VOLUME I
DRAFT FINAL REPORT

REMEDIAL INVESTIGATION PHASE I PRELIMINARY DATA PACKAGE OPERABLE UNIT NO. 3 FORMER NEBRASKA ORDNANCE PLANT MEAD, NEBRASKA CONTRACT NO. DACA41-92-C-0023

Prepared for
Department of the Army
U.S. Army Engineer District
Kansas City District
Corps of Engineers
Kansas city, Missouri

February 1996

Woodward-Clyde

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February 23, 1995
WCC Project 4E11043A

U.S. Army Engineer District, Kansas City
ATTN: CEMRK-EP-EA (Ms. Natalae Tillman)
700 Federal Building
601 East 12th Street
Kansas City, Missouri 64106-2896

Re: Transmittal of Draft Final Preliminary Data Package
Operable Unit 3 RI Phase I
Former Nebraska Ordnance Plant, Mead, Nebraska
Contract No. DACA41-92-C-0023

Dear Ms. Tillman:

Enclosed are five copies of the Draft Final Preliminary Data Package (PDP) for Remedial Investigation Phase I for Operable Unit 3 at the former Nebraska Ordnance Plant near Mead, Nebraska. Distribution of the remaining copies of the PDP has been made in accordance with the attached list.

We look forward to your review of this document. If you have any questions, please contact the undersigned.

Very truly yours,

Rick A. Nusz, P.HG.
OU3 Project Manager

Robert F. Skach, P.E.
Mead Project Manager

Enclosures

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FORMER NOP, MEAD, NEBRASKA
CONTRACT NO. DACA41-92-C-0023

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Term	Definition
amatol	trinitrotoluene and ammonium nitrate
ARDC	Agriculture Research and Development Center of the University of Nebraska, formerly the University of Nebraska Field Laboratory (UNFL)
ATV	All-Terrain Vehicle
bgs	Below Ground Surface
BLRA	Baseline Risk Assessment
BS/BSD	Blank Spike/Blank Spike Duplicate
BTEX	Benzene, Toluene, Ethylbenzene and Total Xylenes
CDAP	Chemical Data Acquisition Plan
CEMRK	U.S. Army Corps of Engineers, Missouri River Division - Kansas City District
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations. The CFR are published in numbered titles such as 40 CFR and numbered parts such as 40 CFR 280
cm^2	Square Centimeters
CWM	Chemical Warfare Materials
DERP	Defense Environmental Restoration Program
DNT	Dinitrotoluene
DoD	Department of Defense
Donohue	SEC Donohue & Associates, Inc. (now RUST Environment and Infrastructure)
DQO	Data Quality Objectives
EE/CA	Engineering Evaluation and Cost Analysis
EM	Electromagnetic
EMSL	Environmental Monitoring Systems Laboratory
EOR	Explosive Ordnance Reconnaissance
EPA	U.S. Environmental Protection Agency, Region VII
ESE	Environmental Science & Engineering, Incorporated
FS	Feasibility Study
HE	High Explosives
HI	Hazard Index

Term	Definition
HMX	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
HNu	Portable organic vapor analyzer using a PID manufactured by Hnu Corporation
HSA	Hollow Stem Augers
IAG	Interagency Agreement
ID	Internal Diameter
LCS	Laboratory Control Sample
LUST	Leaking Underground Storage Tank
Load Line	Bomb Load Line (No. 1, 2, 3, and 4)
MCL	Maximum Contaminant Level
mg/kg	Milligrams per kilogram (ppm by weight) equivalent to µg/g
mg/L	Milligrams per liter (ppm)
ml	milliliter
MS	Matrix Spike
mV	milliVolts
MW	Monitoring Well
N	Nitrogen
NDEQ	Nebraska Department of Environmental Quality
NAD-1983	North American Datum
NOP	Nebraska Ordnance Plant
NRD	Natural Resources District
O.D.	Outside Diameter
OE	Ordnance and Explosive
OU	Operable Unit
PCB	Polychlorinated biphenyl
PDP	Preliminary Data Package
PID	Photo ionization dectector
PP	Proposed Plan
PPLV	Preliminary Pollutant Limit Values
ppm	Parts per million (mg/kg and mg/l)
PRGs	Preliminary Remediation Goals

Term	Definition
PVC	Polyvinyl Chloride
PWP	Project Work Plan
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QCSR	Quality Control Summary Reports
RDX	Hexahydro-1,3,5-trintro-1,3,5-triazine
RI	Remedial Investigation
RME	Reasonable Maximum Exposure
ROD	Record of Decision
RUST	Rust Environment and Infrastructure (Formerly Donohue & Assoc.)
Site	Former NOP
SPO	Sampling Plan and Objectives document (CDAP Part I)
SVOC	Semi-Volatile organic compounds
TCE	Trichloroethylene (trichloroethene)
TCT	Twin City Testing Corporation
TNB	1,3,5-Trinitrobenzene
TNT	2, 4, 6-trinitrotoluene
TRPH	Total Recoverable Petroleum Hydrocarbons
USACE	U.S. Army Corps of Engineers
UST	Underground Storage Tank
UXO	Unexploded Ordnances
VOC	Volatile organic compounds
WCC	Woodward-Clyde Consultants
µg/L	Micrograms per liter (ppb)
µg/kg	Micrograms per kilogram (ppb by weight)

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0.1 INTRODUCTION

0.1.1 Project Background

The former Nebraska Ordnance Plant (NOP) was a Department of Defense (DoD) owned, contractor-operated facility situated on 17,258 acres in Saunders County near Mead, Nebraska that operated between 1942 and 1959. The U.S. Army Corps of Engineers (USACE), Kansas City District (CEMRK) is responsible for conducting environmental investigations and remediation activities at the former NOP (Site) under the Defense Environmental Restoration Program (DERP). Woodward-Clyde Consultants (WCC) has been retained by the USACE to conduct these investigations under Contract DACA41-92-C-0023.

The Site has been divided into three Operable Units (OU1, OU2, and OU3) under the Interagency Agreement dated January 30, 1992 between the U.S. Department of the Army and the U.S. Environmental Protection Agency (EPA), Region VII, and the Nebraska Department of Environmental Quality (NDEQ). OU1 includes explosives contaminated soils within the upper 4-feet, OU2 includes groundwater as well as explosives-contaminated soil (exclusive of those addressed by OU1) which may be a contributing source of groundwater contamination, and OU3 includes other areas at the Site not addressed under OU1 or OU2.

0.1.2 Purpose of Report

The purpose of this Preliminary Data Package (PDP) report is to provide a timely means of presenting field activity results and determining the need for additional field activities to meet either the RI Phase I data collection objectives or the overall RI site-specific objectives. This report also provides for an efficient review process leading to the timely completion of the RI Report. The data collected during the Phase I investigation are intended to assist in characterization of each investigation area and provide information on whether additional RI field (Phase II) activities are warranted.

0.2 GENERAL DESCRIPTIONS OF PHASE I INVESTIGATION ACTIVITIES

Field activities were performed in accordance with the OU3 RI Project Work Plan (PWP) (WCC, 1994a) and Chemical Data Acquisition Plan (CDAP), Parts I, II, and III (WCC, 1994b; WCC, 1994c; and, WCC, 1994d) to address the RI objectives for each OU3 area under investigation. Some of the major field activities included:

- Ordnance and Explosive Avoidance Surveys
- Geophysical Surveys
- Location and Elevation Surveys
- Adjacent Soil Sampling
- Beneath Soil Sampling
- Shallow Soil Sampling
- Deep Soil Sampling
- High Explosive Field Screening
- Wipe Sampling
- Monitoring Well Installation
- Groundwater Sampling at Existing Monitoring Wells
- Groundwater Sampling at Newly Installed Monitoring Wells
- Groundwater Sampling by HydroPunch®
- Surface Water Sampling
- Sediment Sampling
- Site-Wide Potentially Hazardous Waste Survey

The investigation areas included in the Phase I investigation (**Drawing 1-1**) were comprised of bomb production and paint operations buildings, raw products igloo storage areas, several waste disposal areas, landfills, burning, proving and detonation grounds, detonation areas, surface water bodies, formerly used underground storage tanks (USTs), and a previously identified geophysical anomaly. In addition to these general investigation areas, a survey of potentially hazardous waste materials was performed in several buildings located throughout the Site.

While not all chemical analyses were performed at each investigation area, the total list of analyses performed during the Phase I investigation included explosives, metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), thiodyglycol, total

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recoverable petroleum hydrocarbons (TRPH), total benzene, toluene, ethylbenzene, and total xylenes (BTEX) and polychlorinated biphenyls (PCBs).

As part of the Phase I investigation, screening levels were developed for the majority of soil and water analytes as a method of accelerating and increasing consistency in decisions concerning contamination and the need for additional sampling. Screening levels do not define unacceptable levels of contamination nor do they indicate the need for a response action. In addition to screening levels, the extensive amount of previous sampling performed at the Site was also considered when evaluating the need for additional sampling to address the overall RI objective.

0.3 SITE-SPECIFIC SUMMARY OF FINDINGS

0.3.1 Load Lines Bomb Production Buildings

0.3.1.1 Adjacent Soil Sampling

Adjacent soil samples were collected at depths up to 2 feet at locations along the outside walls of Load Line Bomb Production Buildings. Each sample was analyzed for explosives and metals.

Of the 112 soil samples (from 60 separate locations) collected adjacent to the buildings at Load Line 1, only 14 individual samples displayed concentrations above the soil screening levels for explosives. The primary explosive compound detected above the screening level at Load Line 1 was TNT. The explosives were generally detected in the soils at the Amatol Melt Building, the Ammonium Nitrate Service Building, the West Cooling Building, and the TNT Pouring Building. A total of 112 adjacent soil samples from Load Line 1 were analyized for 22 different metals. The metals which were detected above soil screening levels and the corresponding percentage of samples with detections exceeding the screening levels are as follows: aluminum (1%), arsenic (1%), barium (3%), beryllium (1%), cadmium (52%), chromium (2%), cobalt (1%), copper (7%), lead (1%), manganese (2%), nickel (1%), selenium (25%), thallium (1%), vanadium (1%), and zinc (15%).

Of the 152 soil samples (from 76 separate locations) collected adjacent to the buildings at Load Line 2, only 13 individual samples displayed concentrations above the soil screening levels for explosives. The primary explosive compounds detected above the screening levels at Load Line 2 were RDX and TNT. The explosives were generally detected in the soils at the Amatol Melt Building, the Ammonium Nitrate Service Building, the East Cooling Building, and the West Cooling Building. A total of 152 adjacent soil samples from Load Line 2 were analyized for 22 different metals. The metals which were detected above soil screening levels and the corresponding percentage of samples with detections exceeding the screening levels are as follows: arsenic (1%), barium (1%), cadmium (50%), chromium (1%), copper (11%), lead (13%), manganese (1%), nickel (2%), selenium (29%), and zinc (23%).

Of the 148 soil samples (from 74 separate locations) collected adjacent to the buildings at Load Line 3, only 16 individual samples displayed concentrations above the soil screening levels for explosives. The primary explosive compounds detected above the screening level at Load Line 3 were RDX and TNT. RDX was the primary compound detected at Load Line 3. The explosives were generally detected in the soils at the Amatol Melt Building, the Ammonium Nitrate Service Building, the East Cooling Building, the West Cooling Building, and the TNT Pouring Building. A total of 143 adjacent soil samples from Load Line 3 were analyized for 22 different metals. The metals which were detected above soil screening levels and the corresponding percentage of samples with detections exceeding the screening levels are as follows: barium (1%), cadmium (44%), copper (6%), lead (3%), nickel (3%), selenium (38%), thallium (1%), and zinc (20%).

Of the 146 soil samples (from 73 separate locations) collected adjacent to the buildings at Load Line 4, only 7 individual samples displayed concentrations above the soil screening levels for explosives. The primary explosives compound detected above the screening level at Load Line 4 was RDX. The explosives were generally detected in the soils at the Amatol Melt Building, the North TNT Service Building, the East Cooling Building, and the TNT Pouring Building. A total of 146 adjacent soil samples from Load Line 4 were analyized for 22 different metals. The metals which were detected above soil screening levels and the corresponding percentage of samples with detections exceeding the screening levels are as follows: aresenic (1%), cadmium (53%), chromium (1%), copper (5%), nickel (1%), selenium (46%), and zinc (16%).

0.3.1.2 Beneath Soil Sampling

Soil samples were collected from the uppermost one foot of soil beneath the concrete floor at each Bomb Production Building. All samples were analyzed for explosives and metals.

A total of 38 samples were collected from beneath the building floors at Load Line 1. TNT was the only explosive compound detected at a concentration greater than the soil screening level in only one beneath soil sample from the Ammonium Nitrate Service Building. For metals, cadmium, copper, and selenium were detected at concentrations greater than the soil screening levels in the beneath soil samples at Load Line 1.

A total of 36 samples were collected from beneath the building floors at Load Line 2. Three explosive compounds [TNT; 1,3,5-trinitrobenzene (TNB) and RDX] were detected at concentrations greater than the soil screening level in one beneath soil sample at the northwest sample in the East Cooling Building. For metals, cadmium and selenium were the only metals detected at concentrations greater than the soil screening levels in the beneath soil samples from the buildings at Load Line 2

A total of 38 samples were collected from beneath the building floors at Load Line 3. 2,4-DNT was the only explosive compound detected at a concentration greater than the soil screening level in the beneath soil samples at the South TNT Service Building. For metals, cadmium and selenium were the only metals detected at concentrations greater than the soil screening levels in the beneath soil samples at Load Line 3.

A total of 37 samples were collected from beneath the building floors at Load Line 4. No explosives were detected at concentrations greater than the soil screening levels in the beneath soil samples collected at Load Line 4. For metals, cadmium, cooper, and selenium were the only metals detected at concentrations greater than the soil screening levels in the beneath soil samples from Load Line 4.

0.3.1.3 Wipe Sampling

Wipe samples were collected from the North, South, East and West facing building wall surfaces and the floor surfaces within each Bomb Production Buildings at Load Lines 1, 2, 3

and 4. All samples were analyzed for explosives and nearly every wipe sample had detectable concentrations of explosives. None of the buildings could be excluded from future risk assessment on the basis of non-detection of explosives.

0.3.2 Load Lines Paint Operations Buildings

0.3.2.1 Shallow Soil Sampling

Soil samples were collected at depths up to 2 feet at locations in the vicinity of each Load Line Paint Operations Building and analyzed for metals.

At Load Line 1, 24 of the 58 samples collected displayed metals one or more metals at concentrations greater than the screening levels. The metals which were detected above screening levels and the corresponding percentage of samples with detected concentrations exceeding the screening levels are as follows: antimony (53%), cadmium (21%), chromium (5%), copper (5%), lead (2%), nickel (3%), selenium (24%), and zinc (10%).

At Load Line 2, 23 of the 56 samples collected displayed metals one or more metals at concentrations greater than the screening levels. The metals which were detected above screening levels and the corresponding percentage of samples with detected concentrations exceeding the screening levels are as follows: antimony (2%), arsenic (2%), cadmium (27%), chromium (4%), cobalt (2%), copper (5%), lead (4%), nickel (4%), selenium (14%), thallium (2%), and zinc (11%).

At Load Line 3, 29 of the 56 samples collected displayed metals one or more metals at concentrations greater than the screening levels. The metals which were detected above screening levels and the corresponding percentage of samples with detected concentrations exceeding the screening levels are as follows: antimony (2%), barium (2%), cadmium (20%), chromium (11%), cobalt (4%), copper (9%), lead (4%), nickel (4%), selenium (34%), and zinc (9%).

At Load Line 4, 31 of the 58 samples collected displayed metals one or more metals at concentrations greater than the screening levels. The metals which were detected above screening levels and the corresponding percentage of samples with detected concentrations

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exceeding the screening levels are as follows: antimony (3%), cadmium (38%), chromium (5%), copper (2%), lead (2%), selenium (28%), thallium (2%), and zinc (10%).

0.3.2.2 Groundwater Sampling At Existing Monitoring Wells

Manganese was the only total metal detected at a concentration greater than the screening level a groundwater sample collected from one of existing wells (at Load Line 3) downgradient of the Paint Operations Buildings. The manganese concentration above screening level was detected in one well at Load Line 3. The only dissolved metal detected at concentrations greater than the screening level was thallium.

0.3.3 Igloo Storage Areas Raw Production Storage Buildings

0.3.3.1 Initial High Explosive Screening and Confirmation Analysis

The total number of soil samples collected for High Explosives (HE) screening was 110. None of the 110 samples screened positive (above 0.5 ppm) for RDX. Two of the 110 samples screened positive (above 0.5 ppm) for TNT.

From the group of soil samples displaying negative (below 0.5 ppm) HE screening results, 12 samples (approximately 10 percent) were randomly selected to be submitted for laboratory confirmation analyses. Of the samples for which concentrations were reported above the detection limit by the analytical lab, only one sample contained concentrations of RDX above the lower limit of the assay range of the field instrument used to perform the HE screening in the field lab. This concentration is well below the soil screening level of 5.8 mg/kg for RDX.

0.3.3.2 Additional High Explosive Screening and Soil Sampling

As previously mentioned, two samples displayed positive results using the HE screening method. Five additional soil samples were collected near each of the original sample locations (10 samples total). None of the ten samples screened (above 0.5 ppm) positive results for RDX. One sample (IGS-039-000) screened positive (4.0 - 5.0 ppm) for TNT.

TNT was not detected in any of the ten samples submitted for laboratory analysis. RDX was detected in three of the ten samples at the following concentrations: The concentrations detected in the samples are well below the soil screening level of 5.8 mg/kg for RDX.

0.3.3.3 Wipe Sampling

Wipe samples were collected from the floors of the 20 igloos north of Load Line 2 and from the 36 igloos north of Load Line 3. Each wipe was analyzed for explosives. Explosives were detected in nearly every wipe sample collected. None of the buildings could be excluded from future risk assessment on the basis of non-detection of explosives

0.3.4 Tetryl Pelleting Building

Shallow soil samples at the Tetryl Pelleting Building were collected at six sampling locations in front of doorways immediately adjacent to the concrete drainage channel on the east side of the building and analyzed for explosives and metals.

No explosive was detected in concentration above the screening level. For metals, 6 of the 12 samples collected had concentrations above screening level for barium, cadmium, copper, selenium, and/or zinc.

0.3.5 North Burning Ground

Shallow samples were collected at twelve locations (24 samples total) at the North Burning Ground. At the two deep soil boring locations, shallow soil samples were collected in conjunction with the soil boring activities and analyzed for metals, VOCs and SVOCs.

No VOCs or SVOCs were detected at concentrations greater than screening level. For metals, 24 of the 30 soil samples collected had concentrations above screening level for beryllium, cadmium, cobalt, copper, nickel, selenium, and/or thallium.

0.3.6 South Burning Ground

Shallow soil samples were collected at seventeen locations (51 samples total) at the South Burning Ground and analyzed for metals, VOCs, and SVOCs.

No VOCs were detected at concentrations greater than the soil screening level. Two explosives compounds (2,4-DNT and 2,6-DNT) were detected in the SVOC analyses at concentrations greater than the explosives soil screening level at one sample location. For metals, 42 of the 51 samples collected had metals in concentrations above screening level for cadmium and/or selenium.

0.3.7 Proving Grounds

0.3.7.1 Shallow and Deep Soil Sampling

Shallow soil samples were collected at six locations and deep soil samples were collected from two locations at the Proving Grounds and analyzed for metals, VOCs, and SVOCs.

No VOCs or SVOCs were detected at concentrations greater than their associated screening levels. Fourteen of the 16 soil samples collected had results above metal screening levels for cadmium, selenium, and/or zinc.

0.3.7.2 Groundwater Sampling at Newly Installed Well

A monitoring well was installed on the east side of the NRD Reservoir. Water levels were measured in the new well and all of the existing monitoring wells in the vicinity of the reservoir. The well was sampled in June 1995. The parameters of analysis included explosives, total metals, dissolved metals, VOCs, and SVOCs, and none of the analytes were detected in concentrations above screening level.

0.3.8 Potential Landfill Area North of the Proving Grounds

Both shallow and deep soil samples were collected from the Potential Landfill Area North of the Proving Grounds. At the deep locations, stainless steel hand augers were used to advance

the borings to 10 feet bgs. The 10- to 20-foot samples were not collected due to auger refusal at 10 feet bgs. All of the samples were analyzed for explosives, metals, VOCs, and SVOCs.

No VOCs, SVOCs, or explosives were detected at concentrations greater than soil screening levels. For metals, 12 of the 16 soil samples collected had concentrations above screening level for antimony, cadmium, chromium, cobalt, copper, lead, selenium, and/or zinc.

0.3.9 Landfill Area

Existing monitoring wells at the Landfill Area were sampled during three separate quarterly sampling events to determine whether thiodiglycol is present in the groundwater upgradient or downgradient of the Landfill Area. Thiodiglycol was not detected in any of the samples collected.

0.3.10 Potential Waste Disposal Area North of Former Nike Maintenance Area

0.3.10.1 Shallow and Deep Soil Sampling

Shallow soil samples were collected in conjunction with the deep soil samples at six borehole locations. All of the samples were analyzed for explosives, metals, VOCs, and SVOCs.

No VOCs, SVOCs, or explosives were detected at concentrations greater than any soil screening level. Twenty-four of the 42 samples collected had cadmium and/or selenium in concentrations above a metals screening level.

0.3.10.2 Groundwater Sampling at Existing Monitoring Wells

Groundwater samples were collected from two existing wells in December 1994 and were analyzed for explosives, total and dissolved metals, VOCs, and SVOCs. With the exception of manganese, no compounds were detected at concentrations greater than the groundwater screening levels in the samples collected from either well. Total manganese was detected above the groundwater screening level in only one well, however, it was also detected at concentrations greater than the screening level in the background groundwater samples collected during the investigation.

0.3.11 Waste Disposal Area Southeast of Boom Booster Area

0.3.11.1 Shallow And Deep Soil Sampling

Both shallow and deep soil samples were collected from four soil borings. At four other locations, only shallow soils samples were collected. All of the samples were analyzed for explosives, metals, VOCs, SVOCs, and PCBs.

No VOCs, SVOCs, explosives, or PCBs were detected at concentrations greater than the soil screening level. For metals, 30 of the 36 samples collected had cadmium and/or selenium detected at concentrations greater than the soil screening levels

0.3.11.2 Groundwater Sampling at Existing Monitoring Wells

Groundwater samples were collected from one existing monitoring well to evaluate whether the groundwater downgradient of the Waste Disposal Area southeast of the Bomb Booster Area has been impacted by past DoD-related activities. The groundwater samples were analyzed for explosives, total and dissolved metals, VOCs, SVOCs, and PCBs.

No compounds were detected at concentrations greater than the groundwater screening levels, except for manganese (total and dissolved), which was only above the screening level in the background groundwater sample.

0.3.12 Waste Disposal Areas at the Atlas Missile Area

0.3.12.1 Shallow and Deep Soil Sampling

Shallow soil samples were collected from two locations at the southwest waste disposal area and at eight locations at the northeast waste disposal area. Deep soil samples were collected from two soil borings at the southwest waste disposal area and from three soil borings at the larger northeast waste disposal area. All of the samples were analyzed for explosives, metals, VOCs, and SVOCs.

No VOCs, SVOCs, or explosives were detected at concentrations greater than any soil screening level. Three metals (cadmium, manganese, and/or selenium) were detected at concentrations greater than the soil screening levels in 20 of the 31 samples collected.

0.3.12.2 Groundwater Sampling at Existing Monitoring Wells

Groundwater samples were collected from five existing monitoring wells to evaluate whether the groundwater downgradient of the potential waste disposal area at the Atlas Missile Area has been impacted by past activities. Groundwater samples were collected in December 1994 and analyzed for explosives, total and dissolved metals, VOCs, and SVOCs.

No SVOCs were detected at concentrations greater than the groundwater screening levels in the samples collected downgradient from the Waste Disposal Areas at the Atlas Missile Area. TCE was the only VOC detected at a concentration greater than the groundwater screening levels from one of the wells. Total and dissolved manganese were detected at concentrations greater than the screening level in samples collected from three of the wells and in the background monitoring wells.

0.3.13 Potential Waste Disposal Area North of Ammonium Nitrate Plant

Both shallow and deep soil samples were collected from two soil borings and analyzed for explosives, metals, VOCs, and SVOCs.

No VOCs, SVOCs, or explosives were detected at concentrations greater than any soil screening level. For metals, 9 of the 12 samples collected had cadmium greater than the soil screening level.

0.3.14 Demolition Grounds

0.3.14.1 Shallow and Deep Soil Sampling

Both shallow and deep soil samples were collected from four soil borings at the Demolition Ground and analyzed for explosives, metals, VOCs, and SVOCs.

No VOCs, SVOCs, or explosives were detected at concentrations greater than any soil screening level. For metals, 10 of the 20 samples collected had selenium and/or cadmium above screening level.

0.3.14.2 Groundwater Sampling at Existing Monitoring Wells

Groundwater samples were collected from two existing monitoring wells to evaluate whether the groundwater downgradient of the Demolition Grounds has been impacted by past DoD activities. The groundwater samples were analyzed for explosives, total and dissolved metals, VOCs and SVOCs and no compounds were detected above the screening.

0.3.15 Detonation Craters

Shallow soil samples were collected from each of the five Detonation Craters and analyzed for explosives, metals, VOCs, and SVOCs.

No VOCs, SVOCs, or explosives were detected at concentrations greater than any soil screening levels. For metals, 6 of the 11 samples collected had concentrations above screening level for cadmium, selenium, and/or manganese.

0.3.16 Bermed Area

Shallow soil samples to 3 feet bgs, were collected from three locations at the Bermed Area and analyzed for explosives, metals, VOCs and SVOCs.

No VOCs, SVOCs, or explosives were detected at concentrations greater than the soil screening level. For metals, 7 of the 9 samples collected had cadmium and/or selenium above screening level.

0.3.17 Ammonium Nitrate Plant

0.3.17.1 Groundwater Sampling at Newly Installed Well

The new monitoring well was installed downgradient of the former Ammonium Nitrate Plant and an initial sample was collected during the Third Quarterly Groundwater Monitoring Event (March 1995) and analyzed for nitrates plus nitrites and total nitrogen. During the Fourth Quarterly Groundwater Monitoring Event (June 1995), another groundwater sample was collected and analyzed for total and dissolved metals, nitrates plus nitrites, and total nitrogen.

No metals were detected in the samples from the newly installed well above the groundwater screening level, however, total and dissolved manganese were detected at concentrations greater than the groundwater screening level in the background monitoring well samples. Total nitrates and nitrites were detected at concentrations greater than the screening level in the samples collected during the March event. For the June event, only nitrates were detected in concentrations above screening level.

0.3.17.2 Groundwater Sampling At Existing Monitoring Wells

Groundwater samples were collected in December 1994 from eight existing monitoring wells to obtain data on the background concentrations of nitrates and nitrites in the groundwater.

Total nitrates and nitrates plus nitrites (both as N), and total and dissolved manganese were detected at concentrations greater than the groundwater screening levels

0.3.18 Johnson and Clear Creeks

0.3.18.1 Surface Water Sampling

Surface water samples were collected from four sampling stations along Johnson and Clear Creeks and analyzed for explosives, metals, VOCs, and SVOCs.

No VOCs, SVOCs, or explosives were detected at concentrations greater than the screening levels. However, two explosives compounds [RDX and Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)] and one VOC (TCE) were detected in the surface water samples. The highest reported levels of RDX and TCE were detected at concentrations close to the screening levels in the samples collected in Johnson Creek. In addition, two metals (manganese and nickel) were detected at concentrations greater than the screening levels.

0.3.18.2 Sediment Sampling

Sediment samples were collected from at the same four sampling stations along Johnson and Clear Creeks where the surface water samples were taken. All of the sediment samples were analyzed for explosives, metals, VOCs, and SVOCs

No VOCs, SVOCs or explosives were detected at concentrations greater than the screening levels. For metals, aluminum, manganese, silver and zinc were detected at concentrations greater than the screening levels.

0.3.19 Silver Creek

0.3.19.1 Surface Water Sampling

Surface water samples were collected from two sampling stations along Silver Creek and analyzed for explosives, metals, VOCs, and SVOCs.

No VOCs, SVOCs or explosives were detected at concentrations greater than any screening level. One explosive compound (4-Am-DNT) was detected in the downstream surface water sample, but no screening level was established. In addition, manganese was detected at concentrations greater than the screening levels.

0.3.19.2 Sediment Sampling

Sediment samples were collected at the same two sampling stations where surface water samples were taken and analyzed for explosives, metals, VOCs, and SVOCs.

No VOCs, SVOCs or explosives were detected at concentrations greater than the screening levels in the sediment samples collected from Silver Creek. Selenium was the only metal detected at concentrations greater than the screening level in the sediment samples from Silver Creek.

0.3.20 Underground Storage Tanks at Administration, Bomb Booster, and Atlas Missile Areas

0.3.20.1 Administration Area UST

Shallow and Deep Soil Sampling

Shallow and deep soil samples were collected from a single borehole at the Administration Area UST location and analyzed for BTEX, SVOCs and TRPH. No SVOCs were detected in the soil samples. TRPH was detected above the screening level.

Groundwater Sampling

Groundwater samples were collected at each boring location using the Hydropunch® II sampler and analyzed for BTEX, SVOCs and TRPH. Detectable concentrations of BTEX and SVOCs (below screening levels for SVOCs) were reported in the groundwater samples collected.

0.3.20.2 Bomb Booster Area UST

Shallow and Deep Soil Sampling

The shallow and deep soil samples were collected from a single borehole at the Bomb Booster Area UST locations and analyzed for BTEX, SVOCs and TRPH. No results were above screening level.

Groundwater Sampling

Groundwater samples were collected at each boring location using the Hydropunch® II sampler and analyzed for BTEX, SVOCs and TRPH. Detectable concentrations of SVOCs (below screening levels) were reported in the groundwater sample collected.

0.3.20.3 Atlas Missile Area Launch Operations Building UST

Shallow and Deep Soil Sampling

The shallow and deep soil samples were collected from a single borehole at the launch operations building UST and analyzed for BTEX, SVOCs and TRPH. Detectable concentrations of SVOCs and TRPH (above screening level for TRPH in one sample) were reported in soil samples collected.

Groundwater Sampling

Groundwater samples were collected using the Hydropunch® II sampler and analyzed for BTEX, SVOCs and TRPH. Detectable concentrations of SVOCs (below screening levels) were reported in the groundwater sample collected.

0.3.20.4 Atlas Missile Area Gate House UST

Shallow and Deep Soil Sampling

The shallow and deep soil samples were collected from a single borehole at the Gate House UST and analyzed for BTEX, SVOCs and TRPH. Detectable concentrations of SVOCs and TRPH were reported below screening levels in soil the soil samples collected.

Groundwater Sampling

Groundwater samples were collected at each boring location using the Hydropunch® II sampler and analyzed for BTEX, SVOCs and TRPH. Detectable concentrations of BTEX

and SVOCs (below screening levels for SVOCs) were reported in the groundwater samples collected.

0.3.21 Geophysical Anomaly at Load Line 3

Shallow soil samples were collected from two locations in conjunction with the collection of samples from the deep soil borings and analyzed for explosives, metals, VOCs and SVOCs.

No VOCs, SVOCs or explosives were detected at concentrations greater than the soil screening levels. For metals, cadmium and/or selenium were the only metals detected at concentrations greater than the soil screening level in 8 of the 11 samples collected.

0.3.22 Site-Wide Potentially Hazardous Waste Survey

0.3.22.1 Survey Locations

The survey was conducted throughout all Site buildings in Load Lines 1, 2, 3, and 4, the Administration Area, the Ammonium Nitrate Plant, the Sewage Treatment Plant, the Atlas Missile Area, and the Bomb Booster Area. Several buildings at the Ammonium Nitrate Plant, the Administration Area, and the Bomb Booster Area could not be accessed due to either locked buildings or owners not allowing access to their building.

0.3.22.2 Summary of Results

No containerized DoD-related potentially hazardous wastes were identified.

0.4 SITE-WIDE CONCLUSIONS AND RECOMMENDATIONS SUMMARY

0.4.1 Conclusions

The following table presents a summary of the results of the Phase I investigation:

OU3 RI PHASE I SUMMARY OF CONCLUSIONS
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

		OU3 INVESTIGATION AREA																					
		Load Line Buildings		Waste Disposal/Landfill Areas						Burning/ Proving/Demolition Grounds				Storage/ Process Areas			Surface Water Bodies			Other Investigation Areas			
MATRIX	ANALYTES	Bomb Production	Paint Operations	North of Former Nike Maintenance Area	Southeast of Bomb Booster Area	Atlas Missile Area	North of Ammonium Nitrate Plant	Landfill Area West of WWTP	Potential Landfill North of Proving Grounds	North Burning Ground	South Burning Ground	Proving Ground	Demolition Ground	Igloo Storage Area	Tetryl Pelleting Building	Ammonium Nitrate Plant	Johnson Creek	Clear Creek	Silver Creek	Detonation Craters W. of Demolition Ground	Bermed Area near Load Line 1	Underground Storage Tanks	Geophysical Anomoly at Load Line 3
Soil	Explosives	●		+	+	+	+		+				+	+	+					+	+		+
	Metals	●	●	●	●	●	●		●	●	●	●	●		●					●	●	○	●
	VOC			+	+	○	○		○	+	+	+	+							○	○		○
	SVOC			+	+	+	+		+	+	●	+	+							+	+	+	+
	PCB				+																		
	BTEX																					○	
	TPH																					●	
Sediment	Explosives																○	○	○				
	Metals																+	+	●				
	VOC																+	+	+				
	SVOC																○	○	+				
Groundwater	Explosives			+	○	○						○	+										
	VOC			+	+	●						○	+										
	SVOC			○	○	+						○	○									+	
	BTEX																					+	
	TPH																					+	
	Total Metals		●	●	●	●						○	+			+							
	Dissolved Metals		●	+	●	●						○	+			+							
	Thiodiglycol							○															
	Nitrates + Nitrites															●							
	Total Nitrates															●							
Surface Water	Explosives																+	+	+				
	Metals																●	●	●				
	VOC																+	+	+				
	SVOC																○	○	○				

Notes:

○ No results above detection

● Result(s) above detection and above screening level

+ Result(s) above detection but below screening level

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0.4.2 Summary Recommendations

With the exception of those investigation areas listed below, no additional sampling is required to address the overall RI objectives at any of the other OU3 RI areas. Following is a list of those areas where a Phase II investigation is recommended to satisfy the overall RI objectives at the following areas, together with additional work to be performed during the Phase II investigation to fulfill the RI Phase I data collection objectives:

- Load Line 2 TNT Screening Building demolished (explosives in soil)
- Proving grounds (VOCs, SVOCs and metals in soil)
- Potential Landfill Area north of the Proving Grounds (metals in soil)
- Johnson and Clear Creeks (VOCs, explosives and metals in surface water)
- Silver Creek (VOCs and explosives in surface water)
- Physical habitat assessment of Johnson, Clear and Silver Creeks
- Raw Product Igloo Storage Buildings (metals in soil)
- USTs at Agronomy Area (SVOCs, BTEX, TPH is soil and groundwater)
- Hazardous Waste Survey

Section 1

1.0
INTRODUCTION

1.1 PROJECT BACKGROUND

The former Nebraska Ordnance Plant (NOP) was a Department of Defense (DoD) owned, contractor-operated facility situated on 17,258 acres in Saunders County near Mead, Nebraska that operated between 1942 and 1959. The U.S. Army Corps of Engineers (USACE), Kansas City District (CEMRK) is responsible for conducting environmental investigations and remediation activities at the Site under the Defense Environmental Restoration Program (DERP). Woodward-Clyde Consultants (WCC) has been retained by the USACE to conduct these investigations under Contract DACA41-92-C-0023.

The Site has been divided into three Operable Units (OU1, OU2, and OU3) under the Interagency Agreement (IAG) dated January 30, 1992 between the U.S. Department of the Army, the U.S. Environmental Protection Agency (EPA), Region VII, and the Nebraska Department of Environmental Quality (NDEQ). OU1 includes explosives contaminated soils within the upper 4 feet, OU2 includes groundwater as well as explosives-contaminated soil (exclusive of those addressed by OU1) which may be a contributing source of groundwater contamination, and OU3 includes other areas at the Site not addressed under OU1 or OU2.

This document describes the objectives and approaches for the OU3 Remedial Investigation (RI) Phase I, and summarizes the findings and the specific activities conducted during the investigation and its findings. The data collected during the Phase I investigation are intended to assist in characterization of each investigation area and to provide information on whether additional RI field activities (Phase II) are warranted.

The investigation areas included in the Phase I investigation (**Drawing 1-1**) were comprised of bomb production and paint operations buildings, raw products igloo storage areas, several waste disposal areas, landfills, burning, proving and detonation grounds, detonation areas, surface water bodies, formerly used underground storage tanks (USTs), and a previously identified geophysical anomaly. In addition to these general investigation areas, a survey of

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potentially hazardous waste materials was performed in several buildings located throughout the Site.

Field activities were performed in accordance with the OU3 RI Project Work Plan (PWP) (WCC, 1994a) and Chemical Data Acquisition Plan (CDAP), Parts I, II, and III (WCC, 1994b; WCC, 1994c; and, WCC, 1994d) to address the RI objectives for each OU3 area under investigation. Some of the major field sampling activities included surface/subsurface soil sampling, sediment sampling, surface water sampling, wipe sampling, High Explosive (HE) screening, HydroPunch® groundwater sampling, monitoring well installation, development and sampling, and groundwater sampling of existing monitoring wells.

1.2 PURPOSE OF REPORT

The purpose of the Preliminary Data Package (PDP) report is to provide a timely means of presenting field activity results and determining the need for additional field activities to meet either the RI Phase I data collection objectives or the overall RI site-specific objectives. The PDP also provides for an efficient review process which will lead to the timely completion of the RI report. The PDP is not the equivalent of the OU3 RI report. The RI report will be prepared following completion of all field activities necessary to meet the RI objectives at each investigation area.

The PDP is a primary document under the terms of the IAG. The PDP was prepared and presented in conjunction with CDAP Part I - Chapter B (WCC, 1996) which provides the Sampling Plans and Objectives (SPO) for the proposed Phase II investigation. The PDP was preceded by the PWP (WCC, 1994a), CDAP (WCC, 1994b; WCC, 1994c; and, WCC, 1994d), and a Quality Control Summary Report (QCSR) (WCC, 1995a) which addressed the quality control practices (field and laboratory) employed during the Phase I investigation.

Information typically associated with a RI report such as extensive discussions on site background, previous studies, hydrogeology, nature and extent of contamination, fate and transport analyses, and pathway analyses, are not discussed in the PDP; however, such information was considered during the evaluation of the Phase I results and the development

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of Phase II field activities. Discussions on each investigation area consist of brief descriptions of the field sampling activities, deviations (if any) from the CDAP (WCC, 1995b, and WCC, 1994c), and field sampling results. Discussions are limited to those necessary to relay the relevant information necessary to determine the need for additional RI field work according to the RI objectives. When recommended, general discussions for additional field work have been presented with more detailed information provided in the CDAP Part I - Chapter B (WCC, 1996).

1.3 ORGANIZATION OF REPORT

The PDP is organized into the following eight major sections:

- Section 2.0 (Study Objectives) reviews both the OU3 overall RI and Phase I data collection objectives and the Quality Assurance (QA) objectives. These objectives were used in evaluating whether or not the Phase I investigation was performed in accordance with the CDAP and whether or not additional field activities are warranted.

- Section 3.0 (Screening Level Guidelines for Environmental Samples) presents the methodology employed and sources used in developing soil and water screening levels.

- Section 4.0 (Analytical Methods and General Field Activity Descriptions) presents an overview of field data and sample collection procedures used during the Phase I investigation.

- Section 5.0 (Site-Specific Investigations) discusses the Phase I investigation at each OU3 investigation area including site-specific study objectives, field activities, result summaries, conclusions, and general recommendations. This section also presents a summary of conclusions and recommendations.

- Section 6.0 (Site-Wide Conclusions and Recommendations Summary) presents the site wide conclusions and the recommendations for the proposed OU3 Phase II investigation.

- Section 7.0 (Schedules) presents schedules for the Phase II investigation and project deliverables.

- Section 8.0 (References) presents a list of references.

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All tables (except the analytical summary tables) can be found at the end of Volume I of the PDP. All drawings are presented in Volume II. Analytical summary tables, geophysical survey results, Ordnance and Explosive (OE) survey results, and field documentation are presented as appendices in Volume III of the PDP.

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Section 2

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2.0
STUDY OBJECTIVES

2.1 OVERALL RI AND PHASE I DATA COLLECTION OBJECTIVES

Overall RI and Phase I data collection objectives were developed for each individual OU3 investigation area and are presented in the OU3 PWP (WCC, 1994a) and CDAP Part II (WCC, 1994c). These objectives are also presented in Section 5.0 (Site-Specific Investigations) of the PDP. Results of the Phase I investigation have been assessed to evaluate whether the Phase I data collection objectives were met and are sufficient to meet the overall RI objective for each investigation (see Section 5.0).

2.2 DATA QUALITY OBJECTIVES

To assess the reliability of the data, certain quality assurance/quality control (QA/QC) procedures were implemented as identified in the CDAP Part II. Activities are included in the CDAP Part II documentation for field and laboratory procedures, as well as the collection and analysis of QA/QC samples. In order to address quality control practices employed during the Phase I investigation, a QCSR was prepared following the completion of all field sampling activities and laboratory analyses. The QCSR included discussions of all locations which may have been influenced or compromised and their impact on the data quality objectives (DQOs) or remedial decisions. For the purposes of this PDP, conclusions from the QCSR are summarized in the conclusion sections of Section 5.0 for each investigation, which provides a general statement as to whether or not the Phase I DQOs were successfully met.

As part of the OU3 Phase I investigation, groundwater sampling results were obtained from the Quarterly Groundwater Sampling Program (September, 1994 through June, 1995) to determine the groundwater chemical characteristics at several of the individual OU3 investigation areas. **Table 2-1** lists the quarterly sampling event which addresses the DQOs as described in the CDAP Part I (WCC, 1994b). Also listed in **Table 2-1** are any additional quarterly sampling events which provided additional results to support the OU3 Phase I investigation.

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The DQOs for the Quarterly Groundwater Sampling Program have been assessed in a separate report for three of the four quarters of sampling (WCC, 1995c; WCC, 1995d; and, WCC, 1995e).

- 1st Quarter (September, 1994)

  The overall assessment of the data reported for the five First Quarterly Groundwater Monitoring thiodiglycol analyses indicated that precision, accuracy, and comparability were acceptable. Linear drift was observed during comparison of continuing calibration check standards for thiodiglycol analysis. The non-detects were judged to be valid. Overall completeness for these five analyses supporting the OU3 Phase I investigation was 100 percent.

- 2nd Quarter (December, 1994)

  The overall assessment of the data reported for the Second Quarterly Groundwater Monitoring analyses reviewed for Mead OU3 indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of one nitrate/nitrite result based upon holding time. In addition, seven acetone results, seven 2-butanone results, seven 2-hexanone results, three 4-methyl-2-pentanone results, two 1,2-dibromo-3-chloropropane results, and one chloromethane result were rejected based upon calibrations. Overall completeness for the Second Quarterly Groundwater Monitoring results supporting the OU3 Phase I investigation was 98 percent.

- 3rd Quarter (March, 1995)

  The overall assessment of the data reported for the Third Quarterly Groundwater Monitoring analyses reviewed for Mead OU3 indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of five acetone results, five 2-butanone results, five 2-hexanone results, two 1,2-dibromo-3-chloropropane results, and three 2-methyl-2-pentanone results based upon calibrations. Overall completeness for the Third Quarterly Groundwater Monitoring results supporting the OU3 Phase I investigation was 98 percent.

- 4th Quarter (June, 1995)

  The overall assessment of the data reported for the Fourth Quarterly Groundwater Monitoring analyses reviewed for Mead OU3 indicated that precision, representativeness, and comparability were acceptable. Overall completeness for the Fourth Quarterly Groundwater Monitoring results supporting the OU3 Phase I investigation was greater than the CDAP QA objective of 90 percent.

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Section 3

3.0
SCREENING LEVEL GUIDELINES FOR ENVIRONMENTAL SAMPLES

As part of the OU3 RI, screening levels were developed for the majority of soil and water analytes. "Soil screening levels streamline the remedial investigation/feasibility study RI process by accelerating and increasing consistency in decisions concerning soil contamination. Soil screening levels do not trigger the need for response actions or define "unacceptable" levels of contaminants in soil. Areas with soil contamination concentrations below soil screening levels generally would not warrant further study or action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)" (EPA, 1994). Water screening levels also streamline the RI process, and do not trigger the need for response actions or define "unacceptable" levels of contaminants in water.

The screening level development process used for the OU3 RI involved the review of one or more sources for each chemical group. Section 3.1 and Section 3.2 specify the sources used in screening level development and the order in which these sources were referenced. **Table 3-1** and **Table 3-2** summarize the steps involved in establishing screening levels for soil and water, respectively. The steps taken to develop each screening level were dependent on the matrix and chemical under consideration. In general, the screening level development process began with first identifying any established remediation goals developed under OU1 or OU2. The next step in selecting a screening level value was to identify published health-based criteria. If no health-based criteria were identified, then other documented values were used. For chemicals with no previously established remediation goals or published criteria, no screening level was given and all results above detection were evaluated.

3.1 SOIL SAMPLES

3.1.1 Explosives

Soil screening levels developed for explosives are listed in **Table 3-3**. Screening levels for explosives have been set at the concentration listed as OU1 risk-based remediation goals.

3.1.2 Metals

Table 3-4 lists the soil screening levels established for metals. Sources from which screening level values were obtained are listed below in the order in which they were referenced:

- 2 times average background values
- EPA Region IX Preliminary Remediation Goals (Residential Soil) (EPA, 1995c)
- EPA Region III Risk-Based Concentrations (Soil Ingestion, Residential) (EPA, 1995b)

Because of the limited number of background metal results available from previous investigations, additional background soil samples were collected during the OU3 Phase I RI (**Table 3-5**). Soil samples were collected for background metals analysis at 10 locations (**Drawing 1-1**) at the Site on August 29, 1995. A sample size of 10 was considered adequate for providing a greater representation of background metals concentrations, especially when compared with the limited data (generally less than 3 samples per analyte) provided from previous investigations. Samples were collected from 1 to 2 feet below ground surface. The samples were collected in accordance with the procedures outlined in Section 4.2.4.1.

Prior to field sampling, 10 potential background metals sampling locations were selected based on a number of considerations. The first consideration given in selecting potential background metals sampling locations was the general diversity in surface soils at the Site. A potential for variations in metal types and concentrations could be attributed to soils of differing composition. Based on a review of the Sanders County Soil Survey (USDA, 1965), it was determined that the surface soils at the Site were primarily comprised of the Sharpsburg-Fillmore Association. Therefore, soil type was not a major consideration for selecting potential background sampling locations.

With the use of aerial photographs and topographical maps, combined with present knowledge of the Site, potential background metals sampling locations were selected at areas which were believed to be non-tilled lands which have not historically been impacted by past NOP or industrial operations. Information from previous investigations was reviewed to verify that each of the potential sampling locations was not in the immediate vicinity of

known impacted areas or within the explosive or TCE groundwater plumes defined during the OU2 RI.

Once all potential background metals sampling locations were selected, each location was field-verified to confirm the present land use and observed for surface signs which might indicate past activity.

Results of a statistically-based background metals evaluation are presented in **Table 3-6**. All metals measured in the site background samples fall within the expected background ranges. An analysis of the calculated mean concentrations, ± the 99 percent confidence interval, suggests that the true mean background concentrations for the site are likely to be very close to the calculated values. These results suggest that the background samples collected are representative of site background metals, and that additional background sampling would be unlikely to provide useful information.

A 2 times average background value was used as the screening level for metals in soil based on times background value was recommended by EPA Region VII. The 5 times background approach used for the evaluation of metals in the OU1 Remedial Investigation was not used for OU3 because under OU1, metals were evaluated only in relation to remedies for the explosives contaminated soils. Under OU3, metals are being evaluated as chemicals of concern at areas which have not been sampled previously.

Table 3-7 shows the average background metals concentrations used to calculate screening levels. The average background concentration for lead was not used to calculate the screening level. An established EPA screening value of 400 mg/kg was used for the screening level for lead.

For those metals with no detectable results (antimony, mercury, and silver), average background concentrations could not be determined. Therefore, EPA Region IX Preliminary Remediation Goals (Residential Soil) (EPA, 1995c) and EPA Region III Risk-Based Concentrations (Soil Ingestion, Residential) (EPA, 1995b) were used in establishing screening levels.

3.1.3 Volatile Organic Compounds

Soil screening levels established for Volatile Organic Compounds (VOCs) are presented in **Table 3-8**. The following list presents sources used in developing these screening levels in the order in which they were referenced:

- EPA Region IX Preliminary Remediation Goals (Residential Soil) (EPA, 1995c)
- EPA Region III Risk-Based Concentrations (Soil Ingestion, Residential) (EPA, 1995b)
- Generic Soil Screening Levels (Ingestion) (EPA, 1994)

3.1.4 Semi-Volatile Organic Compounds

Table 3-9 lists soil screening levels developed for Semi-Volatile Organic Compounds (SVOCs). Sources from which screening level values were obtained are listed below in the order in which they were referenced:

- 2,4-DNT, 2,6-DNT and Nitrobenzene: (Listed as both explosives and SVOCs) OU1 Remediation Goals (RUST, 1994)

- EPA Region IX Preliminary Remediation Goals (Residential Soil) (EPA, 1995c)

- EPA Region III Risk-Based Concentrations (Soil Ingestion, Residential) (EPA, 1995b)

- Generic Soil Screening Levels (Ingestion) (EPA, 1994)

3.1.5 TRPH

A soil screening level of 10 mg/kg was selected for Total Recoverable Petroleum Hydrocarbons (TRPH). This value was obtained from the Nebraska Petroleum Contaminated Soils Protocol for the Leaking Underground Storage Tank (LUST) Program (NDEQ, 1993).

3.1.6 Benzene, Toluene, Ethylbenzene, and Total Xylenes

A soil screening level of 1,000 µg/kg was selected for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX). This value was obtained from The Nebraska Petroleum Contaminated Soils Protocol for the LUST Program (NDEQ, 1993).

3.1.7 Polychlorinated Biphenyls

A soil screening level of 15,000 µg/kg was developed for polychlorinated biphenyls (PCBs). This value was obtained from a letter from the USACE (Dated March, 1994) to the EPA regarding the action level for PCB contaminated soil (USACE, 1994).

3.2 WATER SAMPLES

3.2.1 Explosives

Water screening levels developed for explosives are presented in **Table 3-10**. Sources from which these screening levels were obtained are listed below in the order in which they were referenced:

- OU2 Final Target Groundwater Cleanup Goals (WCC, 1994e)
- Maximum Contaminant Levels (EPA, 1995c)
- Maximum Contaminant Level Goals (EPA, 1995c)
- Lower of Lifetime Health Advisories or 10^{-6} Cancer Risk Health Advisories (EPA, 1995a)
- EPA Region IX Preliminary Remediation Goals (Tap Water) (EPA, 1995c)
- EPA Region III Risk-Based Concentrations (Tap Water) (EPA, 1995)

3.2.2 Metals

Table 3-11 lists the water screening levels established for metals. The following list presents the sources from which these screening levels were obtained in the order in which they were referenced.

- Maximum Contaminant Levels (EPA, 1995a)
- Maximum Contaminant Level Goals (EPA, 1995a)
- Lower of Lifetime Health Advisories or 10^{-6} Cancer Risk Health Advisories (EPA, 1995a)
- EPA Region IX Preliminary Remediation Goals (Tap Water) (EPA, 1995c)

3.2.3 Volatile Organic Compounds

Water screening levels established for VOCs are presented in **Table 3-12.** Sources from which the screening levels were obtained are listed below in the order in which they were referenced:

- OU2 Final Target Groundwater Cleanup Goals (WCC, 1994e)
- Maximum Contaminant Levels (EPA, 1995a)
- Maximum Contaminant Level Goals (EPA, 1995a)
- Lower of Lifetime Health Advisories or 10^{-6} Cancer Risk Health Advisories (EPA, 1995a)
- EPA Region IX Preliminary Remediation Goals (Tap Water) (EPA, 1995c)
- EPA Region III Risk-Based Concentrations (Tap Water) (EPA, 1995b)

The MCL of 0.05 µg/L used as a screening level for 1,2-Dibromoethane is listed as an MCL under the chemical name Ethylene dibromide.

3.2.4 Semi-Volatile Organic Compounds

Table 3-13 lists water screening levels developed for SVOCs. The following list presents sources from which the screening levels were obtained in the order in which they were referenced:

- OU2 Final Target Groundwater Cleanup Goals (WCC, 1994e)
- Maximum Contaminant Levels (EPA, 1995a)
- Maximum Contaminant Level Goals (EPA, 1995a)
- Lower of Lifetime Health Advisories or 10^{-6} Cancer Risk Health Advisories (EPA, 1995a)
- EPA Region IX Preliminary Remediation Goals (Tap Water) (EPA, 1995c)
- EPA Region III Risk-Based Concentrations (Tap Water) (EPA, 1995b)

3.2.5 TRPH

A value of 2.0 mg/L was developed as a water screening level for TRPH. The State of Nebraska LUST Program recommends using this value as a clean-up goal.

3.2.6 BTEX

The State of Nebraska Title 118 sets groundwater clean-up levels at Maximum Contaminant Levels (MCLs) for each respective BTEX constituent. The following are the MCLs (EPA, 1995a):

- Benzene - 5 µg/L
- Toluene - 1,000 µg/L
- Ethylbenzene - 700 µg/L
- Xylene - 10,000 µg/L

3.2.7 PCBs

A value of 0.5 μg/L was developed as a water screening level for PCBs. This value is a MCL (EPA, 1995a).

3.2.8 Nitrates and Nitrites

Values of 10,000 μg/L N as NO_3 and 1,000 μg/L N as NO_2 were used for water screening levels for nitrates and nitrites, respectively. These values are the established MCLs (EPA, 1995a).

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Section 4

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4.1 ANALYTICAL METHODS

The analytical and preparation methods for soil, sediment, wipe sampling, surface water, and groundwater (including HydroPunch® groundwater sampling), are presented in **Table 4-1**. The sample identification designation for the different types of sampling activities is explained in **Table 4-2**. Summary tables of all results for each investigation area are provided in **Appendix A.**

4.2 FIELD ACTIVITIES

4.2.1 Ordnance and Explosive Avoidance Survey

Following the placement of individual Phase I investigation area boundaries, and prior to the initiation of intrusive activities, an OE avoidance survey was performed at all of the Waste Disposal Areas, North Burning Ground, Potential Landfill Area north of the Proving Grounds, Proving Grounds, South Burning Ground, Demolition Ground, and Detonation Craters investigation areas. A report discussing the OE results for Phase I is presented in **Appendix B**.

Using Explosive Ordnance Reconnaissance (EOR) methods, trained and licensed OE survey personnel visually scanned the surface terrain to locate surface ordnance or evidence suggesting the presence of subsurface ordnance. In areas where the visual search was obstructed by heavy vegetation or snow, a Schonstedt GA-72CV (a type of metal detector) was used to locate possible contacts. All observed OE contacts were flagged in place. The position of each contact was recorded on individual investigation area maps and the location was avoided by all personnel.

Following the visual OE survey at sites requiring drill rig access, 10-foot vehicle lanes with a 60 foot "key hole" clearance around the sample location were cleared for drill rig access to the individual boring locations. Access lanes were cleared to a depth of 2 feet with a Schonstedt GA-72CV and staked out with blue flagging. Prior to deep soil sampling, each

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individual soil boring location was cleared to a depth of 15 feet below ground surface (bgs). The Foerster Ferex Ordnance Locator (designated the MK 26 Ordnance Locator) was used for all down-hole ordnance surveys. The MK 26 has a depth clearance capability of 5 feet bgs. Downhole clearance was done by power augering to 5 feet bgs and inserting the MK 26 into the hole and clearing it to 10 feet bgs. If the hole was clear to 10 feet, the hole would be augered to 10 feet bgs, and the MK 26 was again inserted into the hole to clear to 15 feet bgs. After the hole was cleared, the drill rig off-set approximately 1 foot from the cleared location and began drilling. If a shallow or deep soil sampling location could not be cleared at the originally designated point, the location was moved over 2 to 3 feet and the OE clearance was attempted again.

4.2.2 Geophysical Survey

A surface geophysical survey was conducted within the boundaries of the Phase I investigation area at all the Waste Disposal Areas, the Potential Landfill Area north of the Proving Grounds, the Detonation Craters, the Demolition Ground, and the Geophysical Anomaly at Load Line 3. Prior to performance of the geophysical survey, a survey grid with node spacing was established. The geophysical survey was performed to aid in characterizing the subsurface conditions of the investigation areas. Final sampling locations were based on the results of the geophysical survey. When present, sampling locations were located adjacent to an area(s) of subsurface anomaly. If no subsurface anomalies were present based on the geophysical results, the sampling locations were distributed so as to collect representative samples of the entire investigation area. Descriptions of the two types of Electromagnetic (EM) surveys utilized for this investigation are detailed in the following sections. EM contour maps were produced for each geophysical investigation area from the results of the EM survey and are presented in **Appendix C**.

4.2.2.1 Electromagnetic Method Using the Geonics EM-31

EM surveys using the EM-31 were conducted at all the Waste Disposal Areas, the Detonation Craters, the Potential Landfill Area north of the Proving Grounds, the Demolition Ground, the Geophysical Anomaly at Load Line 3, and the Administration Area Underground Storage Tank (UST). The EM method using the Geonics EM-31 provides a rapid means of

measuring the electrical conductivity of subsurface materials, including soil and rock. EM data can aid the characterization of:

- lateral extent of landfill and/or trench materials;
- buried metallic objects;
- depth and thickness of subsurface units;
- soil and rock units, and lateral variations within the units; and
- lateral extent of paleochannels.

The EM method using the EM-31 involves the induction of an electrical current into the earth. A small alternating current is generated by a transmitter coil that transmits a primary, time-varying magnetic field into the ground. Through inductive coupling, the primary magnetic field produces small eddy currents in the subsurface, which in turn, create their own secondary magnetic field. A receiver coil measures both the primary and secondary fields. Changes in magnitude and phase of the individual currents are output as voltages and are related to the subsurface electrical conductivity.

The depth of investigation of the EM-31 is dependent on the mode of operation of the instrument. For this investigation the EM-31 was operated in the vertical dipole mode which provides a maximum depth of penetration of approximately 15 to 18 feet bgs.

The EM-31 measures both the quadrature phase component and the inphase component of the induced magnetic field. The quadrature phase is linearly related to the ground conductivity and therefore directly responsive to geologic variations. The inphase component reading is the ratio of the induced magnetic field to the primary field, and as a result, is more responsive to the presence of metallic objects than the quadrature phase. It should be noted that variations in both the quadrature and inphase readings from some background level are more diagnostic than the absolute value.

Conductivity values for each component of the EM response can be plotted and contoured to evaluate the conductivity variations across the site. Variations in the subsurface conductivity resulting from buried metallic objects are generally manifested by relatively large (greater than 30 mmhos/meter) anomalies. However, these anomalies, as well as smaller ones, can be masked by the interfering effects of surface debris, buried utilities, overhead utilities,

communications equipment, or any large metal structures in close proximity to the survey area.

4.2.2.2 Electromagnetic Method Using the Geonics EM-61

At the suspected UST at the Atlas Missile Area Launch Operations Building, the geophysical investigation also included an EM survey using the Geonics EM-61. The EM-61 is a time domain EM instrument that is specifically designed to detect buried metal objects. The instrument generates rapid EM pulses through a transmitter coil which pulses induce secondary EM fields in the near subsurface. The secondary EM fields induced from moderately conductive subsurface materials (i.e. soil and rock) are of relatively short duration. However, the secondary EM fields induced from metallic objects such as USTs are of relatively long duration. The EM-61 measures this prolonged response from metallic objects after the EM response from conductive earth materials dissipates. This design provides high resolution of metallic targets. The depth of investigation of the instrument is relatively unaffected by site specific subsurface conditions. The instrument is reportedly capable of detecting a single 55-gallon steel drum to a depth of 10 feet bgs.

The EM-61 measures the EM response in milliVolts (mV). Similar to the case with EM-31 data, the variations in EM response readings from some background level are more diagnostic than the absolute values. EM response values can be plotted and contoured to evaluate the variations across the site. Variations in the EM response resulting from buried metallic objects, such as underground storage tanks, are generally manifested by relatively large (greater than 500 mV) anomalies. However, although the EM-61 data are generally less susceptible to interference than the EM-31 data, EM-61 anomalies can be masked by the interfering effects from utility lines or other metallic objects.

4.2.3 Location and Elevation Survey

Following all Phase I sampling activities, all shallow and deep soil sampling locations with the exception of the Load Line buildings and UST investigation areas, were surveyed to North American Datum (NAD-1983) to determine point elevations and location coordinates. Not all soil sampling locations adjacent to the Load Line buildings and UST locations were

surveyed. The sampling points not surveyed were measured with a surveyor's tape in reference to the building adjacent to where the samples were collected.

4.2.4 Soil Sampling

4.2.4.1 Adjacent Soil Sampling

Soil samples were collected adjacent to each Load Line Bomb Production Building and analyzed for explosives and metals. The adjacent soil samples consisted of two discrete samples from 0 to 6 inches and 1 to 2 feet bgs. Analytes included explosives and metals. A complete discussion of the adjacent shallow soil sampling is described in Section 2.3 of CDAP Part II (WCC, 1994c).

Hand augers equipped with 3-inch diameter, 6-inch long stainless-steel buckets were used to collect the adjacent soil samples. Once the sample point was located, the sampling team augered to 6 inches bgs and placed the 0- to 6-inch soil sample in a stainless-steel bowl and mixed thoroughly. Following mixing, the appropriate sample containers were filled. The same collection procedure was used for the 1- to 2-foot sampling interval. Following sample collection, the sampling hole was backfilled with excavated material, and a wooden lath was placed at the sampling location and labeled with the sample designation.

4.2.4.2 Beneath Soil Sampling

Soil samples were collected beneath the concrete floor at each Load Line Bomb Production Building and analyzed for explosives and metals. Analytes included explosives and metals. A complete discussion of the beneath the building soil sampling is described in Section 2.2 of CDAP Part II (WCC, 1994c).

Four locations, situated approximately 5 to 20 feet from the corners of each building (depending on the size of the building), and one discretionary location were sampled in each Bomb Production Building. The discretionary sampling location was selected by visually surveying the building floor for surface features that indicated a potential contaminant transfer to the subsurface, such as cracks in the concrete flooring.

Once each sampling point was located, the concrete flooring was removed using a 6-inch diameter diamond-bit steel concrete core barrel. The beneath soil sample was collected from the uppermost one foot of soil immediately below the concrete flooring or fill/base material with hand augers equipped with 3-inch diameter, 6-inch long stainless-steel buckets. Once the sample was obtained, it was mixed thoroughly, and the appropriate sample containers were filled. Following sample collection, the borehole was refilled to its original surface with concrete, and the sampling location was labeled "WCC-1995" with black spray paint.

4.2.4.3 Shallow Soil Sampling

Shallow soil samples were collected at the Waste Disposal Areas, Load Line Paint Operation Buildings, Demolition Ground, Detonation Craters, Proving Grounds, North and South Burning Grounds, and the Bermed Area. Shallow soil samples were collected in conjunction with deep soil samples at some of the locations (see Section 4.2.4.4). Analytes include explosives, VOCs, SVOCs, metals, and PCBs. A complete discussion of shallow soil sampling is described in Section 2.3 of CDAP Part II (WCC, 1994c).

Hand augers equipped with 3-inch diameter, 6-inch long stainless-steel buckets were used to collect the shallow soil samples. The shallow soil samples consisted of two discrete samples from 0 to 6 inches and 1 to 2 feet bgs at all sampling locations. An additional soil sample was collected from 2 to 3 feet bgs at sample locations where plowed or tilled fields were present. This additional shallow soil sample was collected to determine presence of contamination within the uppermost undisturbed layer of soil.

Once the sample point was located, the sampling team augered to 6 inches bgs and placed the 0- to 6-inch soil sample in a stainless-steel bowl, and mixed thoroughly. Following mixing, the appropriate sample containers were filled. The sampling team then continued augering to the 1- to 2-foot sampling interval. The 1- to 2-foot soil sample was placed in a stainless-steel bowl. The sample container for the VOC analysis was filled first. The remainder of the soil was mixed thoroughly, and the remaining sample containers were filled. In areas where plowed or tilled fields were present, the 2- to 3-foot sample was collected in the same manner as the 1- to 2-foot sample. Following sample collection, the sampling hole was backfilled

with excavated material and a wooden lath labeled with the sample designation was placed at the location.

4.2.4.4 Deep Soil Sampling

Deep soil samples were collected at the Waste Disposal Areas, Demolition Ground, Proving Grounds, Potential Landfill Area north of the Proving Grounds, and the North Burning Ground investigation areas. Analytes include explosives, VOCs, SVOCs, metals, and PCBs. A complete discussion of deep soil sampling is described in Section 2.4 of CDAP Part II (WCC, 1994c).

Deep soil borings were advanced using an All-Terrain Vehicle (ATV) mounted drill rig with 3.75-inch internal diameter (I.D.) Hollow Stem Augers (HSAs) and a 3.5-inch outside diameter (O.D.) split barrel sampler. Soil samples were collected from sampling intervals of 4 to 5 feet, 9 to 10 feet, and 19 to 20 feet bgs. Additionally, at deep soil sample locations, shallow soil samples (0 to 6 inches and 1 to 2 feet bgs) were also collected with the split barrel sampler. The 2- to 3-foot sample was also collected where tilled or plowed fields were present.

Once the sampling point was located, the drill rig set up over the point and the 0- to 6-inch sample was collected with the split barrel sampler. The 1- to 2-foot sample was collected in the same manner, followed by the remaining soil samples from the appropriate sampling intervals. Prior to collection of the laboratory soil sample from the sampler, the drill rig geologist logged the sample for classification purposes, and a boring log was prepared (**Appendix D**). Material from inside the sample "core" was collected for laboratory analysis and field screened with an portable organic vapor analyzer using a Photo ionization detector (PID) manufactured by Hnu Corporation. Any material that appeared to be slough was not removed. The soil samples at each interval were collected by compositing the entire split barrel sampler.

At the Administration, Bomb Booster, and Atlas Missile Area UST locations, soil samples were collected from 0 to 6 inches, 1 to 2 feet, 4 to 5 feet, 9 to 10 feet, and then every 10 feet

from the ground surface downward until groundwater was encountered. Procedures for soil sampling collection are described in the previous paragraphs.

Following sample collection, the borehole was backfilled with drill cuttings to 3 feet bgs. The remaining 3 feet was backfilled to the ground surface with bentonite grout. A wooden lath, labeled with the sample location designation, was then placed at the sampling point.

4.2.5 High Explosives Field Screening

4.2.5.1 Soil Sample Collection

Two composite soil samples were collected at each of the 56 Raw Products Igloo Storage Buildings for HE screening. Each composite sample consisted of a 0- to 1-foot sample collected in an area of exposed ground surface just to the left or the right sides of the igloo concrete pad (facing the igloo). The composite sample was then split. One sample was used for HE screening and one sample held for potential confirmation analysis. Hand augers equipped with 3-inch diameter, 6-inch long stainless-steel buckets were used to collect the soil samples.

Once the two sampling locations were identified, the sampling team augered to 6 inches bgs, placed the 0- to 6-inch soil sample in a stainless-steel bowl and mixed thoroughly. Following mixing, the appropriate sample containers were filled.

4.2.5.2 HE Screening for TNT and RDX

HE screening for 2,4,6-trinitrotoluene (TNT) and Hexahydro-1,3,5-Trinitro-1,3,5-Trizaine (RDX) was performed on each composite soil sample at a field laboratory. Detailed procedures for performing soil extraction and TNT and RDX field screening using the DTECH® TNT and RDX Explosives Test Kits are described in Appendixes A and B of CDAP Part II (WCC, 1994c). Following screening, 10 percent of the samples having negative screening results for the presence of explosives were submitted to the laboratory for explosives analysis.

4.2.6 Wipe Sampling

Wipe samples were collected at each Load Line Bomb Production building from the predominant (north, south, east, and west) building wall surface and at the center and discretionary location of the floor. Wipe samples were also collected at the center point of the floor in each Raw Product Igloo Storage Buildings. All wipe samples were analyzed for explosives. A complete discussion of the wipe sampling procedure is described in Section 2.5 of CDAP Part II (WCC, 1994c).

For each wall sampled, wipe sampling sites consisted of a 100 square centimeter (cm^2) area approximately 5 feet above the floor at the center of the horizontal length of the wall. Floor wipe sampling sites consisted of a 100 cm^2 area in the approximate center of each Bomb Production Building and Raw Product Igloo Storage Building.

Following the visual survey to determine the location of floor surface features which indicated a potential contaminant transfer route to the subsurface, a discretionary floor wipe sample was collected at one of these locations. This location coincided with the discretionary soil sample beneath the Bomb Production Building.

Wipe samples were collected by placing a decontaminated 100 cm^2 Teflon template on the surface to be sampled and placing the acetonitrile saturated gauze flat within the template and wiping in an "S" pattern. Upon the completion of sampling, the gauze was then placed back into the 4 oz. sample container. Following sampling, all wipe sampling locations were marked with "WCC 1995" in black or yellow spray paint just above the sampling location.

4.2.7 Monitoring Well Installation and Development

Two shallow groundwater monitoring wells (MW-63B and MW-64B) were installed during Phase I of the OU3 RI. A complete discussion of the monitoring well installation and development procedures is described in Section 2.9 of CDAP Part II (WCC, 1994c). Well construction details are presented in **Table 4-3**. Boring logs for MW-63B and MW-64B are presented in **Appendix D**. Monitoring well completion diagrams are presented in **Appendix E.**

The monitoring wells were installed in borings advanced with a hydraulic rotary drill rig, with a bit providing a nominal minimum 6-inch diameter hole for the well to be constructed of 2-inch diameter polyvinyl chloride (PVC) well casing. Portable mud pits were used during drilling and bentonite was used when necessary to maintain the borehole stability and to remove drill cuttings from the borehole.

Soil samples were obtained for classification purposes only using nominal 2- and 3-inch diameter stainless-steel split spoon samplers. These samples were logged by the drill rig geologist and a boring log was prepared (**Appendix D**). Once the borehole was advanced to a sufficient depth into the upper fine sand unit, the borehole was reamed to the appropriate diameter for well installation.

The monitoring well was constructed of 2-inch diameter, threaded, flush coupled, Schedule 40 PVC pipe. A ten foot, 2-inch diameter Schedule 40 PVC, 0.010-inch slot screen was used for the shallow wells. Upon placement of the well casing into the hole, a 10-20 silica sand filter pack was tremied into the annular space around the well screen to approximately 3 to 5 feet above the top of the screen. The remaining annulus was grouted to within 5 feet of the ground surface with Pure Gold® grout.

No less than 24 hours after placement of the grout, a 4-inch square protective steel surface casing with a steel locking cap, was installed over the 2-inch diameter well riser pipe. Concrete was placed in the annulus between the protective casing and the borehole, and a surface pad was placed around the protective steel casing. Four protective posts were installed surrounding the completed wells.

A minimum of 48 hours following the well completion, each monitoring well was developed by surging and pumping. A truck mounted drill rig with a snug fitting stainless-steel surge block apparatus was used for surging. During groundwater pumping, field measurements of specific conductivity, pH, temperature, turbidity, and discharge volume were obtained. Development data for wells MW-63B and MW-64B are summarized on the well development forms provided in **Appendix F**.

4.2.8 Groundwater Sampling

4.2.8.1 Groundwater Sampling at Existing Monitoring Wells

As part of the OU3 Phase I investigation, groundwater sampling results were obtained from the Site-Wide Quarterly Groundwater Sampling Program to determine the groundwater chemical characteristics at several of the individual OU3 investigation areas. **Table 2-1** presents a list of the existing monitoring wells sampled, the analytes measured for, the associated investigation area, and the associated quarterly sampling event. The table lists each quarter providing results which fulfill the DQOs listed in the PWP (WCC, 1994a). The table also lists additional quarterly data presented in the PDP used to support the OU3 Phase I. A complete discussion of the groundwater sampling procedure is described in Section 2.9 of CDAP, Part II (WCC, 1994c).

Prior to sampling activities, a water level measurement was obtained and the volume of water needed to purge five well volumes was calculated. A 2-inch diameter submersible pump was set approximately 5 feet below the groundwater surface and allowed to purge. During purging, pH, temperature, and specific conductance of the discharging groundwater were monitored. Measurements of pH, temperature, and conductivity were taken every one-half well volume until three similar readings were obtained.

Following purging, non-VOC samples were collected with the pump. After all non-VOC samples were collected, the pump was removed from the well and VOC samples were collected using a Teflon bailer. Nylon cord was used to lower the bailer into the top of the well screen to collect the water sample for VOC analyses. At the completion of sampling, a final water level measurement was taken and recorded.

4.2.8.2 Groundwater Sampling at Newly Installed Monitoring Wells

Groundwater monitoring well MW-63B was sampled and analyzed for nitrates/nitrites and metals. Groundwater monitoring well MW-64B was sampled and analyzed for explosives, metals, VOCs, and SVOCs. Both monitoring wells were sampled as previously described in Section 4.2.8.1. A complete discussion on the groundwater sampling procedure is described in Section 2.10 of CDAP Part II (WCC, 1994c).

4.2.8.3 Groundwater Sampling by Hydropunch®

Groundwater samples were collected at the UST sites with the HydroPunch® and were analyzed for SVOCs, BTEX, and TRPH. A complete discussion of the HydroPunch® sampling procedure is described in Section 2.11.4 of CDAP Part II (WCC, 1994c).

Once the top of groundwater was reached at each deep soil sampling location at USTs being investigated, the HydroPunch® tool was driven approximately 4 feet into the water-bearing zone with a 140-pound hammer. When the HydroPunch® was at the appropriate depth, it was retracted approximately 2 to 3 inches to allow the groundwater to enter the sampling device. Once an adequate volume of water had flowed into the screen, a small diameter stainless-steel bailer was lowered through the drive pipe into the screened portion of the HydroPunch® and the groundwater sample was collected. When groundwater sampling was completed, the HydroPunch® was removed from the borehole and rinsed before disassembly and cleaning. The borehole was then grouted, via 1-inch tremie, using Environplug® grout to approximately 3 feet bgs and then brought to grade with drill cuttings.

4.2.9 Surface Water Sampling

Surface water samples were collected at three sampling stations along Johnson Creek, one along Clear Creek, and two sampling stations along Silver Creek. All samples were analyzed for explosives, metals, VOCs, and SVOCs. A complete discussion of the surface water sampling procedure is described in Section 2.7 of CDAP Part II (WCC, 1994c).

Samples were collected just below the water surface at the channel thalweg portion of the creek. A clean plastic sampling container was submerged into the water facing upstream and care was taken not to collect sediment. Once the surface water sample was collected, the appropriate sample containers were filled. An additional clean sampling container was filled and used to measure the pH, temperature, and specific conductance of the surface water; and all readings were recorded on the sample collection field sheet.

4.2.10 Sediment Sampling

Sediment samples were collected at three sampling stations along Johnson Creek, one along Clear Creek, and two sampling stations along Silver Creek. All samples were collected at the same location, where surface water samples were taken and analyzed for explosives, metals, VOCs, and SVOCs. A complete discussion of the sediment sampling procedure is described in Section 2.8 of CDAP Part II (WCC, 1994c).

Samples were collected from the top layer (approximately the upper 6 inches) of sediment and from the near left, center, and near right bank of the creek channel at each location. The samples were collected with a stainless-steel spoon, because the water depth in the creek was less than 2 feet. The three samples collected at each sampling station were composited in the field in a decontaminated stainless-steel mixing bowl, and then the appropriate sample containers were filled.

4.2.11 Site-Wide Hazardous Waste Inventory

A Site-Wide hazardous waste inventory was conducted to identify any containerized (drummed, canned, bottled, bagged, or boxed) materials related to past DoD activities that may be present inside former NOP buildings or within 3 feet of the building walls. A walk-through survey was conducted, photographs were taken of potentially hazardous former DoD waste materials, and a hazardous waste inventory field sheet was completed. The inventory was conducted through all Load Line buildings, the Administration Area, the Ammonium Nitrate Plant, the Sewage Treatment Plant, the Atlas Missile Area, and the Bomb Booster Area. Some buildings could not be accessed due to being locked or being occupied by private individuals or industry. Only those buildings that could be accessed were surveyed during the inventory. A complete discussion of the hazardous waste inventory procedure is described in Section 4.22.3 of CDAP Part I (WCC, 1994b).

Section 5

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5.0
SITE-SPECIFIC INVESTIGATIONS

While Sections 1.0 through 4.0 presented an overview of several topics common to the OU3 RI Phase I investigation, Section 5.0 presents site-specific discussions and information. In general, Section 5.0 addresses site-specific RI and Phase I data collection objectives, sample collection activities, analytical results , conclusions, and recommendations.

The site-specific overall RI objectives and Phase I data collection objectives were taken directly from the PWP (WCC, 1994a). Site-specific discussions on sample collection includes types, quantities, and locations of samples collected; field procedures used; and any deviations from the original sampling plans presented in CDAP Part I (WCC, 1994b). For each investigation area, drawings are provided in Volume II which show the Phase I area boundary, sampling locations, and types of samples collected.

Analytical results summary tables are presented in **Appendix A**. Each table presents all chemicals with detectable concentrations. All chemicals with results above their respective screening level are underlined and in bold italic font. Data summary tables are provided in the tables section of Volume I, providing a further summary of the analytical results. For each data summary table, chemicals detected at concentrations greater than the screening level are shown in bold. The maximum concentration and respective sampling location, together with the minimum concentration above the screening level, are listed in separate columns. The maximum concentration detected divided by the chemical-specific screening level is also listed to provide a factor of how much above, or below, the maximum detected concentration is relative to the screening level. A separate column is also provided in the data summary tables which lists the frequency of detection for each chemical detected.

Drawings with analytical results are provided for each investigation area in Volume II. A Volume II drawing list and an overall legend/notes sheet is provided at the beginning of Volume II. For most investigation areas, chemical concentrations (and corresponding sampling depth) above the screening level are shown in text boxes adjacent to the corresponding sampling locations. Sampling locations from previous investigations have also been added to each drawing to provide an indication of total sample coverage for the

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area. At Load Line Bomb Production Buildings, because explosive have already been identified as the primary chemical of concern, metals above screening level were only shown when co-located with explosives above a screening level. In the RI report, all Load Line sampling locations with results above screening level will be displayed. Because of the relatively fewer samples collected, drawings depicting analytical results for Johnson Creek, Clear Creek, Silver Creek and all UST investigation areas show all detected chemical concentrations regardless of results being above or below screening level.

The conclusions sections generally focus on the achievement of the overall data quality, results above screening level, and achievement of Phase I data collection objectives of each investigation area. Based on the results of the Phase I investigation, Phase II activities are recommended for each investigation area when either the data quality objectives or Phase I data collection objectives are considered to be inadequately met or when it is determined that additional sampling is required to meet the overall RI objective. For the purposes of this PDP, the recommendations sections only present a summary of the proposed additional field activities (if necessary) with detailed information provided in the CDAP Part I - Chapter B (WCC, 1996).

5.1 LOAD LINES BOMB PRODUCTION BUILDINGS

The principal operation at the Site was loading bombs in the four Load Lines (**Drawing 1-1**). This activity began in October 1942 and continued through August 1945 with the lines periodically deactivated and reactivated for operational changes. The operation of the lines was terminated in 1945 and reactivated in 1952 for use during the Korean conflict. In 1956, the Site was put on standby notice. Starting in 1958 and continuing through 1971, much of the Site, including the Load Lines, was "excessed" and disposed or sold.

The bomb production at the Load Lines included melt loading and assembly of bombs, shells, warheads, demolition blocks, and practice rockets. Previous investigations of the soils and groundwater in this area indicated that both soils and groundwater contained chemicals that came from these operations. During a Confirmation Study, field screening of soil samples collected from the upper foot of soil in drainage ditches indicated the presence of explosives (USACE, 1989). Soils have also been investigated as part of OU1. Explosives have been

detected in soils adjacent to the Load Lines, primarily in ditches, sumps, and bomb wash pits. The highest concentrations were in the upper foot of soil (Donohue, 1992a). Groundwater in the vicinity of the buildings was investigated for explosive compounds as well as other chemicals as part of the OU2 RI.

5.1.1 Overall RI and Phase I Objectives

5.1.1.1 Overall RI Objectives

The first RI objective is to evaluate whether the soils adjacent to and beneath Load Line Bomb Production Buildings contain explosives and metals attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment. The second RI objective is to evaluate whether the interior building surfaces contain explosives residue at concentrations sufficient to pose an unacceptable risk to human health. Sites which were sampled as part of the OU1 RI were not investigated under OU3.

5.1.1.2 RI Phase I Data Collection Objectives

The RI Phase I data collection objectives were to:

- Evaluate the extent of explosives and metals in the shallow soils adjacent to Load Line Bomb Production Buildings
- Evaluate the extent of explosives in the upper soils beneath Load Line Bomb Production Buildings
- Identify whether explosives are present on Load Line Bomb Production Building wall and floor surfaces and to evaluate their presence using a risk-based approach

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5.1.2 Soil Sampling Adjacent to and Beneath Buildings

5.1.2.1 Sample Collection

Adjacent Soil Samples

Adjacent soil samples to the Bomb Production Buildings on all four Load Lines were collected between January 9 and 28, 1995. The sample locations at the individual Bomb Production Buildings are shown on **Drawings 5-1** through **5-56.** The samples were collected in accordance with the procedures outlined in Section 4.2.4.1. As presented in the CDAP Part I (WCC, 1994b), it was intended that adjacent soil samples would be collected from 77 locations (with two sample depths from each location) at each of the four Load Lines. However, due to the presence of physical obstructions which prevented the access to some sampling locations, not all samples from each of the Load Lines were collected.

With the exception of the proposed sampling locations at the Load Line 1 Cooling Buildings, whenever an obstruction was encountered, an attempt was made to offset the proposed sampling location to within a 10-foot radial distance from its original location. For those locations where a sample could not be obtained within the 10-foot sampling limits, the results obtained from surrounding locations were evaluated and determined to provide adequate coverage to characterize the general area. The areas adjacent to the Load Line 1 Cooling Buildings are covered by several feet of soil from explosion berms which have collapsed, and thus, could not be sampled by means of simply offsetting the original proposed sampling locations. Following completion of the OU3 Phase I investigation, it was discovered that these areas adjacent to the Load Line 1 Cooling Buildings were addressed as part of OU1 RI and would not be addressed under the OU3 RI.

The following table presents a summary of the soil samples adjacent to the Bomb Production Buildings that were not collected during the investigation and presents the reasons the samples were not collected:

LOAD LINE ADJACENT SOIL SAMPLES NOT COLLECTED DURING THE OU3 PHASE I RI

Load Line	Sample I.D.	General Location	Number of Samples	Reason Sample Was Not Collected
Load Line 1	B1A-029 through B1A-035	East side of West Cooling Building	14	Access restricted due to collapse of soil berm
Load Line 1	B1A-041	Northwest corner of West Cooling Building	2	Access restricted by fenced OU1 investigation area
Load Line 1	B1A-042	North side of East Cooling Building	2	Access restricted due to collapse of soil berm
Load Line 1	B1A-050 through B1A-055	West side of East Cooling Building	12	Access restricted due to collapse of soil berm
Load Line 1	B1A-063	Southwest corner of TNT Pouring Building	2	Auger refusal due to concrete
Load Line 1	B1A-073	North side of TNT Screening Building	2	Auger refusal due to concrete
Total for Load Line 1			**34**	
Load Line 2	B2A-073	North side of TNT Screening Building	2	Auger refusal due to concrete
Total for Load Line 2			**2**	
Load Line 3	B3A-063	Southwest corner of TNT Pouring Building	2	Auger refusal due to concrete
Load Line 3	B3A-073	North side of TNT Screening Building	2	Auger refusal due to concrete
Load Line 3	B3A-077	North side of South TNT Service Building	2	Auger refusal due to concrete
Total for Load Line 3			**6**	
Load Line 4	B4A-042	North side of East Cooling Building	2	Auger refusal due to concrete
Load Line 4	B4A-063	Southwest corner of TNT Pouring Building	2	Auger refusal due to concrete
Load Line 4	B4A-073	North side of TNT Screening Building	2	Auger refusal due to concrete
Load Line 4	B4A-077	North side of South TNT Service Building	2	Auger refusal due to concrete
Total for Load Line 4			**8**	
TOTAL NUMBER OF SHALLOW ADJACENT SAMPLES NOT COLLECTED			**50**	

Soil Samples Beneath Bomb Production Buildings

The concrete coring for the soil samples collected beneath the buildings was performed between January 25 and February 9, 1995. The soil samples were collected from beneath the building floors between January 30 and February 11, 1995. All of the samples were collected in accordance with the procedures outlined in Section 4.2.4.2. The locations of the beneath samples collected at the individual Bomb Production Buildings are shown on **Drawings 5-1** through **5-56.** As presented in the CDAP Part I (WCC, 1994b), it was intended that 38 beneath soil samples would be collected from each Load Line. At Load Lines 1 and 3, all 38 samples were collected as planned. At Load Line 2, the two samples beneath the TNT Screening Building (B2B-035 and B2B-036) were not collected because the building has been demolished and is no longer there. At Load Line 4, one sample (B4B-008) was not collected because of an obstruction (which appeared to be a piece of lumber) in a portion of the hole.

5.1.2.2 Summary of Analytical Results

The analytical results for all of the adjacent soil samples and the soil samples collected from beneath the Bomb Production Buildings are presented in **Appendix A.** Detectable concentrations of explosives and metals were reported in the shallow adjacent soil samples and the soil samples from beneath the Bomb Production Buildings at all four Load Lines.

5.1.3 Wipe Sampling

5.1.3.1 Sample Collection

The wipe samples were collected between January 10, 1995 and February 14, 1995. The samples were collected in accordance with the procedures outlined in Section 4.2.6 above. The wipe sample locations at the individual Bomb Production Buildings are presented in **Drawings 5-1** through **5-56.** As presented in the CDAP Part I (WCC, 1994b), it was intended that 78 wipe samples would be collected at each of the four Load Lines. At Load Lines 3 and 4, 78 samples were collected as planned. At Load Line 1, 8 wipe samples were not collected because the walls have been removed from the Nose Pouring Building and the East Cooling Building. At these buildings, only the center floor and the discretionary floor

samples were collected. At Load Line 2, 6 wipe samples were not collected because the TNT Screening Building had been completely removed.

5.1.3.2 Summary of Analytical Results

The analytical results for the samples collected at the Bomb Production Buildings are presented in **Appendix A**. In the tables, all of the chemical compounds with values above the screening levels are underlined and in bold text.

5.1.4 Conclusions

5.1.4.1 Overall Data Quality Assessment

For the soil samples collected adjacent to and beneath the Bomb Production Buildings, the overall data quality assessment indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of a majority of the antimony results based on low matrix spike recoveries and several tetryl results based on low Laboratory Control Sample (LCS) recovery. Resampling for tetryl in soil was performed on August 29 and 30, 1995. This resampling was performed to address the rejected tetryl results. Overall completeness for each Load Line was greater than the CDAP Quality Assurance (QA) objective of 90 percent. Completeness, as defined in CDAP Part III (WCC, 1994d), is determined by the total number of data which are judged to be valid by data validation and is expressed as a percentage of all data collected.

For the wipe samples collected on wall and floor surfaces at Bomb Production Buildings, the overall data quality assessment indicated that precision and comparability were acceptable. Accuracy was impacted by the rejection of a combined total of 360 results based on low blank spike/blank spike duplicate (BS/BSD) matrix spike recoveries. Overall completeness for Load Line 1, 3, and 4 were greater than the CDAP QA objective of 90 percent. The overall completeness for Load Line 2 was 75.8 percent, less than the CDAP QA objective of 90 percent. Resampling was performed on August 31, 1995 to address the rejected results.

5.1.4.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the soil samples adjacent to the Load Line Bomb Production Buildings is presented in **Tables 5-1** through **5-4**. A summary of the analytical data for the soil samples collected from beneath the Bomb Production buildings is presented in **Tables 5-5** through **5-8**.

The results for explosives detected at concentrations greater than the soil screening levels are presented in **Drawings 5-57** through **5-75**. Metals concentrations which were above screening levels were only presented on drawings at locations where explosives were also detected above screening levels. A summary of the specific explosives detected at concentrations greater than the soil screening levels at each of the Load Lines is presented in **Table 5-13**.

Adjacent Soil Samples

Load Line 1

Explosive compounds were detected at concentrations greater than screening levels at 12 of the 60 adjacent soil sample locations at Load Line 1. Of the 112 soil samples (from 60 separate locations) collected adjacent to the buildings at Load Line 1, only 14 individual samples displayed concentrations above the soil screening levels. The primary explosive compound detected above the screening level at Load Line 1 was TNT. Of the 12 sample locations with explosives above the screening levels, only three contained explosives above the screening level in the 1- to 2-foot sample. The remainder of the detections were in the 0- to 6-inch bgs samples. As shown on **Table 5-9**, only one sample location of the 60 sampled at Load Line 1 displayed an increase in explosives concentrations with depth. The explosives were generally detected above the screening level in the soils at the Amatol Screening Building, Amatol Melt Building, the Ammonium Nitrate Service Building, the West Cooling Building, and the TNT Pouring Building.

A total of 112 adjacent soil samples from Load Line 1 were analyized for 22 different metals. The metals which were detected above soil screening levels and the corresponding percentage of samples with detections exceeding the screening levels are as follows: aluminum (1%),

arsenic (1%), barium (3%), beryllium (1%), cadmium (52%), chromium (2%), cobalt (1%), copper (7%), lead (1%), manganese (2%), nickel (1%), selenium (25%), thallium (1%), vanadium (1%), and zinc (15%). None of the metals were detected at concentrations which exceed both a published RBC/PRG value and the average background level.

Load Line 2

Explosive compounds were detected at concentrations greater than the screening levels at 8 of the 76 adjacent soil sample locations at Load Line 2. Of the 152 soil samples collected adjacent to the buildings at Load Line 2, only 13 individual samples displayed concentrations above the soil screening levels. The primary explosive compounds detected above the screening levels at Load Line 2 were RDX and TNT. Of the 8 sample locations with explosives above the screening levels, five contained explosives above the screening level in the 1- to 2-foot bgs sample. The remainder of the detections were in the 0- to 6-inch bgs samples. As shown on **Table 5-10** only three sample locations of the 76 sampled at Load Line 2 displayed an increase in explosives concentrations with depth. Explosives were detected above the screening level in the soils at the Amatol Melt Building, the Ammonium Nitrate Service Building, the East Cooling Building, and the West Cooling Building.

A total of 152 adjacent soil samples from Load Line 2 were analyized for 22 different metals. The metals which were detected above soil screening levels and the corresponding percentage of samples with detections exceeding the screening levels are as follows: arsenic (1%), barium (1%), cadmium (50%), chromium (1%), copper (11%), lead (13%), manganese (1%), nickel (2%), selenium (29%), and zinc (23%). Lead was the only metal detected at concentrations which exceed both a published RBC/PRG value and the average background level.

Load Line 3

Explosive compounds were detected at concentrations greater than the screening levels at 12 of the 74 adjacent soil samples locations at Load Line 3. Of the 148 soil samples collected adjacent to the buildings at Load Line 3, only 16 individual samples displayed concentrations above the soil screening levels. The primary explosive compounds detected above the screening level at Load Line 3 were RDX and TNT. Of the 12 sample locations with

explosives above the screening levels, 4 contained explosives above the screening level in the 1- to 2-foot bgs sample. The remainder of the detections were in the 0- to 6-inch bgs samples. As shown on **Table 5-11,** only two sample locations of the 74 sampled at Load Line 3 displayed an increase in explosives concentrations with depth. Explosives were detected above the screening level in the soils at the Amatol Melt Building, the Ammonium Nitrate Service Building, the East Cooling Building, the West Cooling Building, and the TNT Pouring Building.

A total of 148 adjacent soil samples from Load Line 3 were analyized for 22 different metals. The metals which were detected above soil screening levels and the corresponding percentage of samples with detections exceeding the screening levels are as follows: barium (1%), cadmium (44%), copper (6%), lead (3%), nickel (3%), selenium (38%), thallium (1), and zinc (20%). Lead was the only metal detected at concentrations which exceed both a published RBC/PRG value and the average background level

Load Line 4

Explosive compounds were detected at concentrations greater than the screening levels at 6 of the 73 adjacent soil sample locations at Load Line 4. Of the 146 soil samples collected adjacent to the buildings at Load Line 4, only 7 individual samples displayed concentrations above the soil screening levels. The primary explosives compound detected above the screening level at Load Line 4 was RDX. Of the 6 sample locations with explosives above the screening levels, 2 contained explosives above the screening level in the 1- to 2-foot bgs sample. The remainder of the detections were in the 0- to 6-inch bgs samples. As shown on **Table 5-12,** only one sample location of the 73 sampled at Load Line 4 displayed an increase in explosives concentrations with depth. Explosives were detected above the screening level in the soils at the Amatol Melt Building, the North TNT Service Building, the East Cooling Building, and the TNT Pouring Building.

A total of 146 adjacent soil samples from Load Line 4 were analyized for 22 different metals. The metals which were detected above soil screening levels and the corresponding percentage of samples with detections exceeding the screening levels are as follows: aresenic (1%), cadmium (53%), chromium (1%), copper (5%), nickel (1%), selenium (46%), and zinc (16%).

None of the metals were detected at concentrations which exceed both a published RBC/PRG value and the average background level.

Beneath Soil Samples

Load Line 1

A total of 38 samples were collected from beneath the building floors at Load Line 1. TNT was the only explosive compound detected at concentrations greater than the soil screening level in the beneath soil samples at Load Line 1. The detection of TNT above the screening level was in one sample (B1B-016) from the Ammonium Nitrate Service Building. For metals, cadmium, copper, and selenium were detected at concentrations greater than the soil screening levels in the beneath soil samples at Load Line 1.

Load Line 2

A total of 36 samples were collected from beneath the building floors at Load Line 2. Three explosive compounds [TNT,1,3,5-trinitrobenzene (TNB) and RDX] were detected at concentrations greater than the soil screening level in one beneath soil sample at Load Line 2. The explosives were detected in sample B2B-025 at the northwest sample in the East Cooling Building. No explosives were detected at concentrations greater than the screening level in any of the other soil samples collected at Load Line 2. For metals, cadmium and selenium were the only metals detected at concentrations greater than the soil screening levels in the beneath soil samples from the buildings at Load Line 2.

Load Line 3

A total of 38 samples were collected from beneath the building floors at Load Line 3. 2,4-DNT was the only explosive compound detected at a concentration greater than the soil screening level in the beneath soil samples at Load Line 3. The detection of 2,4-DNT above the screening level was in one sample (B3B-038) from the South TNT Service Building. For metals, cadmium and selenium were the only metals detected at concentrations greater than the soil screening levels in the beneath soil samples at Load Line 3.

Load Line 4

A total of 37 samples were collected from beneath the building floors at Load Line 4. No explosives were detected at concentrations greater than the soil screening levels in the beneath soil samples collected at Load Line 4. For metals, cadmium, cooper, and selenium were the only metals detected at concentrations greater than the soil screening levels in the beneath soil samples from Load Line 4.

Wipe Samples

The detected concentrations of explosives in wipe samples collected from individual Bomb Production Buildings are presented in **Tables 5-13** through **5-16**.

An approach was proposed and presented in the PWP (WCC, 1994a) which would be used to develop risk based screening levels using wipe samples for eliminating buildings with minimal risks from future risk assessment. This approach was originally used by the EPA for deriving surface cleanup levels for the PCB Spill Cleanup Policy (40 CFR Part 261) and was developed exclusively for the evaluation of potential carcinogenic effects of PCBs. Screening levels based on carcinogenic risks could not be used to eliminate any building from future risk assessment because the nitroaromatic compounds found on building surfaces are non-carcinogenic. However, these compounds exhibit a high degree of toxicity. As a result, all buildings which exhibited measurable levels of explosives in wipe samples will be evaluated in the future for inclusion as a part of a potential risk assessment. The model presented in the PWP is being modified to more accurately estimate noncarcinogenic risks associated with the site conditions.

5.1.4.3 Achievement of Phase I Data Collection Objectives

Soil samples were collected adjacent to Load Line Bomb Production Buildings in accordance with the procedures presented in the CDAP Part II (WCC, 1994c). While site-specific access restrictions prevented the collection of 50 of the 616 planned samples, the total number of samples collected are considered sufficient to address the Phase I data collection objectives and develop recommendations for additional sampling (if necessary). Explosives and metals were detected at concentrations greater than their associated soil screening levels. The extent

of contamination in the soils adjacent to the Load Line Bomb Production Buildings could not be fully determined. Therefore, the Phase I data collection objective was not achieved. However, the Phase I data collection objectives will be satisfied during remedial action associated with OU1 which will include these soils.

With the exception of the Load Line 2 TNT Screening Building, all soil samples collected beneath the Load Line Bomb Production Buildings were collected in accordance with the CDAP (WCC, 1994b and c). Explosives were detected in concentrations above the soil screening level at only three isolated beneath soil sampling locations. Results from soil samples in the vicinity of each of these isolated beneath soil sample locations indicate that the extent of contamination is limited. Therefore, the Phase I data collection objective was achieved for all buildings sampled as part of the Phase I investigation. The two soil samples beneath the Load Line 2 TNT Screening Buildings were not collected due to field judgement once the building has been demolished and is no longer present. These samples will be collected during the Phase II investigation at the Site in order to complete the Phase I data collection objectives for the investigation area.

Wipe samples were collected from the surface walls and flooring of the Load Line Bomb Production Buildings in accordance with the CDAP (WCC, 1994b and c). Explosives were detected in nearly every wipe sample. Because screening levels developed from the EPA model presented in the PWP (WCC, 1994a) cannot account for potentially significant non-carcinogenic effects of the explosives, this model could not be used to eliminate any building from future risk assessment. Since no building can be excluded on the basis of non-detection of explosives, all Phase I data collection objectives for wipe samples were achieved.

5.1.5 Recommendations

Based on the results of the Phase I investigation at the Load Line Bomb Production Buildings, all adjacent soil samples with explosive concentrations above the soil screening level also met the criteria for soils to be remediated under OU1. This criteria includes soil within the upper 4 feet with explosive concentrations above the OU1 Remediation Goals (RGs) listed in the OU1 Record of Decision (ROD) (USACE, 1995). Therefore, those soils identified during the OU3 Phase I which met the OU1 RGs will be included in the OU1

remediation according to the OU1 ROD (USACE, 1995). The additional volumes to be remediated and the revised limits of excavation will be presented in the OU1 Remedial Design.

Table 5-17 lists ranges of metal concentrations detected in previous investigations at the Load Lines. In general, the metal concentrations detected in the OU3 RI Phase I are similar to those detected in previous investigations.

At areas where the extent of explosives contamination was not thoroughly defined, confirmation sampling will be performed during the OU1 remediation to ensure that the areal extent of explosives contamination is remediated.

Based on the results of the beneath soil sampling and surface wipe sampling, and since all adjacent soil samples with explosive concentrations above the soil screening level will be remediated under OU1, no additional sampling is required to address the overall RI objectives. Therefore, no Phase II investigation of the soils beneath the Bomb Production Buildings is recommended. The proposed beneath samples at the Load Line 2 TNT Screening Building will be collected during the Phase II investigation at the Site in order complete the Phase I data collection objectives. Samples will be collected at the Load Line 2 TNT Screening Building as described in the CDAP Part I-Chapter B (WCC, 1996).

The EPA model presented in the PWP (WCC, 1994a) was proposed as a method for evaluating risk associated with the dermal exposure to contaminated walls and floors. However, this model was originally developed to support the PCB Spill Cleanup Policy (40 CFR Part 261) and was developed specifically to address the carcinogenicity of PCBs. For most of the carcinogens, including PCBs, significant cancer risks usually occur at the lower dosage levels when compared to the non-cancer health effects, and thus, are the determining factor in setting cleanup goals. However, in the case of several of the nitroaromatic explosives, which have low Reference Doses, possible significant non-carcinogenic effects would occur at very low doses. Because the EPA model considers only a total lifetime intake rather than a daily intake, it would not adequately address non-cancer health effects. It is therefore recommended that an alternative model be developed which would evaluate possible non-cancer health effects of contaminants on Load Line Bomb Production Buildings

walls and floors. EPA, NDEQ, and UNL will be provided a schedule that outlines the anticipated submittal of a model using the results of the wipe sampling including any impacts on the submittal of risk assessment documents.

5.2 LOAD LINES PAINT OPERATIONS BUILDINGS

Painting operations were performed on each of the four Load Lines. On each Load Line, the Receiving and Painting Building is located south of the Inert Storage Building. The Paint Storage and Mixing Building is located east of the Receiving and Painting Building. A Paint Storage Building is also located west of the Assembly, Pack, and Shipping Building (Donohue, 1992a).

Previous investigations have verified the presence of metals in soil near the Paint Operation Buildings. During the Confirmation Study, a soil sample collected adjacent to a Paint Storage Building in Load Line 1 contained lead of concentrations greater than background concentrations (USACE, 1989). During the OU1 RI, soil samples collected from the upper two feet of soil near the Receiving and Painting Buildings in all Load Lines contained concentrations of lead, barium, and chromium at concentrations greater than background concentrations. During a later phase of OU1, lead was detected above background concentrations in soil samples collected from the upper foot of soil near the Painting and Receiving Building in all Load Lines, and of chromium was detected at concentrations greater than background in a shallow sample collected near the Painting and Receiving Building in Load Line 2 (Donohue, 1992a).

5.2.1 Overall RI and Phase I Objectives

5.2.1.1 Overall RI Objectives

The first RI objective is to evaluate whether the soils at Paint Operations Buildings contain metals attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment. The second RI objective is to evaluate the potential for metals contamination in the groundwater attributed to past DoD-related activities. The third RI objective is to determine local background levels for metals in

groundwater. Soils beyond the boundaries of individual Paint Operations Building investigation areas are being addressed in OU1.

5.2.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objectives were to:

- Evaluate the extent of metals in shallow soils at Paint Operations Buildings (Receiving and Painting Buildings, and North and South Storage Buildings)
- Identify whether metals are present in groundwater near the vicinity of Paint Operations Buildings
- Determine local background levels for metals in groundwater

5.2.2 Shallow Soil Sampling

5.2.2.1 Sample Collection

The shallow soil samples adjacent to the Paint Operations Buildings were collected between January 11 and 29, 1995. The locations for the samples collected at the Paint Operation Buildings are presented on **Drawings 5-76** through **5-87**. As presented in the CDAP Part I (WCC, 1994b), it was intended that samples would be collected from 29 locations (58 total samples at two depth intervals) at each Load Line. All of the samples at Load Lines 1 and 4 were collected as planned. At Load Lines 2 and 3, samples from P2A-014 and P3A-014 (on the east side of the Paint Storage and Mixing Building) were not collected because the areas were covered with a concrete sidewalk.

5.2.2.2 Summary of Analytical Results

The analytical results for all of the samples collected at the Paint Operations Buildings are presented in **Appendix A.** Detectable concentrations of metals were reported in the soil samples collected at the Paint Operation Buildings at each of the four Load Lines.

5.2.3 Groundwater Sampling At Existing Monitoring Wells

Groundwater sampling of existing monitoring wells was performed to identify whether metals are present in the groundwater downgradient of the Paint Operations Buildings and to determine local background levels for metals in groundwater. The monitoring well locations are shown on **Drawing 5-88**.

5.2.3.1 Sample Collection

The groundwater samples collected for the OU3 investigation were collected as part of the on-going Quarterly Groundwater Sampling Program at the Site. Groundwater samples were collected from the wells in December 1994 and in March 1995.

5.2.3.2 Summary of Analytical Results

The analytical results for all of the groundwater samples collected at the existing monitoring wells downgradient of the Paint Operations Buildings are presented in **Appendix A**. Detectable concentrations of total and dissolved metals were reported in the groundwater samples collected at the monitoring wells downgradient of the Paint Operations Buildings at each of the four Load Lines.

5.2.4 Conclusions

5.2.4.1 Overall Data Quality Assessment

The overall data quality assessment for soil samples collected at Paint Operations Buildings indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of a combined total of 70 antimony results based on low matrix spike recoveries. Overall completeness for each Load Line was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.2.4.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the soil samples collected from the Paint Operations Buildings is presented in **Tables 5-18** through **5-21**. The summary analytical data for the groundwater samples collected from the existing monitoring wells is summarized in **Table 5-22**, **Table 5-23,** and **Appendix A**. The summary analytical data for the background monitoring wells is summarized in **Table 5-24** and **Table 5-25**.

Soil samples

Approximately 8 to 10 individual metals were detected at concentrations greater than the soil screening levels in samples from each of the Load Lines. These metals included, antimony, barium (Load Line 3 only), cadmium, chromium, cobalt (Load Lines 2 and 3 only), copper, lead, nickel (Load Lines 2, 3, and 4 only), selenium, thallium (Load Lines 1 and 2 only), and zinc. A majority of the metals with results above screening level were from the 0- to 6-inch sampling interval. Concentrations for metals above screening levels are shown on **Drawings 5-76** through **5-87**.

Load Line 1

At Load Line 1, 24 of the 58 samples collected displayed metals one or more metals at concentrations greater than the screening levels. The metals which were detected above screening levels and the corresponding percentage of samples with detected concentrations exceeding the screening levels are as follows: antimony (3%), cadmium (21%), chromium (5%), copper (5%), lead (2%), nickel (3%), selenium (24%), and zinc (10%). Lead was the only metal detected at concentrations which exceed both a published RBC/PRG value and the average background level.

Load Line 2

At Load Line 2, 23 of the 56 samples collected displayed metals one or more metals at concentrations greater than the screening levels. The metals which were detected above screening levels and the corresponding percentage of samples with detected concentrations exceeding the screening levels are as follows: antimony (2%), arsenic (2%), cadmium (27%),

chromium (4%), cobalt (2%), copper (5%), lead (4%), nickel (4%), selenium (27%), thallium (2%), and zinc (11%). Chromium and lead were the only metals detected at concentrations which exceed both a published RBC/PRG value and the average background level.

Load Line 3

At Load Line 3, 29 of the 56 samples collected displayed metals one or more metals at concentrations greater than the screening levels. The metals which were detected above screening levels and the corresponding percentage of samples with detected concentrations exceeding the screening levels are as follows: antimony (2%), barium (2%), cadmium (20%), chromium (11%), cobalt (4%), copper (9%), lead (4%), nickel (4%), selenium (34%), and zinc (9%). Chromium and lead were the only metals detected at concentrations which exceed both a published RBC/PRG value and the average background level.

Load Line 4

At Load Line 4, 31 of the 58 samples collected displayed metals one or more metals at concentrations greater than the screening levels. The metals which were detected above screening levels and the corresponding percentage of samples with detected concentrations exceeding the screening levels are as follows: antimony (3%), cadmium (38%), chromium (5%), copper (2%), lead (2%), selenium (28%), thallium (2%), and zinc (10%). Lead was the only metal detected at concentrations which exceed both a published RBC/PRG value and the average background level.

Groundwater Samples

Manganese was the only total metal detected at concentrations greater than the screening level in the groundwater samples collected from the existing wells downgradient of the Paint Operations Buildings. The manganese concentration above screening level was detected in one well (MW-15A) at Load Line 3.

The only dissolved metal detected at concentrations greater than the screening level was thallium. Dissolved thallium was detected at concentrations greater than the screening level in four monitoring wells.

5.2.4.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objectives for the Paint Operations Buildings were to evaluate the extent of metals in the shallow soil, to identify whether metals are present in the groundwater, and to determine the background levels of metals in the groundwater at the Site.

With the exception of two individual soil sampling locations which could not be accessed at Load Lines 2 and 3, all other soil and groundwater samples were collected in accordance with the CDAP (WCC, 1994b and c). For all Load Lines combined, metals above screening level were detected in 107 of a total of 228 samples. Nearly all samples with metals above screening level were from the 0- to 6-inch sampling interval and at isolated locations. Groundwater samples were collected from existing monitoring wells downgradient from the buildings and from existing background monitoring wells. Based on the analytical results for the soil samples and on the groundwater sampling activities performed during the investigation, the Phase I data collection objectives for the Paint Operations Buildings were achieved.

5.2.5 Recommendations

Based on the results of the Phase I investigation, no additional sampling is required to address the overall RI objective. Therefore, no Phase II investigation is recommended. All results from the Phase I investigation will be presented in the RI report.

5.3 IGLOO STORAGE AREAS RAW PRODUCT STORAGE BUILDINGS

High explosives raw products used in the manufacture of ordnance were stored in igloos shown on **Drawing 5-89** and **Drawing 5-90**. Fifty-nine igloos were originally located north of Load Line 2 and fifty-eight were originally located north of Load Line 3 (Donohue, 1992a). Currently, thirty-six igloos are present north of Load Line 2 and twenty are present north of Load Line 3. No previous investigations concerning explosives contamination at the Igloo Storage Areas had been performed.

5.3.1 Overall RI and Phase I Objectives

5.3.1.1 Overall RI Objectives

The RI objective at the Igloo Storage Areas is to evaluate whether the soils contain explosives attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment.

5.3.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objectives were to:

- Identify whether explosives are present in upper soils adjacent to igloos by means of high explosives (HE) screening, and, if explosives are present. Evaluate the extent of explosives and metals in the shallow soil at the igloos.

- Identify whether explosives are present on igloo building floors

5.3.2 Initial High Explosive Screening and Confirmation Sampling

5.3.2.1 Sample Collection

Samples for HE screening were collected from two locations at each of the Raw Product Igloo Storage Buildings. With 56 Raw Product Igloo Storage Buildings remaining at the Site, it was intended that a total of 112 soil samples (two at each igloo) would be collected for HE screening. However, at two locations (IGS-100 and IGS-111), samples were not collected due to the presence of rock and/or concrete immediately below the ground surface. Therefore, the total number of samples collected for HE screening was 110. The HE Screening samples were collected between January 9 and 18, 1995. The locations of the shallow soil samples are presented on **Drawing 5-89** and **Drawing 5-90**. At each igloo, the samples were collected 5 feet north of the concrete abutment at the entry-side corners of the igloos (**Drawing 5-91** and **Drawing 5-92**). Each shallow sample consisted of soil collected from 0 to 1 foot bgs. Each sample was split with one sample used for HE screening and one

sample retained for possible laboratory confirmation analysis. The HE screening was performed in accordance with the procedures outlined in Section 4.2.5.

From the group of samples displaying negative (below 0.5 parts per million (ppm)) HE screening results, 12 samples (approximately 10 percent) were randomly selected to be submitted for laboratory confirmation analyses. The purpose of submitting the samples with negative results was to confirm the results obtained during the HE screening process. As presented in Section 4.17.3.1 of the CDAP Part I (WCC, 1994b), it was intended that the confirmation samples would be analyzed for explosives and metals. However, the samples were analyzed for explosives only. Confirmation samples were not analyzed for metals due to field error. The samples submitted for laboratory analysis were as follows:

IGN-031	IGN-056	IGN-084
IGN-032	IGN-060	IGN-106
IGN-036	IGN-080	IGN-107
IGN-040	IGN-081	IGN-109

5.3.2.2 Summary of Screening and Analytical Results

HE Screening

None of the 110 samples screened positive (above 0.5 ppm) for RDX. Two of the 110 samples screened positive (above 0.5 ppm) for TNT (**Drawing 5-89** and **Drawing 5-90**).. These include:

Sample I.D.	General Location	TNT Screening Results (ppm)
IGS-039	Igloo Storage Area North of Load Line 2	>5.0
IGS-073	Igloo Storage Area North of Load Line 3	4.0 - 5.0

Laboratory Analytical Results

The analytical results for the 12 confirmation samples submitted to the laboratory for analysis are presented in **Appendix A**. Of the samples for which concentrations were reported above the detection limit by the analytical lab, only one sample (IGN-032) contained concentrations of RDX above the lower limit of the assay range of the field instrument used to perform the HE screening in the field lab. RDX was detected in IGN-032 at a concentration of 1.4 mg/kg (ppm). This concentration is well below the soil screening level of 5.8 mg/kg for RDX. The laboratory detection for RDX was 0.75 mg/kg and the lower limit of the assay range for the field lab instrument was 0.5 mg/kg. A data summary table for confirmation soil samples above screening levels is presented in **Table 5-26**.

5.3.3 Additional High Explosive Screening and Soil Sampling

As previously mentioned, two samples displayed positive results using the HE screening method. Five additional soil samples were collected near each of the original sample locations (10 samples total). Although the additional sampling was not included as part of the Phase I investigation CDAP I, the sampling was performed during the Phase I investigation (while the field HE screening laboratory was set up and operating) in order to define the lateral and vertical extent of contamination in these areas.

5.3.3.1 Sample Collection

The additional soil samples were collected on January 17, 1995 using the procedures outlined in Section 4.2.5. Each of the 10 samples was split, with one sample used for HE screening and one sample submitted to the laboratory for explosives analysis. The locations of the additional samples are shown on **Drawing 5-91** and **Drawing 5-92**. The additional sample locations are summarized in the following table:

For the wipe samples, the overall data quality assessment indicated that precision, accuracy, representativeness, and comparability were acceptable. Overall completeness was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.3.4.5 Analytical Results Above Applicable Screening Level Guidlines

A data summary table for both the confirmation and additional soil samples is presented in **Table 5-27**. None of the samples submitted from the confirmation sampling or the additional soil samples had results which exceeded any of the screening levels for explosives in soil.

5.3.4.6 Achievement of Phase I Data Collection Objectives

The Phase I data collection objectives for the Igloo Storage Area were to evaluate whether explosives are present in the soils adjacent to Raw Product Igloo Storage Building and on the igloo floor surfaces. All soil and wipe samples were collected in accordance with the CDAP (WCC, 1994b and c). Additional soil sampling was performed to verify the presence of explosives based on HE screening results.

Based on the analytical results for the soil and wipe samples collected, the Phase I data collection objectives for explosives at the Raw Product Igloo Storage Buildings were achieved. Soil samples will be collected at the Phase I confirmation sampling locations and analyzed for metals in order to complete the Phase I data collection objectives for the investigation area.

5.3.5 Recommendations

Based on results of the Phase I investigation, no additional sampling is required to address the overall RI objective. The proposed soil samples at the Igloo Storage Buildings will be collected during the Phase II investigation at the site in order to complete the Phase I data collection objectives. All results from the Phase I investigation will be presented in the RI report.

As stated under the recommendations section for Load Line Bomb Production Buildings (Section 5.1.5), it is recommended that prior to the performance of the Baseline Risk

Assessment, an alternative model be developed for evaluating potential non-carcinogenic effects of contaminants on the floors of the Raw Products Igloo Storage Buildings.

5.4 TETRYL PELLETING BUILDING

The Tetryl Pelleting Building is located within the Bomb Booster Area in the northwest portion of the Site (**Drawing 1-1**). The Bomb Booster Area was a separate Load Line used by the Army to produce and load tetryl boosters for the detonation of bombs. Tetryl was screened and pelleted in the Tetryl Pelleting Building prior to booster assembly (ESE, 1983). After operation by the Army, the majority of this Bomb Booster Area structures were used until recently as a fireworks factory. Fireworks supplies and equipment have been scattered throughout the building since the fireworks company abandoned the facility. Black powder has been observed on the walls. The facility is currently under the supervision of the State Fire Marshall and the State Highway Patrol (TCT, 1991). Tetryl was found in Bomb Booster Area soils. TNT, the only other compound identified from area soils, was present in trace amounts (USACE, 1991). The groundwater downgradient of the immediate vicinity of the Bomb Booster Area was previously investigated as part of the OU2 RI and will continue to be monitored as part of the Site-Wide Quarterly Groundwater Sampling Program.

5.4.1 Overall RI and Phase I Objectives

5.4.1.1 Overall RI Objectives

The RI objective is to evaluate whether the soils adjacent to the concrete drain on the east side of the Tetryl Pelleting Building contained explosives and metals attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment.

5.4.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objectives were to evaluate the extent of explosives and metals in the shallow soils at the Tetryl Pelleting Building.

5.4.2 Shallow Soil Sampling

5.4.2.1 Sample Collection

Shallow soil samples at the Tetryl Pelleting Building were collected on January 30, 1995. The samples were collected in front of doorways immediately adjacent to the approximately 1-foot wide concrete drainage on the east side of the building. The six sample locations are shown on **Drawing 5-93**. At each location, one sample was collected from 0 to 6 inches bgs, and one sample was collected from 1 to 2 feet bgs. All of the samples were collected in accordance with the procedures outlined in Section 4.2.4.3. All of the samples were analyzed for explosives and metals.

5.4.2.2 Summary of Analytical Results

Analytical results for all of the samples collected at the Tetryl Pelleting Building are presented in **Appendix A.** Detectable concentrations of explosives and metals were reported in the soil samples collected at the Tetryl Pelleting Building.

5.4.3 Conclusions

5.4.3.1 Overall Data Quality Assessment

The overall assessment of the data reported for Tetryl Pelleting Building indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 8 tetryl results and 8 antimony results based on low LCS and matrix spike recoveries, respectively. Resampling for tetryl in soil was performed on August 31, 1995 to address the rejected tetryl results. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

Previous investigations have identified explosives, metals, VOCs, and SVOCs as chemicals of concern. During a Preliminary Survey (TCT, 1991), a geophysical survey was performed, and soil samples were collected for analysis. The geophysical survey identified 99 ferrous contacts, 3 non-ferrous contacts, and 4 large areas of ferrous concentration. Two 18-inch deep trenches were excavated. No ordnance was found, but a layer of ash was visible 6 inches below grade.

5.5.1 Overall RI and Phase I Objectives

5.5.1.1 Overall RI Objectives

The RI objective for the North Burning Ground is to evaluate whether the soils contain metals, VOCs, and SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment. Samples collected during the OU3 RI were not analyzed for explosives because the explosive contaminated soils in this area are being investigated under the OU1 investigation.

5.5.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objective was to evaluate the extent of metals, VOCs, and SVOCs in shallow and deep soils at the North Burning Ground.

5.5.2 Ordnance and Explosive Avoidance Survey

The OE avoidance survey was performed within the Phase I investigation boundary on March 3 and 17, 1995 by OE personnel. The OE survey was performed to clear access routes for personnel and equipment necessary to collect the shallow soil samples as well as drill and sample the deep soil borings in the area. All OE clearance activities were conducted in accordance with the procedures outlined in Section 4.2.1.

An OE avoidance survey was performed for 10-foot access lanes between the shallow soil sampling locations and at the sampling locations to a depth of 2 feet bgs. A Schonstedt GA-72CV was used to perform the clearance to the 2-foot depth. A 60 foot "key hole" access lane was cleared to each of the two shallow and deep soil sampling locations for drill

rig access with the Schonstedt GA-72CV. Downhole clearance at each boring location was done by OE personnel with the MK 26 Ordnance Locator to a depth of 15 feet bgs.

No ordnance items or explosive materials were detected during the OE avoidance survey conducted at the North Burning Ground.

5.5.3 Shallow and Deep Soil Sampling

5.5.3.1 Sample Collection

Shallow soil samples were collected between March 26 and 29, 1995. The samples were collected in accordance with the procedures outlined in Section 4.2.4.3. Shallow samples were collected at twelve locations (24 samples total). At the two deep soil boring locations, the shallow soil samples were collected in conjunction with the soil boring activities.

Soil borings (NGA-005 and NGA-007) were drilled on March 28, 1995, and the boring logs are presented in **Appendix E**. The deep soil samples were collected in accordance with Section 4.2.4.4.

Locations of the samples collected at the North Burning Ground are presented in **Drawing 5-94**. All of the samples were analyzed for metals, VOCs and SVOCs.

5.5.3.2 Summary of Analytical Results

The analytical results for all of the samples collected are presented in **Appendix A.** Detectable concentrations of VOCs, SVOCs and metals were reported in the soil samples collected at the North Burning Ground.

5.5.4 Conclusions

5.5.4.1 Overall Data Quality Assessment

The overall assessment of the data reported for the North Burning Ground samples indicated that precision, representativeness, and comparability were acceptable. Accuracy was

impacted by the rejection of 13 nondetect antimony results based on Matrix Spike (MS) recoveries less than 30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.5.4.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the samples collected is presented in **Table 5-29**. Sampling locations and results above screening level are plotted on **Drawing 5-94**.

No VOCs or SVOCs were detected at concentrations greater than screening level. For metals, 24 of the 30 soil samples collected had concentrations above screening level. Berylium, cadmium, cobalt, copper, nickel, selenium, and thallium were detected above screening level.

5.5.4.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objective for the North Burning Ground was to evaluate the extent of VOCs, SVOCs, and metals in the shallow and deep soils. All soil samples were collected in accordance with the CDAP (WCC, 1994b and c). No VOCs or SVOCs were detected above screening level. Metals above screening level were detected mostly in the 0- to 6-inch sampling interval and displayed limited areal extent. Therefore, the Phase I data collection objective was achieved for the area

5.5.5 Recommendations

Based on the results of the Phase I investigations, no additional sampling is required to address the overall RI objective. Therefore, no Phase II investigation is recommended. All results from the Phase I investigation will be presented in the RI report.

5.6 SOUTH BURNING GROUND

The South Burning Ground is located southwest of the Wastewater Treatment Plant (**Drawing 1-1**). The area consists of approximately 3 acres and is currently being privately

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farmed. Powder from steamed-out bomb carcasses, powder for disposal, and similar materials were burned at the area when the NOP was in operation (Weed, 1986).

Previous investigations have identified explosives, metals, and VOCs as chemicals of concern. During an initial site visit, propellant grains for large caliber ammunition and small apparent pieces of bulk explosives were observed. Three areas of heavy ferrous concentration and four ferrous contacts were identified during a geophysical survey. Explosives were detected in concentrations which exceeded the Preliminary Pollutant Limit Values (PPLV) for farming. No significant concentrations of metals above background levels were detected (TCT, 1991).

During the OU1 RI, TNT was detected in concentrations which exceeded PRGs. Mercury and silver were detected at concentrations greater than background levels in one soil sample collected northeast of the actual South Burning Ground. Acetone and toluene were also detected, but no SVOCs were detected (Donohue, 1992a).

5.6.1 Overall RI and Phase I Objectives

5.6.1.1 Overall RI Objectives

The RI objective for the South Burning Ground is to evaluate whether the soils contain metals, VOCs, or SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment. Samples collected during the OU3 RI were not analyzed for explosives because the explosive contaminated soils in this area are being addressed under OU1.

5.6.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objective was to evaluate the extent of metals, VOCs, and SVOCs in shallow soils at the South Burning Ground.

5.6.2 Ordnance and Explosive Avoidance Survey

The OE avoidance survey was performed within the Phase I investigation boundary on March 10, 1995 by OE personnel. The OE survey was performed to clear access for personnel and equipment necessary to collect the shallow soil samples in the area. All OE clearance activities were conducted in accordance with the procedures outlined in Section 4.2.1.

An OE avoidance survey was performed with a Schonstedt GA-72CV to 3 feet bgs. No ordnance items or explosive materials were detected during the OE avoidance survey conducted at the South Burning Ground.

5.6.3 Shallow Soil Sampling

5.6.3.1 Sample Collection

Shallow soil samples were collected between March 23 and 28, 1995. Samples were collected from 0 to 6 inches bgs and 1 to 2 feet bgs. Because the area is currently used for crop production and the shallow soils are tilled, at each location samples were also collected from 2 to 3 feet bgs. The sample locations are shown on **Drawing 5-95**. All of the samples were analyzed for metals, VOCs, and SVOCs.

5.6.3.2 Summary of Analytical Results

The analytical results for all of the samples collected are presented in **Appendix A.** Detectable concentrations of VOCs, SVOCs, and metals were reported in the soil samples collected at the South Burning Grounds.

5.6.4 Conclusions

5.6.4.1 Overall Data Quality Assessment

The overall assessment of the data reported for the South Burning Ground samples indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 32 nondetect antimony results based on MS recoveries less than

30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.6.4.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the samples collected is presented in **Table 5-30**. Sampling locations and results above screening level are plotted on **Drawing 5-95.**

No VOCs were detected at concentrations greater than the soil screening level. Two explosives compounds (2,4-DNT and 2,6-DNT) were detected in the SVOC analyses at concentrations greater than the explosives soil screening level at one sample location (SGA-004). As stated in the PWP (WCC, 1994a), explosives contaminated soil in this area has been investigated under the OU1, and the explosives will not be addressed in the OU3 RI. The sample location is consistent with the location at which explosives were detected in the soils during the OU1 investigation. For metals, 42 of the 51 samples collected had metals in concentrations above screening level. Cadmium and selenium were the only metals detected above screening level.

5.6.4.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objective for the South Burning Ground was to evaluate the extent of VOCs, SVOCs, and metals in the shallow soils. All soil samples were collected in accordance with the CDAP (WCC, 1994b and c). No VOCs or SVOCs were detected above screening level. Metals above screening level were detected mostly in the 0- to 6-inch sampling interval and displayed limited areal extent. Therefore, the Phase I data collection objective was achieved for the area.

5.6.5 Recommendations

Based on the results of the Phase I investigations, no additional sampling is required to address the overall RI objective. Therefore, no Phase II investigation is recommended. All results from the Phase I investigation will be presented in the RI report.

5.7 PROVING GROUNDS

The Proving Grounds are located on the west side of the NRD Reservoir on Johnson Creek on the northeast side of the Site (**Drawing 1-1**). Historical aerial photographs (EPA, 1987) show two east-to-west trending trenches which are partially within the reservoir high water line. The Proving Grounds property is owned by the University of Nebraska and is currently graded and used as a wildlife plantings area. It was formerly used as a test area for ordnance and explosives when the NOP was in operation (Donohue, 1992a).

Previous investigations identified explosives, metals, VOCs, and SVOCs as chemicals of concern. During an initial site visit, small apparent pieces of bulk explosives were observed. One large anomalous area was identified during a geophysical survey. Two trenches were excavated, but no ordnance was found. Lead and explosives were detected in concentrations which exceeded the Preliminary Pollutant Limit Values (PPLV) for farming. Other metals were found at relatively high concentrations compared to background levels (TCT, 1991).

During the OU1 RI, TNT was detected in concentrations which exceeded PRGs. No metals were detected at concentrations greater than background levels. The SVOC bis(2-ethylhexyl) phthalate and the VOCs acetone, toluene, 1,2-dichloroethene and TCE were detected (Donohue, 1992a).

5.7.1 Overall RI and Phase I Objectives

5.7.1.1 <u>Overall RI Objectives</u>

The first RI objective for the Proving Grounds is to evaluate whether the soils contain metals, VOCs, or SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment. Samples collected during the OU3 RI were not analyzed for explosives, because the explosives contaminated soils in this area are being addressed under OU1. The second RI objective is to evaluate the effect of the NRD Reservoir on the local hydrogeology east of the reservoir and evaluate whether the shallow groundwater contains explosives, VOCs, SVOCs, or metals attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk human health or the environment.

5.7.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objectives were to:

- Evaluate the extent of metals, VOCs, and SVOCs in shallow and deep soils at the Proving Grounds
- Evaluate the effect of the NRD Reservoir on local hydrogeology east of the reservoir
- Identify whether explosives, metals, VOCs, or SVOCs are present in the shallow groundwater east of the NRD Reservoir

5.7.2 Ordnance and Explosive Avoidance Survey

The OE survey was performed within the Phase I investigation boundary on March 15, 1995. The intention was to clear access routes for the personnel and equipment necessary to collect the shallow samples and drill and sample the deep soil borings in the area. However, as the OE survey was performed with the Schonstedt GA-72CV, it was evident that the area was "saturated" with metallic contacts at or below the surface. For this reason, it was not possible to clear access lanes of sufficient width to allow the drilling equipment to enter the area. As a result, the MK-26 (Forrester) was used to mark approximately 9 locations that were clear for access by sampling personnel.

Because the area could not be accessed by drilling equipment, samples at the two deep borings were collected with hand auger equipment on March 24, 1995. The OE personnel performed the downhole clearance with the MK-26 (Forrester) as the borings were advanced with the hand auger equipment. Each of the borings was cleared to a depth of 15 feet bgs.

5.7.3 Shallow and Deep Soil Sampling

5.7.3.1 Sample Collection

As presented in Section 4.6 of the CDAP Part I (WCC, 1994b), it was planned that soil samples would be collected at three deep soil borings and at six shallow sampling locations.

Three of the sampling points were located in the eastern portion of the Proving Grounds. At the time the field investigation was performed, the eastern portion of the Proving Grounds was inundated by the western portion of the NRD Reservoir. In order to access the eastern sampling locations as planned, water was released from the reservoir at the maximum flow rate from early February through the end of the field investigation. At the time that the deep soil samples were collected (March 24, 1995), the western shore of the reservoir had only receded approximately 15 to 20 feet. As a result, the three eastern sampling locations were still inundated by the reservoir and were; therefore, not sampled during the investigation.

As outlined above in the description of the OE survey, the area was essentially "saturated" with metallic contacts at or near the ground surface. Therefore, it was not possible to clear access lanes of sufficient width to allow the drilling equipment to enter the area. As a result, sampling to 20 feet bgs using a drill rig could not be performed. Approximately 9 candidate sampling locations were cleared by the OE survey. Of the 9 available locations, 2 were chosen as locations for deep sampling and 4 were chosen as shallow sample locations. All sampling was performed using a hand-held auger. The final sampling locations are presented on **Drawing 5-96**.

Deep soil samples were collected on March 24, 1995 in accordance with procedures outlined in Section 4.2.4.4. At the deep locations, stainless steel hand augers were used to advance the borings. Samples for laboratory analysis were collected at 0 to 6 inches, 1 to 2 feet, 4 to 5 feet, and 9 to 10 feet bgs. The 10- to 20-foot samples were not collected due to auger refusal at 10 feet bgs.

Shallow soil samples were collected on April 3, 1995 in accordance with the procedures outlined in Section 4.2.4.3. All of the samples were analyzed for metals, VOCs, and SVOCs.

5.7.3.2 Summary of Analytical Results

Analytical results for all of the samples collected at the Proving Grounds are presented in **Appendix A**. Detectable concentrations of VOCs, SVOCs, and metals were reported in the soil samples collected at the Proving Grounds.

5.7.4 Groundwater Sampling At Newly Installed Monitoring Well

5.7.4.1 Monitoring Well Installation and Sample Collection

Installation

A monitoring well on the east side of the NRD Reservoir (MW-64B) was installed on March 10, 1995 (**Drawing 5-98**). The boring log is presented in **Appendix D**. The installation details are presented on the monitoring well installation report in **Appendix E**. The drilling and installation was performed in accordance with the procedures presented in Section 4.2.7.

Water Level Measurements

One of the objectives for the investigation at the Proving Grounds was to evaluate the effect of the NRD Reservoir on the local hydrogeology east of the reservoir. Water levels were measured in the newly installed monitoring well (MW-64B) and all of the existing monitoring wells in the vicinity of the reservoir as part of the Quarterly Groundwater Sampling Program. The water levels measured in June 1995 are presented in **Table 5-31**.

An evaluation of the effect of the NRD Reservoir was presented in the OU2 RI Report (WCC, 1993a). The evaluation concluded that the NRD Reservoir has resulted in a locally elevated water table and increased hydraulic gradients. The water level measurements in MW-64 (on the east side of the NRD Reservoir), MW-11A (on the west side of the NRD Reservoir) and the water levels in the monitoring wells in the vicinity of the Landfill Area were used to calculate the hydraulic gradients between the NRD Reservoir and the Landfill Area. The hydraulic gradient on the west side of the NRD Reservoir was approximately 29 feet/mile and the hydraulic gradient on the east side of the Reservoir was approximately 14 to 16 feet/mile. Based on these water level measurements it appears that the impact of the NRD Reservoir on the local hydrogeology is greater on the west side than on the east side. The OU2 RI Report (WCC, 1993a) reports that the hydraulic gradient outside of the influence of the NRD Reservoir ranges from 10 feet/mile in the northwest and southeastern portions of the Site to 17 feet/mile within ¾ mile of the edge of the Platte floodplain in the Johnson Creek

watershed. The hydraulic gradient calculated using the water level in MW-64B is within the range for the Johnson Creek watershed.

Sampling

MW-64 was sampled in June, 1995 as part of the Quarterly Groundwater Sampling Program. The groundwater sample was collected in accordance with the procedures outlined in Section 4.2.8. The parameters of analysis included explosives, total metals, dissolved metals, VOCs, and SVOCs.

5.7.4.2 Summary of Analytical Results

The analytical results for explosives, total metals, dissolved metals, VOCs, and SVOCs are presented in **Appendix A**. Detectable concentrations of VOCs, SVOCs, and metals were reported in the groundwater sample collected from MW-64.

5.7.5 Conclusions

5.7.5.1 Overall Data Quality Assessment

The overall assessment of the data reported for the Proving Grounds soil samples indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 10 nondetect antimony results based on MS recoveries less than 30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.7.5.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the soil samples collected from the Proving Grounds is presented in **Table 5-32**. A summary of the analytical data for groundwater sample collected from MW-64 is presented in **Table 5-33.** Concentrations above screening level are plotted on **Drawing 5-96**.

For soil, no VOCs or SVOCs were detected at concentrations greater than their associated screening levels. Fourteen of the 16 soil samples collected had results above metal screening levels. Cadmium, selenium, and zinc were the only metals detected at concentrations greater than the screening level.

For groundwater, none of the analytes were detected in concentrations above screening level.

5.7.5.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objectives for the Proving Grounds were to evaluate the extent of metals, VOCs, and SVOCs in the shallow and deep soils; evaluate the effect of the NRD Reservoir on the local hydrogeology east of the reservoir; and identify whether explosives, metals, VOCs, and SVOCs are present in the groundwater east of the reservoir. All soil and groundwater samples were collected according to the procedures presented in CDAP (WCC, 1994b and c).

As previously stated, soil samples were not collected within the eastern portion of the investigation area as originally planned. Therefore, the Phase I data collection objectives were not fully met. For the sampling which was performed, although soil samples were not collected at the 19 to 20-foot sampling interval, the analytical data results suggest that Phase II sampling is not necessary to further characterize the soils in those areas of the Proving Grounds where sampling was performed. The analytical data from MW-64B showed no contaminants above screening level present in the groundwater east of the reservoir. Groundwater level measurements from this well, and the existing monitoring wells in the vicinity of the reservoir, were used to evaluate the local hydrogeology east of the reservoir. Based on the results of the investigation as outlined above, the Phase I data collection objectives for the Proving Grounds were achieved.

5.7.6 Recommendations

In order to fully meet the Phase I data collection objectives, soil samples will be collected within the eastern portion of the Proving Grounds. Samples will be collected at the Proving Grounds during the Phase II investigation at the Site as described in the CDAP Part I-Chapter B (WCC, 1996).

During the Phase I field investigation, information on possible drum disposal in the vicinity of the Proving Grounds was received from a former U.S. Air Force employee who had worked at the Site. The employee recalled that drums of carbon tetrachloride were disposed of in the general vicinity of the Proving Grounds. It is therefore recommended that a formal interview with the employee be scheduled and conducted by USACE to document and obtain more information on the details of the alleged drum disposal. An attempt will be made to schedule and conduct the interview prior to the initiation of the Phase II investigation. Based on the results of the interview, and any additional information which might be obtained, recommendations (if necessary) for additional work will be developed and submitted for review and comment as a separate document.

Results from the Phase I, additional, and (if necessary) Phase II investigations will be presented in the OU3 RI report.

5.8 POTENTIAL LANDFILL AREA NORTH OF PROVING GROUNDS

The EMSL Report (EPA 1987) report identified a potential landfill area contiguous with the north side of the Proving Grounds and the northeast side of the North Burning Ground. The potential landfill area was identified in a 1949 aerial photo and covered approximately 10 acres. The eastern one-half boundary of the area is covered by the NRD Reservoir. The TCT Study (1991) also identified this area as a "potential landfill area". The site is presently an untilled grassy area with no visual evidence of past disposal activities.

5.8.1 Overall RI and Phase I Objectives

5.8.1.1 Overall RI Objectives

The first RI objective for the Potential Landfill Area north of the Proving Grounds is to evaluate whether the soils in the area contain explosives, metals, VOCs, or SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment.

5.8.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objective was to evaluate the extent of explosives, metals, VOCs, and SVOCs in shallow and deep soils at the Potential Landfill Area.

5.8.2 Ordnance and Explosive Avoidance Survey

The OE survey at the Potential Landfill Area was performed on March 15, 1995. The intention was to clear access routes for the personnel and equipment necessary to collect the shallow samples and drill and sample the deep soil borings in the area. However, as the OE survey was performed with the Schonstedt GA-72CV, it was evident that the area was "saturated" with metallic contacts at or below the surface. For this reason it was not possible to clear access lanes of sufficient width to allow the drilling equipment to enter the area. As a result, the MK-26 (Forrester) was used to mark approximately 12 locations that were clear for access by sampling personnel (without vehicles).

Because the area could not be accessed by drilling equipment, samples at the two deep borings were collected with hand auger equipment on March 24, 1995. The OE personnel performed the downhole clearance with the MK-26 (Forrester) as the borings were advanced with the hand auger equipment. Each of the borings was cleared to a depth of 15 feet bgs.

5.8.3 Geophysical Survey

The geophysical survey was performed on March 20, 1995. The survey was performed with the EM-31 instrument using a 20-foot grid node spacing. The survey was performed in accordance with the procedures outlined in Section 4.2.2, and the results are presented in **Appendix D**.

The geophysical survey was performed to identify and delineate areas of possible or suspected waste disposal activities. Sampling locations were located adjacent to an area(s) of subsurface anomolies, if present. If no areas of subsurface anomoly were identified, then the sampling sites were located as shown in the investigation area drawing in the Draft Final CDAP Part I.

At the Potential Landfill Area, no subsurface anomolies were identified. The proposed sampling points were placed at locations that spacially represented the investigation area and that were cleared during the OE survey.

A complete discussion of the geophysical results and interpretation will be presented in the RI report.

5.8.4 Shallow and Deep Soil Sampling

As with the Proving Grounds, it was planned that samples would be collected from three deep soil borings and from six shallow locations at the Potential Landfill Area. As described in Section 5.7.3.1, water was released from the NRD Reservoir in an attempt to expose the far eastern portion of the investigation area. However, the water level did not recede enough to allow the collection of samples from all proposed sampling locations. Therefore, samples were only collected from two deep borings and from four shallow locations.

5.8.4.1 Sample Collection

The sample locations are presented on **Drawing 5-97**. The deep soil samples were collected on March 24, 1995 in accordance with the procedures outlined in Section 4.2.4.4. At the deep locations, stainless steel hand augers were used to advance the borings. Samples for laboratory analysis were collected at 0 to 6 inches, 1 to 2 feet, 4 to 5 feet, and 9 to 10 feet bgs. The 10- to 20-foot samples were not collected due to auger refusal at 10 feet bgs.

The shallow soil samples were collected on April 3, 1995. The shallow samples were collected in accordance with the procedures outlined in Section 4.2.4.3. All of the samples were analyzed for explosives, metals, VOCs, and SVOCs.

5.8.4.2 Summary of Analytical Results

The analytical results for all of the samples collected at the Potential Landfill Area are presented in **Appendix A.** No VOCs were detected in any of the soil samples collected from

the Potential Landfill Area. Detectable concentrations of SVOCs, explosives, and metals were reported in the soil samples collected.

5.8.5 Conclusions

5.8.5.1 Overall Data Quality Assessment

The overall assessment of the data reported for the samples indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 6 nondetect antimony results based on MS recoveries less than 30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.8.5.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the samples collected is presented in **Table 5-34**. Concentrations above screening level are plotted on **Drawing 5-97**.

No VOCs, SVOCs, or explosives were detected at concentrations greater than soil screening levels. For metals, 12 of the 16 soil samples collected had concentrations above screening level. Antimony, cadmium, chromium, cobalt, copper, lead, selenium, and zinc were the metals which were detected above screening level.

5.8.5.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objective for the Potential Landfill Area was to evaluate the extent of VOCs, SVOCs, explosives, and metals in the shallow and deep soils. Soil samples were collected in accordance with the procedures presented in the CDAP (WCC 1994b and 1994c). Although soil samples were not collected at all proposed sampling locations or from the 19- to 20-foot sampling interval, the locations sampled and the samples collected at the 15-foot depth were considered sufficient to address the Phase I data collection objectives and make recommendations for Phase II work. Elevated concentrations of several metals (especially lead and chromium) were detected in soil samples collected near the surface and

at depth at sampling location PL-001. Therefore, with respect to metals, the Phase I data collection objective for the Potential Landfill Area was not completely achieved.

5.8.6 Recommendations

With respect to VOCs, SVOCs, and explosives, no further investigations are recommended for the Potential Landfill Area north of the Proving Grounds. Several metals in the soil were detected in concentrations which have potential for human health risks, therefore, further sampling is recommended to determine the vertical and horizontal extent of metals contamination in the vicinity of PL-001. This information would also be necessary should further remediation of the soils be required.

A detailed description of the additional investigations, including the number and location of additional soil samples, is presented in the CDAP I-Chapter B (WCC, 1996). All of the data collected during the Phase I and Phase II investigations will be presented in the RI report.

5.9 LANDFILL AREA

The Landfill Area (**Drawing 1-1**) consists of a series of trenches west of the sewage treatment plant that were filled with solid waste and covered with soil. It is not known when the area was first used as a landfill; however, it was reportedly used during the Site operations. Solid waste, garbage, old lumber, and similar materials were buried there (Weed, 1986). The area is currently owned by the University of Nebraska. It was also observed that when the University initiated their landfill activities, a bulldozer operator noticed a greenish gas emanating from the ground (TCT, 1991). The University also reported that there was trash at the surface prior to their operation (TCT, 1991). The groundwater upgradient and downgradient of the Landfill Area was previously investigated as part of OU2. The University is also reported to have buried some low-level radioactive and infectious wastes in nearby trenches south of the Landfill Area (TCT, 1991). The exact locations of these trenches have not been confirmed.

Two separate investigations are ongoing at the Landfill Area, a groundwater investigation and an Engineering Evaluation and Cost Analysis (EE/CA). A discussion of the OE EE/CA,

including a summary of the work plans and project milestones, is included in the OU3 PWP (WCC, 1994a). The following discussion pertains to the groundwater investigation.

5.9.1 Overall RI and Phase I Objectives

5.9.1.1 Overall RI Objectives

The RI objective for the groundwater at the Landfill Area is to evaluate whether the groundwater upgradient and downgradient of the Landfill Area contains thiodiglycol (a hydrolysis degradation product of mustard agent) at concentrations sufficient to pose an unacceptable risk to human health or the environment.

5.9.1.2 Phase I RI Data Collection Objective

The RI Phase I data collection objective was to identify whether thiodiglycol is present in the groundwater at the Landfill Area.

5.9.2 Groundwater Sampling At Existing Monitoring Wells

Existing monitoring wells sampled to determine whether thiodiglycol is present in the groundwater downgradient of the landfill consisted of MW-52A, MW-52B, MW-53A, MW-53B, MW-54A, MW-54B, MW-55A, MW-55B, MW-56A, and MW-56B. Existing monitoring wells sampled to determine whether the groundwater upgradient of the Landfill Area contains thiodiglycol consisted of MW-19A, MW-19B, MW-19C, MW-47A and MW-47B, MW-48A, MW-48B, and MW-48D. The locations of these monitoring wells are shown on **Drawing 5-98**.

5.9.2.1 Sample Collection

The groundwater samples were collected in conjunction with the Quarterly Groundwater Sampling Program. Three rounds of samples were collected from each of the monitoring wells listed above in accordance with the procedures outlined in Section 4.2.8.

5.9.2.2 Summary of Thiodiglycol Results

Thiodiglycol was not detected in any of the samples from any of the existing monitoring wells listed above during the three sampling events.

5.9.3 Conclusions

5.9.3.1 Overall Data Quality Assessment

The overall assessment of the data reported for the Landfill Area samples indicated that precision, accuracy, representativeness, and comparability were acceptable. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.9.3.2 Engineering Evaluation/Cost Analysis

The Landfill has been evaluated as part of a Site-wide EE/CA. The EE/CA will be submitted to the regulators for review during the public comment period in March. The results of the EE/CA will be incorporated into the RI Report. The EE/CA Work Plan (Dames and Moore, 1994) did not recommend any intrusive activity at the Landfill.

5.9.3.3 Analytical Results above Applicable Screening Level Guidelines

No screening level above detection limit was established for thiodiglycol. Thiodiglycol was not detected in any of the samples from any of the existing monitoring wells listed above during the three sampling events.

5.9.3.4 Achievement of Phase I Data Collection Objectives

The objective for the Landfill Area investigation was to identify whether thiodiglycol is present in the groundwater downgradient of the Landfill Area. Three rounds of groundwater samples were collected from the existing monitoring wells downgradient from the Landfill. Therefore, the Phase I data collection objective for the Landfill Area was achieved.

5.9.4 Recommendations

Based on the results of the Phase I investigations, no additional sampling is required to address the overall RI objective. Therefore, no Phase II investigation is recommended. All results from the Phase I investigation will be presented in the RI report.

5.10 WASTE DISPOSAL AREAS NORTH OF THE FORMER NIKE MAINTENANCE AREA

Two potential waste disposal areas located approximately 600 feet north of the former Nike Maintenance Area were originally identified in the EMSL Report (EPA, 1987) (**Drawing 1-1**). The areas were noted in a 1949 aerial photo, with a combined area of approximately 10 acres. After further review of the EMSL Report (EPA, 1987), the potential northern waste disposal area was divided into two separate areas as shown on **Drawing 5-99** creating three individual potential waste disposal areas for the OU3 RI.

The Nike Maintenance Area was used by the U.S. Army as a guided missile maintenance shop (ESE, 1983). Subsequently, the Nike Maintenance Area was converted to the National Guard Impoundment which is its present usage. The two north investigation areas are presently in a cultivated field, and the third waste disposal area is partially covered with a gravel parking lot.

Law Environmental (1990) reported that three soil gas locations in the area of the two former facilities had detectable levels of trichloroethane. Approximately 1/4 mile south and downgradient of the site, TCE was detected in shallow soil gas samples during the OU2 RI (WCC, 1993a). No VOCs were detected in a groundwater headspace sample taken directly east of the former Nike Maintenance Area during the OU2 RI.

5.10.1 Overall RI and Phase I Objectives

5.10.1.1 <u>Overall RI Objectives</u>

The first RI objective for the potential Waste Disposal Areas north of the former Nike Maintenance Area is to evaluate whether the soils and groundwater contain explosives,

metals, VOCs, or SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment. The second RI objective was to evaluate the potential for groundwater contamination.

5.10.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objectives were to:

- Evaluate the extent of explosives, metals, VOCs, and SVOCs in shallow and deep soils at the three potential waste disposal areas north of the former Nike Maintenance Area

- Identify whether explosives, metals, VOCs, and SVOCs are present in the groundwater at an existing monitoring well located near the former Nike Maintenance Area

5.10.2 Ordnance and Explosive Avoidance Survey

The surficial OE survey was performed within the Phase I investigation boundaries between March 1 and 3, 1995. The three areas were cleared visually and with the Schonstedt GA-72CV. No contacts were detected on either of potential waste disposal areas north of the current Nebraska National Guard parking lot. The third potential waste disposal area includes the current parking lot, an area of grass and trees to the west of the parking lot, and a small strip (approximately 20 to 25 feet wide) of land north of the parking lot (**Drawing 5-99**). No surficial OE survey was performed in the gravel parking lot. However, 169 metallic contacts were detected with the Schonstedt GA-72 CV in the grassy and wooded area to the west and within the small strip to the north of the parking lot. The contacts were flagged by the OE survey crew and avoided during intrusive sampling activities.

The downhole OE surveys were performed on March 19, 1995 at the five soil boring locations in the cultivated field at the two potential waste disposal areas north of the parking lot. The downhole clearance was performed with the MK-26 as a boring was drilled to 10 feet bgs with portable power auger equipment. The downhole clearances at the two soil borings in the parking lot were performed with the MK-26 while the borings were drilled and sampled on March 23, 1995.

5.10.3 Geophysical Survey

The geophysical surveys were performed between March 8 and 11, 1995. All of the surveys were performed with the EM-31 instrument using a 20-foot grid node spacing. The results for the geophysical surveys conducted at the potential waste disposal areas north of the Nike Maintenance area are presented in **Appendix D.**

The geophysical survey was performed to identify and delineate areas of possible or suspected waste disposal activities. Sampling locations were located adjacent to an area(s) of subsurface anomolies, if present. If no areas of subsurface anomoly were identified, then the sampling sites were located as shown in the investigation area drawing in the Draft Final CDAP Part I.

At the western waste disposal area, the two proposed sampling locations were placed to the south of a subsurface anomoly identified in the central portion of the investigation area. The three proposed sampling locations for the eastern waste disposal area were placed adjacent to and along a north-south trending subsurface anomoly identified in the central portion of the investigative area. For the southern disposal area, one sampling locations was placed to the east of the grassy and wooded area to address potential contamination from that area. The second proposed sampling location was placed in the parking lot. Both sampling points were located appropriately to address potential contamination in the southern waste disposal area.

A complete discussion of the geophysical results and interpretation will be presented in the RI report.

5.10.4 Shallow and Deep Soil Sampling

Shallow soil samples at the area were collected in conjunction with the drilling activities for the deep soil samples. Seven soil borings were drilled to 20 feet bgs.

5.10.4.1 <u>Sample Collection</u>

Shallow and deep soil samples were collected between March 20 and March 23, 1995. The locations of the seven soil borings are presented on **Drawing 5-99**. At each of the seven

borings, soil samples were collected from 0 to 6 inches, 1 to 2 feet, 2 to 3 feet, 4 to 5 feet, 9 to 10 feet, and 19 to 20 feet bgs. All of the soil samples were collected in accordance with the procedures outlined in Section 4.2.4.3 and Section 4.2.4.4. The boring logs for the seven borings are presented in **Appendix E**. All of the samples were analyzed for explosives, metals, VOCs, and SVOCs.

5.10.4.2 Summary of Analytical Results

The analytical results for all of the samples collected are presented in **Appendix A.** Detectable concentrations of VOCs, SVOCs, explosives, and metals were reported in the soil samples collected.

5.10.5 Groundwater Sampling At Existing Monitoring Wells

Groundwater samples were collected from existing monitoring wells MW-22A and MW-22B to evaluate whether the groundwater downgradient of the investigation area has been impacted by past activities. Existing monitoring well clusters sampled to evaluate background groundwater quality consisted of MW-19A, MW-19B, MW-19C, MW-47A, MW-47B, MW-48A, MW-48B and MW-48D. The locations of the monitoring wells are shown on **Drawing 5-88**.

5.10.5.1 Sample Collection

Groundwater samples were collected from MW-22A and MW-22B during the Quarterly Groundwater Sampling Program. Groundwater samples were collected on December 17, 1994 and were analyzed for explosives, total and dissolved metals, VOCs, and SVOCs. The groundwater samples were collected in accordance with the procedures outlined in Section 4.2.8.

5.10.5.2 Summary of Analytical Results

The analytical results for all of the groundwater samples collected from MW-22A and MW-22B are presented in **Appendix A.** The analytical results for the background groundwater samples are presented in **Appendix A.**

Detectable concentrations of VOCs, explosives, and total and dissolved metals were reported in the groundwater samples collected from MW-22A and MW-22B. Detectable concentrations of total and dissolved metals, and volatiles were reported in the samples from the background wells.

5.10.6 Conclusions

5.10.6.1 Overall Data Quality Assessment

The overall assessment of the data reported for the samples collected indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 3 nondetect antimony results based on MS recoveries less than 30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.10.6.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the soil samples collected is presented in **Table 5-35**. The analytical data for the groundwater samples collected from MW-22A and MW-22B is presented in **Table 5-36**.

Soils

No VOCs, SVOCs, or explosives were detected at concentrations greater than any soil screening level. Twenty-four of the 42 samples collected had metals (cadmium and/or selenium) in concentrations above screening level. Sampling locations and concentrations above screening level are plotted on **Drawing 5-99**.

Groundwater

With the exception of manganese, no compounds were detected at concentrations greater than the groundwater screening levels in the samples from MW-22A and MW-22B. Total manganese was detected in MW-22B above the groundwater screening level. Manganese was also detected at concentrations greater than the screening level in the background groundwater samples collected during the investigation.

5.10.6.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objectives for the potential Waste Disposal Areas north of the former Nike Maintenance Area were to evaluate the extent of explosives, metals, VOCs, and SVOCs in the shallow and deep soils and to identify whether explosives, metals, VOCs, and SVOCs are present in the groundwater. Soil and groundwater samples were collected in accordance with the CDAP (WCC, 1994b and c). Based on the analytical results for the soil and groundwater samples the Phase I data collection objectives were achieved.

5.10.7 Recommendations

Based on the results of the Phase I investigations, no additional sampling is required to address the overall RI objective. Therefore, no Phase II investigation is recommended. Results from the Phase I investigation will be presented in the RI report.

5.11 WASTE DISPOSAL AREA SOUTHEAST OF THE BOMB BOOSTER AREA

A waste disposal area located approximately 1,000 feet southeast of the Bomb Booster Area, east of Avenue A, was identified on the aerial photos contained in the EMSL Report (EPA, 1987) (**Drawing 1-1**). Aerial photos indicate that a potential waste disposal area was present in 1949 and operational through the 1950s. The potential waste disposal area appeared to cover approximately 10 acres and is presently cultivated with no visual evidence of past disposal activities (**Appendix B**).

The Bomb Booster Area was used to assemble tetryl boosters. Law Environmental (1990) reported that soil gas samples collected near this area had detectable levels of tetrachloroethane. A previous report mentioned possible disposal of PCBs within the waste disposal area (USACE, 1987).

5.11.1 Overall RI and Phase I Objectives

5.11.1.1 Overall RI Objectives

The first RI objective for the waste disposal area located southeast of the Bomb Booster Area is to evaluate whether the soils or groundwater contain explosives, metals, VOCs, SVOCs, or PCBs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment. The second RI objective is to evaluate the potential for groundwater contamination.

5.11.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objectives were to:

- Evaluate the extent of explosives, metals, VOCs, SVOCs, and PCBs in the shallow and deep soils at the Waste Disposal Area southeast of the Bomb Booster Area

- Identify whether explosives, metals, VOCs, SVOCs, and PCBs are present in the groundwater at an existing monitoring well located near the potential waste disposal area south of the Bomb Booster Area

5.11.2 Ordnance and Explosive Avoidance Survey

The OE avoidance survey was performed within the Phase I investigation area boundary on March 4, 18, and 19, 1995. The OE survey was performed to clear access routes for personnel and equipment necessary to lay out the geophysical grid area, conduct the geophysical survey, collect the shallow soil samples, and drill and sample the deep soil borings in the area. All OE clearance activities were conducted in accordance with the procedures outlined in Section 4.2.1.

Initially, an OE avoidance survey was performed over the entire investigation area. In addition, an OE avoidance survey was performed for 10 foot access lanes between the shallow soil sampling locations and at the shallow soil sampling locations themselves to a depth of 3 feet bgs. A Schonstedt GA-72CV was used to perform the clearance to the 3 foot bgs depth. Sixty-foot "key hole" access lanes were cleared to each of the four shallow and deep soil sampling locations for drill rig access with the Schonstedt GA-72CV. Downhole clearance at each boring location was done by OE personnel with the MK 26 Ordnance Locator to a depth of 15 feet bgs.

No ordnance items or explosive materials were found during the OE survey conducted at the Potential Waste Disposal Area southeast of the Bomb Booster Area.

5.11.3 Geophysical Survey

The geophysical survey of the area was conducted on March 10 and 11, 1995. The survey was performed with the EM-31 instrument using a 20-foot grid node spacing. The geophysical survey was conducted within the boundaries shown on **Drawing 5-100**, and the results are presented in **Appendix C.**

The geophysical survey was performed to identify and delineate areas of possible or suspected waste disposal activities. Sampling locations were located adjacent to an area(s) of subsurface anomolies, if present. If no areas of subsurface anomoly were identified, then the sampling sites were located as shown in the investigation area drawing in the Draft Final CDAP Part I.

The five northern most proposed locations were placed according to the Draft Final CDAP Part I investigation area drawing. The remaining three proposed sampling locations to the south were placed around a subsurface anomoly identified during the geophysical survey.

A complete discussion of the geophysical results and interpretation will be presented in the RI report.

5.11.4 Shallow and Deep Soil Sampling

Deep soil samples were collected from four soil borings. Shallow soil samples were collected from eight locations, and four of them were collected in conjunction with the soil boring activities.

5.11.4.1 Sample Collection

Shallow and deep sampling locations are presented on **Drawing 5-100**. The shallow samples were collected on March 26, 1995. Because the area is currently used for crop production, at each shallow sampling location, samples were collected from 0 to 6 inches, 1 to 2 feet, and 2 to 3 feet bgs. The shallow samples were collected in accordance with the procedures outlined in Section 4.2.4.3.

Deep soil borings were drilled on March 23 and 24, 1995. At each of the four borings, soil samples were collected from 0 to 6 inches, 1 to 2 feet, 2 to 3 feet, 4 to 5 feet, 9 to 10 feet bgs, and 19 to 20 feet bgs. The deep soil samples were collected in accordance with the procedures outlined in Section 4.2.4.4. The soil boring logs are presented in **Appendix D.**

All shallow and deep soil samples were analyzed for explosives, metals, VOCs, SVOCs, and PCBs.

5.11.4.2 Summary of Analytical Results

The analytical results for all of the samples collected are presented in **Appendix A.** Detectable concentrations of VOCs, SVOCs, explosives, PCBs, and metals were reported in the soil samples collected at the Waste Disposal Area southeast of the Bomb Booster Area.

5.11.5 Groundwater Sampling At Existing Monitoring Wells

Groundwater samples were collected from existing monitoring well MW-57B to evaluate whether the groundwater downgradient of the Waste Disposal Area has been impacted by past activities at the site. Existing monitoring wells sampled to evaluate background groundwater quality consisted of MW-19A, MW-19B, and MW-19C, MW-47A and

MW-47B, and MW-48A, MW-48B, and MW-48D. The locations of the monitoring wells are shown on **Drawing 5-88**.

5.11.5.1 Sample Collection

Groundwater samples were collected from MW-57B in December, 1994 during the Quarterly Groundwater Sampling Program. The groundwater samples were analyzed for explosives, total and dissolved metals, VOCs, SVOCs, and PCBs. The groundwater samples were collected in accordance with the procedures outlined in Section 4.2.8.

5.11.5.2 Summary of Analytical Results

The analytical results for the groundwater sample collected from MW-57B and the background monitoring wells are presented in **Appendix A.**

Detectable concentrations of VOCs and total and dissolved metals were reported in the groundwater sample collected from MW-57B. Detectable concentrations of total and dissolved metals and VOCs were reported in the background samples.

5.11.6 Conclusions

5.11.6.1 Overall Data Quality Assessment

The overall assessment of the samples from the data reported for samples from the Waste Disposal Area southeast of the Bomb Booster Area indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 15 nondetect antimony results based on MS recoveries less than 30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.11.6.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the soil samples collected is presented in **Table 5-37**. The analytical data for the groundwater samples collected from MW-57B are presented in **Table 5-38**.

Soils

No VOCs, SVOCs, explosives, or PCBs were detected at concentrations greater than the soil screening level. Thirty of the 36 samples collected had metals in concentrations above screening level. Cadmium and selenium were the only metals detected at concentrations greater than the soil screening levels. Those metals displaying concentrations above screening level are plotted on **Drawing 5-100**.

Groundwater

No compounds were detected at concentrations greater than the groundwater screening levels in the sample from MW-57B. Manganese (total and dissolved) was the only metal detected above the screening level in the background groundwater samples. No other compounds were detected above the screening level in the background groundwater samples.

5.11.6.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objectives for the Waste Disposal Area southeast of the Bomb Booster Area were to evaluate the extent of explosives, metals, VOCs, and SVOCs in the shallow and deep soils and to identify whether explosives, metals, VOCs, and SVOCs are present in the groundwater. Soil and groundwater samples were collected in accordance with the CDAP (WCC, 1994b and c). Based on the analytical results for the soil samples, the Phase I data collection objectives for the Waste Disposal Area southeast of the Bomb Booster Area were achieved.

5.11.7 Recommendations

Based on the results of the Phase I investigations, no additional sampling is required to address the overall RI objective. Therefore, no Phase II investigation is recommended. All results from the Phase I investigation will be presented in the RI report.

5.12 WASTE DISPOSAL AREAS AT THE ATLAS MISSILE AREA

The Atlas Missile Area is located approximately 1 mile north of Load Lines 3 and 4 (**Drawing 1-1**). Construction on the missile complex began in 1959 and lasted for approximately 18 months. The area was used by the U.S. Air Force to house three missile silos and a control area. TCE was used to degrease pipelines which carried liquid oxygen fuel for the missiles. The Atlas Missile Area was abandoned by the Air Force in 1964 (USACE, 1991).

Two waste disposal areas at the Atlas Missile Area were identified on the EMSL aerial photographs (EPA, 1987). One potential waste disposal area was located in the southwest corner of the Atlas Missile Area (**Drawing 5-101**) and the second potential waste disposal area was located outside the northeast side of the Atlas Missile Area along Johnson Creek (**Drawing 5-102**). The southwest and northeast waste disposal areas covered approximately 10 and 20 acres, respectively. Law Environmental (1990) and WCC (1993a) reported TCE contamination in shallow soils gas in the Atlas Missile Area. TCE concentrations up to 5.2 µg/L in soil gas samples were taken from the southwest waste disposal area (WCC, 1993a).

5.12.1 Overall RI and Phase I Objectives

5.12.1.1 <u>Overall RI Objectives</u>

The first RI objective for the Waste Disposal Areas at the Atlas Missile Area is to evaluate whether the soils and groundwater contain explosives, metals, VOCs, or SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment. The second RI objective was to evaluate groundwater contamination.

5.12.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objectives were to:

- Evaluate the extent of explosives, metals, VOCs, and SVOCs in shallow and deep soils at the Waste Disposal Areas at the Atlas Missile Area

- Identify whether explosives, metals, VOCs, or SVOCs are present in the groundwater at existing monitoring wells located near the Waste Disposal Areas at the Atlas Missile Area

5.12.2 Ordnance and Explosive Avoidance Survey

The OE avoidance survey was performed within the Phase I investigation boundaries on March 6, 7, 8, and 23, 1995. The OE survey was performed to clear access routes for personnel and equipment necessary to lay out the geophysical grid areas, conduct the geophysical survey, collect the shallow soil samples, and drill and sample the deep soil borings in the area. All OE clearance activities were conducted in accordance with the procedures outlined in Section 4.2.1.

An OE avoidance survey was performed over the both areas to a depth of 2 feet bgs with a Schonstedt GA-72CV. Downhole clearance at each boring location was performed with the MK 26 Ordnance Locator to a depth of 15 feet bgs.

A large area with surface metal debris in the northeast waste disposal area was flagged off and no OE survey was conducted there. The area appeared to contain old car parts, fencing, wire, and other metal debris. No ordnance items or explosive materials were found during the OE survey.

5.12.3 Geophysical Survey

Geophysical surveys were conducted on March 20 and 21, 1995. The surveys were performed with the EM-31 instrument using a 20-foot grid node spacing. The surveys were performed within the boundaries shown on **Drawing 5-101** and **Drawing 5-102**. The

geophysical surveys were performed in accordance with the procedures outlined in Section 4.2.2, and the results are presented in **Appendix C.**

The geophysical survey was performed to identify and delineate areas of possible or suspected waste disposal activities. Sampling locations were located adjacent to an area(s) of subsurface anomolies, if present. If no areas of subsurface anomoly were identified, then the sampling sites were located as shown in the investigation area drawing in the Draft Final CDAP Part I.

No subsurface anomolies were identified during the geophysical survey. Therefore, all proposed sampling locations were placed as shown on the site specific investigation drawings in the Draft Final CDAP Part I.

A complete discussion of the geophysical results and interpretation will be presented in the RI report.

5.12.4 Shallow and Deep Soil Sampling

Shallow soil samples were collected from two locations at the southwest waste disposal area and at eight locations at the northeast waste disposal area. The shallow samples from both locations at the southwest waste disposal area and from three of the eight locations at the northeast waste disposal area were collected in conjunction with the soil boring activities.

Deep soil samples were collected from two soil borings at the southwest waste disposal area and from three soil borings at the larger northeast waste disposal area.

5.12.4.1 <u>Sample Collection</u>

The shallow and deep sampling locations are presented on **Drawing 5-101** and **Drawing 5-102**.

The sample locations requiring only shallow samples were sampled on March 29, 1995. At each shallow sampling location, samples were collected from 0 to 6 inches bgs and from 1 to

2 feet bgs. The shallow samples were collected in accordance with the procedures outlined in Section 4.2.4.3.

The deep soil borings at both waste disposal areas were drilled on March 27, 1995. At each of the five borings, soil samples were collected from 0 to 6 inches, 1 to 2 feet, 2 to 3 feet, 4 to 5 feet, 9 to 10 feet, and 19 to 20 feet bgs. The deep soil samples were collected in accordance with the procedures outlined in Section 4.2.4.4. The soil boring logs are presented in **Appendix D.**

5.12.4.2 Summary of Analytical Results

The analytical results for all of the samples collected are presented in **Appendix A.** Detectable concentrations of SVOCs, explosives and metals were reported in the soil samples.

5.12.5 Groundwater Sampling At Existing Monitoring Wells

Groundwater samples were collected from existing monitoring wells MW-58A, MW-58B, MW-59A, MW-59B, and MW-59D to evaluate whether the groundwater downgradient of the Waste Disposal Areas at the Atlas Missile Area has been impacted by past activities. In addition, existing monitoring wells MW-19A, MW-19B, and MW-19C were sampled to evaluate background groundwater quality. The locations of the monitoring wells are shown on **Drawing 5-88**.

5.12.5.1 Sample Collection

Groundwater samples were collected from the monitoring wells listed above in December 1994 during the Quarterly Groundwater Sampling Program. The groundwater samples were analyzed for explosives, total and dissolved metals, VOCs, and SVOCs. The groundwater samples were collected in accordance with the procedures outlined in Section 4.2.8.

5.12.5.2 Summary of Analytical Results

The analytical results for all of the groundwater samples collected from MW-58A, MW-58B, MW-59A, MW-59B, and MW-59D as well as the background monitoring wells are presented in **Appendix A.**

Detectable concentrations of VOCs, SVOCs, and total and dissolved metals were reported in the groundwater samples collected from the monitoring wells downgradient of the area. Total and dissolved metals and VOCs were detected in the background groundwater samples.

5.12.6 Conclusions

5.12.6.1 Overall Data Quality Assessment

The overall assessment of the data reported for the samples collected from this area indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 3 nondetect antimony results based on MS recoveries less than 30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.12.6.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the soil samples collected at the Waste Disposal Areas at the Atlas Missile Area is presented in **Table 5-39**. A summary of the analytical data for the groundwater samples collected from the existing monitoring wells is presented in **Table 5-40**.

Soils

No VOCs, SVOCs, or explosives were detected at concentrations greater than any soil screening level. Three metals (cadmium, manganese, and selenium) were detected at concentrations greater than the soil screening levels in 20 of the 31 samples collected. Those

metals displaying concentrations above screening level are plotted on **Drawing 5-101** and **Drawing 5-102**.

Groundwater

No SVOCs were detected at concentrations greater than the groundwater screening levels in the samples collected downgradient from the Waste Disposal Areas at the Atlas Missile Area. TCE was the only VOC detected at concentrations greater than the groundwater screening levels from these areas and was detected in the sample from MW-58B.

Total and dissolved manganese were detected at concentrations greater than the screening level in three of the five groundwater samples collected. Total and dissolved manganese were also detected at concentrations greater than the groundwater screening level in the background monitoring wells.

5.12.6.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objectives for the Waste Disposal Areas at the Atlas Missile Area were to evaluate the extent of explosives, metals, VOCs, and SVOCs in the shallow and deep soils and to identify whether explosives, metals, VOCs, and SVOCs are present in the groundwater. Soil samples were collected in accordance with the CDAP (WCC, 1994b and c). Based on the analytical results, the Phase I data collection objectives were achieved.

5.12.7 Recommendations

Based on an evaluation of the Phase I data, no additional sampling is required to address the overall RI objective. Therefore, no Phase II investigation is recommended. All of the data collected during the Phase I investigation will be presented in the RI report.

The results of the Phase I investigations at the Atlas Missile Area do not indicate that the waste disposal areas are a source of TCE to the groundwater. Considering that TCE sources other than the waste disposal areas have already been identified and investigated under OU2, it is recommended that no further investigations of the groundwater be conducted under the

OU3 RI. The TCE detected in the groundwater will continue to be monitored under the Site-Wide Quarterly Groundwater Sampling Program.

5.13 POTENTIAL WASTE DISPOSAL AREA NORTH OF THE AMMONIUM NITRATE PLANT

The Ammonium Nitrate Plant is located north of Load Lines 2 and 3 (**Drawing 1-1**). Ammonium Nitrate for ordnance was produced at the plant from March to May 1943. During the last quarter of 1944, all remaining ammonium nitrate was shipped out as surplus. The plant then produced grained ammonium under an emergency fertilizer production program from 1945 to 1949. The plant has not been used to produce ammonium nitrate since 1950 and is currently used as private pasture (Donohue, 1992).

5.13.1 Overall RI and Phase I Objectives

5.13.1.1 Overall RI Objectives

The RI objective for the potential Waste Disposal Area north of the Ammonium Nitrate Plant is to evaluate whether the soils and groundwater contain explosives, metals, VOCs, and SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment.

5.13.1.2 Phase I RI Data Collection Objective

The RI Phase I data collection objective was to evaluate the extent of explosives, metals, VOCs, and SVOCs in the shallow and deep soils at the potential Waste Disposal Area north of the Ammonium Nitrate Plant.

5.13.2 Ordnance and Explosive Avoidance Survey

The OE avoidance survey of the area was performed on March 4 and 21, 1995 by OE personnel. The OE survey was performed to clear access routes for personnel and equipment necessary to lay out the geophysical grid area, conduct the geophysical survey, collect the

shallow soil samples, and drill and sample the deep soil borings in the area. All OE clearance activities were conducted in accordance with the procedures outlined in Section 4.2.1.

An OE avoidance survey was performed for 10 foot access lanes between the shallow soil sampling locations and at the shallow soil sampling locations to a depth of 2 feet bgs. A Schonstedt GA-72CV was used to perform the clearance to the 2 foot depth bgs. Sixty-foot "key hole" access lanes were cleared at each of the five shallow and deep soil sampling locations, for drill rig access, with the Schonstedt GA-72CV. Downhole clearance at each boring location was done by OE personnel with the MK 26 Ordnance Locator to a depth of 15 feet bgs.

No ordnance items or explosive materials were found during the OE survey conducted at the potential Waste Disposal Area north of the Ammonium Nitrate Plant.

5.13.3 Geophysical Survey

The geophysical survey of the area was conducted on March 12, 1995. The survey was performed with the EM-31 instrument using a 20-foot grid node spacing. The survey was performed within the boundaries shown on **Drawing 5-103**. The geophysical survey was performed in accordance with the procedures outlined in Section 4.2.2, and the results are presented in **Appendix C.**

The geophysical survey was performed to identify and delineate areas of possible or suspected waste disposal activities. Sampling locations were located adjacent to an area(s) of subsurface anomolies, if present. If no areas of subsurface anomoly were identified, then the sampling sites were located as shown in the investigation area drawing in the Draft Final CDAP Part I.

A large subsurface anomoly was identified in the central portion of the investigation area and the two proposed sampling locations were placed adjacent to the anomoly.

A complete discussion of the geophysical results and interpretation will be presented in the RI report.

5.13.4 Shallow and Deep Soil Sampling

Deep soil samples were collected from two soil borings. Shallow soil samples were collected from both locations in conjunction with the collection of samples from the deep soil borings.

5.13.4.1 Sample Collection

The shallow and deep sampling locations are presented in **Drawing 5-103**. The soil borings were drilled on March 22, 1995. At each boring, soil samples were collected from 0 to 6 inches, 1 to 2 feet, 2 to 3 feet, 4 to 5 feet, 9 to 10 feet, and 19 to 20 feet bgs. The soil samples were collected in accordance with the procedures outlined in Section 4.2.4.3 and Section 4.2.4.4. The soil boring logs are presented in **Appendix E.**

5.13.4.2 Summary of Analytical Results

The analytical results for all of the samples collected are presented in **Appendix A.** Detectable concentrations of SVOCs, explosives, and metals were reported in the soil samples collected at the potential Waste Disposal Area north of the Ammonium Nitrate Plant.

5.13.5 Conclusions

5.13.5.1 Overall Data Quality Assessment

The overall assessment of the data reported for the samples collected from the potential Waste Disposal Area north of the Ammonium Nitrate Plant indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 3 nondetect antimony results based on MS recoveries less than 30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.13.5.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data is presented in **Table 5-41**. Sampling locations and results above screening level are plotted on **Drawing 5-103**.

No VOCs, SVOCs, or explosives were detected at concentrations greater than any soil screening level. Nine of the 12 samples collected had metals at concentrations above screening level. Cadmium was the only metals detected at a concentration greater than the soil screening level.

5.13.5.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objective for the potential Waste Disposal Area north of the Ammonium Nitrate Plant was to evaluate the extent of explosives, metals, VOCs, and SVOCs in the shallow and deep soils. Soil samples were collected in accordance with the CDAP (WCC, 1994b and c). Based on the analytical results for the soil samples, the Phase I data collection objective was achieved.

5.13.6 Recommendations

Based on the results of the Phase I investigation, no additional sampling is required to address the overall RI objective. Therefore, no Phase II investigation is recommended. All results from the Phase I investigation will be presented in the RI report.

5.14 DEMOLITION GROUND

The Demolition Ground is located in the southwest portion of the Site, south of Highway 63, north of Silver Creek, and east of the Detonation Craters investigation area. The approximate location of the Demolition Ground is shown on **Drawing 1-1**.

Previous investigations by TCT (1991) included visual and geophysical surveys. Visual surveying revealed no ordnance or Unexploded Ordnance (UXO) debris. Metal detector and magnetometer surveys revealed 17 ferrous contacts within the study area. Of the 17 contacts, 7 were within a depth of 1 foot and were hand excavated. The excavators revealed two bomb

booster adapters with no explosive components, three pieces of what appeared to be 75mm projectile fragmentation, and two pieces of wire.

During TCT's Preliminary Assessment, no explosives were detected. No elevated levels of metals were present in the three soil samples collected, with the exception of zinc. One sample showed a concentration of zinc at nine times the background.

An EE/CA was performed for OE at the Demolition Grounds. Results of the EE/CA will be incorporated into the Draft Final PDP.

5.14.1 Overall RI and Phase I Objectives

5.14.1.1 Overall RI Objectives

The first RI objective for the Demolition Ground is to evaluate whether the soils and groundwater contain explosives, metals, VOCs, or SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment. The second RI objective was to evaluate the potential for groundwater contamination.

5.14.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objectives were to:

- Evaluate the extent of explosives, metals, VOCs, and SVOCs in the shallow and deep soils at the Demolition Ground
- Identify whether explosives, metals, VOCs, or SVOCs are present in the groundwater at an existing monitoring well near the Demolition Ground

5.14.2 Ordnance and Explosive Avoidance Survey

The OE avoidance survey at the Demolition Ground was performed on March 4, 5, 21 and 22, 1995. The OE survey was performed to clear access routes for personnel and equipment necessary to lay out the geophysical grid areas, conduct the geophysical survey, collect the

shallow soil samples, and drill and sample the deep soil borings in the area. All OE clearance activities were conducted in accordance with the procedures outlined in Section 4.2.1.

An OE avoidance survey was performed over the entire area to a depth of 2 feet bgs with a Schonstedt GA-72CV. Downhole clearance at each boring location was performed with the MK 26 Ordnance Locator to a depth of 15 feet bgs.

No ordnance items or explosive materials were found during the OE survey conducted at the Demolition Ground.

5.14.3 Geophysical Survey

The geophysical survey at the Demolition Ground was conducted on March 12 and 13, 1995 with the EM-31 instrument using a 20-foot grid node spacing. The survey was performed within the boundaries shown on **Drawing 5-104**. The geophysical survey was performed in accordance with the procedures outlined in Section 4.2.2, and the results are presented in **Appendix C.**

The geophysical survey was performed to identify and delineate areas of possible or suspected waste disposal activities. Sampling locations were located adjacent to an area(s) of subsurface anomolies, if present. If no areas of subsurface anomoly were identified, then the sampling sites were located as shown in the investigation area drawing in the Draft Final CDAP Part I.

No subsurface anomolies were identified during the geophysical survey. Therefore, all proposed sampling locations were placed as shown on the site specific investigation drawings in the Draft Final CDAP Part I.

A complete discussion of the geophysical results and interpretation will be presented in the RI report.

5.14.4 Shallow and Deep Soil Sampling

Deep soil samples were collected from four soil borings at the Demolition Ground. Shallow soil samples were collected from the four locations in conjunction with the collection of samples from the deep soil borings.

5.14.4.1 Sample Collection

The shallow and deep sampling locations are presented in **Drawing 5-104**. The soil borings at the Demolition Ground were drilled on March 24 and 25, 1995. At each boring, soil samples were collected from 0 to 6 inches, 1 to 2 feet, 4 to 5 feet, 9 to 10 feet, and 19 to 20 feet bgs. The soil samples were collected in accordance with the procedures outlined in Section 4.2.4.3 and Section 4.2.4.4. All of the samples were analyzed for explosives, metals, VOCs and SVOCs. The soil boring logs are presented in **Appendix D**.

5.14.4.2 Summary of Analytical Results

The analytical results for all of the samples collected at the Demolition Ground are presented in **Appendix A.** Detectable concentrations of VOCs, SVOCs, explosives and metals were reported in the soil samples collected at the Demolition Ground.

5.14.5 Groundwater Sampling At Existing Monitoring Well

Groundwater samples were collected from existing monitoring wells MW-10A and MW-10B to evaluate whether the groundwater downgradient of the Demolition Ground has been impacted by past activities at the area. The location of the monitoring wells are shown on **Drawing 5-88**.

5.14.5.1 Sample Collection

Groundwater samples were collected from the MW-10A and MW-10B in December 1994 during the Quarterly Groundwater Sampling Program. The groundwater samples were analyzed for explosives, total and dissolved metals, VOCs and SVOCs. The groundwater samples were collected in accordance with the procedures outlined in Section 4.2.8.

5.14.5.2 Summary of Analytical Results

The analytical results for all of the groundwater samples collected from MW-10A and B are presented in **Appendix A.** Detectable concentrations of VOCs, explosives, and total and dissolved metals were reported in the groundwater samples collected from MW-10A and B.

5.14.6 Conclusions

5.14.6.1 Overall Data Quality Assessment

The overall assessment of the data reported for the samples from the Demolition Ground indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 20 nondetect antimony results based on MS recoveries less than 30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.14.6.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the soil samples collected at the Demolition Ground area is presented in **Table 5-42**. A summary of the analytical data for the groundwater samples collected from MW-10A and MW-10B is presented in **Table 5-43**.

Soils

No VOCs, SVOCs, or explosives were detected at concentrations greater than any soil screening level. Of the 20 samples collected, 10 had metals at concentrations above screening levels. Selenium and cadmium were the only metals above screening level. Sampling locations and results above screening level are plotted on **Drawing 5-104**.

Groundwater

No compounds were detected above the groundwater screening levels in the groundwater samples from MW-10A and MW-10B.

5.14.6.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objectives for the Demolition Ground were to evaluate the extent of explosives, metals, VOCs, and SVOCs in the shallow and deep soils and to identify whether explosives, metals, VOCs, and SVOCs are present in the groundwater. Soil and groundwater samples were collected in accordance with the CDAP (WCC, 1994b and c). Based on the analytical results, the Phase I data collection objectives for the Demolition Ground were achieved.

5.14.7 Recommendations

Based on the evaluation of the data, no additional sampling is required to address the overall RI objective. Therefore, no Phase II investigation is recommended. All of the data collected during the Phase I investigation will be presented in the RI Report.

Explosives in the groundwater have been identified and are continually being monitored under the Quarterly Groundwater Monitoring Program, and therefore, it is recommended that no further investigations of the groundwater be conducted under the OU3 RI.

5.15 DETONATION CRATERS WEST OF THE DEMOLITION GROUNDS

The Detonation Craters are located in the southwest portion of the Site, west of the former Demolition Ground, south of Highway 63, and north of Silver Creek. During preliminary assessment activities by TCT (1991), five possible explosion (detonation) craters, (Craters 1 through 5), were identified on historical aerial photographs (EPA, 1987). The craters are most apparent on the 1959 aerial photographs, although remnants of them are evident in later photographs. The locations of the craters, as described by TCT, are shown on **Drawing 1-1**.

Previous investigations by TCT included visual and geophysical surveys. Visual surveying revealed no ordnance or UXO debris. Metal detector and magnetometer surveys revealed shallow ferrous contacts at Craters 1, 2, and 3. Hand excavations at these areas revealed an artillery fuse at Crater 3.

5.15.1 Overall RI and Phase I Objectives

5.15.1.1 Overall RI Objectives

The RI objective for the Detonation Craters located west of the Demolition Ground is to evaluate whether the soils contain explosives, metals, VOCs, or SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment.

5.15.1.2 Phase I RI Data Collection Objective

The RI Phase I data collection objective was to evaluate the extent of explosives, metals, VOCs, and SVOCs in shallow soils at each of the five Detonation Craters located west of the Demolition Ground.

5.15.2 Ordnance and Explosive Avoidance Survey

The OE avoidance survey at the Detonation Craters was performed on March 6, 1995. The OE survey was performed to clear access routes for personnel and equipment necessary to lay out the geophysical grid areas, conduct the geophysical survey, and collect the shallow soil samples in the area. All OE clearance activities were conducted in accordance with the procedures outlined in Section 4.2.1.

An OE avoidance survey was performed with a Schonstedt GA-72CV to 2 feet bgs at Detonation Craters 1, 2, 4, and 5 and to 3 feet bgs at Detonation Crater 3. No ordnance items or explosive materials were found during the OE survey conducted at the Detonation Craters.

5.15.3 Geophysical Survey

As shown in **Drawing 5-105,** Detonation Craters 1 and 2 and Detonation Craters 4 and 5 are in close proximity to each other. For this reason, the surface geophysical investigations were performed on three distinct areas. The first area included a 300-foot by 300-foot grid at the location of Detonation Craters 1 and 2. The second area included a 300-foot by 300-foot

grid at the location of Detonation Crater 3. The third area included a 300-foot by 300-foot grid at the location of Detonation Craters 4 and 5.

The geophysical survey at Detonation Craters 4 and 5 was conducted on March 11, 1995. The survey at Detonation Crater 3 was conducted on March 12, 1995, and the survey at Detonation Craters 1 and 2 was conducted on March 22, 1995. The surveys were performed with the EM-31 instrument using a 10-foot grid node spacing. The surveys were performed within the boundaries shown on **Drawing 5-105**. The geophysical surveys were performed in accordance with the procedures outlined in Section 4.2.2, and the results are presented in **Appendix C.**

The geophysical survey was performed to identify the crater areas. Sampling locations were located adjacent to an area(s) of subsurface anomolies, if present. If no areas of subsurface anomoly were identified, then the sampling sites were located as shown in the investigation area drawing in the Draft Final CDAP Part I.

No subsurface anomolies were identified during the geophysical survey. Therefore, all proposed sampling locations were placed as shown on the site specific investigation drawings in the Draft Final CDAP Part I.

5.15.4 Shallow Soil Sampling

Shallow soil samples were collected from each of the five Detonation Craters.

5.15.4.1 Sample Collection

The shallow sampling locations are presented in **Drawing 5-105**. The shallow soil samples at the Demolition Grounds were collected on April 5, 1995. At Detonation Craters 1, 2, 4 and 5, soil samples were collected from 0 to 6 inches and 1 to 2 feet bgs. Because the location was in a cultivated field, at Detonation Crater 3 soil samples were collected from 0 to 6 inches, 1 to 2 feet, and 2 to 3 feet bgs. The soil samples were collected in accordance with the procedures outlined in Section 4.2.4.3.

5.15.4.2 Summary of Analytical Results

The analytical results for all of the samples collected at the Detonation Craters are presented in **Appendix A.** No VOCs were detected in the soil samples collected at the Detonation Craters. However, detectable concentrations of SVOCs, explosives, and metals were reported in the soil samples.

5.15.5 Conclusions

5.15.5.1 Overall Data Quality Assessment

The overall assessment of the data reported for the samples collected from the Detonation Craters indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 12 nondetect antimony results based on MS recoveries less than 30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.15.5.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the samples collected from the Detonation Craters is presented in **Table 5-44**. Sampling locations and results above screening are plotted on **Drawing 5-105**.

No VOCs, SVOCs, or explosives were detected at concentrations greater than any soil screening levels. For metals, 6 of the 11 samples collected had concentrations above screening level. Cadmium, selenium, and manganese were the only metals detected above screening level.

5.15.5.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objective for the Detonation Craters was to evaluate the extent of explosives, metals, VOCs, and SVOCs in the shallow soils. Soil samples were collected in accordance with the CDAP (WCC, 1994b and c). Based on the field activities performed and

on the analytical results for the soil samples, the Phase I data collection objective for the Detonation Craters was achieved.

5.15.6 Recommendations

Based on an evaluation of the Phase I investigations, no additional sampling is required to address the overall RI objective. Therefore, no Phase II investigation is recommended. All results from the Phase I investigation will be presented in the RI report.

5.16 BERMED AREA SOUTHWEST OF LOAD LINE 1

A Bermed Area exists southwest of Load Line 1 (Bermed Area) (**Drawing 1-1**). The former usage of the berm is unknown. From inspection of 1955 aerial photographs, it is presumed that the Bermed Area was used for protection against accidental explosion during the loading of rail cars on the railroad spur. No previous investigations have been conducted in the immediate area.

5.16.1 Overall RI and Phase I Objectives

5.16.1.1 Overall RI Objectives

The RI objective is to evaluate whether the soils at the Bermed Area contain explosives, metals, VOCs, and SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment.

5.16.1.2 Phase I RI Data Collection Objective

The RI Phase I data collection objective was to evaluate the extent of explosives, metals, VOCs, and SVOCs in the shallow soils at the Bermed Area.

5.16.2 Shallow Soil Sampling

Shallow soil samples were collected from three locations at the Bermed Area.

5.16.2.1 Sample Collection

The soil sampling locations at the Bermed Area were collected on March 26, 1995 and are presented on **Drawing 5-106**. At each of the three locations, soil samples were collected from 0 to 6 inches, 1 to 2 feet and 2 to 3 feet bgs. The soil samples were collected in accordance with the procedures outlined in Section 4.2.4.3 and all of the samples were analyzed for explosives, metals, VOCs, and SVOCs.

5.16.2.2 Summary of Analytical Results

The analytical results for all of the samples collected at the Bermed Area are presented in **Appendix A.** No VOCs were detected in the soil samples collected at the Bermed Area. However, detectable concentrations of SVOCs, explosives, and metals were reported in the soil samples.

5.16.3 Conclusions

5.16.3.1 Overall Data Quality Assessment

The overall assessment of the data reported for the samples collected from the Bermed Area indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 5 nondetect antimony results based on MS recoveries less than 30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.16.3.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the samples collected from the Bermed Area is presented in **Table 5-45**. Sampling locations and results above the screening are plotted on **Drawing 5-106**.

No VOCs, SVOCs, or explosives were detected at concentrations greater than the soil screening level. Seven of the 9 samples collected had metals above screening level.

Cadmium and selenium were the only metals detected at concentrations above screening level.

5.16.3.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objective for the Bermed Area was to evaluate the extent of explosives, metals, VOCs, and SVOCs in the shallow soils. Soil samples were collected in accordance with the CDAP (WCC, 1994b and c). Based on the field activities performed and on the analytical results for the soil samples, the Phase I data collection objective for the Bermed Area was achieved.

5.16.4 Recommendations

Based on an evaluation of the Phase I investigations, no additional sampling is required to address the overall RI objective. Therefore, no Phase II is recommended for the Bermed Area. All results from the Phase I investigation will be presented in the RI report.

5.17 AMMONIUM NITRATE PLANT

The Ammonium Nitrate Plant is located north of Load Lines 2 and 3 (**Drawing 1-1**). Ammonium nitrate for ordnance was produced at the plant from March to May 1943. During the last quarter of 1944, all remaining ammonium nitrate was shipped out as surplus. The plant then produced granular ammonium nitrate under an emergency fertilizer production program from 1945 to 1949. The plant has not been used to produce ammonium nitrate since 1950. The area is currently used as private pasture (Donohue, 1992a).

In 1953, the Army Environmental Health Laboratory performed a study to determine residual effects from nitrate waste disposal practices on lakes, streams, and groundwater. The study concluded that at the time, no residual nitrate problem existed in the surface water and groundwater at the site (ESE, 1983).

5.17.1 Overall RI and Phase I Objectives

5.17.1.1 Overall RI Objectives

The first RI objective is to evaluate if the groundwater contains metals, nitrates and/or nitrites attributed to DoD-related activities at concentrations that may cause an unacceptable risk to human health or the environment. The second RI objective is to determine local background levels for metals, nitrates and/or nitrites in groundwater.

5.17.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objectives were to:

- Identify if nitrates and/or nitrites or metals are present in groundwater at the Ammonium Nitrate Plant
- Determine local background levels for metals, nitrates and/or nitrites in groundwater at the site.

5.17.2 Groundwater Sampling At Newly Installed Monitoring Well

5.17.2.1 Monitoring Well Installation and Sample Collection

Installation

The monitoring well installed downgradient of the Ammonium Nitrate Plant (MW-63B) was installed on February 20, 1995 (**Drawing 5-88**). The boring log is presented in **Appendix D**. The installation details are presented on the monitoring well installation report in **Appendix E**. The drilling and installation was performed in accordance with the procedures presented in Section 4.2.7.

Sampling

MW-63B was sampled during the Fourth Quarterly Groundwater Monitoring Event (June 1995). In accordance with the OU3 workplan, the samples were analyzed for total and

dissolved metals, nitrates plus nitrites, and total nitrogen. Additional data on the groundwater quality downgradient of the Ammonium Nitrate Plant was obtained during the Third Quarterly Groundwater Monitoring Event (March 1995). A sample from MW-63B was collected and analyzed for nitrates plus nitrites and total nitrogen. The groundwater samples were collected in accordance with the procedures outlined in Section 4.2.8.

5.17.2.2 Summary of Analytical Results

The analytical results for the groundwater samples collected from MW-63B are presented in **Appendix A**. Detectable concentrations of nitrates and nitrites, total metals and dissolved metals were reported for MW-63B samples.

5.17.3 Groundwater Sampling At Existing Monitoring Wells

Groundwater samples were collected from existing monitoring wells MW-47A, MW-47B, MW-48A, MW-48B, MW-48D, MW-19A, MW-19B and MW-19C to obtain data on the background concentrations of nitrates and nitrites in the groundwater. The locations of the monitoring wells are shown on **Drawing 5-88**.

5.17.3.1 Sample Collection

Existing monitoring wells MW-47A, MW-47B, MW-48A, MW-48B, MW-48D, MW-19A, MW-19B and MW-19C were sampled in the Second Quarterly Groundwater Monitoring Event (December 1994). Samples were analyzed for nitrates plus nitrites and total nitrogen. The groundwater samples were collected in accordance with the procedures outlined in Section 4.2.8.

5.17.3.2 Summary of Analytical Results

The analytical results for the samples collected from the background monitoring wells are presented in **Appendix A**. Detectable concentrations of nitrates and nitrites, total metals and dissolved metals were reported in the samples from the background monitoring wells.

5.17.4 Conclusions

5.17.4.1 Overall Data Quality Assessment

The overall data quality assessment of the Third Quarterly Groundwater Monitoring (March 1995) results is discussed in Section 2.2. The Fourth Quarter in Groundwater Monitoring (June 1995) results have not yet been validated. Validation results of the June 1995 results are expected to be reported in the Quarterly Groundwater Sampling report to be submitted in December, 1995.

5.17.4.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the samples collected from the MW-63B is presented in **Table 5-46**. A summary of the analytical data for the background monitoring wells is summarized in **Tables 5-24** and **5-25**.

No metals were detected in the samples from MW-63B above the groundwater screening level. Total and dissolved manganese were detected at concentrations greater than the groundwater screening level in the background samples. Total nitrates and nitrates plus nitrites (both as N) were detected at concentrations greater than the screening level in the samples from MW-63B, MW-48B, and MW-19C.

5.17.4.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objectives for the Ammonium Nitrate Plant were to evaluate if nitrates and/or nitrites or metals are present in the groundwater downgradient of the Ammonium Nitrate Plant and to determine the background concentrations of nitrates/nitrites and metals in the groundwater. Groundwater samples were collected from the newly installed monitoring well (MW-63B) in accordance with the CDAP (WCC 1994b, and c) and from background monitoring wells to perform an evaluation of background levels in the groundwater at the Site. Therefore, the Phase I data collection objectives for the Ammonium Nitrate Plant were achieved.

5.17.5 Recommendations

Based on the results of the Phase I investigation, no additional sampling is required to address the overall RI objective. No metals were detected at concentrations greater than the screening levels in the sample from the monitoring well downgradient of the Ammonium Nitrate Plant (MW-63B). The concentrations of nitrates and/or nitrites detected in the downgradient monitoring well were above the screening levels, however, the levels were within the range of concentrations detected in the background monitoring wells for the Site. These levels were also consistent with the levels expected for an area that has been intensively farmed for several years. Considering the short duration of the Ammonium Nitrate Plant operation (4 to 5 years), the elapsed time since the plant was in operation (approximately 45 years), and the intensive farming in the vicinity of the plant over the past 50 years, it is unlikely that the nitrates and/or nitrites detected in the downgradient monitoring well could be directly attributed to the operation of the Ammonium Nitrate Plant. Therefore, no Phase II investigation is recommended. All results from the Phase I investigation will be presented in the RI report.

5.18 JOHNSON AND CLEAR CREEK

5.18.1 Overall RI and Phase I Objectives

5.18.1.1 Overall RI Objectives

The RI objective is to evaluate if the surface waters and sediment of Johnson and Clear Creeks contain explosives, metals, VOCs, or SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment.

5.18.1.2 Phase I RI Data Collection Objectives

The Phase I data collection objective was to determine if explosives, metals, VOCs, or SVOCs are present in the surface waters and/or sediment of Johnson and Clear Creeks. Johnson Creek combines with Clear Creek southwest of the Site. The Clear Creek sample was collected to represent a sampling location thought to be downstream of any contamination.

5.18.2 Surface Water Sampling

5.18.2.1 Sample Collection

Surface water samples were collected from three sampling stations along Johnson Creek (JC-001, JC-002, and JC-003) and one along Clear Creek (JC-004) on March 28 and 29, 1995. The locations of the four sampling stations are shown on **Drawing 5-107**. Surface water samples were collected just below the water surface at the channel thalweg portion of the stream. The surface water samples were collected in accordance with the procedures outlined in Section 4.2.9. The surface water samples were analyzed for explosives, metals, VOCs, and SVOCs. Previous investigation surface water sampling locations in the vicinity of the NRD Reservoir are shown on **Drawing 5-109**.

5.18.2.2 Summary of Analytical Results

The analytical results for the surface water samples collected from Johnson and Clear Creeks are presented in **Appendix A.** Detectable concentrations of VOCs, explosives, and metals were reported in the surface water samples.

5.18.3 Sediment Sampling

5.18.3.1 Sample Collection

Sediment samples were collected from four sampling stations along Johnson and Clear Creeks on March 28 and 29, 1995. The locations of the four sampling stations are shown on **Drawing 5-108**. Sediment samples were collected from the top layer (approximately the upper 6 inches) of sediments in areas of deposition. The sediment samples were collected in accordance with the procedures outlined in Section 4.2.10. The sediment samples were analyzed for explosives, metals, VOCs, and SVOCs. Previous investigation sediment sampling locations in the vicinity of the NRD reservoir are shown on **Drawing 5-109**.

5.18.3.2 Summary of Analytical Results

The analytical results for all of the sediment samples collected from Johnson and Clear Creeks are presented in **Appendix A.** Detectable concentrations of VOCs and metals were reported in the sediment samples.

5.18.4 Conclusions

5.18.4.1 Overall Data Quality Assessment

The overall assessment of the data reported for the samples collected from Johnson and Clear Creeks indicated that precision, accuracy, representativeness, and comparability were acceptable. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.18.4.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the surface water samples collected from Johnson and Clear Creeks is presented in **Table 5-47**. A summary of the analytical data for the sediment samples collected from Johnson Creek is summarized in **Table 5-48**.

Surface Water

No VOCs, SVOCs, or explosives were detected at concentrations greater than the screening levels. However, two explosives compounds [RDX and Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)] and one VOC (TCE) were detected in the surface water samples (JC-003 and JC-004). The highest reported levels of RDX and TCE were detected at concentrations close to the screening levels in the samples collected at the JC-003 location on Johnson Creek. In addition, two metals (manganese and nickel) were detected at concentrations greater than the screening levels. All of the results for the surface water samples are plotted on **Drawing 5-107**.

Sediment Samples

No metals, VOCs, SVOCs, or explosives were detected at concentrations greater than the screening levels in the sediment samples collected from Johnson and Clear Creeks. All of the results for sediment samples are plotted on **Drawing 5-108**.

5.18.4.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objectives for Johnson Creek were to determine if explosives, metals, VOCs, or SVOCs are present in the surface waters and/or sediment of Johnson and Clear Creeks. Surface water and sediment samples were collected in accordance with the CDAP (WCC, 1994b and c). Therefore, the Phase I data collection objectives for Johnson and Clear Creeks were achieved.

5.18.5 Recommendations

Additional Phase II surface water sampling is recommended to confirm the Phase I explosives, VOCs, and metals results and evaluate the potential for seasonal variations of concentrations. Additional sediment sampling in Johnson or Clear Creeks is not recommended because no metals were identified in sediments at or near the relevant screening level. In addition, no seasonal variations of metals is expected.

The Phase II investigation should include surface water sampling during the spring (high flow) and summer (low flow) seasons to evaluate the nature and extent of contamination including any seasonal variations. As discussed in the PWP (WCC, 1994a), a physical habitat assessment will be conducted as part of the Phase II investigation to determine if the physical and chemical environments limit the range of the plains top minnow in Johnson Creek. The physical habitat assessment will be performed during the low flow season.

Because both human and ecological species are potentially exposed to chemicals in the surface water and sediments of Johnson Creek, screening levels based on human and/or ecological health effects will be developed from published EPA water quality criteria and open scientific literature. Comparisons of site-specific chemical concentrations to the

screening values will be used to determine if a more detailed ecological assessment of Johnson Creek is necessary.

The Phase II sampling plans and objectives for Johnson and Clear Creeks are presented in CDAP Part I-Chapter B (WCC, 1996). Results from the Phase I and Phase II investigations will be presented in the RI report.

5.19 SILVER CREEK

5.19.1 Overall RI and Phase Objectives

5.19.1.1 Overall RI Objectives

The RI objective is to evaluate if the surface waters and sediment of Silver Creek contain explosives, metals, VOCs, or SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment.

5.19.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objective was to identify if explosives, metals, VOCs, or SVOCs are present in the surface water and/or sediment of Silver Creek.

5.19.2 Surface Water Sampling

5.19.2.1 Sample Collection

Surface water samples were collected from two sampling stations along Silver Creek on April 4, 1995. The locations of the two sampling stations are shown on **Drawing 5-107**. Surface water samples were collected just below the water surface at the channel thalweg portion of the stream. The surface water samples were collected in accordance with the procedures outlined in Section 4.2.9. The surface water samples were analyzed for explosives, metals, VOCs, and SVOCs.

5.19.2.2 Summary of Analytical Results

The analytical results for the surface water samples collected from Silver Creek are presented in **Appendix A.** Detectable concentrations of VOCs, explosives, and metals were reported in the surface water samples.

5.19.3 Sediment Sampling

5.19.3.1 Sample Collection

Sediment samples were collected from two sampling stations along Silver Creek on April 4, 1995. The locations of the two sampling stations are shown on **Drawing 5-108**. Sediment samples were collected from the top layer (approximately the upper 6 inches) of sediments in areas of deposition. The sediment samples were collected in accordance with the procedures outlined in Section 4.2.10. The sediment samples were analyzed for explosives, metals, VOCs, and SVOCs.

5.19.3.2 Summary of Analytical Results

The analytical results for all of the sediment samples collected from Silver Creek are presented in **Appendix A.** Detectable concentrations of VOCs, SVOCs, and metals were reported in the sediment samples.

5.19.4 Conclusions

5.19.4.1 Overall Data Quality Assessment

The overall assessment of the data reported for the samples collected from Silver Creek indicated that precision, accuracy, representativeness, and comparability were acceptable. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.19.4.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the surface water samples collected from Silver Creek is presented in **Table 5-49**. A summary of the analytical data for the sediment samples collected from Silver Creek is summarized in **Table 5-50**.

Surface Water

No VOCs, SVOCs or explosives were detected at concentrations greater than the screening level. However, one explosives compound (4-Am-DNT) was detected in the downstream surface water sample (SC-002) but no screening levels were established. In addition, manganese was detected at concentrations greater than the screening levels in both of the surface water samples. All of the results for the surface water samples are plotted on **Drawing 5-107**.

Sediment Samples

No VOCs, SVOCs or explosives were detected at concentrations greater than the screening levels in the sediment samples collected from Silver Creek. Two VOCs (acetone and toluene) and three SVOCs (4-methylphenol, di-n-butylphthalate and pyrene) were detected in SC-001 at concentrations below the screening levels. Selenium was the only metal detected at concentrations greater than the screening level in the sediment samples from Silver Creek. All of the results for the sediment samples are plotted on **Drawing 5-108**.

5.19.4.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objectives for Silver Creek were to determine if explosives, metals, VOCs, and SVOCs are present in the surface waters and/or sediment of Silver Creek. Surface water and sediment samples were collected in accordance with the CDAP (WCC, 1994b and c). Therefore, the Phase I data collection objectives for Silver Creek were achieved.

5.19.5 Recommendations

Additional Phase II surface water sampling of Silver Creek is recommended to confirm the Phase I results for explosives and VOCs and evaluate the potential for seasonal variations of contaminant concentrations. Additional sediment sampling in Silver Creek is not recommended because no metals were identified in sediments at or near the relevant screening level. In addition, no seasonal variations of metals is expected.

The Phase II investigation will include surface water sampling during the spring (high flow) and summer (low flow) seasons to evaluate the nature and extent of contamination including any seasonal variations. As discussed in the PWP (WCC, 1994a), a physical habitat assessment will be conducted as part of the Phase II investigation to determine if the physical and chemical environments limit the range of the plains top minnow in Silver Creek. The physical habitat assessment will be performed during the low flow season.

Because both human and ecological species are potentially exposed to chemicals in the surface water and sediments of Silver Creek, screening levels based on human and/or ecological health effects will be developed from published EPA water quality criteria and open scientific literature. Comparisons of site-specific chemical concentrations to the screening values will be used to determine if a more detailed ecological assessment of Silver Creek is necessary.

The Phase II sampling plans and objectives for Silver Creek are presented in CDAP Part I-Chapter B (WCC, 1996). Results from the Phase I and Phase II investigations will be presented in the RI report.

5.20 UNDERGROUND STORAGE TANKS AT ADMINISTRATION, BOMB BOOSTER, AND ATLAS MISSILE AREAS

The Administration Area is located in the northwest corner of the Site (**Drawing 1-1**). This area was used to support activities at the Site beginning in late 1942 and continuing through 1964. Activities at the Administration Area which may have utilized USTs, included locomotive, vehicle and equipment maintenance and chemical storage.

A soil gas investigation completed by the USACE in late 1989 to early 1990 indicated that there may be VOCs in the soil (Law, 1990). The investigation was not definitive, nor were all planned points tested due to access problems. The soils and the groundwater were previously investigated as part of the OU2 RI.

A potential grouping of six fuel oil USTs have been identified from as-built drawings (Giffels and Vallet, Inc., 1942) west of the former Boiler Building at the Administration Area (**Drawing 5-110**). The Boiler Building is no longer present at the site. No previous investigation has been performed specifically regarding USTs in this area.

The Bomb Booster Area is located in the northwest area of Site (**Drawing 1-1**). As previously described, the area was used by the Army to produce tetryl boosters for the detonation of bombs.

Two fuel oil storage tanks have been identified north of the Change House and Boiler Room Building at the Bomb Booster Area (**Drawing 5-111**) from as-built drawings (Giffels and Vallet, Inc., 1942) and site visits. No previous investigation has been performed regarding USTs in this area.

The Atlas Missile Area is located in the north-central area of the Site (**Drawing 1-1**). A soil gas investigation completed in late 1989 to early 1990 showed TCE contamination in the shallow soil gas in this area (Law, 1990). The soil gas, soils and groundwater at the Atlas Missile Area were previously investigated as a part of the OU2 RI.

One fuel oil UST was identified from the USACE as-built drawings on the northwest side of the Gate House and Vehicle Storage Facility at the Atlas Missile Area (**Drawing 5-112**). Another oil UST has been identified from as-built drawings (USACE, 1961) on the southeast side of the Launch Operations Building at the Atlas Missile Area (**Drawing 5-113**). No previous investigation has been performed regarding USTs in this area.

5.20.1 Overall RI and Phase I Objectives

5.20.1.1 Overall RI Objectives

The RI objective for the UST investigations is to evaluate whether the soils and groundwater contain SVOCs, BTEX, or TRPH attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment.

5.20.1.2 Phase I RI Data Collection Objectives

The RI Phase I data collection objectives were to:

- Identify whether SVOCs, BTEX or TRPH are present in the shallow and deep soils at the potential UST locations
- Identify whether SVOCs, BTEX or TRPH are present in the groundwater immediately downgradient of the potential UST locations

5.20.2 Administration Area

5.20.2.1 Geophysical Survey

The geophysical survey at the Administration Area UST was conducted on March 21, 1995. The survey was performed with the EM-31 instrument using a 10-foot grid node spacing. The survey was performed within the Phase I Study Area boundaries shown on **Drawing 5-110**. The geophysical survey was performed in accordance with the procedures outlined in Section 4.2.2 and the results are presented in **Appendix C.**

The geophysical survey was performed to identify an area of subsurface anomoly which may have been associated with a UST or backfilled area where a UST had been located. The sampling location was located adjacent to and downgradient from the subsurface anomoly at the Administration Area.

5.20.2.2 Shallow Soil, Deep Soil, and Groundwater Sample Collection

The shallow soil samples at the Administration Area UST were collected in conjunction with the deep soil boring. The location of the soil boring drilled at the Administration Area UST is shown on **Drawing 5-110**.

The soil boring at the Administration Area UST (UA-001) was drilled and sampled on April 7 and 8, 1995. Soil samples were collected at 0 to 6 inches, 1 to 2 feet, 4 to 5 feet, 9 to 10 feet, 19 to 20 feet and 29 to 30 feet bgs. All of the soil samples were collected in accordance with the procedures outlined in Sections 4.2.4.3 and 4.2.4.4. The boring log is presented in **Appendix D.** All of the samples were analyzed for BTEX, SVOCs and TRPH.

Upon completion of the soil sampling, the boring was advanced to the top of the groundwater table. Groundwater was observed in the boring at a depth of approximately 35 feet bgs. Once the water table was encountered, the soil sampling tools were removed from inside the augers and the Hydropunch® II sampler was advanced to 40 feet bgs. At 40 feet bgs the tool was opened, and groundwater was allowed to enter the screen. A small (approximately 3/4-inch O.D. and 3 feet long) stainless steel bailer was used to remove the groundwater sample. However, after collecting 2-40 ml vials and 1/2 liter, it appeared that some fine sand was entering the screen and the Hydropunch® tool was bailed dry. On the following day (April 8, 1995), the tool was removed, cleaned out with deionized water, and reinstalled to 41.4 feet bgs. The remainder of the groundwater sample was collected on April 8, 1995. The groundwater samples was analyzed for BTEX, SVOCs and TRPH. The samples were collected in accordance with the procedures outlined in Section 4.2.8.

5.20.2.3 Summary of Soil Sampling Analytical Results

The analytical results for the soil samples collected at the Administration Area UST are presented in **Appendix A.** BTEX was not detected in any of the soil samples collected at the Administration Area UST. Detectable concentrations of SVOCs and TPH were reported in the soil samples.

5.20.2.4 Summary of Groundwater Sampling Analytical Results

The analytical results for the groundwater sample collected from the Administration Area UST are presented in **Appendix A.** Detectable concentrations of BTEX and SVOCs were reported in the groundwater sample.

5.20.3 Bomb Booster Area

5.20.3.1 Shallow Soil, Deep Soil, and Groundwater Sample Collection

The shallow soil samples at the Bomb Booster Area UST were collected in conjunction with the deep soil boring. The location of the soil boring drilled at the Bomb Booster Area UST is shown on **Drawing 5-111**.

The soil boring at the Bomb Booster Area UST (UB-001) was drilled and sampled on April 6, 1995. Soil samples were collected from 0 to 6 inches, 1 to 2 feet, 4 to 5 feet, 9 to 10 feet, 19 to 20 feet and 29 to 30 feet bgs. All of the soil samples were collected in accordance with the procedures outlined in Sections 4.2.4.3 and 4.2.4.4. The boring log is presented in **Appendix D**. All of the samples were analyzed for BTEX, SVOCs and TRPH.

Upon completion of the soil sampling, the boring was advanced to the top of the groundwater table. Groundwater was observed in the boring at a depth of approximately 37 feet bgs. Once the water table was encountered, the soil sampling tools were removed from inside the augers and the Hydropunch® II sampler was advanced to 42.7 feet bgs. At 42.7 feet bgs the tool was opened, and groundwater was allowed to enter the screen. A small (approximately 3/4-inch O.D. and 3 feet long) stainless steel bailer was used to remove the groundwater sample. The groundwater sample was analyzed for BTEX, SVOCs and TRPH. The sample was collected in accordance with the procedures outlined in Section 4.2.8.

5.20.3.2 Summary of Soil Sampling Analytical Results

The analytical results for the soil samples collected at the Bomb Booster Area UST are presented in **Appendix A**. BTEX and TRPH were not detected in any of the soil samples

collected at the Bomb Booster Area UST. Detectable concentrations of SVOCs were reported in the soil samples collected.

5.20.3.3 Summary of Groundwater Sampling Analytical Results

The analytical results for the groundwater sample collected from the Bomb Booster Area UST are presented in **Appendix A.** Detectable concentrations of SVOCs were reported in the groundwater sample.

5.20.4 Atlas Missile Area

As described above, two USTs were identified at the Atlas Missile Area. One fuel oil UST was identified on the northwest side of the Gate House and Vehicle Storage Facility (Gate House), and one UST was identified on the southeast side of the Launch Operations Building.

5.20.4.1 Geophysical Survey

Due to the presence of a concrete slab over the tank location, a geophysical study was not conducted at the location of the UST at the Gate House and Vehicle Storage facility.

Geophysical surveys at the Launch Operations Building UST were conducted on March 9 and 12, 1995. One survey (March 9, 1995), was performed with the EM-31 instrument using a 5-foot grid node spacing. A second survey was performed on March 12, 1995 with the EM-61 instrument. Both surveys were performed within the boundaries shown on **Drawing 5-112**. The geophysical surveys were performed in accordance with the procedures outlined in Section 4.2.2. The results for the geophysical surveys are presented in **Appendix C.**

The geophysical survey was performed to identify an area of subsurface anomoly which may have been associated with a UST or backfilled area where a UST had been located. The sampling location was located adjacent to and downgradient from the subsurface anomoly at the Atlas Missile Area Launch Operations Building UST locations.

5.20.4.2 Shallow Soil, Deep Soil, and Groundwater Sample Collection

The shallow soil samples at both Atlas Missile Area USTs were collected in conjunction with the deep soil boring. The location of the soil borings drilled at the Atlas Missile Area USTs are shown on **Drawing 5-112** and **Drawing 5-113**.

Launch Operations Building

The soil boring at the Launch Operations Building UST (UMA-002) was drilled and sampled on April 4, 1995. Soil samples were collected at 0 to 6 inches, 1 to 2 feet, 4 to 5 feet, 9 to 10 feet, 19 to 20 feet, 29 to 30 feet and 38 to 39 feet bgs. All of the soil samples were collected in accordance with the procedures outlined in Sections 4.2.4.3 and 4.2.4.4. The boring log is presented in **Appendix D.** All of the samples were analyzed for BTEX, SVOCs, and TRPH.

Upon completion of the soil sampling, the boring was advanced to the top of the groundwater table. Groundwater was observed in the boring at a depth of approximately 40.8 feet bgs. Once the water table was encountered, the soil sampling tools were removed from inside the augers and the Hydropunch® II sampler was advanced to 45 feet bgs. At 45 feet bgs the tool was opened, however, no measurable groundwater entered the screen. The Hydropunch® tool was left in place (open) overnight to evaluate whether groundwater would enter the screen. On the following day (April 5, 1995), no groundwater had accumulated in the screen. It appeared that fine sand had entered the screen and blocked the water level indicator from entering the saturated portion of the screen. The Hydropunch® tool was then removed, cleaned out with deionized water, and reinstalled to 50 feet bgs. The tool was opened, and a small quantity of groundwater entered the screen. However, after removing approximately 3 bailers of water, the Hydropunch® was dry. Therefore, the Hydropunch® tool and the augers were removed and the boring was abandoned.

On April 8, 1995, a new boring was drilled at the Launch Operations Building UST. The new boring was located approximately 4 feet North of the abandoned boring. The boring was advanced with hollow stem augers down to 39.5 feet bgs. At 39.5 feet the Hydropunch® was installed inside the augers and advanced to 44 feet bgs. The Hydropunch® tool was opened,

and the groundwater sample was successfully collected. The groundwater sample was analyzed for BTEX, SVOCs and TRPH. The sample was collected in accordance with the procedures outlined in Section 4.2.8.

Gate House and Vehicle Storage Facility UST

The shallow soil samples at the Gate House UST were collected in conjunction with the deep soil boring. The location of the soil boring drilled at the Gate House is shown on **Drawing 5-112**.

The soil boring at the Gate House (UM-001) was drilled and sampled on April 10, 1995. Soil samples were collected at 0 to 6 inches, 1 to 2 feet, 4 to 5 feet, 9 to 10 feet, 19 to 20 feet, 29 to 30 feet and 38 to 39 feet bgs. All of the soil samples were collected in accordance with the procedures outlined in Sections 4.2.4.3 and 4.2.4.4. The boring log is presented in **Appendix D**. All of the samples were analyzed for BTEX, SVOCs and TRPH.

Upon completion of the soil sampling, the boring was advanced to the top of the groundwater table. Groundwater was observed in the boring at a depth of approximately 48 feet bgs. Once the water table was encountered, the soil sampling tools were removed from inside the augers and the Hydropunch® II sampler was advanced to 52.4 feet bgs. At 52.4 feet bgs, the tool was opened, and groundwater was allowed to enter the screen. A small (approximately 3/4-inch O.D. and 3 feet long) stainless steel bailer was used to remove the groundwater sample. The groundwater sample was analyzed for BTEX, SVOCs and TRPH. The sample was collected in accordance with the procedures outlined in Section 4.2.8.

5.20.4.3 Summary of Soil Sampling Analytical Results

The analytical results for the soil samples collected at the Atlas Missile Area USTs are presented in **Appendix A**. BTEX was not detected in any of the soil samples collected at the Atlas Missile Area USTs. Detectable concentrations of SVOCs and TRPH were reported in the soil samples.

5.20.4.4 Summary of Groundwater Sampling Analytical Results

The analytical results for the groundwater samples collected from the Atlas Missile Area USTs are presented in **Appendix A**. Detectable concentrations of BTEX and SVOCs were reported in the groundwater samples collected from the UST at the Gate House (UM-001). Detectable concentrations of SVOCs were reported in the groundwater samples collected from the UST at the Launch Operations Building (UM-002).

5.20.5 Conclusions

5.20.5.1 Overall Data Quality Assessment

The overall assessment of the data reported for the samples collected from the USTs indicated that precision, accuracy, representativeness, and comparability were acceptable. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.20.5.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the soil samples collected at the USTs is presented in **Table 5-51**. A summary of the analytical data for the groundwater samples is presented in **Table 5-52**.

Soils

No SVOCs were detected at concentrations greater than the soil screening level in any of the soil samples collected at the USTs.

TRPH was detected slightly above the soil screening level in the 0- to 6-inches bgs sample from the soil boring at the Administration Area UST and at the Atlas Missile Area (Launch Operations Building). None of the other soil samples displayed TRPH concentrations greater than the soil screening level.

Groundwater

No SVOCs, BTEX, or TRPH were detected at concentrations greater than the screening levels in the groundwater samples collected at the USTs. Low levels of toluene (2.8 µg/L) and total xylenes (4.3J µg/L) were detected in two of the groundwater samples. Groundwater screening levels have not been developed for these compounds.

5.20.5.3 Achievement of Phase I Data Collection Objectives

The Phase I data collection objectives for the USTs were to evaluate whether BTEX, SVOCs or TPH are in the soils and groundwater at the UST areas. No known releases have been reported for any of the three USTs in this investigation. According to NDEQ, since there have been no reported releases, the state does not require a state-approved remedial investigation program. Because the potential source area were each a point-source of known origin, a single sampling location positioned downgradient of the UST location was considered adequate in meeting the objectives of the Phase I investigation.

Groundwater samples and soil samples were collected from a sufficient number of appropriately located shallow and deep borings to adequately characterize the areas. Based on the field activities performed and on the analytical results for the samples, the Phase I data collection objectives for the USTs at the Administration Area, the Bomb Booster Area, and the Atlas Missile Area were achieved.

After the Phase I investigation at the USTs was completed, three potential USTs at two additional UST locations were identified. Both of the UST sites are located east of Load Line 4 in the Agronomy Area of the ARDC. Since no sampling was performed at these two UST, the Phase I data collection objectives for the UST sites at the Site have not been achieved.

5.20.6 Recommendations

Based on the results of the Phase I investigation, no additional sampling is required to address the overall RI objective for the USTs at the Administration area, the Bomb Booster Areas, and the Atlas Missile Area. Therefore, no Phase II investigation is recommended for

those sites. As previously stated, three potential USTs at two additional UST locations have been identified at the Site, therefore, to fully meet the Site-wide UST Phase I data collection objectives and overall RI objectives, soil and groundwater sampling will be performed at each of the newly identified USTs. This sampling will be performed during the Phase II investigation as described in the CDAP Part I-Chapter B (WCC, 1996). All results from the Phase I investigation and additional UST sampling will be presented in the RI report.

5.21 GEOPHYSICAL ANOMALY AT LOAD LINE 3

The Confirmation Study (USACE, 1987) identified a 40-foot by 50-foot geophysical anomaly prior to installing MW-14 at Load Line 3 (**Drawing 1-1**). It was reported that the southern extent of the anomaly could not be determined due to interference from overhead power lines which crossed the site in a southwesterly direction (USACE, 1987). The anomaly may be a buried utility. WCC (1993a) reported that the groundwater sample from MW-14 contained 1,2 dichloropropane (25 µg/L) and chloroform (3 µg/L).

5.21.1 Overall RI and Phase I Objectives

5.21.1.1 Overall RI Objectives

The first RI objective for the investigation of the Geophysical Anomaly at Load Line 3 is to confirm the presence of the geophysical anomaly. The second RI objective is to evaluate whether the surrounding soils contain explosives, metals, VOCs, or SVOCs attributed to past DoD-related activities at concentrations sufficient to pose an unacceptable risk to human health or the environment.

5.21.1.2 Phase I RI Data Collection Objectives

The Phase I data collection objectives were to:

- Confirm the existence, and location of a Geophysical Anomaly at Load Line 3
- Evaluate the extent of explosives, metals, VOCs, and SVOCs in shallow and deep soils adjacent to the geophysical anomaly

5.21.2 Geophysical Survey

The geophysical survey at the Geophysical Anomaly at Load Line 3 was conducted on March 11, 1995. The survey was performed with the EM-31 instrument using a 10-foot grid node spacing. The survey was performed within the phase I study area boundaries shown on **Drawing 5-114**. The geophysical survey was performed in accordance with the procedures outlined in Section 4.2.2. The results for the geophysical survey are presented in **Appendix C**.

The geophysical survey was performed to confirm the presence or absence of a geophysical anomoly identified previously at Load Line 3. Sampling locations were located adjacent to an area(s) of subsurface anomolies, if present. If no area of subsurface anomoly was identified, then the sampling sites were located as shown in the investigation area drawing in the Draft Final CDAP Part I.

A subsurface anomoly was identified in the central portion of the investigation area and the two proposed sampling locations were placed one to the north and one to the south of the anomoly.

A complete discussion of the geophysical results and interpretation will be presented in the RI report.

5.21.3 Shallow and Deep Sampling

Shallow and deep soil samples were collected from two soil borings at the Geophysical Anomaly at Load Line 3.

5.21.3.1 Sample Collection

The shallow and deep sampling locations are presented in **Drawing 5-114**. The soil borings at the Geophysical Anomaly at Load Line 3 were drilled on March 28, 1995. At each boring, soil samples were collected from 0 to 6 inches, 1 to 2 feet, 2 to 3 feet, 4 to 5 feet, 9 to 10 feet, and 19 to 20 feet bgs. The soil samples were collected in accordance with the procedures outlined in Sections 4.2.4.3 and 4.2.4.4. The soil samples were analyzed for

explosives, metals, VOCs, and SVOCs. The sample from 2 to 3 feet bgs at the southern boring (GA-002) was not analyzed for metals. The soil boring logs are presented in **Appendix D.**

5.21.3.2 Summary of Analytical Results

The analytical results for all of the samples collected at the Geophysical Anomaly at Load Line 3 are presented in **Appendix A.**

No VOCs were detected in the soil samples collected at the Geophysical Anomaly at Load Line 3. However, detectable concentrations of SVOCs, explosives, and metals were reported in the soil samples.

5.21.4 Conclusions

5.21.4.1 Overall Data Quality Assessment

The overall assessment of the data reported for the samples collected from the Geophysical Anomaly indicated that precision, representativeness, and comparability were acceptable. Accuracy was impacted by the rejection of 7 nondetect antimony results based on MS recoveries less than 30 percent. Overall completeness for this investigation area was greater than the CDAP QA objective of 90 percent. Completeness is defined in Section 5.1.4.1.

5.21.4.2 Analytical Results above Applicable Screening Level Guidelines

A summary of the analytical data for the samples collected from the Geophysical Anomaly at Load Line 3 is presented in **Table 5-53**. No VOCs, SVOCs or explosives were detected at concentrations greater than the soil screening level. Cadmium and selenium were the only metals detected at concentrations greater than the soil screening level in 8 of the 11 samples collected. Those metals displaying concentrations above screening level are plotted on **Drawing 5-114**.

5.21.4.3 Achievement of Phase I Data Collection Objectives

Based on the results of the geophysical survey and the analytical results for the soil samples, the Phase I data collection objectives for the Geophysical Anomaly at Load Line 3 were achieved.

5.21.5 Recommendations

Based on the results of the Phase I investigation, no additional sampling is required to address the overall RI objective. Therefore, no Phase II investigation is recommended for Geophysical Anomaly at Load Line 3. All results from the Phase I investigation will be in the RI report.

5.22 SITE-WIDE POTENTIALLY HAZARDOUS WASTE SURVEY

All of the Site-Wide hazardous waste survey areas are shown on **Drawing 5-115**.

5.22.1 Overall RI and Phase I Objectives

5.22.1.1 Overall RI Objectives

The first RI objective is to assess each former NOP building for the presence of containerized potentially hazardous DoD waste materials and associated releases. The second RI objective is to evaluate the releases (if any) for concentrations of chemicals sufficient to pose an unacceptable risk to human health or the environment.

5.22.1.2 Phase I RI Data Collection Objectives

The RI phase I Study data collection objectives were to:

- Identify whether containerized potentially hazardous DoD-related waste materials are present in former NOP buildings

- Identify whether releases may have occurred from containers of potentially hazardous waste materials

5.22.2 Load Line Buildings

Load Lines 1, 2, 3, and 4 are located in the central portion of the Site (**Drawing 5-115**).

5.22.2.1 Survey Locations

A complete walk-through and visual hazardous waste survey was completed through the following Load Line buildings and their associated walkways (**Drawings 5-116** through **5-119**):

Load Line 1 Buildings: Inert Storage, Paint Storage and Mixing, Amatol Melt, Amatol Screening, Ammonium Nitrate Service, TNT Magazine, North TNT Service, East and West Cooling, TNT Pouring, TNT Screening, South TNT Service, Railroad Crane, North and South Change Houses, South Paint Storage, and Assembly and Shipping buildings.

Load Line 2 Buildings: Inert Storage, Receiving and Painting, Paint Storage and Mixing, Nose Pour, Amatol Melt, Amatol Screening, Ammonium Nitrate Service, North TNT Service, TNT Magazine, East and West Cooling, TNT Screening, South TNT Service, TNT Pouring, and North Change House buildings.

Load Line 3 Buildings: Inert Storage, Receiving and Painting, Nose Pour, Amatol Melt, Amatol Screening, Ammonium Nitrate Service, North TNT Service, TNT Magazine, East and West Cooling, North Change House, TNT Pouring, TNT Screening, South TNT Service, South Paint Storage, Assembly and Shipping buildings.

Load Line 4 Buildings: Inert Storage, Receiving and Painting, Paint Storage and Mixing, Nose Pour, Amatol Melt, Amatol Screening, Ammonium Nitrate Service, North TNT Service, TNT Magazine, East and West Cooling, South Change House,

TNT Pouring, TNT Screening, South TNT Service, South Paint Storage, Assembly and Shipping buildings.

A hazardous waste inventory was not conducted in those buildings where access could not be obtained or where the building was missing at the individual Load Line. The Receiving and Painting and Nose Pour buildings were missing at Load Line 1 (**Drawing 5-116**). The buildings have been removed due to heavy fire damage. The South Change House, South TNT Screening, South Paint Storage and Assembly and Shipping buildings have been demolished at Load Line 2 (**Drawing 5-117**). Access could not be obtained for the South Change House and the Paint Storage and Mixing buildings at Load Line 3 (**Drawing 5-118**). At Load Line 4, access could not be obtained for the North Change House (**Drawing 5-119**).

5.22.2.2 Survey Results

Many of the Load Line buildings are either empty or are currently being used by the University of Nebraska Agricultural Research and Development Center (ARDC) for work areas and farm equipment and supply storage. No potentially hazardous DoD-related waste was found in any of the Load Line 1, 2, 3, or 4 buildings surveyed.

5.22.3 Bomb Booster Area Buildings

The Bomb Booster Area is located in the northwest area of the Site (**Drawing 1-1**). The Bomb Booster Area was a separate load line used by the Army to produce and load tetryl boosters for the detonation of bombs. After operation by the Army, the majority of the Bomb Booster Area structures were used until recently as a fireworks factory. Currently, several of the Bomb Booster Area buildings are occupied by CH Industries.

5.22.3.1 Survey Locations

A complete walk-through and visual hazardous waste survey was completed through the Change House, Boiler Room building, the Booster Service Magazine building, the Tetryl Pelleting building, the Tetryl Rest House, the Tetryl Screening, Rest House, the Tetryl

Service Magazine building, north and south vacuum cleaner buildings and all associated walkways (**Drawing 5-120**).

The Line Office and First Aid, Inert Storage, and Booster Assembly buildings are currently being used by CH Industries. A walk-through and visual hazardous waste survey was not conducted in these buildings

5.22.3.2 Survey Results

No potentially hazardous DoD-related waste was found in any of the Bomb Booster buildings surveyed.

5.22.4 Administration Area Buildings

The Administration Area is located in the northwest corner of the Site (**Drawing 1-1**). The area was used to support activities at the Site beginning in late 1942 and continuing through 1964.

5.22.4.1 Survey Locations

Many of the former administration buildings have either been demolished or are currently being used by private industry and therefore, access could not be obtained. Several buildings to the south of the Administration Area are empty and access was available (**Drawing 5-121**).

5.22.4.2 Survey Results

No potentially hazardous DoD-related waste was found in any of the Administration Area Buildings surveyed.

5.22.5 Atlas Missile Area Buildings

The Atlas Missile Area is located approximately one mile North of Load Line 2 (**Drawing 1-1**). Construction on the missile site began in 1959 and lasted for approximately 18 months. The area was used by the U.S. Air Force to house three missile silos and as a

control area. The Atlas Missile Area was abandoned by the U.S. Air Force in 1964. The site is currently being used by the Nebraska National Guard as a training site.

5.22.5.1 Survey Locations

A complete walk-through and visual hazardous waste survey was completed through all three missile silos and the launch operations building (**Drawing 5-122**). The gate house is currently being used by the National Guard as a check-in point and access could not be obtained.

5.22.5.2 Survey Results

No potentially hazardous DoD-related waste was found in any of the Atlas Missile Area Buildings surveyed.

5.22.6 Ammonium Nitrate Plant

The Ammonium Nitrate Plant is located North of Load Lines 2 and 3 (**Drawing 1-1**). It produced ammonium nitrate from March to May 1943 for ordnance. The plant has not been used to produce ammonium nitrate since 1950 and is currently used by private individuals as a horse breeding farm and pasture land.

5.22.6.1 Survey Locations

A complete walk-through and visual hazardous waste survey was completed through the four of the Ammonium Nitrate buildings (**Drawing 5-123**). The remaining three buildings are currently occupied by private individuals and access could not be obtained.

5.22.6.2 Survey Results

The three north buildings are being used to store hay and the southeast most building is being used to store plumbing materials. No potentially hazardous DoD-related waste was found in any of the Ammonium Nitrate Buildings surveyed.

5.22.7 Sewage Treatment Plant

The Sewage Treatment Plant is located just south of the Landfill Area on the eastern portion of the Site (**Drawing 1-1**). The Sewage Treatment Plant is no longer in operation.

5.22.7.1 Survey Locations

The only enclosed structure remaining at the sewage treatment plant is the pump house building (**Drawing 5-124**). A complete walk-through and visual hazardous waste survey was completed through the pump house building.

5.22.7.2 Survey Results

No potentially hazardous DoD-related waste was found in the pump house building.

5.22.8 Conclusions

No containerized potentially hazardous waste materials attributed to past DoD-related activities were found in any of the former NOP buildings surveyed during this investigation.

5.22.9 Recommendations

Based on the survey results of the Phase I investigation, no additional field work is required to address the overall RI objective at the Load Line Buildings and the Atlas Missile Area Buildings. Several buildings at the Ammonium Nitrate plant, the Administration Area, and the Bomb Booster Area could not be accessed due to either locked buildings or owners not allowing access to their buildings. A second attempt will be made during the Phase II investigation at the Site to contact the owners and survey those buildings not surveyed during the Phase I field activity. All information from the Phase I investigation and additional work will be presented in the RI report.

Section 6

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6.0
SITE-WIDE CONCLUSIONS AND RECOMMENDATIONS SUMMARIES

6.1 SUMMARY OF CONCLUSIONS

Results of the Phase I investigation have been summarized in **Table 6-1**. For each investigation area, the analyses performed are summarized according to those areas with; results above detection, results above detection and below screening level, and results above detection and above a screening level.

6.2 SUMMARY RECOMMENDATIONS

With the exception of those investigation areas listed below. No additional sampling is required to address the overall RI objectives at most of the OU3 RI areas. Following is a list of those areas where a Phase II investigation is recommended to satisfy the overall RI objectives.

- Load Line 2 TNT Screening Building demolished (explosives in soil)
- Proving grounds (VOCs, SVOCs and metals in soil)
- Potential Landfill Area north of the Proving Grounds (metals in soil)
- Johnson and Clear Creeks (VOCs, explosives and metals in surface water)
- Silver Creek (VOCs and explosives in surface water)
- Physical habitat assessment of Johnson, Clear and Silver Creeks
- Raw Product Igloo Storage Buildings (metals in soil)
- USTs at Agronomy Area (SVOCs, BTEX, TPH is soil and groundwater)
- Hazardous Waste Survey

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Section 7

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7.0
TIME SCHEDULE AND DELIVERABLES

The following table shows the proposed submittal dates for all primary documents and the dates for Phase II activities.

Task Name	End/Submittal Date
Draft Final PDP	26-Feb-96
Draft Final CDAP Part I - Chapter B	26-Feb-96
RI Phase II Field Activities	April-June 1996
QCSR Report	17-Jul-96
Working Draft RI Report	21-Oct-96
Draft RI Report	26-Dec-96
Working Draft BLRA Report	18-Jan-97
Draft Final RI Report	18-Mar-97
Draft BLRA Report	21-Mar-97
Working Draft FS Report	8-Apr-97
Draft Final BLRA Report	4-Jun-97
Draft FS Report	10-Jun-97
Draft Final FS Report	25-Aug-97
Working Draft PP	1-Dec-97
Draft PP	5-Feb-98
Draft Final PP	11-Jun-98
Working Draft ROD	13-Aug-98
Draft ROD	16-Oct-98
Draft Final ROD	21-Dec-98
ROD Approval	25-Jan-99
ROD Signature	25-Feb-99

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B07NE003703-03526

Section 8

8.0
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Tables

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TABLE 2-1

OU2 QUATERLY SAMPLING EVENT RESULTS USED TO SUPPORT OU3 RI PHASE I INVESTIGATION
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

OU3 Investigation Area	Well No.	OU2 Sampling Results Supporting OU3*		Additional OU2 Sampling Results Supporting OU3**	
		Sampling Event	Parameters	Sampling Event	Parameters
Load Line Paint Operations Buildings	MW-3A & B	2nd Qtr.	M	3rd Qtr.	M
	MW-4A & B	2nd Qtr.	M	3rd Qtr.	M
	MW-6A & B	2nd Qtr.	M	3rd Qtr.	M
	MW-8A & B	2nd Qtr.	M	3rd Qtr.	M
	MW-12A	2nd Qtr.	M	3rd Qtr.	M
	MW-13A	2nd Qtr.	M	3rd Qtr.	M
	MW-14A	2nd Qtr.	M	3rd Qtr.	M
	MW-15A	2nd Qtr.	M	3rd Qtr.	M
NOP Background Wells	MW-19A, B & C	2nd Qtr.	E, M, V, S, T, N2+N3, N, P	3rd Qtr.	E, M, V
	MW-47A & B	2nd Qtr.	E, M, V, S, T, N2+N3, N, P	3rd Qtr.	E, M, V
	MW-48A, B & D	2nd Qtr.	E, M, V, S, T, N2+N3, N, P	none	E, M, V
Proving Grounds	MW-64B	4th Qtr.	E, M, V, S	none	na
Landfill Area	MW-52A & B	2nd. Qtr.	T	1st, 3rd Qtr.	T
	MW-53A & B	2nd. Qtr.	T	1st, 3rd Qtr.	T
	MW-54A & B	2nd. Qtr.	T	1st, 3rd Qtr.	T
	MW-55A & B	2nd. Qtr.	T	1st, 3rd Qtr.	T
	MW-56A & B	2nd. Qtr.	T	1st, 3rd Qtr.	T
WDAs N. of Nike Maintenence	MW-22A & B	2nd. Qtr.	E, M, V, S	none	na
WDA S.E. of Bomb Booster	MW-57B	2nd. Qtr.	E, M, V, S, P	none	na
WDAs at Atlas Missile Area	MW-58A & B	2nd. Qtr.	E, M, V, S	none	na
	MW-59A, B & D	2nd. Qtr.	E, M, V, S	none	na
Demolition Ground	MW-10A & B	2nd. Qtr.	E, M, V, S	none	na
Ammonium Nitrate Plant	MW-63B	4th Qtr.	M, N2 + N3, N	3rd. Qtr.	N2+N3, N

Notes:

* = OU2 sampling event providing data needs as described in the OU3 CDAP (WCC, 1995b).

** = *OU2 sampling event providing additional results to support OU3.*

1st Qrt. = September 1994

2nd Qrt. = December 1995

3rd Qrt. = March 1995

4th Qrt. = June 1995

E = Explosives

M = Metals (*total & dissolved*)

V = Volatiles

S = Semi-volatiles

P = Polychlorinated biphenyl

T = Thiodyglycol

N2 + N3 = nitrates + nitrites

N = Nitrate

WDA = Waste Disposal Area

TABLE 3-1
SUMMARY OF SOURCES USED IN DEVELOPING SOIL SCREENING LEVELS FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
Explosives	OU1 RG (RUST, 1994)	No Screening Level Established	---	---	---
Metals	2 x BG (OU3 RI)	PRG (EPA, 1995c)	RBC (EPA, 1995b)	---	---
Volatiles	PRG (EPA, 1995c)	RBC (EPA, 1995b)	GSSL (EPA, 1994)	No Screening Level Established	---
Semivolatiles	OU1 RG (RUST, 1994)	PRG (EPA, 1995c)	RBC (EPA, 1995b)	GSSL (EPA, 1994)	No Screening Level Established

SOURCES:

GSSL - Generic Soil Screening Levels (Ingestion)
2 x BG - 2 times background values presented in Table 3-7
OU1 RG - OU1 Remediation Goal
PRG - EPA Region IX Preliminary Remediation Goal (Residential Soil)
RBC - EPA Region III Risk-Based Concentration (Soil Ingestion, Residential)

TABLE 3-2
SUMMARY OF SOURCES USED IN DEVELOPING WATER SCREENING LEVELS
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	STEP 7
Metals	MCL (EPA, 1995a)	MCLG (EPA, 1995a)	Lower of Lifetime HA (EPA, 1995a) and 10^{-6} Cancer Risk HA (EPA, 1995a)	PRG (EPA, 1995c)	- - -	- - -	- - -
Volatiles	OU2 FTGCG (WCC, 1994e)	MCL (EPA, 1995a)	MCLG (EPA, 1995a)	Lower of Lifetime HA (EPA, 1995a) and 10^{-6} Cancer Risk HA (EPA, 1995a)	PRG (EPA, 1995c)	RBC (EPA, 1995b)	No Screening Level Established
Explosives	OU2 FTGCG (WCC, 1994e)	MCL (EPA, 1995a)	MCLG (EPA, 1995a)	Lower of Lifetime HA (EPA, 1995a) and 10^{-6} Cancer Risk HA (EPA, 1995a)	PRG (EPA, 1995c)	RBC (EPA, 1995b)	No Screening Level Established
Semivolatiles	OU2 FTGCG (WCC, 1994e)	MCL (EPA, 1995a)	MCLG (EPA, 1995a)	Lower of Lifetime HA (EPA, 1995a) and 10^{-6} Cancer Risk HA (EPA, 1995a)	PRG (EPA, 1995c)	RBC (EPA, 1995b)	No Screening Level Established

SOURCES:

10^{-6} Cancer Risk HA - 10^{-6} Cancer Risk Health Advisory
Lifetime HA - Lifetime Health Advisory
MCL - Maximum Contaminant Level
MCLG - Maximum Contaminant Level Goal
OU2 FTGCG - OU2 Final Target Groundwater Cleanup Goal
PRG - EPA Region IX Preliminary Remediation Goals (Tap Water)
RBC - EPA Region III Risk-Based Concentration (Tap Water)

TABLE 3-3
SCREENING LEVELS FOR EXPLOSIVES IN SOIL
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (mg/kg)	SOURCES
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	No Screening Level Established	OU1 RG (RUST, 1994)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	No Screening Level Established	OU1 RG (RUST, 1994)
1,3-Dinitrobenzene (1,3-DNB)	3.4	OU1 RG (RUST, 1994)
2,4-Dinitrotoluene (2,4-DNT)	0.9	OU1 RG (RUST, 1994)
2,6-Dinitrotoluene (2,6-DNT)	0.9	OU1 RG (RUST, 1994)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	OU1 RG (RUST, 1994)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343.0	OU1 RG (RUST, 1994)
Nitrobenzene (NB)	No Screening Level Established	OU1 RG (RUST, 1994)
Nitrotoluene (NT)	343.0	OU1 RG (RUST, 1994)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	OU1 RG (RUST, 1994)
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	OU1 RG (RUST, 1994)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	OU1 RG (RUST, 1994)

SOURCES:

OU1 RG - OU1 Remediation Goal

TABLE 3-4
SCREENING LEVELS FOR METALS IN SOIL
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (mg/kg)	SOURCES
Aluminum (A1)	33,852	2 x BG (OU3 RI)
Antimony (Sb)	31n	PRG (EPA, 1995c)
Arsenic (As)	13.5	2 x BG (OU3 RI)
Barium (Ba)	440	2 x BG (OU3 RI)
Beryllium (Be)	1.52	2 x BG (OU3 RI)
Cadmium (Cd)	0.40	2 x BG (OU3 RI)
Calcium (Ca)	GRAS	- - -
Chromium (Cr)	37.0	2 x BG (OU3 RI)
Cobalt (Co)	17.2	2 x BG (OU3 RI)
Copper (Cu)	33.9	2 x BG (OU3 RI)
Iron (Fe)	GRAS	- - -
Lead (Pb)	400n	PRG (EPA, 1995c)
Magnesium (Mg)	GRAS	- - -
Manganese (Mn)	1083	2 x BG (OU3 RI)
Mercury (Hg)	23n	RBC (EPA, 1995b)
Nickel (Ni)	39.3	2 x BG (OU3 RI)
Potassium (K)	GRAS	- - -
Selenium (Se)	1.33	2 x BG (OU3 RI)
Silver (Ag)	380n	PRG (EPA, 1995c)
Sodium (Na)	GRAS	- - -
Thallium (T1)	1.72	2 x BG (OU3 RI)

TABLE 3-4
SCREENING LEVELS FOR METALS IN SOIL
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (mg/kg)	SOURCES
Vanadium (V)	72.5	2 x BG (OU3 RI)
Zinc (Zn)	119.5	2 x BG (OU3 RI)

n - Non-carcinogenic effects
GRAS - Generally recognized as safe

SOURCES:

2 x BG - 2 times background values presented in Table 3-7
PRG - EPA Region IX Preliminary Remediation Goal (Residential Soil)
RBC - EPA Region III Risk Based Concentration (Soil Ingestion, Residential)

Table 3-5
Analytical Data for Background Soil
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	BKG-001			BKG-002			BKG-003			BKG-004			BKG-005			BKG-006			BKG-007			BKG-008			BKG-009			BKG-010		
		BKG-001-001 (1-2 ft)			BKG-002-001 (1-2 ft)			BKG-003-001 (1-2 ft)			BKG-004-001 (1-2 ft)			BKG-005-001 (1-2 ft)			BKG-006-001 (1-2 ft)			BKG-007-001 (1-2 ft)			BKG-008-001 (1-2 ft)			BKG-009-001 (1-2 ft)			BKG-010-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																															
Aluminum	33852	19400			15200			19000			16200			17500			16300			9660			17200			18100			20700		
Antimony	31		R			R			R			R			R			R			R			R			R			R	
Arsenic	13.5	5.6			7.2			8.1			8.2			8.4			5.8			3.8			7			6.8			6.8		
Barium	440	212			192			208			244			225			219			236			207			244			215		
Beryllium	1.52	0.78	J		0.76	J		0.86	J		0.8	J		0.81	J		0.69	J		0.54	J		0.77	J		0.79	J		0.8	J	
Cadmium	0.4	0.22	J		0.19	J		0.15	J		0.23	J		0.27	J		0.19	J			U	(0.11)	0.16	J		0.36	J		0.17	J	
Calcium	GRAS	2930			3130			3260			3730			3470			2790			2560			2970			3220			2370		
Chromium	37	20.2			16.2			19.9			18.1			19.6			17.8			13.1			18.7			19.9			21.3		
Cobalt	17.2	8.6	J		8.4	J		9.9	J		9.2	J		9.3	J		7.2	J		8.9	J		8.6	J		7.1	J		8.8	J	
Copper	33.9	15.7			17.3			19.1			22.1			21.4			13.4			11.9			16.8			16.5			15.2		
Iron	GRAS	18300			18000			21000			20500			20400			15900			11300			18400			18100			19500		
Lead	400	13.4			14			14.9			14.7			15.5			14.4			14.5			13.9			15.7			13.7		
Magnesium	GRAS	3380			3150			3940			4310			4150			2710			2080			3160			3170			3440		
Manganese	1083	504			513			603			572			578			447			660			523			497			516		
Nickel	39.3	19.1			19.8			23.4			24.6			24.1			15.9			12			19.6			18.7			19.3		
Potassium	GRAS	3150	J		2460	J		2820	J		2110	J		2870	J		2780	J		1720	J		2900	J		3600	J		2980	J	
Selenium	1.33		U	(0.77)		U	(0.78)	1.2				U	(0.82)		U	(0.79)	0.89	J			U	(0.73)	1.2	J		1	J			U	(0.75)
Thallium	1.72		U	(0.81)	0.86	J			U	(0.83)		U	(0.86)		U	(0.83)		U	(0.82)		U	(0.77)		U	(0.84)		U	(0.83)		U	(0.8)
Vanadium	72.5	40.2			31.6			37.5			31.3			38.3			36.2			27.5			38.3			40.2			41.3		
Zinc	119.5	65.6			53.7			62			66.1			67.5			56.6			42.8			55.5			65.5			62.4		

GRAS=Generally recognized as safe
Data Qualifiers:
J=Estimated Value
R=Rejected
UJ=Estimated Detection Limit
U=Nondetect Value

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

TABLE 3-6
STATISTICAL COMPARISON OF SITE BACKGROUND SAMPLES TO VALUES REPORTED IN THE LITERATURE
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Analytes	Background Measured Concentration Range (mg/kg)	Average Background Concentration ±99% Confidence Interval (mg/kg)	Concentration Range Reported From Literature[a] (mg/kg)
Aluminum	9660 - 20700	16926 ± 2963	5,000 - >100,000[b]
Antimony	R	NA	<1.0 - 2.6[b]
Arsenic	3.8 - 8.4	6.77 ± 1.37	1.6 - 12[c]
Barium	192 - 244	220 ± 17	100 - 1,000[c]
Beryllium	0.54 - 0.86	0.76 ± 0.09	ND - 2.0[c]
Cadmium	0.06 - 0.36	0.20 ± 0.08	ND - 11[b]
Chromium	13.1 - 21.3	18.5 ± 2.3	1.0 - 70[c]
Cobalt	7.1 - 9.9	8.6 ± 0.9	ND - 15[c]
Copper	11.9 - 22.1	16.9 ± 3.2	2.0 - 30[c]
Lead	13.4 - 15.7	14.5 ± 0.73	10 - 30[c]
Manganese	447 - 660	541 ± 60	30 - 5,000[b]
Mercury	ND	NA	0.02 - 0.08[c]
Nickel	12 - 24.6	19.7 ± 3.7	ND - 50[c]
Selenium	ND - 1.2	NA[f]	<0.1 - 1.2[c]
Silver	ND	NA	<0.5 - 5.0[d]
Thallium	ND - 0.86	NA[f]	<0.25 - 10[e]
Vanadium	27.5 - 41.3	36.2 ± 4.5	10 - 150[c]
Zinc	42.8 - 67.5	59.8 ± 7.5	10 - 220[c]

Notes:
[a] Elements in North American Soils (Dragun and Chiasson, 1991)
[b] Western United States (West of the 96th Meridian)
[c] Nebraska Soils
[d] Western USA, B Horizon
[e] Michigan Soils
[f] Confidence intervals could not be reliably calculated for chemicals with numerous ND values (selenium, thallium)
ND Not Detected
NA Not Applicable
R Rejected Data

TABLE 3-7

AVERAGE BACKGROUND METAL CONCENTRATIONS USED TO CALCULATE SCREENING LEVELS
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

	OU3 RI PHASE I INVESTIGATION BACKGROUND SAMPLE LOCATION I.Ds (Results in mg/kg)										
Analytes	**BKG-001**	**BKG-002**	**BKG-003**	**BKG-004**	**BKG-005**	**BKG-006**	**BKG-007**	**BKG-008**	**BKG-009**	**BKG-010**	**Average Concentrations (mg/kg)**
Aluminum	19400	15200	19000	16200	17500	16300	9660	17200	18100	20700	16926
Arsenic	5.6	7.2	8.1	8.2	8.4	5.8	3.8	7.0	6.8	6.8	6.8
Barium	212	192	208	244	225	219	236	207	244	215	220
Beryllium	0.78	0.76	0.86	0.8	0.81	0.69	0.54	0.77	0.79	0.80	0.76
Cadmium	0.22	0.19	0.15	0.23	0.27	0.19	0.06 *	0.16	0.36	0.17	0.20
Chromium	20.2	16.2	19.9	18.1	19.6	17.8	13.1	18.7	19.9	21.3	18.5
Cobalt	8.6	8.4	9.9	9.2	9.3	7.2	8.9	8.6	7.1	8.8	8.6
Copper	15.7	17.3	19.1	22.1	21.4	13.4	11.9	16.8	16.5	15.2	16.9
Manganese	504	513	603	572	578	447	660	523	497	516	541
Nickel	19.1	19.8	23.4	24.6	24.1	15.9	12.0	19.6	18.7	19.3	19.7
Selenium	0.39 *	0.39 *	1.2	0.41 *	0.40 *	0.89	0.37 *	1.2	1.0	0.38 *	0.66
Thallium	<.81	0.86	<.83	<.86	<.83	<.82	<.77	<.84	<.83	<.80	0.86
Vanadium	40.2	31.6	37.5	31.3	38.3	36.2	27.5	38.3	40.2	41.3	36.2
Zinc	65.6	53.7	62	66.1	67.5	56.6	42.8	55.5	65.5	62.4	59.8

Notes:

< - Result less than indicated detection limit

* - Results presented as 1/2 the Laboratory Quantification Limits

TABLE 3-8
SCREENING LEVELS FOR VOLATILE ORGANIC COMPOUNDS IN SOIL
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/kg)	SOURCES
Acetone	2,000,000n	PRG (EPA, 1995c)
Benzene	1,400c	PRG (EPA, 1995c)
Bromodichloromethane	1,400c	PRG (EPA, 1995c)
Bromoform	56,000c	PRG (EPA, 1995c)
Bromomethane	15,000n	PRG (EPA, 1995c)
2-Butanone	8,700,000n	PRG (EPA, 1995c)
Carbon Disulfide	16,000n	PRG (EPA, 1995c)
Carbon Tetrachloride	470c	PRG (EPA, 1995c)
Chlorobenzene	160,000n	PRG (EPA, 1995c)
Chloroethane	1,100,000n	PRG (EPA, 1995c)
Chloroform	530c	PRG (EPA, 1995c)
Chloromethane	2,000c	PRG (EPA, 1995c)
cis-1,2-Dichloroethene	59,000n	PRG (EPA, 1995c)
cis-1,3-Dichloropropene	510c	PRG (EPA, 1995c)
Dibromochloromethane	5,300c	PRG (EPA, 1995c)
1,1-Dichloroethane	840,000n	PRG (EPA, 1995c)
1,2-Dichloroethane	440c	PRG (EPA, 1995c)
1,1-Dichloroethene	38c	PRG (EPA, 1995c)
1,2-Dichloropropane	680c	PRG (EPA, 1995c)
Ethylbenzene	690,000sat	PRG (EPA, 1995c)
2-Hexanone	No Screening Level Established	*
Methylene Chloride	11,000c	PRG (EPA, 1995c)
4-Methyl-2-Pentanone	5,200,000n	PRG (EPA, 1995c)
Styrene	2,200,000sat	PRG (EPA, 1995c)
1,1,2,2-Tetrachloroethane	900c	PRG (EPA, 1995c)
Tetrachloroethene	7,000c	PRG (EPA, 1995c)
Toluene	1,900,000n	PRG (EPA, 1995c)
trans-1,2-Dichloroethene	170,000n	PRG (EPA, 1995c)

TABLE 3-8
SCREENING LEVELS FOR VOLATILE ORGANIC COMPOUNDS IN SOIL
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/kg)	SOURCES
trans-1,3-Dichloropropene	510c	PRG (EPA, 1995c)
1,1,1-Trichloroethane	3,000,000sat	PRG (EPA, 1995c)
1,1,2-Trichloroethane	1,400c	PRG (EPA, 1995c)
Trichloroethene (TCE)	7,100c	PRG (EPA, 1995c)
Vinyl Chloride	5.2c	PRG (EPA, 1995c)
Total Xylenes	990,000sat	PRG (EPA, 1995c)

c - Carcinogenic effects
n - Non-carcinogenic effects
sat - Soil saturation
* - No screening level was established; however, all sources listed in the source summary table were referenced

SOURCES:

PRG - EPA Region IX Preliminary Remediation Goal (Residential Soil)

TABLE 3-9
SCREENING LEVELS FOR SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/kg)	SOURCES
Acenaphthene	360,000sat	PRG (EPA, 1995c)
Acenaphthylene	No Screening Level Established	*
Anthracene	19,000sat	PRG (EPA, 1995c)
Benzo(a)anthracene	610c	PRG (EPA, 1995c)
Benzo(a)pyrene	61c	PRG (EPA, 1995c)
Benzo(b)fluoranthene	610c	PRG (EPA, 1995c)
Benzo(g,h,i)perylene	No Screening Level Established	*
Benzo(k)fluoranthene	6,100c	PRG (EPA, 1995c)
bis(2-Chloroethoxy)methane	No Screening Level Established	*
bis(2-Chloroethyl)ether	74c	PRG (EPA, 1995c)
bis(2-Ethylhexyl)phthalate	32,000c	PRG (EPA, 1995c)
4-Bromophenyl-phenylether	4,500,000n	RBC (EPA, 1995b)
Butylbenzylphthalate	13,000,000n	PRG (EPA, 1995c)
Carbazole	22,000c	PRG (EPA, 1995c)
4-Chloroaniline	260,000n	PRG (EPA, 1995c)
4-Chloro-3-methylphenol	No Screening Level Established	*
2-Chloronaphthalene	5,200,000n	PRG (EPA, 1995c)
2-Chlorophenol	330,000n	PRG (EPA, 1995c)
4-Chlorophenyl-phenylether	No Screening Level Established	*
Chrysene	24,000sat	PRG (EPA, 1995c)
Dibenzo(a,h)anthracene	61c	PRG (EPA, 1995c)
Dibenzofuran	260,000n	PRG (EPA, 1995c)
1,2-Dichlorobenzene	2,300,000sat	PRG (EPA, 1995c)
1,3-Dichlorobenzene	2,800,000sat	PRG (EPA, 1995c)
1,4-Dichlorobenzene	7,400c	PRG (EPA, 1995c)
3,3'-Dichlorobenzidine	990c	PRG (EPA, 1995c)

TABLE 3-9
SCREENING LEVELS FOR SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/kg)	SOURCES
2,4-Dichlorophenol	200,000n	PRG (EPA, 1995c)
Diethylphthalate	52,000,000n	PRG (EPA, 1995c)
2,4-Dimethylphenol	1,300,000n	PRG (EPA, 1995c)
Dimethylphthalate	100,000,000max	PRG (EPA, 1995c)
Di-n-butylphthalate	6,500,000n	PRG (EPA, 1995c)
4,6-Dinitro-2-methylphenol	No Screening Level Established	*
2,4-Dinitrophenol	130,000n	PRG (EPA, 1995c)
2,4-Dinitrotoluene (2,4-DNT)	900	OU1 RG (RUST, 1994)
2,6-Dinitrotoluene (2,6-DNT)	900	OU1 RG (RUST, 1994)
Di-n-octylphthalate	1,300,000n	PRG (EPA, 1995c)
Fluoranthene	2,600,000n	PRG (EPA, 1995c)
Fluorene	300,000sat	PRG (EPA, 1995c)
Hexachlorobenzene	280c	PRG (EPA, 1995c)
Hexachlorobutadiene	5,700c	PRG (EPA, 1995c)
Hexachlorocyclopentadiene	450,000n	PRG (EPA, 1995c)
Hexachloroethane	32,000c	PRG (EPA, 1995c)
Indeno(1,2,3-cd)pyrene	610c	PRG (EPA, 1995c)
Isophorone	470,000c	PRG (EPA, 1995c)
2-Methylnaphthalene	No Screening Level Established	*
2-Methylphenol	3,300,000n	PRG (EPA, 1995c)
4-Methylphenol	330,000n	PRG (EPA, 1995c)
Naphthalene	800,000sat	PRG (EPA, 1995c)
2-Nitroaniline	3,900n	PRG (EPA, 1995c)
3-Nitroaniline	230,000n	RBC (EPA, 1995b)
4-Nitroaniline	230,000n	RBC (EPA, 1995b)
Nitrobenzene	No Screening Level Established	OU1 RG (RUST, 1994)
2-Nitrophenol	No Screening Level Established	*

TABLE 3-9
SCREENING LEVELS FOR SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/kg)	SOURCES
4-Nitrophenol	4,800,000n	RBC (EPA, 1995b)
N-Nitroso-di-n-propylamine	63c	PRG (EPA, 1995c)
N-Nitrosodiphenylamine (1)	91,000c	PRG (EPA, 1995c)
2,2'-oxybis(1-Chloropropane)	No Screening Level Established	*
Pentachlorophenol	2,500c	PRG (EPA, 1995c)
Phenanthrene	No Screening Level Established	*
Phenol	39,000,000n	PRG (EPA, 1995c)
Pyrene	2,000,000n	PRG (EPA, 1995c)
1,2,4-Trichlorobenzene	620,000n	PRG (EPA, 1995c)
2,4,5-Trichlorophenol	6,500,000n	PRG (EPA, 1995c)
2,4,6-Trichlorophenol	40,000c	PRG (EPA, 1995c)

c - Carcinogenic effects
max - Ceiling limit
n - Non-carcinogenic effects
sat - Soil saturation
* - No screening level was established; however, all sources listed in the source summary table were referenced
(1) - Cannot be separated from Diphenylamine

SOURCES:

OU1 RG - OU1 Remediation Goal
PRG - EPA Region IX Preliminary Remediation Goal (Residential Soil)
RBC - EPA Region III Risk-Based Concentration (Soil Ingestion, Residential)

TABLE 3-10
SCREENING LEVELS FOR EXPLOSIVES IN WATER
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/l)	SOURCES
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	No Screening Level Established	*
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	No Screening Level Established	*
1,3-Dinitrobenzene (1,3-DNB)	1.0	Lifetime HA (EPA, 1995a)
2,4-Dinitrotoluene (2,4-DNT)	1.24a	OU2 FTGCG (WCC, 1994e)
2,6-Dinitrotoluene (2,6-DNT)	0.05	10^{-6} Cancer Risk HA (EPA, 1995a)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2c	OU2 FTGCG (WCC, 1994e)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	370b	PRG (EPA, 1995c)
Nitrobenzene (NB)	18b	PRG (EPA, 1995c)
2-Nitrotoluene (2-NT)	61b	RBC (EPA, 1995b)
3-Nitrotoluene (3-NT)	370b	PRG (EPA, 1995c)
4-Nitrotoluene (4-NT)	370b	PRG (EPA, 1995c)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	400c	OU2 FTGCG (WCC, 1994e)
1,3,5-Trinitrobenzene (1,3,5-TNB)	0.778b	OU2 FTGCG (WCC, 1994e)
2,4,6-Trinitrotoluene (2,4,6-TNT)	2c	OU2 FTGCG (WCC, 1994e)

a - Carcinogenic risk
b - Non-carcinogenic risk
c - Health advisory
* - No screening level was established; however, all sources listed in the source summary table were referenced

SOURCES:

10^{-6} Cancer Risk HA - 10^{-6} Cancer Risk Health Advisory
Lifetime HA - Lifetime Health Advisory
OU2 FTGCG - OU2 Final Target Groundwater Cleanup Goal
PRG - EPA Region IX Preliminary Remediation Goal (Tap Water)
RBC - EPA Region III Risk-Based Concentration (Tap Water)

TABLE 3-11
SCREENING LEVELS FOR METALS IN WATER
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/l)	SOURCES
Aluminum (A1)	37,000n	PRG (EPA, 1995c)
Antimony (Sb)	6	MCL (EPA, 1995a)
Arsenic (As)	50	MCL (EPA, 1995a)
Barium (Ba)	2,000	MCL (EPA, 1995a)
Beryllium (Be)	4	MCL (EPA, 1995a)
Cadmium (Cd)	5	MCL (EPA, 1995a)
Calcium (Ca)	GRAS	- - -
Chromium (Cr)	100	MCL (EPA, 1995a)
Cobalt (Co)	2,200n	PRG (EPA, 1995c)
Copper (Cu)	1,300	AL (EPA, 1995a)
Iron (Fe)	GRAS	- - -
Lead (Pb)	15	AL (EPA, 1995a)
Magnesium (Mg)	GRAS	- - -
Manganese (Mn)	180n	PRG (EPA, 1995c)
Mercury (Hg)	2	MCL (EPA, 1995a)
Nickel (Ni)	100	MCL (EPA, 1995a)
Potassium (K)	GRAS	- - -
Selenium (Se)	50	MCL (EPA, 1995a)
Silver (Ag)	100	Lifetime HA (EPA, 1995a)
Sodium (Na)	GRAS	- - -
Thallium (T1)	2	MCL (EPA, 1995a)
Vanadium (V)	260n	PRG (EPA, 1995c)
Zinc (Zn)	2,000	Lifetime HA (EPA, 1995a)

n - Non-carcinogenic effects
GRAS - Generally recognized as safe

SOURCES:

AL - Action Level
Lifetime HA - Lifetime Health Advisory
MCL - Maximum Contaminant Level
PRG - EPA Region IX Preliminary Remediation Goal (Tap Water)

TABLE 3-12
SCREENING LEVELS FOR VOLATILE ORGANIC COMPOUNDS IN WATER
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/l)	SOURCES
Acetone	610n	PRG (EPA, 1995c)
Benzene	5	MCL (EPA, 1995a)
Bromochloromethane	90	Lifetime HA (EPA, 1995a)
Bromomethane	10	Lifetime HA (EPA, 1995a)
2-Butanone	1,900n	PRG (EPA, 1995c)
Carbon Disulfide	21n	PRG (EPA, 1995c)
Carbon Tetrachloride	5	MCL (EPA, 1995a)
Chlorobenzene	100	MCL (EPA, 1995a)
Chloroethane	710n	PRG (EPA, 1995c)
Chloromethane	3	Lifetime HA (EPA, 1995a)
cis-1,2-Dichloroethene	70	MCL (EPA, 1995a)
cis-1,3-Dichloropropene	0.2	10^{-6} Cancer Risk HA (EPA, 1995a)
1,2-Dibromo-3-chloropropane	0.2	MCL (EPA, 1995a)
1,2-Dibromoethane	0.05	MCL (EPA, 1995a)
1,2-Dichlorobenzene	600	MCL (EPA, 1995a)
1,3-Dichlorobenzene	600^{+}	MCL (EPA, 1995a)
1,4-Dichlorobenzene	75	MCL (EPA, 1995a)
1,1-Dichloroethane	810n	PRG (EPA, 1995c)
1,2-Dichloroethane	5	MCL (EPA, 1995a)
1,1-Dichloroethene	7	MCL (EPA, 1995a)
1,2-Dichloroethene	55	PRG (EPA, 1995c)
1,2-Dichloropropane	5	MCL (EPA, 1995a)

TABLE 3-12
SCREENING LEVELS FOR VOLATILE ORGANIC COMPOUNDS IN WATER
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/l)	SOURCES
Ethylbenzene	700	MCL (EPA, 1995a)
2-Hexanone	No Screening Level Established	*
Methylene Chloride	5	MCL (EPA, 1995a)
4-Methyl-2-Pentanone	2,900n	PRG (EPA, 1995c)
Styrene	100	MCL (EPA, 1995a)
1,1,2,2-Tetrachloroethane	0.055c	PRG (EPA, 1995c)
Tetrachloroethene	5	MCL (EPA, 1995a)
Toluene	1,000	MCL (EPA, 1995a)
trans-1,2-Dichloroethene	100	MCL (EPA, 1995a)
trans-1,3-Dichloropropene	0.2	10^{-6} Cancer Risk HA (EPA, 1995a)
1,1,1-Trichloroethane	200	MCL (EPA, 1995a)
1,1,2-Trichloroethane	5	MCL (EPA, 1995a)
Trichloroethene (TCE)	5	MCL (EPA, 1995a)
Trihalomethane Group	100	MCL (EPA, 1995a)
Vinyl Chloride	2	MCL (EPA, 1995a)
Total Xylenes	10,000	MCL (EPA, 1995a)

c - Carcinogenic effects
n - Non-carcinogenic effects
* - No screening level was established; however, all sources listed in the source summary table were referenced
+ - The values for m-dichlorobenzene are based on data for o-dichlorobenzene

SOURCES:

10^{-6} Cancer Risk HA - 10^{-6} Cancer Risk Health Advisory
Lifetime HA - Lifetime Health Advisory
MCL - Maximum Contaminant Level
PRG - EPA Region IX Preliminary Remediation Goal (Tap Water)

TABLE 3-13
SCREENING LEVELS FOR SEMI-VOLATILE ORGANIC COMPOUNDS IN WATER
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/l)	SOURCES
Acenaphthene	370n	PRG (EPA, 1995c)
Acenaphthylene	No Screening Level Established	*
Anthracene	1,800n	PRG (EPA, 1995c)
Benzo(a)anthracene	0.092c	PRG (EPA, 1995c)
Benzo(a)pyrene	2	MCL (EPA, 1995a)
Benzo(b)fluoranthene	0.002	10^{-6} Cancer Risk HA (EPA, 1995a)
Benzo(g,h,i)perylene	No Screening Level Established	*
Benzo(k)fluoranthene	0.002	10^{-6} Cancer Risk HA (EPA, 1995a)
bis(2-Chloroethoxy)methane	No Screening Level Established	*
bis(2-Chloroethyl)ether	0.0098c	PRG (EPA, 1995c)
bis(2-Ethylhexyl)phthalate	6	MCL (EPA, 1995a)
4-Bromophenyl-phenylether	2,100n	RBC (EPA, 1995b)
Butylbenzylphthalate	7,300n	PRG (EPA, 1995c)
Carbazole	3.4c	PRG (EPA, 1995c)
4-Chloroaniline	150n	PRG (EPA, 1995c)
4-Chloro-3-methylphenol	No Screening Level Established	*
2-Chloronaphthalene	2,900n	PRG (EPA, 1995c)
2-Chlorophenol	40	Lifetime HA (EPA, 1995a)
4-Chlorophenyl-phenylether	No Screening Level Established	*
Chrysene	9.2c	PRG (EPA, 1995c)
Dibenzo(a,h)anthracene	0.0092c	PRG (EPA, 1995c)
Dibenzofuran	150n	PRG (EPA, 1995c)
1,2-Dichlorobenzene	600	MCL (EPA, 1995a)
1,3-Dichlorobenzene	600^{+}	MCL (EPA, 1995a)
1,4-Dichlorobenzene	75	MCL (EPA, 1995a)
3,3'-Dichlorobenzidine	0.15c	PRG (EPA, 1995c)
2,4-Dichlorophenol	20	Lifetime HA (EPA, 1995a)
Diethylphthalate	5,000	Lifetime HA (EPA, 1995a)
2,4-Dimethylphenol	730n	PRG (EPA, 1995c)
Dimethylphthalate	370,000n	PRG (EPA, 1995c)

TABLE 3-13
SCREENING LEVELS FOR SEMI-VOLATILE ORGANIC COMPOUNDS IN WATER
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/l)	SOURCES
Di-n-butylphthalate	3,700n	PRG (EPA, 1995c)
4,6-Dinitro-2-methylphenol	No Screening Level Established	*
2,4-Dinitrophenol	73n	PRG (EPA, 1995c)
2,4-Dinitrotoluene (2,4-DNT)	1.24	OU2 FTGCG (WCC, 1994e)
2,6-Dinitrotoluene (2,6-DNT)	0.05	10^{-6} Cancer Risk HA (EPA, 1995a)
Di-n-octylphthalate	730n	PRG (EPA, 1995c)
Fluoranthene	1,500n	PRG (EPA, 1995c)
Fluorene	240n	PRG (EPA, 1995c)
Hexachlorobenzene	1	MCL (EPA, 1995a)
Hexachlorobutadiene	1	MCLG (EPA, 1995a)
Hexachlorocyclopentadiene	50	MCL (EPA, 1995a)
Hexachloroethane	1	Lifetime HA (EPA, 1995a)
Indeno(1,2,3-cd)pyrene	0.092c	PRG (EPA, 1995c)
Isophorone	40	10^{-6} Cancer Risk HA (EPA, 1995a)
2-Methylnaphthalene	No Screening Level Established	*
2-Methylphenol	1,800n	PRG (EPA, 1995c)
4-Methylphenol	180n	PRG (EPA, 1995c)
Naphthalene	20	Lifetime HA (EPA, 1995a)
2-Nitroaniline	2.2n	PRG (EPA, 1995c)
3-Nitroaniline	110n	RBC (EPA, 1995b)
4-Nitroaniline	110n	RBC (EPA, 1995b)
Nitrobenzene	18n	PRG (EPA, 1995c)
2-Nitrophenol	No Screening Level Established	*
4-Nitrophenol	60	Lifetime HA (EPA, 1995a)
N-Nitroso-di-n-propylamine	0.0096c	PRG (EPA, 1995c)
N-Nitrosodiphenylamine (1)	14c	PRG (EPA, 1995c)
2,2'-oxybis(1-Chloropropane)	No Screening Level Established	*
Pentachlorophenol	1	MCL (EPA, 1995a)
Phenanthrene	No Screening Level Established	*
Phenol	4,000	Lifetime HA (EPA, 1995a)

TABLE 3-13
SCREENING LEVELS FOR SEMI-VOLATILE ORGANIC COMPOUNDS IN WATER
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

COMPOUNDS	CONCENTRATIONS (ug/l)	SOURCES
Pyrene	1,100n	PRG (EPA, 1995c)
1,2,4-Trichlorobenzene	70	MCL (EPA, 1995a)
2,4,5-Trichlorophenol	3,700n	PRG (EPA, 1995c)
2,4,6-Trichlorophenol	3	10^{-6} Cancer Risk HA (EPA, 1995a)

c - Carcinogenic effects
n - Non-carcinogenic effects
* - No screening level was established; however, all sources listed in the source summary table were referenced
(1) - Cannot be separated from Diphenylamine
+ - The values for m-dichlorobenzene are based on data for o-dichlorobenzene

SOURCES:

10^{-6} Cancer Risk HA - 10^{-6} Cancer Risk Health Advisory
Lifetime HA - Lifetime Health Advisory
MCL - Maximum Contaminant Level
MCLG - Maximum Contaminant Level Goal
OU2 FTGCG - OU2 Final Target Groundwater Cleanup Goal
PRG - EPA Region IX Preliminary Remediation Goal (Tap Water)
RBC - EPA Region III Risk-Based Concentration (Tap Water)

TABLE 4-1

ANALYTICAL METHODOLOGIES
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Compound Class	Matrix	Analytical Method
TCL Volatile Organic Compounds (VOCs)	Soil	CLP-SOW OLM02.1
TCL Low-Concentration VOCs	Water	CLP-SOW low concentration (October 1992)
TCL Semi-Volatile Organic Compounds (SVOCs)	Water Soil	CLP-SOW OLM02.1
TCL PolyChlorinated Biphenyls (PCBs)	Soil	CLP-SOW OLM02.1
TAL Metals	Water (total and dissolved) Soil Surface Wipe	CLP-SOW ILM03.0
Explosives	Water Soil Surface Wipe	SW846-8330[1]
NO_3/NO_2	Water	EPA 353.3
Thiodiglycol	Water	HPLC MS/MS
NO_3	Water	EPA 352.1
High Explosives Field Screening - TNT	Soil	DTECH™ Test Kit TK-1004-1
High Explosives Field Screening - RDX	Soil	DTECH™ Test Kit TK-1005-1
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)	Water Soil	EPA 8020
Total Recoverable Petroleum Hydrocarbons (TRPH)	Soil Water	EPA 418.1

Note:

[1]Refers to SW-846, Method 8330, Revision 0, Nov. 1992 released as a proposed update method by USEPA.
TCL - Target Compound List. EPA's list of hazardous inorganic compounds (CLP only)
TAL - Target Analyte List. EPA's list of hazardous inorganic compounds (CLP only)

Table 4-2
SAMPLE IDENTIFICATION DESIGNATION

Investigation Area	Investigation Activity	Sample Type	Sample Identification Designation (1)	Example
Load Line Bomb Production Buildings	Shallow Soil Sampling (Adjacent)	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	B1A-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	B1A-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	B1A-401-002
	Shallow Soil Sampling (Beneath)	Investigative Sample	"InvArea"B-"LocNum"-"Depth"	B1B-001-002
		QC Field Split	"InvArea"B-"LocNum+200"-"Depth"	B1B-201-002
		QA Field Split	"InvArea"B-"LocNum+400"-"Depth"	B1B-401-002
	Wipe Sampling	Investigative Sample	"InvArea"W-"LocNum"-"WipeType"	B1W-001-WLL
		Blank	"InvArea"W-"LocNum+200"-"WipeType"	B1W-001-BLK
Load Line Paint Operations Buildings	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	P1A-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	P1A-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	P1A-401-002
	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-003-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-203-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-403-113
Tetryl Pelleting Building	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	TPA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	TPA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	TPA-401-002
North Burning Ground	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	NGA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	NGA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	NGA-401-002
Proving Grounds	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	PGA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	PGA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	PGA-401-002
	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-003-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-203-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-403-113
South Burning Ground	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	SGA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	SGA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	SGA-401-002
Potential Landfill Area North of Proving Grounds	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	PLA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	PLA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	PLA-401-002
Landfill Area	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-053-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-253-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-453-113
Waste Disposal Areas North of Former Nike Maintenance Area	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	NMA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	NMA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	NMA-401-002
	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-053-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-253-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-453-113

See Sheet 4 for Footnotes

Table 4-2
SAMPLE IDENTIFICATION DESIGNATION

Investigation Area	Investigation Activity	Sample Type	Sample Identification Designation (1)	Example
Waste Disposal Area Southeast of Bomb Booster Area	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	BBA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	BBA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	BBA-401-002
	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-053-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-253-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-453-113
Waste Disposal Areas at the Atlas Missile Area	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	AMA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	AMA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	AMA-401-002
	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-053-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-253-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-453-113
Waste Disposal Areas North of the Ammonium Nitrate Plant	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	ANA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	ANA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	ANA-401-002
	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-053-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-253-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-453-113
Demolition Ground	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	DGA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	DGA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	DGA-401-002
	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-053-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-253-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-453-113
Detonation Craters West of the Demolition Ground	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	DCA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	DCA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	DCA-401-002
Bermed Area Southwest of Load Line 1	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	BRA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	BRA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth" RIN-"SID"	BRA-401-002
Ammonium Nitrate Plant	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-063-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-263-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-463-113
Igloo Storage Areas	HE Screening	Investigative Sample	"InvArea"S-"LocNum"-"Depth"	IGS-001-002
	Confirmation Sampling	Investigative Sample	"InvArea"N-"LocNum"-"Depth"	IGN-001-002
		QC Field Split	"InvArea"N-"LocNum+200"-"Depth"	IGN-201-002
		QA Field Split	"InvArea"N-"LocNum+400"-"Depth"	IGN-401-002
	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	IGP-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	IGP-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth"	IGP-401-002
	Wipe Sampling	Investigative Sample	"InvArea"W-"LocNum"-"WipeType"	IGW-001-WLL
		Blank	"InvArea"W-"LocNum+200"-"WipeType"	IGW-001-BLK

See Sheet 4 for Footnotes

Table 4-2
SAMPLE IDENTIFICATION DESIGNATION

Investigation Area	Investigation Activity	Sample Type	Sample Identification Designation (1)	Example
Johnson Creek	Surface Water Sampling	Investigative Sample	"InvArea"W-LocNum"-"MM""Y"	JCW-003-113
		QC Field Replicate	"InvArea"W-"LocNum+200"-"MM""Y"	JCW-203-113
		QA Field Replicate	"InvArea"W-"LocNum+400"-"MM""Y"	JCW-403-113
	Sediment Sampling	Investigative Sample	"InvArea"S-LocNum"-"MM""Y"	JCS-003-113
		QC Field Split	"InvArea"S-"LocNum+200"-"MM""Y"	JCS-203-113
		QA Field Split	"InvArea"S-"LocNum+400"-"MM""Y"	JCS-403-113
Silver Creek	Surface Water Sampling	Investigative Sample	"InvArea"W-LocNum"-"MM""Y"	SCW-001-113
		QC Field Replicate	"InvArea"W-"LocNum+200"-"MM""Y"	SCW-201-113
		QA Field Replicate	"InvArea"W-"LocNum+400"-"MM""Y"	SCW-401-113
	Sediment Sampling	Investigative Sample	"InvArea"S-LocNum"-"MM""Y"	SCS-001-113
		QC Field Split	"InvArea"S-"LocNum+200"-"MM""Y"	SCS-201-113
		QA Field Split	"InvArea"S-"LocNum+400"-"MM""Y"	SCS-401-113
Underground Storage Tanks at Administration Area	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	UAA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	UAA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth" RIN-"SID"	UAA-401-002
	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-063-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-263-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-463-113
Underground Storage Tanks at Bomb Booster Area	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	UBA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	UBA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth" RIN-"SID"	UBA-401-002
	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-063-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-263-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-463-113
Underground Storage Tanks at Atlas Missile Area	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	UMA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	UMA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth" RIN-"SID"	UMA-401-002
	Groundwater Sampling	Investigative Sample	"Interval"MW-"LocNum"-"MM""Y"	BMW-063-113
		QC Field Replicate	"Interval"MW-"LocNum+200"-"MM""Y"	BMW-263-113
		QA Field Replicate	"Interval"MW-"LocNum+400"-"MM""Y"	BMW-463-113
Geophysical Anomaly at Load Line 3	Shallow Soil Sampling	Investigative Sample	"InvArea"A-"LocNum"-"Depth"	GAA-001-002
		QC Field Split	"InvArea"A-"LocNum+200"-"Depth"	GAA-201-002
		QA Field Split	"InvArea"A-"LocNum+400"-"Depth" RIN-"SID"	GAA-401-002
All Investigation Areas	All Sampling Activities	Rinsate - QC	RIN-"SID"-QA TRB-"Y""MM"-0"DD"-"NN"	RIN-BMW-063-113
		Rinsate - QA	TRB-"Y""MM"-0"DD"-"NN"-QA	RIN-BMW-063-113-QA
		Trip Blank - QC		TRB-411-018-02
		Trip Blank - QA		TRB-411-018-04-QA

See Sheet 4 for Footnotes

Table 4-2
SAMPLE IDENTIFICATION DESIGNATION

Note : (1) "InvArea" = a 2-character abbreviation of the investigation area

B1 : Bomb Production Buildings at Load Line 1
B2 : Bomb Production Buildings at Load Line 2
B3 : Bomb Production Buildings at Load Line 3
B4 : Bomb Production Buildings at Load Line 4
P1 : Paint Operation Buildings at Load Line 1
P2 : Paint Operation Buildings at Load Line 2
P3 : Paint Operation Buildings at Load Line 3
P4 : Paint Operation Buildings at Load Line 4
TP: Tetryl Pelleting Building
NG : North Burning Ground
PG : Proving Ground
SG : South Burning Ground
PL: Potential Landfill Area North of Proving Grounds
NM: Waste Disposal Area North of Former Nike Maintenance Area
BB: Waste Disposal Area Southeast of Bomb Booster Area
AM: Waste Disposal Area at the Atlas Missile Area
AN: Waste Disposal Area North of the Ammonium Nitrate Plant
DG: Demolition Ground
DC: Detonation Craters West of the Demolition Ground
IG : Igloo Storage Area
JC : Johnson Creek
SC: Silver Creek
BR : Bermed Area Southwest of Load Line 1
UA: Underground Storage Tanks at Administration Areas
UB: Underground Storage Tanks at Bomb Booster Area
UM: Underground Storage Tanks at Atlas Missile Area
GA: Geophysical Anomaly at Load Line 3

"LocNum" = a 3-digit code representing the sample location
"LocNum+200" = a 3-digit code which is the sample point plus 200, indicating that the sample is a QC sample
"LocNum+400" = a 3-digit code which is the sample point plus 400, indicating that the sample is a QA sample
"Depth" = a 3-digit code representing the depth of the top of soil column for soil sampling
"WipeType" = a 3-character code indicating the type of wipe sample being collected

EWL: A wall wipe sample collected from the east facing wall; etc. for wipe samples collected from the north wall (NWL), south (SWL) and west (WWL).
FLR : a floor wipe sample
BLK : a blank wipe sample for QA/QC purposes

"Interval" = either A, B, C, or D, depending on the screen interval of the monitoring well being sampled, representing the screen interval of the well
"Y" = a 1-digit code representing the last digit of the year of sampling
"MM" = a 2-digit numerical abbreviation of the month of sampling
"DD" = a 2-digit numerical abbreviation of the day of sampling
"NN" = Sequential numbering of trip blanks to each laboratory for each day of sampling
"SID" = Sample identification of the investigation sample associated with a rinsate sample

Table 4-3

Monitoring Well Construction Details

Monitoring Well	Top of Casing Elevation	Elevation (ft)	Filter Pack Size	Depth to Top of Filter Pack (ft bgs)	Top of Screened Interval		Bottom of Screened Interval		Bottom of Well		Bottom of Boring		Top of Bedrock		Bedrock Type
					Depth (ft bgs)	Elevation (ft)	Depth (ft bgs)	Elevation (ft)	Depth (ft below TOC)	Elevation (ft)	Depth (ft bgs)	Elevation (ft)	Depth (ft bgs)	Elevation (ft)	
63	1177.01	1175.22	10\20	13	18.5	1156.72	28.5	1146.72	28.8	1146.42	31.4	1143.82	NP	NP	NP
64B	1143.79	1141.94	10\20	16	19	1122.94	29	1112.94	29.5	1112.44	31	1110.94	NP	NP	NP

1. NP = Not penetrated.
2. Bottom of well depths were obtained from as-built drawings and checked with later well soundings.

Table 5-1
Data Summary for Adjacent Soil Sampling at Load Line 1 Bomb Production Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (MG/KG)							
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	27	1.9	15.88	21%	6%	B1A-022-000
1,3-Dinitrobenzene (1,3-DNB)	3.4	0.63	*	0.19	1%	0%	B1A-060-000
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	13000	18	755.81	49%	12%	B1A-022-000
2,4-Dinitrotoluene (2,4-DNT)	0.9	6.8	2	7.56	6%	3%	B1A-036-000
2,6-Dinitrotoluene (2,6-DNT)	0.9	1	1	1.11	7%	1%	B1A-012-000
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NI	54	NA	NA	43%	NA	B1A-060-000(J)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NI	30	NA	NA	35%	NA	B1A-060-000
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	3	*	0.52	19%	0%	B1A-024-001
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.46	*	0.00	7%	0%	B1A-077-000(J)
Nitrobenzene (NB)	NI	0.41	NA	NA	1%	NA	B1A-001-001(J)
Nitrotoluene	343	0.96	*	0.00	6%	0%	B1A-046-001
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	1.1	*	0.00	23%	0%	B1A-075-001
METALS (MG/KG)							
Aluminum	33852	47500	47500	1.40	99%	1%	B1A-011-001
Antimony	31	3.2	*	0.10	24%	0%	B1A-022-000(J)
Arsenic	13.5	17.5	17.5	1.30	100%	1%	B1A-011-001
Barium	440	4710	446	10.70	100%	3%	B1A-066-001(J)
Beryllium	1.52	1.9	1.9	1.25	100%	1%	B1A-011-001
Cadmium	0.4	17.2	0.41	43.00	96%	52%	B1A-047-000(J)
Calcium	GRAS	79100	NA	NA	100%	NA	B1A-066-001
Chromium	37	47	40.8	1.27	100%	2%	B1A-011-001
Cobalt	17.2	20.8	20.8	1.21	100%	1%	B1A-011-001
Copper	33.9	75.3	35.2	2.22	100%	7%	B1A-008-000
Iron	GRAS	46900	NA	NA	100%	NA	B1A-011-001
Lead	400	417	417	1.04	100%	1%	B1A-058-000(J)
Magnesium	GRAS	8950	NA	NA	100%	NA	B1A-011-001
Manganese	1083	1110	1090	1.02	100%	2%	B1A-027-001
Mercury	23	0.93	*	0.04	5%	0%	B1A-009-000
Nickel	39.3	51.7	51.7	1.32	100%	1%	B1A-011-001
Potassium	GRAS	8210	NA	NA	100%	NA	B1A-011-001
Selenium	1.33	3.1	1.4	2.33	44%	25%	B1A-011-001(J)
Sodium	GRAS	3500	NA	NA	38%	NA	B1A-056-000(J)
Thallium	1.72	1.9	1.9	1.10	1%	1%	B1A-037-000(J)
Vanadium	72.5	102	102	1.41	100%	1%	B1A-011-001
Zinc	119.5	1890	125	15.82	100%	15%	B1A-047-000(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level
Resampling data replace initial investigation data for Tetryl. The above statistics are based on resampling data results.

Table 5-2
Data Summary for Adjacent Soil Sampling at Load Line 2 Bomb Production Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (MG/KG)							
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	32	11	18.82	10%	2%	B2A-022-000
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	14000	18	813.95	28%	4%	B2A-051-000
2,4-Dinitrotoluene (2,4-DNT)	0.9	3.7	3.7	4.11	1%	1%	B2A-051-000
2,6-Dinitrotoluene (2,6-DNT)	0.9	12	7.6	13.33	1%	1%	B2A-022-000
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NI	4.5	NA	NA	22%	NA	B2A-051-000
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NI	2.4	NA	NA	16%	NA	B2A-022-000,B2A-033-000
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	4300	12	741.38	38%	5%	B2A-008-000
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.53	*	0.00	7%	0%	B2A-071-000(J)
Nitrotoluene	343	1.44	*	0.00	5%	0%	B2A-001-000
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	300	*	0.17	36%	0%	B2A-008-000(J)
METALS (MG/KG)							
Aluminum	33852	23600	*	0.70	100%	0%	B2A-066-001
Antimony	31	2.8	*	0.09	24%	0%	B2A-001-000(J)
Arsenic	13.5	15.5	15.5	1.15	99%	1%	B2A-038-000
Barium	440	516	516	1.17	100%	1%	B2A-029-000(J)
Beryllium	1.52	0.95	*	0.63	100%	0%	B2A-006-001,B2A-015-001,B2A-058-000
Cadmium	0.4	12.6	0.41	31.50	71%	50%	B2A-002-000
Calcium	GRAS	173000	NA	NA	100%	NA	B2A-054-000
Chromium	37	70.6	70.6	1.91	99%	1%	B2A-038-000(J)
Cobalt	17.2	14	*	0.81	100%	0%	B2A-071-000
Copper	33.9	145	34.1	4.28	100%	11%	B2A-038-000
Iron	GRAS	118000	NA	NA	100%	NA	B2A-038-000
Lead*	400	1040	406	2.60	100%	13%	B2A-039-000
Magnesium	GRAS	5970	NA	NA	100%	NA	B2A-060-001
Manganese	1083	1090	1090	1.01	100%	1%	B2A-038-000
Mercury	23	0.39	*	0.02	3%	0%	B2A-045-000
Nickel	39.3	52.4	45.4	1.33	100%	2%	B2A-038-000
Potassium	GRAS	4940	NA	NA	100%	NA	B2A-062-000
Selenium	1.33	3.3	1.4	2.48	56%	29%	B2A-038-000(J)
Sodium	GRAS	2720	NA	NA	7%	NA	B2A-022-000
Vanadium	72.5	57.9	*	0.80	100%	0%	B2A-058-000
Zinc	119.5	654	122	5.47	100%	23%	B2A-036-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level
**=metals exceeding published RBCs/PRGs which are above average background concentrations

Table 5-3
Data Summary for Adjacent Soil Sampling at Load Line 3 Bomb Production Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (MG/KG)							
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	1.4	*	0.82	11%	0%	B3A-029-000
1,3-Dinitrobenzene (1,3-DNB)	3.4	0.42	*	0.12	2%	0%	B3A-059-001(J)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	87000	29	5058.14	36%	5%	B3A-055-000
2,4-Dinitrotoluene (2,4-DNT)	0.9	3.4	3.4	3.78	1%	1%	B3A-029-000
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NI	6	NA	NA	34%	NA	B3A-029-000
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NI	2.7	NA	NA	36%	NA	B3A-029-000,B3A-031-001
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	1600	6.2	275.86	30%	7%	B3A-053-000(J)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.41	*	0.00	4%	0%	B3A-039-001(J)
Nitrobenzene (NB)	NI	1.1	NA	NA	1%	NA	B3A-054-000(J)
Nitrotoluene	343	0.62	*	0.00	1%	0%	B3A-029-000
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	730	*	0.43	34%	0%	B3A-055-000(J)
METALS (MG/KG)							
Aluminum	33852	23300	*	0.69	100%	0%	B3A-050-001
Antimony	31	1.5	*	0.05	10%	0%	B3A-065-000(J)
Arsenic	13.5	11.8	*	0.87	100%	0%	B3A-032-001
Barium	440	2380	466	5.41	100%	1%	B3A-004-000
Beryllium	1.52	1	*	0.66	100%	0%	B3A-051-001
Cadmium	0.4	3.1	0.41	7.75	90%	44%	B3A-060-000
Calcium	GRAS	69800	NA	NA	100%	NA	B3A-029-000
Chromium	37	26.8	*	0.72	100%	0%	B3A-059-000(J)
Cobalt	17.2	15.4	*	0.90	100%	0%	B3A-032-001
Copper	33.9	157	35.7	4.63	100%	6%	B3A-015-000
Iron	GRAS	25000	NA	NA	100%	NA	B3A-040-000
Lead*	400	4670	438	11.68	100%	3%	B3A-032-000(J)
Magnesium	GRAS	8390	NA	NA	100%	NA	B3A-064-000
Manganese	1083	1040	*	0.96	100%	0%	B3A-030-001(J)
Mercury	23	0.72	*	0.03	21%	0%	B3A-064-000
Nickel	39.3	60	41.6	1.53	100%	3%	B3A-061-000
Potassium	GRAS	4590	NA	NA	100%	NA	B3A-076-000
Selenium	1.33	2.8	1.4	2.11	57%	38%	B3A-074-000(J)
Silver	380	79.3	*	0.21	3%	0%	B3A-064-000(J)
Sodium	GRAS	278	NA	NA	13%	NA	B3A-043-000(J)
Thallium	1.72	1.8	1.8	1.05	2%	1%	B3A-059-000(J)
Vanadium	72.5	51.5	*	0.71	100%	0%	B3A-036-000
Zinc	119.5	408	121	3.41	100%	20%	B3A-043-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
Resampling data replace initial investigation data for Tetryl. The above statistics are based on resampling data results.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level
** =metals exceeding published RBCs/PRGs which are above average background concentrations

Table 5-4
Data Summary for Adjacent Soil Sampling at Load Line 4 Bomb Production Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (MG/KG)							
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.12	*	0.07	5%	0%	B4A-022-000(J)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	37	37	2.15	35%	1%	B4A-069-000
2,4-Dinitrotoluene (2,4-DNT)	0.9	0.088	*	0.10	1%	0%	B4A-037-001(J)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NI	1.1	NA	NA	17%	NA	B4A-051-001
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NI	0.87	NA	NA	19%	NA	B4A-009-000(J)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	74	6.3	12.76	20%	5%	B4A-008-000
Nitrobenzene (NB)	NI	1.6	NA	NA	2%	NA	B4A-015-001(J)
Nitrotoluene	343	0.28	*	0.00	1%	0%	B4A-013-001
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	7.5	*	0.00	34%	0%	B4A-008-000
METALS (MG/KG)							
Aluminum	33852	25600	*	0.76	100%	0%	B4A-028-001
Antimony	31	1.4	*	0.05	14%	0%	B4A-011-000(J)
Arsenic	13.5	15.3	15.3	1.13	100%	1%	B4A-011-000
Barium	440	347	*	0.79	100%	0%	B4A-071-001
Beryllium	1.52	1	*	0.66	98%	0%	B4A-018-001,B4A-021-001,B4A-028-001,B4A-038-001,B4A-067-001
Cadmium	0.4	10.3	0.41	25.75	90%	53%	B4A-003-000
Calcium	GRAS	51000	NA	NA	100%	NA	B4A-057-000
Chromium	37	57	40.5	1.54	100%	1%	B4A-011-000
Cobalt	17.2	14.9	*	0.87	100%	0%	B4A-027-001
Copper	33.9	112	34.2	3.30	100%	5%	B4A-014-000
Iron	GRAS	70600	NA	NA	100%	NA	B4A-011-000
Lead	400	313	*	0.78	100%	0%	B4A-046-000
Magnesium	GRAS	5260	NA	NA	100%	NA	B4A-038-001
Manganese	1083	960	*	0.89	100%	0%	B4A-025-000
Mercury	23	0.38	*	0.02	27%	0%	B4A-009-000
Nickel	39.3	61.7	61.7	1.57	100%	1%	B4A-011-000
Potassium	GRAS	6090	NA	NA	100%	NA	B4A-021-000
Selenium	1.33	3.3	1.4	2.48	64%	46%	B4A-011-000(J)
Sodium	GRAS	10200	NA	NA	23%	NA	B4A-014-000
Thallium	1.72	1.5	*	0.87	1%	0%	B4A-050-000(J)
Vanadium	72.5	52.3	*	0.72	100%	0%	B4A-028-001
Zinc	119.5	355	120	2.97	100%	16%	B4A-054-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
Resampling data replace initial investigation data for Tetryl. The above statistics are based on resampling data results.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-5
Data Summary for Beneath Soil Sampling at Load Line 1 Bomb Production Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (MG/KG)							
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.2	*	0.12	3%	0%	B1B-036-000(J)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	32	32	1.86	11%	3%	B1B-016-000(J)
2,4-Dinitrotoluene (2,4-DNT)	0.9	0.23	*	0.26	3%	0%	B1B-037-000(J)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NI	0.37	NA	NA	16%	NA	B1B-024-000(J)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NI	0.23	NA	NA	8%	NA	B1B-012-000(J)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	5.1	*	0.88	18%	0%	B1B-038-000
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.071	*	0.00	3%	0%	B1B-036-000(J)
Nitrotoluene	343	0.69	*	0.00	3%	0%	B1B-022-000
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	1.2	*	0.00	16%	0%	B1B-037-000
METALS (MG/KG)							
Aluminum	33852	21900	*	0.65	100%	0%	B1B-025-000
Antimony	31	0.55	*	0.02	5%	0%	B1B-031-000(J)
Arsenic	13.5	10.6	*	0.79	100%	0%	B1B-027-000,B1B-034-000
Barium	440	334	*	0.76	100%	0%	B1B-034-000
Beryllium	1.52	0.95	*	0.63	100%	0%	B1B-025-000
Cadmium	0.4	0.84	0.42	2.10	66%	29%	B1B-034-000(J)
Calcium	GRAS	9900	NA	NA	100%	NA	B1B-017-000
Chromium	37	24.1	*	0.65	100%	0%	B1B-024-000
Cobalt	17.2	14.7	*	0.85	100%	0%	B1B-034-000
Copper	33.9	44.3	44.3	1.31	100%	3%	B1B-024-000
Iron	GRAS	23600	NA	NA	100%	NA	B1B-025-000
Lead	400	26.6	*	0.07	100%	0%	B1B-013-000(J)
Magnesium	GRAS	6280	NA	NA	100%	NA	B1B-017-000
Manganese	1083	897	*	0.83	100%	0%	B1B-034-000(J)
Nickel	39.3	32.7	*	0.83	100%	0%	B1B-034-000
Potassium	GRAS	11600	NA	NA	100%	NA	B1B-025-000
Selenium	1.33	2	1.4	1.50	39%	21%	B1B-036-000(J)
Vanadium	72.5	46.2	*	0.64	100%	0%	B1B-025-000
Zinc	119.5	64	*	0.54	100%	0%	B1B-034-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-6
Data Summary for Beneath Soil Sampling at Load Line 2 Bomb Production Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (MG/KG)							
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	1.9	1.9	1.12	8%	3%	B2B-025-000
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	220	220	12.79	22%	3%	B2B-025-000
2,4-Dinitrotoluene (2,4-DNT)	0.9	0.39	*	0.43	8%	0%	B2B-030-000(J)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NI	0.32	NA	NA	8%	NA	B2B-021-000(J),B2B-025-000(J)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NI	0.21	NA	NA	3%	NA	B2B-021-000(J)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	740	740	127.59	31%	3%	B2B-025-000
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.14	*	0.00	8%	0%	B2B-021-000(J)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	35	*	0.02	42%	0%	B2B-025-000
METALS (MG/KG)							
Aluminum	33852	20200	*	0.60	100%	0%	B2B-026-000(J)
Antimony	31	0.59	*	0.02	3%	0%	B2B-026-000(J)
Arsenic	13.5	11.5	*	0.85	100%	0%	B2B-016-000
Barium	440	324	*	0.74	100%	0%	B2B-037-000(J)
Beryllium	1.52	0.92	*	0.61	100%	0%	B2B-026-000
Cadmium	0.4	0.66	0.41	1.65	67%	36%	B2B-026-000(J)
Calcium	GRAS	5890	NA	NA	100%	NA	B2B-019-000(J)
Chromium	37	23.7	*	0.64	100%	0%	B2B-026-000(J)
Cobalt	17.2	12.5	*	0.73	100%	0%	B2B-021-000
Copper	33.9	25.8	*	0.76	100%	0%	B2B-028-000(J)
Iron	GRAS	23700	NA	NA	100%	NA	B2B-026-000
Lead	400	16.1	*	0.04	100%	0%	B2B-005-000(J)
Magnesium	GRAS	5150	NA	NA	100%	NA	B2B-026-000
Manganese	1083	898	*	0.83	100%	0%	B2B-025-000
Nickel	39.3	29.6	*	0.75	100%	0%	B2B-026-000
Potassium	GRAS	3890	NA	NA	100%	NA	B2B-026-000
Selenium	1.33	1.9	1.4	1.43	39%	14%	B2B-031-000(J)
Sodium	GRAS	266	NA	NA	42%	NA	B2B-001-000(J),B2B-003-000(J)
Thallium	1.72	1.4	*	0.81	3%	0%	B2B-001-000(J)
Vanadium	72.5	53.1	*	0.73	100%	0%	B2B-026-000
Zinc	119.5	66.9	*	0.56	100%	0%	B2B-026-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-7
Data Summary for Beneath Soil Sampling at Load Line 3 Bomb Production Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (MG/KG)							
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.21	*	0.12	18%	0%	B3B-014-000(J)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.82	*	0.05	8%	0%	B3B-038-000
2,4-Dinitrotoluene (2,4-DNT)	0.9	3.5	3.5	3.89	3%	3%	B3B-038-000
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NI	0.073	NA	NA	3%	NA	B3B-007-000(J)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NI	0.24	NA	NA	5%	NA	B3B-004-000(J)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	3.6	*	0.62	13%	0%	B3B-016-000
Nitrotoluene	343	0.19	*	0.00	3%	0%	B3B-014-000
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.52	*	0.00	58%	0%	B3B-010-000
METALS (MG/KG)							
Aluminum	33852	22600	*	0.67	100%	0%	B3B-020-000
Antimony	31	0.63	*	0.02	5%	0%	B3B-006-000(J)
Arsenic	13.5	11.2	*	0.83	100%	0%	B3B-005-000,B3B-025-000
Barium	440	391	*	0.89	100%	0%	B3B-001-000
Beryllium	1.52	0.99	*	0.65	100%	0%	B3B-020-000
Cadmium	0.4	0.61	0.41	1.53	82%	42%	B3B-025-000(J)
Calcium	GRAS	5660	NA	NA	100%	NA	B3B-002-000
Chromium	37	23.3	*	0.63	100%	0%	B3B-020-000
Cobalt	17.2	12.9	*	0.75	100%	0%	B3B-010-000,B3B-023-000
Copper	33.9	31.6	*	0.93	100%	0%	B3B-038-000(J)
Iron	GRAS	22300	NA	NA	100%	NA	B3B-006-000
Lead	400	69	*	0.17	100%	0%	B3B-007-000
Magnesium	GRAS	4780	NA	NA	100%	NA	B3B-005-000
Manganese	1083	853	*	0.79	100%	0%	B3B-021-000(J)
Mercury	23	0.17	*	0.01	3%	0%	B3B-036-000(J)
Nickel	39.3	29.8	*	0.76	100%	0%	B3B-003-000(J)
Potassium	GRAS	4210	NA	NA	100%	NA	B3B-020-000
Selenium	1.33	2.1	1.4	1.58	47%	37%	B3B-019-000(J),B3B-026-000(J)
Sodium	GRAS	624	NA	NA	11%	NA	B3B-003-000
Vanadium	72.5	48.3	*	0.67	100%	0%	B3B-020-000
Zinc	119.5	63.5	*	0.53	100%	0%	B3B-020-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-8
Data Summary for Beneath Soil Sampling at Load Line 4 Bomb Production Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (MG/KG)							
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.056	*	0.00	3%	0%	B4B-035-000(J)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NI	0.3	NA	NA	3%	NA	B4B-035-000(J)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.59	*	0.10	27%	0%	B4B-018-000(J)
Nitrobenzene (NB)	NI	0.0053	NA	NA	3%	NA	B4B-021-000(J)
Nitrotoluene	343	0.12	*	0.00	3%	0%	B4B-035-000
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.15	*	0.00	14%	0%	B4B-035-000(J)
METALS (MG/KG)							
Aluminum	33852	18300	*	0.54	100%	0%	B4B-016-000
Arsenic	13.5	10	*	0.74	100%	0%	B4B-018-000
Barium	440	302	*	0.69	100%	0%	B4B-018-000
Beryllium	1.52	0.89	*	0.59	100%	0%	B4B-018-000,B4B-024-000
Cadmium	0.4	0.96	0.41	2.40	100%	68%	B4B-034-000(J)
Calcium	GRAS	8370	NA	NA	100%	NA	B4B-007-000
Chromium	37	27.3	*	0.74	100%	0%	B4B-033-000(J)
Cobalt	17.2	13.7	*	0.80	100%	0%	B4B-016-000
Copper	33.9	80.6	80.6	2.38	100%	3%	B4B-036-000(J)
Iron	GRAS	22000	NA	NA	100%	NA	B4B-024-000
Lead	400	16.8	*	0.04	100%	0%	B4B-024-000
Magnesium	GRAS	4780	NA	NA	100%	NA	B4B-007-000
Manganese	1083	972	*	0.90	100%	0%	B4B-030-000
Nickel	39.3	28.6	*	0.73	100%	0%	B4B-003-000
Potassium	GRAS	3530	NA	NA	100%	NA	B4B-034-000
Selenium	1.33	2.4	1.4	1.80	73%	46%	B4B-038-000(J)
Vanadium	72.5	43.1	*	0.59	100%	0%	B4B-012-000
Zinc	119.5	60.6	*	0.51	100%	0%	B4B-028-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

TABLE 5-9

LOAD LINE 1 ADJACENT SOIL SAMPLING LOCATIONS WITH EXPLOSIVES ABOVE SCREENING LEVEL FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Sample Location I.D.	Explosive	Concentration in mg/kg	
		0-0.5 ft bgs	1-2 ft bgs
B1A-007	2,4,6-TNT	**58**	U(0.5)
B1A-008	1,3,5-TNB	**6.4**	U(0.5)
	2,4,6-TNT	**420**	0.65
B1A-009	1,3,5-TNB	**1.9**	U(0.5)
	2,4,6-TNT	**43**	2.4
B1A-012	1,3,5-TNB	**2.3**	U(0.5)
	2,4,6-TNT	**860**	3.2
	2,6-DNT	**1**	U(0.5)
B1A-016	2,4,6-TNT	U(0.5)	**32**
B1A-022	1,3,5-TNB	**27**	**5.3**
	2,4,6-TNT	**13000**	**1100**
	2,4-DNT	**5**	0.89
B1A-036	2,4,6-TNT	**24**	U(0.5)
	2,4-DNT	**6.8**	U(0.5)
B1A-037	2,4,6-TNT	**21**	0.2J
B1A-038	1,3,5-TNB	**3**	U(0.5)
	2,4,6-TNT	**180**	0.72
B1A-057	2,4,6-TNT	**26**	U(0.5)
B1A-058	2,4,6-TNT	**1500**	**18**
	1,3,5-TNB	**2.5**	U(0.5)
B1A-060	2,4,6-TNT	**68**	0.28
	2,4-DNT	**2**	U(0.5)

Note:

Concentrations above screening level are shown in bold text

TABLE 5-10

LOAD LINE 2 ADJACENT SOIL SAMPLING LOCATIONS WITH EXPLOSIVES ABOVE SCREENING LEVEL FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Sample Location I.D.	Explosives	Concentration in mg/kg	
		0-0.5 ft bgs	1-2 ft bgs
B2A-007	RDX	**2200**	U(4.2)
B2A-008	RDX	**4300**	**18J**
B2A-009	RDX	**1500J**	**47**
B2A-013	RDX	**13**	**61**
B2A-022	1,3,5-TNB	**32**	**16**
	2,4,6-TNT	**87**	**37**
	2,6-DNT	**12**	**7.6**
	RDX	1.9J	**12**
B2A-031	2,4,6-TNT	**170**	0.48J
B2A-033	1,3,5-TNB	U(0.5)	**11**
	2,4,6-TNT	**500**	**18**
B2A-051	2,4,6-TNT	**14000**	0.41J
	2,4-DNT	**3.7**	U(0.5)

Note:

Concentrations above screening level are shown in bold text

TABLE 5-11

LOAD LINE 3 ADJACENT SOIL SAMPLING LOCATIONS WITH EXPLOSIVES ABOVE SCREENING LEVEL FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Sample Location I.D.	Explosives	Concentration in mg/kg	
		0-0.5 ft bgs	1-2 ft bgs
B3A-011	RDX	**110J**	**26**
B3A-022	2,4,6-TNT	**100**	U(0.5)
	RDX	**160**	0.14J
B3A-029	2,4,6-TNT	**20000**	3.8
	2,4-DNT	**3.4**	U(0.5)
B3A-030	2,4,6-TNT	**76**	U(0.5)
B3A-033	RDX	**150**	U(0.75)
B3A-051	RDX	**130**	1.9
B3A-052	2,4,6-TNT	**87**	U(0.5)
	RDX	2.2	**28**
B3A-053	2,4,6-TNT	**62J**	UJ(0.5)
	RDX	**1600J**	**35J**
B3A-055	2,4,6-TNT	**87000**	UJ(0.5)
	RDX	U(7500)	**6.2**
B3A-058	RDX	**18**	UJ(0.75)
B3A-061	2,4,6-TNT	**29**	6.5J
B3A-066	RDX	**14**	4.3

Note:

Concentrations above screening level are shown in bold text

TABLE 5-12

LOAD LINE 4 ADJACENT SOIL SAMPLING LOCATIONS WITH EXPLOSIVES ABOVE SCREENING LEVEL FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Sample Location I.D.	Explosives	Concentration in mg/kg	
		0-0.5 ft bgs	1-2 ft bgs
B4A-008	RDX	**74**	**6.3**
B4A-009	RDX	**24**	0.34J
B4A-026	RDX	**28**	U(0.75)
B4A-051	RDX	**14J**	2.2
B4A-054	RDX	0.56J	**11**
B4A-069	2,4,6-TNT	**37**	0.4J
	RDX	**36**	0.59J

Note:

Concentrations above screening level are shown in bold text

TABLE 5-13

LOAD LINE 1 DETECTED CONCENTRATIONS OF EXPLOSIVES IN WIPE SAMPLES FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRAKA

Building Name	Sample Location I.D.	Explosive	Results (mg/wipe)	
Nose Pour	B1W-005-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0003	J
Amatol Melt (1st Floor)	B1W-007-NWL	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.000072	J
	B1W-008-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0085	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0024	
	B1W-010-WWL	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0006	
	B1W-011-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.013	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0016	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0013	
	B1W-012-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.013	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0055	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0056	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00032	J
Amatol Melt (2nd Floor)	B1W-019-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.046	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0044	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0039	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0026	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00089	
	B1W-020-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0092	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00039	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00027	J
	B1W-021-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.022	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0015	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.00093	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0012	
	B1W-022-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00091	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00026	J
	B1W-023-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.037	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0013	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0034	
	B1W-024-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0051	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0012	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.001	
Amatol Melt (3rd Floor)	B1W-031-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.005	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00024	J
	B1W-032-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0036	
	B1W-033-SWL	1,3,5-Trinitrobenzene (1,3,5-TNB)	0.0005	J
		2,4,6-Trinitrotoluene (2,4,6-TNT)	0.052	J
		2,4-Dinitrotoluene (2,4-DNT)	0.0005	J
		2,6-Dinitrotoluene (2,6-DNT)	0.0089	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0084	J
		2-Nitrotoluene (2-NT)	0.042	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0048	J
		4-Nitrotoluene (4-NT)	0.042	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00065	J
		Nitrobenzene (NB)	0.002	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0029	J
	B1W-034-WWL	1,3,5-Trinitrobenzene (1,3,5-TNB)	0.00023	J
		2,4,6-Trinitrotoluene (2,4,6-TNT)	0.032	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0024	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0013	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00046	J
	B1W-035-FLR	1,3,5-Trinitrobenzene (1,3,5-TNB)	0.0001	J
		2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0037	

TABLE 5-13

LOAD LINE 1 DETECTED CONCENTRATIONS OF EXPLOSIVES IN WIPE SAMPLES
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRAKA

Building Name	Sample Location I.D.	Explosive	Results (mg/wipe)	
Amatol Melt (3rd Floor)	B1W-035-FLR	2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.001	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0017	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0002	J
	B1W-036-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0047	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0003	J
Amatol Screening (1st Floor)	B1W-013-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00063	
	B1W-014-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0062	
	B1W-015-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0022	
	B1W-016-WWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0028	
	B1W-017-FLR	4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.00029	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0013	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00066	
Amatol Screening (2nd Floor)	B1W-025-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0082	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0015	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0008	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0027	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0005	
	B1W-026-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0037	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0012	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0018	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00063	J
	B1W-027-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.031	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0031	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0046	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0005	
	B1W-028-WWL	2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00043	J
	B1W-029-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0026	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00013	J
	B1W-030-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0016	
Ammonium Nitrate Service	B1W-037-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0013	
	B1W-038-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.011	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0066	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0019	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00063	J
	B1W-039-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.003	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00052	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0019	
	B1W-040-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0014	
	B1W-041-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0022	J
North TNT Service	B1W-043-NWL	1,3,5-Trinitrobenzene (1,3,5-TNB)	0.00025	J
		2,4,6-Trinitrotoluene (2,4,6-TNT)	0.006	
		2-Nitrotoluene (2-NT)	0.0027	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0025	
		4-Nitrotoluene (4-NT)	0.0027	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0024	
	B1W-044-EWL	1,3,5-Trinitrobenzene (1,3,5-TNB)	0.00011	J
		2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0013	J
	B1W-045-SWL	4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0036	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0013	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0029	
	B1W-046-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00096	
	B1W-048-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00036	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00032	J

TABLE 5-13

LOAD LINE 1 DETECTED CONCENTRATIONS OF EXPLOSIVES IN WIPE SAMPLES FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRAKA

Building Name	Sample Location I.D.	Explosive	Results (mg/wipe)	
West Cooling	B1W-049-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0071	
	B1W-050-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0022	
	B1W-051-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.026	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0025	
	B1W-052-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0017	
	B1W-053-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.04	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0024	J
	B1W-054-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0016	J
East Cooling	B1W-059-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00037	J
	B1W-060-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00023	J
TNT Pouring	B1W-061-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0013	
	B1W-062-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0072	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.00047	
	B1W-063-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.003	
		3-Nitrotoluene (3-NT)	0.0012	
	B1W-064-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0034	
		3-Nitrotoluene (3-NT)	0.0025	
	B1W-065-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0032	J
TNT Screening	B1W-067-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0048	
		3-Nitrotoluene (3-NT)	0.0016	
	B1W-068-EWL	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00022	J
	B1W-069-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0023	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00079	
	B1W-070-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.015	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0026	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00049	J
	B1W-071-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0011	
	B1W-072-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00022	J
South TNT Service	B1W-073-NWL	1,3,5-Trinitrobenzene (1,3,5-TNB)	0.00095	J
		2,4,6-Trinitrotoluene (2,4,6-TNT)	0.036	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.002	J
	B1W-074-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.017	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0049	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0015	J
	B1W-075-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.072	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0068	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0031	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0088	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.002	
	B1W-076-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.048	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.007	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0045	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.042	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0067	
	B1W-078-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00066	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00071	

TABLE 5-14

LOAD LINE 2 DETECTED CONCENTRATIONS OF EXPLOSIVES IN WIPE SAMPLES FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Building Name	Sample Location I.D.	Explosive	Results (mg/wipe)	
Nose Pour	B2W-001-RNW	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.018	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0035	
	B2W-002-REW	2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0079	
	B2W-004-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0012	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0019	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0013	J
	B2W-005-RFL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00092	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0043	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00022	
	B2W-006-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0045	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0022	
Amatol Melt (1st Floor)	B2W-007-RWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00056	
	B2W-008-REW	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0091	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0095	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0047	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0069	
	B2W-009-SWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0022	J
	B2W-010-WWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.11	J
	B2W-011-RFL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0027	
		2,6-Dinitrotoluene (2,6-DNT)	0.00017	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00051	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00062	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00062	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00053	
	B2W-012-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00088	J
Amatol Screening	B2W-013-RNW	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0064	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0053	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0017	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.017	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0053	J
		2-Nitrotoluene (2-NT)	0.0075	J
		4-Nitrotoluene (4-NT)	0.0075	J
	B2W-017-RFL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0014	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.011	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.001	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0067	
Amatol Melt (2nd Floor)	B2W-019-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	1.1	J
		2,4-Dinitrotoluene (2,4-DNT)	0.0011	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.023	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.018	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.12	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0053	J
	B2W-020-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0092	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0017	J
	B2W-021-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.055	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.013	J
	B2W-022-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.034	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.013	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0019	
	B2W-023-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0027	
		2,6-Dinitrotoluene (2,6-DNT)	0.0002	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00056	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.00049	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.16	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.065	

TABLE 5-14

LOAD LINE 2 DETECTED CONCENTRATIONS OF EXPLOSIVES IN WIPE SAMPLES FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Building Name	Sample Location I.D.	Explosive	Results (mg/wipe)	
Amatol Melt (2nd Floor)	B2W-024-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.016	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0042	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0017	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.14	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.056	J
Amatol Melt (3rd Floor)	B2W-031-NWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0015	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00091	
	B2W-032-EWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0014	J
	B2W-033-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0066	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00053	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0018	
	B2W-034-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0066	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0016	J
	B2W-035-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00074	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0084	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.023	
	B2W-036-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.14	J
		2,6-Dinitrotoluene (2,6-DNT)	0.0011	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0057	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0042	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.064	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.019	J
Amatol Screening (1st Floor)	B2W-013-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.004	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0008	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.006	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00052	J
	B2W-014-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0023	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0038	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.00055	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0028	J
	B2W-015-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0049	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0042	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0065	J
	B2W-016-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0058	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0043	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0039	J
	B2W-017-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.046	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0055	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0039	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.26	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.071	J
	B2W-018-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0032	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.01	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0046	J
Amatol Screening (2nd Floor)	B2W-025-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0044	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.007	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00096	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00023	J
	B2W-027-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0058	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0074	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.002	J
	B2W-028-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0056	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.005	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0012	J
	B2W-029-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00082	J

TABLE 5-14

LOAD LINE 2 DETECTED CONCENTRATIONS OF EXPLOSIVES IN WIPE SAMPLES FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Building Name	Sample Location I.D.	Explosive	Results (mg/wipe)	
Amatol Screening (2nd Floor)	B2W-029-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0078	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00097	J
	B2W-030-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0012	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0055	J
Ammonium Nitrate Service	B2W-037-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0021	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0062	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0062	J
	B2W-038-EWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0037	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00052	J
	B2W-039-SWL	4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.00041	J
	B2W-040-WWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0042	J
	B2W-041-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0031	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00074	J
	B2W-042-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00032	J
North TNT Service	B2W-043-NWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0017	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0013	J
	B2W-047-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.078	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.012	J
	B2W-048-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.061	J
West Cooling	B2W-050-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.021	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0032	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.01	J
	B2W-051-EWL	3-Nitrotoluene (3-NT)	0.0034	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0018	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00071	J
	B2W-053-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00015	J
East Cooling	B2W-056-NWL	3-Nitrotoluene (3-NT)	0.0024	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.024	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00075	
	B2W-058-SWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0024	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00039	J
	B2W-059-FLR	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00021	J
	B2W-060-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0011	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00078	J
TNT Pouring	B2W-062-EWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00047	J
	B2W-063-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0018	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0094	J
	B2W-064-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0012	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0028	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00026	J
	B2W-065-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0037	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0004	J
	B2W-066-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.01	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00054	
South TNT Service	B2W-076-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0016	J
	B2W-077-FLR	2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0003	J
		3-Nitrotoluene (3-NT)	0.00062	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0015	J

TABLE 5-15

LOAD LINE 3 DETECTED CONCENTRATIONS OF EXPLOSIVES IN WIPE SAMPLES FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Building Name	Sample Location I.D.	Explosive	Results (mg/wipe)	
Nose Pour	B3W-003-SWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.002	
	B3W-005-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00057	
	B3W-006-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0005	J
Amatol Melt (1st Floor)	B3W-007-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00037	J
	B3W-008-EWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00048	J
	B3W-010-WWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00056	J
	B3W-011-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.002	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00016	J
Amatol Melt (2nd Floor)	B3W-020-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.98	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.021	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0046	J
	B3W-021-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00084	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00038	J
	B3W-022-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.092	J
	B3W-023-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.015	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0022	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.002	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0035	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00035	J
	B3W-024-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.017	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00081	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.00078	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0018	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00063	J
Amatol Melt (3rd Floor)	B3W-031-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.51	J
		2,4-Dinitrotoluene (2,4-DNT)	0.012	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0455	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0946	J
	B3W-032-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.16	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0134	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0011	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0155	J
	B3W-033-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0046	J
	B3W-034-WWL	1,3,5-Trinitrobenzene (1,3,5-TNB)	0.0018	J
		2,4,6-Trinitrotoluene (2,4,6-TNT)	0.09	J
	B3W-035-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.011	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0023	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0021	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0039	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00065	J
	B3W-036-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0029	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00063	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.00065	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0015	J
		Nitrobenzene (NB)	0.1	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00022	J
Amatol Screening (1st Floor)	B3W-013-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00093	J
	B3W-014-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0069	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.00065	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00078	J
	B3W-015-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.023	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0066	J
	B3W-017-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0062	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0027	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0054	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00034	J

TABLE 5-15

LOAD LINE 3 DETECTED CONCENTRATIONS OF EXPLOSIVES IN WIPE SAMPLES
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Building Name	Sample Location I.D.	Explosive	Results (mg/wipe)	
Amatol Screening (2nd Floor)	B3W-025-NWL	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0001	J
	B3W-026-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0015	J
	B3W-027-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0092	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00016	J
	B3W-028-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00099	J
	B3W-029-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.045	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0006	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.003	J
	B3W-030-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0055	J
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0014	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0013	J
Ammonium Nitrate Service	B3W-038-EWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0012	J
	B3W-041-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0001	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0001	J
North TNT Service	B3W-043-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0024	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0026	
	B3W-044-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00093	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0011	J
	B3W-045-SWL	2,6-Dinitrotoluene (2,6-DNT)	0.00031	J
	B3W-046-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0016	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00092	
	B3W-047-FLR	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0002	J
	B3W-048-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0003	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0001	J
West Cooling	B3W-051-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00018	J
	B3W-052-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0031	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0019	
	B3W-053-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0003	J
	B3W-054-FLR	4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0004	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.000014	J
East Cooling	B3W-055-WWL	2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0033	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0033	
	B3W-057-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0037	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.00091	J
	B3W-058-SWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0035	
	B3W-059-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0016	J
TNT Pouring	B3W-061-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0051	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0051	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.023	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0029	J
	B3W-062-EWL	2-Nitrotoluene (2-NT)	0.0016	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0084	J
		4-Nitrotoluene (4-NT)	0.0016	J
	B3W-063-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.009	J
		2-Nitrotoluene (2-NT)	0.00039	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0065	J
		4-Nitrotoluene (4-NT)	0.00039	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00069	J
	B3W-064-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.002	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0057	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00043	J
	B3W-065-FLR	3-Nitrotoluene (3-NT)	0.0004	J
	B3W-066-FLR	3-Nitrotoluene (3-NT)	0.0011	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00051	J
TNT Screening	B3W-067-NWL	4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.011	J
	B3W-068-EWL	4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.017	J

TABLE 5-15

LOAD LINE 3 DETECTED CONCENTRATIONS OF EXPLOSIVES IN WIPE SAMPLES FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Building Name	Sample Location I.D.	Explosive	Results (mg/wipe)	
TNT Screening	B3W-068-EWL	Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	0.0017	J
	B3W-069-SWL	2,4-Dinitrotoluene (2,4-DNT)	0.00026	J
		3-Nitrotoluene (3-NT)	0.0011	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.012	J
		Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	0.00056	J
	B3W-070-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.003	
		2-Nitrotoluene (2-NT)	0.007	
		3-Nitrotoluene (3-NT)	0.00089	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0075	
		4-Nitrotoluene (4-NT)	0.007	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00078	
	B3W-071-FLR	2-Nitrotoluene (2-NT)	0.0016	
		3-Nitrotoluene (3-NT)	0.0013	
		4-Nitrotoluene (4-NT)	0.0016	
		Nitrobenzene (NB)	0.003	
	B3W-072-FLR	3-Nitrotoluene (3-NT)	0.0014	
South TNT Service	B3W-073-NWL	1,3,5-Trinitrobenzene (1,3,5-TNB)	0.0013	J
		2,4,6-Trinitrotoluene (2,4,6-TNT)	0.016	
		3-Nitrotoluene (3-NT)	0.0042	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0033	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00096	
		Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	0.019	J
	B3W-074-EWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0022	J
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0016	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0059	J
	B3W-075-SWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.018	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0015	
	B3W-076-WWL	1,3,5-Trinitrobenzene (1,3,5-TNB)	0.00068	J
		1,3-Dinitrobenzene	0.00018	J
		2,4,6-Trinitrotoluene (2,4,6-TNT)	0.026	
		2,6-Dinitrotoluene (2,6-DNT)	0.0085	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.0047	
		2-Nitrotoluene (2-NT)	0.0014	
		3-Nitrotoluene (3-NT)	0.096	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0049	
		4-Nitrotoluene (4-NT)	0.0014	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0014	
		Nitrobenzene (NB)	0.093	

TABLE 5-16

LOAD LINE 4 DETECTED CONCENTRATIONS OF EXPLOSIVES IN WIPE SAMPLES FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

Building Name	Sample Location I.D.	Explosive	Results (mg/wipe)	
Ammonium Nitrate Service	B4W-037-NWL	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00032	J
	B4W-040-WWL	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00026	J
North TNT Service	B4W-043-NWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0076	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00039	J
	B4W-046-WWL	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00031	J
	B4W-047-FLR	1,3-Dinitrobenzene	0.0014	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00097	J
	B4W-048-FLR	1,3-Dinitrobenzene	0.0014	J
		2-Nitrotoluene (2-NT)	0.0086	J
		4-Nitrotoluene (4-NT)	0.0086	J
West Cooling	B4W-049-WWL	2,6-Dinitrotoluene (2,6-DNT)	0.00032	J
	B4W-051-EWL	2,6-Dinitrotoluene (2,6-DNT)	0.000096	J
	B4W-052-SWL	2,6-Dinitrotoluene (2,6-DNT)	0.0004	J
	B4W-053-FLR	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00088	J
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00021	J
	B4W-054-FLR	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00021	J
East Cooling	B4W-059-FLR	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00022	J
	B4W-060-FLR	2-Nitrotoluene (2-NT)	0.006	J
		4-Nitrotoluene (4-NT)	0.006	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00041	J
TNT Pouring	B4W-061-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0039	
		2-Amino-4,6-dintrotoluene (2-Am-DNT)	0.00075	
		4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.00024	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0095	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0015	
	B4W-064-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.004	
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0062	
	B4W-065-FLR	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00011	J
	B4W-066-FLR	1,3,5-Trinitrobenzene (1,3,5-TNB)	0.00011	J
		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00028	J
TNT Screening	B4W-067-NWL	4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0021	J
	B4W-069-SWL	4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0025	J
	B4W-070-WWL	4-Amino-2,6-dintrotoluene (4-Am-DNT)	0.0012	J
	B4W-072-FLR	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00021	J
South TNT Service	B4W-073-NWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00077	J
	B4W-074-EWL	1,3,5-Trinitrobenzene (1,3,5-TNB)	0.0022	
		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.000056	J
	B4W-076-WWL	2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00035	J

TABLE 5-17

METAL CONCENTRATIONS IN SOILS FROM PREVIOUS INVESTIGATIONS AT LOAD LINES FORMER NEBRASKA ORDNANCE PLANT, MEAD NEBRASKA

Previous Investigation (Document Source)	Analyte	Ranges in Concentrations (mg/kg)			
		Load Line 1	Load Line 2	Load Line 3	Load Line 4
OU1 RI Report (CEMRK, 1991) and Supplemental OU1 RI/FS (Donohue, 1992a)	Barium	12 - 813	24 - 403	13 - 430	29 3 - 375
	Cadmium	1.5 - 2.5	1.5 - 1.8	U	U
	Chromium	3 - 43	3 - 268	14 - 36	4 - 33
	Lead	6.4 - 576	6.6 - 198	6 - 331	14 - 91.2
Confirmation Study (CEMRK, 1987)	Arsenic	1.7 - 3.0	1 7 - 4.0	2.5 - 4.7	2.1 - 3.4
	Barium	230 - 270	220 - 310	180 - 330	210 - 290
	Cadmium	1.1 - 1.9	1.3 - 1.7	U - 1.3	U - 1 1
	Chromium	15 - 26	16 -19	14 - 17	14 - 18
	Lead	24 - 260	23 -27	18 - 35	20 - 25
	Mercury	U - 0.1	U	U - 0.11	U
	Selenium	0.1 - 0.32	0.23 - 0.29	0.22 - 0.42	0.39 - 0.58
	Silver	U	U	U	U

Note:
U - Undetected

Table 5-18
Data Summary for Soil Sampling at Load Line 1 Paint Operation Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
METALS	(MG/KG)						
Aluminum	33852	24800	*	0.73	100%	0%	P1A-028-001
Antimony	31	47.2	40.3	1.52	53%	3%	P1A-020-000(J)
Arsenic	13.5	10.7	*	0.79	100%	0%	P1A-015-001
Barium	440	339	*	0.77	100%	0%	P1A-019-001
Beryllium	1.52	0.94	*	0.62	100%	0%	P1A-025-001,P1A-026-001
Cadmium	0.4	144	0.46	360.00	78%	21%	P1A-029-000
Calcium	GRAS	28300	NA	NA	100%	NA	P1A-029-000
Chromium	37	140	41.3	3.78	100%	5%	P1A-029-000
Cobalt	17.2	13.4	*	0.78	100%	0%	P1A-015-001
Copper	33.9	53.6	36.3	1.58	100%	5%	P1A-008-000
Iron	GRAS	23800	NA	NA	100%	NA	P1A-015-001
Lead*	400	794	794	1.99	100%	2%	P1A-029-000(J)
Magnesium	GRAS	6360	NA	NA	100%	NA	P1A-024-000
Manganese	1083	878	*	0.81	100%	0%	P1A-015-001
Mercury	23	0.24	*	0.01	3%	0%	P1A-018-000(J)
Nickel	39.3	49.5	39.5	1.26	100%	3%	P1A-008-000(J)
Potassium	GRAS	4850	NA	NA	100%	NA	P1A-024-000
Selenium	1.33	2	1.4	1.50	43%	24%	P1A-022-001(J)
Sodium	GRAS	215	NA	NA	9%	NA	P1A-001-001(J)
Thallium	1.72	1.5	*	0.87	2%	0%	P1A-004-001(J)
Vanadium	72.5	53.1	*	0.73	100%	0%	P1A-028-001
Zinc	119.5	266	123	2.23	100%	10%	P1A-020-000(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level
**=metals exceeding published RBCs/PRGs which are above average background concentrations

Table 5-19
Data Summary for Soil Sampling at Load Line 2 Paint Operation Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
METALS (MG/KG)							
Aluminum	33852	27000	*	0.80	100%	0%	P2A-028-001
Antimony	31	37.4	37.4	1.21	28%	2%	P2A-005-000(J)
Arsenic	13.5	14.6	14.6	1.08	100%	2%	P2A-003-000
Barium	440	423	*	0.96	100%	0%	P2A-003-000
Beryllium	1.52	1.1	*	0.72	100%	0%	P2A-028-001
Cadmium	0.4	13.8	0.41	34.50	70%	27%	P2A-003-000
Calcium	GRAS	16100	NA	NA	100%	NA	P2A-012-000
Chromium*	37	840	94.4	22.70	100%	4%	P2A-003-000
Cobalt	17.2	44.9	44.9	2.61	100%	2%	P2A-003-000
Copper	33.9	86	35.2	2.54	100%	5%	P2A-003-000
Iron	GRAS	26800	NA	NA	100%	NA	P2A-003-000
Lead*	400	3960	490	9.90	100%	4%	P2A-003-000
Magnesium	GRAS	6110	NA	NA	100%	NA	P2A-024-001
Manganese	1083	1080	*	1.00	100%	0%	P2A-018-000(J)
Mercury	23	0.76	*	0.03	11%	0%	P2A-003-000
Nickel	39.3	63	43.6	1.60	100%	4%	P2A-003-000
Potassium	GRAS	4430	NA	NA	100%	NA	P2A-028-001
Selenium	1.33	1.9	1.4	1.43	27%	14%	P2A-009-000(J),P2A-028-001(J)
Sodium	GRAS	6100	NA	NA	7%	NA	P2A-007-000
Thallium	1.72	2.2	2.2	1.28	4%	2%	P2A-006-001(J)
Vanadium	72.5	60.5	*	0.83	100%	0%	P2A-026-001
Zinc	119.5	486	120	4.07	100%	11%	P2A-003-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level
**=metals exceeding published RBCs/PRGs which are above average background concentrations

Table 5-20
Data Summary for Soil Sampling at Load Line 3 Paint Operation Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
METALS	(MG/KG)						
Aluminum	33852	24200	*	0.71	100%	0%	P3A-024-000
Antimony	31	54.8	54.8	1.77	36%	2%	P3A-005-000(J)
Arsenic	13.5	13.4	*	0.99	100%	0%	P3A-029-001
Barium	440	516	516	1.17	100%	2%	P3A-003-000
Beryllium	1.52	0.95	*	0.63	100%	0%	P3A-024-000
Cadmium	0.4	5.8	0.41	14.50	86%	20%	P3A-003-000
Calcium	GRAS	124000	NA	NA	100%	NA	P3A-027-000(J)
Chromium*	37	806	37.2	21.78	100%	11%	P3A-003-000
Cobalt	17.2	25.2	18.6	1.47	100%	4%	P3A-003-000
Copper	33.9	218	35.5	6.43	100%	9%	P3A-005-000
Iron	GRAS	45000	NA	NA	100%	NA	P3A-029-001
Lead*	400	3730	996	9.33	100%	4%	P3A-003-000(J)
Magnesium	GRAS	6150	NA	NA	100%	NA	P3A-005-001
Manganese	1083	813	*	0.75	100%	0%	P3A-015-001
Mercury	23	0.29	*	0.01	45%	0%	P3A-003-000
Nickel	39.3	194	110	4.94	100%	4%	P3A-003-000
Potassium	GRAS	5290	NA	NA	100%	NA	P3A-024-000
Selenium	1.33	1.8	1.4	1.35	48%	34%	P3A-028-001(J)
Sodium	GRAS	441	NA	NA	2%	NA	P3A-017-001
Thallium	1.72	1.2	*	0.70	2%	0%	P3A-027-001(J)
Vanadium	72.5	59.1	*	0.82	100%	0%	P3A-024-000
Zinc	119.5	551	153	4.61	100%	9%	P3A-003-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level
**=metals exceeding published RBCs/PRGs which are above average background concentrations

Table 5-21
Data Summary for Soil Sampling at Load Line 4 Paint Operation Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
METALS	(MG/KG)						
Aluminum	33852	20300	*	0.60	100%	0%	P4A-028-001
Antimony	31	171	38.4	5.52	36%	3%	P4A-001-000(J)
Arsenic	13.5	9	*	0.67	98%	0%	P4A-007-001(J)
Barium	440	278	*	0.63	100%	0%	P4A-025-001
Beryllium	1.52	0.88	*	0.58	79%	0%	P4A-028-001
Cadmium	0.4	19.7	0.42	49.25	62%	38%	P4A-011-000
Calcium	GRAS	167000	NA	NA	100%	NA	P4A-027-000
Chromium	37	123	48.2	3.32	100%	5%	P4A-011-000
Cobalt	17.2	13	*	0.76	100%	0%	P4A-004-000
Copper	33.9	37.2	37.2	1.10	100%	2%	P4A-005-000(J)
Iron	GRAS	22000	NA	NA	100%	NA	P4A-001-001
Lead*	400	600	600	1.50	100%	2%	P4A-011-000
Magnesium	GRAS	4090	NA	NA	100%	NA	P4A-001-001
Manganese	1083	810	*	0.75	100%	0%	P4A-007-000(J)
Nickel	39.3	34.2	*	0.87	100%	0%	P4A-005-000
Potassium	GRAS	6430	NA	NA	100%	NA	P4A-025-001
Selenium	1.33	2.3	1.4	1.73	47%	28%	P4A-007-001(J)
Sodium	GRAS	226	NA	NA	19%	NA	P4A-018-000(J)
Thallium	1.72	1.8	1.8	1.05	3%	2%	P4A-007-001(J)
Vanadium	72.5	42	*	0.58	100%	0%	P4A-028-000
Zinc	119.5	264	120	2.21	100%	10%	P4A-007-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level
**=metals exceeding published RBCs/PRGs which are above average background concentrations

Table 5-22
Data Summary for November/December 1994 Groundwater Sampling of Existing Monitoring Wells at Load Lines Paint Operation Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID
DISSOLVED METALS (UG/L)							
Aluminum	37000	313	*	0.01	100%	0%	AMW-013-114
Arsenic	50	15.4	*	0.31	100%	0%	AMW-004-114
Barium	2000	456	*	0.23	100%	0%	BMW-003-114
Cadmium	5	0.32	*	0.06	8%	0%	AMW-012-114(B)
Calcium	GRAS	74600	NA	NA	100%	NA	AMW-003-114
Chromium	100	3.3	*	0.03	50%	0%	BMW-008-114(B)
Cobalt	2200	1.2	*	0.00	8%	0%	AMW-013-114(B)
Copper	1300	3	*	0.00	17%	0%	AMW-013-114(B)
Iron	GRAS	334	NA	NA	17%	NA	AMW-013-114
Lead	15	3.6	*	0.24	17%	0%	AMW-013-114
Magnesium	GRAS	25500	NA	NA	100%	NA	BMW-003-114
Manganese	180	37.9	*	0.21	58%	0%	AMW-004-114
Nickel	100	6.6	*	0.07	42%	0%	AMW-012-114(B)
Potassium	GRAS	14100	NA	NA	100%	NA	AMW-012-114
Selenium	50	28	*	0.56	100%	0%	AMW-003-114
Sodium	GRAS	26300	NA	NA	100%	NA	AMW-008-114
Thallium	2	8.7	5.6	4.35	33%	33%	BMW-003-114(B)
Vanadium	260	10.6	*	0.04	100%	0%	BMW-004-114(B)
Zinc	2000	8.3	*	0.00	100%	0%	AMW-012-114(B)
TOTAL METALS (UG/L)							
Aluminum	37000	4160	*	0.11	100%	0%	AMW-012-114
Arsenic	50	12.1	*	0.24	67%	0%	AMW-004-114
Barium	2000	434	*	0.22	100%	0%	BMW-003-114
Beryllium	4	0.83	*	0.21	17%	0%	AMW-012-114(B)
Calcium	GRAS	76800	NA	NA	100%	NA	AMW-004-114
Chromium	100	12.6	*	0.13	33%	0%	AMW-012-114
Copper	1300	10.5	*	0.01	42%	0%	AMW-012-114(B)
Iron	GRAS	6040	NA	NA	50%	NA	AMW-012-114(*)
Lead	15	13.6	*	0.91	33%	0%	AMW-012-114
Magnesium	GRAS	25500	NA	NA	100%	NA	BMW-003-114
Manganese	180	345	345	1.92	83%	8%	AMW-015-114(E)
Nickel	100	27.1	*	0.27	50%	0%	AMW-012-114(B)
Potassium	GRAS	12900	NA	NA	100%	NA	AMW-012-114
Selenium	50	15.9	*	0.32	58%	0%	AMW-003-114
Sodium	GRAS	26100	NA	NA	100%	NA	AMW-008-114
Vanadium	260	24.5	*	0.09	100%	0%	AMW-012-114(B)
Zinc	2000	92.6	*	0.05	83%	0%	AMW-014-114

Note : Monitoring wells sampled include MW-3A & B, MW-4A & B, MW-6A & B, MW-8A & B, MW-12A, MW-13A, MW-14A, and MW-15A.
Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-23
Data Summary for March 1995 Groundwater Sampling of Existing Monitoring Wells at Load Lines Paint Operation Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
DISSOLVED METALS (UG/L)							
Aluminum	37000	145	*	0.00	100%	0%	BMW-003-035(B)
Antimony	6	12.6	12.6	2.10	8%	8%	BMW-003-035(B)
Arsenic	50	9.7	*	0.19	67%	0%	AMW-004-035(B)
Barium	2000	475	*	0.24	100%	0%	BMW-003-035
Beryllium	4	1.2	*	0.30	8%	0%	BMW-003-035(B)
Cadmium	5	1.1	*	0.22	8%	0%	BMW-003-035(B)
Calcium	GRAS	74500	NA	NA	100%	NA	AMW-004-035
Chromium	100	4.4	*	0.04	25%	0%	BMW-003-035(B)
Cobalt	2200	12.9	*	0.01	17%	0%	BMW-003-035(B)
Copper	1300	6.1	*	0.00	50%	0%	BMW-003-035(B)
Iron	GRAS	65.4	NA	NA	8%	NA	AMW-004-035(B)
Lead	15	2	*	0.13	8%	0%	BMW-003-035(B)
Magnesium	GRAS	24200	NA	NA	100%	NA	BMW-003-035
Manganese	180	44	*	0.24	42%	0%	AMW-004-035
Mercury	2	0.32	*	0.16	8%	0%	AMW-015-035
Nickel	100	11.3	*	0.11	42%	0%	BMW-003-035(B)
Potassium	GRAS	12400	NA	NA	100%	NA	AMW-012-035(E)
Selenium	50	31.6	*	0.63	100%	0%	AMW-003-035(*)
Silver	100	2.5	*	0.03	8%	0%	BMW-003-035(B)
Sodium	GRAS	27400	NA	NA	100%	NA	AMW-008-035
Thallium	2	8	7.5	4.00	17%	17%	BMW-003-035(B)
Vanadium	260	17.5	*	0.07	100%	0%	BMW-003-035(B)
Zinc	2000	25	*	0.01	100%	0%	BMW-008-035
TOTAL METALS (UG/L)							
Aluminum	37000	2030	*	0.05	100%	0%	AMW-014-035
Arsenic	50	9.6	*	0.19	50%	0%	AMW-004-035(B)
Barium	2000	399	*	0.20	100%	0%	BMW-003-035
Calcium	GRAS	72700	NA	NA	100%	NA	AMW-003-035
Chromium	100	4.7	*	0.05	50%	0%	AMW-014-035(B)
Cobalt	2200	1.5	*	0.00	25%	0%	AMW-012-035(B)
Copper	1300	8.8	*	0.01	42%	0%	AMW-015-035(B)
Iron	GRAS	2300	NA	NA	33%	NA	AMW-014-035
Lead	15	5.5	*	0.37	42%	0%	AMW-014-035
Magnesium	GRAS	23100	NA	NA	100%	NA	BMW-003-035
Manganese	180	67.5	*	0.38	92%	0%	AMW-014-035
Nickel	100	8.6	*	0.09	67%	0%	AMW-012-035(B)
Potassium	GRAS	10900	NA	NA	100%	NA	AMW-012-035(E)
Selenium	50	19.1	*	0.38	42%	0%	AMW-003-035
Silver	100	0.76	*	0.01	8%	0%	AMW-015-035(B)
Sodium	GRAS	24800	NA	NA	100%	NA	AMW-008-035
Vanadium	260	11	*	0.04	92%	0%	BMW-004-035(B)
Zinc	2000	117	*	0.06	100%	0%	AMW-013-035

Note : Monitoring wells sampled include MW-3A & B, MW-4A & B, MW-6A & B, MW-8A & B, MW-12A, MW-13A, MW-14A, and MW-15A.
Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-24
Data Summary for November/December 1994 Groundwater Sampling of Background Monitoring Wells
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
DISSOLVED METALS (UG/L)							
Aluminum	37000	150	*	0.00	100%	0%	CMW-019-114(B)
Arsenic	50	26.3	*	0.53	100%	0%	AMW-047-114
Barium	2000	510	*	0.26	100%	0%	CMW-019-114
Calcium	GRAS	169000	NA	NA	100%	NA	AMW-019-114
Chromium	100	0.94	*	0.01	13%	0%	CMW-019-114(B)
Cobalt	2200	3.9	*	0.00	38%	0%	BMW-019-114(B)
Iron	GRAS	1930	NA	NA	75%	NA	AMW-019-114
Magnesium	GRAS	33100	NA	NA	100%	NA	AMW-019-114
Manganese	180	463	259	2.57	88%	75%	AMW-047-114
Nickel	100	3.8	*	0.04	25%	0%	CMW-019-114(B)
Potassium	GRAS	36200	NA	NA	100%	NA	AMW-019-114
Selenium	50	30.6	*	0.61	100%	0%	BMW-048-114
Sodium	GRAS	205000	NA	NA	100%	NA	AMW-019-114(E)
Thallium	2	7	7	3.50	13%	13%	AMW-048-114(B)
Vanadium	260	10.8	*	0.04	38%	0%	BMW-048-114(B)
Zinc	2000	10.2	*	0.01	88%	0%	BMW-019-114(B)
TOTAL METALS (UG/L)							
Aluminum	37000	213	*	0.01	88%	0%	AMW-019-114
Arsenic	50	22.3	*	0.45	100%	0%	DMW-048-114
Barium	2000	285	*	0.14	88%	0%	BMW-048-114
Calcium	GRAS	157000	NA	NA	88%	NA	AMW-019-114
Cobalt	2200	1.4	*	0.00	13%	0%	DMW-048-114(B)
Iron	GRAS	1870	NA	NA	75%	NA	BMW-047-114
Magnesium	GRAS	31000	NA	NA	88%	NA	AMW-019-114
Manganese	180	481	264	2.67	75%	75%	AMW-047-114
Nickel	100	2.9	*	0.03	13%	0%	BMW-048-114(B)
Potassium	GRAS	21000	NA	NA	88%	NA	AMW-019-114
Selenium	50	22.8	*	0.46	13%	0%	BMW-048-114
Silver	100	4.7	*	0.05	13%	0%	BMW-019-114(B)
Sodium	GRAS	191000	NA	NA	88%	NA	AMW-019-114(E)
Vanadium	260	11.1	*	0.04	38%	0%	BMW-048-114(B)
Zinc	2000	107	*	0.05	88%	0%	AMW-019-114
VOLATILES (UG/L)							
Chloromethane	3	0.6	*	0.20	13%	0%	BMW-019-114(J)
Methylene chloride	5	4	*	0.80	75%	0%	AMW-047-114(B)
WATER QUALITY (mg/L)							
Nitrite	1	5.7	5.7	5.70	29%	14%	BMW-048-114
Nitrate	10	59	59	5.90	29%	14%	BMW-048-114

Note : Monitoring wells sampled include MW-19A, B & C, MW-47A & B, and MW-48A, B & D.
Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-25
Data Summary for March 1995 Groundwater Sampling of Background Monitoring Wells
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
DISSOLVED METALS (UG/L)							
Aluminum	37000	81.1	*	0.00	60%	0%	BMW-047-035(B)
Arsenic	50	24.3	*	0.49	80%	0%	AMW-047-035
Barium	2000	496	*	0.25	100%	0%	CMW-019-035
Calcium	GRAS	165000	NA	NA	100%	NA	AMW-019-035
Cobalt	2200	4.1	*	0.00	40%	0%	BMW-019-035(B)
Copper	1300	1.1	*	0.00	40%	0%	AMW-047-035(B)
Iron	GRAS	1850	NA	NA	80%	NA	BMW-047-035
Lead	15	1.6	*	0.11	20%	0%	AMW-047-035(B)
Magnesium	GRAS	32100	NA	NA	100%	NA	AMW-019-035
Manganese	180	461	343	2.56	100%	80%	AMW-047-035
Nickel	100	2.2	*	0.02	40%	0%	CMW-019-035(B)
Potassium	GRAS	33800	NA	NA	100%	NA	AMW-019-035(E)
Selenium	50	15.5	*	0.31	100%	0%	BMW-019-035
Sodium	GRAS	200000	NA	NA	100%	NA	AMW-019-035
Vanadium	260	2.6	*	0.01	60%	0%	CMW-019-035(B)
Zinc	2000	19	*	0.01	100%	0%	BMW-019-035(B)
TOTAL METALS (UG/L)							
Aluminum	37000	188	*	0.01	100%	0%	CMW-019-035(B)
Arsenic	50	21.2	*	0.42	80%	0%	AMW-047-035
Barium	2000	455	*	0.23	100%	0%	CMW-019-035
Calcium	GRAS	169000	NA	NA	100%	NA	AMW-019-035
Cobalt	2200	3.4	*	0.00	40%	0%	BMW-019-035(B)
Iron	GRAS	1840	NA	NA	80%	NA	AMW-019-035
Magnesium	GRAS	32900	NA	NA	100%	NA	AMW-019-035
Manganese	180	437	325	2.43	100%	80%	AMW-047-035
Nickel	100	2.3	*	0.02	40%	0%	CMW-019-035(B)
Potassium	GRAS	31400	NA	NA	100%	NA	AMW-019-035(E)
Sodium	GRAS	200000	NA	NA	100%	NA	AMW-019-035
Vanadium	260	2.3	*	0.01	20%	0%	CMW-019-035(B)
Zinc	2000	17.3	*	0.01	100%	0%	BMW-019-035(B)
VOLATILES (UG/L)							
Methylene chloride	5	2	*	0.40	100%	0%	AMW-019-035(B)

Note : Monitoring wells sampled include MW-19A, B & C, MW-47A & B, and MW-48A, B & D.
Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-27
Data Summary for Confirmation and Additional Shallow Soil Sampling at Raw Product Igloo Storage Areas
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (MG/KG)							
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	1.4	*	0.24	36%	0%	IGN-032-000
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.27	*	0.00	14%	0%	IGN-080-000(J)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.093	*	0.00	9%	0%	IGN-106-000(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-28
Data Summary for Shallow Soil Sampling at the Tetryl Pelleting Building
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (MG/KG)							
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.000093	*	0.00	42%	0%	TPA-001-R00
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.47	*	0.00	42%	0%	TPA-002-001(J)
METALS (MG/KG)							
Aluminum	33852	18200	*	0.54	100%	0%	TPA-001-001(J)
Antimony	31	9.3	*	0.30	33%	0%	TPA-001-000(J)
Arsenic	13.5	13	*	0.96	100%	0%	TPA-001-000
Barium	440	520	520	1.18	100%	8%	TPA-002-000
Beryllium	1.52	0.78	*	0.51	100%	0%	TPA-001-001,TPA-004-001
Cadmium	0.4	1.4	1.4	3.50	33%	8%	TPA-002-000
Calcium	GRAS	10400	NA	NA	100%	NA	TPA-003-000
Chromium	37	20.5	*	0.55	100%	0%	TPA-004-000
Cobalt	17.2	11.4	*	0.66	100%	0%	TPA-002-000
Copper	33.9	34.6	34.6	1.02	100%	8%	TPA-001-000
Iron	GRAS	19400	NA	NA	100%	NA	TPA-004-001
Lead	400	248	*	0.62	100%	0%	TPA-005-000
Magnesium	GRAS	3430	NA	NA	100%	NA	TPA-004-001
Manganese	1083	575	*	0.53	100%	0%	TPA-004-001
Mercury	23	0.6	*	0.03	8%	0%	TPA-001-000
Nickel	39.3	29.3	*	0.75	100%	0%	TPA-004-001(J)
Potassium	GRAS	3540	NA	NA	100%	NA	TPA-001-001
Selenium	1.33	1.9	1.4	1.43	25%	25%	TPA-003-000(J)
Sodium	GRAS	169	NA	NA	42%	NA	TPA-004-000(J)
Vanadium	72.5	37.2	*	0.51	100%	0%	TPA-001-001,TPA-003-001
Zinc	119.5	275	135	2.30	100%	17%	TPA-002-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
Resampling data replace initial investigation data for Tetryl. The above statistics are based on resampling data results.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-29
Data Summary for Shallow and Deep Soil Sampling at the North Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
Butylbenzylphthalate	13000000	57	*	0.00	3%	0%	NGA-004-001(J)
Di-n-butylphthalate	6500000	3518	*	0.00	20%	0%	NGA-008-001
Diethylphthalate	52000000	31	*	0.00	7%	0%	NGA-002-001(J)
Pyrene	2000000	54	*	0.00	7%	0%	NGA-008-000(J)
bis(2-Ethylhexyl)phthalate	32000	1222	*	0.04	10%	0%	NGA-007-000
METALS (MG/KG)							
Aluminum	33852	17300	*	0.51	100%	0%	NGA-005-004
Antimony	31	2	*	0.06	10%	0%	NGA-001-000
Arsenic	13.5	13.4	*	0.99	93%	0%	NGA-002-001
Barium	440	244	*	0.55	100%	0%	NGA-005-001
Beryllium	1.52	3.1	3.1	2.04	100%	3%	NGA-002-001
Cadmium	0.4	3.1	0.41	7.75	90%	70%	NGA-002-001
Calcium	GRAS	104000	NA	NA	100%	NA	NGA-009-000
Chromium	37	19.6	*	0.53	100%	0%	NGA-002-001
Cobalt	17.2	37.7	37.7	2.19	100%	3%	NGA-002-001
Copper	33.9	206	34.2	6.08	100%	13%	NGA-011-000
Iron	GRAS	20500	NA	NA	100%	NA	NGA-005-004
Lead	400	43	*	0.11	100%	0%	NGA-010-000
Magnesium	GRAS	4040	NA	NA	100%	NA	NGA-005-004
Manganese	1083	718	*	0.66	100%	0%	NGA-005-001
Nickel	39.3	42.7	42.7	1.09	100%	3%	NGA-002-001
Potassium	GRAS	3440	NA	NA	100%	NA	NGA-001-000(J)
Selenium	1.33	3.7	1.4	2.78	73%	50%	NGA-002-001(J)
Silver	380	17.1	*	0.05	10%	0%	NGA-010-000
Sodium	GRAS	266	NA	NA	3%	NA	NGA-007-000(J)
Thallium	1.72	4.4	4.4	2.56	3%	3%	NGA-002-001(J)
Vanadium	72.5	52.2	*	0.72	100%	0%	NGA-002-001
Zinc	119.5	101	*	0.85	97%	0%	NGA-004-000
VOLATILES (UG/KG)							
Trichloroethene (TCE)	7100	2	*	0.00	6%	0%	NGA-006-001(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-30
Data Summary for Shallow Soil Sampling at the South Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
1,2-Dichlorobenzene	2300000	47	*	0.00	2%	0%	SGA-012-002(J)
2,4-Dimethylphenol	1300000	48	*	0.00	4%	0%	SGA-012-002(J)
2,4-Dinitrotoluene (2,4-DNT)	900	48771	48771	54.19	2%	2%	SGA-004-000
2,6-Dinitrotoluene (2,6-DNT)	900	4534	4534	5.04	2%	2%	SGA-004-000
2-Methylphenol	3300000	421	*	0.00	6%	0%	SGA-012-002
4-Methylphenol	330000	597	*	0.00	6%	0%	SGA-012-002
Butylbenzylphthalate	13000000	486	*	0.00	8%	0%	SGA-001-001
Di-n-butylphthalate	6500000	17826	*	0.00	31%	0%	SGA-004-000
Diethylphthalate	52000000	871	*	0.00	4%	0%	SGA-009-002
N-Nitrosodiphenylamine (1)	91000	4633	*	0.05	4%	0%	SGA-004-000
Naphthalene	800000	21	*	0.00	4%	0%	SGA-012-002(J)
Phenol	39000000	477	*	0.00	6%	0%	SGA-012-002
Pyrene	2000000	89	*	0.00	2%	0%	SGA-006-002(J)
METALS (MG/KG)							
Aluminum	33852	22500	*	0.66	100%	0%	SGA-017-002
Antimony	31	0.56	*	0.02	4%	0%	SGA-017-000(J)
Arsenic	13.5	10.1	*	0.75	100%	0%	SGA-012-002
Barium	440	290	*	0.66	100%	0%	SGA-010-001
Beryllium	1.52	0.86	*	0.57	100%	0%	SGA-017-002
Cadmium	0.4	1.1	0.42	2.75	100%	78%	SGA-006-001(J)
Calcium	GRAS	11000	NA	NA	100%	NA	SGA-010-002
Chromium	37	24	*	0.65	100%	0%	SGA-017-002
Cobalt	17.2	10.9	*	0.63	100%	0%	SGA-005-002,SGA-011-002
Copper	33.9	22.5	*	0.66	100%	0%	SGA-010-001
Iron	GRAS	22700	NA	NA	100%	NA	SGA-003-001
Lead	400	18	*	0.05	100%	0%	SGA-013-002(J)
Magnesium	GRAS	6180	NA	NA	100%	NA	SGA-006-002
Manganese	1083	678	*	0.63	100%	0%	SGA-011-002
Nickel	39.3	28.7	*	0.73	100%	0%	SGA-011-002
Potassium	GRAS	3840	NA	NA	100%	NA	SGA-016-000
Selenium	1.33	2.2	1.4	1.65	75%	47%	SGA-008-000(J),SGA-008-001(J),SGA-017-001(J)
Sodium	GRAS	251	NA	NA	16%	NA	SGA-012-002(J)
Thallium	1.72	1.4	*	0.81	4%	0%	SGA-008-002(J)
Vanadium	72.5	52.7	*	0.73	100%	0%	SGA-017-002
Zinc	119.5	89.7	*	0.75	100%	0%	SGA-016-000
VOLATILES (UG/KG)							
Acetone	2000000	17	*	0.00	3%	0%	SGA-009-001
Trichloroethene (TCE)	7100	42	*	0.01	9%	0%	SGA-003-001

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-32
Data Summary for Shallow and Deep Soil Sampling at the Proving Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
4-Chloro-3-methylphenol	NI	93	NA	NA	6%	NA	PGA-005-004(J)
Butylbenzylphthalate	13000000	344	*	0.00	13%	0%	PGA-002-000(J)
Di-n-butylphthalate	6500000	3542	*	0.00	75%	0%	PGA-001-000
Pentachlorophenol	2500	14	*	0.01	6%	0%	PGA-005-004(J)
Pyrene	2000000	243	*	0.00	19%	0%	PGA-005-004(J)
bis(2-Ethylhexyl)phthalate	32000	49	*	0.00	38%	0%	PGA-006-001(J)
METALS (MG/KG)							
Aluminum	33852	13800	*	0.41	100%	0%	PGA-001-001
Antimony	31	4.1	*	0.13	31%	0%	PGA-004-001(J)
Arsenic	13.5	8.7	*	0.64	94%	0%	PGA-001-004(J)
Barium	440	260	*	0.59	100%	0%	PGA-003-001
Beryllium	1.52	0.7	*	0.46	100%	0%	PGA-001-001
Cadmium	0.4	0.99	0.43	2.48	94%	75%	PGA-001-009(J)
Calcium	GRAS	5600	NA	NA	100%	NA	PGA-002-001
Chromium	37	15.2	*	0.41	100%	0%	PGA-006-001
Cobalt	17.2	10.4	*	0.60	100%	0%	PGA-001-004
Copper	33.9	22.6	*	0.67	100%	0%	PGA-004-000
Iron	GRAS	17700	NA	NA	100%	NA	PGA-001-009
Lead	400	30	*	0.08	100%	0%	PGA-002-000
Magnesium	GRAS	4010	NA	NA	100%	NA	PGA-001-009
Manganese	1083	791	*	0.73	100%	0%	PGA-001-004
Nickel	39.3	28.3	*	0.72	100%	0%	PGA-001-004
Potassium	GRAS	2790	NA	NA	100%	NA	PGA-005-000
Selenium	1.33	1.9	1.4	1.43	69%	56%	PGA-003-001(J)
Sodium	GRAS	243	NA	NA	31%	NA	PGA-006-001(J)
Thallium	1.72	1.3	*	0.76	6%	0%	PGA-005-004(J)
Vanadium	72.5	31	*	0.43	100%	0%	PGA-005-000
Zinc	119.5	127	127	1.06	100%	6%	PGA-002-000
VOLATILES (UG/KG)							
Acetone	2000000	18	*	0.00	40%	0%	PGA-001-009(J)
Toluene	1900000	0.5	*	0.00	10%	0%	PGA-005-004(J)
Trichloroethene (TCE)	7100	1	*	0.00	20%	0%	PGA-001-009(J),PGA-005-001(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-33
Analytical Data for Groundwater Sampling of Newly Installed Monitoring Well at Proving Grounds
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-64B		
		BMW-064-065		
		R	Q	QL
DISSOLVED METALS (UG/L)				
Aluminum	37000	66.6	B	
Barium	2000	320	E	
Calcium	GRAS	51600		
Copper	1300	1.1	B	
Magnesium	GRAS	14100		
Manganese	180	54		
Nickel	100	5.1	B	
Potassium	GRAS	8770	E	
Sodium	GRAS	22500		
Zinc	2000	5.5	B	
TOTAL METALS (UG/L)				
Aluminum	37000	352		
Antimony	6	2.8	B	
Barium	2000	238		
Cadmium	5	0.4	B	
Calcium	GRAS	50300		
Copper	1300	4.5	B	
Iron	GRAS	212		
Magnesium	GRAS	13500		
Manganese	180	69.2		
Nickel	100	6.8	B	
Potassium	GRAS	7350	E	
Sodium	GRAS	22000		
Vanadium	260	0.67	B	
Zinc	2000	7.3	B	
VOLATILES (UG/L)				
Acetone	610	10	B	
Methylene chloride	5	1	J	
SEMIVOLATILES (UG/L)				
bis(2-Ethylhexyl)phthalate	6	2	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table 5-34
Data Summary for Shallow and Deep Soil Sampling at Potential Landfill Area North of the Proving Grounds
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
Benzo(b)fluoranthene	610	77	*	0.13	6%	0%	PLA-001-000(J)
Butylbenzylphthalate	13000000	1204	*	0.00	13%	0%	PLA-004-001(J)
Chrysene	24000	27	*	0.00	6%	0%	PLA-001-000(J)
Di-n-butylphthalate	6500000	2823	*	0.00	31%	0%	PLA-002-009
Diethylphthalate	52000000	72	*	0.00	6%	0%	PLA-003-001(J)
Phenol	39000000	48	*	0.00	6%	0%	PLA-006-000(J)
Pyrene	2000000	89	*	0.00	6%	0%	PLA-004-000(J)
bis(2-Ethylhexyl)phthalate	32000	701	*	0.02	13%	0%	PLA-003-001
EXPLOSIVES (MG/KG)							
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.068	*	0.00	13%	0%	PLA-004-000(J)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NI	0.26	NA	NA	13%	NA	PLA-004-000(J)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NI	0.13	NA	NA	13%	NA	PLA-003-001(J)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.068	*	0.00	25%	0%	PLA-001-000(J)
METALS (MG/KG)							
Aluminum	33852	17900	*	0.53	100%	0%	PLA-002-001
Antimony	31	81.8	81.8	2.64	50%	6%	PLA-001-001(J)
Arsenic	13.5	9.1	*	0.67	81%	0%	PLA-002-001
Barium	440	347	*	0.79	100%	0%	PLA-001-001
Beryllium	1.52	0.82	*	0.54	100%	0%	PLA-002-001
Cadmium	0.4	1.3	0.46	3.25	81%	75%	PLA-003-000
Calcium	GRAS	136000	NA	NA	100%	NA	PLA-001-000
Chromium**	37	688	688	18.59	100%	6%	PLA-001-001
Cobalt	17.2	18.7	18.7	1.09	100%	6%	PLA-001-001
Copper	33.9	47.9	47.9	1.41	88%	6%	PLA-001-001(J)
Iron	GRAS	23600	NA	NA	100%	NA	PLA-005-000
Lead**	400	2910	2910	7.28	88%	6%	PLA-001-001
Magnesium	GRAS	16700	NA	NA	100%	NA	PLA-001-000
Manganese	1083	898	*	0.83	100%	0%	PLA-002-001(J)
Nickel	39.3	26.9	*	0.68	100%	0%	PLA-001-001
Potassium	GRAS	3310	NA	NA	100%	NA	PLA-005-000(J)
Selenium	1.33	3.1	1.4	2.33	44%	38%	PLA-005-000(J)
Sodium	GRAS	311	NA	NA	50%	NA	PLA-001-001(J)
Thallium	1.72	1.4	*	0.81	6%	0%	PLA-001-001(J)
Vanadium	72.5	42.5	*	0.59	100%	0%	PLA-002-001
Zinc	119.5	728	150	6.09	88%	13%	PLA-003-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level
** =metals exceeding published RBCs/PRGs which are above average background concentrations

Table 5-35
Data Summary for Shallow and Deep Soil Sampling at Waste Disposal Areas North of the Former Nike Maintenance Area
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
Butylbenzylphthalate	13000000	740	*	0.00	7%	0%	NMA-001-001
Di-n-butylphthalate	6500000	3593	*	0.00	21%	0%	NMA-001-004
Pyrene	2000000	164	*	0.00	7%	0%	NMA-002-001(J)
EXPLOSIVES (MG/KG)							
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.46	*	0.08	5%	0%	NMA-004-019(J)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.94	*	0.00	26%	0%	NMA-006-002
METALS (MG/KG)							
Aluminum	33852	20400	*	0.60	100%	0%	NMA-005-001
Antimony	31	0.65	*	0.02	5%	0%	NMA-002-002(J)
Arsenic	13.5	11.3	*	0.84	79%	0%	NMA-006-002
Barium	440	368	*	0.84	100%	0%	NMA-005-001
Beryllium	1.52	0.84	*	0.55	100%	0%	NMA-005-001
Cadmium	0.4	1.3	0.48	3.25	79%	62%	NMA-005-001
Calcium	GRAS	11300	NA	NA	100%	NA	NMA-002-001
Chromium	37	21	*	0.57	100%	0%	NMA-005-001
Cobalt	17.2	15.8	*	0.92	100%	0%	NMA-007-009
Copper	33.9	23.5	*	0.69	98%	0%	NMA-005-009
Iron	GRAS	21700	NA	NA	100%	NA	NMA-005-009
Lead	400	20.3	*	0.05	100%	0%	NMA-001-001
Magnesium	GRAS	4690	NA	NA	100%	NA	NMA-002-001
Manganese	1083	785	*	0.72	100%	0%	NMA-006-000(J)
Nickel	39.3	28	*	0.71	100%	0%	NMA-002-000(J)
Potassium	GRAS	3780	NA	NA	100%	NA	NMA-005-000
Selenium	1.33	2.1	1.4	1.58	55%	31%	NMA-003-000(J)
Sodium	GRAS	1090	NA	NA	12%	NA	NMA-002-004
Vanadium	72.5	39.9	*	0.55	100%	0%	NMA-005-001
Zinc	119.5	94.7	*	0.79	100%	0%	NMA-004-000
VOLATILES (UG/KG)							
Total Xylenes	990000	1	*	0.00	3%	0%	NMA-004-004

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-36
Data Summary for November/December 1994 Groundwater Sampling of Existing Monitoring Wells at Waste Disposal Areas of the Former Nike Maintenance Area Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
DISSOLVED METALS (UG/L)							
Aluminum	37000	96.1	*	0.00	100%	0%	BMW-022-114(B)
Arsenic	50	5.9	*	0.12	50%	0%	AMW-022-114(B)
Barium	2000	264	*	0.13	100%	0%	BMW-022-114
Calcium	GRAS	86500	NA	NA	100%	NA	AMW-022-114
Cobalt	2200	1.2	*	0.00	100%	0%	AMW-022-114(B)
Copper	1300	1.3	*	0.00	50%	0%	AMW-022-114(B)
Magnesium	GRAS	15100	NA	NA	100%	NA	BMW-022-114
Manganese	180	180	*	1.00	100%	0%	AMW-022-114
Nickel	100	2.1	*	0.02	50%	0%	BMW-022-114(B)
Potassium	GRAS	17900	NA	NA	100%	NA	AMW-022-114
Selenium	50	23.6	*	0.47	100%	0%	BMW-022-114
Sodium	GRAS	22400	NA	NA	100%	NA	AMW-022-114
Vanadium	260	2.2	*	0.01	100%	0%	BMW-022-114(B)
Zinc	2000	1.3	*	0.00	100%	0%	AMW-022-114(B)
EXPLOSIVES (UG/L)							
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2	1.3	*	0.65	50%	0%	BMW-022-114
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	400	0.12	*	0.00	50%	0%	BMW-022-114
TOTAL METALS (UG/L)							
Aluminum	37000	133	*	0.00	100%	0%	AMW-022-114(B)
Arsenic	50	5.2	*	0.10	100%	0%	AMW-022-114(B)
Barium	2000	253	*	0.13	100%	0%	BMW-022-114
Calcium	GRAS	84800	NA	NA	100%	NA	AMW-022-114
Cobalt	2200	0.75	*	0.00	50%	0%	BMW-022-114(B)
Magnesium	GRAS	15100	NA	NA	100%	NA	BMW-022-114
Manganese	180	185	185	1.03	100%	50%	BMW-022-114
Nickel	100	3.2	*	0.03	50%	0%	BMW-022-114(B)
Potassium	GRAS	14800	NA	NA	100%	NA	AMW-022-114
Selenium	50	10.4	*	0.21	50%	0%	BMW-022-114
Sodium	GRAS	21000	NA	NA	100%	NA	AMW-022-114
Vanadium	260	2.9	*	0.01	100%	0%	BMW-022-114(B)
Zinc	2000	1.2	*	0.00	100%	0%	AMW-022-114(B),BMW-022-114(B)
VOLATILES (UG/L)							
Methylene chloride	5	3	*	0.60	100%	0%	AMW-022-114(B)

Note : Monitoring wells sampled inculde MW-22A & MW-22B
Chemicals in bold, italics, and underlined are detected above the respective screening levels
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-37

Data Summary for Shallow and Deep Soil Sampling at Waste Disposal Area Southeast of the Bomb Booster Area

Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
2,4-Dimethylphenol	1300000	63	*	0.00	3%	0%	BBA-003-000(J)
2-Methylphenol	3300000	111	*	0.00	3%	0%	BBA-003-000(J)
4-Methylphenol	330000	148	*	0.00	3%	0%	BBA-003-000(J)
Butylbenzylphthalate	13000000	401	*	0.00	8%	0%	BBA-001-009(J)
Di-n-butylphthalate	6500000	3089	*	0.00	31%	0%	BBA-001-009
Phenol	39000000	139	*	0.00	8%	0%	BBA-003-000(J)
Pyrene	2000000	123	*	0.00	6%	0%	BBA-001-000(J)
EXPLOSIVES (MG/KG)							
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.0014	*	0.00	3%	0%	BBA-007-002(J)
2,6-Dinitrotoluene (2,6-DNT)	0.9	0.0025	*	0.00	3%	0%	BBA-008-000(J)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NI	0.0025	NA	NA	6%	NA	BBA-007-002(J)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NI	0.0019	NA	NA	6%	NA	BBA-006-019(J)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.00026	*	0.00	3%	0%	BBA-007-002(J)
Nitrotoluene	343	0.0048	*	0.00	6%	0%	BBA-008-000
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.39	*	0.00	19%	0%	BBA-001-019(J)
METALS (MG/KG)							
Aluminum	33852	20700	*	0.61	100%	0%	BBA-002-001(J)
Antimony	31	0.54	*	0.02	3%	0%	BBA-008-002(J)
Arsenic	13.5	9.8	*	0.73	89%	0%	BBA-006-009
Barium	440	360	*	0.82	100%	0%	BBA-001-002
Beryllium	1.52	0.96	*	0.63	100%	0%	BBA-008-000
Cadmium	0.4	1.4	0.43	3.50	86%	67%	BBA-001-002
Calcium	GRAS	22400	NA	NA	100%	NA	BBA-005-000
Chromium	37	21.4	*	0.58	100%	0%	BBA-006-009(J),BBA-008-002(J)
Cobalt	17.2	12.7	*	0.74	100%	0%	BBA-007-004
Copper	33.9	25.8	*	0.76	100%	0%	BBA-008-000
Iron	GRAS	22000	NA	NA	100%	NA	BBA-008-002
Lead	400	28	*	0.07	100%	0%	BBA-007-009
Magnesium	GRAS	4900	NA	NA	100%	NA	BBA-006-009
Manganese	1083	818	*	0.76	100%	0%	BBA-001-002(J)
Nickel	39.3	30	*	0.76	100%	0%	BBA-003-002
Potassium	GRAS	4790	NA	NA	100%	NA	BBA-008-000
Selenium	1.33	2.2	1.4	1.65	78%	72%	BBA-006-001(J)
Vanadium	72.5	48.4	*	0.67	100%	0%	BBA-006-009
Zinc	119.5	103	*	0.86	100%	0%	BBA-005-000(J)
PCBs (UG/KG)							
Total PCBs	15000	1105.7	*	0.07	6%	0%	BBA-005-000
VOLATILES (UG/KG)							
Acetone	2000000	17	*	0.00	4%	0%	BBA-007-001
Tetrachloroethene	7000	1	*	0.00	4%	0%	BBA-006-009(J)
Toluene	1900000	0.6	*	0.00	7%	0%	BBA-007-004(J)
Trichloroethene (TCE)	7100	2	*	0.00	4%	0%	BBA-007-004(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.

GRAS = Generally recognized as safe

NI = screening level not identified

* = all detection were below the screening level

Table 5-38

Data Summary for November/December 1994 Groundwater Sampling of the Existing Monitoring Well at the Waste Disposal Area Southeast of Bomb Booster Area Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
DISSOLVED METALS (UG/L)							
Aluminum	37000	105	*	0.00	100%	0%	BMW-057-114(B)
Arsenic	50	5.9	*	0.12	100%	0%	BMW-057-114(B)
Barium	2000	722	*	0.36	100%	0%	BMW-057-114
Calcium	GRAS	81400	NA	NA	100%	NA	BMW-057-114
Chromium	100	2.5	*	0.03	100%	0%	BMW-057-114(B)
Magnesium	GRAS	26000	NA	NA	100%	NA	BMW-057-114
Nickel	100	1.9	*	0.02	100%	0%	BMW-057-114(B)
Potassium	GRAS	17600	NA	NA	100%	NA	BMW-057-114
Selenium	50	7.1	*	0.14	100%	0%	BMW-057-114
Sodium	GRAS	16600	NA	NA	100%	NA	BMW-057-114
Vanadium	260	1.7	*	0.01	100%	0%	BMW-057-114(B)
Zinc	2000	1.9	*	0.00	100%	0%	BMW-057-114(B)
TOTAL METALS (UG/L)							
Aluminum	37000	157	*	0.00	100%	0%	BMW-057-114(B)
Arsenic	50	3.6	*	0.07	100%	0%	BMW-057-114(B)
Barium	2000	662	*	0.33	100%	0%	BMW-057-114
Calcium	GRAS	81500	NA	NA	100%	NA	BMW-057-114
Chromium	100	2.6	*	0.03	100%	0%	BMW-057-114(B)
Magnesium	GRAS	25200	NA	NA	100%	NA	BMW-057-114
Manganese	180	0.82	*	0.00	100%	0%	BMW-057-114(B)
Nickel	100	1.6	*	0.02	100%	0%	BMW-057-114(B)
Potassium	GRAS	14400	NA	NA	100%	NA	BMW-057-114
Selenium	50	6.8	*	0.14	100%	0%	BMW-057-114
Sodium	GRAS	15300	NA	NA	100%	NA	BMW-057-114
Vanadium	260	2.4	*	0.01	100%	0%	BMW-057-114(B)
Zinc	2000	0.67	*	0.00	100%	0%	BMW-057-114(B)
VOLATILES (UG/L)							
Methylene chloride	5	0.8	*	0.16	100%	0%	BMW-057-114(JB)

Note : Monitoring well sampled includes MW-57B.
Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-39
Data Summary for Shallow and Deep Soil Sampling at Waste Disposal Areas at the Atlas Missile Area
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
Butylbenzylphthalate	13000000	403	*	0.00	19%	0%	AMA-006-019
Di-n-butylphthalate	6500000	4247	*	0.00	39%	0%	AMA-001-001(J)
Diethylphthalate	52000000	161	*	0.00	13%	0%	AMA-008-000(J)
Pyrene	2000000	154	*	0.00	10%	0%	AMA-005-001(J)
bis(2-Ethylhexyl)phthalate	32000	2108	*	0.07	6%	0%	AMA-008-000
EXPLOSIVES (MG/KG)							
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.063	*	0.00	3%	0%	AMA-003-009(J)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NI	0.057	NA	NA	3%	NA	AMA-001-000(J)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.098	*	0.00	10%	0%	AMA-003-009(J)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.14	*	0.00	52%	0%	AMA-003-009(J),AMA-004-000(J)
METALS (MG/KG)							
Aluminum	33852	25600	*	0.76	100%	0%	AMA-008-004
Antimony	31	0.67	*	0.02	6%	0%	AMA-008-004(J)
Arsenic	13.5	10	*	0.74	74%	0%	AMA-001-004
Barium	440	341	*	0.78	100%	0%	AMA-001-004
Beryllium	1.52	1	*	0.66	100%	0%	AMA-008-004
Cadmium	0.4	1.1	0.43	2.75	74%	55%	AMA-008-009(J)
Calcium	GRAS	6980	NA	NA	100%	NA	AMA-005-001
Chromium	37	27.2	*	0.74	100%	0%	AMA-008-004
Cobalt	17.2	14.3	*	0.83	100%	0%	AMA-002-004
Copper	33.9	25.1	*	0.74	100%	0%	AMA-001-004
Iron	GRAS	24800	NA	NA	100%	NA	AMA-008-004
Lead	400	17.6	*	0.04	100%	0%	AMA-001-000(J)
Magnesium	GRAS	5210	NA	NA	100%	NA	AMA-001-004
Manganese	1083	1150	1150	1.06	100%	3%	AMA-002-004
Nickel	39.3	37.6	*	0.96	100%	0%	AMA-008-009
Potassium	GRAS	4290	NA	NA	100%	NA	AMA-008-000
Selenium	1.33	2.6	1.4	1.95	61%	48%	AMA-001-001(J)
Sodium	GRAS	176	NA	NA	13%	NA	AMA-005-001(J)
Vanadium	72.5	59.5	*	0.82	100%	0%	AMA-008-004
Zinc	119.5	90.6	*	0.76	100%	0%	AMA-008-009

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-40
Data Summary for November/December 1994 Groundwater Sampling of Existing Monitoring Wells at Waste Disposal Areas at the Atlas Missile Area Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
DISSOLVED METALS (UG/L)							
Aluminum	37000	159	*	0.00	100%	0%	AMW-059-114(B),DMW-059-114(B)
Arsenic	50	23.8	*	0.48	100%	0%	DMW-059-114
Barium	2000	813	*	0.41	100%	0%	BMW-059-114
Calcium	GRAS	91500	NA	NA	100%	NA	AMW-058-114
Iron	GRAS	1020	NA	NA	20%	NA	AMW-058-114
Magnesium	GRAS	20500	NA	NA	100%	NA	BMW-059-114
Manganese	180	989	195	5.49	80%	60%	AMW-059-114
Nickel	100	6.3	*	0.06	60%	0%	BMW-059-114(B)
Potassium	GRAS	16600	NA	NA	100%	NA	AMW-058-114(E)
Selenium	50	19.8	*	0.40	100%	0%	AMW-059-114
Sodium	GRAS	38700	NA	NA	100%	NA	AMW-058-114
Vanadium	260	5.6	*	0.02	80%	0%	BMW-058-114(B)
Zinc	2000	1.4	*	0.00	100%	0%	DMW-059-114(B)
SEMIVOLATILES (UG/L)							
bis(2-Ethylhexyl)phthalate	6	4	*	0.67	40%	0%	BMW-058-114(J)
TOTAL METALS (UG/L)							
Aluminum	37000	320	*	0.01	100%	0%	DMW-059-114
Arsenic	50	23.3	*	0.47	80%	0%	DMW-059-114
Barium	2000	749	*	0.37	100%	0%	BMW-059-114
Calcium	GRAS	96800	NA	NA	100%	NA	AMW-058-114
Iron	GRAS	1110	NA	NA	80%	NA	AMW-058-114
Magnesium	GRAS	19800	NA	NA	100%	NA	BMW-059-114
Manganese	180	931	208	5.17	100%	60%	AMW-059-114(E)
Potassium	GRAS	14800	NA	NA	100%	NA	AMW-058-114
Selenium	50	12	*	0.24	20%	0%	BMW-058-114
Sodium	GRAS	39000	NA	NA	100%	NA	AMW-058-114
Vanadium	260	6.2	*	0.02	80%	0%	BMW-058-114(B)
Zinc	2000	30.4	*	0.02	80%	0%	BMW-059-114
VOLATILES (UG/L)							
Methylene chloride	5	4	*	0.80	60%	0%	BMW-058-114(JB)
Trichloroethene (TCE)	5	57	57	11.40	20%	20%	BMW-058-114

Note : Monitoring wells sampled include MW-58A & B, and MW-59A, B & D.
Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-41
Data Summary for Shallow and Deep Soil Sampling at the Waste Disposal Area North of the Ammonium Nitrate Plant
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
Butylbenzylphthalate	13000000	229	*	0.00	8%	0%	ANA-002-019(J)
Di-n-butylphthalate	6500000	2330	*	0.00	8%	0%	ANA-002-019
Diethylphthalate	52000000	527	*	0.00	8%	0%	ANA-001-000
Pyrene	2000000	105	*	0.00	8%	0%	ANA-001-000(J)
EXPLOSIVES (MG/KG)							
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.1	*	0.00	8%	0%	ANA-001-004(J)
METALS (MG/KG)							
Aluminum	33852	18000	*	0.53	100%	0%	ANA-002-000
Arsenic	13.5	10.1	*	0.75	83%	0%	ANA-002-004
Barium	440	303	*	0.69	100%	0%	ANA-002-002
Beryllium	1.52	0.81	*	0.53	100%	0%	ANA-001-002
Cadmium	0.4	1.2	0.44	3.00	83%	75%	ANA-002-004(J),ANA-002-009(J)
Calcium	GRAS	16500	NA	NA	100%	NA	ANA-002-009
Chromium	37	20.5	*	0.55	100%	0%	ANA-002-009
Cobalt	17.2	12.1	*	0.70	100%	0%	ANA-002-004
Copper	33.9	23.6	*	0.70	100%	0%	ANA-002-004
Iron	GRAS	20100	NA	NA	100%	NA	ANA-002-009
Lead	400	30.2	*	0.08	100%	0%	ANA-002-000
Magnesium	GRAS	9150	NA	NA	100%	NA	ANA-002-009
Manganese	1083	708	*	0.65	100%	0%	ANA-002-004
Nickel	39.3	30.2	*	0.77	100%	0%	ANA-002-004
Potassium	GRAS	4200	NA	NA	100%	NA	ANA-002-000
Selenium	1.33	1.3	*	0.98	25%	0%	ANA-001-009(J)
Vanadium	72.5	43.8	*	0.60	100%	0%	ANA-002-009
Zinc	119.5	87.4	*	0.73	100%	0%	ANA-002-000(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-42
Data Summary for Shallow and Deep Soil Sampling at the Demolition Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
Butylbenzylphthalate	13000000	337	*	0.00	5%	0%	DGA-001-009(J)
Di-n-butylphthalate	6500000	2706	*	0.00	30%	0%	DGA-001-000
Pyrene	2000000	153	*	0.00	5%	0%	DGA-002-000(J)
EXPLOSIVES (MG/KG)							
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.066	*	0.00	10%	0%	DGA-002-019(J)
METALS (MG/KG)							
Aluminum	33852	18100	*	0.53	100%	0%	DGA-001-000
Arsenic	13.5	9.4	*	0.70	80%	0%	DGA-001-004,DGA-002-004
Barium	440	434	*	0.99	100%	0%	DGA-003-001(J)
Beryllium	1.52	0.76	*	0.50	100%	0%	DGA-001-001
Cadmium	0.4	0.82	0.47	2.05	80%	45%	DGA-001-004(J)
Calcium	GRAS	4230	NA	NA	100%	NA	DGA-003-004
Chromium	37	18.5	*	0.50	100%	0%	DGA-001-000
Cobalt	17.2	11.4	*	0.66	100%	0%	DGA-002-009
Copper	33.9	21.3	*	0.63	100%	0%	DGA-001-004
Iron	GRAS	19900	NA	NA	100%	NA	DGA-001-001
Lead	400	15.6	*	0.04	100%	0%	DGA-001-000
Magnesium	GRAS	3970	NA	NA	100%	NA	DGA-004-004
Manganese	1083	889	*	0.82	100%	0%	DGA-002-009
Mercury	23	0.13	*	0.01	5%	0%	DGA-002-009(J)
Nickel	39.3	30.1	*	0.77	100%	0%	DGA-002-009
Potassium	GRAS	4460	NA	NA	100%	NA	DGA-003-000
Selenium	1.33	1.8	1.5	1.35	35%	10%	DGA-001-001(J)
Sodium	GRAS	750	NA	NA	5%	NA	DGA-004-009
Vanadium	72.5	40.1	*	0.55	100%	0%	DGA-001-000
Zinc	119.5	68.4	*	0.57	100%	0%	DGA-001-000
VOLATILES (UG/KG)							
Toluene	1900000	0.6	*	0.00	13%	0%	DGA-004-004(J)
Trichloroethene (TCE)	7100	2	*	0.00	6%	0%	DGA-004-009(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-43

Data Summary for November/December 1994 Groundwater Sampling of Existing Monitoring Wells at the Demolition Ground Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
DISSOLVED METALS (UG/L)							
Aluminum	37000	130	*	0.00	100%	0%	BMW-010-114(B)
Arsenic	50	5.4	*	0.11	100%	0%	AMW-010-114(B)
Barium	2000	182	*	0.09	100%	0%	BMW-010-114(B)
Calcium	GRAS	48800	NA	NA	100%	NA	AMW-010-114
Magnesium	GRAS	9080	NA	NA	100%	NA	AMW-010-114
Manganese	180	10.3	*	0.06	50%	0%	BMW-010-114(B)
Nickel	100	1.9	*	0.02	100%	0%	BMW-010-114(B)
Potassium	GRAS	11000	NA	NA	100%	NA	BMW-010-114
Selenium	50	14.1	*	0.28	100%	0%	AMW-010-114
Sodium	GRAS	17300	NA	NA	100%	NA	AMW-010-114(E)
Vanadium	260	2.3	*	0.01	100%	0%	AMW-010-114(B),BMW-010-114(B)
Zinc	2000	0.26	*	0.00	50%	0%	BMW-010-114(B)
EXPLOSIVES (UG/L)							
2,4,6-Trinitrotoluene (2,4,6-TNT)	2	0.32	*	0.16	50%	0%	BMW-010-114
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NI	0.43	NA	NA	100%	NA	BMW-010-114
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2	0.24	*	0.12	100%	0%	AMW-010-114
TOTAL METALS (UG/L)							
Aluminum	37000	158	*	0.00	100%	0%	BMW-010-114(B)
Arsenic	50	3.8	*	0.08	100%	0%	AMW-010-114(B)
Barium	2000	171	*	0.09	100%	0%	BMW-010-114(B)
Calcium	GRAS	45100	NA	NA	100%	NA	AMW-010-114
Copper	1300	3.2	*	0.00	50%	0%	BMW-010-114(B)
Iron	GRAS	187	NA	NA	100%	NA	AMW-010-114(*)
Magnesium	GRAS	8980	NA	NA	100%	NA	AMW-010-114
Manganese	180	10.9	*	0.06	100%	0%	BMW-010-114(BE)
Potassium	GRAS	9650	NA	NA	100%	NA	BMW-010-114
Sodium	GRAS	16900	NA	NA	100%	NA	AMW-010-114(E)
Vanadium	260	4	*	0.02	50%	0%	BMW-010-114(B)
Zinc	2000	28.7	*	0.01	100%	0%	BMW-010-114
VOLATILES (UG/L)							
Methylene chloride	5	0.5	*	0.10	50%	0%	AMW-010-114(JB)

Note : Monitoring wells sampled include MW-10A & B.
Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-44
Data Summary for Shallow Soil Sampling at Detonation Craters West of the Demolition Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
Butylbenzylphthalate	13000000	919	*	0.00	9%	0%	DCA-004-001
Di-n-butylphthalate	6500000	2776	*	0.00	27%	0%	DCA-004-001
Pyrene	2000000	67	*	0.00	9%	0%	DCA-003-002(J)
EXPLOSIVES (MG/KG)							
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.074	*	0.00	9%	0%	DCA-004-000(J)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.071	*	0.00	45%	0%	DCA-003-000(J)
METALS (MG/KG)							
Aluminum	33852	12600	*	0.37	100%	0%	DCA-002-000
Arsenic	13.5	5.1	*	0.38	100%	0%	DCA-002-000(J)
Barium	440	184	*	0.42	100%	0%	DCA-002-000
Beryllium	1.52	0.59	*	0.39	100%	0%	DCA-002-000
Cadmium	0.4	2.2	2.2	5.50	55%	9%	DCA-003-002
Calcium	GRAS	3840	NA	NA	100%	NA	DCA-001-000
Chromium	37	16.2	*	0.44	100%	0%	DCA-003-002
Cobalt	17.2	7.2	*	0.42	100%	0%	DCA-001-001,DCA-002-001
Copper	33.9	13.3	*	0.39	100%	0%	DCA-002-000
Iron	GRAS	14800	NA	NA	100%	NA	DCA-002-000
Lead	400	177	*	0.44	100%	0%	DCA-003-002(J)
Magnesium	GRAS	2720	NA	NA	100%	NA	DCA-002-000
Manganese	1083	1320	1320	1.22	100%	9%	DCA-001-001
Nickel	39.3	13.7	*	0.35	100%	0%	DCA-002-000
Potassium	GRAS	2850	NA	NA	100%	NA	DCA-002-000
Selenium	1.33	2.1	1.5	1.58	82%	45%	DCA-001-001(J),DCA-002-000(J)
Sodium	GRAS	258	NA	NA	9%	NA	DCA-005-001(J)
Vanadium	72.5	25	*	0.34	100%	0%	DCA-002-000
Zinc	119.5	55.3	*	0.46	100%	0%	DCA-002-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-45
Data Summary for Shallow Soil Sampling at Bermed Area Southwest of Load Line 1
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
Di-n-butylphthalate	6500000	2331	*	0.00	11%	0%	BRA-001-000(J)
Diethylphthalate	52000000	22	*	0.00	33%	0%	BRA-001-002(J)
Pyrene	2000000	121	*	0.00	11%	0%	BRA-003-002(J)
EXPLOSIVES (MG/KG)							
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.027	*	0.00	33%	0%	BRA-003-000(J)
METALS (MG/KG)							
Aluminum	33852	23100	*	0.68	100%	0%	BRA-003-002
Arsenic	13.5	7.2	*	0.53	100%	0%	BRA-002-002(J)
Barium	440	278	*	0.63	100%	0%	BRA-002-002
Beryllium	1.52	0.88	*	0.58	100%	0%	BRA-003-002
Cadmium	0.4	0.56	0.48	1.40	100%	33%	BRA-002-002(J)
Calcium	GRAS	178000	NA	NA	100%	NA	BRA-003-001
Chromium	37	24.1	*	0.65	100%	0%	BRA-003-002
Cobalt	17.2	11.5	*	0.67	100%	0%	BRA-002-002
Copper	33.9	16.6	*	0.49	100%	0%	BRA-002-000
Iron	GRAS	21300	NA	NA	100%	NA	BRA-002-002
Lead	400	15.8	*	0.04	100%	0%	BRA-002-002(J)
Magnesium	GRAS	4010	NA	NA	100%	NA	BRA-002-002
Manganese	1083	674	*	0.62	100%	0%	BRA-002-002(J)
Nickel	39.3	21.2	*	0.54	100%	0%	BRA-002-002
Potassium	GRAS	3970	NA	NA	100%	NA	BRA-003-002
Selenium	1.33	2	1.4	1.50	78%	78%	BRA-003-002(J)
Vanadium	72.5	49.8	*	0.69	100%	0%	BRA-003-002
Zinc	119.5	82.4	*	0.69	100%	0%	BRA-003-002

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-46
Analytical Data for Groundwater Sampling of Newly Installed Monitoring Well at Ammonium Nitrate Plant
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-63B					
		BMW-063-035			BMW-063-065		
		R	Q	QL	R	Q	QL
DISSOLVED METALS (UG/L)							
Aluminum	37000		NA		150	B	
Arsenic	50		NA		4.3	B	
Barium	2000		NA		122	B	
Beryllium	4		NA		0.33	B	
Calcium	GRAS		NA		101000		
Chromium	100		NA		2.4	B	
Magnesium	GRAS		NA		23800		
Manganese	180		NA		7.7	B	
Potassium	GRAS		NA		7640	E	
Selenium	50		NA		8.5		
Sodium	GRAS		NA		19700	E	
Vanadium	260		NA		12.5	B	
Zinc	2000		NA		1.9	B	
TOTAL METALS (UG/L)							
Aluminum	37000		NA		534		
Arsenic	50		NA		4.5	B	
Barium	2000		NA		115	B	
Calcium	GRAS		NA		10300		
Chromium	100		NA		3.9	B	
Copper	1300		NA		1.7	B	
Iron	GRAS		NA		290		
Magnesium	GRAS		NA		23800		
Manganese	180		NA		15.6		
Potassium	GRAS		NA		6710	E	
Selenium	50		NA		4.5	B	
Sodium	GRAS		NA		19100	E	
Vanadium	260		NA		13.9	B	
Zinc	2000		NA		6.3	B	
WATER QUALITY (mg/L unless indicated)							
Nitrite	1	***5.8***				U	(0.02)
Nitrate	10	***40***			***41***		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table 5-47
Data Summary for Surface Water Sampling at Johnson and Clear Creeks
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (UG/L)							
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2	1.8	*	0.90	100%	0%	JCW-003-035
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	400	0.54	*	0.00	50%	0%	JCW-003-035
METALS (UG/L)							
Aluminum	37000	21000	*	0.57	100%	0%	JCW-001-035
Arsenic	50	11.2	*	0.22	50%	0%	JCW-001-035
Barium	2000	280	*	0.14	100%	0%	JCW-001-035
Calcium	GRAS	86600	NA	NA	100%	NA	JCW-004-035
Chromium	100	13.7	*	0.14	25%	0%	JCW-001-035
Cobalt	2200	10.1	*	0.00	25%	0%	JCW-001-035
Copper	1300	32.5	*	0.03	50%	0%	JCW-001-035
Iron	GRAS	18000	NA	NA	100%	NA	JCW-001-035
Lead	15	10.9	*	0.73	25%	0%	JCW-001-035
Magnesium	GRAS	17900	NA	NA	100%	NA	JCW-004-035
Manganese	180	580	554	3.22	100%	50%	JCW-001-035
Mercury	2	0.28	*	0.14	50%	0%	JCW-001-035(J)
Nickel	100	129	129	1.29	50%	25%	JCW-004-035(J)
Potassium	GRAS	30400	NA	NA	100%	NA	JCW-001-035
Sodium	GRAS	44200	NA	NA	100%	NA	JCW-004-035
Vanadium	260	41	*	0.16	50%	0%	JCW-001-035
Zinc	2000	442	*	0.22	50%	0%	JCW-001-035
VOLATILES (UG/L)							
Trichloroethene (TCE)	5	4.51	*	0.90	50%	0%	JCW-003-035

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-48
Data Summary for Sediment Sampling at Johnson and Clear Creeks
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
METALS	(MG/KG)						
Aluminum	33852	15900	*	0.47	100%	0%	JCS-001-035
Arsenic	13.5	8.3	*	0.61	50%	0%	JCS-001-035
Barium	440	245	*	0.56	100%	0%	JCS-001-035
Beryllium	1.52	0.82	*	0.54	50%	0%	JCS-001-035
Calcium	GRAS	3690	NA	NA	100%	NA	JCS-001-035
Chromium	37	16.8	*	0.45	100%	0%	JCS-001-035
Cobalt	17.2	12.6	*	0.73	100%	0%	JCS-001-035
Copper	33.9	17.8	*	0.53	100%	0%	JCS-001-035
Iron	GRAS	17400	NA	NA	100%	NA	JCS-001-035
Lead	400	18.3	*	0.05	100%	0%	JCS-001-035
Magnesium	GRAS	3310	NA	NA	100%	NA	JCS-001-035
Manganese	1083	706	*	0.65	100%	0%	JCS-001-035
Nickel	39.3	19.6	*	0.50	50%	0%	JCS-001-035(J)
Potassium	GRAS	3900	NA	NA	100%	NA	JCS-001-035
Silver	380	2.3	*	0.01	50%	0%	JCS-001-035
Sodium	GRAS	275	NA	NA	100%	NA	JCS-001-035
Vanadium	72.5	38.8	*	0.54	100%	0%	JCS-001-035
Zinc	119.5	90.2	*	0.75	100%	0%	JCS-001-035
VOLATILES	(UG/KG)						
Acetone	2000000	48	*	0.00	50%	0%	JCS-001-035(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-49
Data Summary for Surface Water Sampling at Silver Creek
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
EXPLOSIVES (UG/L)							
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NI	0.39	NA	NA	50%	NA	SCW-002-045(J)
METALS (UG/L)							
Aluminum	37000	596	*	0.02	100%	0%	SCW-001-045
Barium	2000	174	*	0.09	100%	0%	SCW-001-045
Calcium	GRAS	79700	NA	NA	100%	NA	SCW-001-045(J)
Iron	GRAS	803	NA	NA	100%	NA	SCW-001-045
Magnesium	GRAS	19700	NA	NA	100%	NA	SCW-002-045
Manganese	180	281	249	1.56	100%	100%	SCW-001-045
Potassium	GRAS	10900	NA	NA	100%	NA	SCW-002-045
Selenium	50	5	*	0.10	50%	0%	SCW-001-045
Sodium	GRAS	40000	NA	NA	100%	NA	SCW-002-045
Vanadium	260	6.8	*	0.03	50%	0%	SCW-002-045
VOLATILES (UG/L)							
Toluene	1000	0.11	*	0.00	50%	0%	SCW-002-045(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-50
Data Summary for Sediment Sampling at Silver Creek
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
4-Methylphenol	330000	2444	*	0.01	50%	0%	SCS-001-045
Di-n-butylphthalate	6500000	575	*	0.00	50%	0%	SCS-001-045
Pyrene	2000000	107	*	0.00	50%	0%	SCS-002-045(J)
METALS (MG/KG)							
Aluminum	33852	10000	*	0.30	100%	0%	SCS-002-045
Arsenic	13.5	6.9	*	0.51	100%	0%	SCS-002-045
Barium	440	237	*	0.54	100%	0%	SCS-002-045
Calcium	GRAS	6400	NA	NA	100%	NA	SCS-002-045
Chromium	37	12.8	*	0.35	100%	0%	SCS-002-045
Cobalt	17.2	6.5	*	0.38	100%	0%	SCS-002-045
Copper	33.9	14.1	*	0.42	100%	0%	SCS-002-045
Iron	GRAS	14500	NA	NA	100%	NA	SCS-002-045
Lead	400	11.3	*	0.03	100%	0%	SCS-002-045
Magnesium	GRAS	3020	NA	NA	100%	NA	SCS-002-045
Manganese	1083	896	*	0.83	100%	0%	SCS-002-045
Nickel	39.3	16.1	*	0.41	100%	0%	SCS-002-045
Potassium	GRAS	2220	NA	NA	100%	NA	SCS-002-045
Selenium	1.33	2.2	2	1.65	100%	100%	SCS-001-045
Silver	380	2.3	*	0.01	100%	0%	SCS-002-045
Sodium	GRAS	286	NA	NA	100%	NA	SCS-002-045
Vanadium	72.5	23.2	*	0.32	100%	0%	SCS-002-045
Zinc	119.5	58.5	*	0.49	100%	0%	SCS-002-045
VOLATILES (UG/KG)							
Acetone	2000000	43	*	0.00	50%	0%	SCS-001-045(J)
Toluene	1900000	246	*	0.00	50%	0%	SCS-001-045(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-51
Data Summary for Shallow and Deep Soil Sampling Around UST Locations
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
Benzo(b)fluoranthene	610	32	*	0.05	4%	0%	UAA-001-000(J)
Butylbenzylphthalate	13000000	1164	*	0.00	12%	0%	UMA-001-038
Di-n-butylphthalate	6500000	4222	*	0.00	32%	0%	UBA-001-004
Fluoranthene	2600000	26	*	0.00	4%	0%	UAA-001-000(J)
Pyrene	2000000	94	*	0.00	8%	0%	UAA-001-000(J)
bis(2-Ethylhexyl)phthalate	32000	292	*	0.01	8%	0%	UMA-002-029(J)
TPH (MG/KG)							
TRPH	10	21	21	2.10	8%	8%	UAA-001-000,UMA-002-000

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-52
Data Summary for Hydropunch Groundwater Sampling Around UST Locations
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
BTEX (UG/L)							
Toluene	1000	2.8	*	0.00	25%	0%	UMW-001-045
Total Xylenes	10000	4.3	*	0.00	25%	0%	UAW-001-045(J)
SEMIVOLATILES (UG/L)							
Butylbenzylphthalate	7300	0.4	*	0.00	50%	0%	UMW-002-045(J)
Di-n-butylphthalate	3700	0.5	*	0.00	75%	0%	UAW-001-045(J),UMW-001-045(J),UMW-002-045(J)
Phenol	4000	1	*	0.00	25%	0%	UBW-001-045(J)
bis(2-Ethylhexyl)phthalate	6	0.9	*	0.15	75%	0%	UBW-001-045(J)

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

Table 5-53
Data Summary for Soil Sampling at the Geophysical Anomaly
Former Nebraska Ordnance Plant, Mead, Nebraska

Chemical	Screening Level	Max Conc	Min >SL	Max Conc/SL	% Samples w/ reportable Conc	% Samples w/ Conc > SL	Max Conc Sample ID & Qualifier
SEMIVOLATILES (UG/KG)							
2-Methylphenol	3300000	69	*	0.00	8%	0%	GAA-001-019(J)
4-Methylphenol	330000	101	*	0.00	8%	0%	GAA-001-019(J)
Benzo(a)anthracene	610	69	*	0.11	8%	0%	GAA-002-002(J)
Benzo(b)fluoranthene	610	140	*	0.23	17%	0%	GAA-002-002(J)
Benzo(k)fluoranthene	6100	148	*	0.02	17%	0%	GAA-002-002(J)
Chrysene	24000	76	*	0.00	8%	0%	GAA-002-002(J)
Di-n-butylphthalate	6500000	2666	*	0.00	17%	0%	GAA-001-009
Fluoranthene	2600000	56	*	0.00	8%	0%	GAA-002-002(J)
Phenol	39000000	86	*	0.00	8%	0%	GAA-001-019(J)
Pyrene	2000000	134	*	0.00	17%	0%	GAA-001-002(J)
bis(2-Ethylhexyl)phthalate	32000	1691	*	0.05	17%	0%	GAA-002-002
EXPLOSIVES (MG/KG)							
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.062	*	0.00	75%	0%	GAA-001-009(J)
METALS (MG/KG)							
Aluminum	33852	19100	*	0.56	100%	0%	GAA-001-000
Arsenic	13.5	9	*	0.67	82%	0%	GAA-001-004
Barium	440	343	*	0.78	100%	0%	GAA-001-002
Beryllium	1.52	0.79	*	0.52	100%	0%	GAA-001-000,GAA-002-001
Cadmium	0.4	0.61	0.43	1.53	82%	73%	GAA-001-004(J)
Calcium	GRAS	10100	NA	NA	100%	NA	GAA-001-009
Chromium	37	20.9	*	0.56	100%	0%	GAA-001-000
Cobalt	17.2	10.3	*	0.60	100%	0%	GAA-001-002,GAA-001-004
Copper	33.9	20.7	*	0.61	100%	0%	GAA-001-004
Iron	GRAS	20400	NA	NA	100%	NA	GAA-002-001
Lead	400	15.8	*	0.04	100%	0%	GAA-002-001,GAA-002-004
Magnesium	GRAS	6560	NA	NA	100%	NA	GAA-001-009
Manganese	1083	724	*	0.67	100%	0%	GAA-001-004(J)
Nickel	39.3	25.8	*	0.66	100%	0%	GAA-001-004
Potassium	GRAS	3190	NA	NA	100%	NA	GAA-001-000(J)
Selenium	1.33	2.1	2	1.58	45%	27%	GAA-001-002(J)
Sodium	GRAS	705	NA	NA	36%	NA	GAA-001-004
Vanadium	72.5	45.5	*	0.63	100%	0%	GAA-001-000
Zinc	119.5	72.1	*	0.60	100%	0%	GAA-002-004

Note : Chemicals in bold, italics, and underlined are detected above the respective screening levels.
GRAS = Generally recognized as safe
NI = screening level not identified
* = all detection were below the screening level

TABLE 6-1

OU3 RI PHASE I SUMMARY OF CONCLUSIONS
FORMER NEBRASKA ORDNANCE PLANT, MEAD, NEBRASKA

		OU3 INVESTIGATION AREA																					
		Load Line Buildings		Waste Disposal/Landfill Areas						Burning/ Proving/Demolition Grounds				Storage/ Process Areas			Surface Water Bodies			Other Investigation Areas			
MATRIX	ANALYTES	Bomb Production	Paint Operations	North of Former Nike Maintenance Area	Southeast of Bomb Booster Area	Atlas Missile Area	North of Ammonium Nitrate Plant	Landfill Area West of WWTP	Potential Landfill North of Proving Grounds *	North Burning Ground	South Burning Ground	Proving Ground	Demolition Ground	Igloo Storage Area	Tetryl Pelleting Building	Ammonium Nitrate Plant	Johnson Creek	Clear Creek	Silver Creek	Detonation Craters W. of Demolition Ground	Bermed Area near Load Line 1	Underground Storage Tanks	Geophysical Anomoly at Load Line 3
Soil	Explosives	●		+	+	+	+		+				+	+	+					+	+		+
	Metals	●	●	●	●	●	●		●	●	●	●	●		●					●	●	○	●
	VOC			+	+	○	○		○	+	+	+	+							○	○		○
	SVOC			+	+	+	+		+	+	●	+	+							+	+	+	+
	PCB				+																		
	BTEX																					○	
	TPH																					●	
Sediment	Explosives																○	○	○				
	Metals																+	+	●				
	VOC																+	+	+				
	SVOC																○	○	+				
Groundwater	Explosives			+	○	○						○	+										
	VOC			+	+	●						○	+										
	SVOC			○	○	+						○	○									+	
	BTEX																					+	
	TPH																					+	
	Total Metals		●	●	●	●						○	+			+							
	Dissolved Metals		●	+	●	●						○	+			+							
	Thiodiglycol							○															
	Nitrates + Nitrites															●							
	Total Nitrates															●							
Surface Water	Explosives																+	+	+				
	Metals																●	●	●				
	VOC																+	+	+				
	SVOC																○	○	○				

Notes:

○ No results above detection

● Result(s) above detection and above screening level

+ Result(s) above detection but below screening level

VOLUME II
DRAFT FINAL REPORT

REMEDIAL INVESTIGATION PHASE I PRELIMINARY DATA PACKAGE OPERABLE UNIT NO. 3 FORMER NEBRASKA ORDNANCE PLANT MEAD, NEBRASKA CONTRACT NO. DACA41-92-C-0023

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DRAWING LIST

DRAWING LIST
LEGEND/NOTES SHEET FOR DRAWING
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DRAWING 5-50 LOAD LINE 4 AMMONIUM NITRATE BUILDING SAMPLING LOCATIONS
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DRAWING 5-52 LOAD LINE 4 WEST COOLING BUILDING SAMPLING LOCATIONS
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DRAWING 5-63 LOAD LINE 2 AMMONIUM NITRATE SERVICE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-64 LOAD LINE 2 WEST COOLING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
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DRAWING 5-70 LOAD LINE 3 TNT POURING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-71 LOAD LINE 3 SOUTH TNT SERVICE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-72 LOAD LINE 4 AMATOL MELT BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-73 LOAD LINE 4 NORTH TNT SERVICE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-74 LOAD LINE 4 EAST COOLING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-75 LOAD LINE 4 TNT POURING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-76 PAINT OPERATIONS BUILDINGS AT LOAD LINE 1
DRAWING 5-77 LOAD LINE 1 RECEIVING AND PAINTING BUILDING/NORTH PAINT STORAGE AND MIXING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-78 LOAD LINE 1 SOUTH PAINT STORAGE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-79 PAINT OPERATIONS BUILDINGS AT LOAD LINE 2
DRAWING 5-80 LOAD LINE 2 RECEIVING AND PAINTING BUILDING/NORTH PAINT STORAGE AND MIXING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-81 LOAD LINE 2 SOUTH PAINT STORAGE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-82 PAINT OPERATIONS BUILDINGS AT LOAD LINE 3
DRAWING 5-83 LOAD LINE 3 RECEIVING AND PAINTING BUILDING/NORTH PAINT STORAGE AND MIXING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-84 LOAD LINE 3 SOUTH PAINT STORAGE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-85 PAINT OPERATIONS BUILDINGS AT LOAD LINE 4
DRAWING 5-86 LOAD LINE 4 RECEIVING AND PAINTING BUILDING/NORTH PAINT STORAGE AND MIXING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-87 LOAD LINE 4 SOUTH PAINT STORAGE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-88 GROUNDWATER MONITORING WELLS SAMPLED TO SUPPORT OU3 PHASE I RI
DRAWING 5-89 IGLOO STORAGE AREA NORTH OF LOAD LINE 2 SAMPLING LOCATIONS AND RESULTS ABOVE FIELD LAB INSTRUMENT DETECTION LIMITS
DRAWING 5-90 IGLOO STORAGE AREA NORTH OF LOAD LINE 3 SAMPLING LOCATIONS AND RESULTS ABOVE FIELD LAB INSTRUMENT DETECTION LIMITS
DRAWING 5-91 IGLOO STORAGE AREA NORTH OF LOAD LINE 2 ADDITIONAL HE SCREENING LOCATIONS AND RESULTS ABOVE FIELD LAB INSTRUMENT DETECTION LIMITS
DRAWING 5-92 IGLOO STORAGE AREA NORTH OF LOAD LINE 3 ADDITIONAL HE SCREENING LOCATIONS AND RESULTS ABOVE FIELD LAB INSTRUMENT DETECTION LIMITS
DRAWING 5-93 TETRYL PELLETING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-94 NORTH BURNING GROUND SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-95 SOUTH BURNING GROUND SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-96 PROVING GROUNDS SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-97 POTENTIAL LANDFILL AREA SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-98 LANDFILL AREA GROUNDWATER MONITORING WELLS SAMPLED TO SUPPORT OU3 PHASE I RI
DRAWING 5-99 WASTE DISPOSAL AREAS NORTH OF FORMER NIKE MAINTENANCE AREA SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-100 WASTE DISPOSAL AREA SOUTHEAST OF FORMER BOMB BOOSTER AREA SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-101 SOUTHWEST POTENTIAL WASTE DISPOSAL AREA AT FORMER ATLAS MISSILE AREA SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-102 NORTHEAST POTENTIAL WASTE DISPOSAL AREA AT FORMER ATLAS MISSILE AREA SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-103 WASTE DISPOSAL AREA NORTH OF AMMONIUM NITRATE PLANT SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-104 DEMOLITION GROUND SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-105 DETONATION CRATERS SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-106 BERMED AREA SOUTHWEST OF LOAD LINE 1 SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-107 JOHNSON, CLEAR, AND SILVER CREEKS SAMPLING STATIONS AND SURFACE WATER SAMPLING RESULTS
DRAWING 5-108 JOHNSON, CLEAR, AND SILVER CREEKS SAMPLING STATIONS AND SEDIMENT SAMPLING RESULTS
DRAWING 5-109 PREVIOUS INVESTIGATION SURFACE WATER AND SEDIMENT SAMPLES COLLECTED IN VICINITY OF NRD RESERVOIR
DRAWING 5-110 ADMINISTRATION AREA UST SAMPLING LOCATION AND RESULTS ABOVE SOIL AND GROUNDWATER SCREENING LEVELS
DRAWING 5-111 BOMB BOOSTER AREA UST SAMPLING LOCATION AND RESULTS ABOVE SOIL AND GROUNDWATER SCREENING LEVELS
DRAWING 5-112 ATLAS MISSILE AREA UST SAMPLING LOCATION (GATE HOUSE) AND RESULTS ABOVE SOIL AND GROUNDWATER SCREENING LEVELS
DRAWING 5-113 ATLAS MISSILE AREA UST SAMPLING LOCATION (LAUNCH OPERATIONS BUILDING) AND RESULTS ABOVE SOIL AND GROUNDWATER SCREENING LEVELS
DRAWING 5-114 GEOPHYSICAL ANOMALY AT LOAD LINE 3 SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
DRAWING 5-115 SITE WIDE HAZARDOUS WASTE SURVEY LOCATIONS
DRAWING 5-116 LOAD LINE 1 HAZARDOUS WASTE SURVEY LOCATIONS
DRAWING 5-117 LOAD LINE 2 HAZARDOUS WASTE SURVEY LOCATIONS
DRAWING 5-118 LOAD LINE 3 HAZARDOUS WASTE SURVEY LOCATIONS
DRAWING 5-119 LOAD LINE 4 HAZARDOUS WASTE SURVEY LOCATIONS
DRAWING 5-120 BOMB BOOSTER AREA HAZARDOUS WASTE SURVEY LOCATIONS
DRAWING 5-121 ADMINISTRATION AREA HAZARDOUS WASTE SURVEY LOCATIONS
DRAWING 5-122 FORMER ATLAS MISSILE AREA HAZARDOUS WASTE SURVEY LOCATIONS
DRAWING 5-123 AMMONIUM NITRATE PLANT HAZARDOUS WASTE SURVEY LOCATIONS
DRAWING 5-124 SEWAGE TREATMENT PLANT HAZARDOUS WASTE SURVEY LOCATIONS

Revisions

Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: S.J.F.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

DRAWING LIST

Scale: NONE
Date: FEBRUARY, 1996
Dwg. No.:
Sheet number:

MCS FILE: OU3DWGS

LEGEND

- ARMY CONSTRUCTED BUILDINGS
- ARMY BUILDINGS DEMOLISHED (FOUNDATION REMAINING)
- PAVED ROAD
- UNPAVED ROAD
- FENCE
- DOOR OR BAY DOOR
- DOUBLE DOOR
- BUCKET TRAP SUMP
- DITCH WITH ARROW INDICATING FLOW DIRECTION
- CULVERT
- DECIDUOUS
- TREELINE
- SILO/BIN
- TANK
- POWER POLE
- INDEX CONTOUR
- INTERMEDIATE CONTOUR

OU3 PHASE I RI SAMPLE TYPES

● B2A-001	ADJACENT SOIL SAMPLE LOCATION
■ B2B-001	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-005/B2W-006	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✳WALL, ✕ FLOOR) B2W-001	SURFACE WIPE SAMPLE LOCATION
● NG-001	SHALLOW SOIL SAMPLE LOCATION
⊙ UB-001	DEEP SOIL SAMPLE LOCATION
◑ BKG-001	BACKGROUND SOIL SAMPLE LOCATION
⊕ MW-10	GROUNDWATER MONITORING WELL LOCATION
▲ SC-001	SURFACE WATER AND SEDIMENT SAMPLE LOCATION

CHEMICAL ABBREVIATIONS

1,3,5-TNB = 1,3,5-TRINITROBENZENE
2,4-DNT = 2,4-DINITROTOLUENE
2,6-DNT = 2,6-DINITROTOLUENE
2,4,6-TNT = 2,4,6-TRINITROTOLUENE
4-AM-DNT = 4-AMINO-2,6-DINITROTOLUENE
HMX = OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZINE
RDX = HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE
TCE = TRICHLORDETHYLENE
TRPH = TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
Ag = SILVER
Al = ALUMINUM
As = ARSENIC
Ba = BARIUM
Ca = CALCIUM
Cd = CADMIUM
Co = COBALT
Cr = CHROMIUM
Cu = COPPER
Fe = IRON
Hg = MERCURY
K = POTASSIUM
Mg = MAGNESIUM
Mn = MANGANESE
Na = SODIUM
Ni = NICKEL
Pb = LEAD
Sb = ANTIMONY
Se = SELENIUM
V = VANADIUM
Zn = ZINC

OU3 PHASE I RI ANALYTICAL RESULTS

SAMPLE ID	B1A-036	DEPTH 0-0.5'	DEPTH 1-2'
COMPOUND	2,4,6-TNT	24	BSL
	Se	2.3J	BSL

DEPTH INTERVAL
CONCENTRATION

BSL = BELOW SCREENING LEVEL

UNITS OF CONCENTRATION IN SOIL:

EXPLOSIVES, METALS, TPH — mg/kg
SEMIVOLATILES, VOLATILES, PCBs — µg/kg

UNITS OF CONCENTRATION IN WATER:

EXPLOSIVES, METALS, SEMIVOLATILES, VOLATILES, BTEX — µg/L

OU3 PHASE I RI GENERAL NOTES:

1. A SIX-DIGIT SAMPLE IDENTIFICATION NUMBER (i.e. B1A-001) WAS USED. THE FIRST TWO CHARACTERS IDENTIFIED THE INVESTIGATION AREA FROM WHERE THE SAMPLES WERE COLLECTED (i.e. "B1" FOR BOMB PRODUCTION BUILDINGS AT LOAD LINE 1). THE THIRD CHARACTER IDENTIFIED THE SAMPLE DESCRIPTION (i.e. "A" FOR ADJACENT, "B" FOR BENEATH). THE NEXT THREE NUMERICAL CHARACTERS IDENTIFIED THE SAMPLE LOCATION.
2. AT EACH SHALLOW SOIL SAMPLE LOCATION, DISCRETE SAMPLES WERE COLLECTED AT THE FOLLOWING INTERVALS: 0-0.5 FT. AND 1-2 FT. BELOW GROUND SURFACE (BGS) EXCEPT IN PLOWED FIELDS WHERE A SAMPLE WAS ALSO COLLECTED FROM 2-3 FT. BGS AT ALL SAMPLE LOCATIONS.
3. AT EACH DEEP SOIL SAMPLE LOCATION, DISCRETE SAMPLES WERE COLLECTED AT THE FOLLOWING INTERVALS: 0-6 IN., 1-2 FT., 4-5 FT., 9-10 FT., AND 19-20 FT. BGS EXCEPT IN PLOWED FIELDS WHERE A SAMPLE WAS ALSO COLLECTED FROM 2-3 FT. BGS AT ALL SAMPLE LOCATIONS.
4. DRAWINGS ARE IN 1983 NEBRASKA STATE PLANE COORDINATES AND VERTICAL DATUM NGVD 1929.

OU3 PHASE I RI LOAD LINE SPECIFIC NOTES:

1. AT EACH ADJACENT SOIL SAMPLE LOCATION, DISCRETE SAMPLES WERE COLLECTED AT THE FOLLOWING INTERVALS: 0-0.5 FT. AND 1-2 FT. BGS.
2. EACH SOIL SAMPLE COLLECTED BENEATH THE CONCRETE FLOORS OF LOAD LINE BUILDINGS (BENEATH SOIL SAMPLES) CONSISTED OF THE UPPERMOST ONE FOOT OF SOIL IMMEDIATELY BELOW THE FLOORING OR FILL/BASE MATERIAL (IF PRESENT).
3. WALL WIPE SAMPLES WERE COLLECTED APPROXIMATELY 5 FEET ABOVE THE FLOOR. FLOOR WIPE SAMPLES WERE IN TWO LOCATIONS, THE APPROXIMATE CENTER-POINT OF BUILDING AND A DISCRETIONARY LOCATION DETERMINED IN THE FIELD.
4. FOR ALL LOAD LINE BOMB PRODUCTION BUILDINGS: SOIL SAMPLES WERE ANALYZED FOR EXPLOSIVES AND METALS; SURFACE WIPE SAMPLES WERE ANALYZED FOR EXPLOSIVES.
5. FOR ALL LOAD LINE PAINT OPERATIONS BUILDINGS: SOIL SAMPLES WERE ANALYZED FOR METALS.

PREVIOUS INVESTIGATION SAMPLES TYPES

DH3	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)-USACE/CEMRK, 1989
D2A	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991) -USACE/CEMRK, 1991
HB18	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992) DONAHUE, 1992a
NS-4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (FINAL ENGINEERING REPORT 1991) -TCT, 1991
⊗ BB01	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)-RUST, 1995
△	PREVIOUS INVESTIGATION SURFACE WATER AND SEDIMENT SAMPLING LOCATION (CONFIRMATION STUDY 1989)-USACE/CEMRK, 1989
◬	PREVIOUS INVESTIGATION SURFACE WATER AND SEDIMENT SAMPLING LOCATION (OU1 RI 1991)-USACE/CEMRK, 1991
▲	PREVIOUS INVESTIGATION SEDIMENT SAMPLING LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)-DONAHUE, 1992

Revisions

Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

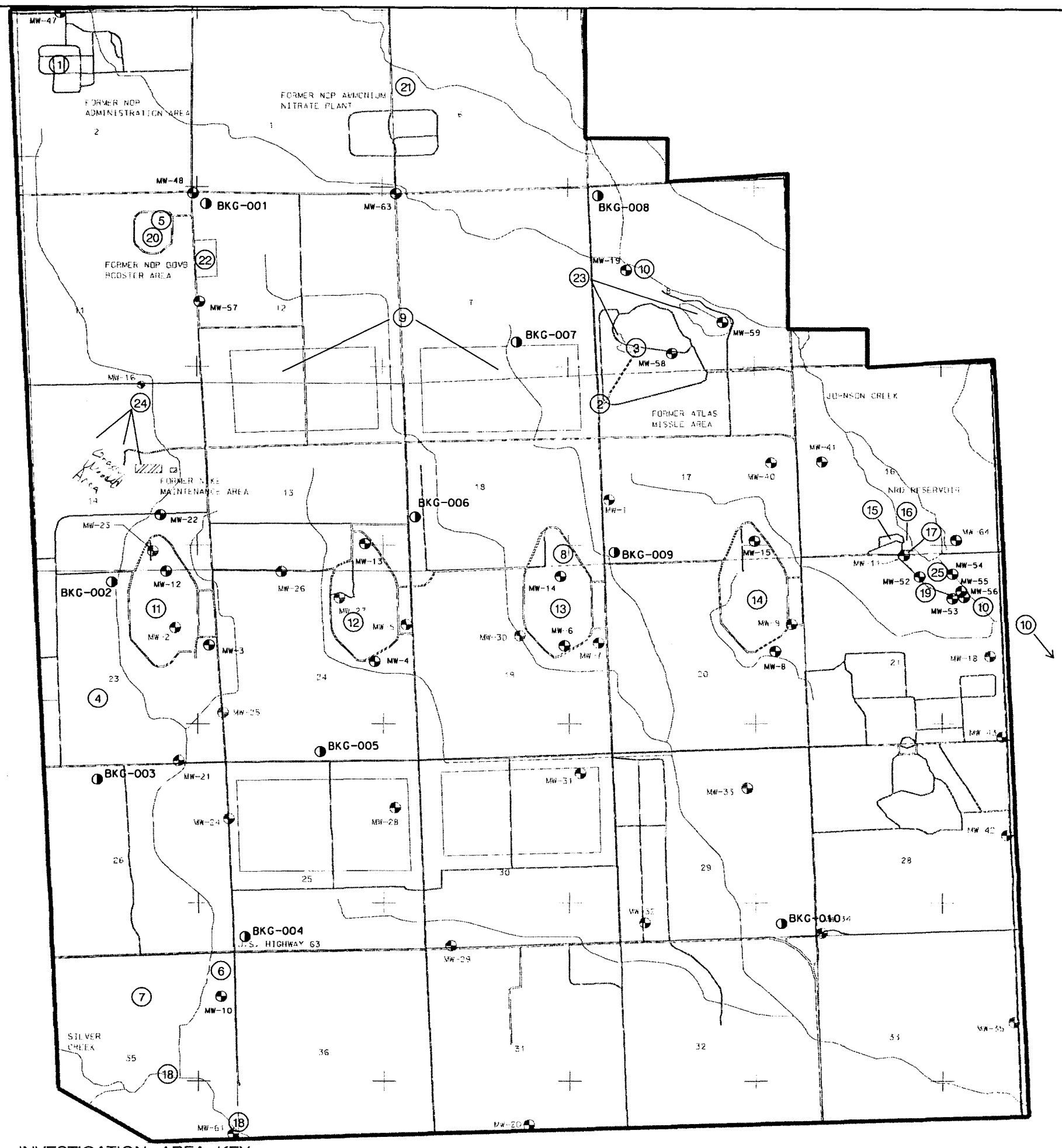
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LEGEND/NOTES SHEET FOR DRAWINGS

Scale: NONE
Date: FEBRUARY, 1996
Dwg. No.:
Sheet number:

MCS FILE: OU3LEG

B07NE003703-03620



INVESTIGATION AREA KEY:

1. Administration Area USTs
2. Atlas Missile Area UST (Gate House)
3. Atlas Missile Area UST (Launch Operations Building)
4. Bermed Area Southwest of Load Line 1
5. Bomb Booster Area USTs
6. Demolition Ground
7. Detonation Craters
8. Geophysical Anomaly at Load Line 3
9. Igloo Storage Areas
10. Johnson Creek
11. Load Line 1
12. Load Line 2
13. Load Line 3
14. Load Line 4
15. North Burning Ground
16. Potential Landfill Area
17. Proving Grounds
18. Silver Creek
19. South Burning Ground
20. Tetryl Pelleting Building
21. Waste Disposal Area North of the Ammonium Nitrate Plant
22. Waste Disposal Area Southeast of Former Bomb Booster Area
23. Waste Disposal Areas at Former Atlas Missile Area
24. Waste Disposal Areas North of Former Nike Maintenance Area
25. Landfill Area

MW-10 Groundwater Monitoring Well sampled to support OU3 Phase I

BKG-001 OU3 Phase I Background Metals Soil Sampling Location

MW-29 Other Existing Groundwater Monitoring Well Cluster

Former NOP Boundary

N

3000 0 3000 6000

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Approved

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OVERLAND PARK, KANSAS

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

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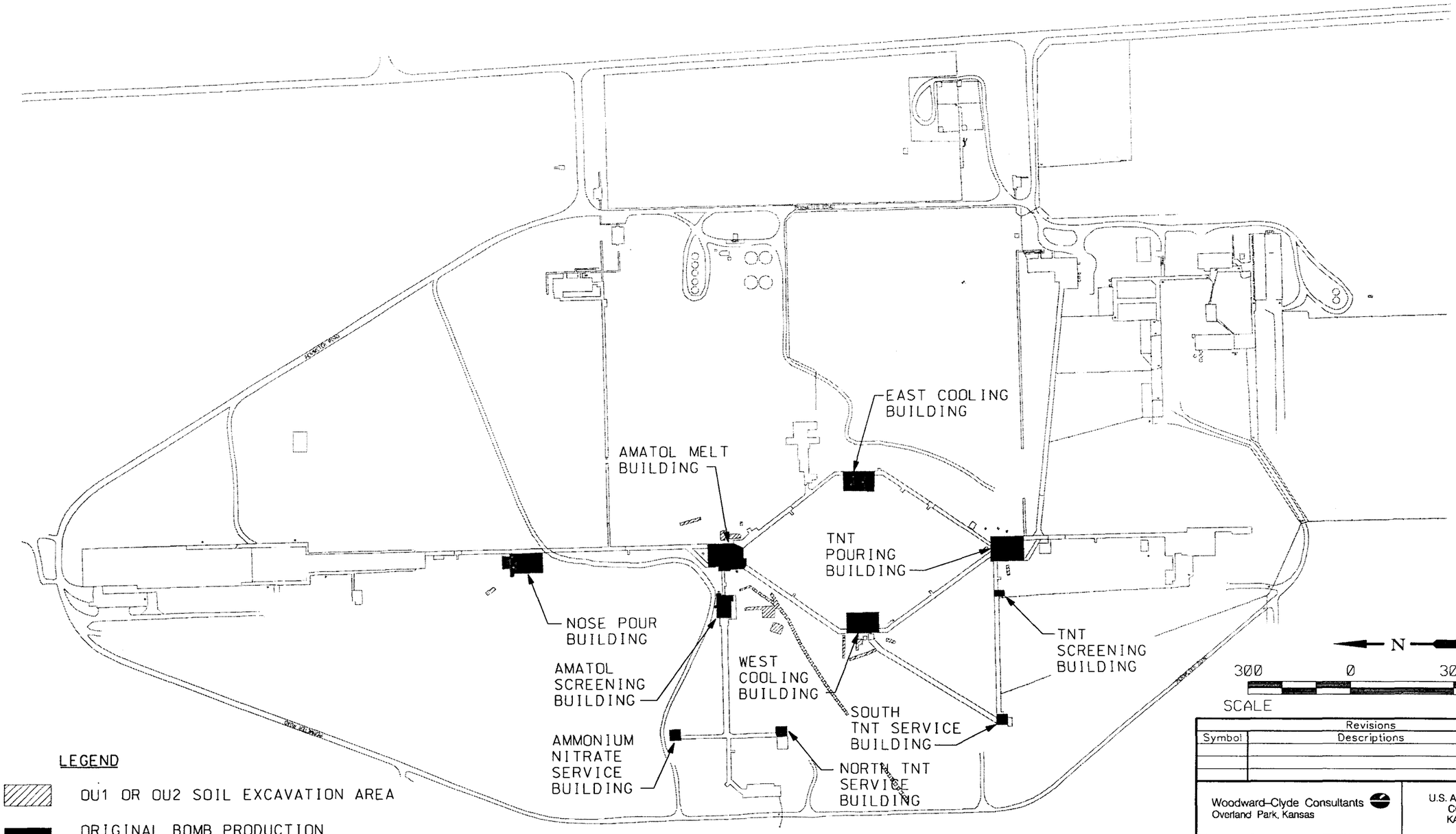
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

OPERABLE UNIT 3
INVESTIGATION AREAS

Scale: 1 IN = 3000 FT
Date: FEBRUARY, 1996
Dwg. No.: 1-1
Sheet number: 1

MICRO FILE: OU3PRS01



LEGEND

OU1 OR OU2 SOIL EXCAVATION AREA

ORIGINAL BOMB PRODUCTION BUILDING LOCATIONS

NOTE:

THE FOLLOWING BOMB PRODUCTION BUILDINGS AT LOAD LINE 1 HAVE BEEN DEMOLISHED: NOSE POUR, AND EAST COOLING.

SOURCES : DRAWING-DONOHUE, 1992B;EXCAVATION AREAS-WCC, 1994E

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

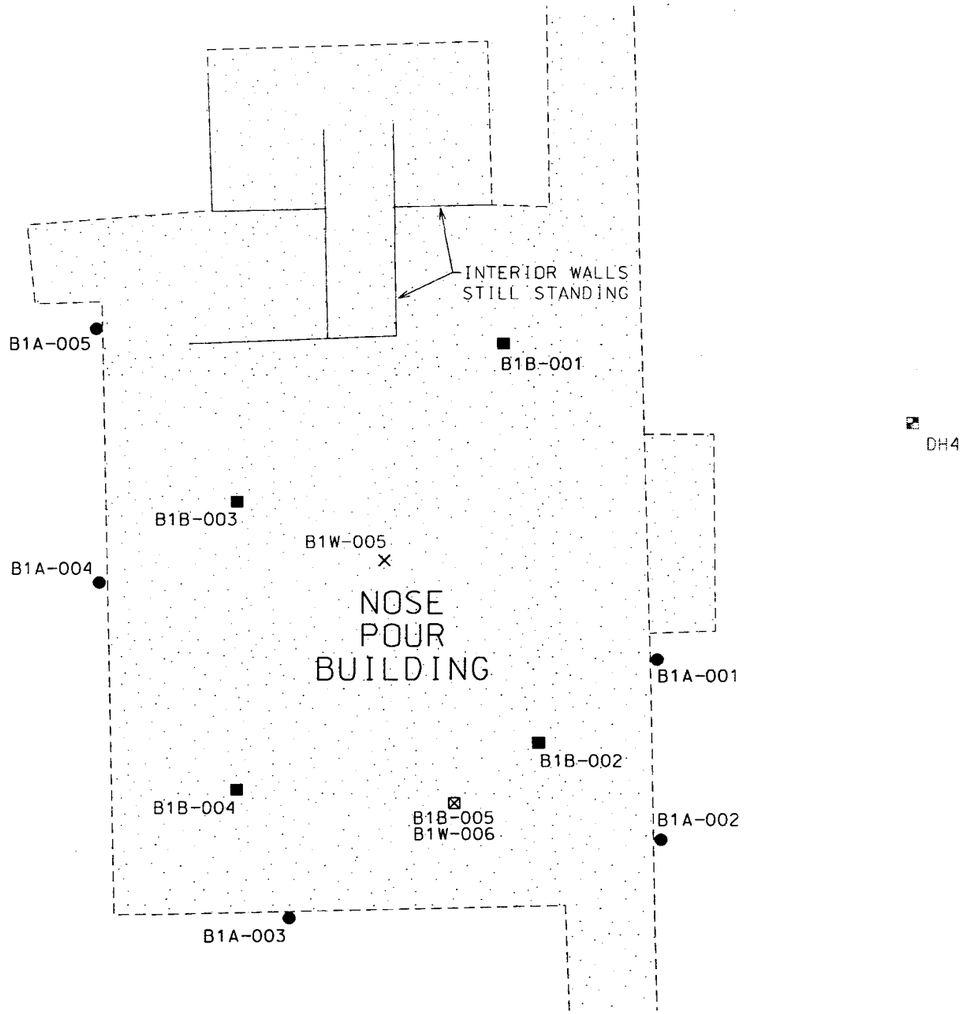
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

BOMB PRODUCTION BUILDINGS AT LOAD LINE 1

Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-1
Sheet number: 1

MCS FILE: OU3L1B

B07NE003703-03622



LEGEND:

● B1A-001	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B1B-001	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B1B-005/B1W-006	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(✳ WALL, × FLOOR) B1W-001	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
◘ DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1 FT FROM THE BUILDING FOUNDATION.
2. SURFACE WIPE SAMPLES B1W-001 TO B1W-004 WERE NOT COLLECTED BECAUSE THE WALLS WERE NO LONGER PRESENT.

N

20 0 20 40

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
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Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

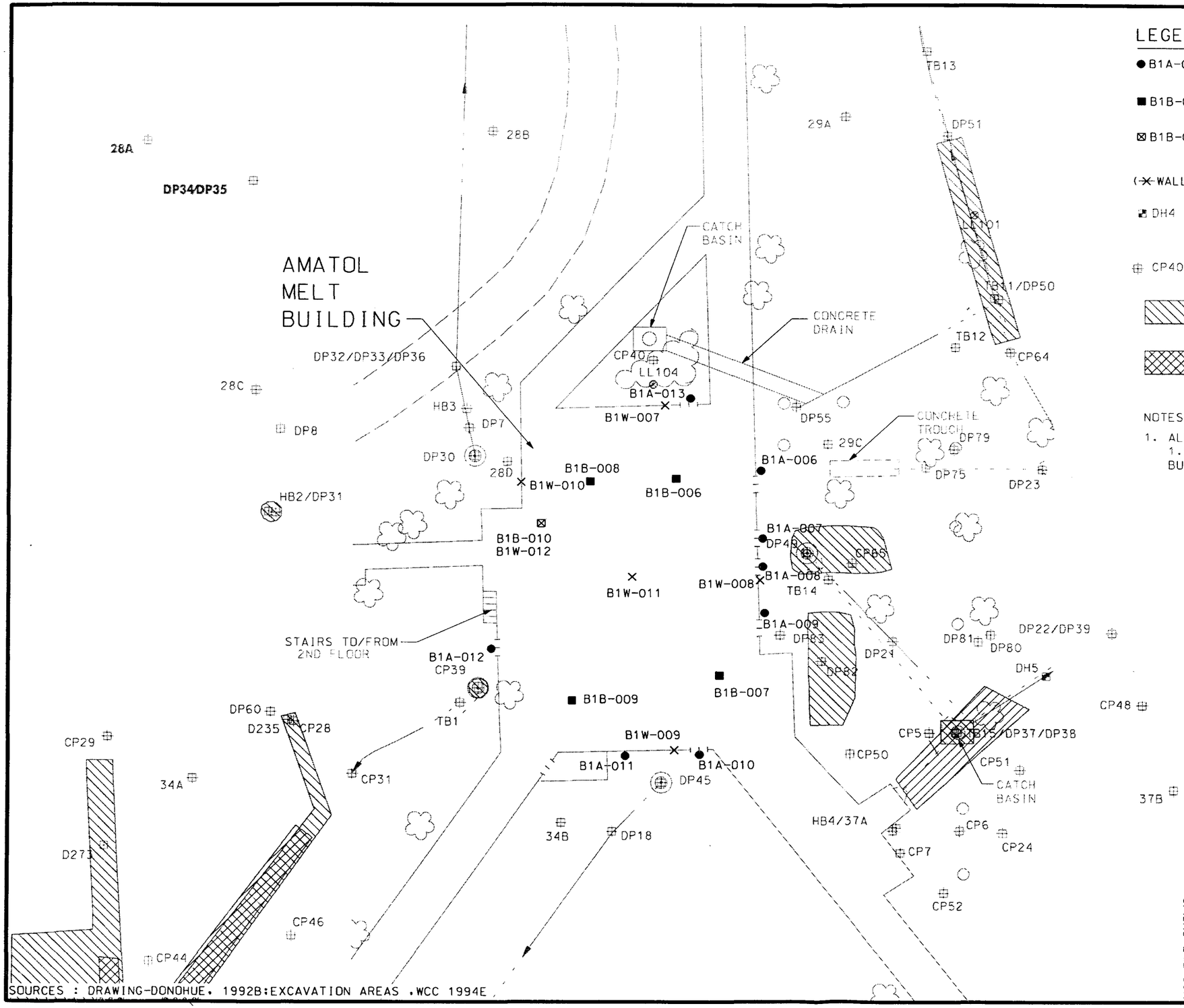
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
NOSE POURING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-2
Sheet number: 1

MCS FILE: OU3L11

SOURCE : DONOHUE, 1992B



SOURCES : DRAWING-DONOHUE, 1992B:EXCAVATION AREAS .WCC 1994E

LEGEND:

● B1A-001	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B1B-001	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B1B-005/B1W-006	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(✕ WALL, ✕ FLOOR) B1W-001	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	OU1 SOIL EXCAVATION AREA
	OU1 AND OU2 SOIL EXCAVATION AREAS

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1.5 FT FROM EXTERIOR WALLS OF THE AMATOL MELT BUILDING.

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

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Submitted by: RAD

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
AMATOL MELT BUILDING
SAMPLING LOCATIONS

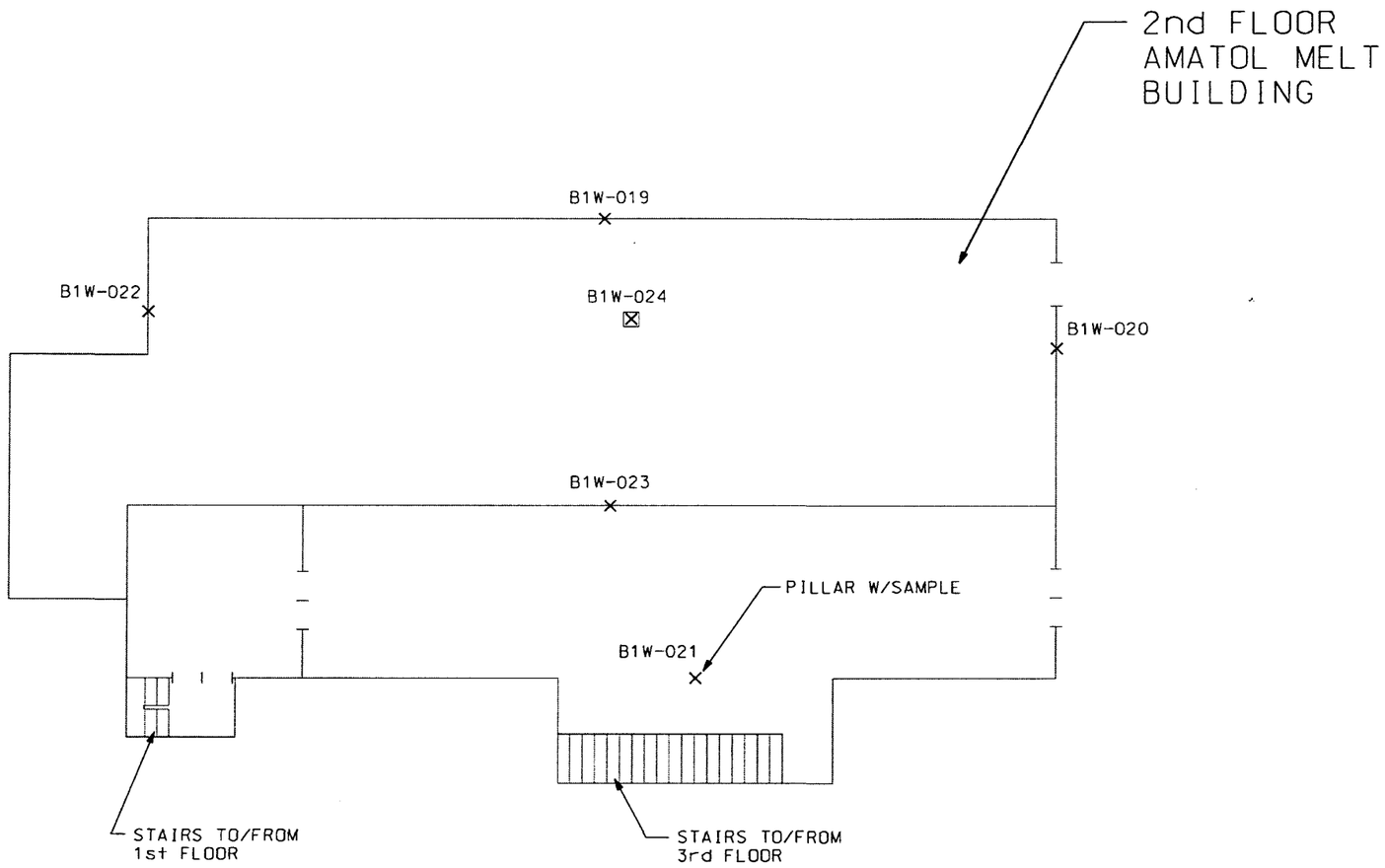
Scale: 1 IN = 30 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-3
Sheet number: 1

MCS FILE: OU3L12

B07NE003703-03624

LEGEND:

⊠ B1W-024	DISCRETIONARY WIPE SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B1W-019	SURFACE WIPE SAMPLE LOCATION



N

10 0 10 20

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.

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Checked by: B.C.O.

Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
2nd FLOOR
AMATOL MELT BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET

Date: FEBRUARY, 1996

Dwg. No.: 5-4

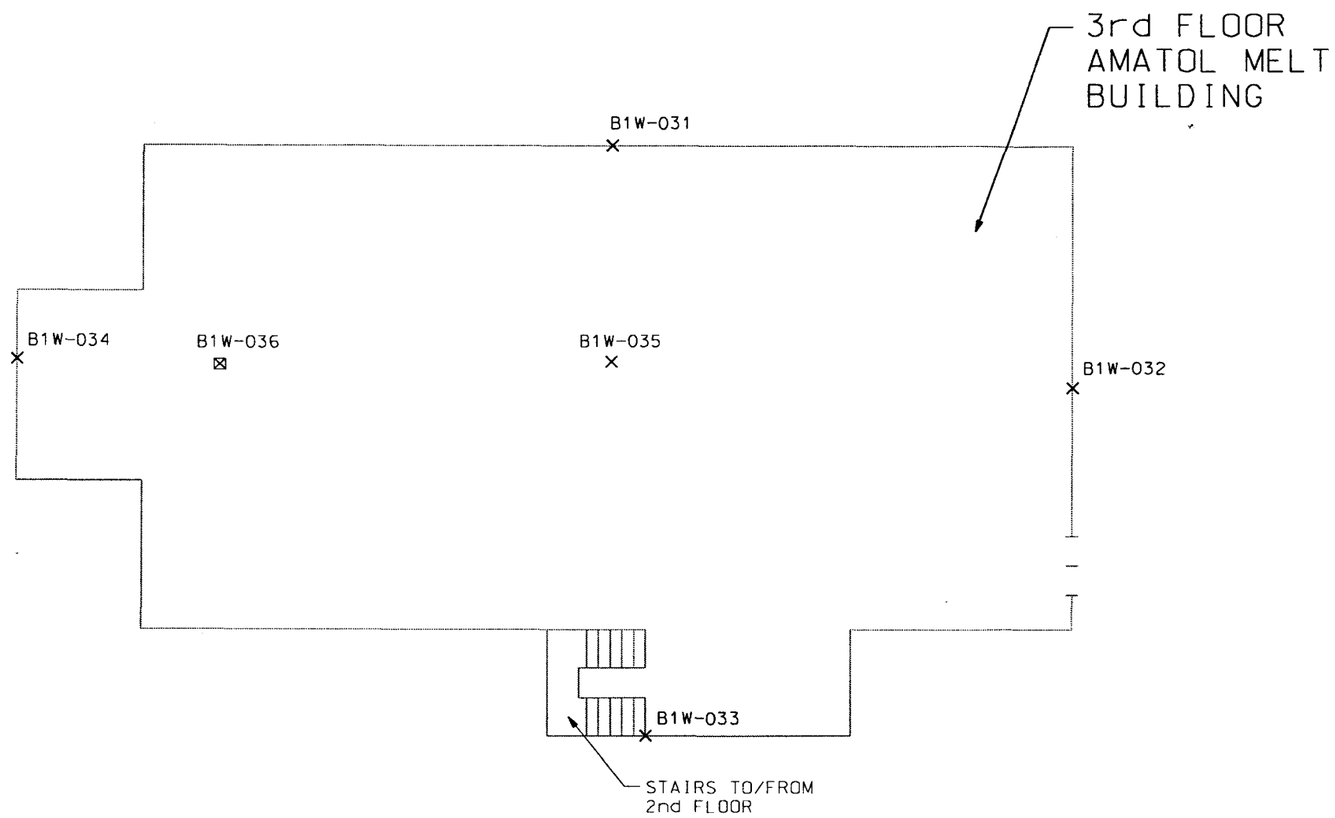
Sheet number: 1

MCS FILE: OU3L122

SOURCE: FIELD MEASUREMENTS

LEGEND:

⊠ B1W-036	DISCRETIONARY WIPE SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B1W-031	SURFACE WIPE SAMPLE LOCATION



N

10 0 10 20

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.

Drawn by: P.C.S.

Checked by: B.C.O.

Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
3rd FLOOR
AMATOL MELT BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET

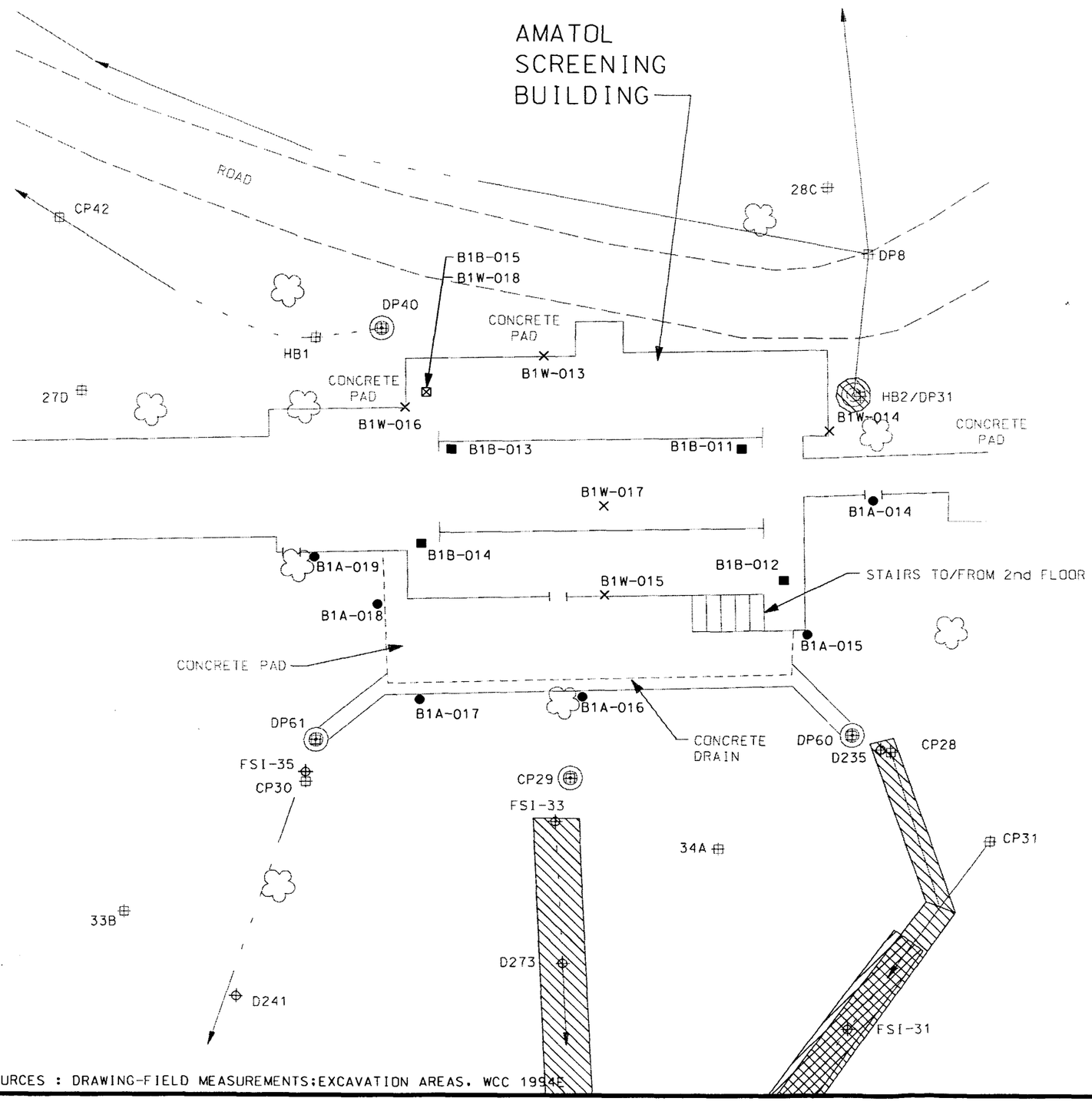
Date: FEBRUARY, 1996

Dwg. No.: 5-5

Sheet number: 1

MCS FILE: OU3L123

SOURCE: FIELD MEASUREMENTS



SOURCES : DRAWING-FIELD MEASUREMENTS;EXCAVATION AREAS. WCC 1994E

LEGEND:

● B1A-014	ADJACENT SOIL SAMPLE LOCATION
■ B1B-011	BENEATH SOIL SAMPLE LOCATION
⊠ B1B-015/B1W-018	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✳ WALL, × FLOOR) B1W-013	SURFACE WIPE SAMPLE LOCATION
⊕ D235	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
⊞ DP7	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
▨	OU1 EXCAVATION AREA
▩	OU1 AND OU2 EXCAVATION AREAS

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS OR CONCRETE FOUNDATION OF THE AMATOL SCREENING BUILDING.

N

20 0 20 40
SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

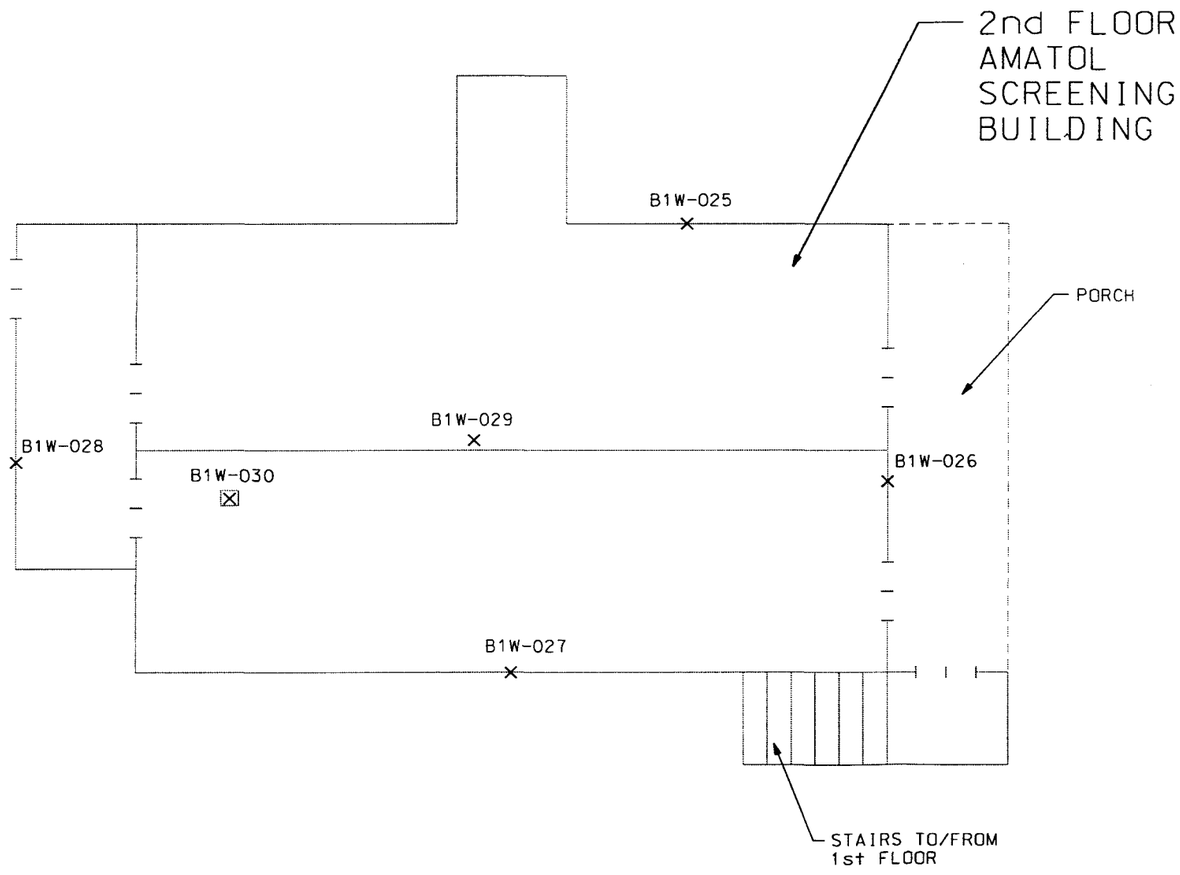
LOAD LINE 1
AMATOL SCREENING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN - 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-6
Sheet number: 1

MCS FILE: OU3L13

LEGEND:

⊠ B1W-030	DISCRETIONARY WIPE SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B1W-025	SURFACE WIPE SAMPLE LOCATION



N

10 0 10 20

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.

Drawn by: P.C.S.

Checked by: B.C.O.

Submitted by: RAW

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
2nd FLOOR
AMATOL SCREENING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET

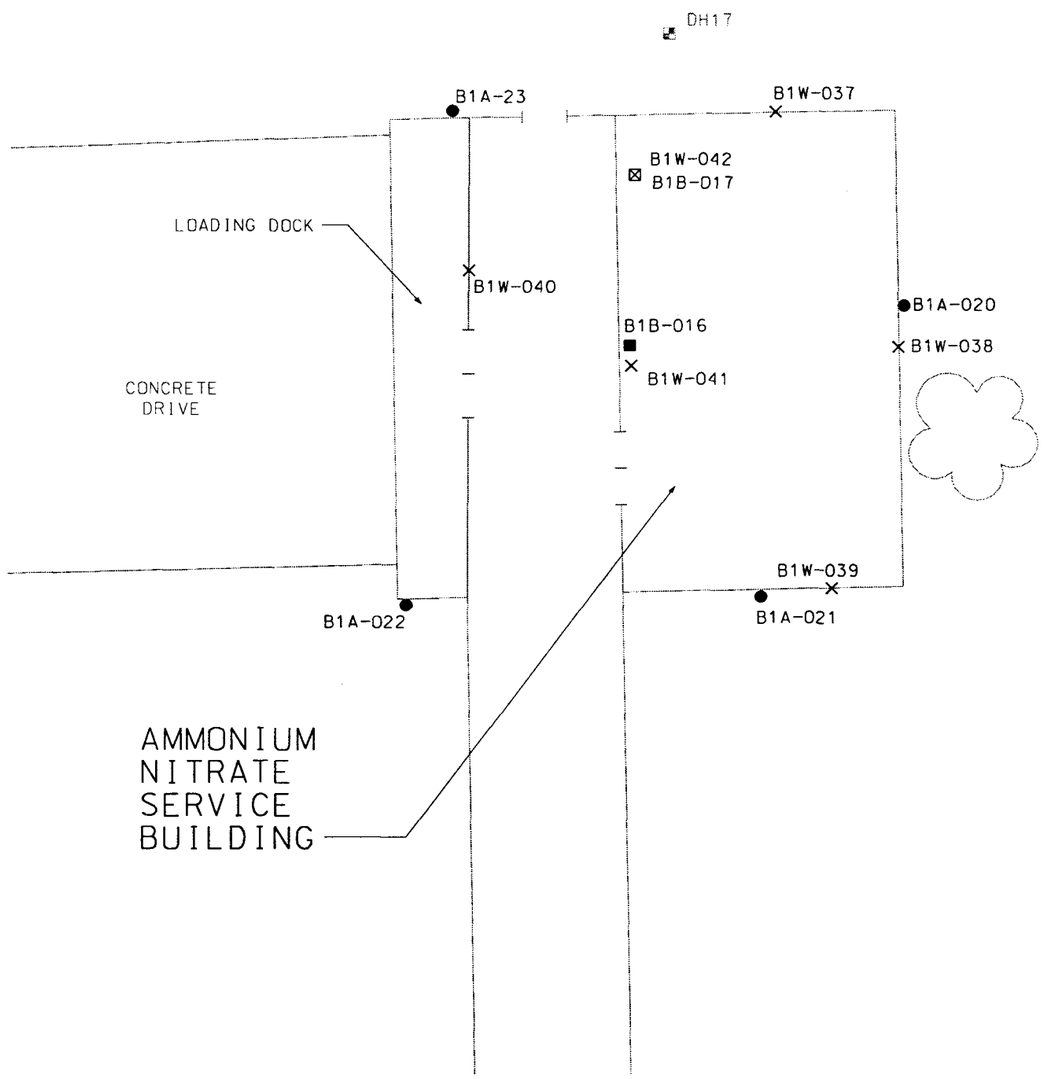
Date: FEBRUARY, 1996

Dwg. No.: 5-7

Sheet number: 1

MCS FILE: OU3L132

SOURCE: FIELD MEASUREMENTS



LEGEND:

● B1A-020	ADJACENT SOIL SAMPLE LOCATION
■ B1B-016	BENEATH SOIL SAMPLE LOCATION
⊠ B1B-017/B1W-042	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, × FLOOR) B1W-037	SURFACE WIPE SAMPLE LOCATION
DH17	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
DP11	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS OF THE BUILDING.

N

10 0 10 20

SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.

Drawn by: T.R.F.

Checked by: B.C.O.

Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
AMMONIUM NITRATE
SERVICE BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET

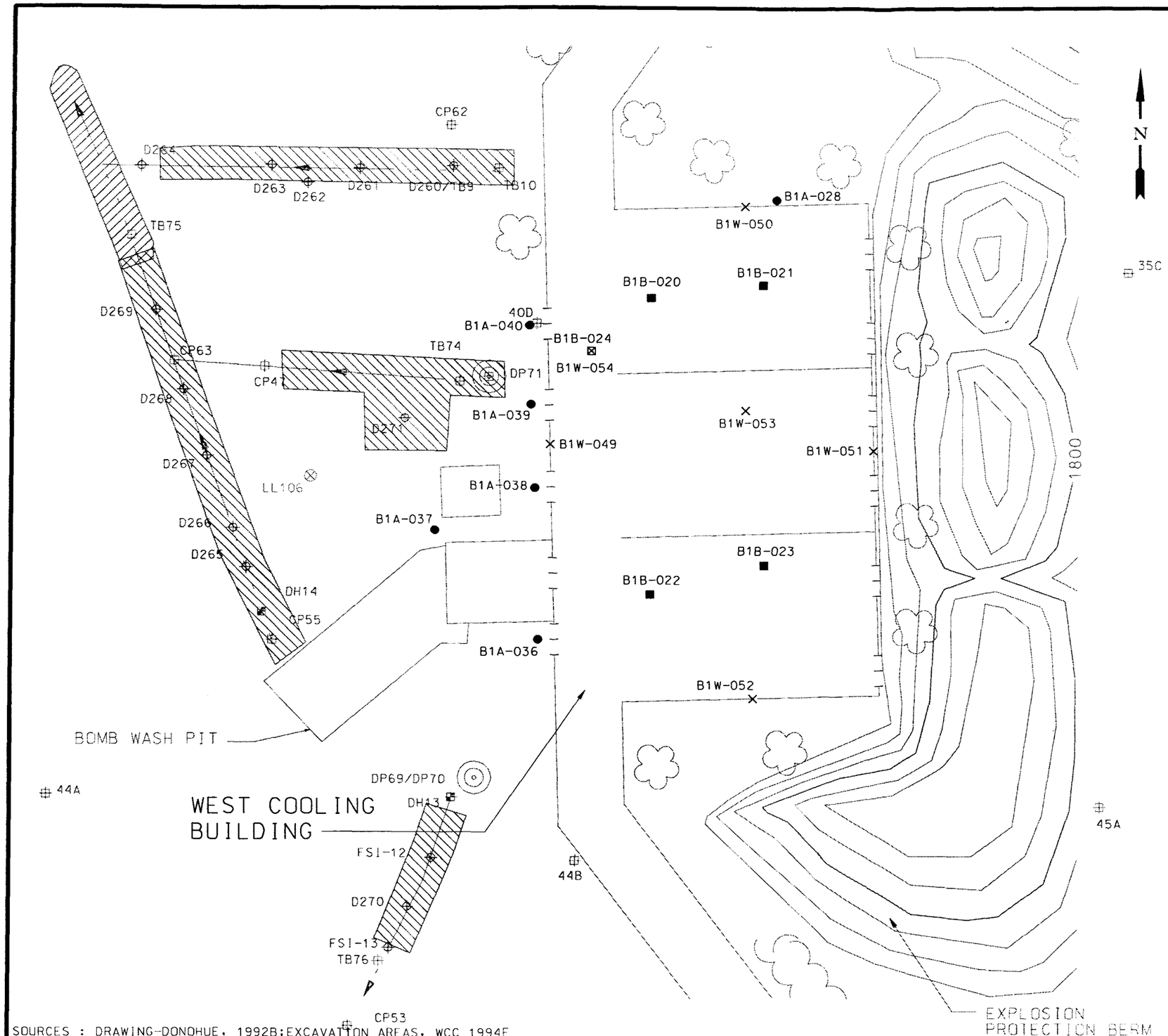
Date: FEBRUARY, 1996

Dwg. No.: 5-8

Sheet number: 1

MCS FILE: OU3L14

SOURCE : DONOHUE, 1992B



SOURCES : DRAWING-DONOHUE, 1992B:EXCAVATION AREAS, WCC 1994E

LEGEND:

● B1A-028	ADJACENT SOIL SAMPLE LOCATION
■ B1B-020	BENEATH SOIL SAMPLE LOCATION
⊠ B1B-024/B1W-054	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(-X-WALL, X FLOOR B1W-049	SURFACE WIPE SAMPLE LOCATION
DH14	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
D269	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
40D	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
⊗ LL106	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
	OU1 EXCAVATION AREA
	OU2 EXCAVATION AREA
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE WEST COOLING BUILDING:
   B1A-036 AT 2.25FT, B1A-037 AT 1.2FT,
   B1A-038 AT 2.25FT, B1A-039 AT 2.5FT,
   B1A-040 AT 2.6FT
2. ADJACENT SOIL SAMPLES B1A-029 TO B1A-35 WERE NOT COLLECTED DUE TO COLLAPSED EARTHEN BERM MATERIAL COVERING SAMPLING LOCATIONS AROUND THE EAST AND SOUTH SIDES OF THE COOLING BUILDING. SAMPLE B1A-041 WAS NOT COLLECTED BECAUSE ACCESS WAS RESTRICTED BY FENCED OU1 INVESTIGATION AREA.
3. CONTOUR INTERVAL IS 2 FEET

20 0 20 40

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

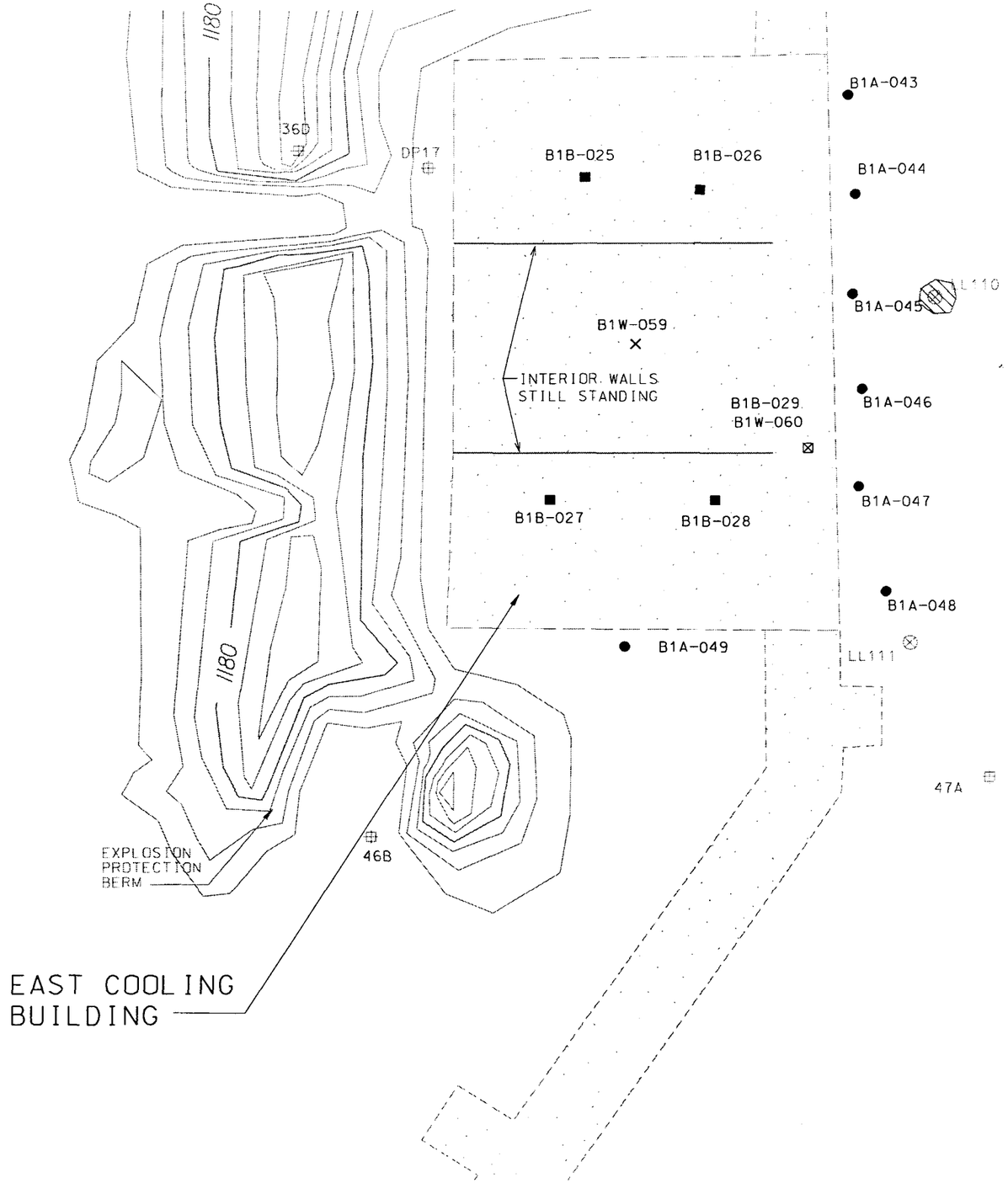
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
WEST COOLING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-10
Sheet number: 1

MCS FILE: OU3L17

B07NE003703-03630



SOURCE : DONOHUE, 1992B

LEGEND:

● B1A-043	ADJACENT SOIL SAMPLE LOCATION
■ B1B-025	BENEATH SOIL SAMPLE LOCATION
⊠ B1B-029/B1W-060	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, × FLOOR) B1W-059	SURFACE WIPE SAMPLE LOCATION
DH6	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
47A	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
LL110	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
	OU1 SOIL EXCAVATION AREA
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE EAST COOLING BUILDING:
   B1A-043 AT 2.4FT, B1A-044 AT 3.3FT,
   B1A-045 AT 2.4FT, B1A-046 AT 3.6FT,
   B1A-047 AT 2.75FT, B1A-048 AT 6.7FT,
   B1A-049 AT 1.7FT
2. ADJACENT SOIL SAMPLES B1A-042 AND B1A-050 TO B1A-055 WERE NOT COLLECTED DUE TO COLLAPSED EARTHEN BERM MATERIAL COVERING SAMPLE LOCATIONS AROUND THE NORTH AND WEST SIDE OF THE COOLING BUILDING.
3. SURFACE WIPE SAMPLES B1W-055 TO B1W-058 WERE NOT COLLECTED BECAUSE THE WALLS WERE NO LONGER PRESENT.
4. CONTOUR INTERVAL IS 2 FEET

N

20 0 20 40

SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

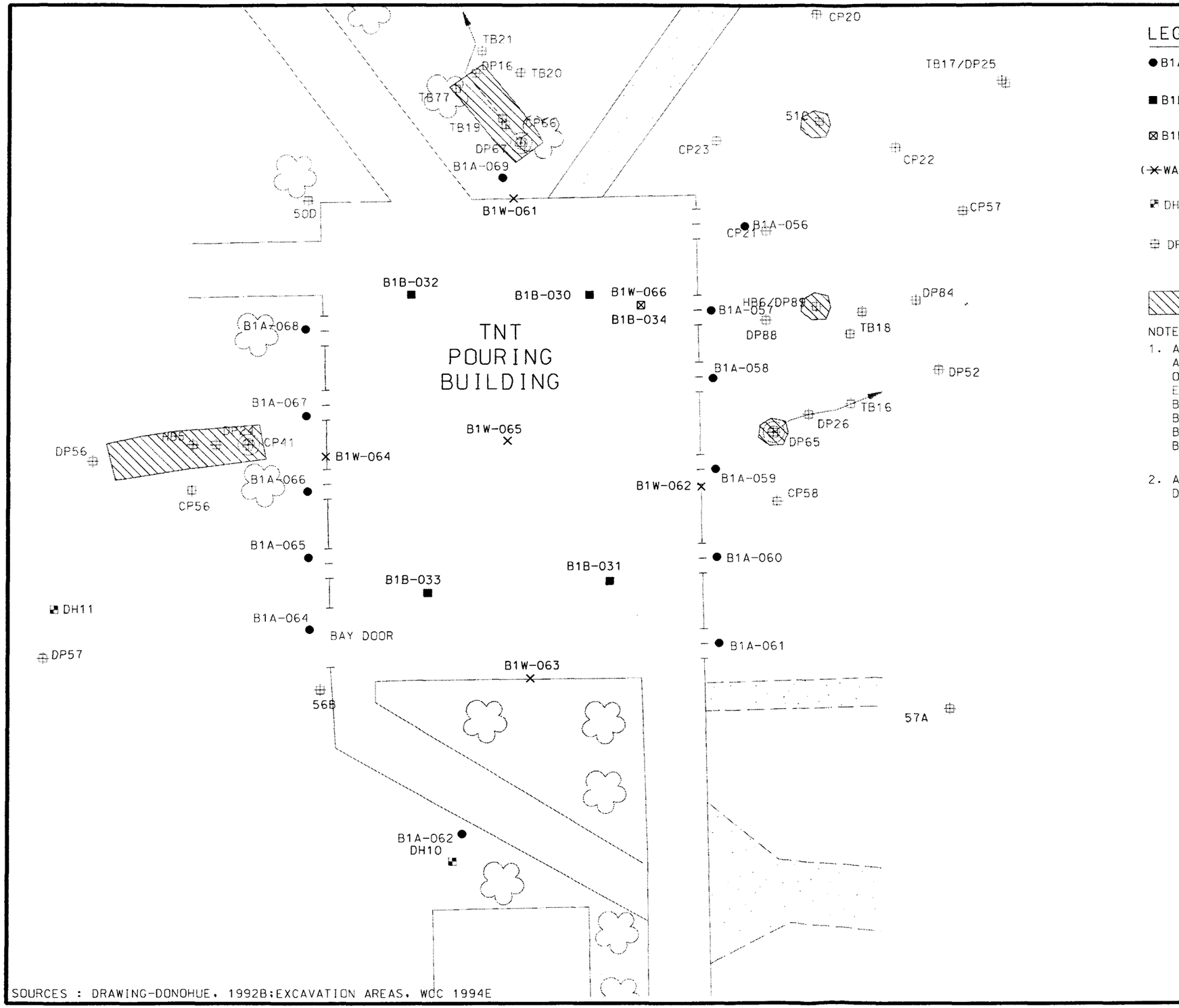
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
EAST COOLING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-11
Sheet number: 1

MCS FILE: OU3L16

B07NE003703-03631



LEGEND:

● B1A-056	ADJACENT SOIL SAMPLE LOCATION
■ B1B-030	BENEATH SOIL SAMPLE LOCATION
⊠ B1B-034/B1W-066	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✳ WALL, × FLOOR) B1W-061	SURFACE WIPE SAMPLE LOCATION
DH10	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
DP26	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
▨	OU1 EXCAVATION AREA

NOTES:

1. ALL ADJACENT SOIL SAMPLES WERE COLLECTED APPROXIMATELY 2 FT FROM THE EXTERIOR WALLS OF THE TNT POURING BUILDING WITH THE FOLLOWING EXCEPTIONS:
   B1A-056 AT 9.0FT, B1A-064 AT 3.0FT,
   B1A-065 AT 3.0FT, B1A-066 AT 3.0FT,
   B1A-067 AT 3.0FT, B1A-068 AT 2.5FT,
   B1A-069 AT 3.5FT

2. ADJACENT SOIL SAMPLE B1A-063 WAS NOT COLLECTED DUE TO CONCRETE DEBRIS AT SAMPLING LOCATION.

N

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SCALE FEET

SOURCES : DRAWING-DONOHUE, 1992B;EXCAVATION AREAS, WCC 1994E

Revisions

Symbol	Descriptions	Date	Apprv'd

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

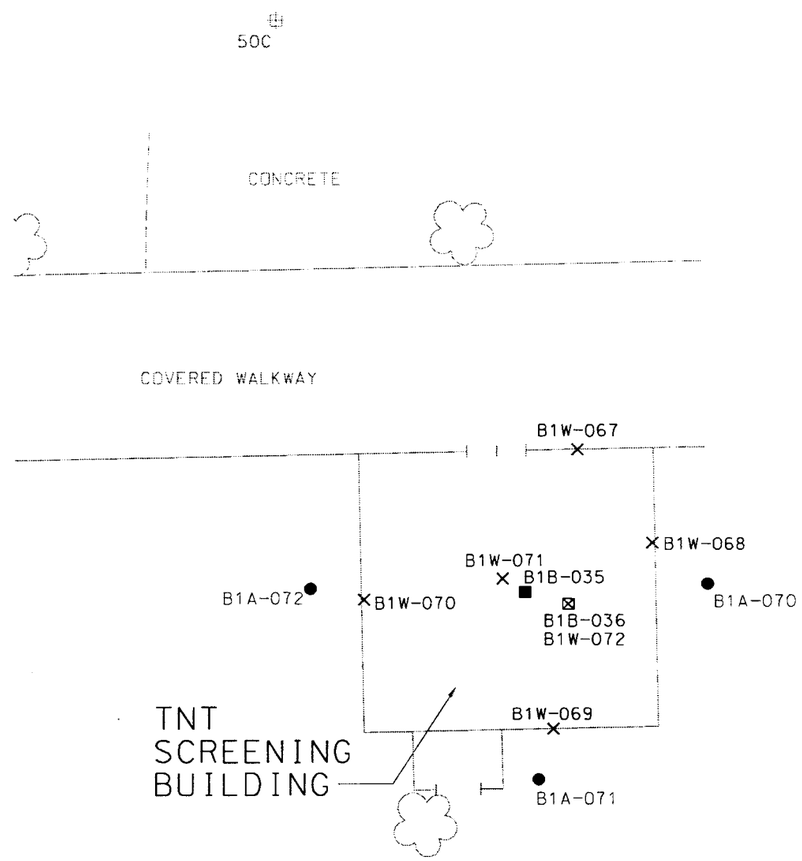
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
TNT POURING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-12
Sheet number: 1

MCS FILE: OU3L19



LEGEND:

● B1A-070	ADJACENT SOIL SAMPLE LOCATION
■ B1B-035	BENEATH SOIL SAMPLE LOCATION
⊠ B1B-036/B1W-072	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✳ WALL, × FLOOR) B1W-067	SURFACE WIPE SAMPLE LOCATION
⊕ 50C	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ALL ADJACENT SOIL SAMPLES WERE COLLECTED APPROXIMATELY 3 FT FROM THE EXTERIOR WALLS OF THE TNT SCREENING BUILDING.
2. ADJACENT SOIL SAMPLE B1A-073 WAS NOT COLLECTED DUE TO CONCRETE PAD AT SAMPLE LOCATION.

N

10 0 10 20

SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

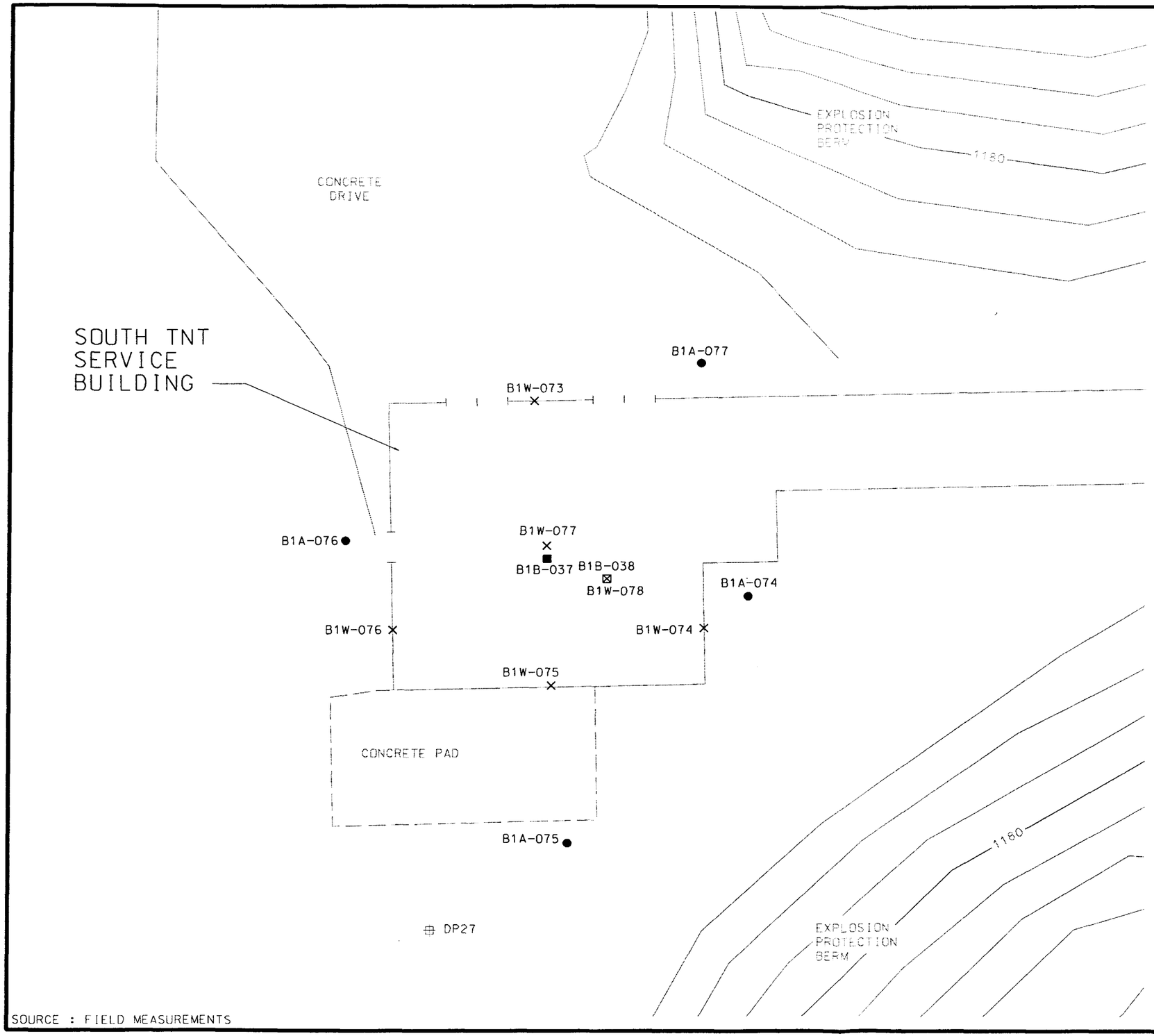
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
TNT SCREENING
BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-13
Sheet number: 1

MCS FILE: OU3L18

SOURCE : FIELD MEASUREMENTS



LEGEND:

● B1A-074	ADJACENT SOIL SAMPLE LOCATION
■ B1B-037	BENEATH SOIL SAMPLE LOCATION
⊠ B1B-038/B1W-078	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
WALL, FLOOR B1W-073	SURFACE WIPE SAMPLE LOCATION
DP27	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE TNT SERVICE BUILDING:
   B1A-074 AT 3.0FT, B1A-075 AT 15.0FT,
   B1A-076 AT 4.0FT, B1A-077 AT 3.0FT
2. CONTOUR INTERVAL IS 2 FT.

N

10 0 10 20

SCALE FEET

SOURCE : FIELD MEASUREMENTS

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

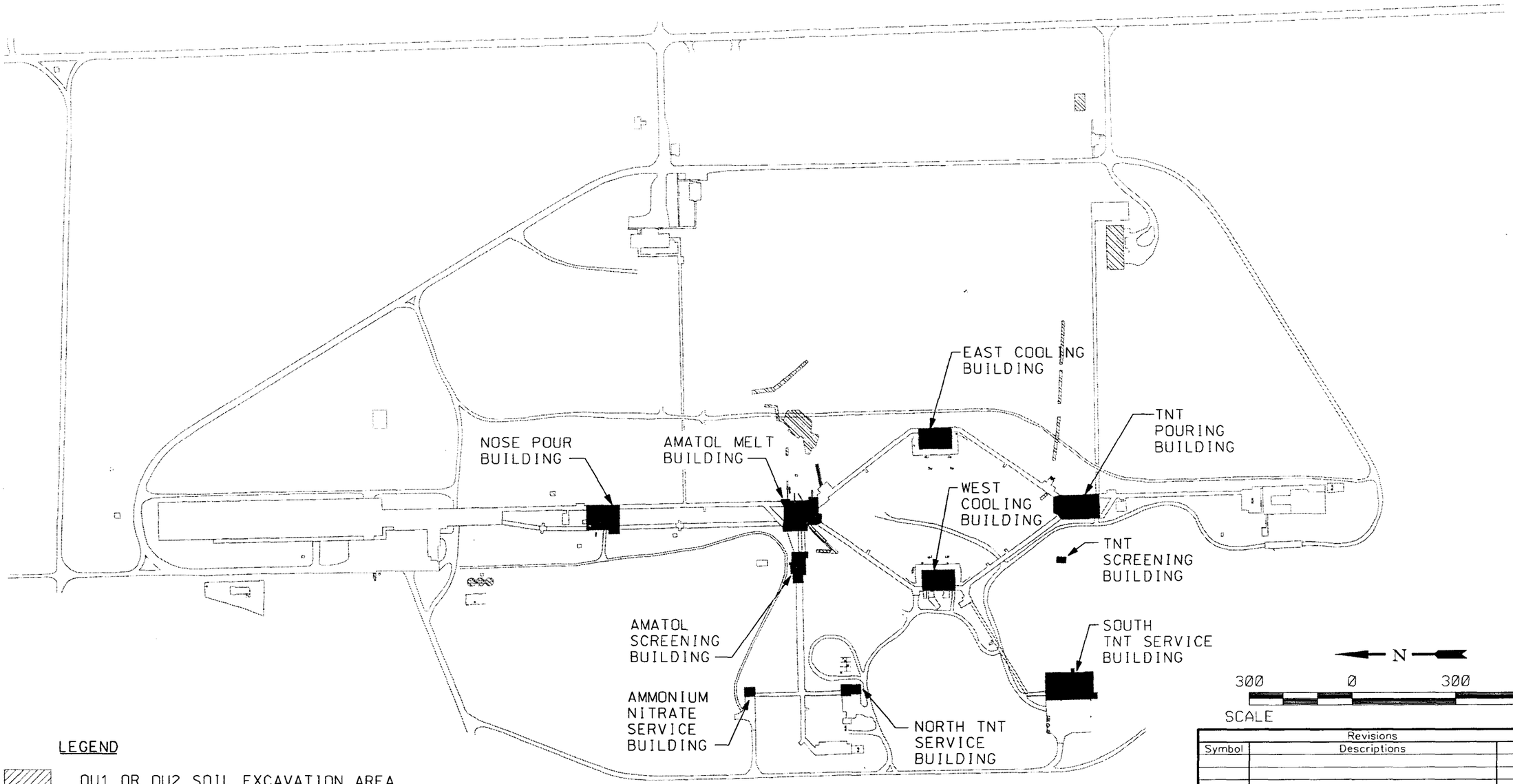
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
SOUTH TNT
SERVICE BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-14
Sheet number: 1

MCS FILE: OU3L10

B07NE003703-03634



LEGEND

OU1 OR OU2 SOIL EXCAVATION AREA

ORIGINAL BOMB PRODUCTION BUILDING LOCATIONS

NOTE:

THE TNT SCREENING BUILDING AT LOAD LINE 2 HAS BEEN DEMOLISHED.

SOURCES : DRAWING-DONOHUE, 1992B;EXCAVATION AREAS, WCC 1994E

Revisions			
Symbol	Descriptions	Date	Apprv'd

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U.S. ARMY ENGINEER DISTRICT
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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

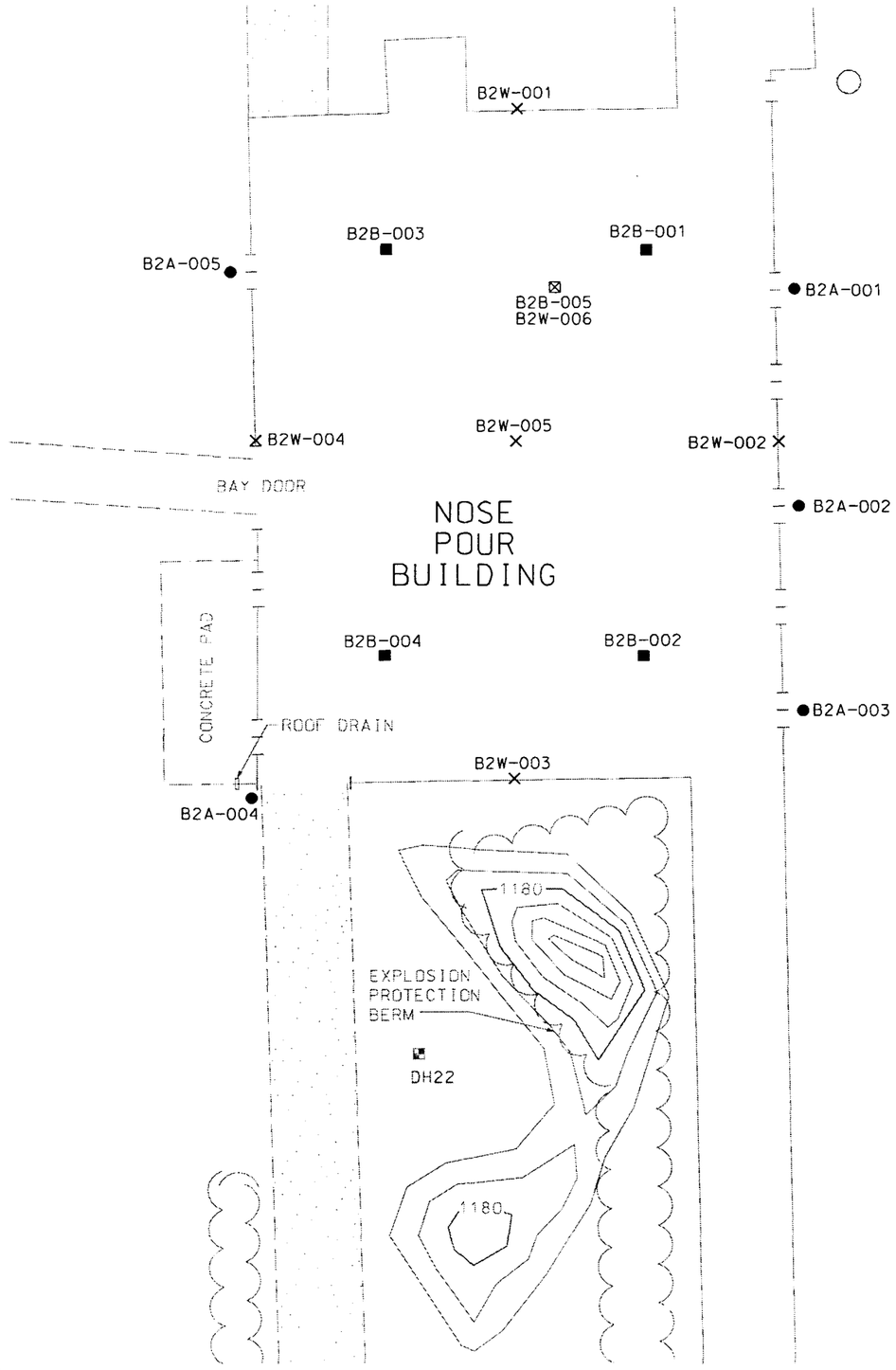
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

BOMB PRODUCTION BUILDINGS AT LOAD LINE 2

Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-15
Sheet number: 1

MCS FILE: OU3L2B



SOURCE : DONAHUE, 1992B

LEGEND:

● B2A-001	ADJACENT SOIL SAMPLE LOCATION
■ B2B-001	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-005/B2W-006	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B2W-001	SURFACE WIPE SAMPLE LOCATION
⊞ 22B	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
◪ DH22	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 2 FT FROM THE EXTERIOR WALLS.

N

20 0 20 40

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

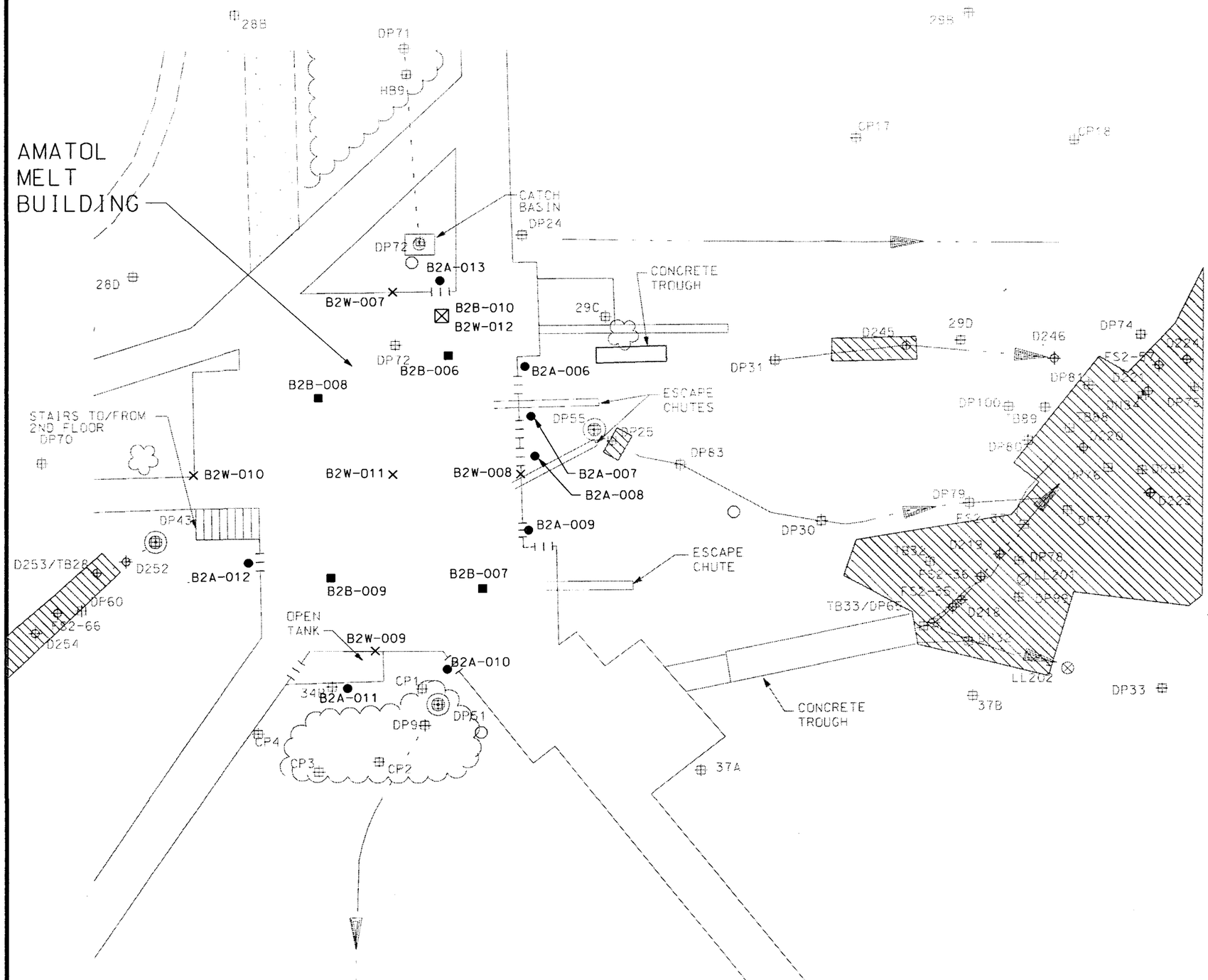
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
NOSE POURING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-16
Sheet number: 1

MCS FILE: OU3L21



LEGEND:

• B2A-006	ADJACENT SOIL SAMPLE LOCATION
■ B2B-006	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-010/B2W-012	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, × FLOOR) B2W-007	SURFACE WIPE SAMPLE LOCATION
DH34	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
D220	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
DP75	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
LL201	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
	OU1 EXCAVATION AREA

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE AMATOL MELT BUILDING:
   B2A-006 AT 1.5FT, B2A-007 AT 2.0FT,
   B2A-008 AT 3.0FT, B2A-009 AT 1.5FT,
   B2A-010 AT 2.0FT, B2A-011 AT 1.5FT,
   B2A-012 AT 2.0FT, B2A-013 AT 2.0FT

SOURCES : DRAWING-DONOHUE, 1992B;EXCAVATION AREAS, WCC 1994E

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

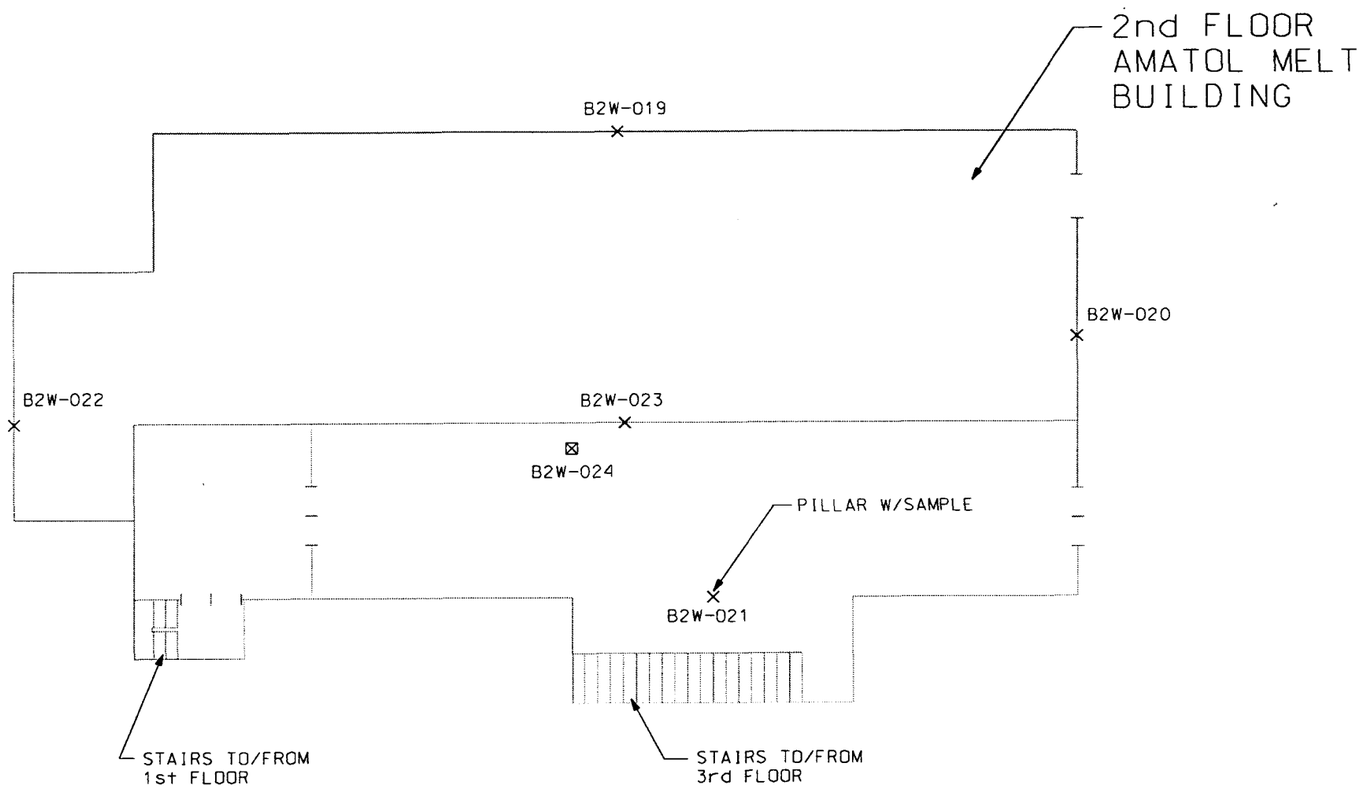
LOAD LINE 2
AMATOL MELT BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 30 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-17
Sheet number: 1

MCS FILE: OU3L22

LEGEND:

⊠ B2W-019	DISCRETIONARY WIPE SAMPLE LOCATION
(✕ WALL, × FLOOR) B2W-024	SURFACE WIPE SAMPLE LOCATION



N

10 0 10 20

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.

Drawn by: P.C.S.

Checked by: B.C.O.

Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
2nd FLOOR
AMATOL MELT BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET

Date: FEBRUARY, 1996

Dwg. No.: 5–18

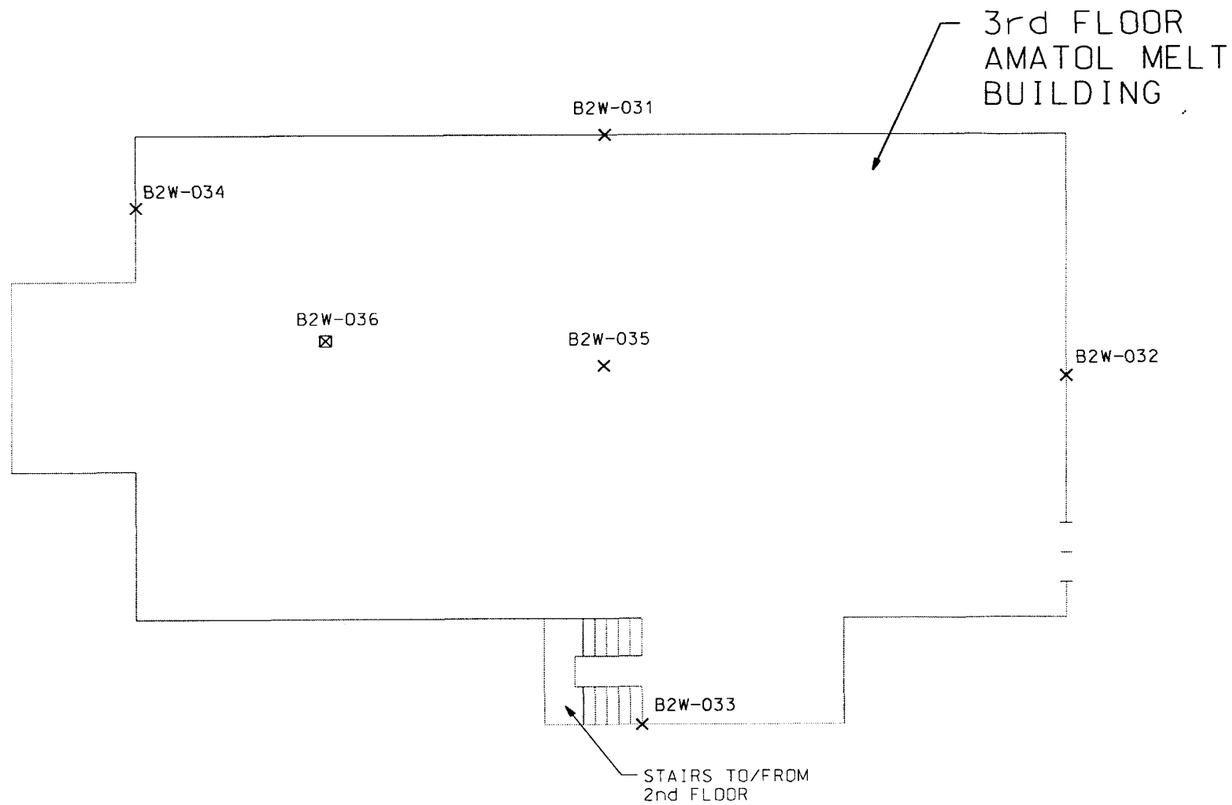
Sheet number: 1

MCS FILE: OU3L222

SOURCE: FIELD MEASUREMENTS

LEGEND:

⊠ B2W-036	DISCRETIONARY WIPE SAMPLE LOCATION
(✳ WALL, × FLOOR) B2W-031	SURFACE WIPE SAMPLE LOCATION



N

10 0 10 20
SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward–Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

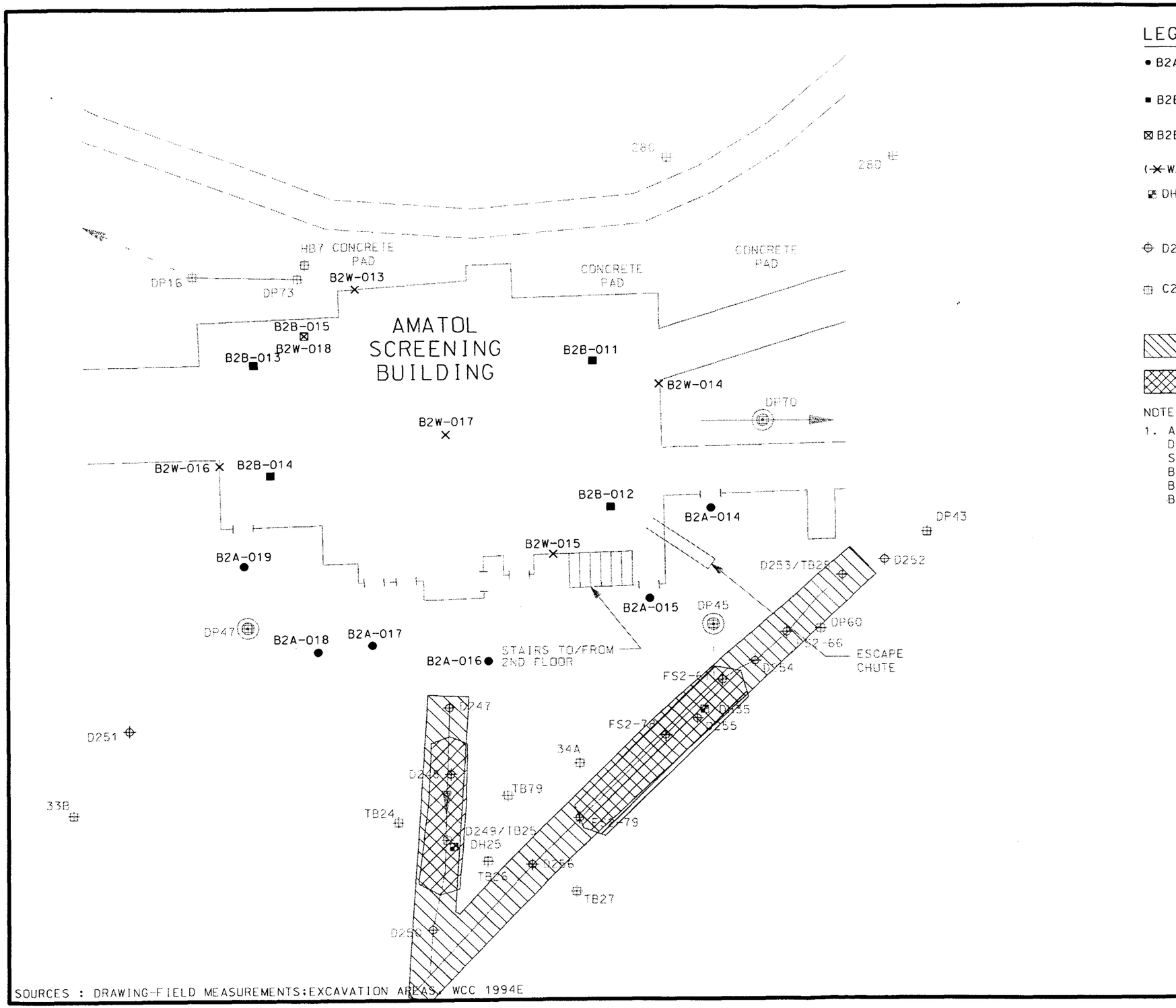
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
3rd FLOOR
AMATOL MELT BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-19
Sheet number: 1

MCS FILE: OU3L223

SOURCE: FIELD MEASUREMENTS



SOURCES : DRAWING-FIELD MEASUREMENTS;EXCAVATION AREAS, WCC 1994E

LEGEND:

• B2A-014	ADJACENT SOIL SAMPLE LOCATION
■ B2B-011	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-015/B2W-018	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✳ WALL, × FLOOR) B2W-013	SURFACE WIPE SAMPLE LOCATION
DH35	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
D256	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
C28	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	OU1 EXCAVATION AREA
	OU1 AND OU2 EXCAVATION AREAS

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE AMATOL SCREENING BUILDING:
   B2A-014 AT 2.0FT, B2A-015 AT 2.0FT,
   B2A-016 AT 9.0FT, B2A-017 AT 12.0FT,
   B2A-018 AT 25.0FT, B2A-019 AT 7.0FT

N

20 0 20 40

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward–Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
AMATOL SCREENING BUILDING
SAMPLING LOCATIONS

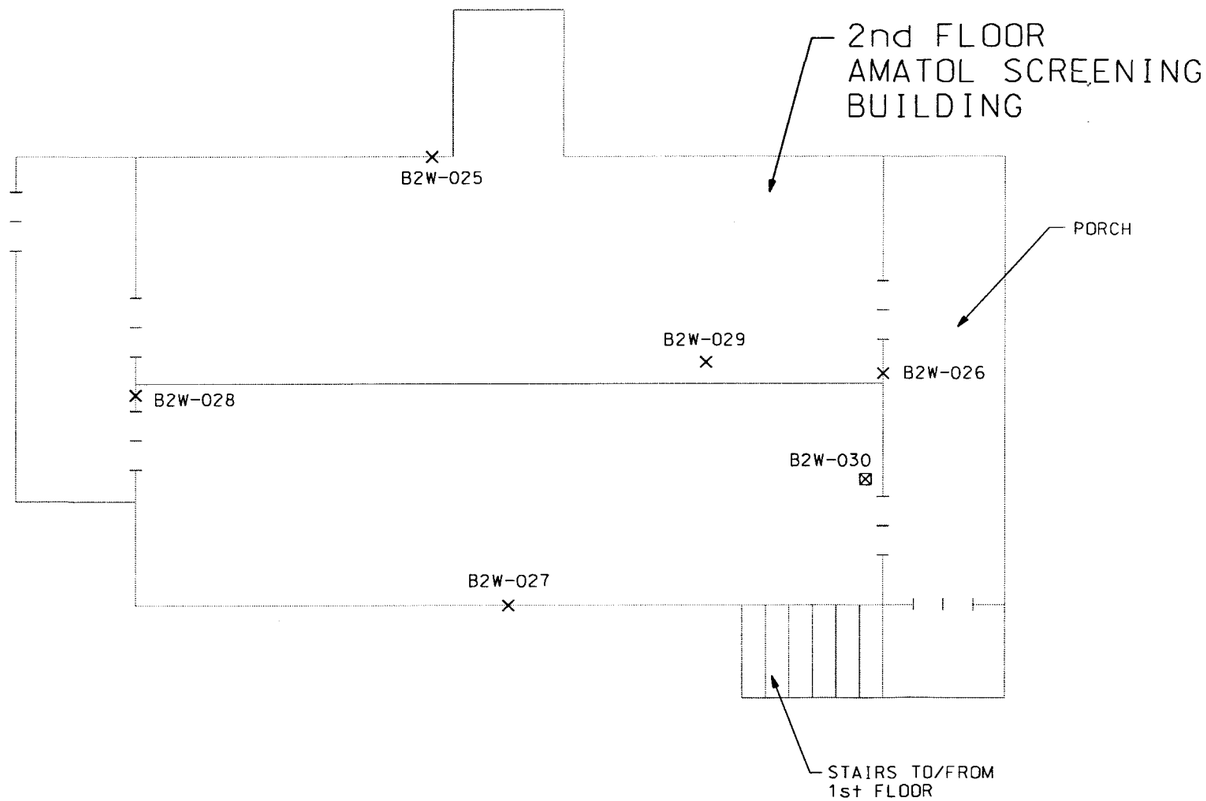
Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-20
Sheet number: 1

MCS FILE: OU3L23

B07NE003703-03640

LEGEND:

⊠ B2W-030	DISCRETIONARY WIPE SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B2W-029	SURFACE WIPE SAMPLE LOCATION



N

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SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

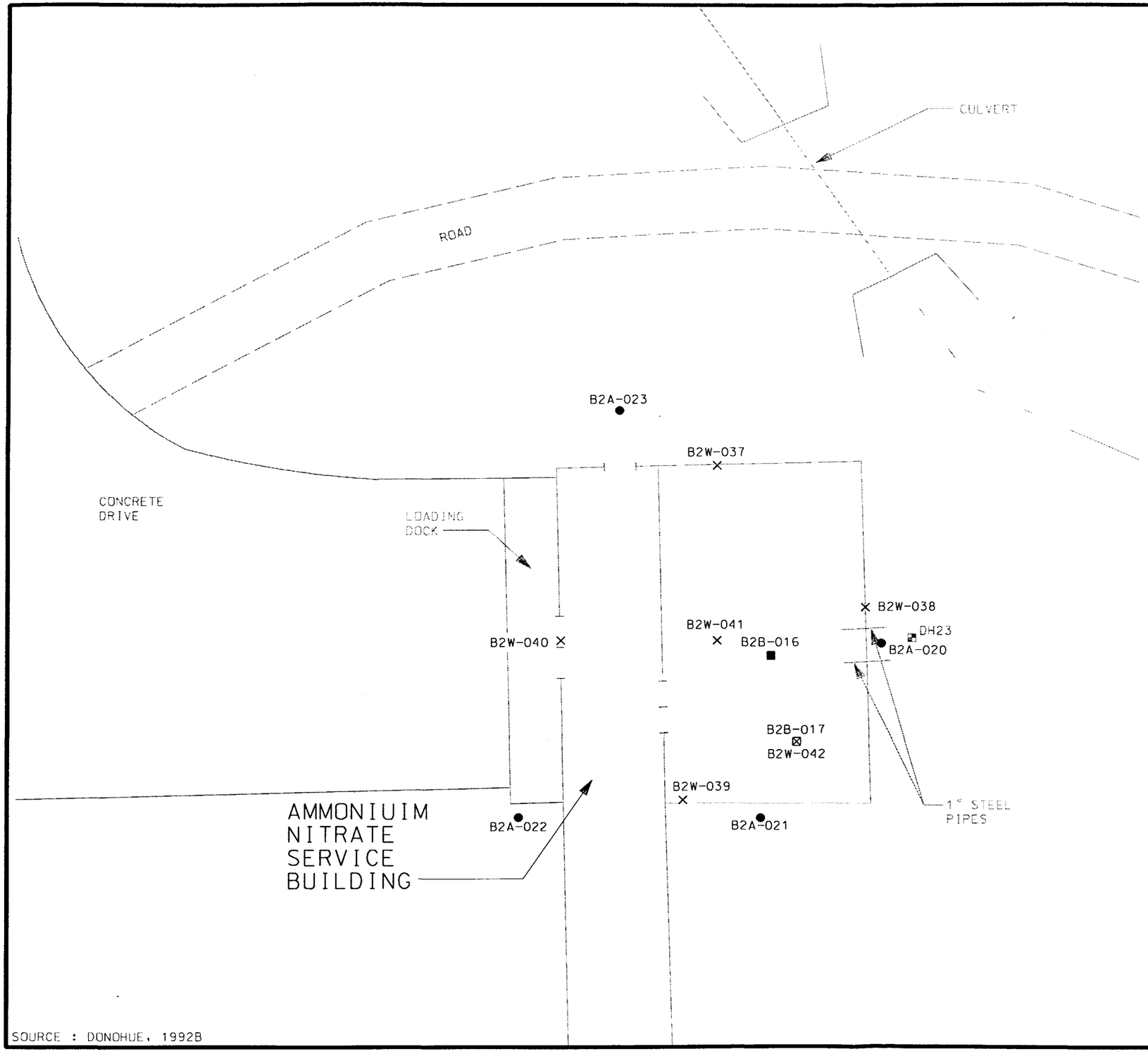
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
2nd FLOOR
AMATOL SCREENING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-21
Sheet number: 1

MCS FILE: OU3L232

SOURCE: FIELD MEASUREMENTS



SOURCE : DONOHUE, 1992B

LEGEND:

● B2A-020	ADJACENT SOIL SAMPLE LOCATION
■ B2B-016	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-017/B2W-042	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, × FLOOR) B2W-037	SURFACE WIPE SAMPLE LOCATION
DH23	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS EXCEPT B2A-023 WHICH WAS COLLECTED APPROXIMATELY 5 FT FROM THE EXTERIOR WALLS.

N

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SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

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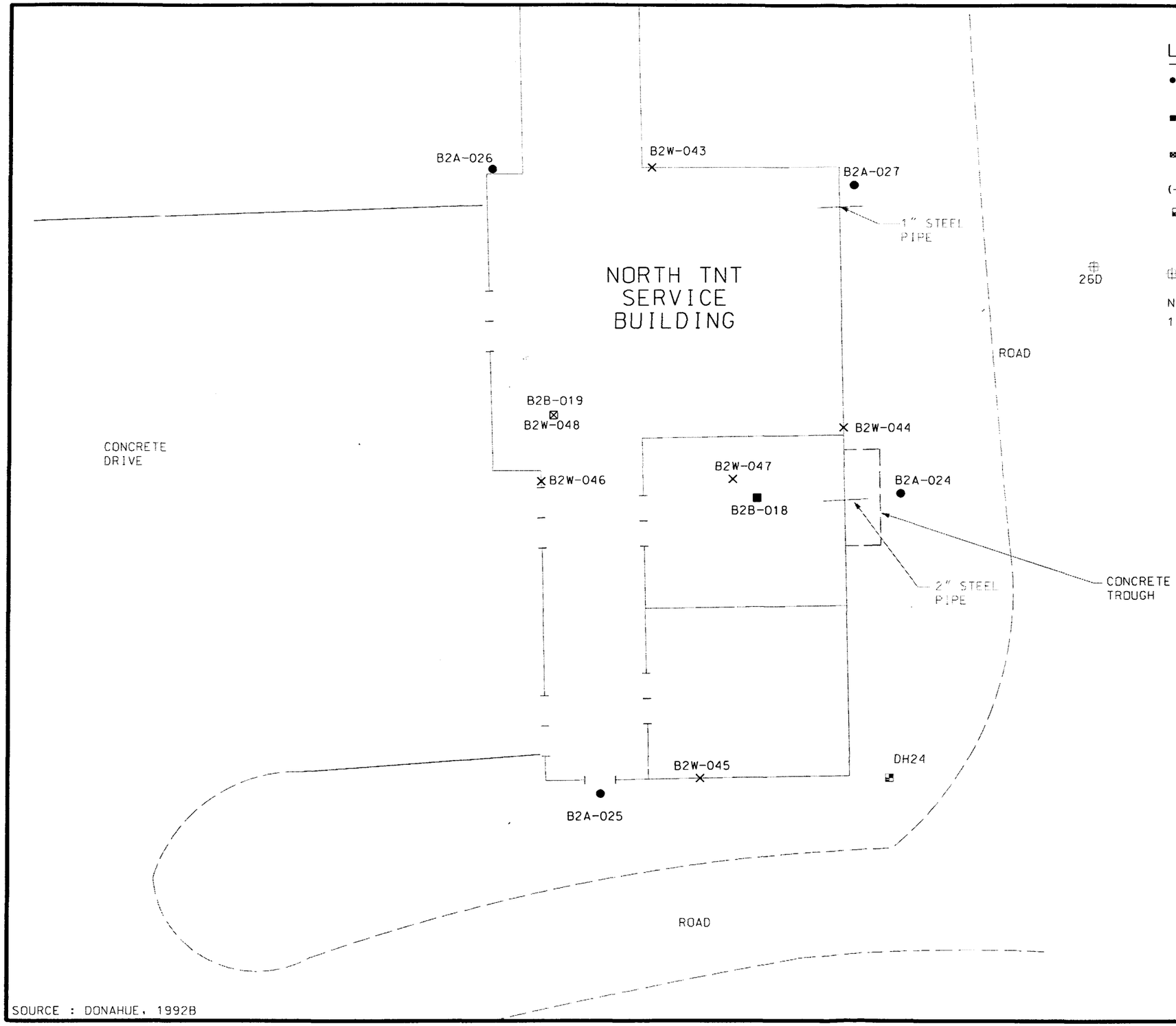
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
AMMONIUM NITRATE BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-22
Sheet number: 1

MCS FILE: OU3L24



SOURCE : DONAHUE, 1992B

LEGEND:

● B2A-024	ADJACENT SOIL SAMPLE LOCATION
■ B2B-018	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-019/B2W-048	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B2W-047	SURFACE WIPE SAMPLE LOCATION
⊠ DH24	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
⊕ 26D	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS EXCEPT B2A-024 WHICH WAS COLLECTED APPROXIMATELY 5 FT FROM THE EXTERIOR WALLS.

N

10 0 10 20

SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Designed by: S.J.F.
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Checked by: B.C.O.
Submitted by: RAN

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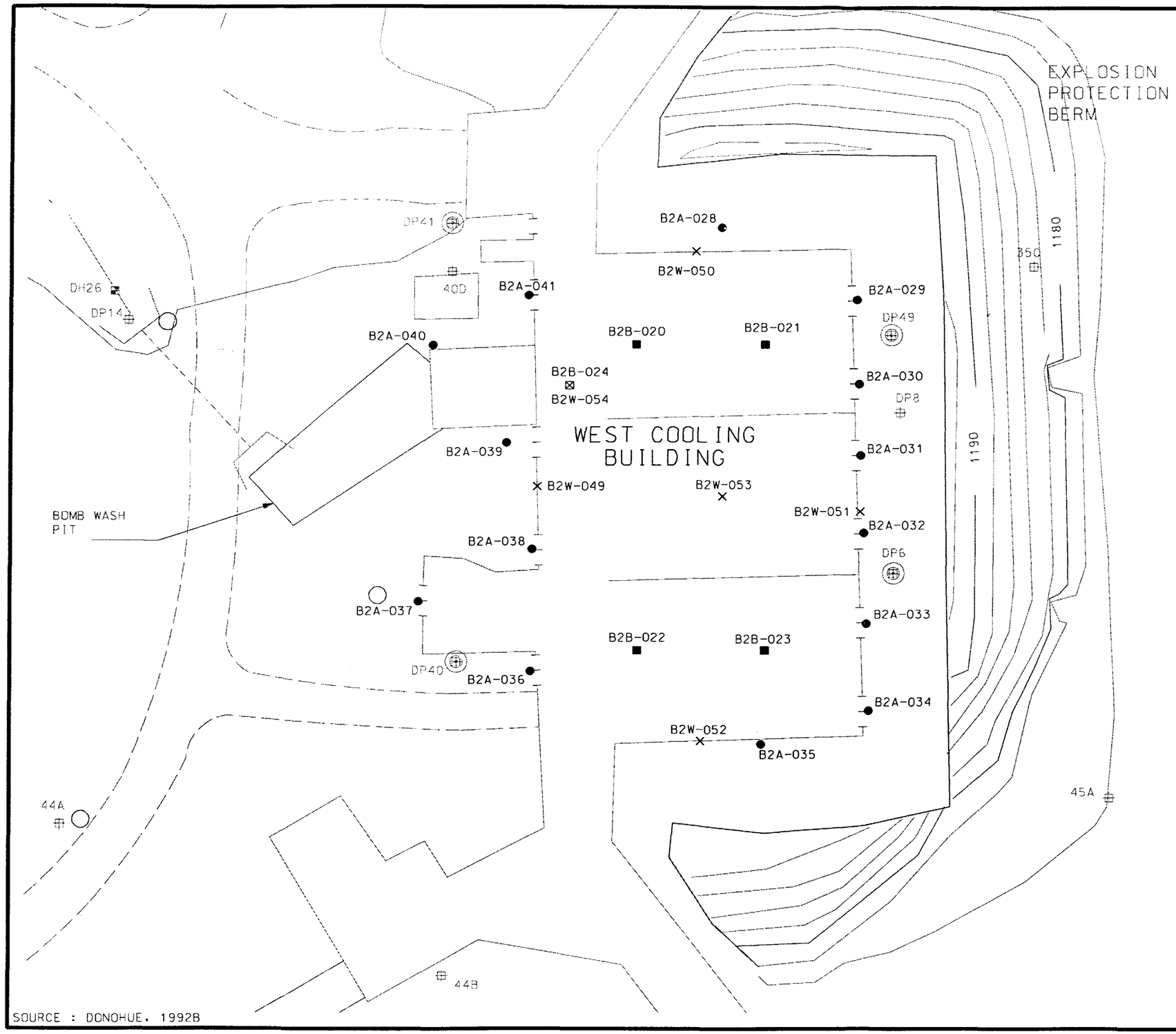
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
NORTH TNT SERVICE BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-23
Sheet number: 1

MCS FILE: OU3L25



LEGEND:

● B2A-028	ADJACENT SOIL SAMPLE LOCATION
■ B2B-020	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-024/B2W-054	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, × FLOOR) B2W-049	SURFACE WIPE SAMPLE LOCATION
DH26	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
44A	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE WEST COOLING BUIILDING:
   B2A-028 AT 3.8FT, B2A-039 AT 5.0FT
2. CONTOUR INTERVAL IS 2 FT.

N

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SCALE FEET

Revisions			
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Designed by: S.J.F.
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Checked by: B.C.O.
Submitted by: RAN

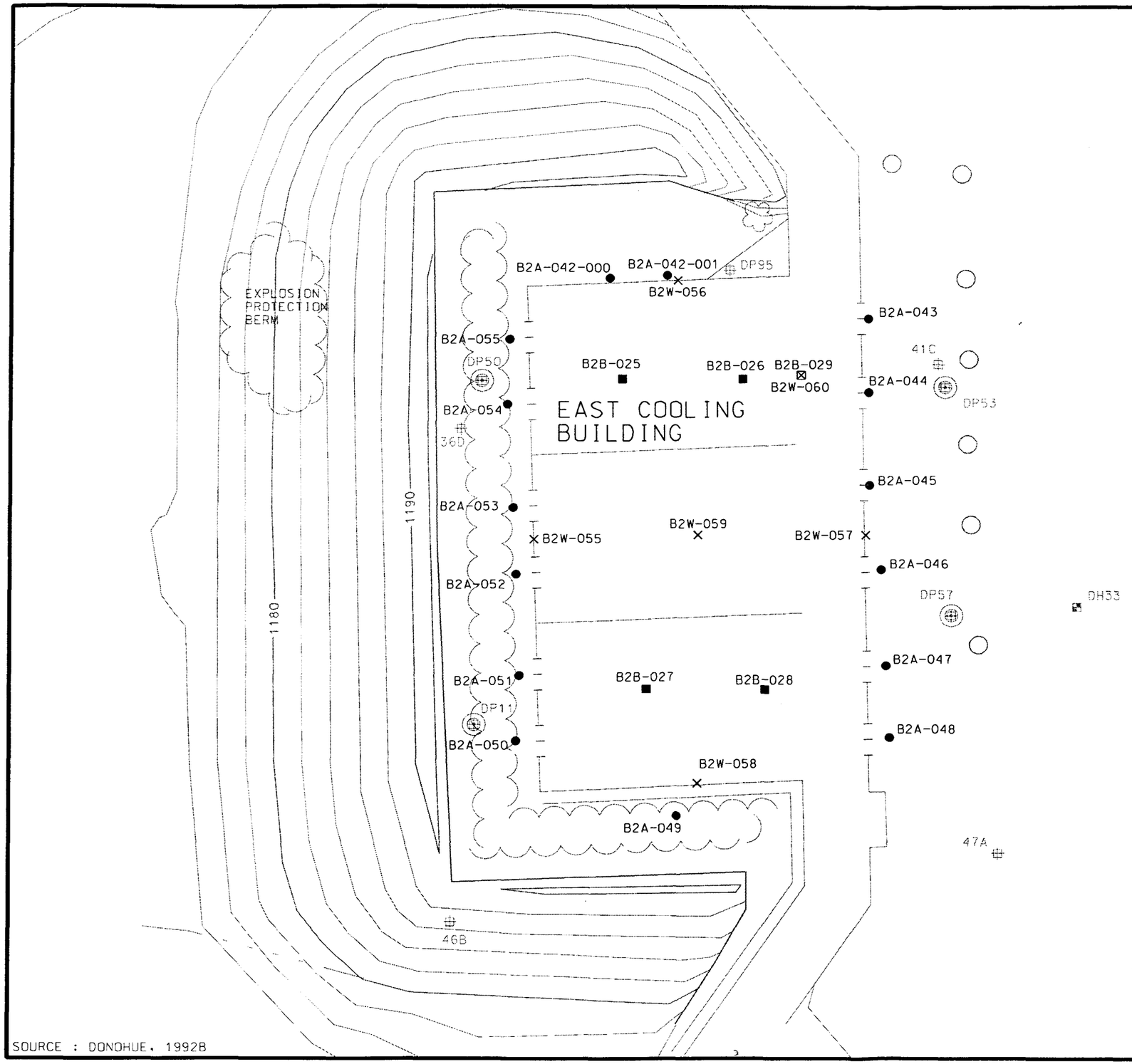
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2 WEST COOLING BUILDING SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-24
Sheet number: 1

MCS FILE: OU3L27



SOURCE : DONOHUE, 1992B

LEGEND:

● B2A-042	ADJACENT SOIL SAMPLE LOCATION
■ B2B-025	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-029/B2W-060	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, × FLOOR) B2W-056	SURFACE WIPE SAMPLE LOCATION
DH33	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
41C	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE EAST COOLING BUILDING:
   B2A-046 AT 2.25FT, B2A-047 AT 2.8FT,
   B2A-048 AT 3.2FT, B2A-049 AT 2.3FT,
   B2A-050 AT 3.2FT, B2A-051 AT 2.7FT,
   B2A-052 AT 2.5FT, B2A-053 AT 2.7FT,
   B2A-054 AT 3.2FT, B2A-055 AT 2.7FT.
2. ADJACENT SAMPLE B2A-042 WAS SPLIT DUE TO CONCRETE. THE 0-6 INCH BGS SAMPLE WAS COLLECTED BUT AUGER REFUSAL DUE TO CONCRETE WAS ENCOUNTERED BEFORE 1 FOOT BGS. THE SAMPLE LOCATION WAS THEREFORE OFFSET TO THE EAST AND THE 1-2 FOOT BGS SAMPLE WAS COLLECTED.
3. CONTOUR INTERVAL IS 2 FT.

N

20 0 20 40
SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
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Checked by: B.C.O.
Submitted by: RAN

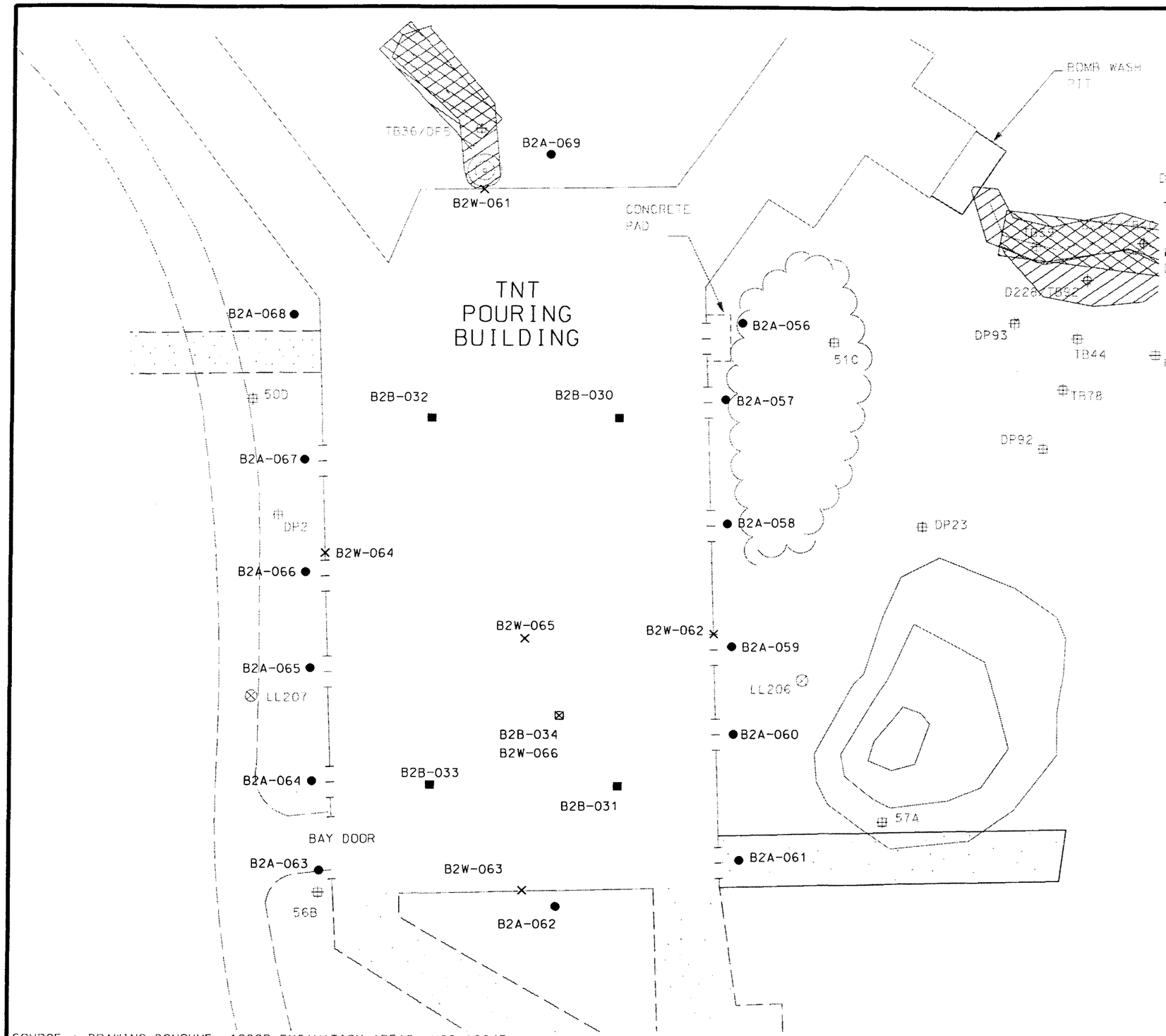
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
EAST
COOLING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-25
Sheet number: 1

MCS FILE: OU3L26



SOURCE : DRAWING-DONOHUE, 1992B;EXCAVATION AREAS, WCC 1994E

LEGEND:

● B2A-056	ADJACENT SOIL SAMPLE LOCATION
■ B2B-030	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-034/B2W-066	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, × FLOOR) B2W-061	SURFACE WIPE SAMPLE LOCATION
DH32	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
D227	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
TB44	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
LL206	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
	OU1 EXCAVATION AREA
	OU1 AND OU2 EXCAVATION AREAS

NOTES:

1. ALL ADJACENT SOIL SAMPLES WERE COLLECTED 2 FT FROM THE EXTERIOR WALLS OF THE TNT POURING AND TNT SCREENING BUILDINGS WITH THE FOLLOWING EXCEPTIONS:
   B2A-056 AT 5.0FT, B2A-061 AT 2.5FT,
   B2A-062 AT 1.5FT, B2A-063 AT 2.5FT,
   B2A-068 AT 1.5FT, B2A-069 AT 6.0FT

N

20 0 20 40
SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
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Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
TNT POURING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-26
Sheet number: 1

MCS FILE: OU3L29

LEGEND:

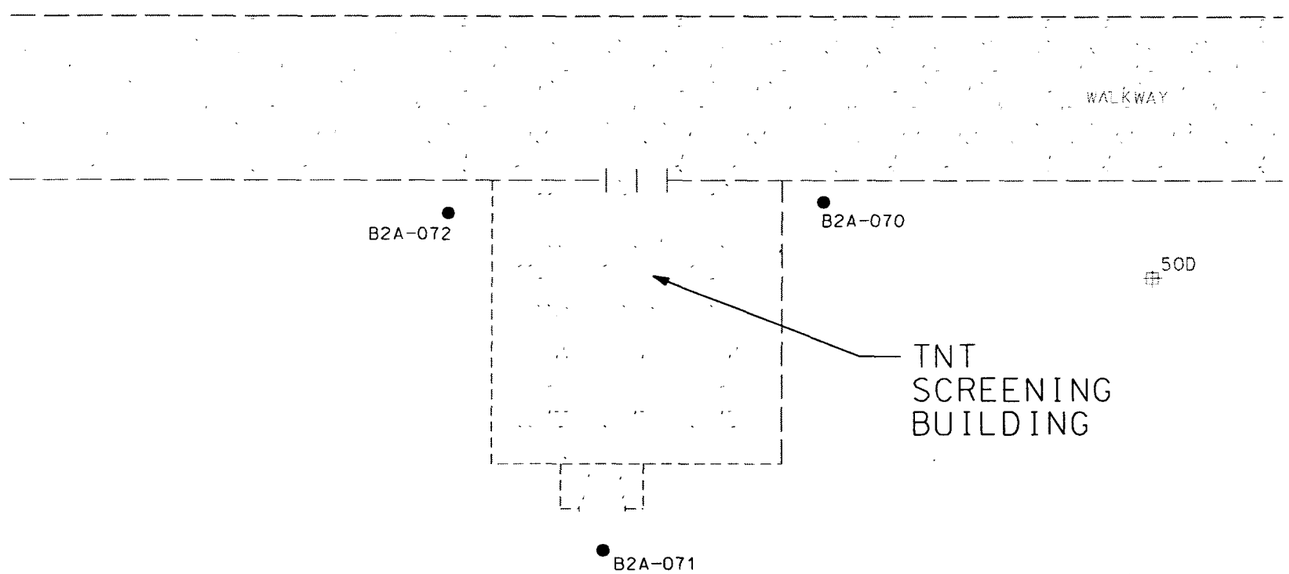
● B2A-070 — ADJACENT SOIL SAMPLE LOCATION

⊞ DP75 — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ADJACENT SOIL SAMPLE B2A-073 WAS NOT COLLECTED DUE TO CONCRETE.
2. BENEATH SOIL SAMPLES B2B-035 AND B2B-036 AND SURFACE WIPE SAMPLES B2W-067 TO B2W-072 WERE NOT COLLECTED BECAUSE THE TNT SCREENING BUILDING NO LONGER EXISTS.

now collecting in phase II



N

10 0 10 20

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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CORPS OF ENGINEERS
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Checked by: B.C.O.

Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
TNT SCREENING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET

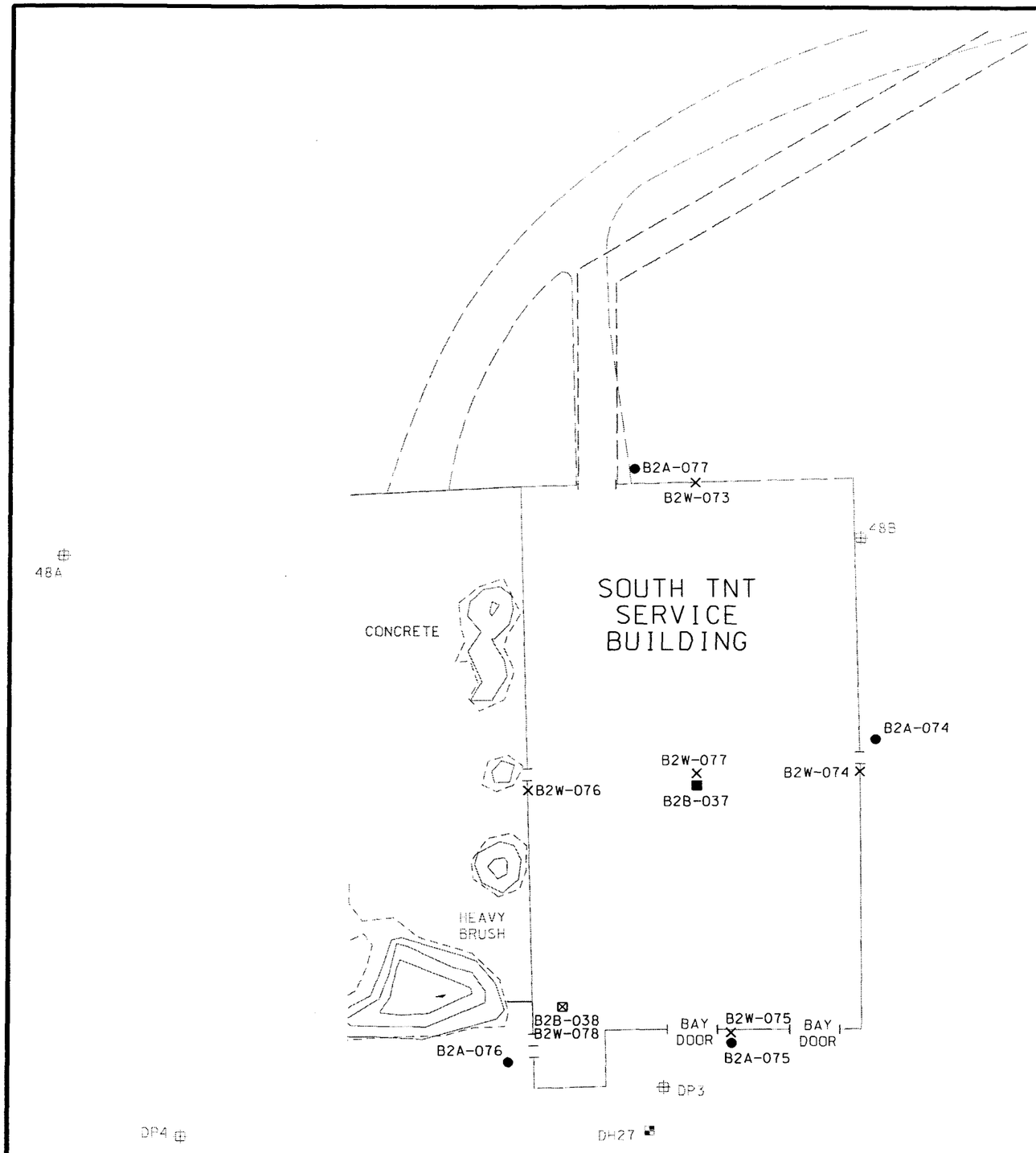
Date: FEBRUARY, 1996

Dwg. No.: 5-27

Sheet number: 1

MCS FILE: OU3L28

SOURCE : FIELD MEASUREMENTS



SOURCE : FIELD MEASUREMENTS

LEGEND:

● B2A-074	ADJACENT SOIL SAMPLE LOCATION
■ B2B-037	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-038/B2W-078	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B2W-073	SURFACE WIPE SAMPLE LOCATION
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE SOUTH TNT SERVICE BUILDING:
   B2A-074 AT 3.0FT, B2A-075 AT 2.0FT, B2A-076 AT 5.5FT.

N

30 0 30 60

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

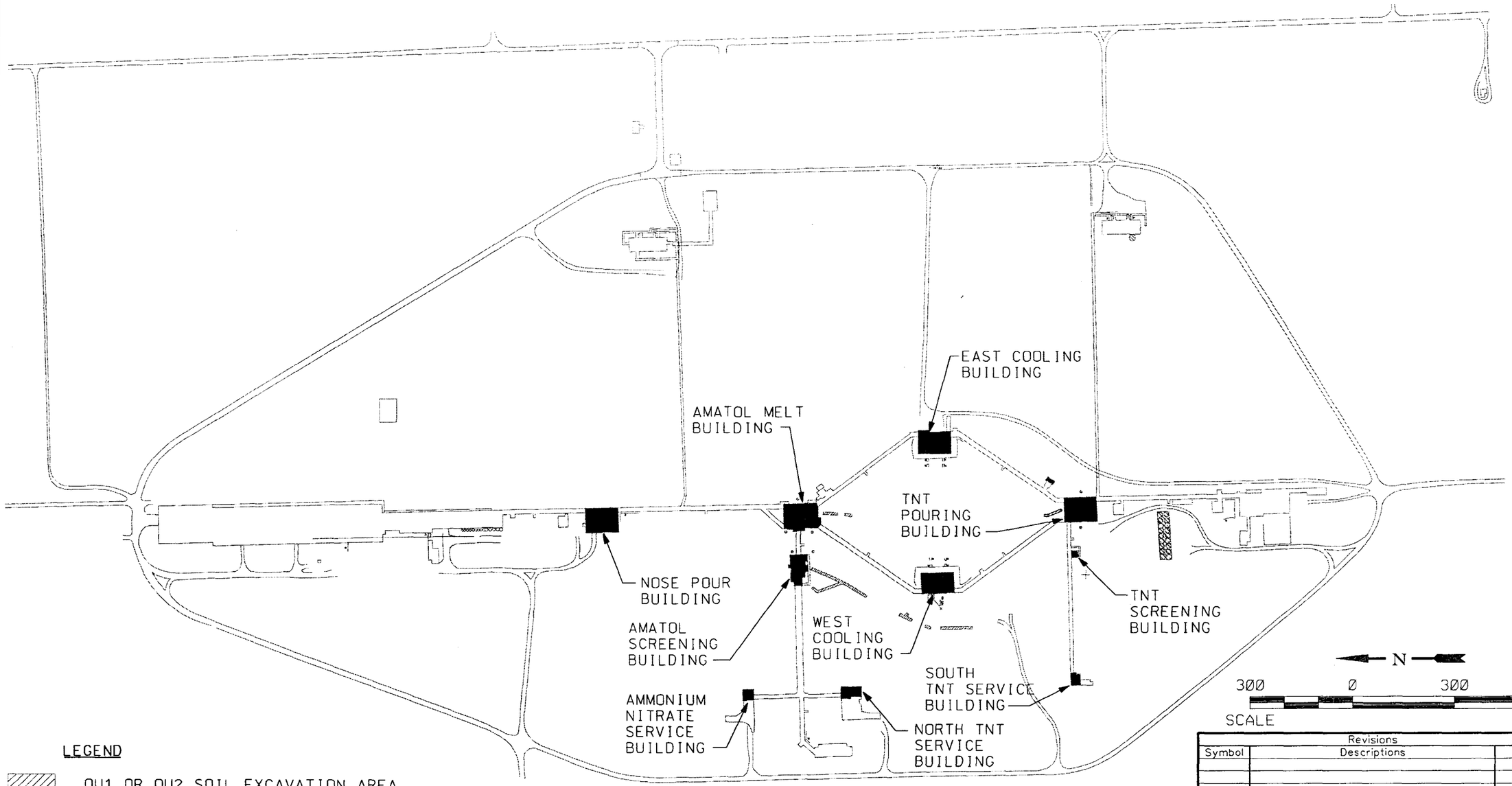
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
SOUTH TNT
SERVICE BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 30 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-28
Sheet number: 1

MCS FILE: OU3L20



LEGEND

OU1 OR OU2 SOIL EXCAVATION AREA

ORIGINAL BOMB PRODUCTION BUILDING LOCATIONS

SOURCES : DRAWING-DONOHUE, 1992B;EXCAVATION AREAS, WCC 1994E

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

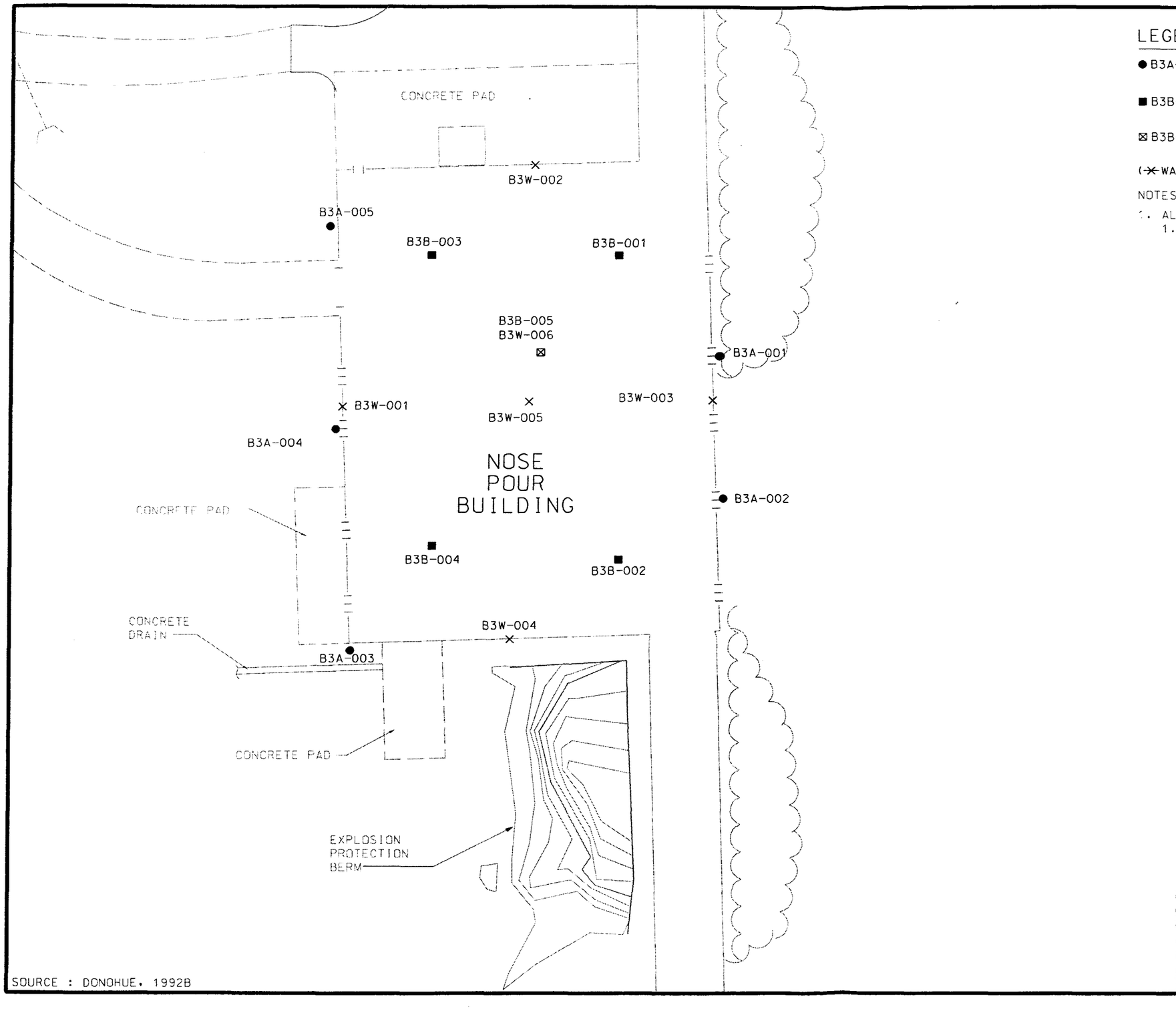
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

BOMB PRODUCTION BUILDINGS AT LOAD LINE 3

Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-29
Sheet number: 1

MCS FILE: OU3L3B

B07NE003703-03649



SOURCE : DONOHUE, 1992B

LEGEND:

● B3A-001	ADJACENT SOIL SAMPLE LOCATION
■ B3B-001	BENEATH SOIL SAMPLE LOCATION
⊠ B3B-005/B3W-006	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✳ WALL, × FLOOR) B3W-001	SURFACE WIPE SAMPLE LOCATION

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1.5 FT FROM EXTERIOR WALLS.

N

20 0 20 40

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

Designed by: S.J.F.

Drawn by: T.R.F.

Checked by: B.C.O.

Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
NOSE POUR BUILDING
SAMPLING LOCATIONS

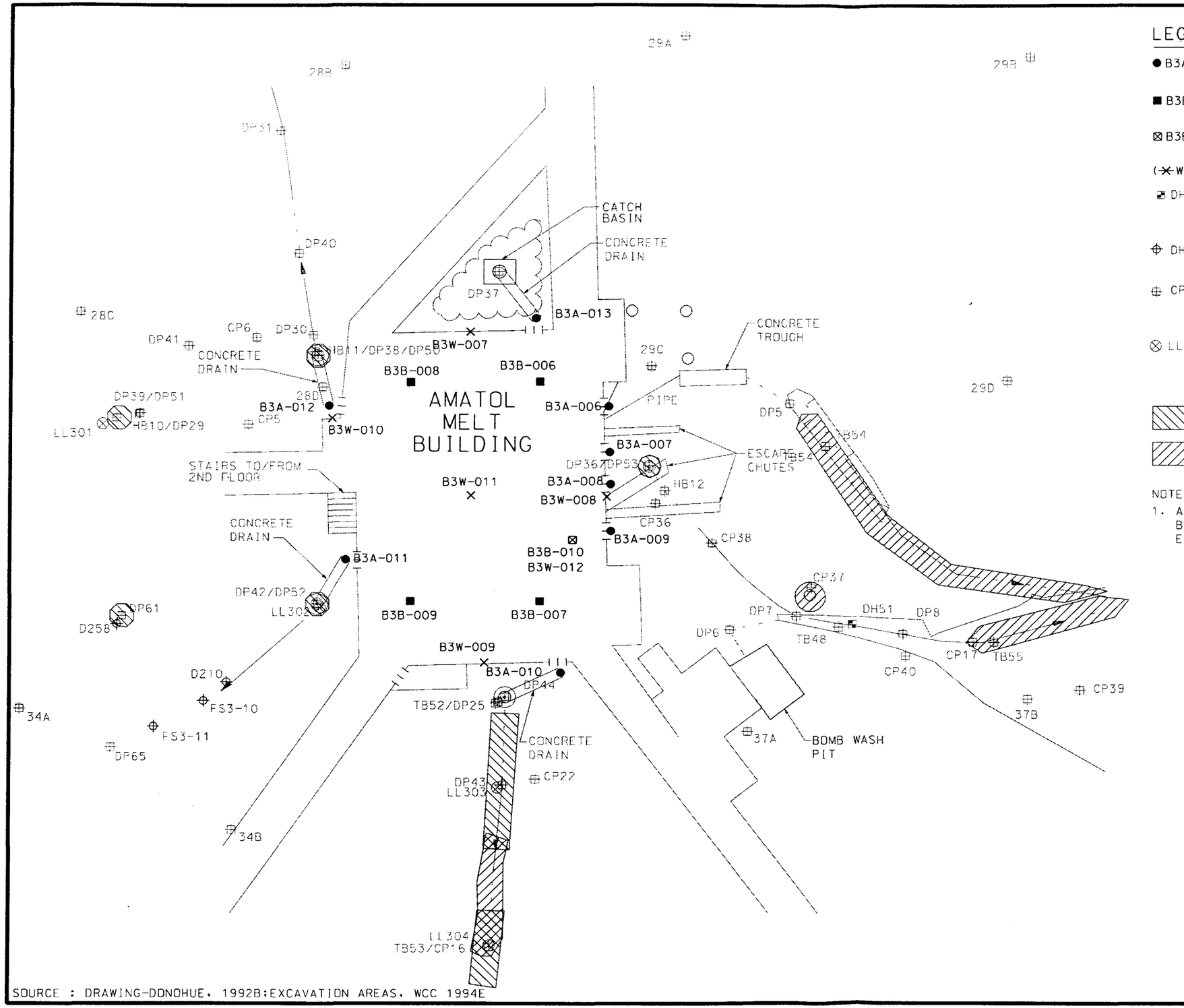
Scale: 1 IN = 20 FEET

Date: FEBRUARY, 1996

Dwg. No.: 5-30

Sheet number: 1

MCS FILE: OU3L31



SOURCE : DRAWING-DONOHUE, 1992B;EXCAVATION AREAS, WCC 1994E

LEGEND:

● B3A-006	ADJACENT SOIL SAMPLE LOCATION
■ B3B-006	BENEATH SOIL SAMPLE LOCATION
⊠ B3B-010/B3W-012	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✳ WALL, × FLOOR) B3W-007	SURFACE WIPE SAMPLE LOCATION
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
DH5	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
⊗ LL302	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
	OU1 EXCAVATION AREA
	OU2 EXCAVATION AREA

NOTES:

1. ALL ADJACENT SOIL SAMPLES TAKEN AT AMATOL MELT BUILDING WERE COLLECTED APPROXIMATELY 1.5 FT FROM EXTERIOR WALLS.

N

30 0 30 60

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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U.S. ARMY ENGINEER DISTRICT
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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

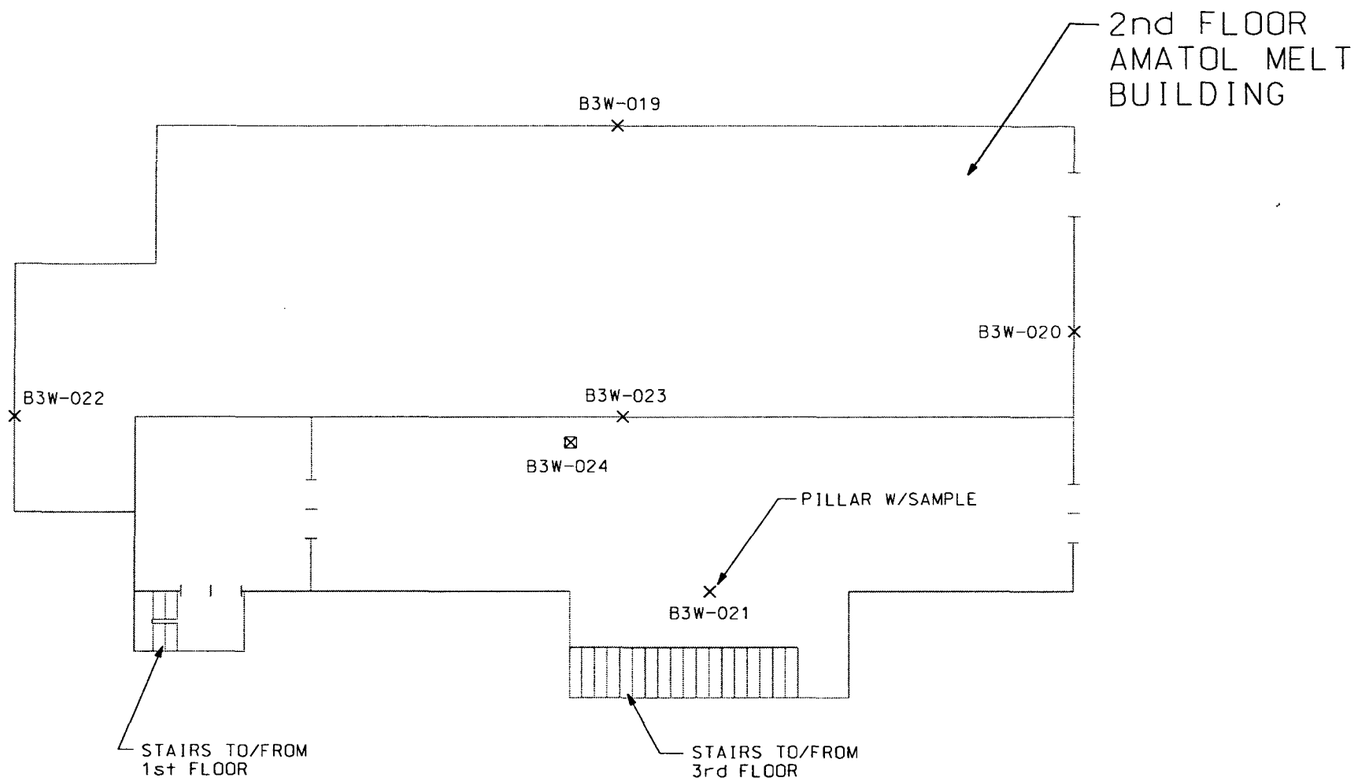
LOAD LINE 3
AMATOL MELT BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 30 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-31
Sheet number: 1

MCS FILE: OU3L32

LEGEND:

⊠ B3W-024	DISCRETIONARY WIPE SAMPLE LOCATION
(✳ WALL, × FLOOR) B3W-019	SURFACE WIPE SAMPLE LOCATION



N

10 0 10 20

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.

Drawn by: P.C.S.

Checked by: B.C.O.

Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
2nd FLOOR
AMATOL MELT BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET

Date: FEBRUARY, 1996

Dwg. No.: 5-32

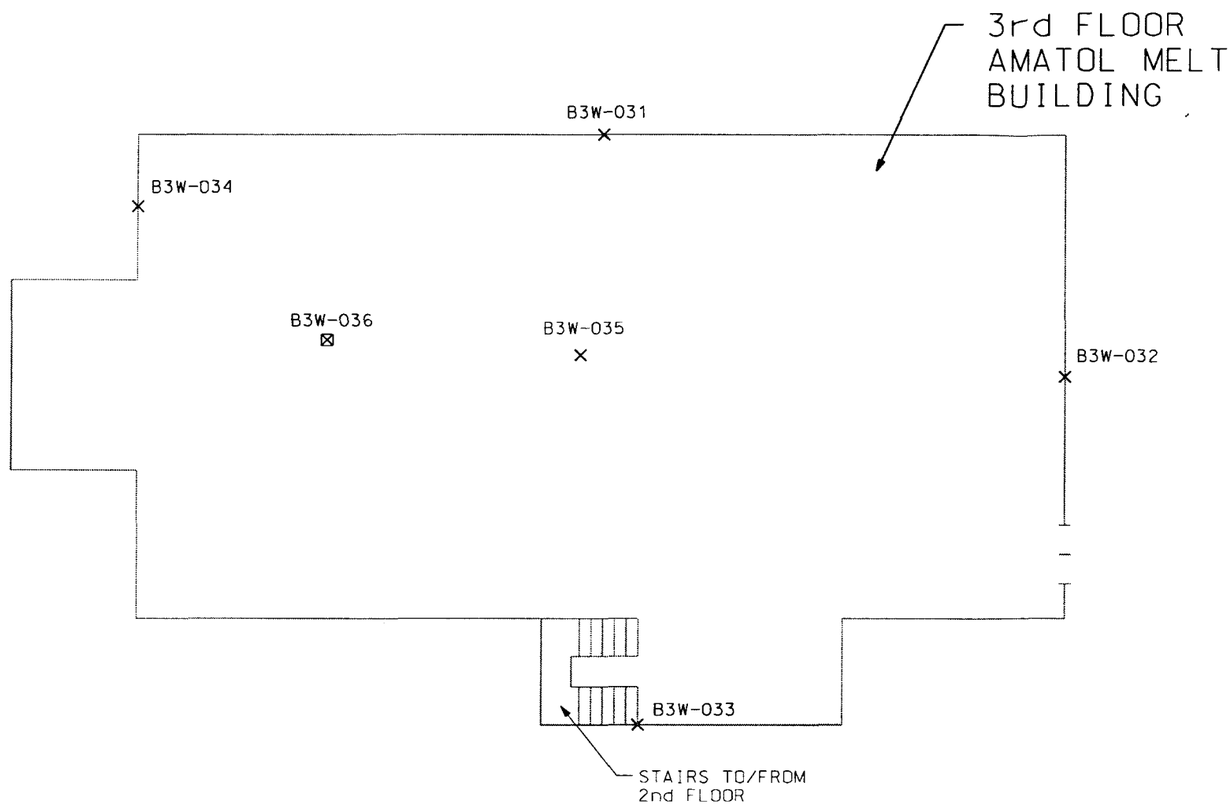
Sheet number: 1

MCS FILE: OU3L322

SOURCE: FIELD MEASUREMENTS

LEGEND:

⊠ B3W-036	DISCRETIONARY WIPE SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B3W-031	SURFACE WIPE SAMPLE LOCATION



N

10 0 10 20
SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

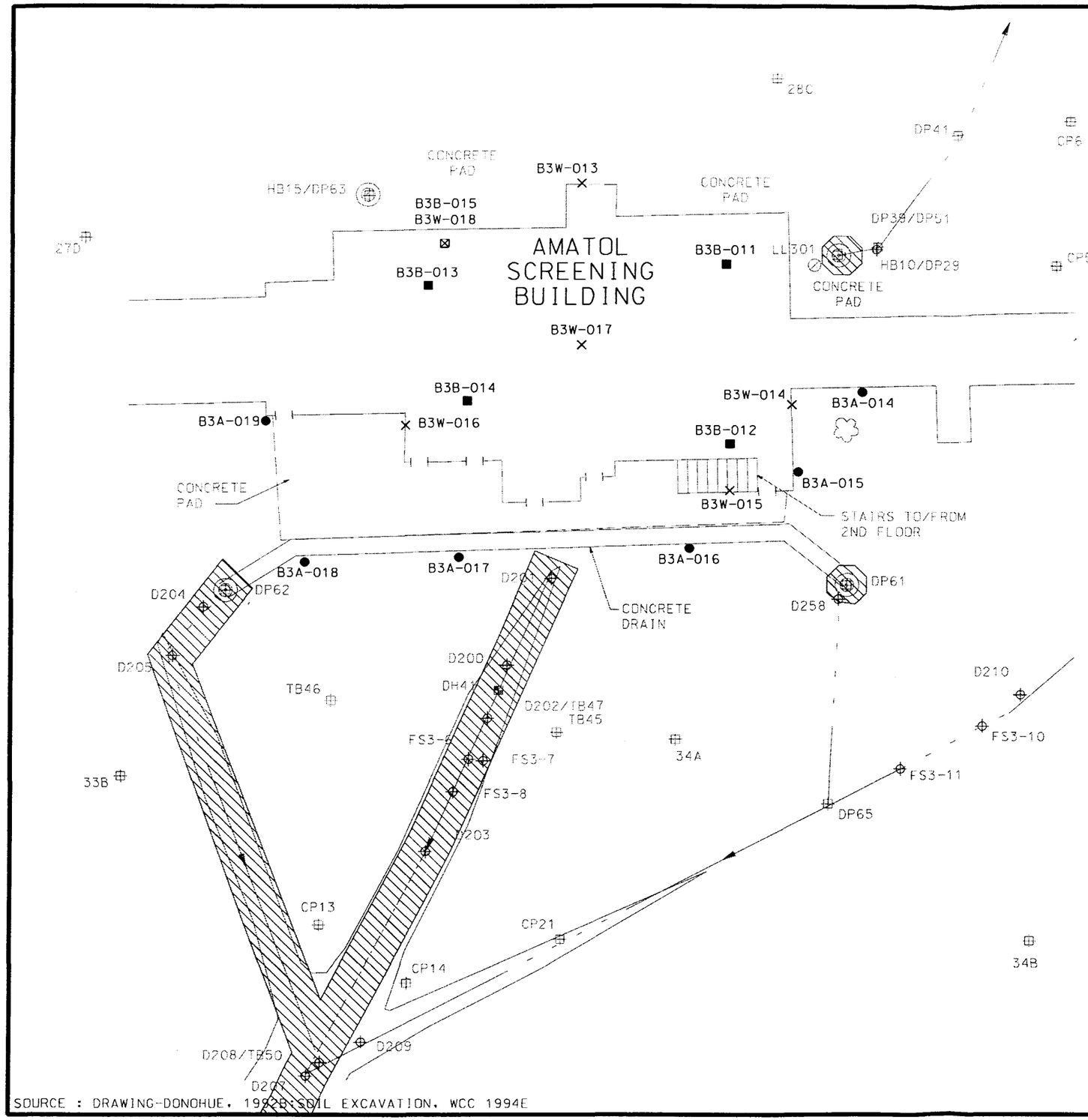
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
3rd FLOOR
AMATOL MELT BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5–33
Sheet number: 1

MCS FILE: OU3L323

SOURCE: FIELD MEASUREMENTS



SOURCE : DRAWING-DONOHUE, 1992B; SOIL EXCAVATION, WCC 1994E

LEGEND:

● B3A-014	ADJACENT SOIL SAMPLE LOCATION
■ B3B-011	BENEATH SOIL SAMPLE LOCATION
⊠ B3B-015/B3W-018	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B3W-013	SURFACE WIPE SAMPLE LOCATION
DH41	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
D200	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
CP5	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
LL301	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
	OU1 EXCAVATION AREA

NOTES:

1. ALL ADJACENT SOIL SAMPLES WERE COLLECTED APPROXIMATELY 1 FT FROM CONCRETE WALKS OR EXTERIOR WALLS.

N

20 0 20 40

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward–Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

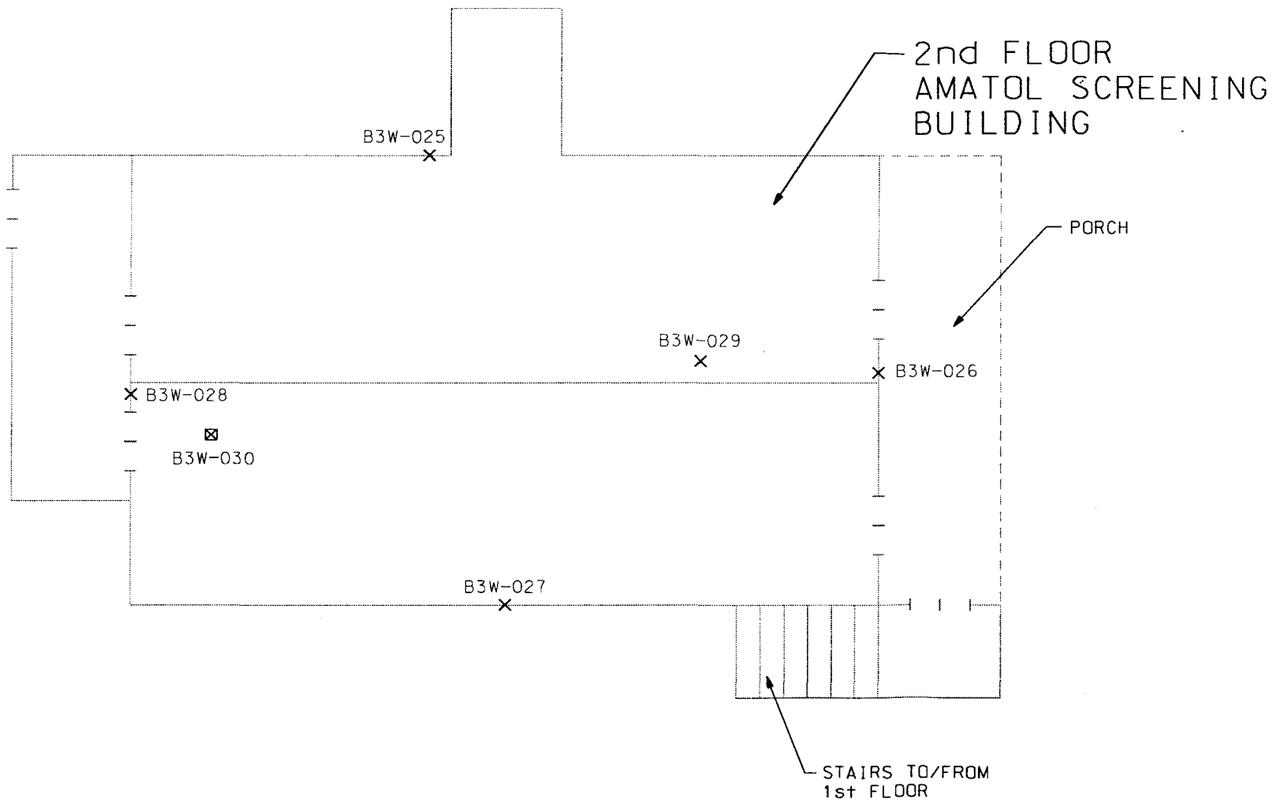
LOAD LINE 3
AMATOL SCREENING BUILDING
SAMPLING LOCATIONS

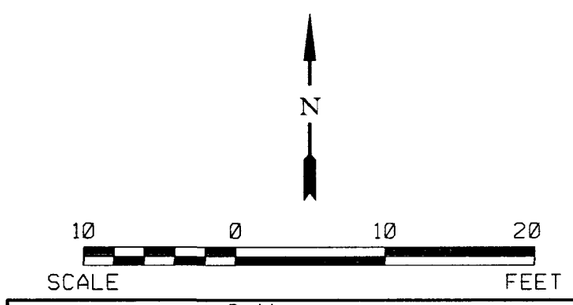
Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-34
Sheet number: 1

MCS FILE: OU3L33

LEGEND:

⊠ B3W-030	DISCRETIONARY WIPE SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B3W-025	SURFACE WIPE SAMPLE LOCATION





SOURCE: FIELD MEASUREMENTS

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward–Clyde Consultants
Overland Park, Kansas

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
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Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

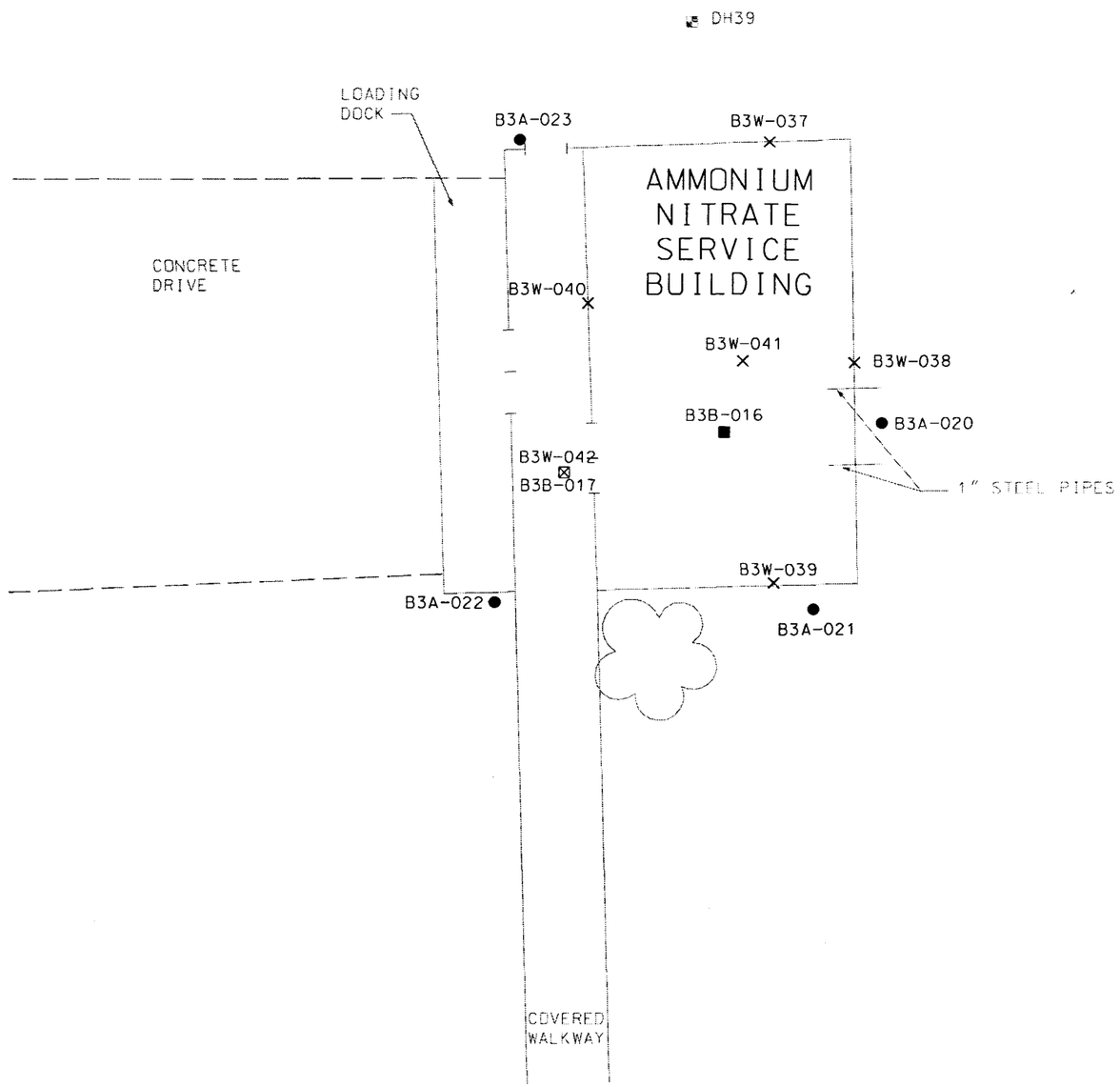
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
2nd FLOOR
AMATOL SCREENING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5–35
Sheet number: 1

MCS FILE: OU3L332

B07NE003703-03655



LEGEND:

● B3A-020	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B3B-016	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B3B-017/B3W-042	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(✕ WALL, × FLOOR) B3W-037	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH39	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)

NOTES:
1. ALL ADJACENT SOIL SAMPLES COLLECTED 1 FT FROM EXTERIOR WALLS.

N

10 0 10 20
SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

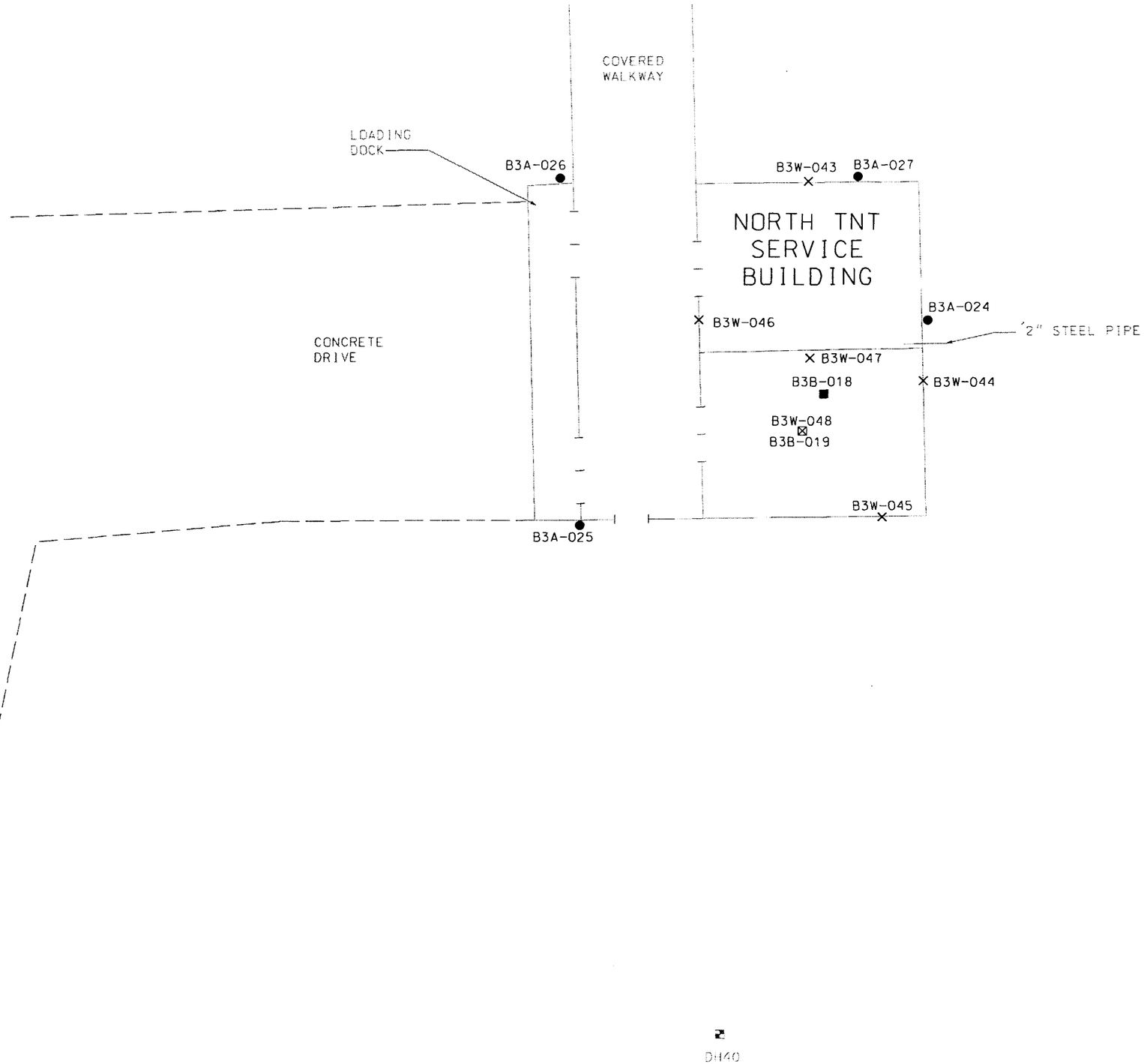
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
AMMONIUM NITRATE SERVICE BUILDING SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-36
Sheet number: 1

MCS FILE: OU3L34

SOURCE : FIELD MEASUREMENTS



LEGEND:

● B3A-024	ADJACENT SOIL SAMPLE LOCATION
■ B3B-018	BENEATH SOIL SAMPLE LOCATION
⊠ B3B-019/B3W-048	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✳ WALL, × FLOOR) B3W-047	SURFACE WIPE SAMPLE LOCATION
DH40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
26D	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:
1. ALL ADJACENT SOIL SAMPLES COLLECTED 1 FT FROM EXTERIOR WALLS.

N

10 0 10 20
SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

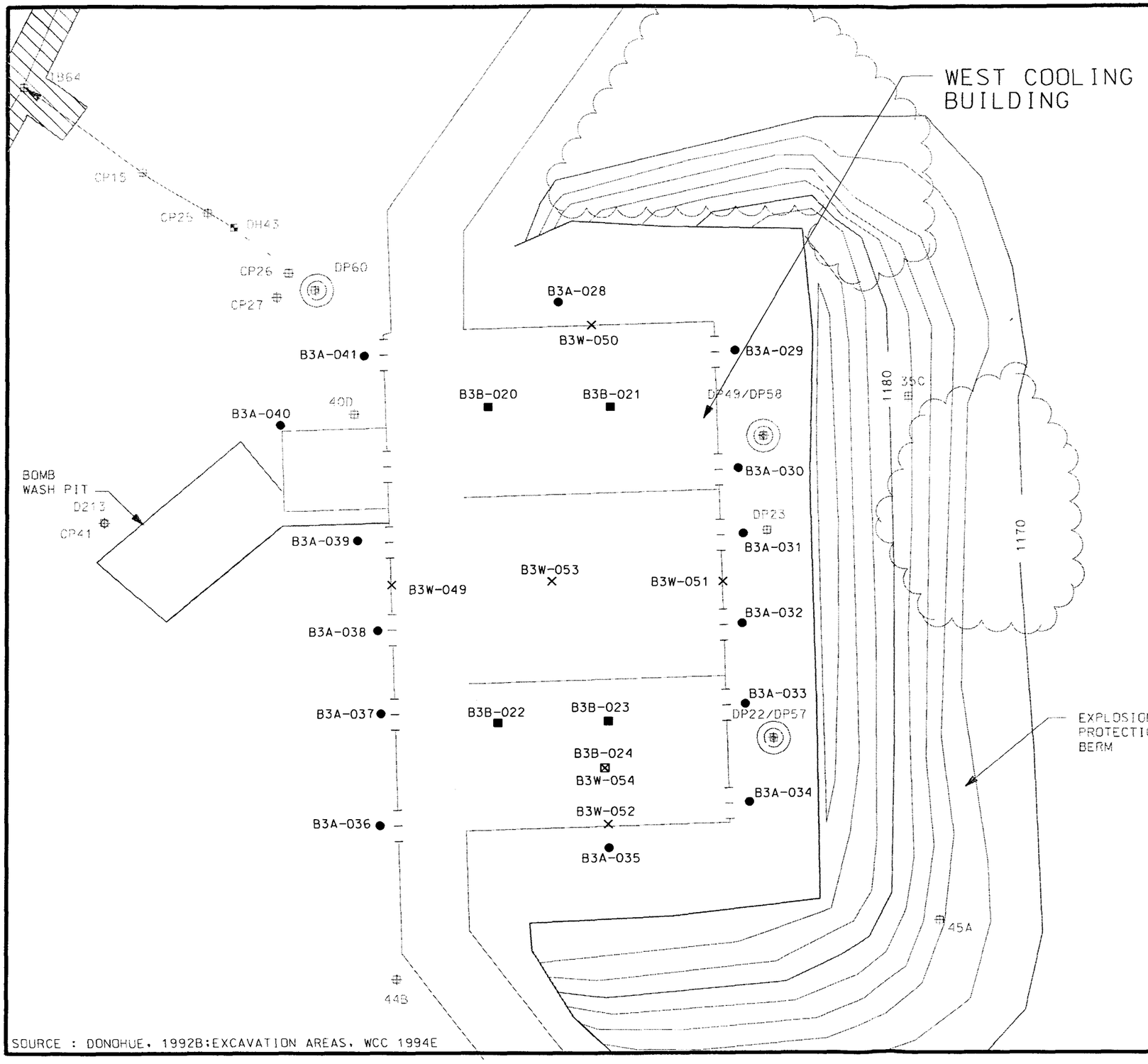
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
NORTH TNT
SERVICE BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-37
Sheet number: 1

MCS FILE: OU3L35

SOURCE : DONOHUE, 1992B



SOURCE : DONOHUE, 1992B;EXCAVATION AREAS, WCC 1994E

LEGEND:

● B3A-028	ADJACENT SOIL SAMPLE LOCATION
■ B3B-020	BENEATH SOIL SAMPLE LOCATION
⊠ B3B-024/B3W-049	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
DH43	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
35C	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
D213	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
(✳ WALL, × FLOOR) B3W-052	SURFACE WIPE SAMPLE LOCATION
▨	OU1 EXCAVATION AREA
	INDEX CONTOUR INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE WEST COOLING BUILDING:
   B3A-028 AT 3.9FT, B3A-029 AT 2.9FT,
   B3A-030 AT 2.9FT, B3A-031 AT 3.5FT,
   B3A-032 AT 2.8FT, B3A-033 AT 2.8FT,
   B3A-034 AT 3.0FT, B3A-035 AT 3.3FT,
   B3A-036 AT 2.7FT, B3A-037 AT 1.9FT,
   B3A-038 AT 2.0FT, B3A-039 AT 5.25FT,
   B3A-040 AT 1.9FT, B3A-041 AT 2.9FT

N

20 0 20 40
SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
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KANSAS CITY, MISSOURI

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Checked by: B.C.O.
Submitted by: RAN

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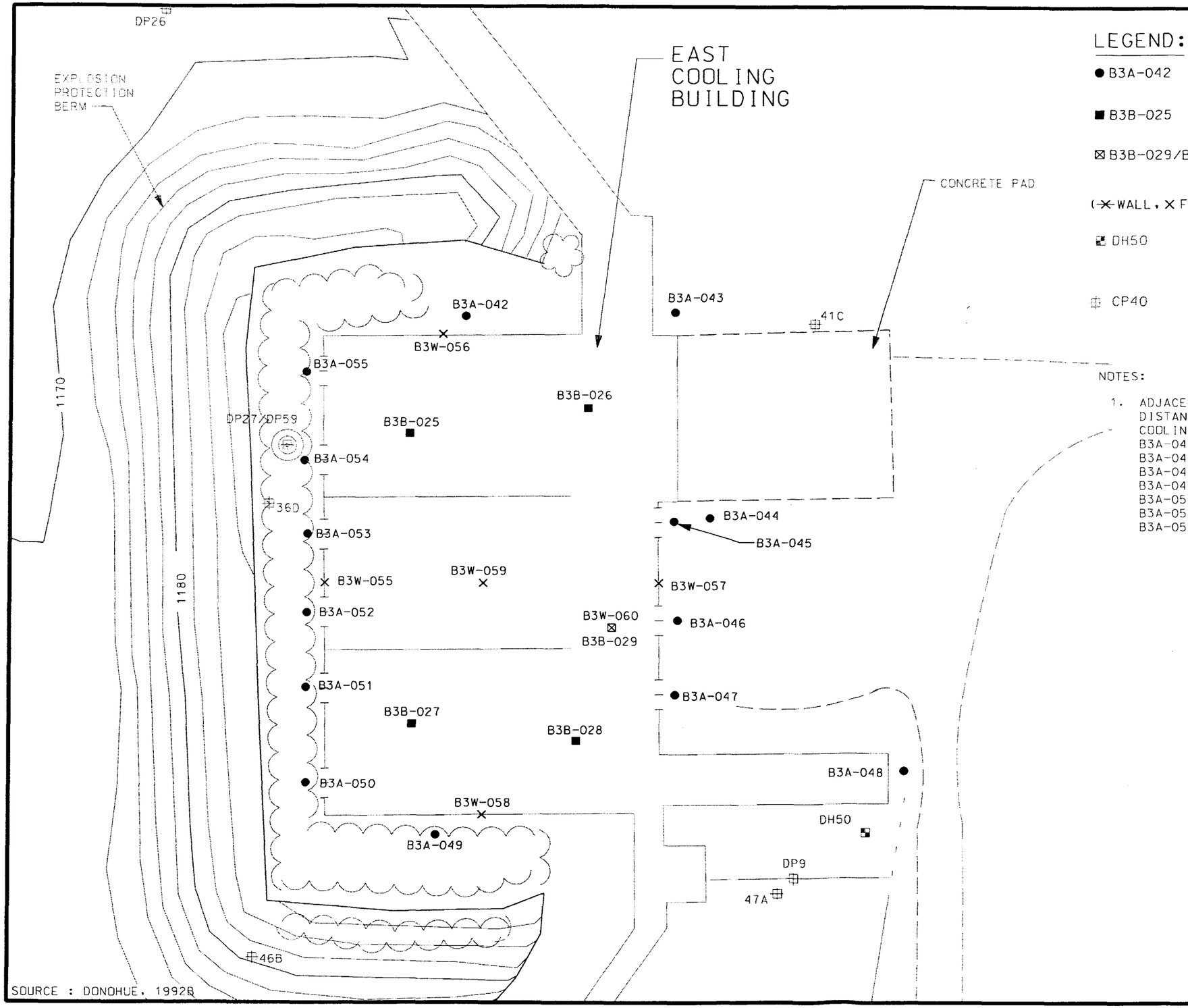
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
WEST COOLING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-38
Sheet number: 1

MCS FILE: OU3L37



SOURCE : DONOHUE, 1992B

LEGEND:

● B3A-042	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B3B-025	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B3B-029/B3W-055	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(✕ WALL, ✕ FLOOR) B3W-055	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH50	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE EAST COOLING BUILDING:
   B3A-042 AT 3.0FT, B3A-043 AT 3.8FT,
   B3A-044 AT 3.0FT, B3A-045 AT 2.25FT,
   B3A-046 AT 2.8FT, B3A-047 AT 2.25FT,
   B3A-048 AT 2.2FT, B3A-049 AT 3.2FT,
   B3A-050 AT 3.2FT, B3A-051 AT 3.1FT,
   B3A-052 AT 2.7FT, B3A-053 AT 2.2FT,
   B3A-054 AT 3.0FT, B3A-055 AT 2.5FT

N

20 0 20 40

SCALE FEET

Revisions			
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KANSAS CITY, MISSOURI

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Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

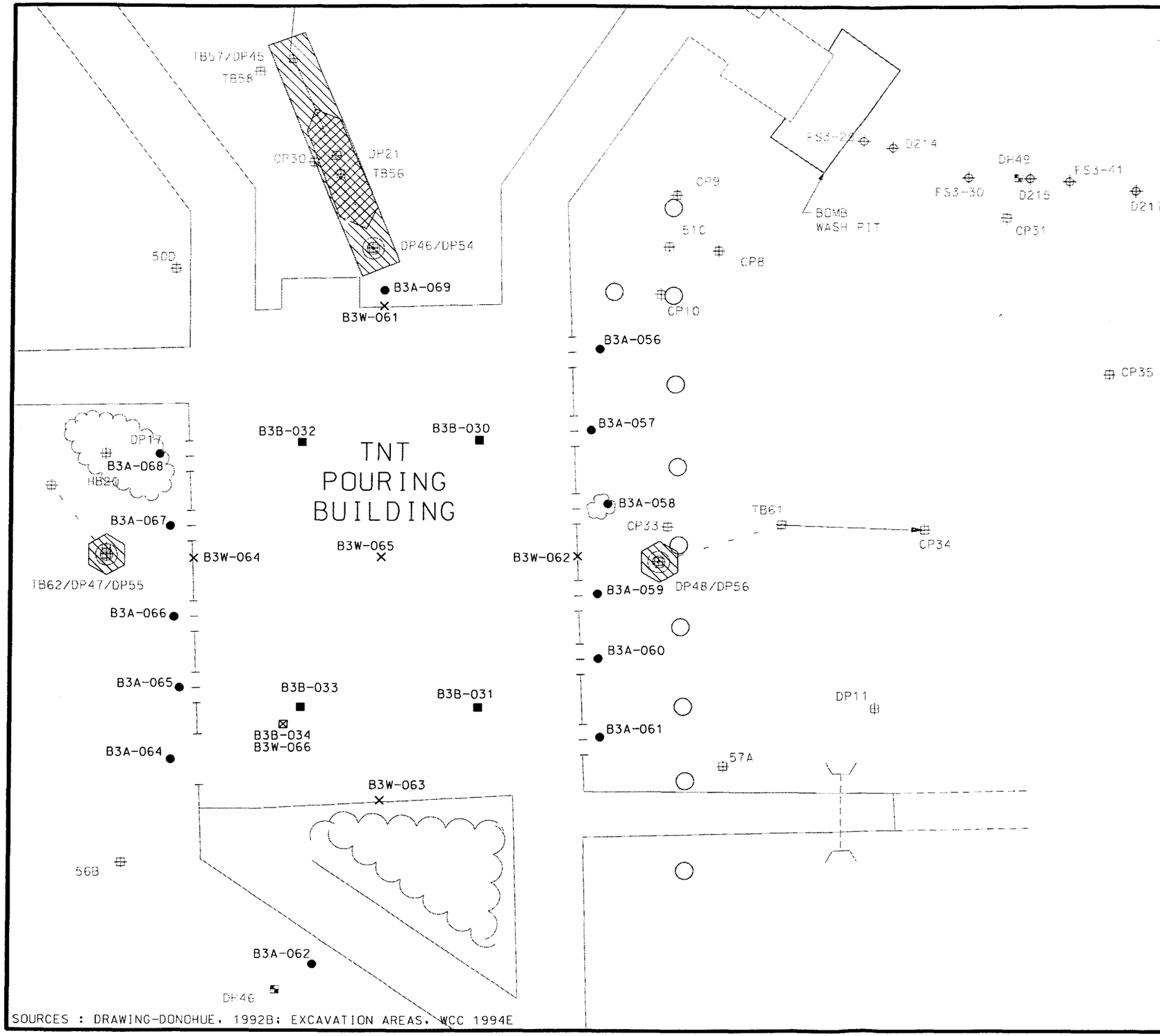
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
EAST COOLING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-39
Sheet number: 1

MCS FILE: OU3L36

B07NE003703-03659



SOURCES : DRAWING-DONOHUE, 1992B; EXCAVATION AREAS, WCC 1994E

LEGEND:

● B3A-056	ADJACENT SOIL SAMPLE LOCATION
■ B3B-030	BENEATH SOIL SAMPLE LOCATION
⊠ B3B-034/B3W-066	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, ✕ FLOOR B3W-061	SURFACE WIPE SAMPLE LOCATION
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
DH5	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	OU1 EXCAVATION AREA
	OU1 AND OU2 EXCAVATION AREAS

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE TNT POURING BUILDING:
   B3A-056 AT 4.5FT, B3A-057 AT 2.5FT,
   B3A-058 AT 5.0FT, B3A-059 AT 2.5FT,
   B3A-060 AT 2.5FT, B3A-061 AT 2.5FT,
   B3A-062 AT 4.0FT, B3A-064 AT 4.5FT,
   B3A-065 AT 2.5FT, B3A-066 AT 3.0FT,
   B3A-067 AT 3.0FT, B3A-068 AT 5.0FT,
   B3A-069 AT 2.5FT
2. ADJACENT SOIL SAMPLE B3A-063 WAS NOT COLLECTED DUE TO CONCRETE DEBRIS AT SAMPLING LOCATION.

N

20 0 20 40

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

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Submitted by: RAN

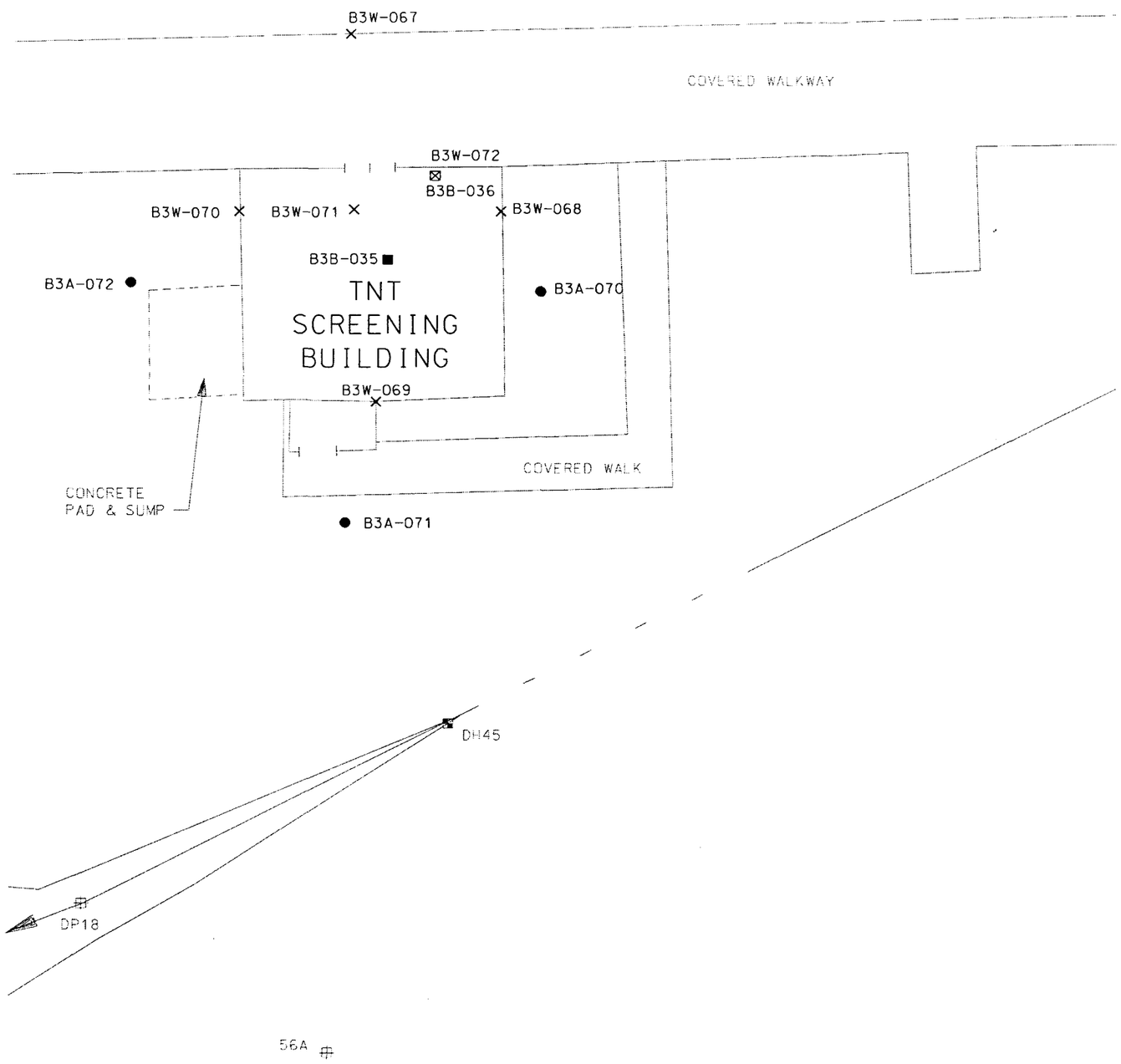
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
TNT POURING
BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-40
Sheet number: 1

MCS FILE: OU3L39



SOURCE : DONOHUE, 1992B

LEGEND:

● B3A-070	ADJACENT SOIL SAMPLE LOCATION
■ B3B-035	BENEATH SOIL SAMPLE LOCATION
⊠ B3B-036/B3W-072	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(X WALL, X FLOOR B3W-067	SURFACE WIPE SAMPLE LOCATION
DH45	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
56A	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE TNT SCREENING BUILDING: B3A-070 AT 2.0FT, B3A-071 AT 5.0FT, B3A-072 AT 9.5FT
2. ADJACENT SOIL SAMPLE B3A-073 WAS NOT COLLECTED DUE TO CONCRETE PAD AT SAMPLE LOCATION.

N

10 0 10 20

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
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Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

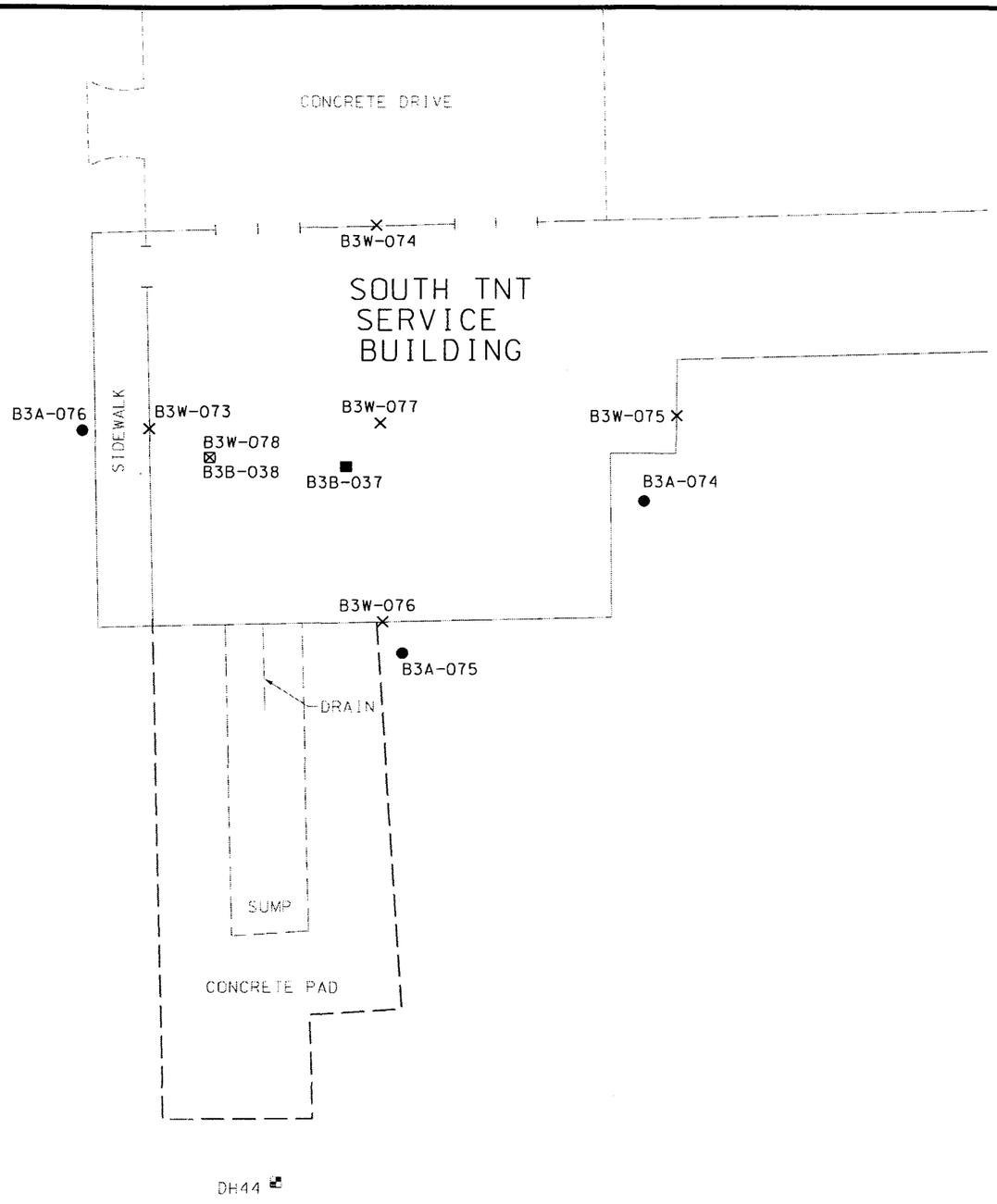
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
TNT SCREENING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-41
Sheet number: 1

MCS FILE: OU3L38

B07NE003703-03661



SOURCE : DONOHUE, 1992B

LEGEND:

● B3A-074	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B3B-037	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B3B-038/B3W-078	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(✕ WALL, × FLOOR) B3W-073	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH44	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE SOUTH TNT SERVICE BUILDING:
   B3A-074 AT 2.0FT, B3A-075 AT 2.0FT,
   B3A-076 AT 4.5FT
2. ADJACENT SOIL SAMPLE B3A-077 NOT COLLECTED DUE TO CONCRETE PAD AT SAMPLING LOCATION.

N

10 0 10 20

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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KANSAS CITY, MISSOURI

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Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
SOUTH TNT SERVICE BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-42
Sheet number: 1

MCS FILE: OU3L30

EAST COOLING BUILDING

AMATOL MELT BUILDING

NOSE POUR BUILDING

TNT POURING BUILDING

AMATOL SCREENING BUILDING

NORTH TNT SERVICE BUILDING

WEST COOLING BUILDING

TNT SCREENING BUILDING

AMMONIUM NITRATE SERVICE BUILDING

SOUTH TNT SERVICE BUILDING

N

300 0 300 600

SCALE FEET

LEGEND

ORIGINAL BOMB PRODUCTION BUILDING LOCATIONS

OU1 OR OU2 SOIL EXCAVATION AREA

SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.

Drawn by: P.C.S.

Checked by: B.C.O.

Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

BOMB PRODUCTION BUILDINGS AT LOAD LINE 4

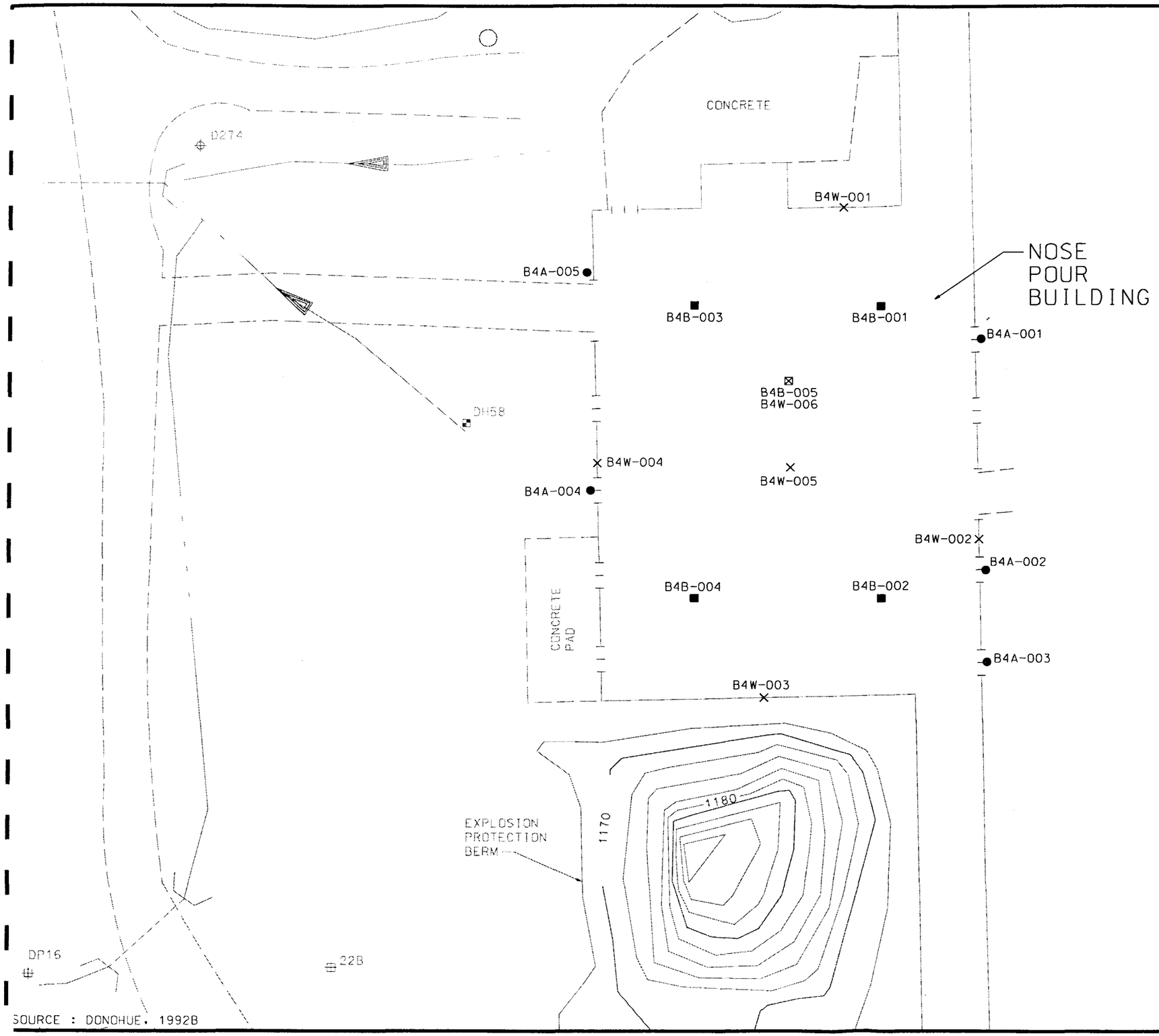
Scale: 1 IN = 300 FEET

Date: FEBRUARY, 1996

Dwg. No.: 5-43

Sheet number: 1

MCS FILE: OU3L4B



SOURCE : DONOHUE, 1992B

LEGEND:

● B4A-001	ADJACENT SOIL SAMPLE LOCATION
■ B4B-001	BENEATH SOIL SAMPLE LOCATION
⊠ B4B-005/B4W-006	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B4W-001	SURFACE WIPE SAMPLE LOCATION
DH58	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
D274	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
22B	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1.5 FT FROM THE EXTERIOR WALLS OF THE AMATOL MELT BUILDING.

N

20 0 20 40

SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

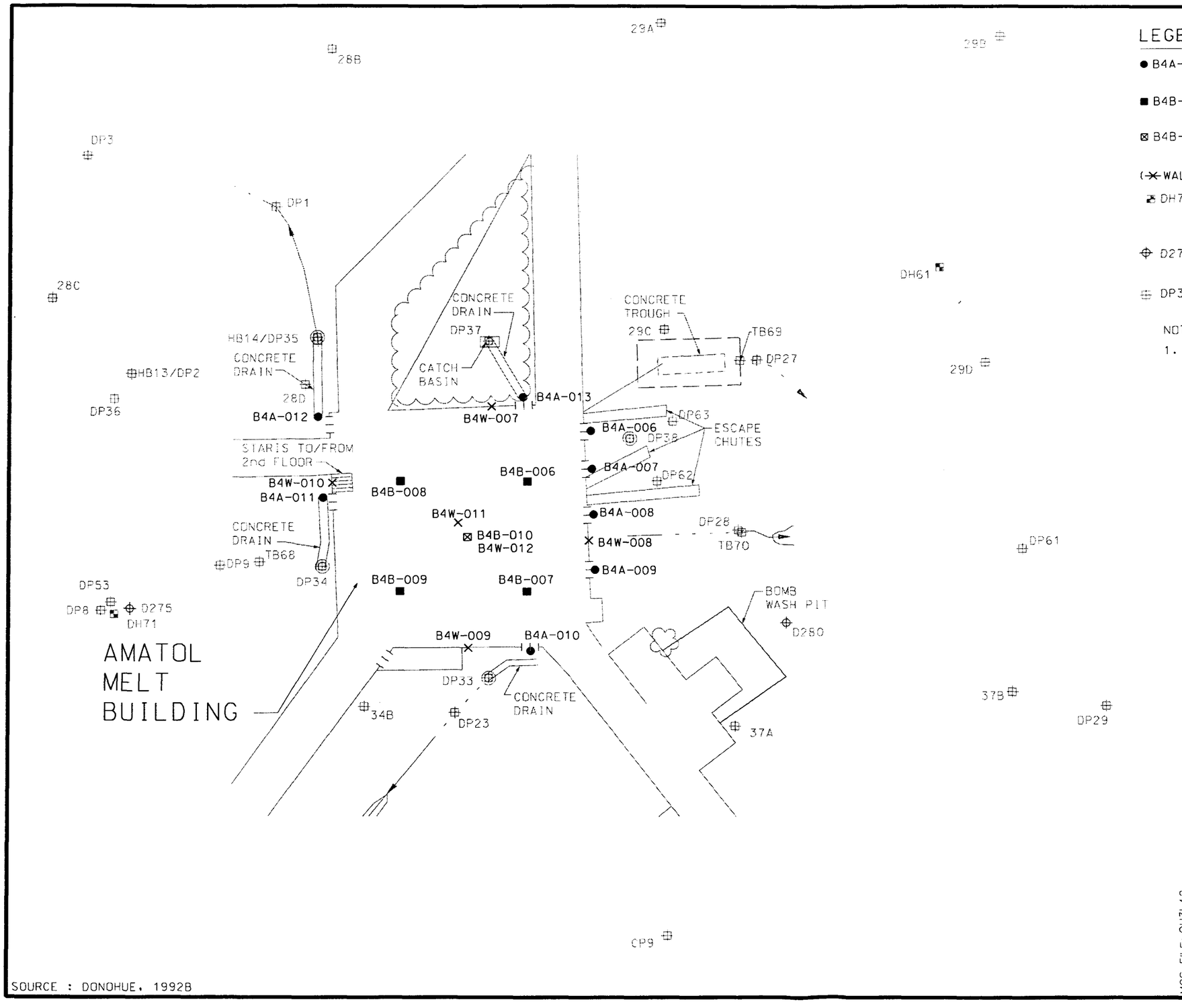
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
NOSE POURING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN - 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-44
Sheet number: 1

MCS FILE: OU3L41



SOURCE : DONOHUE, 1992B

LEGEND:

● B4A-006	ADJACENT SOIL SAMPLE LOCATION
■ B4B-006	BENEATH SOIL SAMPLE LOCATION
⊠ B4B-010/B4W-012	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✳ WALL, × FLOOR) B4W-007	SURFACE WIPE SAMPLE LOCATION
DH71	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
D275	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
DP36	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1.5 FT FROM THE EXTERIOR WALLS OF THE AMATOL MELT BUILDING.

N

30 0 30 60

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

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Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
AMATOL MELT BUILDING
SAMPLING LOCATIONS

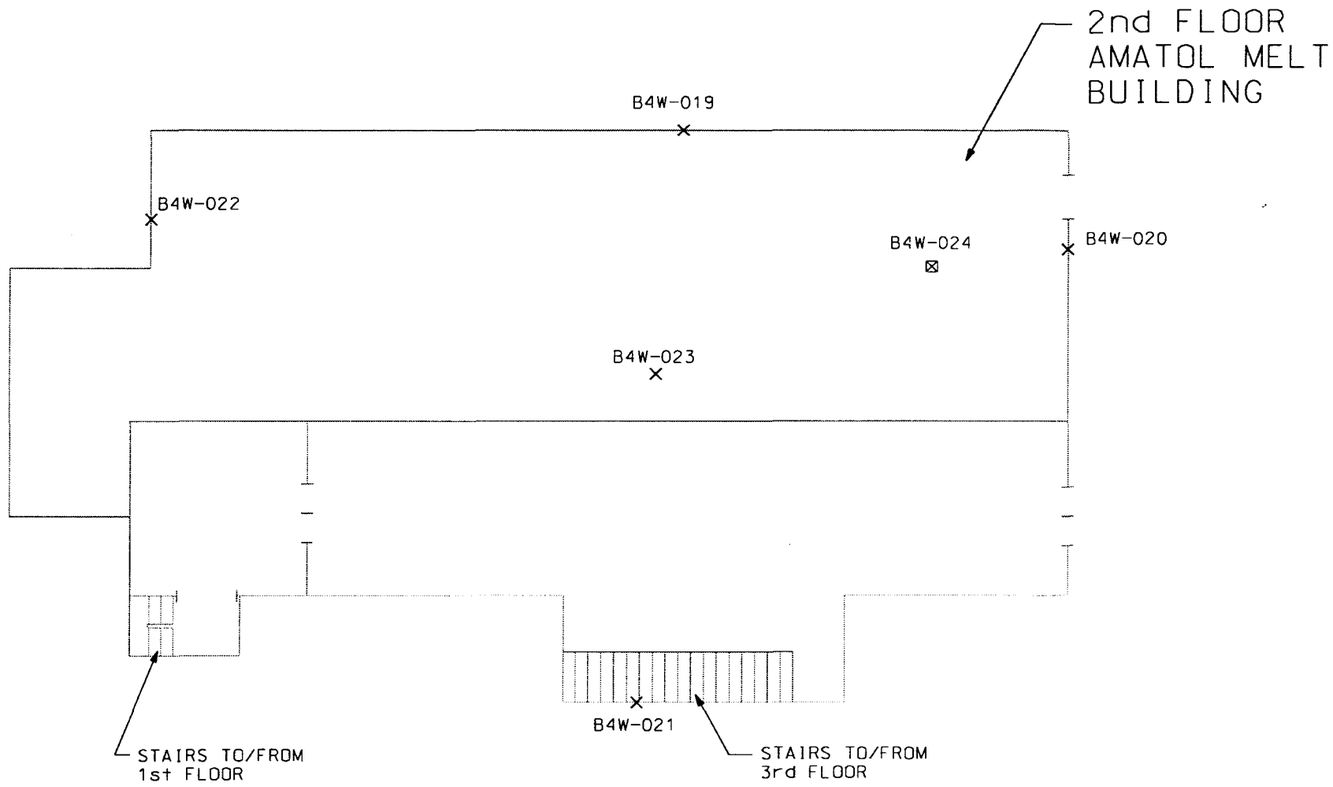
Scale: 1 IN = 30 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-45
Sheet number: 1

MCS FILE: OU3L42

LEGEND:

⊠ B4W-024 — DISCRETIONARY WIPE SAMPLE LOCATION

(✕ WALL, ✕ FLOOR) B4W-019 — SURFACE WIPE SAMPLE LOCATION



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SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.

Drawn by: P.C.S.

Checked by: B.C.O.

Submitted by: RAP

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
2nd FLOOR
AMATOL MELT BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET

Date: FEBRUARY, 1996

Dwg. No.: 5-46

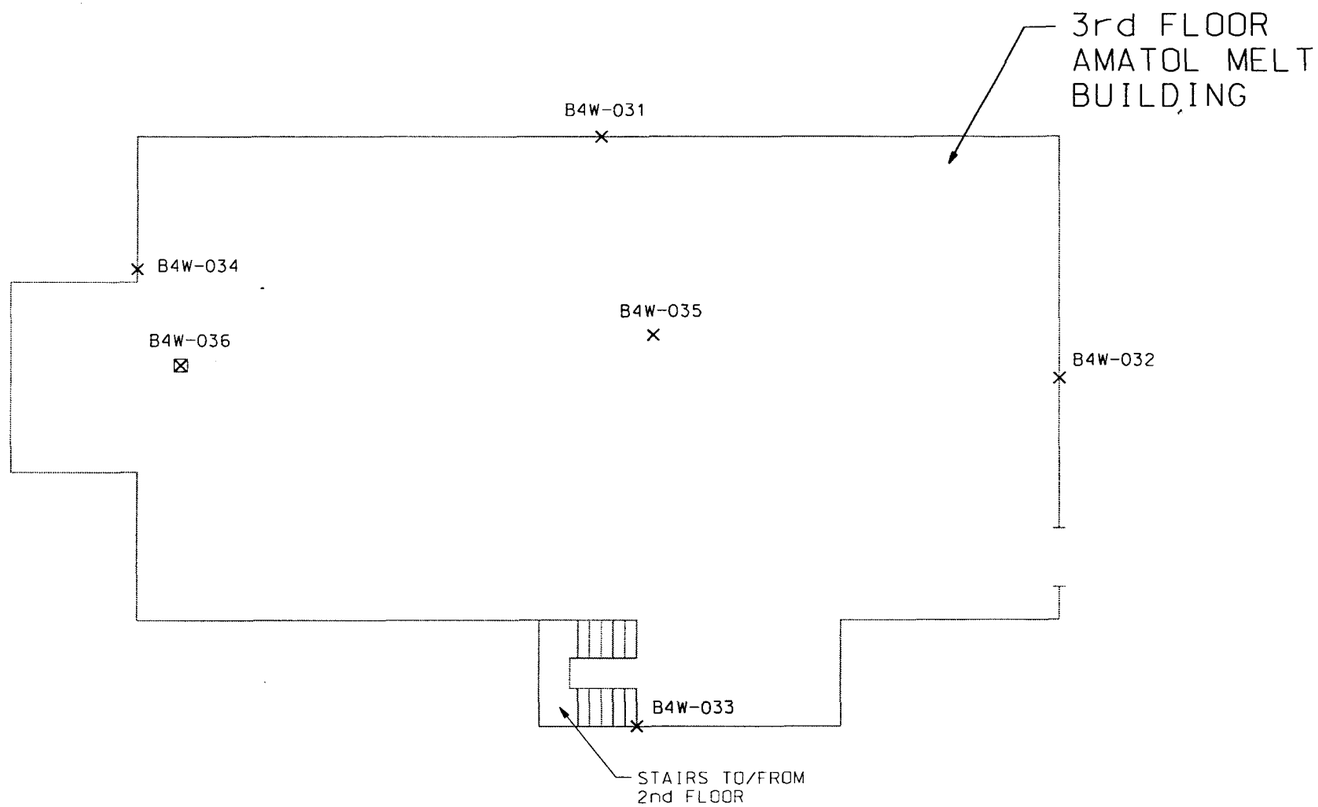
Sheet number: 1

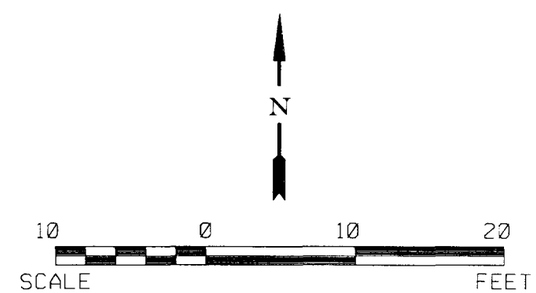
MCS FILE: OU3L422

SOURCE: FIELD MEASUREMENTS

LEGEND:

⊠ B4W-036	DISCRETIONARY WIPE SAMPLE LOCATION
(⊹ WALL, × FLOOR) B4W-031	SURFACE WIPE SAMPLE LOCATION





Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

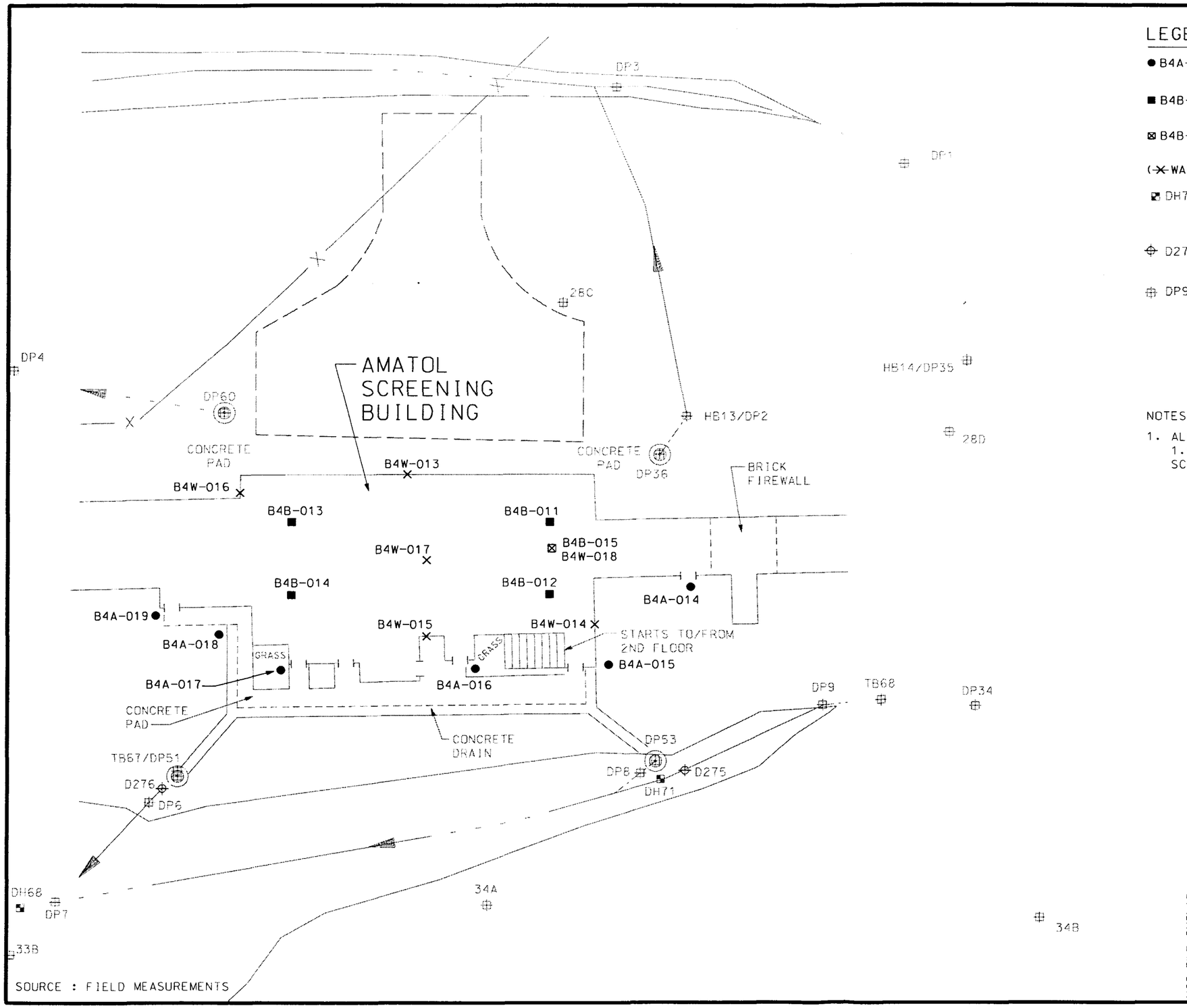
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
3rd FLOOR
AMATOL MELT BUILDING
SAMPLING LOCATIONS

Scale: 1 IN - 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-47
Sheet number: 1

MCS FILE: OU3L423

SOURCE: FIELD MEASUREMENTS



LEGEND:

● B4A-014	ADJACENT SOIL SAMPLE LOCATION
■ B4B-011	BENEATH SOIL SAMPLE LOCATION
⊠ B4B-015/B4W-018	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, ✕ FLOOR) B4W-013	SURFACE WIPE SAMPLE LOCATION
DH71	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
D276	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
DP9	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1.5 FT FROM THE EXTERIOR WALLS OF THE AMATOL SCREENING BUILDING.

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
AMATOL
SCREENING BUILDING
SAMPLING LOCATIONS

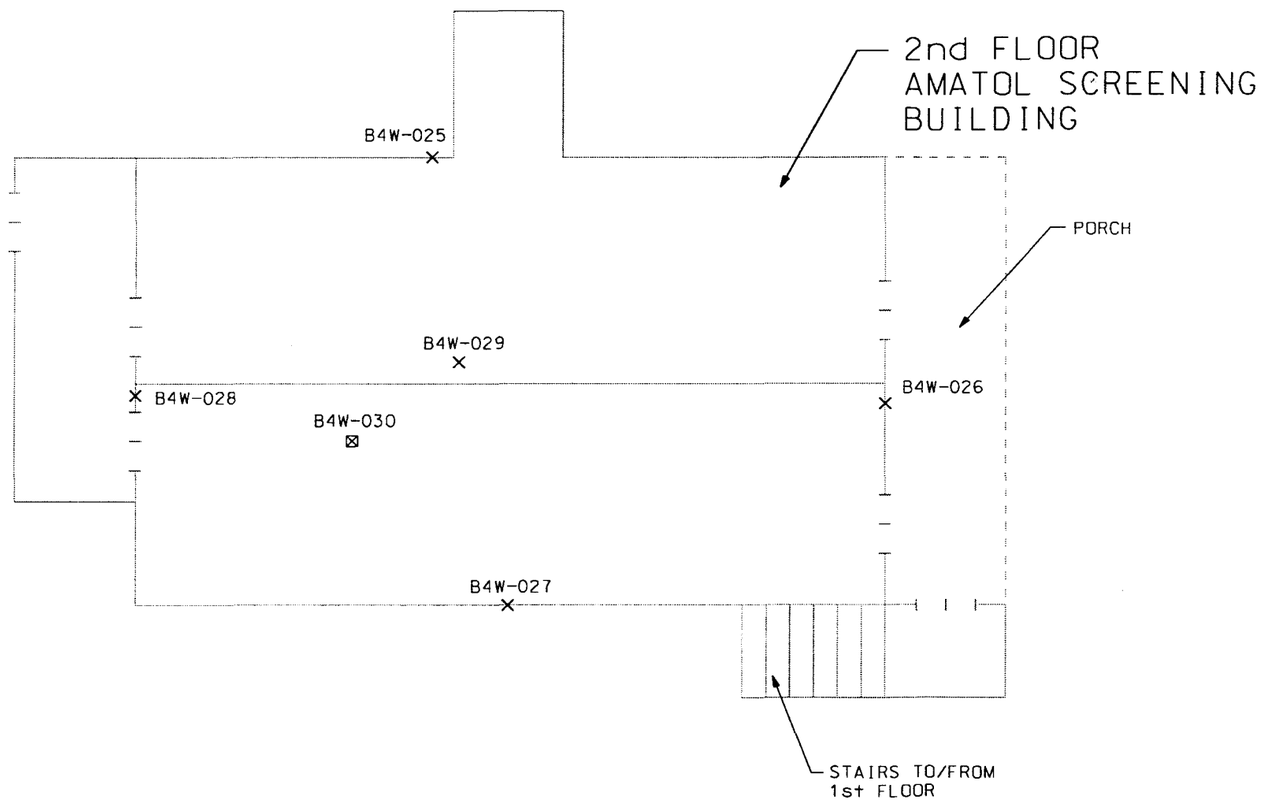
Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-48
Sheet number: 1

MCS FILE: OU3L43

B07NE003703-03668

LEGEND:

⊠ B4W-030	DISCRETIONARY WIPE SAMPLE LOCATION
(-✕-WALL, ✕ FLOOR) B4W-025	SURFACE WIPE SAMPLE LOCATION



N

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SCALE FEET

Revisions			
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KANSAS CITY, MISSOURI

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Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

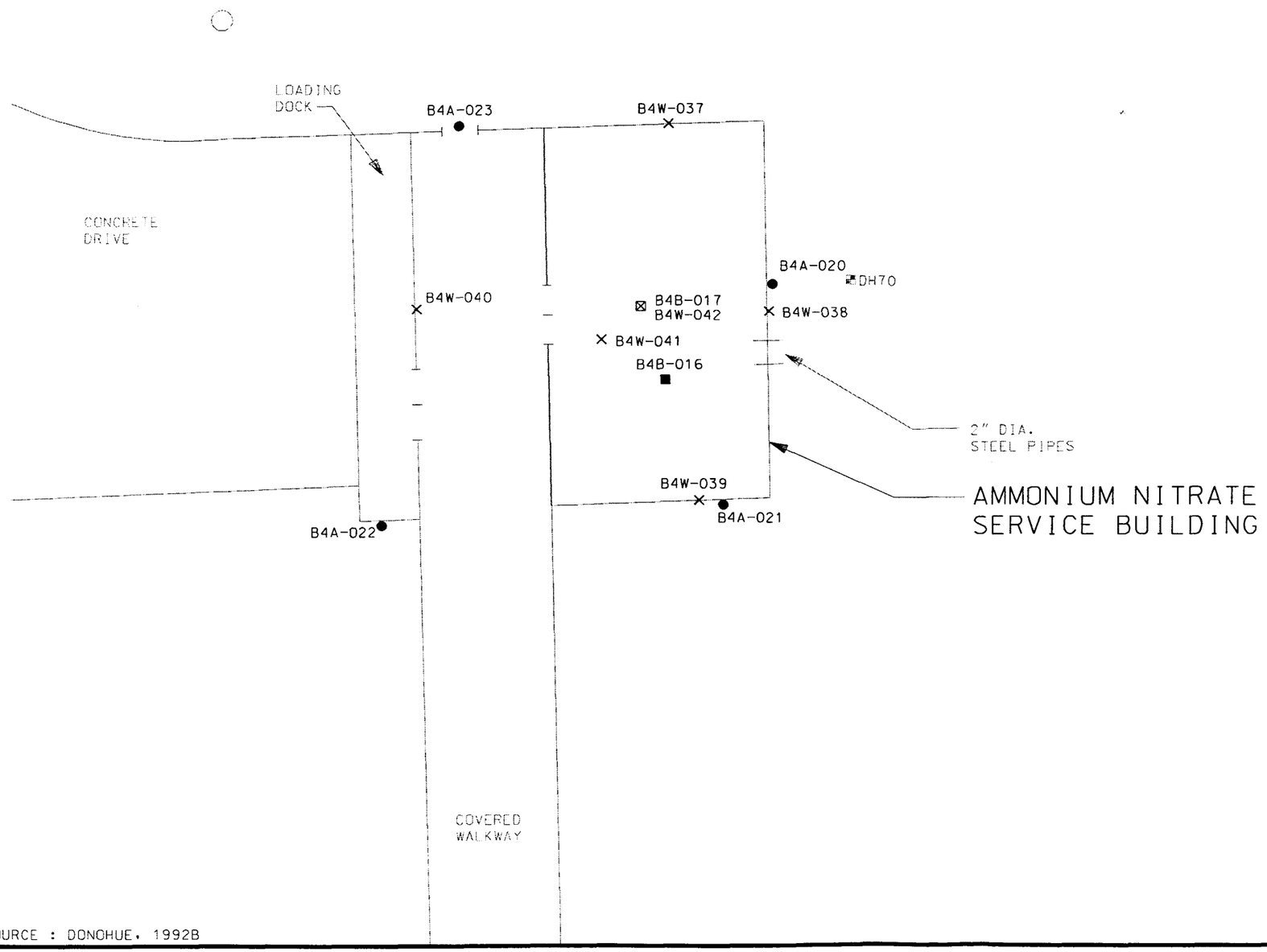
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
2nd FLOOR
AMATOL SCREENING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5–49
Sheet number: 1

MCS FILE: OU3L432

SOURCE: FIELD MEASUREMENTS



SOURCE : DONOHUE, 1992B

LEGEND:

● B4A-020	ADJACENT SOIL SAMPLE LOCATION
■ B4B-016	BENEATH SOIL SAMPLE LOCATION
⊠ B4B-017/B4W-042	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✳ WALL, × FLOOR) B4W-037	SURFACE WIPE SAMPLE LOCATION
DH70	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS OF THE AMMONIUM NITRATE AND NORTH TNT SERVICE BUILDINGS.

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SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

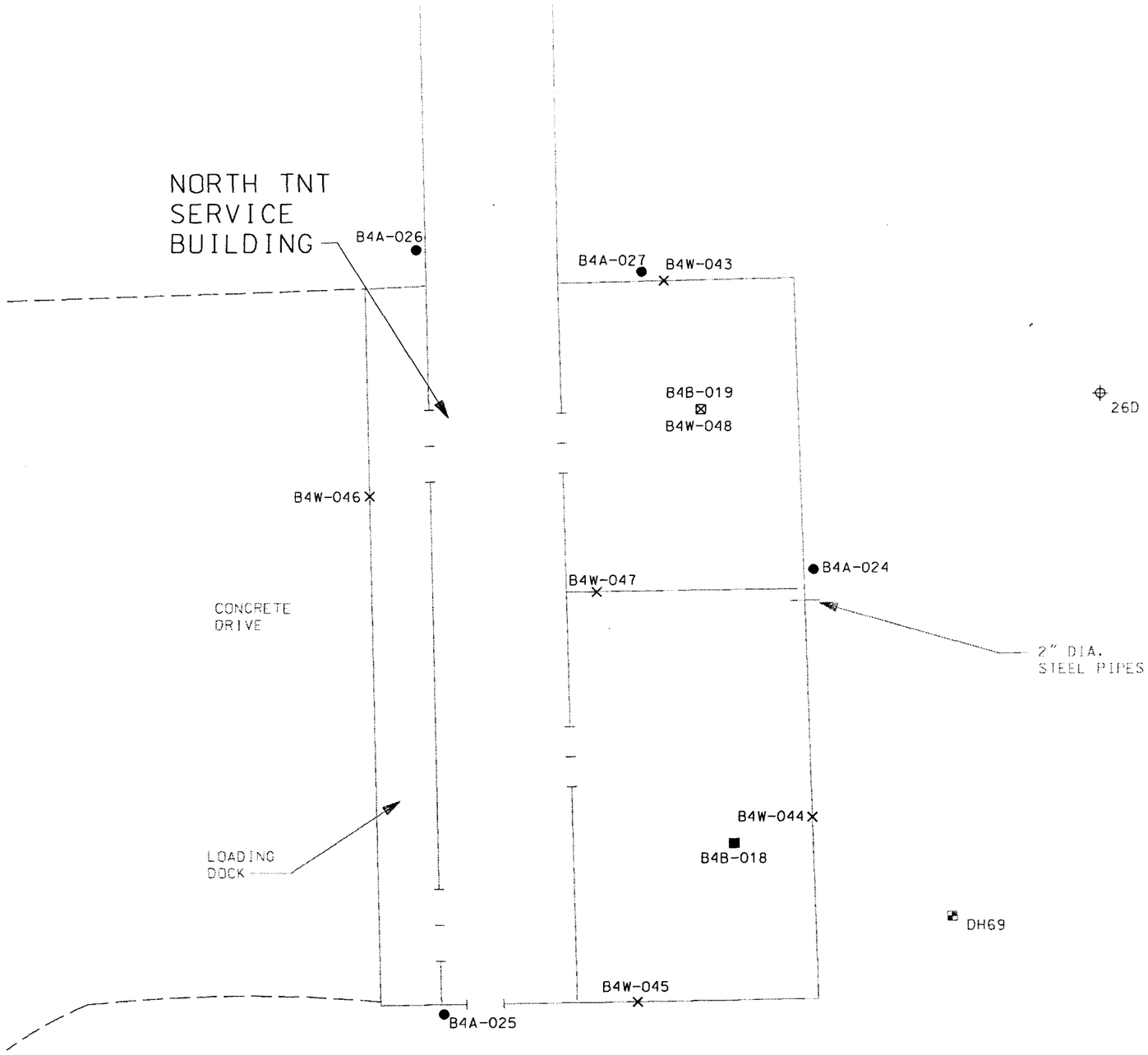
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
AMMONIUM NITRATE
SERVICE BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-50
Sheet number: 1

MCS FILE: OU3L44

B07NE003703-03670



SOURCE : DONOHUE, 1992B

LEGEND:

● B4A-024	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B4B-018	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B4B-019/B4W-048	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(✳ WALL, × FLOOR) B4W-043	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH69	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS OF THE NORTH TNT SERVICE BUILDING.

N

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SCALE FEET

Revisions			
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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

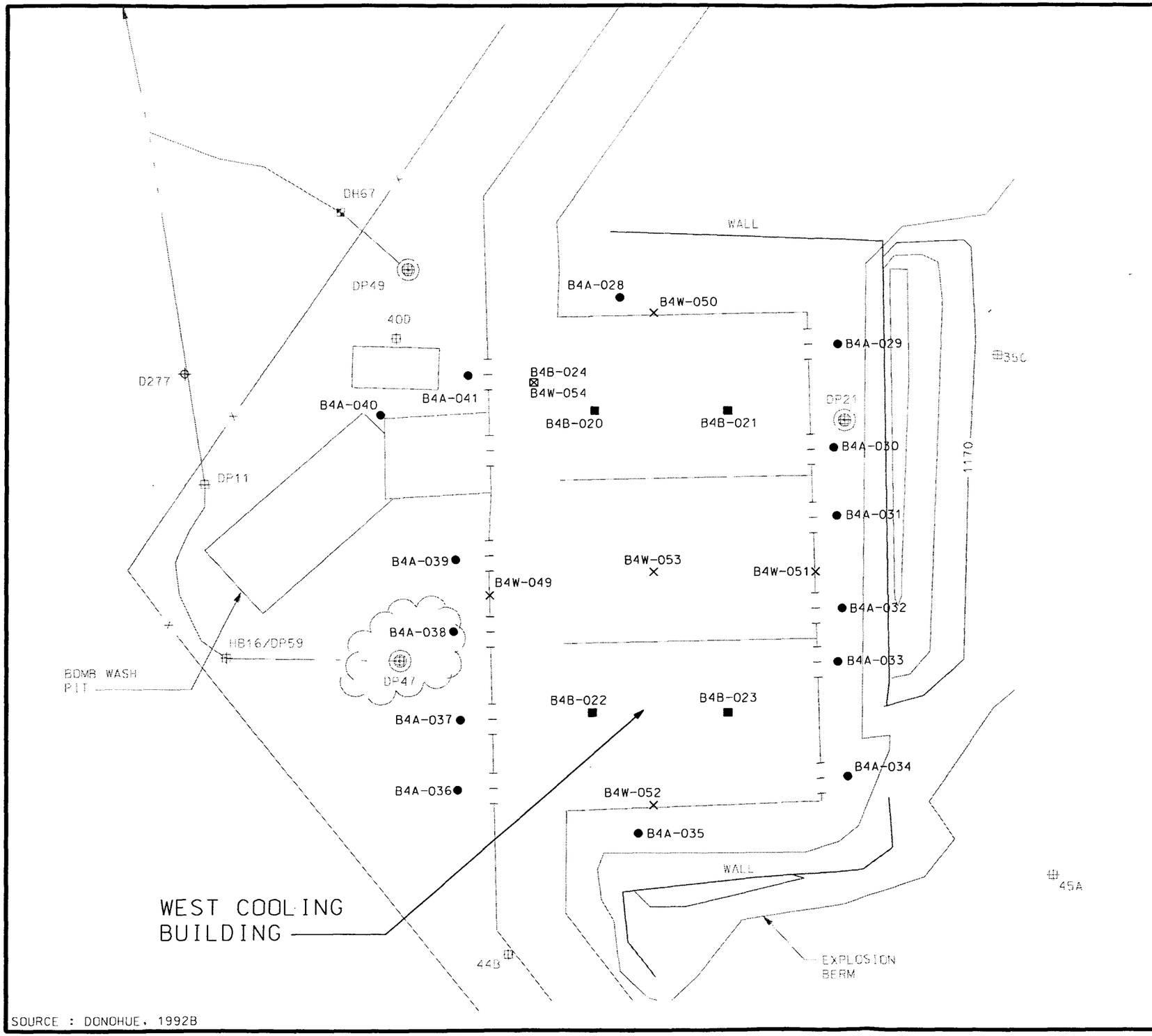
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
NORTH TNT
SERVICE BUILDINGS
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-51
Sheet number: 1

MCS FILE: OU3L45

B07NE003703-03671



SOURCE : DONOHUE, 1992B

LEGEND:

● B4A-028	ADJACENT SOIL SAMPLE LOCATION
■ B4B-020	BENEATH SOIL SAMPLE LOCATION
⊠ B4B-024/B4W-054	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, × FLOOR B4W-049	SURFACE WIPE SAMPLE LOCATION
DH67	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
D277	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
40D	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	INDEX CONTOUR
	INTERMEDIATE CONTOUR
— x —	FENCE

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE WEST COOLING BUILDING:
   B4A-028 AT 2.7FT, B4A-029 AT 5.0FT,
   B4A-030 AT 3.7FT, B4A-031 AT 3.8FT,
   B4A-032 AT 4.4FT, B4A-033 AT 3.2FT,
   B4A-034 AT 4.25FT, B4A-035 AT 4.25FT,
   B4A-036 AT 6.25FT, B4A-037 AT 5.5FT,
   B4A-038 AT 6.2FT, B4A-039 AT 5.5FT,
   B4A-040 AT 1.0FT, B4A-041 AT 2.75FT

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SCALE FEET

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

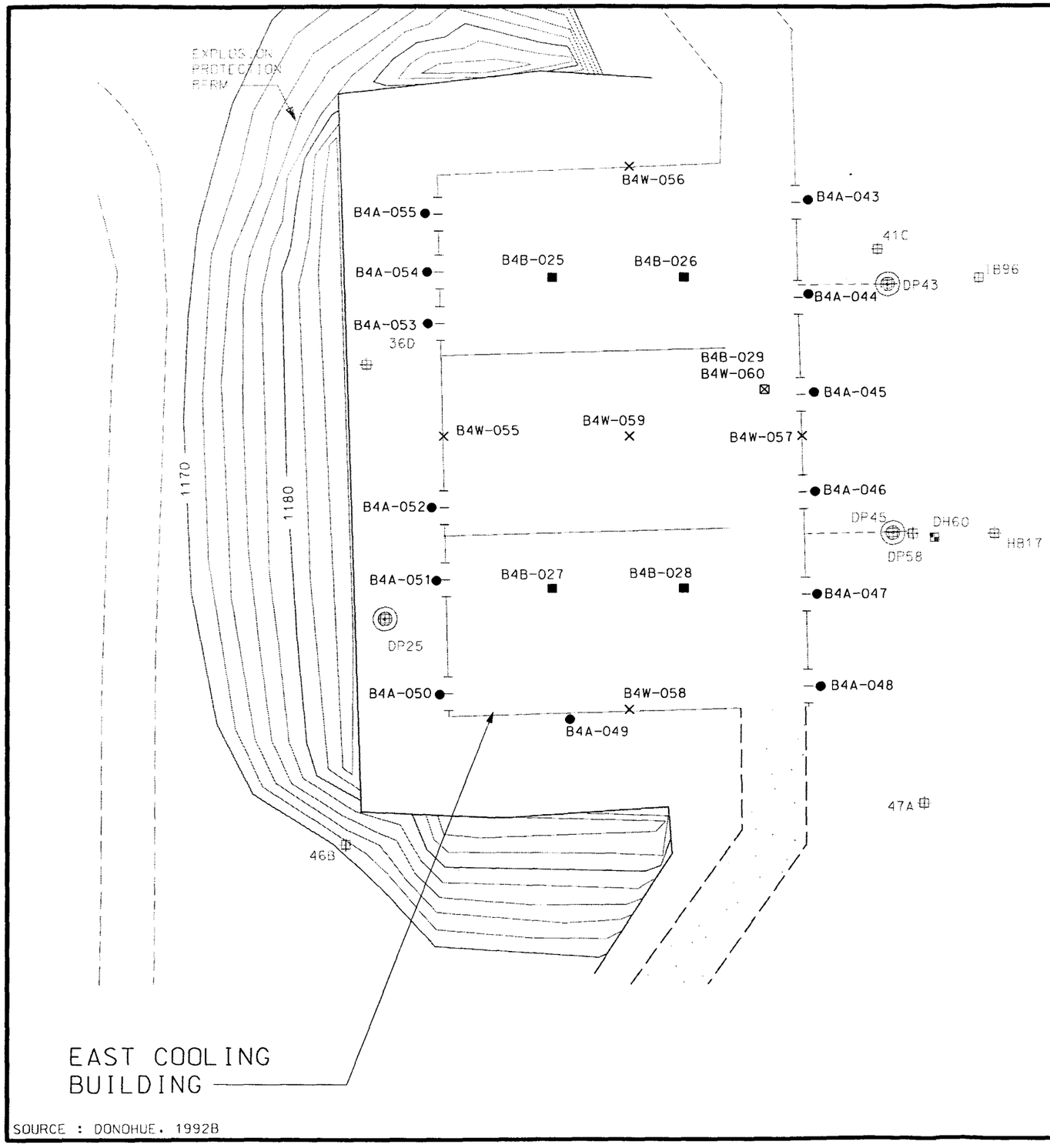
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
WEST
COOLING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-52
Sheet number: 1

MCS FILE: OU3L47

B07NE003703-03672



SOURCE : DONOHUE, 1992B

LEGEND:

● B4A-043	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B4B-025	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B4B-029/B4W-060	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(✕ WALL, × FLOOR) B4W-055	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS OF THE EAST COOLING BUILDING.
2. ADJACENT SOIL SAMPLE B4A-042 WAS NOT COLLECTED DUE TO CONCRETE DEBRIS AT SAMPLE LOCATION.
3. CONTOUR INTERVAL IS 2FT.

N

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SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

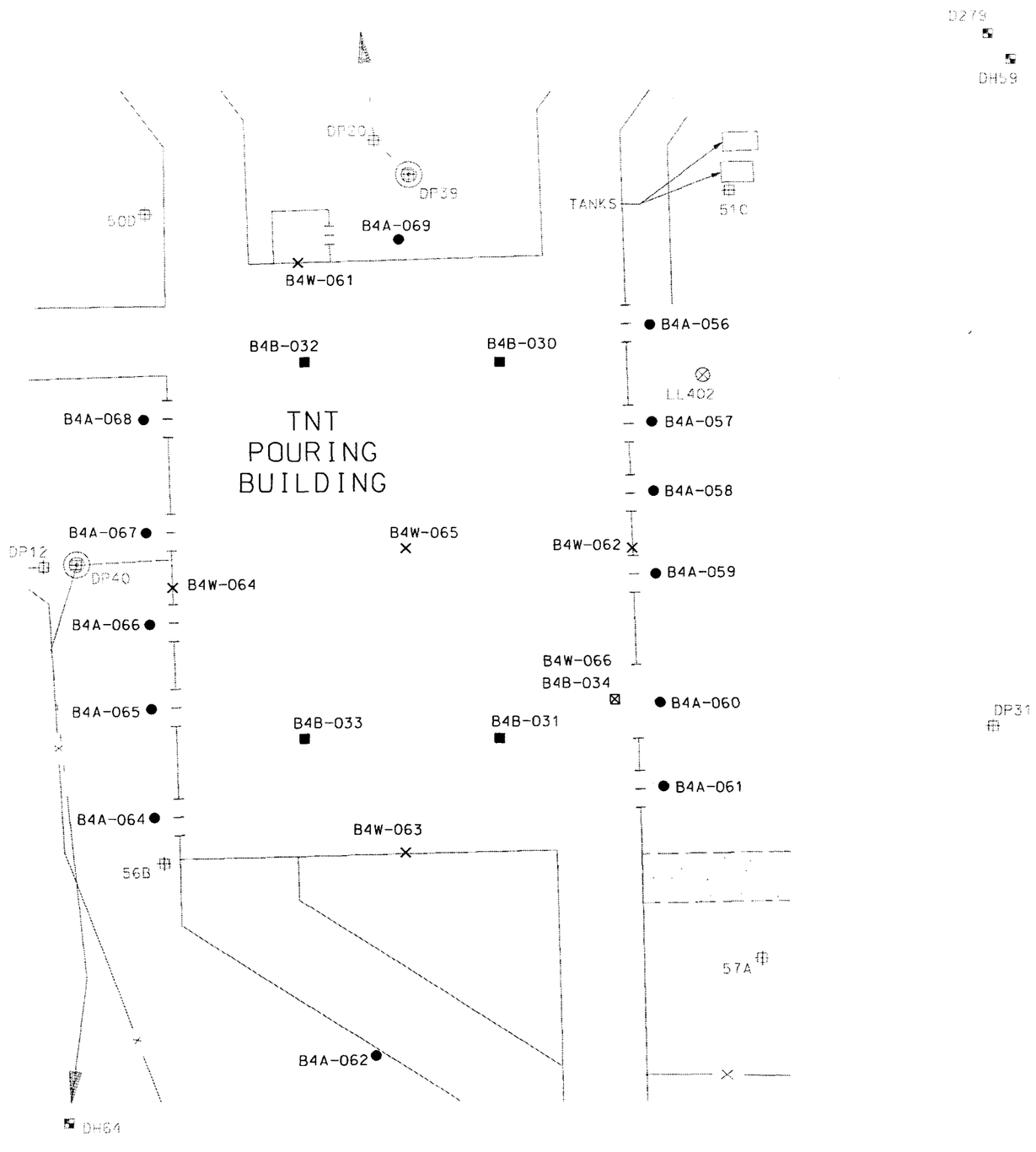
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
EAST COOLING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-53
Sheet number: 1

MCS FILE: OU3L46



SOURCE : DONOHUE, 1992B

LEGEND:

● B4A-056	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B4B-030	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B4B-034/B4W-066	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(✕ WALL, ✕ FLOOR) B4W-061	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH64	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
DH5	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
51C	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
⊗ LL402	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
— x —	FENCE

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWNG DISTANCES FROM THE EXTERIOR WALLS OF THE TNT POURING BUILDING:
   B4A-056 AT 7.5FT, B4A-057 AT 3.0FT,
   B4A-058 AT 3.0FT, B4A-059 AT 3.0FT,
   B4A-060 AT 3.0FT, B4A-064 AT 3.0FT,
   B4A-065 AT 3.0FT, B4A-066 AT 3.0FT,
   B4A-067 AT 3.0FT, B4A-068 AT 3.0FT,
   B4A-069 AT 2.5FT
2. ADJACENT SOIL SAMPLE B4A-063 WAS NOT COLLECTED DUE TO CONCRETE DEBRIS AT SAMPLE LOCATION.

N

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SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
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Checked by: B.C.O.
Submitted by: RAW

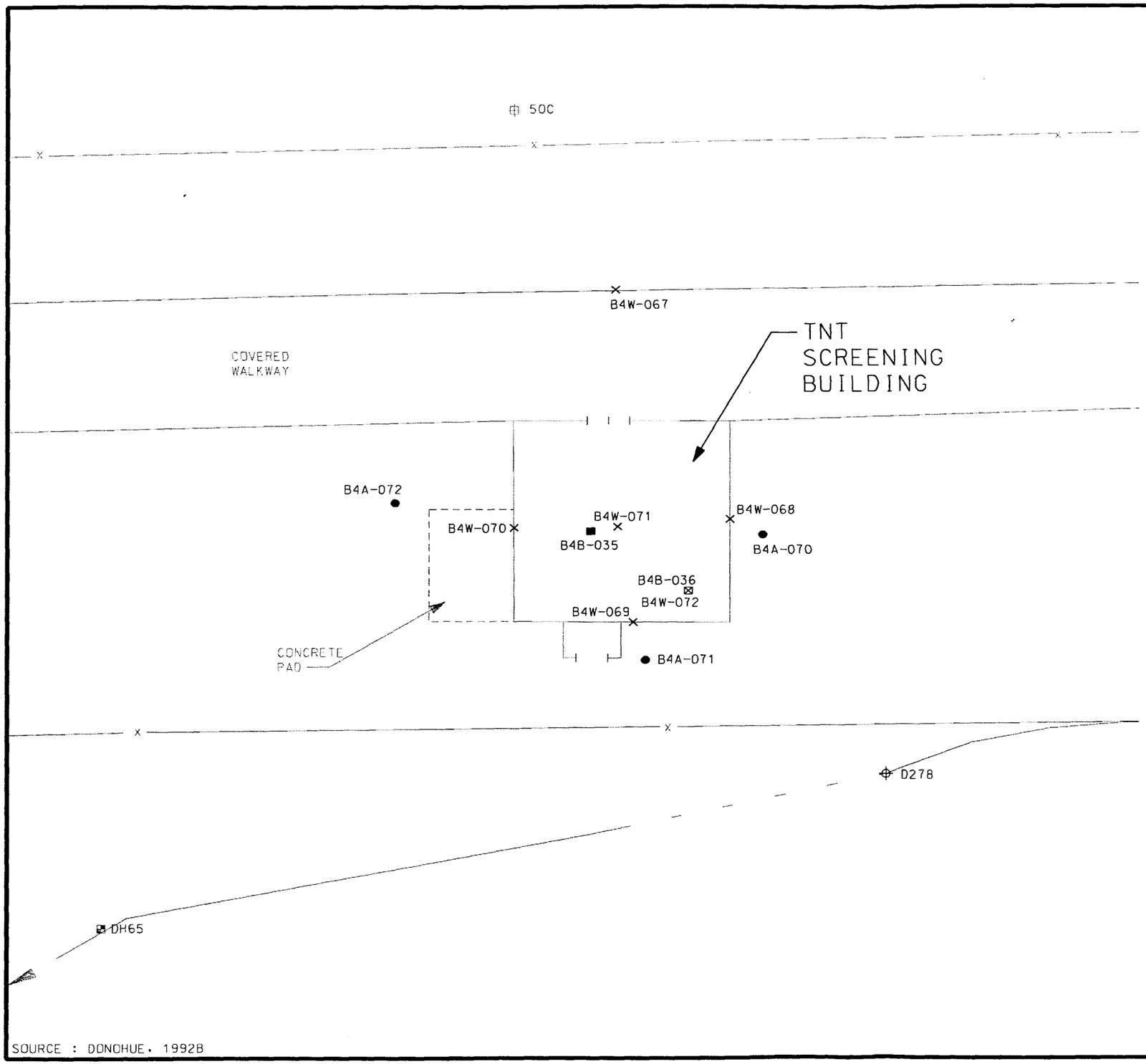
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
TNT POURING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-54
Sheet number: 1

MCS FILE: OU3L49



SOURCE : DONOHUE, 1992B

LEGEND:

● B4A-070	ADJACENT SOIL SAMPLE LOCATION
■ B4B-035	BENEATH SOIL SAMPLE LOCATION
⊠ B4B-036/B4W-072	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, ✕ FLOOR B4W-067	SURFACE WIPE SAMPLE LOCATION
DH65	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
D278	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
50C	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
—— x ——	FENCE

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE TNT SCREENING BUILDING:
   B4A-070 AT 3.0FT, B4A-071 AT 3.0FT,
   B4A-072 AT 9.5FT
2. ADJACENT SOIL SAMPLE B4A-073 WAS NOT COLLECTED DUE TO CONCRETE PAD AT SAMPLE LOCATION.

N

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SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

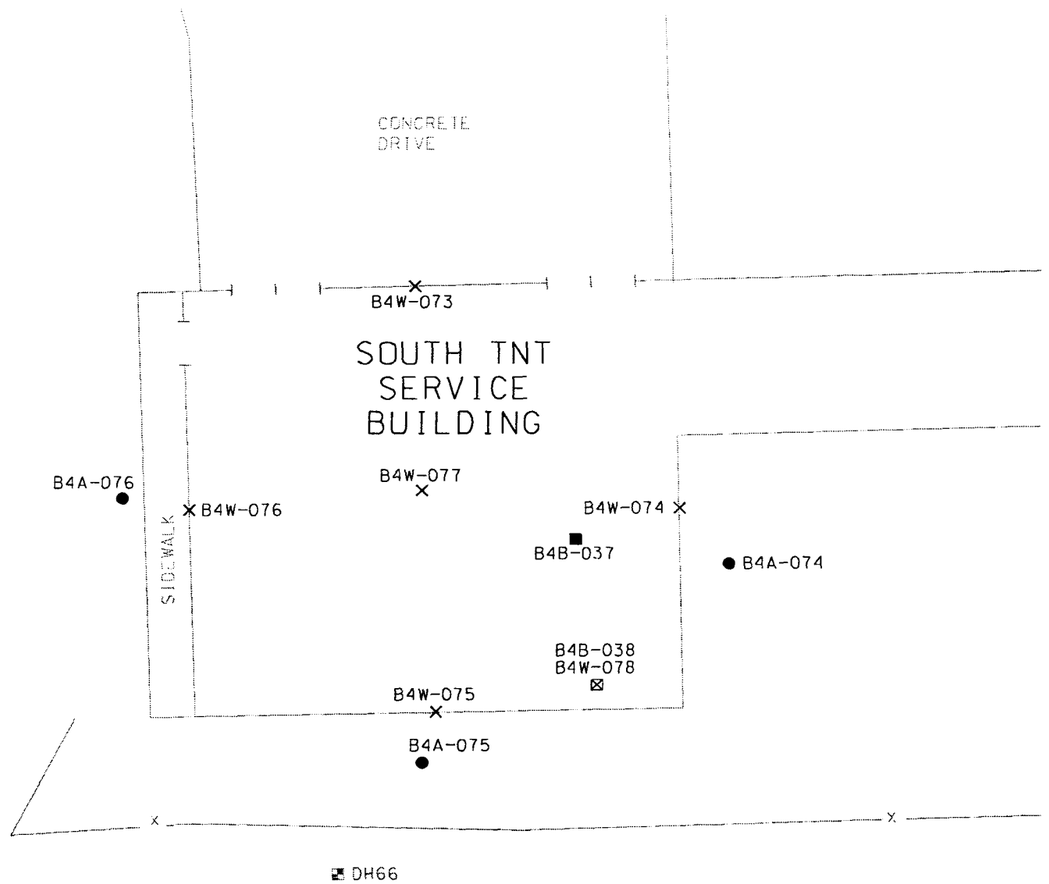
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
TNT SCREENING BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-55
Sheet number: 1

MCS FILE: OU3L48



LEGEND:

● B4A-074	ADJACENT SOIL SAMPLE LOCATION
■ B4B-037	BENEATH SOIL SAMPLE LOCATION
⊠ B4B-038/B4W-078	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION
(✕ WALL, ✕ FLOOR B4W-073	SURFACE WIPE SAMPLE LOCATION
DH66	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
—— x ——	FENCE

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE SOUTH TNT SERVICE BUILDING:
   B4A-074 AT 3.0FT. B4A-075 AT 3.0FT.
   B4A-076 AT 4.0FT
2. ADJACENT SOIL SAMPLE B4A-077 WAS NOT COLLECTED DUE TO CONCRETE PAD AT SAMPLE LOCATION.

N

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SCALE FEET

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Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

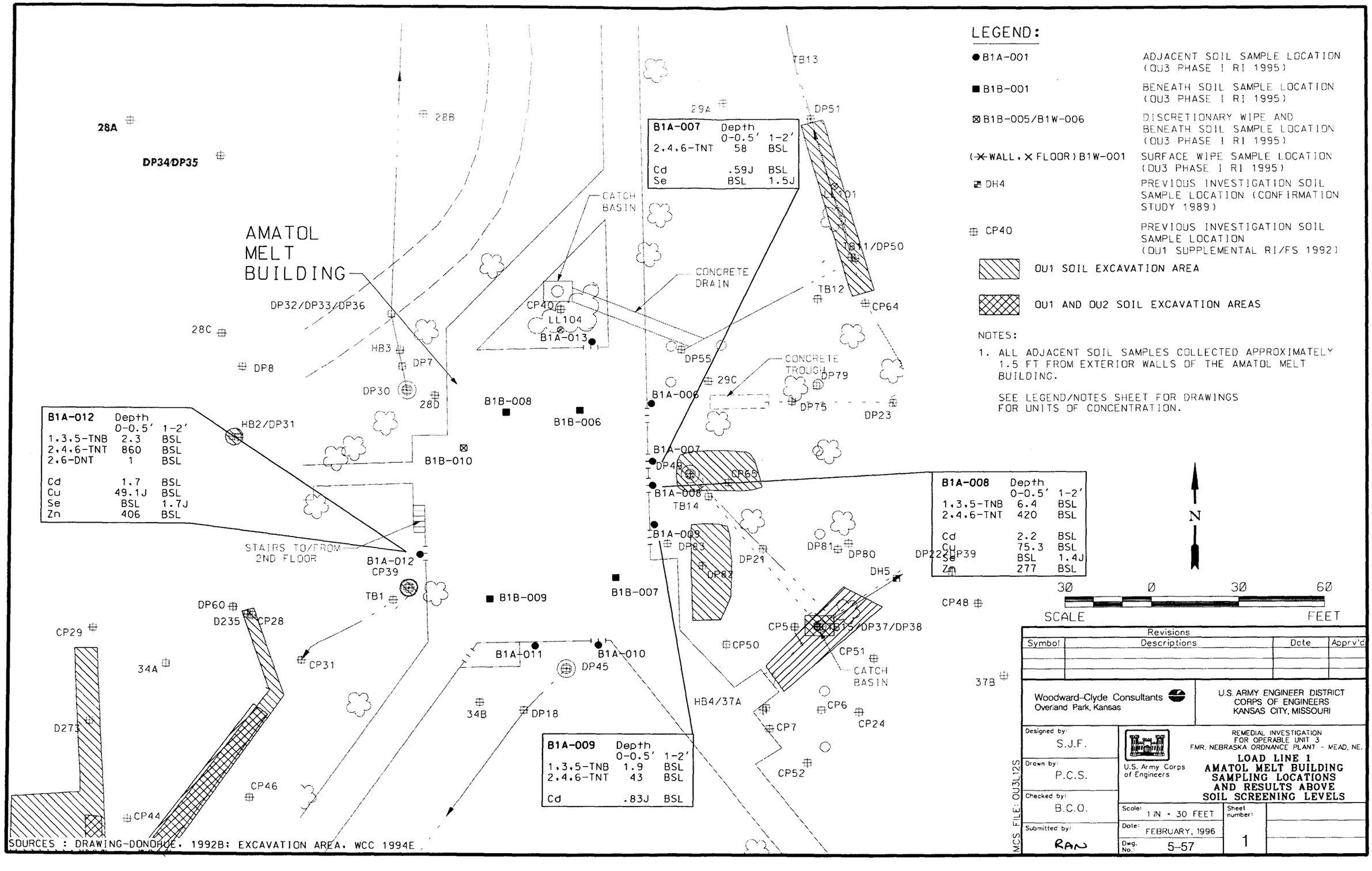
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
SOUTH TNT SERVICE BUILDING
SAMPLING LOCATIONS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-56
Sheet number: 1

MCS FILE: OU3L40

SOURCE : DONOHUE, 1992B



LEGEND:

● B1A-001	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B1B-001	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B1B-005/B1W-006	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(⊹ WALL, × FLOOR) B1W-001	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	OU1 SOIL EXCAVATION AREA
	OU1 AND OU2 SOIL EXCAVATION AREAS

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1.5 FT FROM EXTERIOR WALLS OF THE AMATOL MELT BUILDING.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION.

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

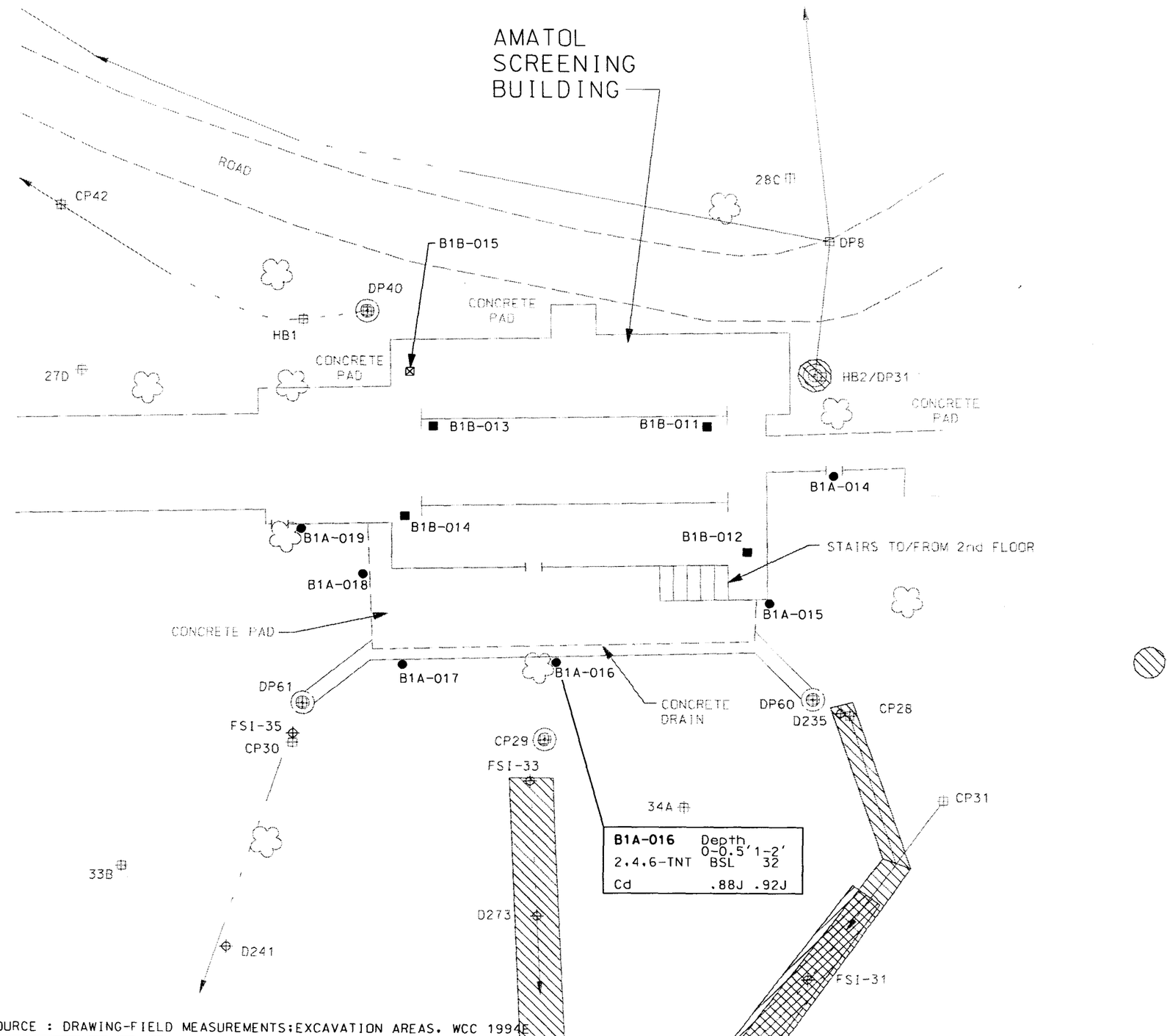
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
AMATOL MELT BUILDING
SAMPLING LOCATIONS
AND RESULTS ABOVE
SOIL SCREENING LEVELS

Scale: 1 IN = 30 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-57
Sheet number: 1

MCS_FILE: OU3L12S



SOURCE : DRAWING-FIELD MEASUREMENTS;EXCAVATION AREAS. WCC 1994

LEGEND:

● B1A-014	ADJACENT SOIL SAMPLE LOCATION
■ B1B-011	BENEATH SOIL SAMPLE LOCATION
⊠ B1B-015	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
⊕ D235	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
⊕ DP7	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

OU1 SOIL EXCAVATION AREA

OU1 AND OU2 SOIL EXCAVATION AREAS

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS OR CONCRETE FOUNDATION OF THE AMATOL SCREENING BUILDING.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION.

N

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SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

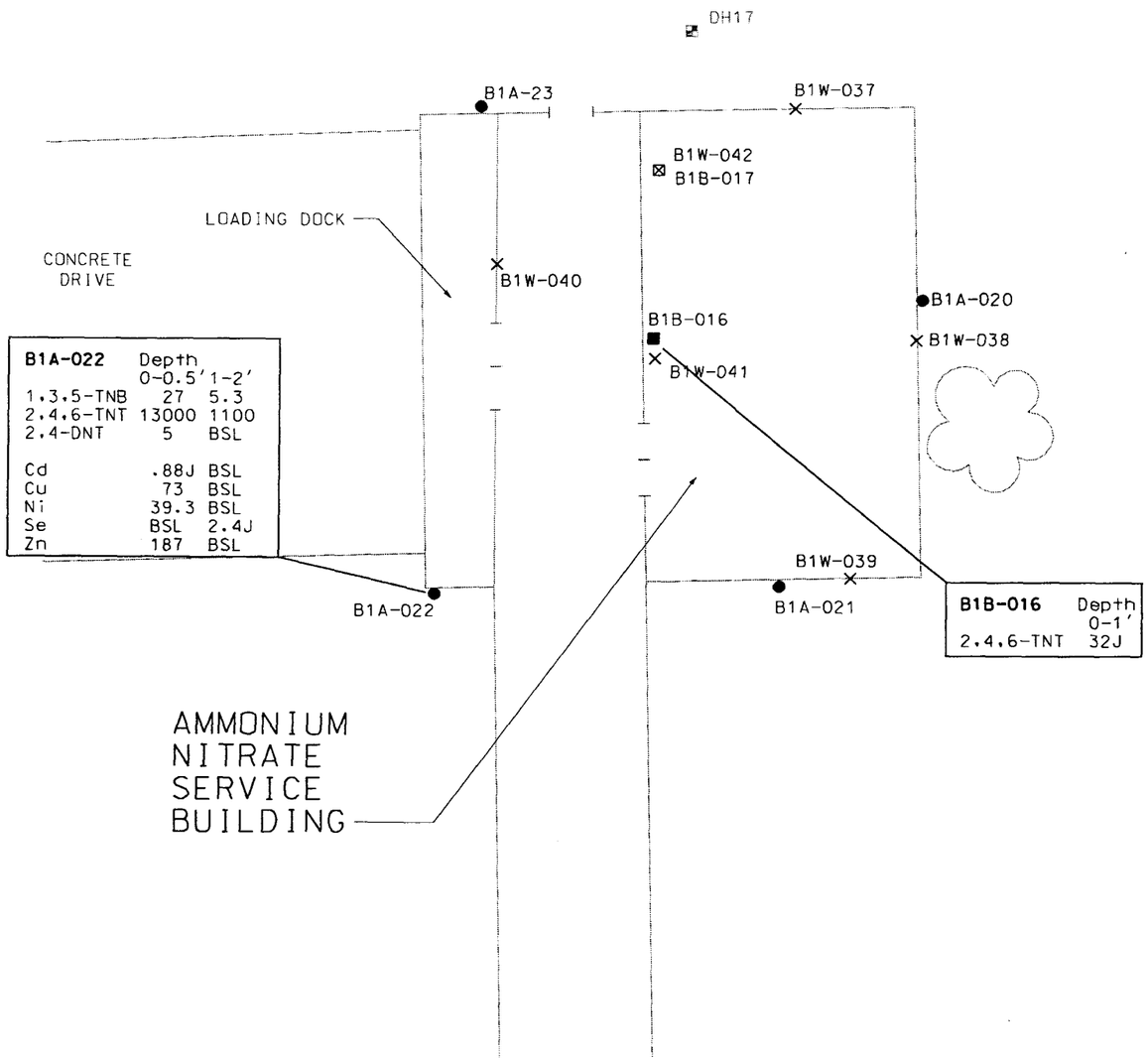
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
AMATOL SCREENING
BUILDING SAMPLING
LOCATIONS AND RESULTS
ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-58
Sheet number: 1

MCS FILE: OU3L13S



B1A-022	Depth 0-0.5'	1-2'
1,3,5-TNB	27	5.3
2,4,6-TNT	13000	1100
2,4-DNT	5	BSL
Cd	.88J	BSL
Cu	73	BSL
Ni	39.3	BSL
Se	BSL	2.4J
Zn	187	BSL

B1B-016	Depth 0-1'
2,4,6-TNT	32J

SOURCE : DONOHUE, 1992B

LEGEND:

● B1A-020	ADJACENT SOIL SAMPLE LOCATION
■ B1B-016	BENEATH SOIL SAMPLE LOCATION
⊠ B1B-017	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
DH17	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
DP11	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS OF THE BUILDING.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

10 0 10 20

SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
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KANSAS CITY, MISSOURI

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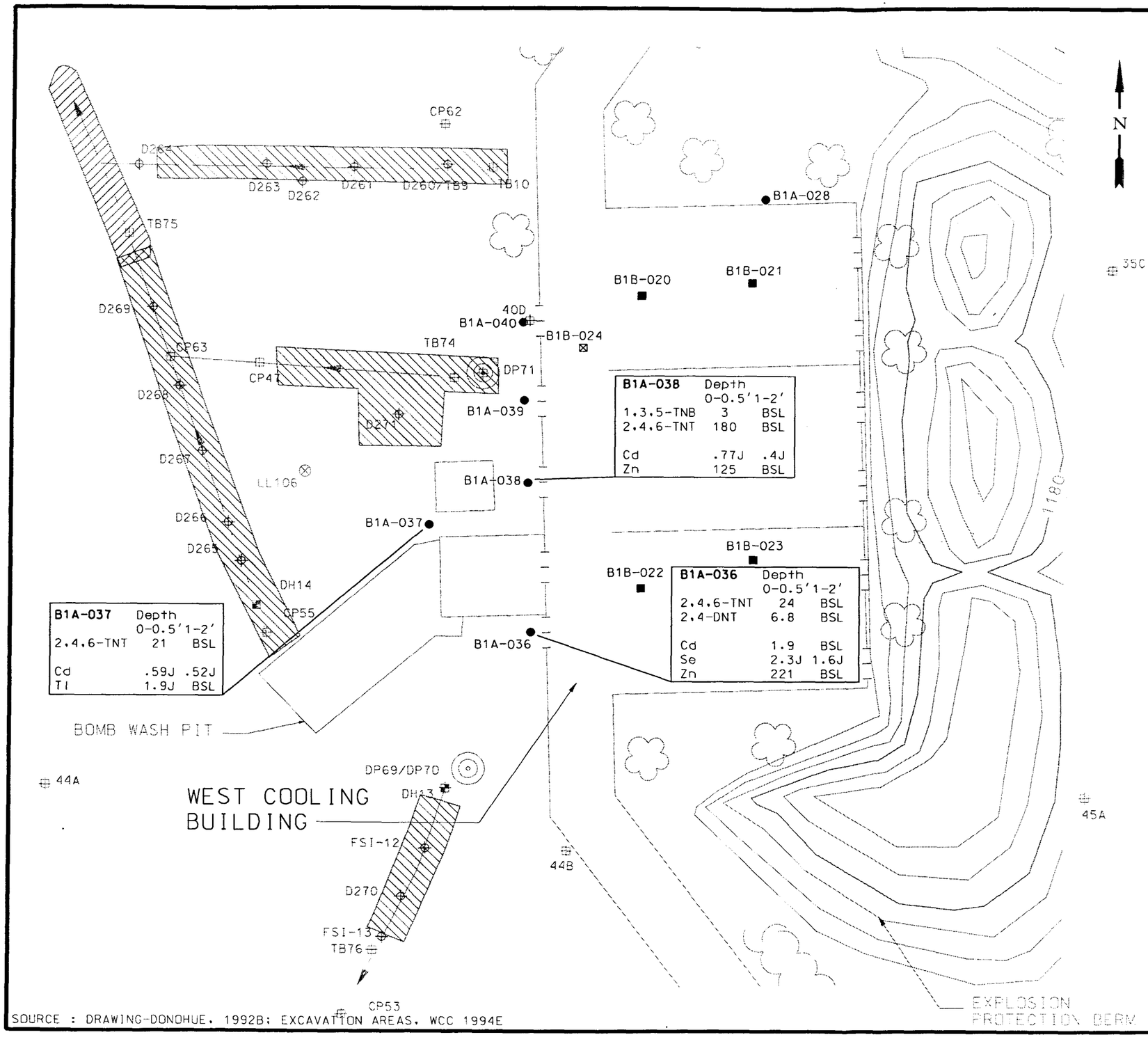
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
AMMONIUM NITRATE SERVICE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-59
Sheet number: 1

MCS FILE: OU3L14S

B07NE003703-03679



SOURCE : DRAWING-DONOHUE, 1992B; EXCAVATION AREAS, WCC 1994E

LEGEND:

● B1A-028	ADJACENT SOIL SAMPLE LOCATION
■ B1B-020	BENEATH SOIL SAMPLE LOCATION
⊠ B1B-024	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
DH14	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
D269	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
40D	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
LL106	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)

OU1 SOIL EXCAVATION AREA

OU2 SOIL EXCAVATION AREA

INDEX CONTOUR

INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE WEST COOLING BUILDING:
   B1A-036 AT 2.25FT, B1A-037 AT 1.2FT,
   B1A-038 AT 2.25FT, B1A-039 AT 2.5FT,
   B1A-040 AT 2.6FT
2. ADJACENT SOIL SAMPLES B1A-029 TO B1A-35 WERE NOT COLLECTED DUE TO COLLAPSED EARTHEN BERM MATERIAL COVERING SAMPLING LOCATIONS AROUND THE EAST AND SOUTH SIDES OF THE COOLING BUILDING. SAMPLE B1A-041 WAS NOT COLLECTED BECAUSE ACCESS WAS RESTRICTED BY FENCED OU1 INVESTIGATION AREA.
3. CONTOUR INTERVAL IS 2 FEET
   SEE LEGEND/NOTES SHEET FOR DRAWINGS
   FOR UNITS OF CONCENTRATION

20 0 20 40

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

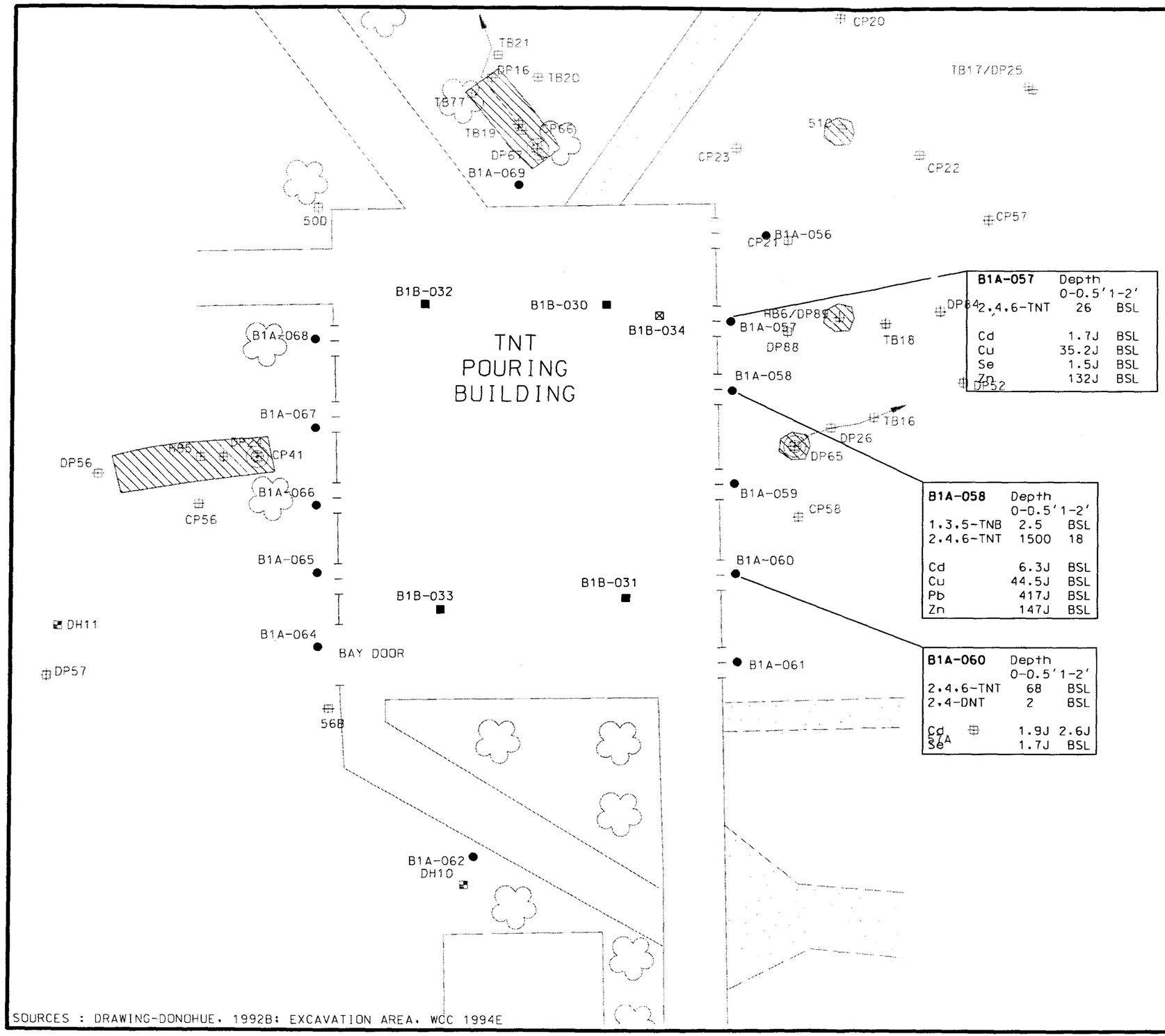
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
WEST COOLING BUILDING
SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-60
Sheet number: 1

MCS FILE: OU3L17S



B1A-057	Depth 0-0.5'	1-2'
2,4,6-TNT	26	BSL
Cd	1.7J	BSL
Cu	35.2J	BSL
Se	1.5J	BSL
Zn	132J	BSL

B1A-058	Depth 0-0.5'	1-2'
1,3,5-TNB	2.5	BSL
2,4,6-TNT	1500	18
Cd	6.3J	BSL
Cu	44.5J	BSL
Pb	417J	BSL
Zn	147J	BSL

B1A-060	Depth 0-0.5'	1-2'
2,4,6-TNT	68	BSL
2,4-DNT	2	BSL
Cd	1.9J	2.6J
Se	1.7J	BSL

LEGEND:

● B1A-056	ADJACENT SOIL SAMPLE LOCATION
■ B1B-030	BENEATH SOIL SAMPLE LOCATION
⊠ B1B-034	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
DH10	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
DP26	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	OU1 SOIL EXCAVATION AREA

NOTES:

1. ALL ADJACENT SOIL SAMPLES WERE COLLECTED APPROXIMATELY 2 FT FROM THE EXTERIOR WALLS OF THE TNT POURING BUILDING WITH THE FOLLOWING EXCEPTIONS:
   B1A-056 AT 9.0FT, B1A-064 AT 3.0FT,
   B1A-065 AT 3.0FT, B1A-066 AT 3.0FT,
   B1A-067 AT 3.0FT, B1A-068 AT 2.5FT,
   B1A-069 AT 3.5FT
2. ADJACENT SOIL SAMPLE B1A-063 WAS NOT COLLECTED DUE TO CONCRETE DEBRIS AT SAME LOCATION

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

20 0 20 40
SCALE FEET

SOURCES : DRAWING-DONOHUE, 1992B; EXCAVATION AREA, WCC 1994E

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

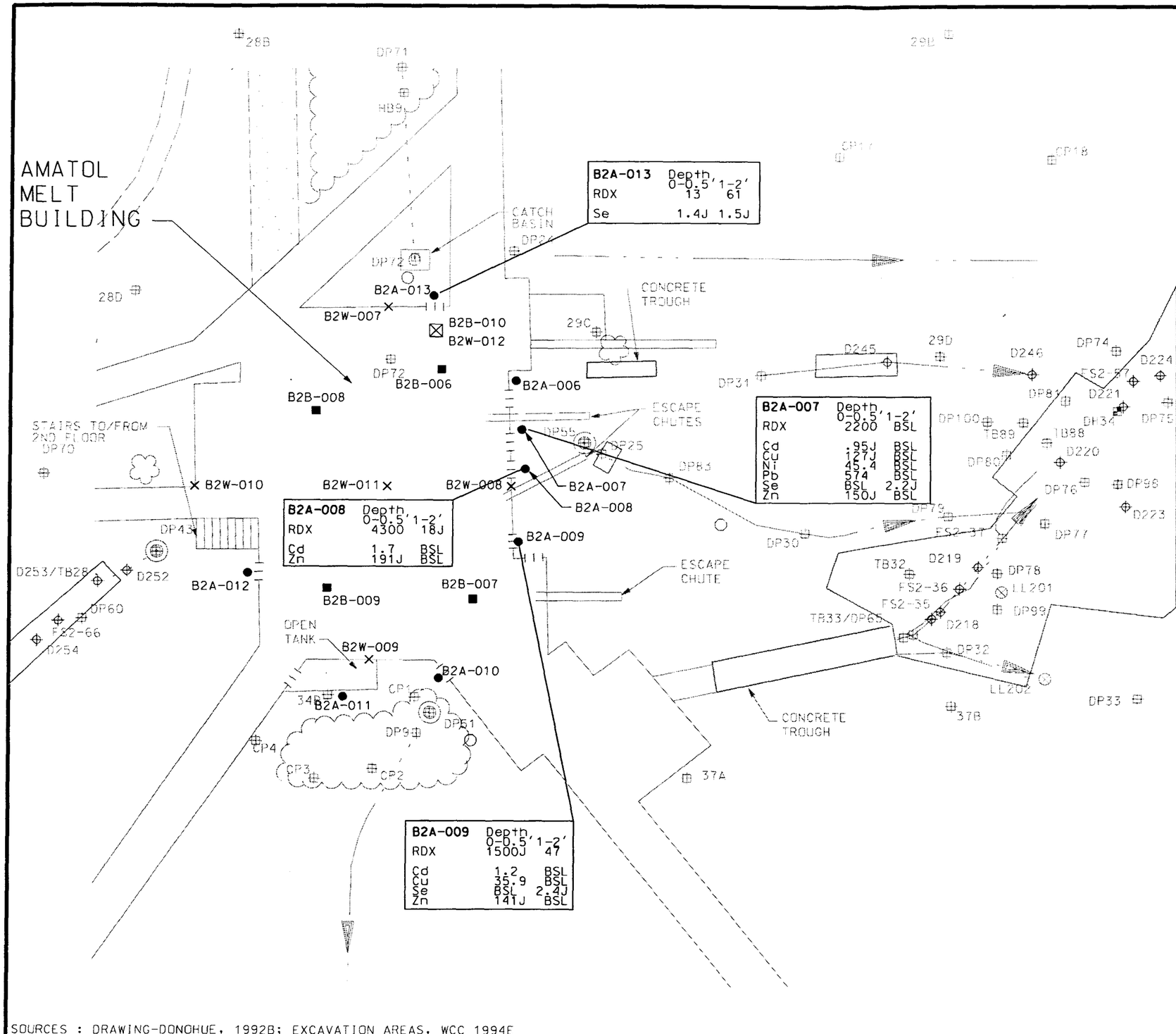
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1
TNT POURING BUILDING
SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-61
Sheet number: 1

MCS FILE: OU3L19S



LEGEND:

• B2A-006	ADJACENT SOIL SAMPLE LOCATION
■ B2B-006	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-010	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
DH34	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
D220	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
DP75	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
LL201	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
	OU1 SOIL EXCAVATION AREA

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE AMATOL MELT BUILDING:
   B2A-006 AT 1.5FT, B2A-007 AT 2.0FT,
   B2A-008 AT 3.0FT, B2A-009 AT 1.5FT,
   B2A-010 AT 2.0FT, B2A-011 AT 1.5FT,
   B2A-012 AT 2.0FT, B2A-013 AT 2.0FT

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

30 0 30 60
SCALE FEET

SOURCES : DRAWING-DONOHUE, 1992B; EXCAVATION AREAS, WCC 1994E

Revisions

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KANSAS CITY, MISSOURI

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Drawn by: P.C.S.
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Submitted by: RAN

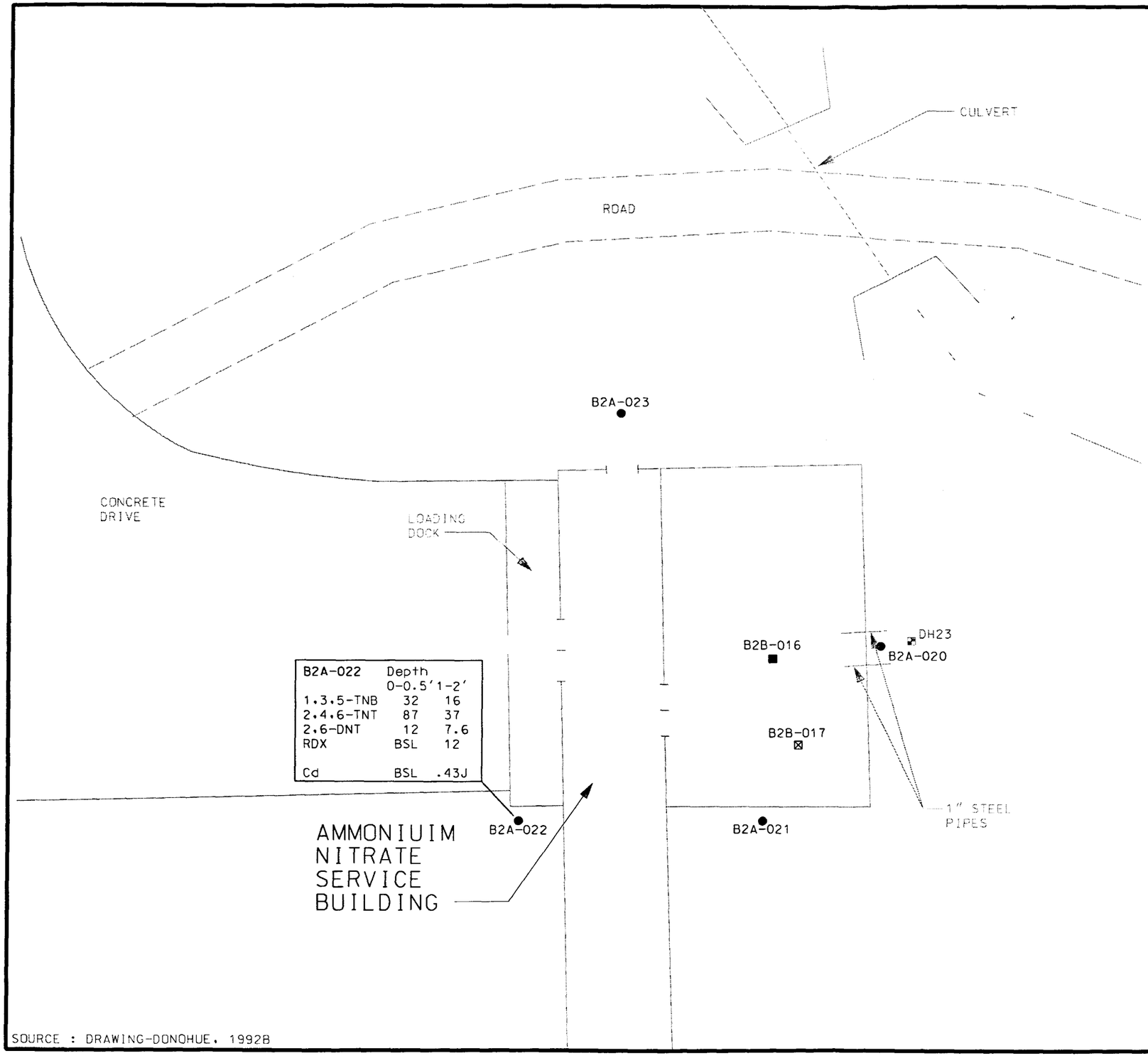
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
AMATOL MELT BUILDING
SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 30 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-62
Sheet number: 1

MCS FILE: OU3L22S



B2A-022	Depth 0-0.5'	1-2'
1,3,5-TNB	32	16
2,4,6-TNT	87	37
2,6-DNT	12	7.6
RDX	BSL	12
Cd	BSL	.43J

SOURCE : DRAWING-DONOHUE, 1992B

LEGEND:

● B2A-020	ADJACENT SOIL SAMPLE LOCATION
■ B2B-016	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-017	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
⊠ DH23	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS EXCEPT B2A-023 WHICH WAS COLLECTED APPROXIMATELY 5 FT FROM THE EXTERIOR WALLS.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

10 0 10 20

SCALE FEET

Revisions

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U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
AMMONIUM NITRATE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-63
Sheet number: 1

MCS FILE: OU3L24S

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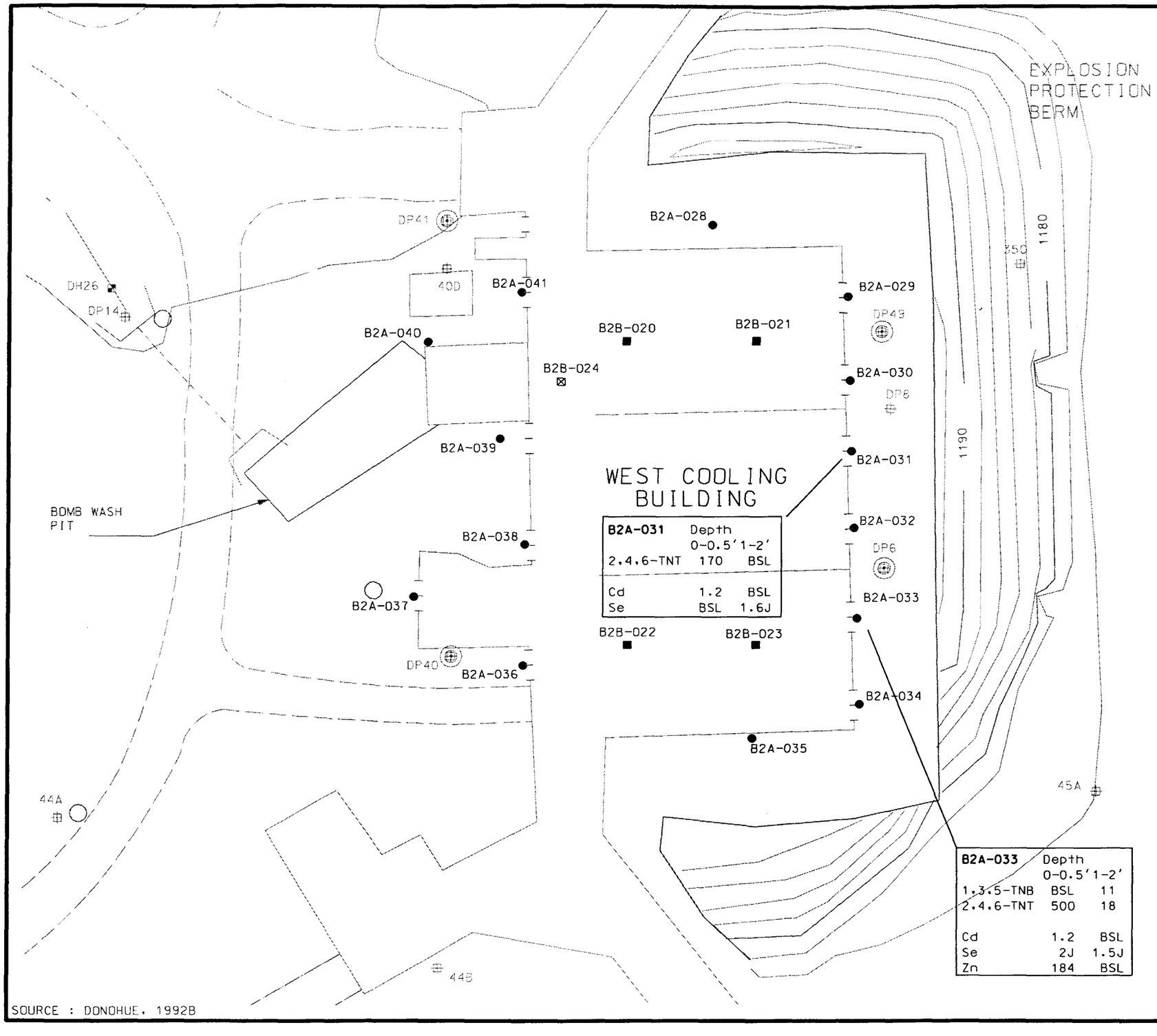

SOURCE : DONOHUE, 1992B

LEGEND:

● B2A-028	ADJACENT SOIL SAMPLE LOCATION
■ B2B-020	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-024	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
DH26	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
44A	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE WEST COOLING BUILDING: B2A-028 AT 3.8FT, B2A-039 AT 5.0FT
2. CONTOUR INTERVAL IS 2 FT.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

20 0 20 40
SCALE FEET

Revisions			
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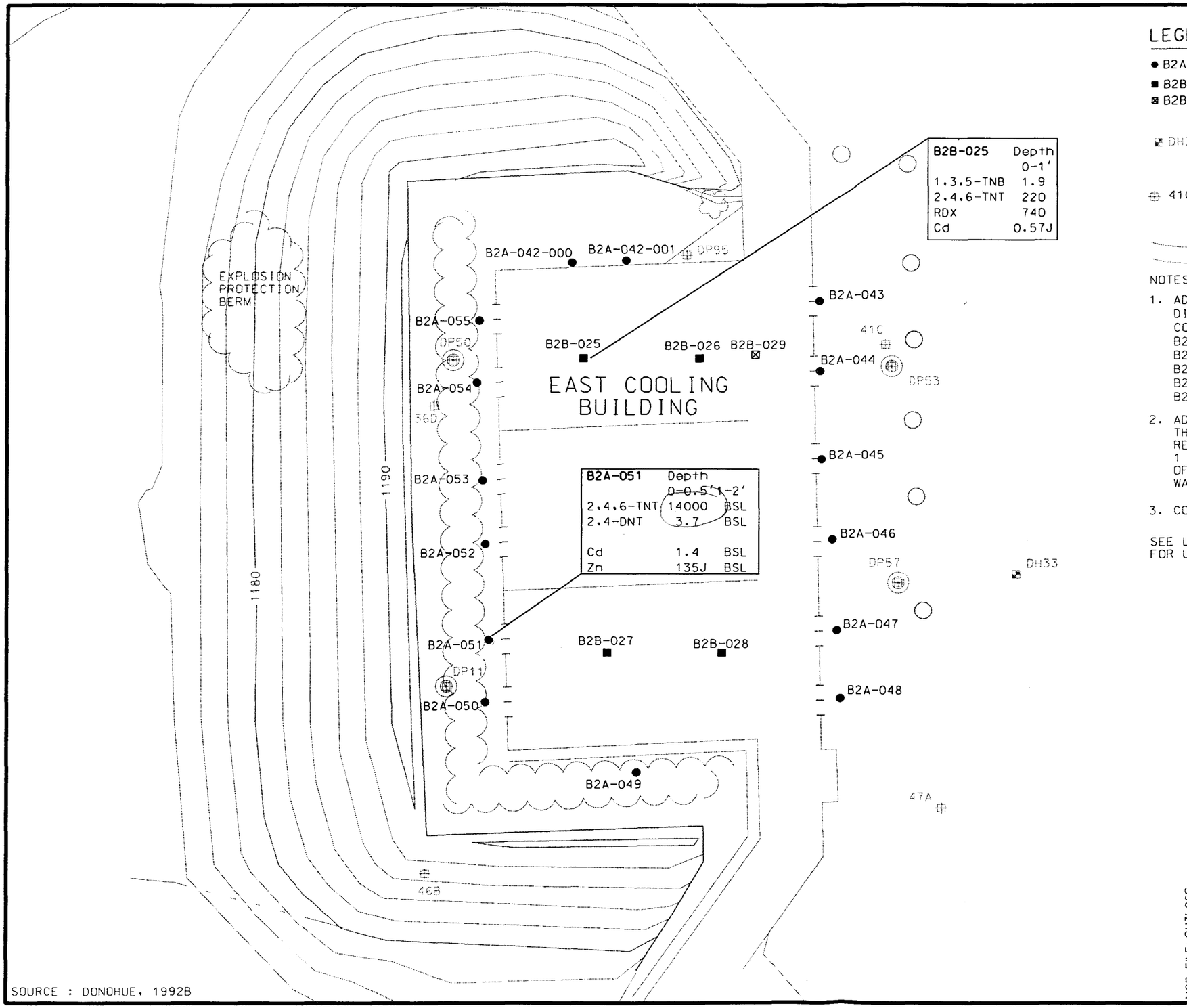
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
WEST COOLING BUILDING
SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-64
Sheet number: 1

MCS FILE: OU3L27S



SOURCE : DONOHUE, 1992B

LEGEND:

● B2A-042	ADJACENT SOIL SAMPLE LOCATION
■ B2B-025	BENEATH SOIL SAMPLE LOCATION
⊠ B2B-029	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
DH33	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
41C	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE EAST COOLING BUILDING:
   B2A-046 AT 2.25FT, B2A-047 AT 2.8FT,
   B2A-048 AT 3.2FT, B2A-049 AT 2.3FT,
   B2A-050 AT 3.2FT, B2A-051 AT 2.7FT,
   B2A-052 AT 2.5FT, B2A-053 AT 2.7FT,
   B2A-054 AT 3.2FT, B2A-055 AT 2.7FT.
2. ADJACENT SAMPLE B2A-042 WAS SPLIT DUE TO CONCRETE. THE 0-6 INCH BGS SAMPLE WAS COLLECTED BUT AUGER REFUSAL DUE TO CONCRETE WAS ENCOUNTERED BEFORE 1 FOOT BGS. THE SAMPLE LOCATION WAS THEREFORE OFFSET TO THE EAST AND THE 1-2 FOOT BGS SAMPLE WAS COLLECTED.
3. CONTOUR INTERVAL IS 2 FT.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

20 0 20 40

SCALE FEET

Revisions			
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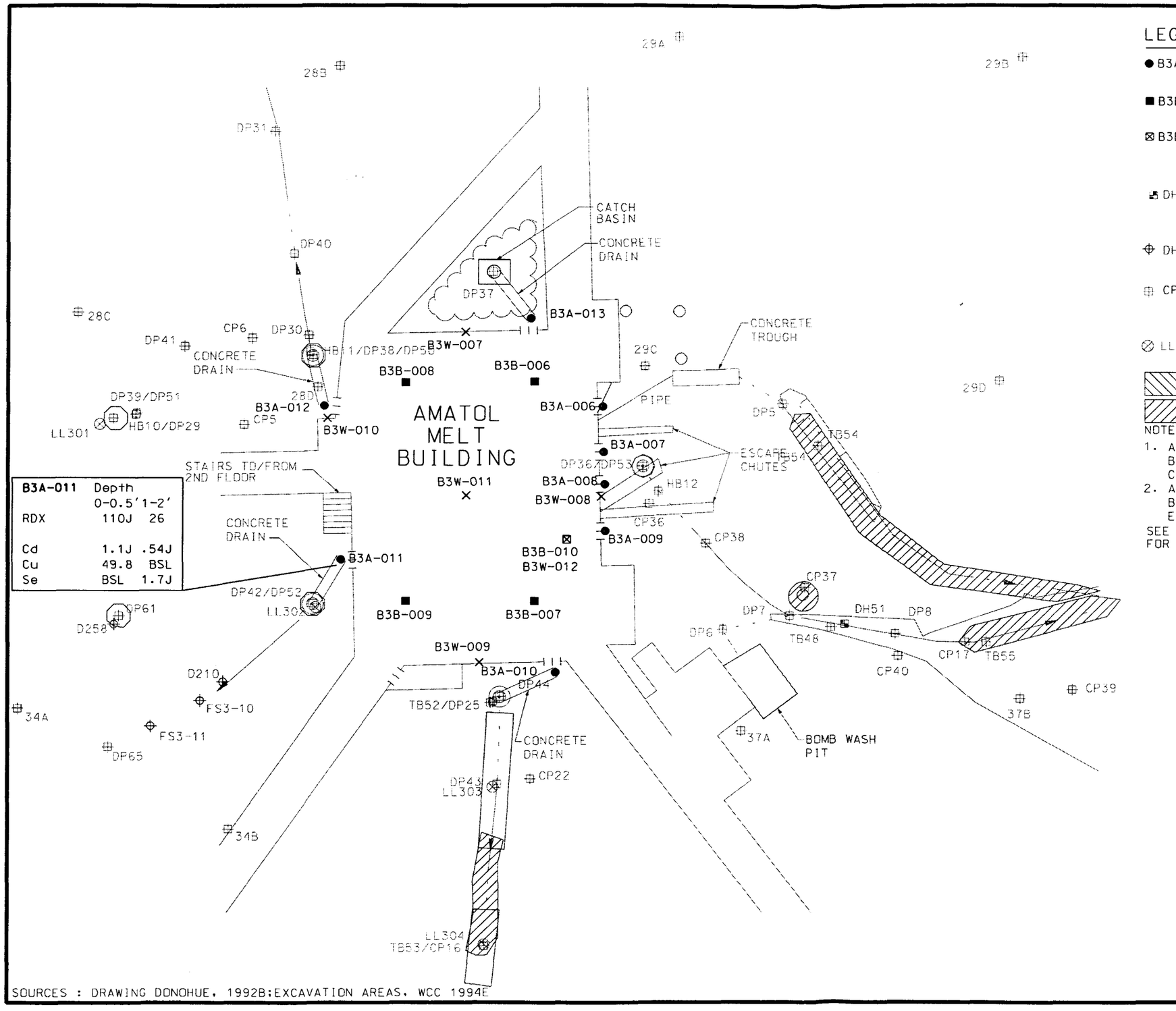
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
EAST COOLING BUILDING
SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-65
Sheet number: 1

MCS FILE: OU3L26S



SOURCES : DRAWING DONOHUE, 1992B:EXCAVATION AREAS, WCC 1994E

LEGEND:

● B3A-006	ADJACENT SOIL SAMPLE LOCATION
■ B3B-006	BENEATH SOIL SAMPLE LOCATION
⊠ B3B-010	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
DH5	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
LL302	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
	OU1 SOIL EXCAVATION AREA
	OU2 SOIL EXCAVATION AREA

NOTES:

1. ALL ADJACENT SOIL SAMPLES TAKEN AT AMATOL SCREENING BUILDING WERE COLLECTED APPROXIMATELY 1 FT FROM CONCRETE WALKS OR EXTERIOR WALLS.
2. ALL ADJACENT SOIL SAMPLES TAKEN AT AMATOL MELT BUILDING WERE COLLECTED APPROXIMATELY 1.5 FT FROM EXTERIOR WALLS.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

30 0 30 60
SCALE FEET

Revisions			
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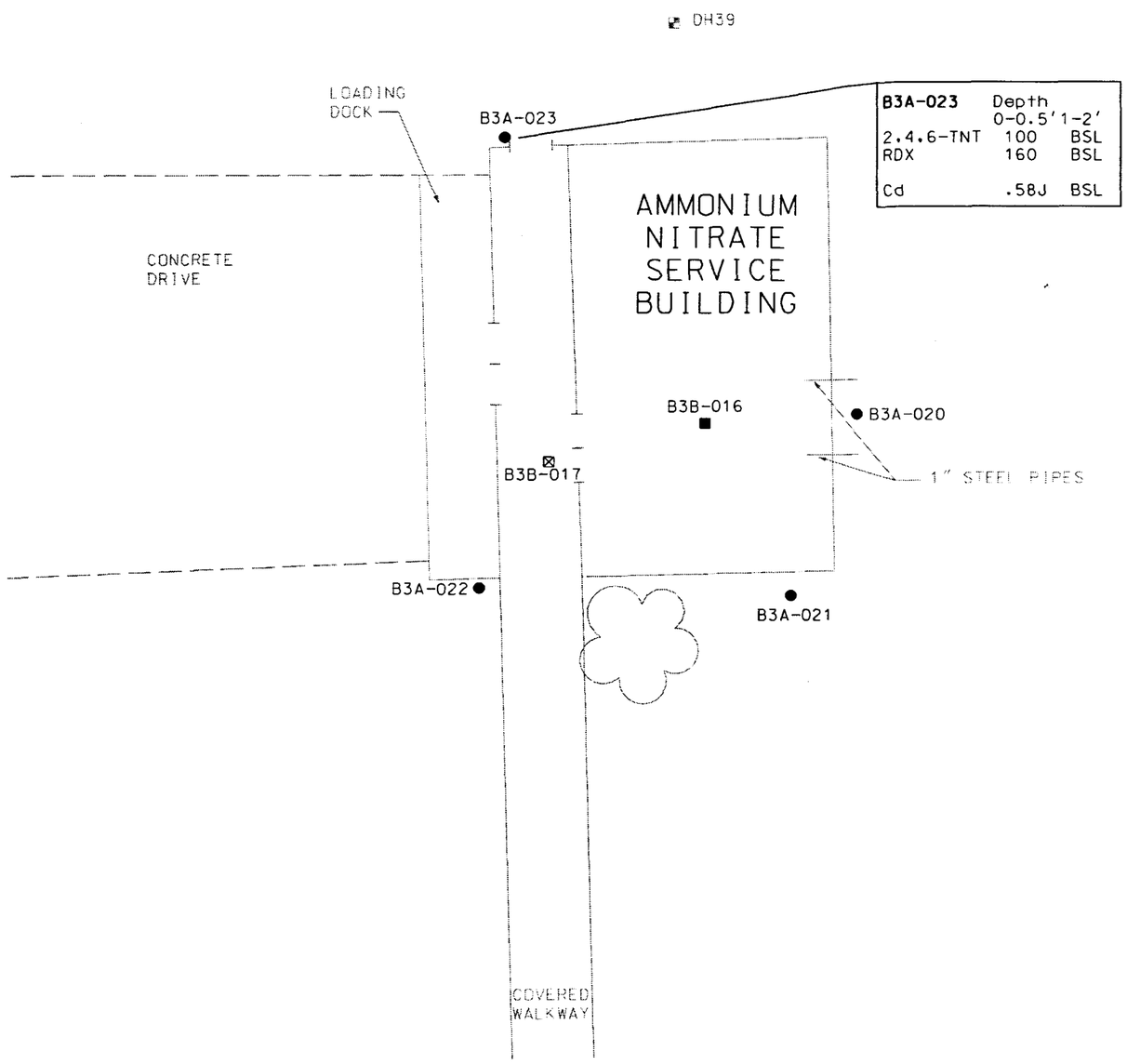
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
AMATOL MELT BUILDING
LOCATIONS AND RESULTS
ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 30 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-66
Sheet number: 1

MCS FILE: OU3L32S



LEGEND:

● B3A-020	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B3B-016	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B3B-017/B3W-042	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(✕ WALL, ✕ FLOOR) B3W-037	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH39	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)

NOTES:
1. ALL ADJACENT SOIL SAMPLES COLLECTED 1 FT FROM EXTERIOR WALLS.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

10 0 10 20
SCALE FEET

SOURCE : FIELD MEASUREMENTS

Revisions			
Symbol	Descriptions	Date	Apprv'd

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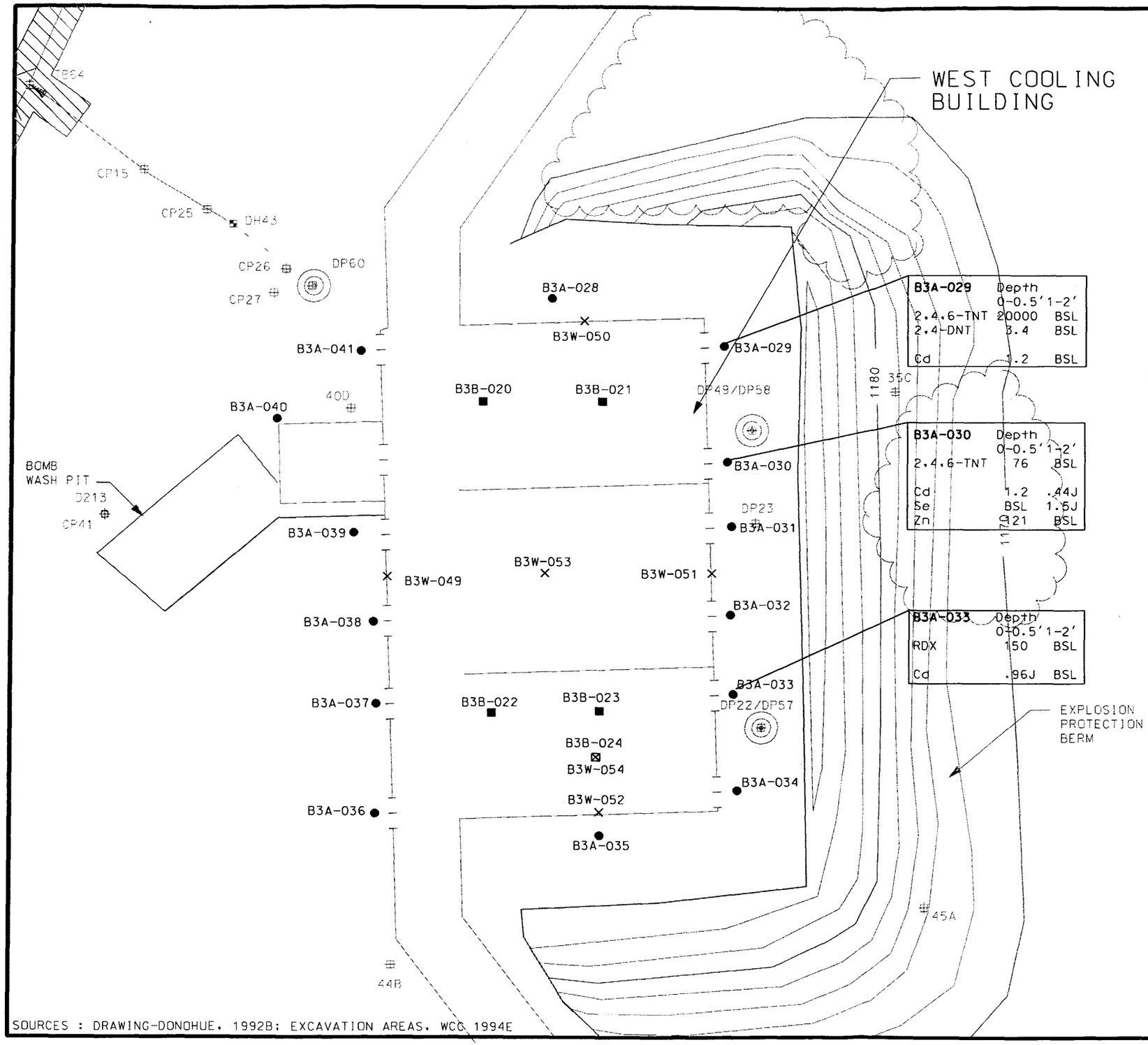
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
AMMONIUM NITRATE SERVICE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-67
Sheet number: 1

MCS FILE: OU3L34S



SOURCES : DRAWING-DONOHUE, 1992B; EXCAVATION AREAS, WCC 1994E

LEGEND:

● B3A-028	ADJACENT SOIL SAMPLE LOCATION
■ B3B-020	BENEATH SOIL SAMPLE LOCATION
⊠ B3B-024	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
DH43	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
35C	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
D213	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
	OU1 SOIL EXCAVATION AREA
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE WEST COOLING BUILDING:
   B3A-028 AT 3.9FT, B3A-029 AT 2.9FT,
   B3A-030 AT 2.9FT, B3A-031 AT 3.5FT,
   B3A-032 AT 2.8FT, B3A-033 AT 2.8FT,
   B3A-034 AT 3.0FT, B3A-035 AT 3.3FT,
   B3A-036 AT 2.7FT, B3A-037 AT 1.9FT,
   B3A-038 AT 2.0FT, B3A-039 AT 5.25FT,
   B3A-040 AT 1.9FT, B3A-041 AT 2.9FT

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

20 0 20 40
SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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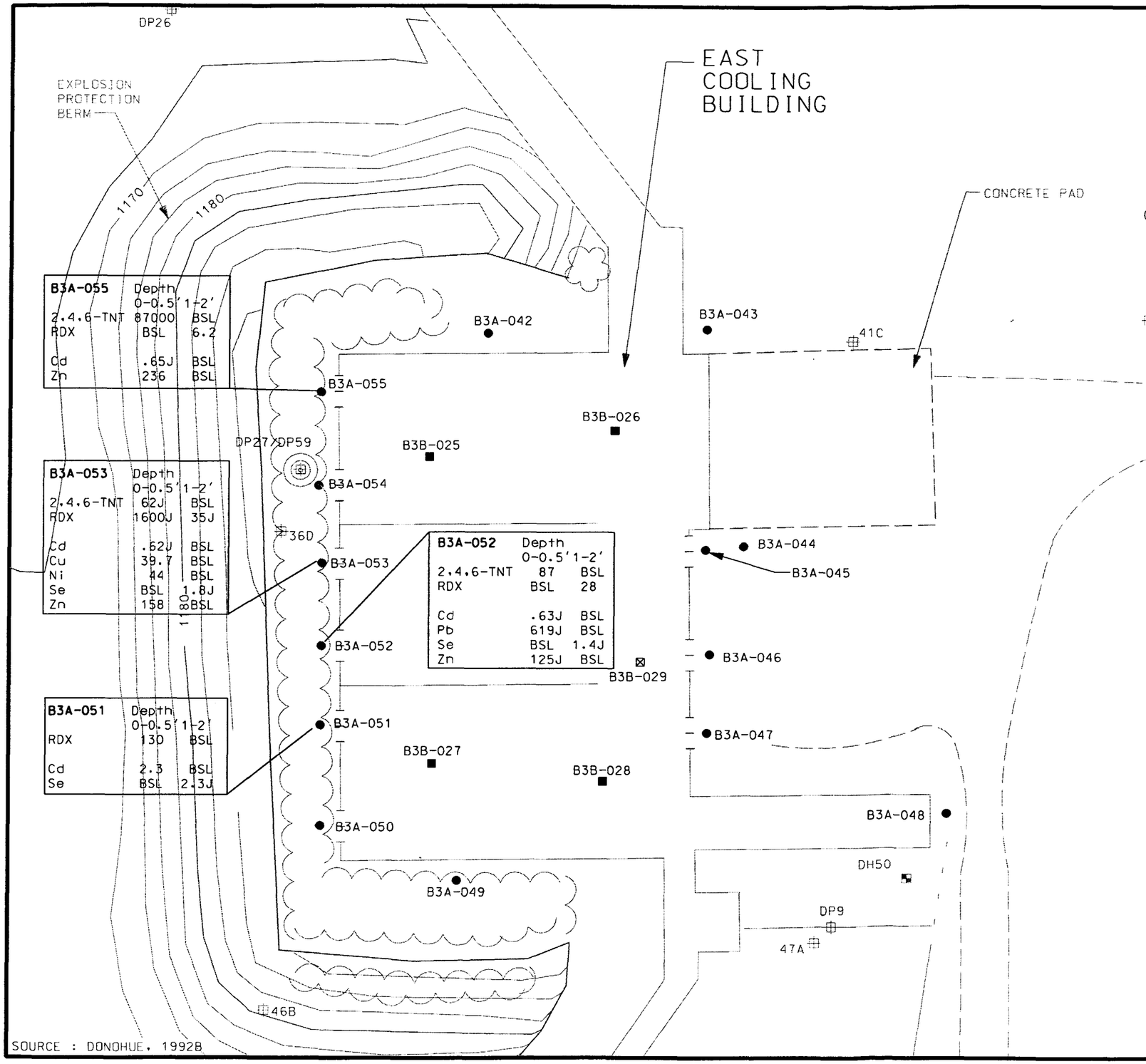
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
WEST COOLING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-68
Sheet number: 1

MCS FILE: OU3L37S



B3A-055	Depth 0-0.5'	1-2'
2,4,6-TNT	87000	BSL
RDX	BSL	6.2
Cd	.65J	BSL
Zn	236	BSL

B3A-053	Depth 0-0.5'	1-2'
2,4,6-TNT	62J	BSL
RDX	1600J	35J
Cd	.62J	BSL
Cu	39.7	BSL
Ni	44	BSL
Se	BSL	1.8J
Zn	158	BSL

B3A-052	Depth 0-0.5'	1-2'
2,4,6-TNT	87	BSL
RDX	BSL	28
Cd	.63J	BSL
Pb	619J	BSL
Se	BSL	1.4J
Zn	125J	BSL

B3A-051	Depth 0-0.5'	1-2'
RDX	130	BSL
Cd	2.3	BSL
Se	BSL	2.3J

LEGEND:

● B3A-042	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B3B-025	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B3B-029/B3W-055	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(✳ WALL, ✕ FLOOR) B3W-055	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE EAST COOLING BUILDING:
B3A-042 AT 3.0FT, B3A-043 AT 3.8FT,
B3A-044 AT 3.0FT, B3A-045 AT 2.25FT,
B3A-046 AT 2.8FT, B3A-047 AT 2.25FT,
B3A-048 AT 2.2FT, B3A-049 AT 3.2FT,
B3A-050 AT 3.2FT, B3A-051 AT 3.1FT,
B3A-052 AT 2.7FT, B3A-053 AT 2.2FT,
B3A-054 AT 3.0FT, B3A-055 AT 2.5FT

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

20 0 20 40
SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

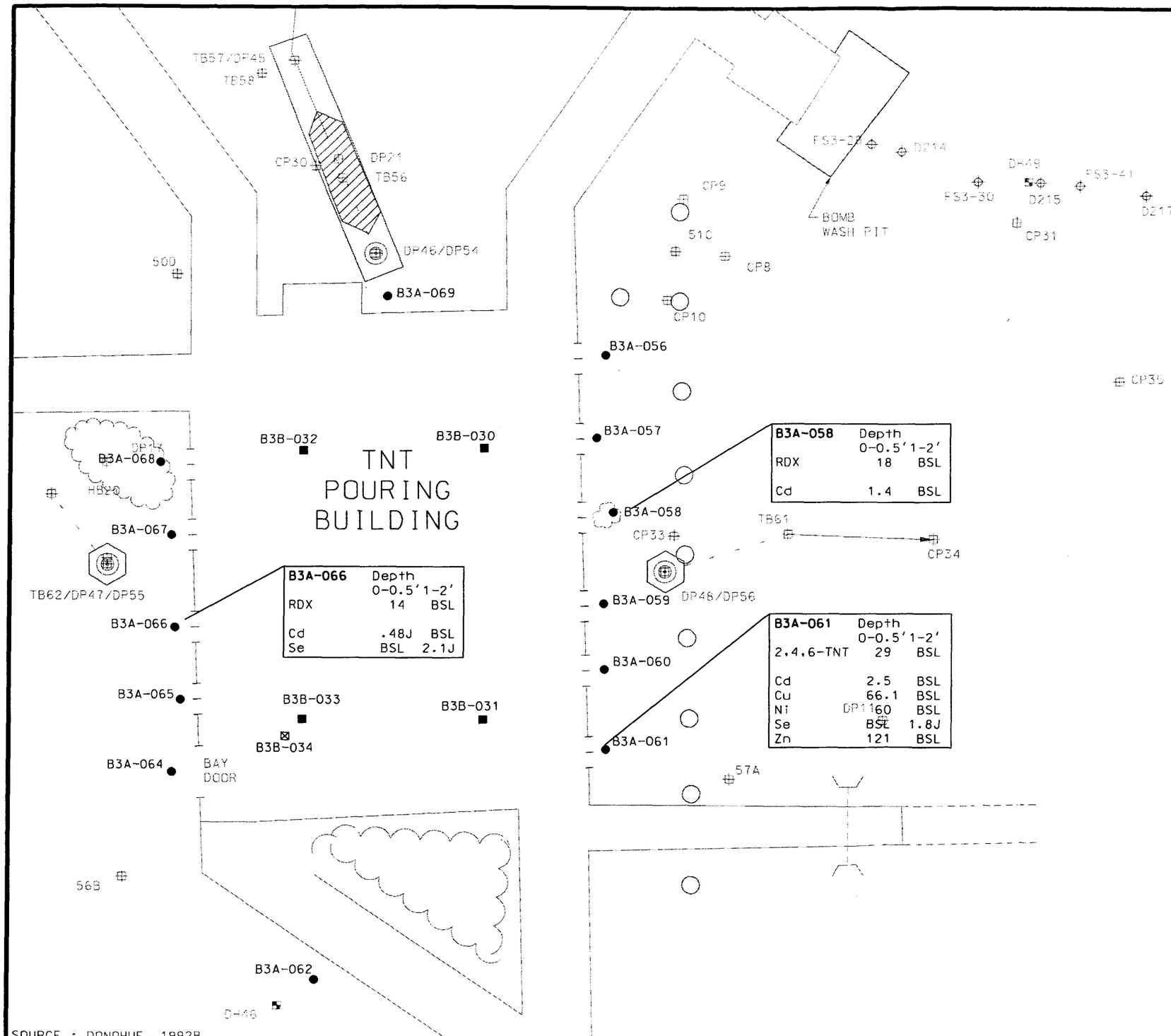
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
EAST COOLING BUILDING
SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-69
Sheet number: 1

MCS FILE: OU3L36S

B07NE003703-03689



B3A-058	Depth 0-0.5'	1-2'
RDX	18	BSL
Cd	1.4	BSL

B3A-066	Depth 0-0.5'	1-2'
RDX	14	BSL
Cd	.48J	BSL
Se	BSL	2.1J

B3A-061	Depth 0-0.5'	1-2'
2,4,6-TNT	29	BSL
Cd	2.5	BSL
Cu	66.1	BSL
Ni	160	BSL
Se	BSL	1.8J
Zn	121	BSL

LEGEND:

● B3A-056	ADJACENT SOIL SAMPLE LOCATION
■ B3B-030	BENEATH SOIL SAMPLE LOCATION
⊠ B3B-034	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
DH5	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	OU1 SOIL EXCAVATION AREA
	OU1 AND OU2 SOIL EXCAVATION AREAS

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE TNT POURING BUILDING:
   B3A-056 AT 4.5FT, B3A-057 AT 2.5FT,
   B3A-058 AT 5.0FT, B3A-059 AT 2.5FT,
   B3A-060 AT 2.5FT, B3A-061 AT 2.5FT,
   B3A-062 AT 4.0FT, B3A-064 AT 4.5FT,
   B3A-065 AT 2.5FT, B3A-066 AT 3.0FT,
   B3A-067 AT 3.0FT, B3A-068 AT 5.0FT,
   B3A-069 AT 2.5FT
2. ADJACENT SOIL SAMPLE B3A-063 WAS NOT COLLECTED DUE TO CONCRETE DEBRIS AT SAMPLE LOCATION.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

20 0 20 40

SCALE FEET

Revisions			
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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

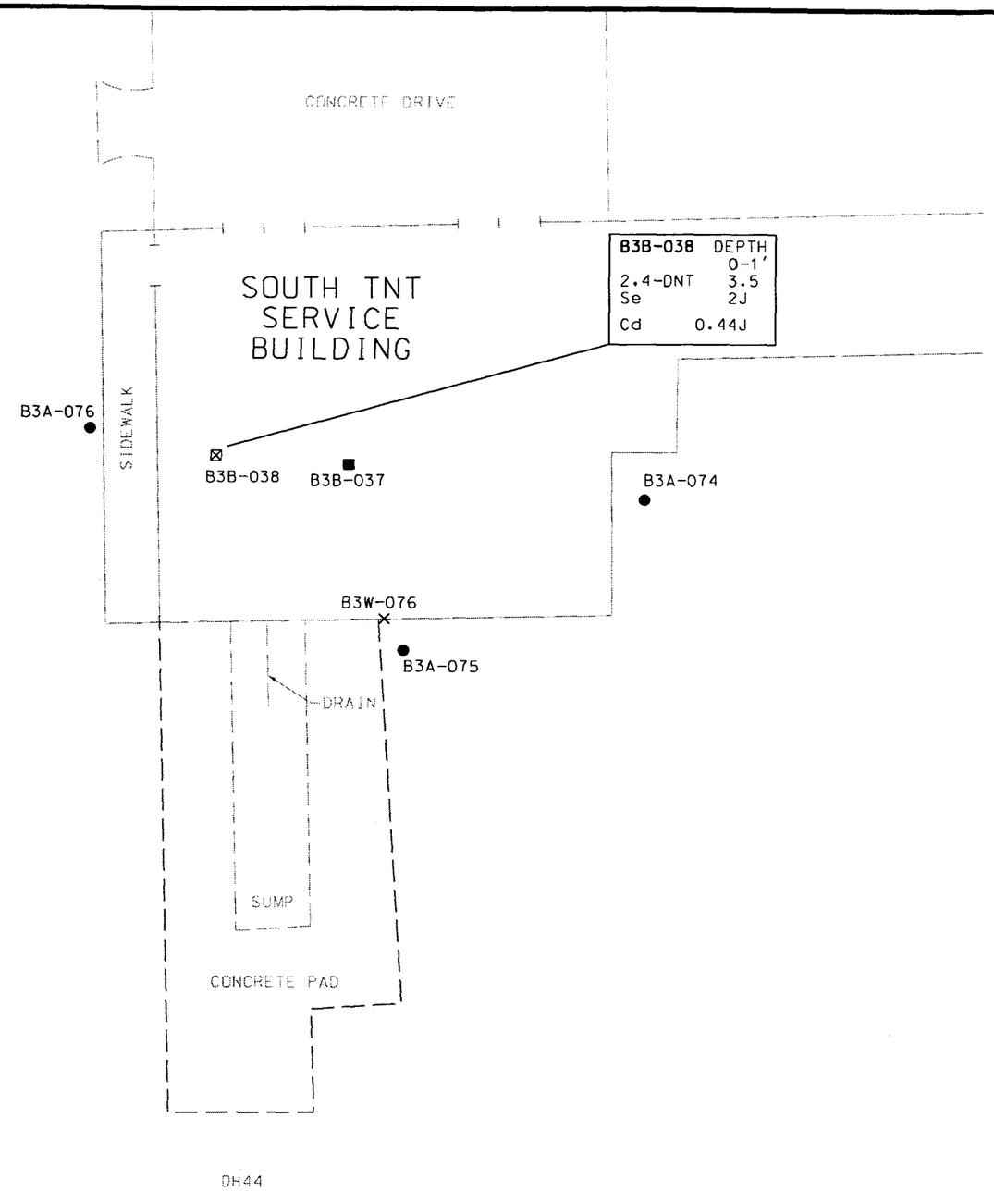
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
TNT POURING BUILDING
SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-70
Sheet number: 1

MCS FILE: OU3L39S

B07NE003703-03690



SOURCE : DONOHUE, 1992B

LEGEND:

● B3A-074	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B3B-037	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B3B-038/B3W-078	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
(✕ WALL, ✕ FLOOR) B3W-073	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH44	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE SOUTH TNT SERVICE BUILDING:
   B3A-074 AT 2.0FT, B3A-075 AT 2.0FT,
   B3A-076 AT 4.5FT
2. ADJACENT SOIL SAMPLE B3A-077 NOT COLLECTED DUE TO CONCRETE PAD AT SAMPLE LOCATION.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

10 0 10 20
SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

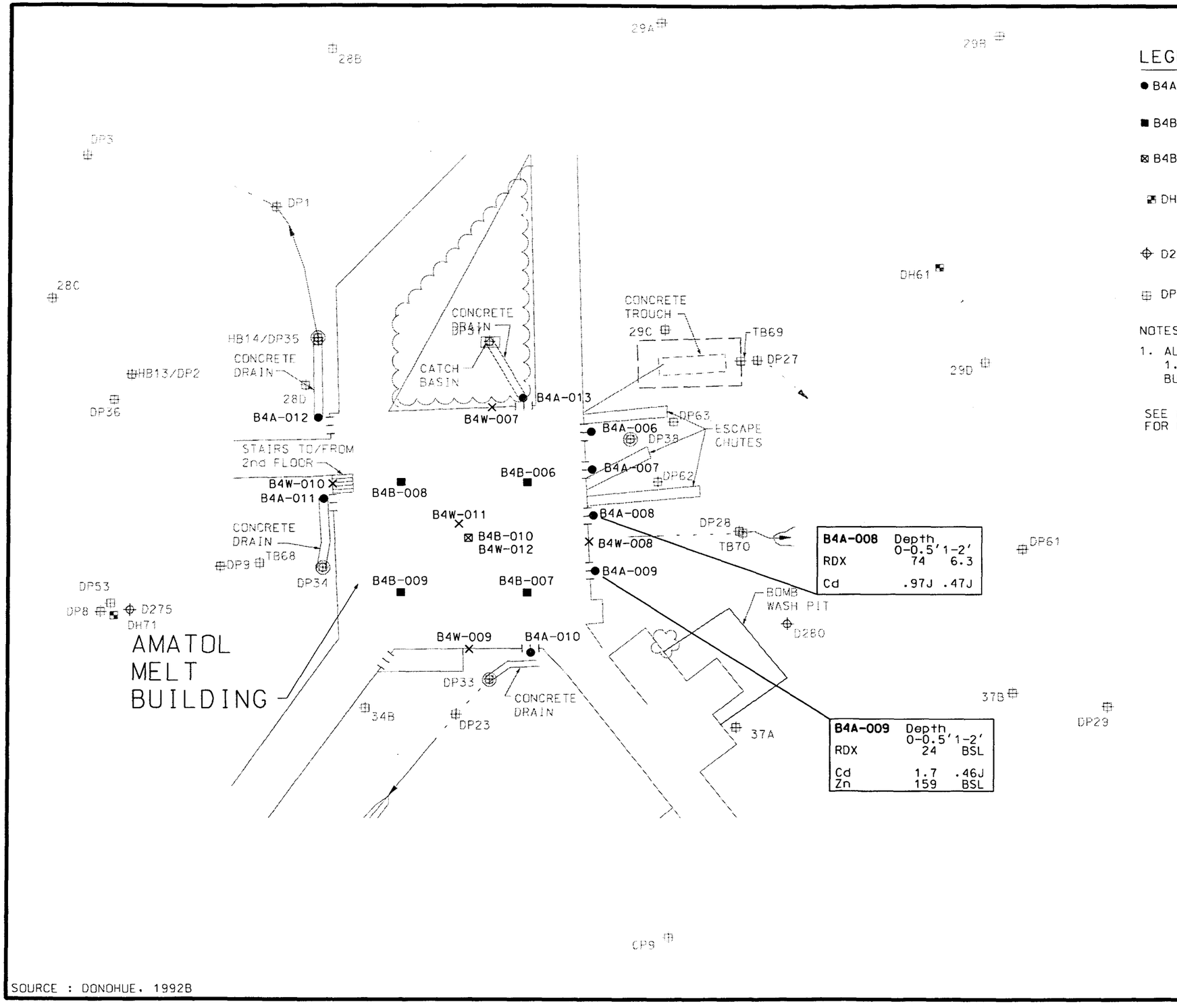
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
SOUTH TNT SERVICE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-71
Sheet number: 1

MCS FILE: OU3L30S

B07NE003703-03691



B4A-008	Depth 0-0.5'	1-2'
RDX	74	6.3
Cd	.97J	.47J

B4A-009	Depth 0-0.5'	1-2'
RDX	24	BSL
Cd	1.7	.46J
Zn	159	BSL

LEGEND:

● B4A-006	ADJACENT SOIL SAMPLE LOCATION
■ B4B-006	BENEATH SOIL SAMPLE LOCATION
⊠ B4B-010	DISCRETIONARY UPPER SOIL SAMPLE LOCATION
DH71	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
D275	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
DP36	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1.5 FT FROM THE EXTERIOR WALLS OF THE AMATOL MELT BUILDING.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

30 0 30 60

SCALE FEET

SOURCE : DONOHUE, 1992B

Revisions			
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KANSAS CITY, MISSOURI

Designed by: S.J.F.
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Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

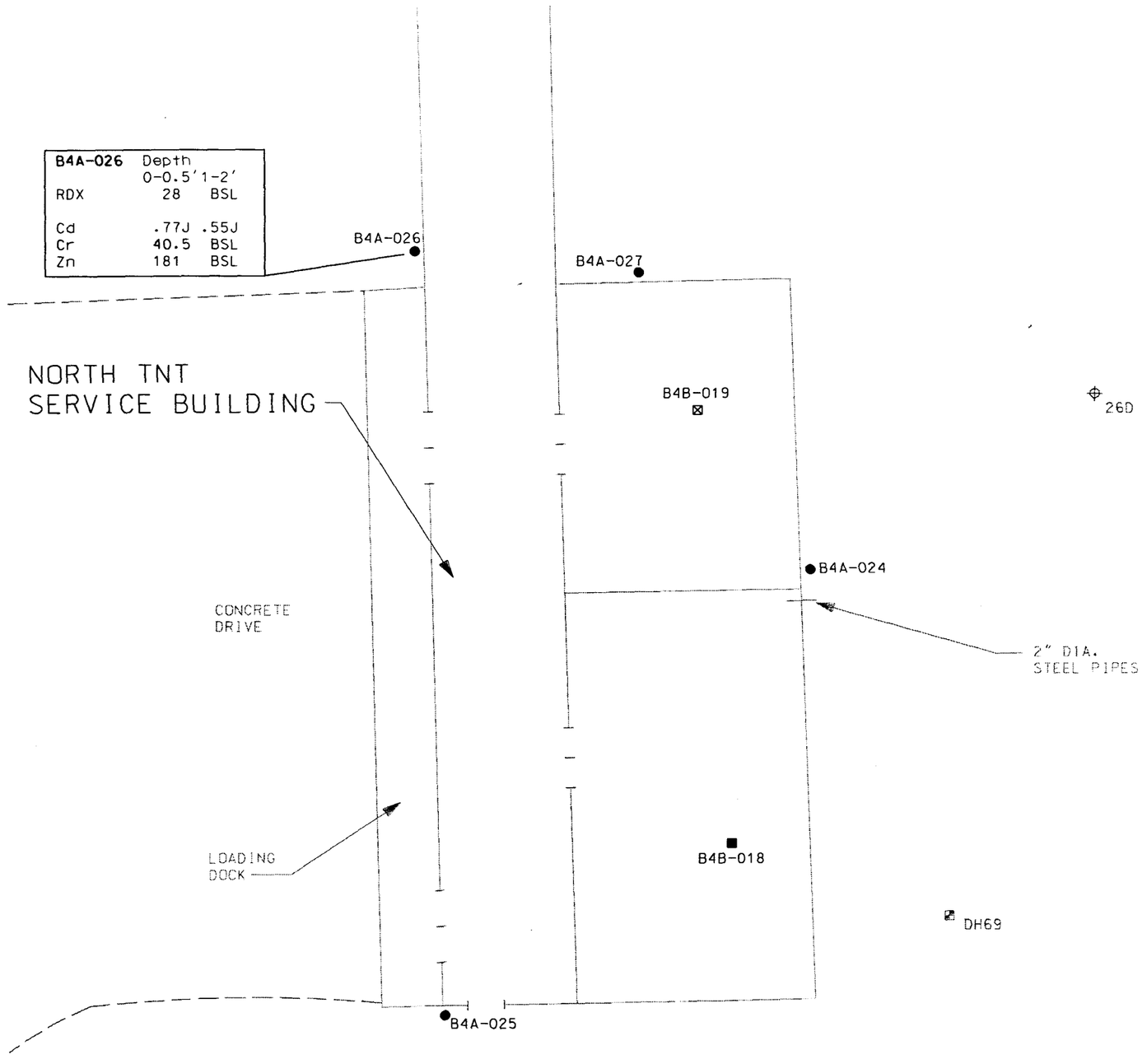
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
AMATOL MELT BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 30 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-72
Sheet number: 1

MCS FILE: OU3L42S

B07NE003703-03692



LEGEND:

● B4A-024	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B4B-018	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B4B-019	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH69	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
⊕ CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ALL ADJACENT SOIL SAMPLES COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS OF THE NORTH TNT SERVICE BUILDING.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

10 0 10 20

SCALE FEET

SOURCE : DONOHUE, 1992B

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KANSAS CITY, MISSOURI

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Submitted by: RAN

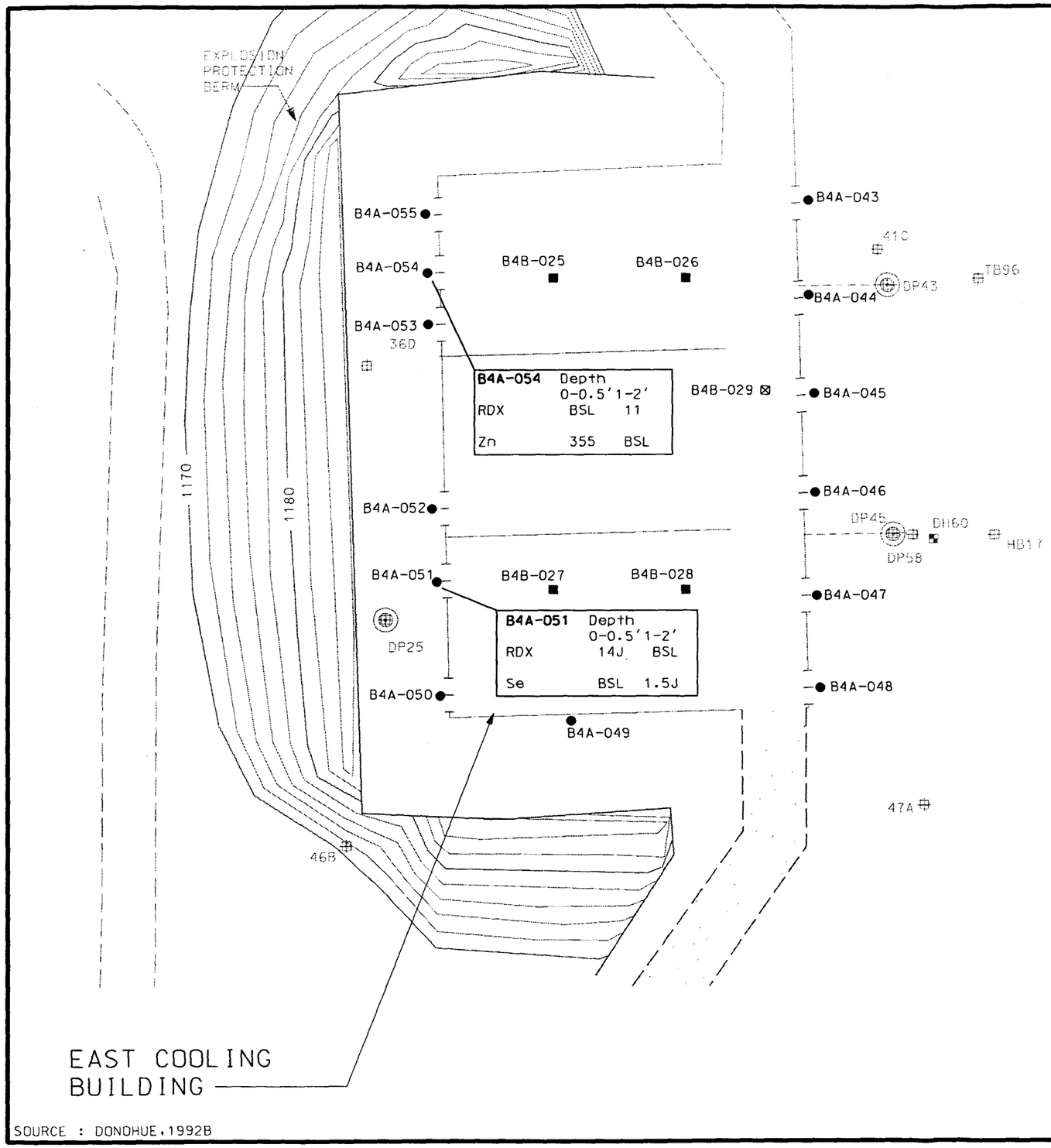
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
NORTH TNT
SERVICE BUILDING
SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-73
Sheet number: 1

MCS FILE: OU3L45S



SOURCE : DONOHUE, 1992B

LEGEND:

● B4A-043	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B4B-025	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B4B-029	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
	SURFACE WIPE SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
	INDEX CONTOUR
	INTERMEDIATE CONTOUR

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED APPROXIMATELY 1 FT FROM THE EXTERIOR WALLS OF THE EAST COOLING BUILDING.
2. ADJACENT SOIL SAMPLE B4A-042 WAS NOT COLLECTED DUE TO CONCRETE DEBRIS AT SAMPLE LOCATION.
3. CONTOUR INTERVAL IS 2FT.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

20 0 20 40

SCALE FEET

Revisions

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Overland Park, Kansas

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

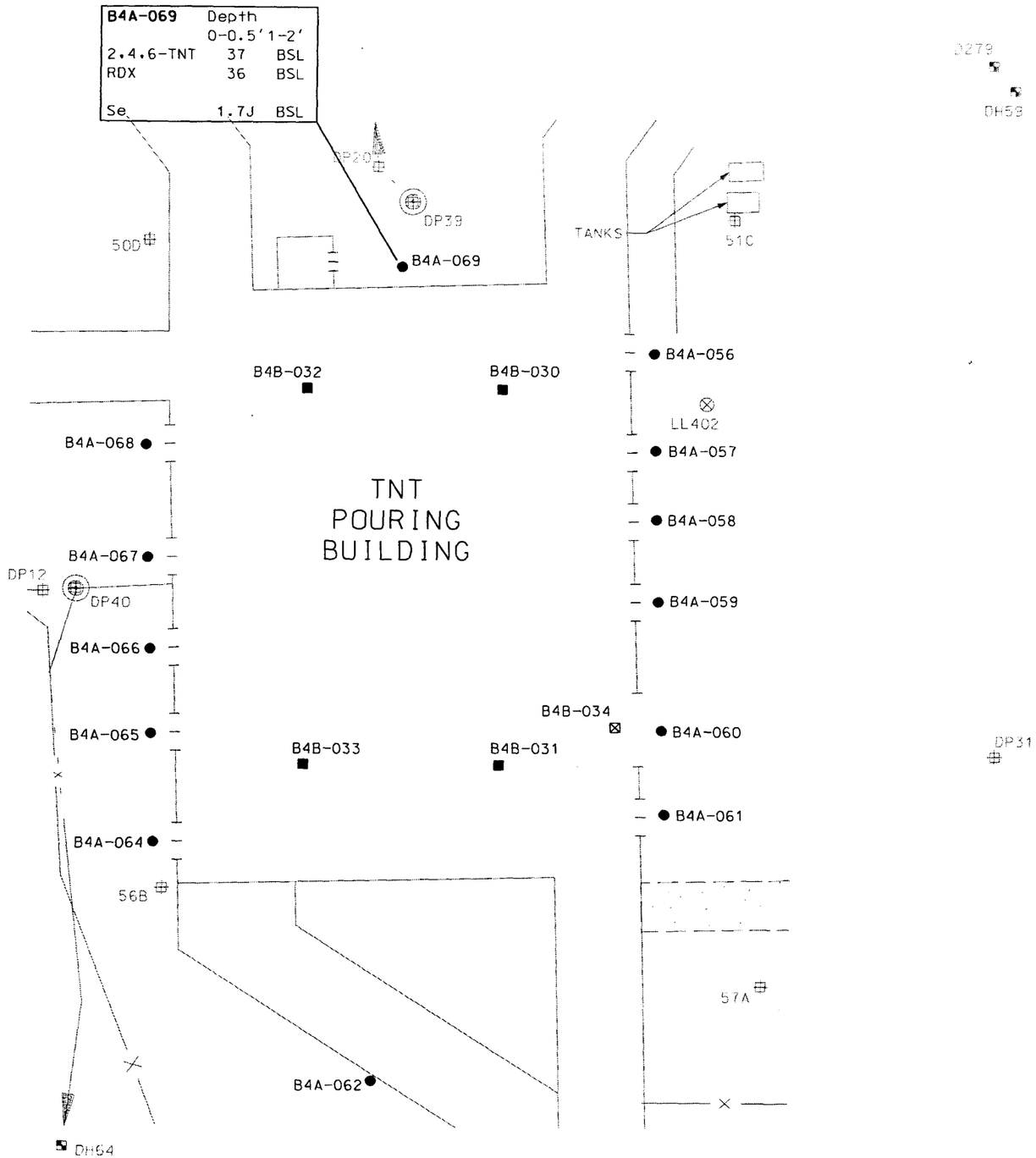
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
EAST COOLING BUILDING
SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-74
Sheet number: 1

MCS FILE: OU3L46S



SOURCE : DONOHUE, 1992B

LEGEND:

● B4A-074	ADJACENT SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
■ B4B-030	BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
⊠ B4B-034	DISCRETIONARY WIPE AND BENEATH SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
DH5	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
⊗ LL402	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
—— x ——	FENCE

NOTES:

1. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWNG DISTANCES FROM THE EXTERIOR WALLS OF THE TNT POURING BUILDING:
   B4A-056 AT 7.5FT, B4A-057 AT 3.0FT,
   B4A-058 AT 3.0FT, B4A-059 AT 3.0FT,
   B4A-060 AT 3.0FT, B4A-064 AT 3.0FT,
   B4A-065 AT 3.0FT, B4A-066 AT 3.0FT,
   B4A-067 AT 3.0FT, B4A-068 AT 3.0FT,
   B4A-069 AT 2.5FT
2. ADJACENT SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE TNT SCREENING BUILDING:
   B4A-070 AT 3.0FT, B4A-071 AT 3.0FT,
   B4A-072 AT 9.5FT
3. DISCRETIONARY SAMPLES: B4B-034, B4W-066, B4B-036 B4W-072
4. ADJACENT SOIL SAMPLES B4A-063 WAS NOT COLLECTED DUE TO CONCRETE DEBRIS AT SAMPLE LOCATION.

SEE LEGEND/NOTES SHEET FOR DRAWINGS
FOR UNITS OF CONCENTRATION

20 0 20 40
SCALE FEET

N

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

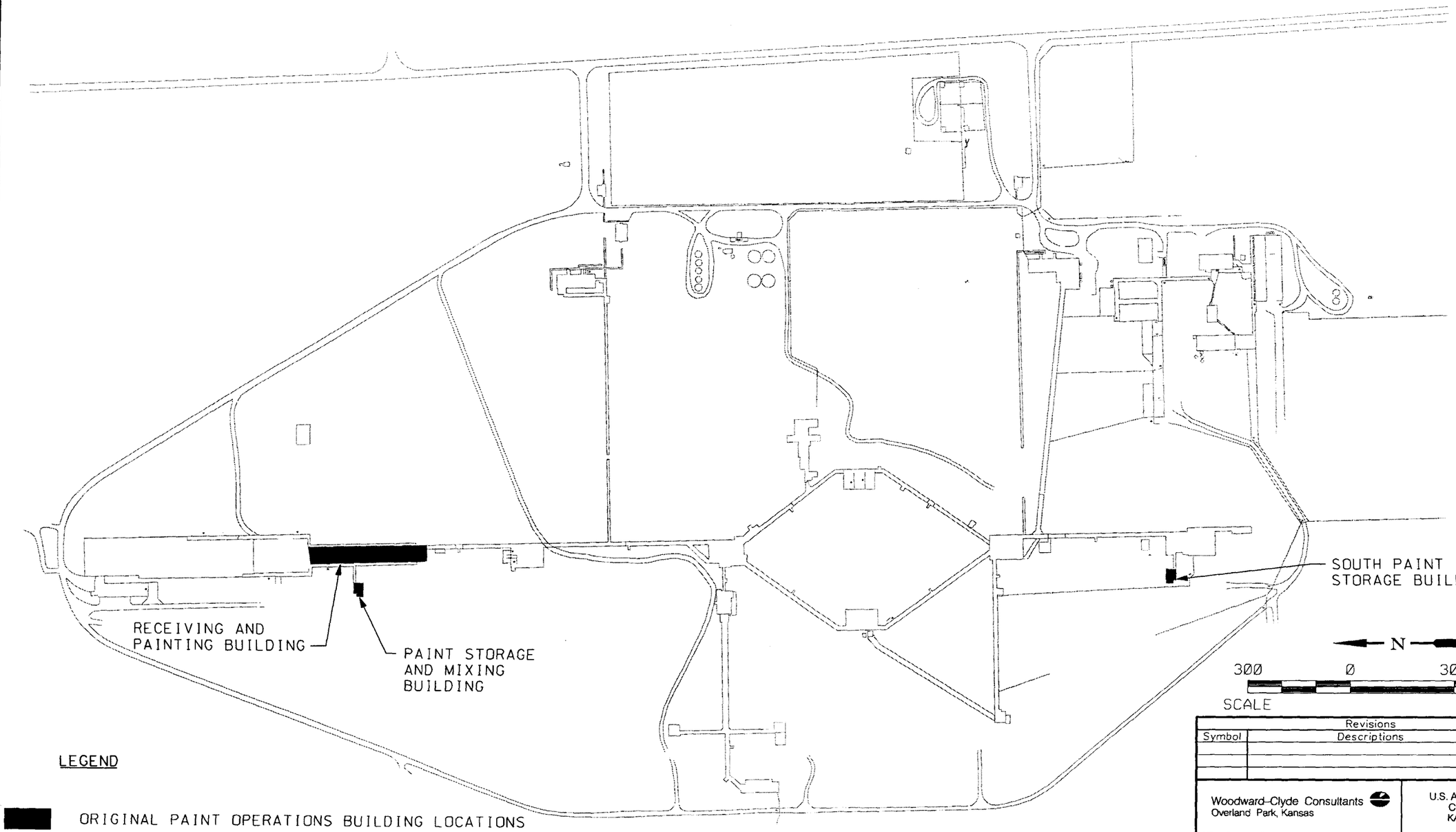
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
TNT POURING BUILDING
SAMPLING LOCATIONS
AND RESULTS ABOVE
SOIL SCREENING LEVELS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-75
Sheet number: 1

MCS FILE: OU3L49S

B07NE003703-03695



LEGEND

ORIGINAL PAINT OPERATIONS BUILDING LOCATIONS

NOTE:

THE RECEIVING AND PAINTING BUILDING AT LOAD LINE 1 HAS BEEN DEMOLISHED.

SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

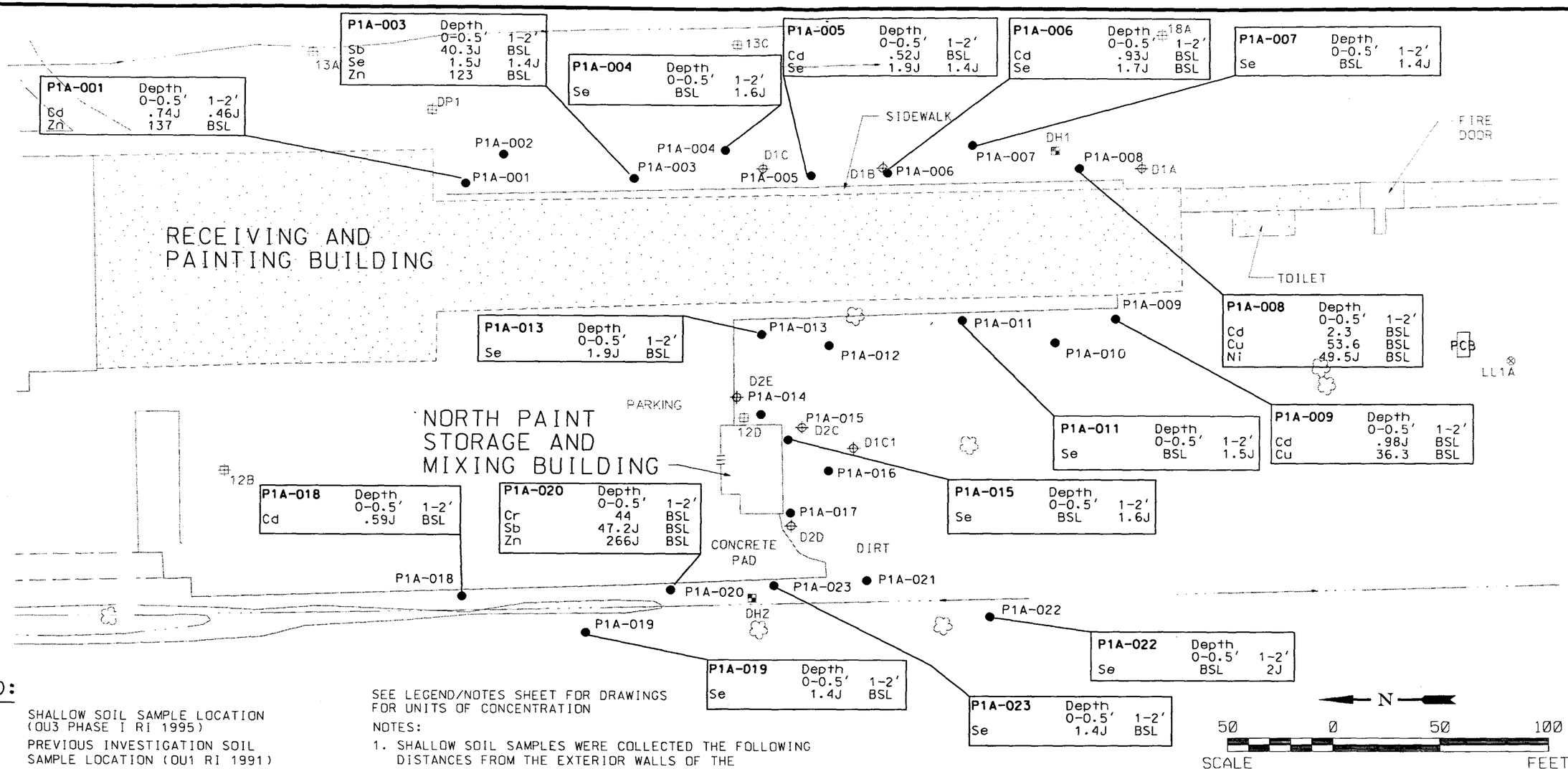
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

PAINT OPERATIONS BUILDINGS AT LOAD LINE 1

Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-76
Sheet number: 1

MCS FILE: OU3L1P



LEGEND:

- ● P1A-001 — SHALLOW SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
- DH4 — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
- D2A — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
- CP40 — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
- LL1A — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (PDI 1995)

SOURCE : DONOHUE.1992B

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

NOTES:

1. SHALLOW SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE RECEIVING AND PAINTING BUILDING:
   P1A-001 AT 6.5FT, P1A-002 AT 20.0FT,
   P1A-003 AT 7.5FT, P1A-004 AT 20.0FT,
   P1A-005 AT 7.5FT, P1A-006 AT 7.5FT,
   P1A-007 AT 20.0FT, P1A-009 AT 9.5FT,
   P1A-010 AT 20.0FT, P1A-011 AT 8.0FT,
   P1A-012 AT 20.0FT, P1A-013 AT 13.0FT
2. SHALLOW SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE PAINT STORAGE AND MIXING BUILDING:
   P1A-014 AT 3.0FT, P1A-015 AT 1.0FT,
   P1A-016 AT 20.0FT, P1A-017 AT 1.0FT
3. SHALLOW SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES WEST OF THE CONCRETE PAD WEST OF THE PAINT STORAGE & MIXING BUILDING:
   P1A-018 AT 1.0FT, P1A-019 AT 20.0FT,
   P1A-020 AT 1.0FT, P1A-021 AT 1.0FT,
   P1A-022 AT 20.0FT, P1A-023 AT 1.0FT

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

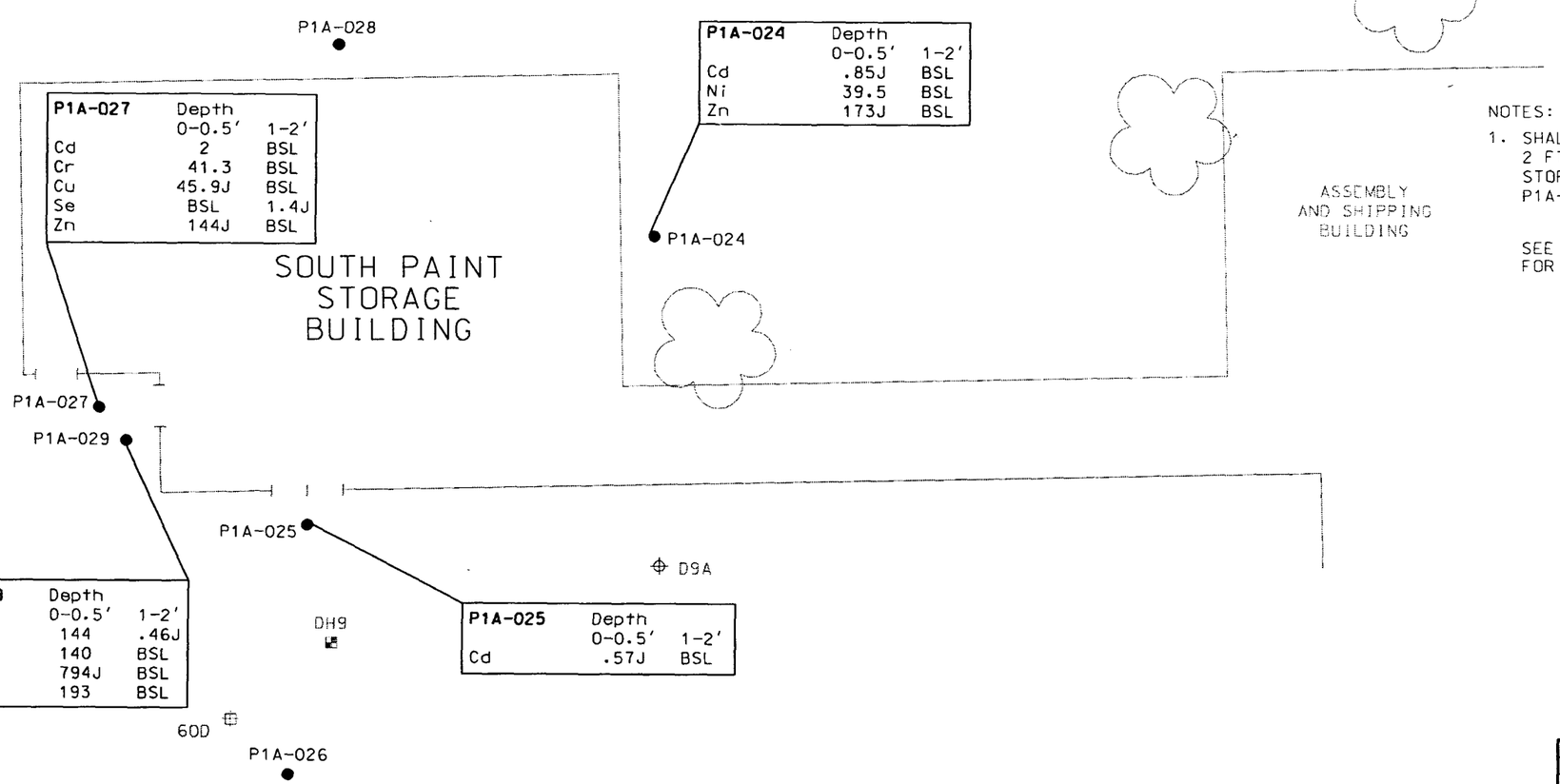
LOAD LINE 1
RECEIVING AND PAINTING BUILDING / NORTH PAINT STORAGE AND MIXING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 50 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-77
Sheet number: 1

MCS FILE: OU3P1IS

LEGEND:

● P1A-024	SHALLOW SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
D19C	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)



P1A-027	Depth 0-0.5'	1-2'
Cd	2	BSL
Cr	41.3	BSL
Cu	45.9J	BSL
Se	BSL	1.4J
Zn	144J	BSL

P1A-024	Depth 0-0.5'	1-2'
Cd	.85J	BSL
Ni	39.5	BSL
Zn	173J	BSL

P1A-029	Depth 0-0.5'	1-2'
Cd	144	.46J
Cr	140	BSL
Pb	794J	BSL
Zn	193	BSL

P1A-025	Depth 0-0.5'	1-2'
Cd	.57J	BSL

NOTES:

1. SHALLOW SOIL SAMPLES WERE COLLECTED APPROXIMATELY 2 FT FROM THE EXTERIOR WALLS OF THE SOUTH PAINT STORAGE BUILDING WITH THE FOLLOWING EXCEPTION: P1A-026 AT 20FT.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

10 0 10 20

SCALE FEET

SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

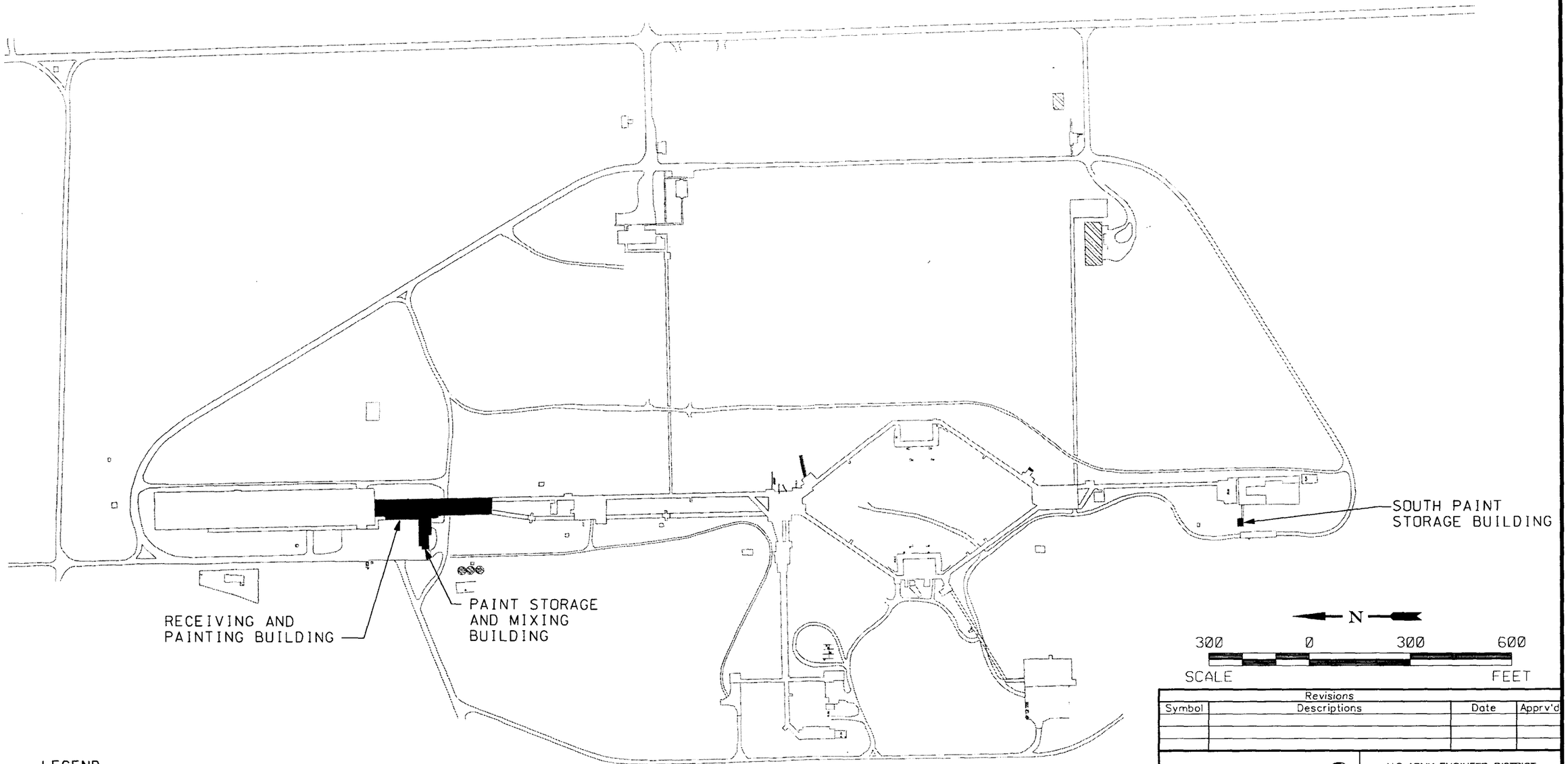
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 1 SOUTH PAINT STORAGE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-78
Sheet number: 1

MCS FILE: OU3P12S



Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

PAINT OPERATIONS BUILDINGS AT LOAD LINE 2

Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-79
Sheet number: 1

MCS FILE: OU3L2P

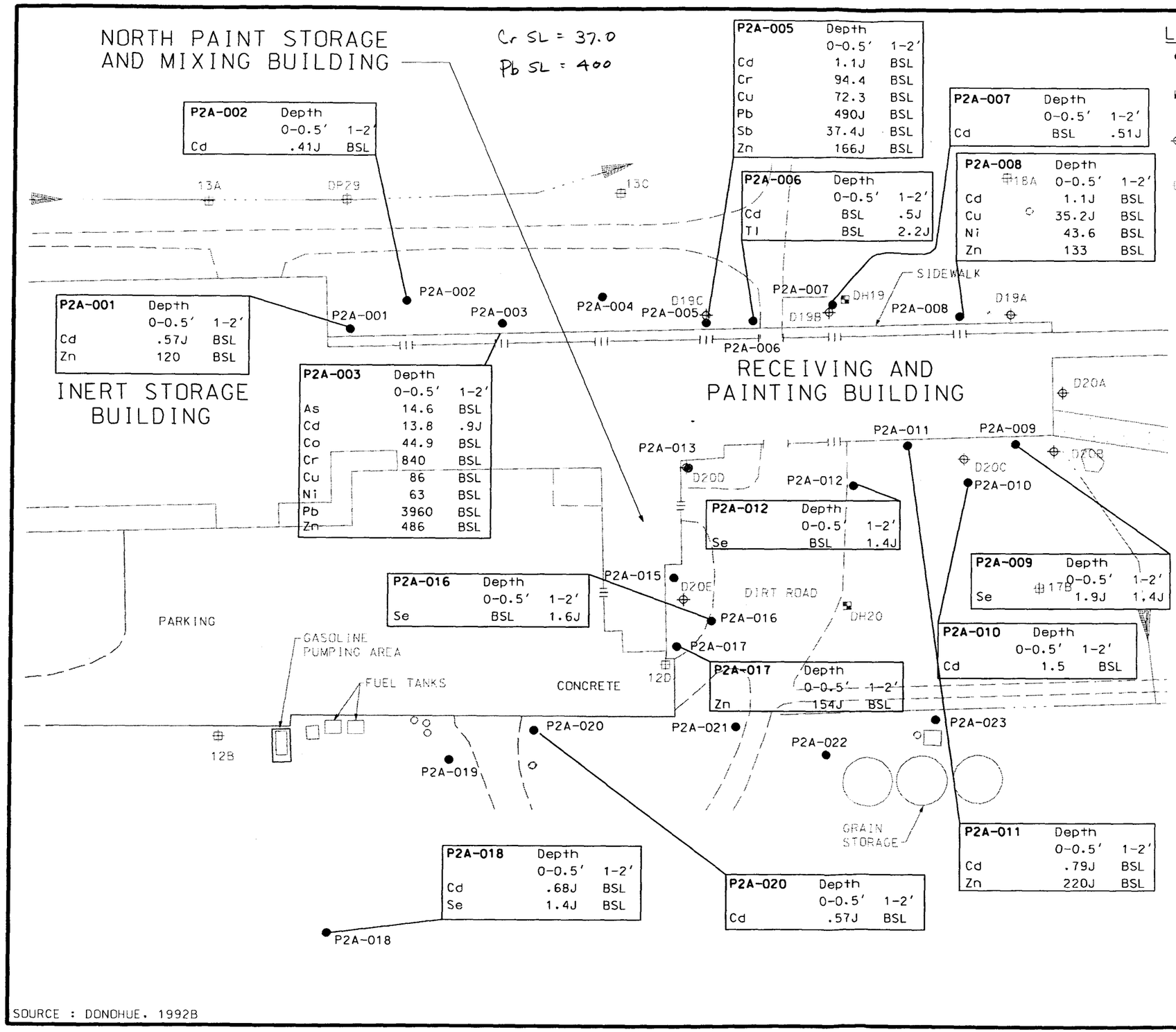
LEGEND

ORIGINAL PAINT OPERATIONS BUILDING LOCATIONS

NOTE:

THE SOUTH PAINT STORAGE BUILDING AT LOAD LINE 2 HAS BEEN DEMOLISHED.

SOURCE : DONOHUE, 1992B



LEGEND:

- ● P2A-001 — SHALLOW SOIL SAMPLE LOCATION (OU3 PHASE I RI 1995)
- DH4 — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
- D19C — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
- CP40 — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

1. SHALLOW SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE RECEIVING AND PAINTING BUILDING: P2A-001 AT 6.5FT, P2A-002 AT 20.0FT, P2A-003 AT 7.5FT, P2A-004 AT 20.0FT, P2A-005 AT 7.0FT, P2A-006 AT 7.0FT, P2A-007 AT 20.0FT, P2A-008 AT 7.0FT, P2A-009 AT 2.0FT, P2A-010 AT 20.0FT, P2A-011 AT 1.0FT, P2A-012 AT 20.0FT, P2A-013 AT 2.0FT
2. SHALLOW SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE NORTH PAINT STORAGE AND MIXING BUILDING: P2A-015 AT 2.0FT, P2A-016 AT 20.0FT, P2A-017 AT 5.0FT
3. SHALLOW SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE CONCRETE PAD WEST OF THE NORTH PAINT STORAGE AND MIXING BUILDING: P2A-018 AT 100.0FT, P2A-019 AT 20.0FT, P2A-020 AT 5FT
4. SHALLOW SOIL SAMPLE P2A-014 NOT COLLECTED DUE TO CONCRETE PAD AT SAMPLING LOCATION.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

50 0 50 100
SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

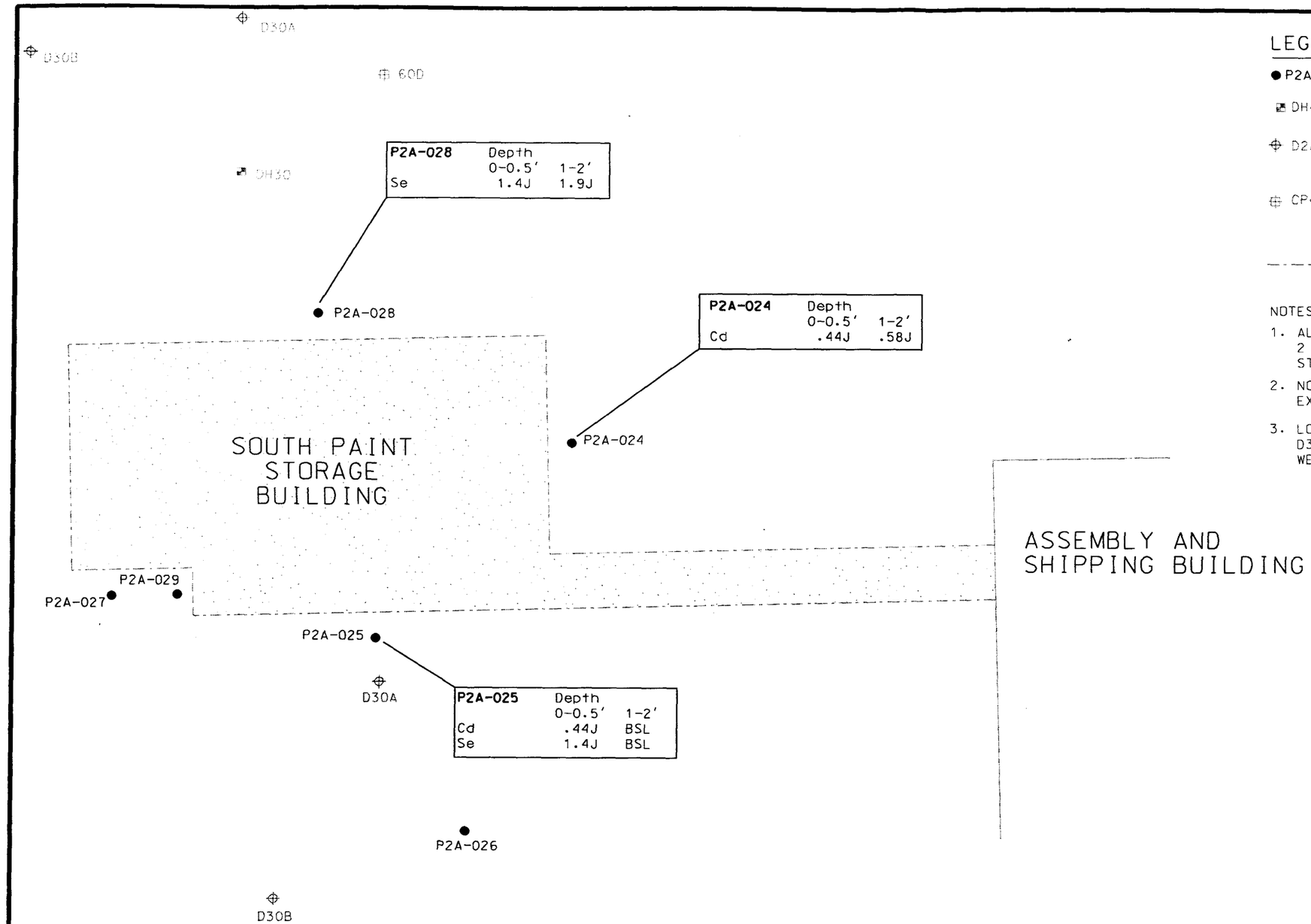
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.
LOAD LINE 2
RECEIVING AND PAINTING BUILDING / NORTH PAINT STORAGE AND MIXING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 50 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-80
Sheet number: 1

MCS FILE: OU3P21S

B07NE003703-03700



LEGEND:

● P2A-024	SHALLOW SOIL SAMPLE LOCATION
DH4	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
D2A	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
— · — · —	BUILDING FOUNDATION REMOVED

NOTES:

1. ALL OF THE SHALLOW SOIL SAMPLES WERE COLLECTED 2 FT FROM THE FOUNDATION OF THE SOUTH PAINT STORAGE BUILDING EXCEPT P2A-026 = (20.0FT).
2. NONE OF THE SAMPLES COLLECTED CONTAINED EXPLOSIVES OR METALS ABOVE SCREENING LEVELS.
3. LOCATION OF PREVIOUS INVESTIGATION SAMPLES D30A AND D30B ARE APPROXIMATE BECAUSE COORDINATES WERE NOT AVAILABLE.

N

10 0 10 20
SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAW

U.S. Army Corps of Engineers

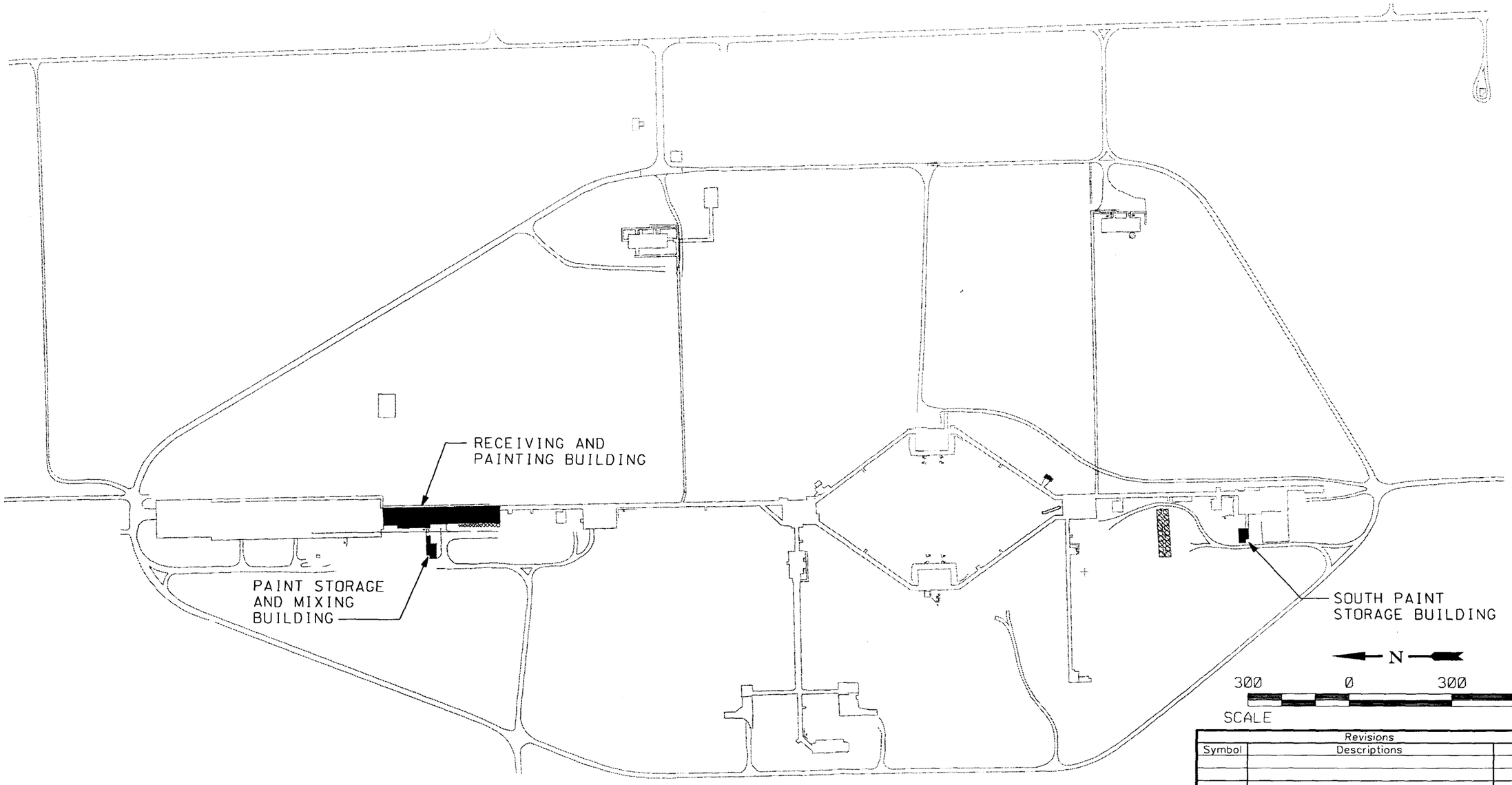
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
SOUTH PAINT STORAGE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-81
Sheet number: 1

MCS FILE: OU3P22

SOURCE : FIELD MEASUREMENTS



LEGEND

ORIGINAL PAINT OPERATIONS BUILDING LOCATIONS

SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

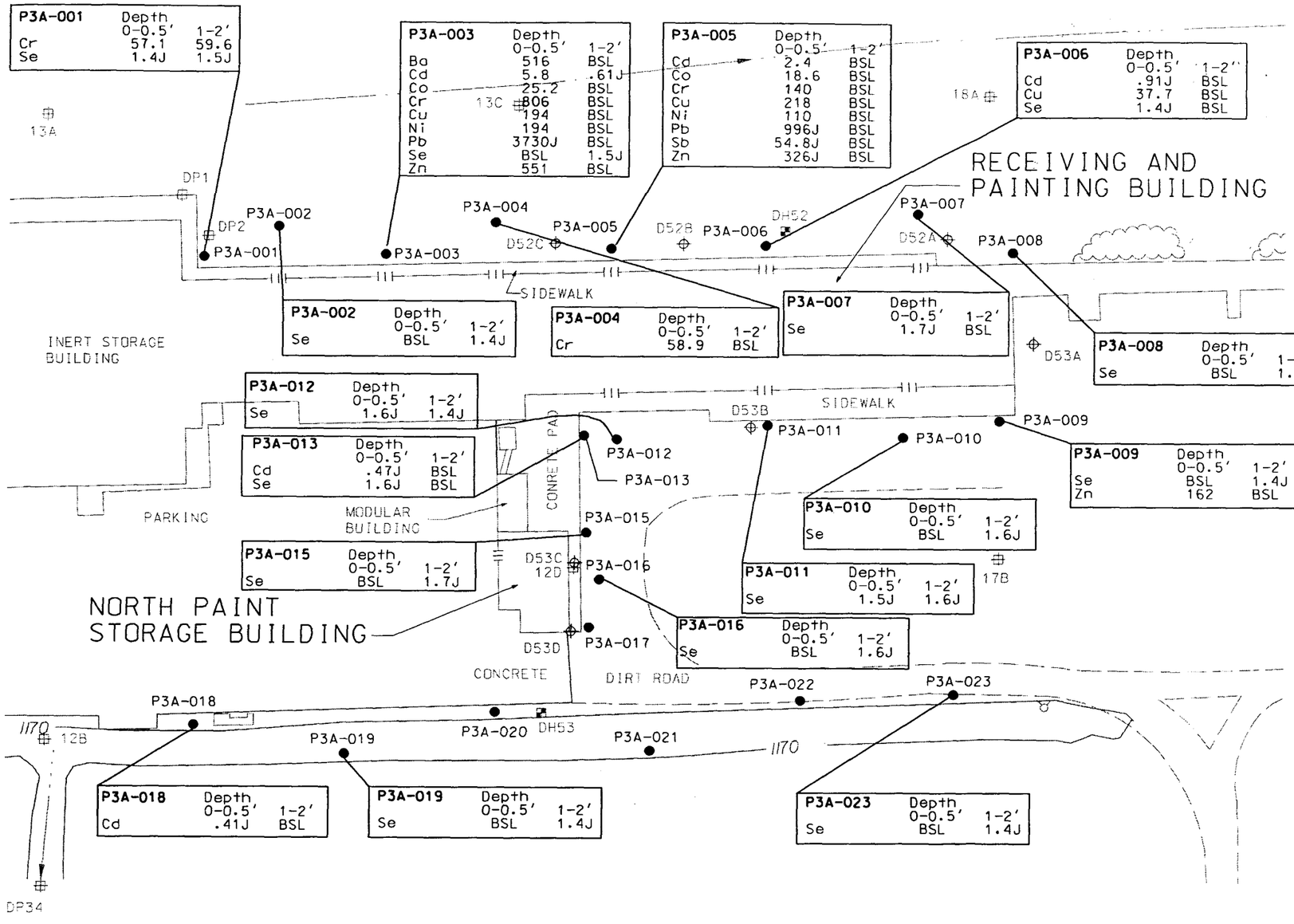
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

PAINT OPERATIONS BUILDINGS AT LOAD LINE 3

Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-82
Sheet number: 1

MCS FILE: OU3L3P

B07NE003703-03702



P3A-001	Depth 0-0.5'	1-2'
Cr	57.1	59.6
Se	1.4J	1.5J

P3A-003	Depth 0-0.5'	1-2'
Ba	516	BSL
Cd	5.8	.61J
Co	25.2	BSL
Cr	806	BSL
Cu	194	BSL
Ni	194	BSL
Pb	3730J	BSL
Se	BSL	1.5J
Zn	551	BSL

P3A-005	Depth 0-0.5'	1-2'
Cd	2.4	BSL
Co	18.6	BSL
Cr	140	BSL
Cu	218	BSL
Ni	110	BSL
Pb	996J	BSL
Sb	54.8J	BSL
Zn	326J	BSL

P3A-006	Depth 0-0.5'	1-2'
Cd	.91J	BSL
Cu	37.7	BSL
Se	1.4J	BSL

P3A-002	Depth 0-0.5'	1-2'
Se	BSL	1.4J

P3A-004	Depth 0-0.5'	1-2'
Cr	58.9	BSL

P3A-007	Depth 0-0.5'	1-2'
Se	1.7J	BSL

P3A-008	Depth 0-0.5'	1-2'
Se	BSL	1.5J

P3A-012	Depth 0-0.5'	1-2'
Se	1.6J	1.4J

P3A-013	Depth 0-0.5'	1-2'
Cd	.47J	BSL
Se	1.6J	BSL

P3A-009	Depth 0-0.5'	1-2'
Se	BSL	1.4J
Zn	162	BSL

P3A-010	Depth 0-0.5'	1-2'
Se	BSL	1.6J

P3A-015	Depth 0-0.5'	1-2'
Se	BSL	1.7J

P3A-011	Depth 0-0.5'	1-2'
Se	1.5J	1.6J

P3A-016	Depth 0-0.5'	1-2'
Se	BSL	1.6J

P3A-018	Depth 0-0.5'	1-2'
Cd	.41J	BSL

P3A-019	Depth 0-0.5'	1-2'
Se	BSL	1.4J

P3A-023	Depth 0-0.5'	1-2'
Se	BSL	1.4J

LEGEND:

- ● P3A-001 — SHALLOW SOIL SAMPLE LOCATION
- DH52 — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
- D52B — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
- 18A — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. SHALLOW SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE RECEIVING AND PAINTING BUILDING:
   P3A-001 AT 7.5FT, P3A-002 AT 20.0FT,
   P3A-003 AT 7.5FT, P3A-004 AT 20.0FT,
   P3A-005 AT 7.5FT, P3A-006 AT 7.5FT,
   P3A-007 AT 20.0FT, P3A-008 AT 2.0FT,
   P3A-009 AT 13.0FT, P3A-010 AT 20.0FT,
   P3A-011 AT 12.6FT
2. SHALLOW SOIL SAMPLE P3A-014 WAS NOT COLLECTED DUE TO CONCRETE PAD AT SAMPLE LOCATION.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

50 0 50 100

SCALE FEET

SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
RECEIVING AND PAINTING BUILDING / NORTH PAINT STORAGE AND MIXING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 50 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-83
Sheet number: 1

MCS FILE: OU3P31S

B07NE003703-03703

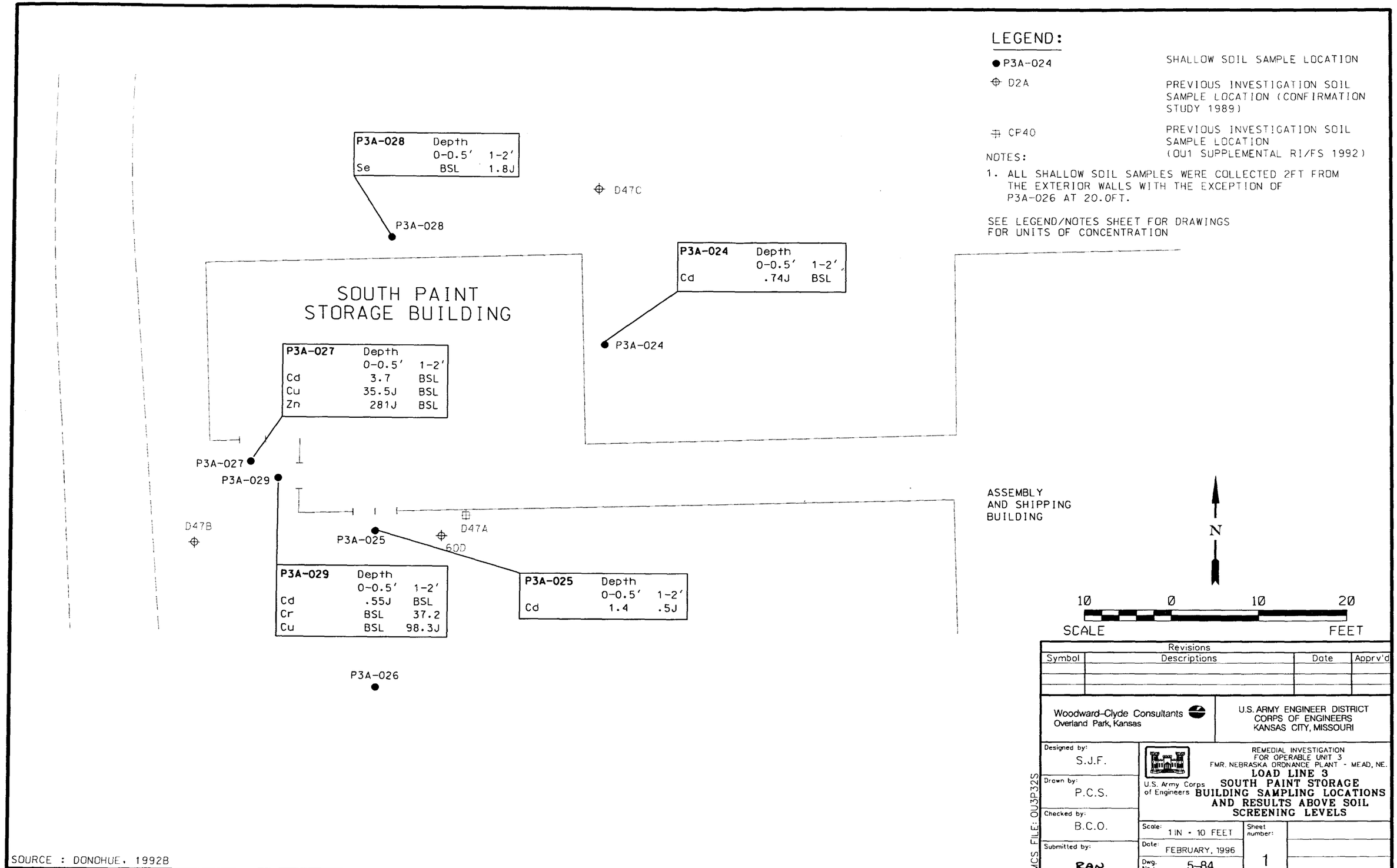
LEGEND:

● P3A-024	SHALLOW SOIL SAMPLE LOCATION
⊕ D2A	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
⌗ CP40	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. ALL SHALLOW SOIL SAMPLES WERE COLLECTED 2FT FROM THE EXTERIOR WALLS WITH THE EXCEPTION OF P3A-026 AT 20.0FT.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION



SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

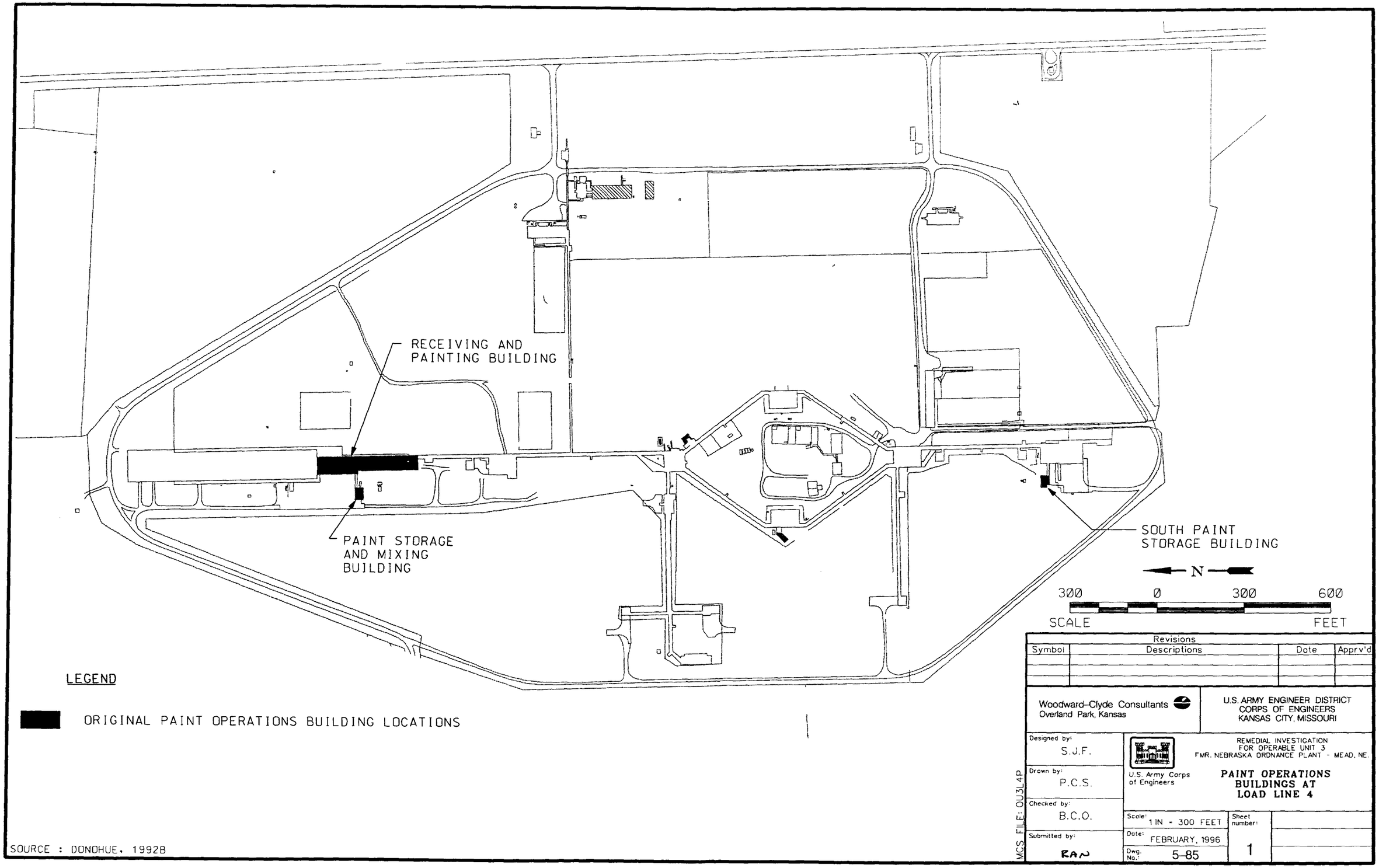
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

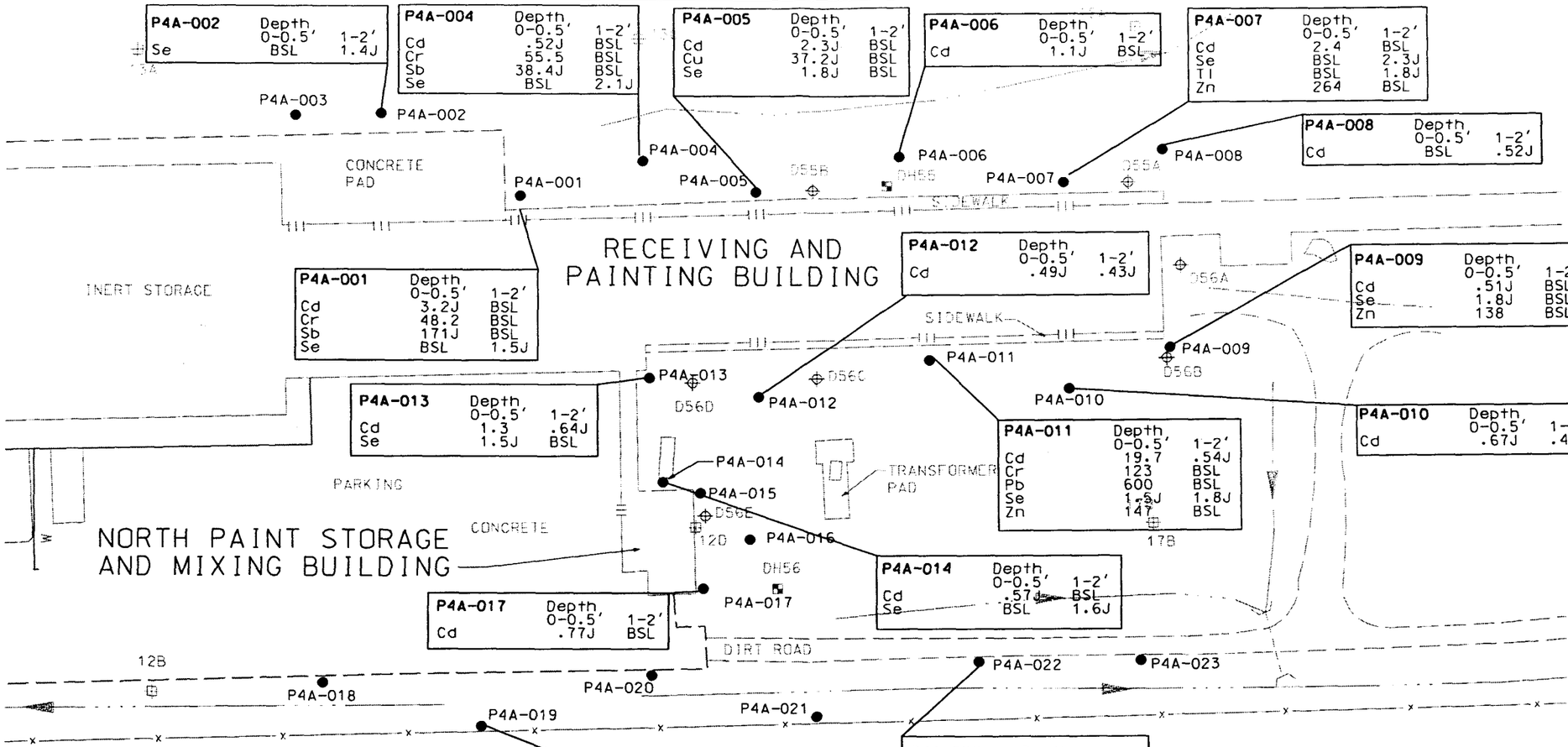
LOAD LINE 3
SOUTH PAINT STORAGE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-84
Sheet number: 1

MCS FILE: OU3P32S

B07NE003703-03704


RECEIVING AND
PAINTING BUILDING
PAINT STORAGE
AND MIXING
BUILDING
SOUTH PAINT
STORAGE BUILDING
N
300 0 300 600
SCALE FEET
LEGEND
ORIGINAL PAINT OPERATIONS BUILDING LOCATIONS
SOURCE : DONOHUE, 1992B
Revisions
Symbol
Descriptions
Date
Apprv'd
Woodward-Clyde Consultants
Overland Park, Kansas
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI
Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN
U.S. Army Corps of Engineers
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.
PAINT OPERATIONS
BUILDINGS AT
LOAD LINE 4
Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-85
Sheet number: 1
MCS FILE: OU3L4P



LEGEND:

● P4A-001	SHALLOW SOIL SAMPLE LOCATION
■ DH56	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
⊕ D56E	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
⊕ 12B	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

NOTES:

1. SHALLOW SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE RECEIVING AND PAINTING BUILDING:
   P4A-001 AT 7.0FT, P4A-002 AT 42.0FT,
   P4A-003 AT 42.0FT, P4A-004 AT 20.0FT,
   P4A-005 AT 7.0FT, P4A-006 AT 20.0FT,
   P4A-007 AT 7.0FT, P4A-008 AT 20.0FT,
   P4A-009 AT 3.0FT, P4A-010 AT 20.0FT,
   P4A-011 AT 7.0FT, P4A-012 AT 20.0FT,
   P4A-013 AT 3.0FT
2. SHALLOW SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES FROM THE EXTERIOR WALLS OF THE NORTH PAINT STORAGE/MIXING BUILDING:
   P4A-014 AT 1.0FT, P4A-015 AT 1.0FT,
   P4A-016 AT 20.0FT, P4A-017 AT 1.0FT
3. SHALLOW SOIL SAMPLES WERE COLLECTED THE FOLLOWING DISTANCES WEST OF THE CONCRETE PAD AND OR DIRT ROAD WEST OF THE PAINT STORAGE/MIXING BUILDING:
   P4A-018 AT 1.0FT, P4A-019 AT 20.0FT,
   P4A-020 AT 1.0FT, P4A-021 AT 20.0FT,
   P4A-022 AT 1.0FT, P4A-023 AT 1.0FT

SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

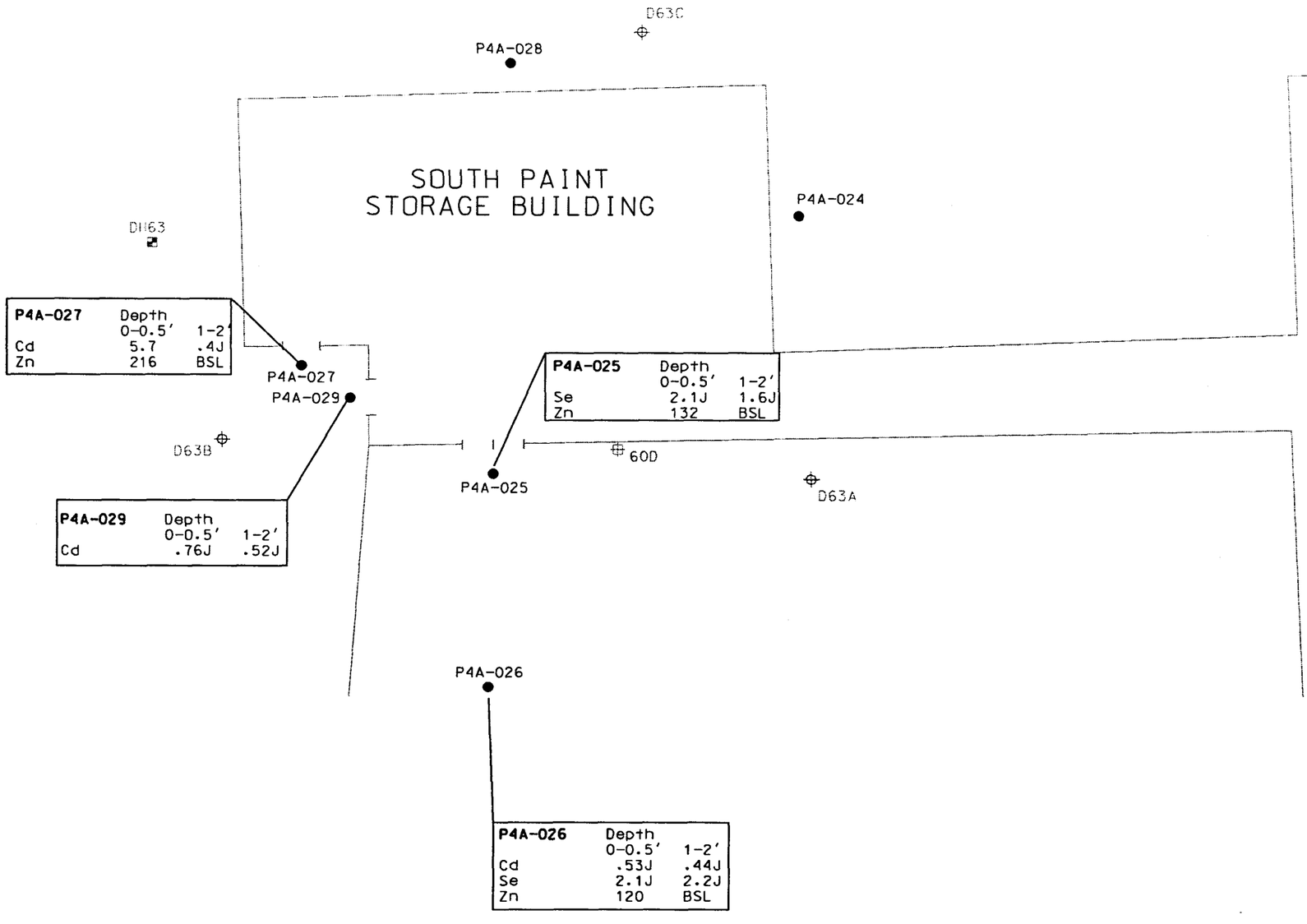
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
RECEIVING AND PAINTING BUILDING / NORTH PAINT STORAGE AND MIXING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 50 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-86
Sheet number: 1

MCS FILE: OU3P41S

B07NE003703-03706



P4A-027	Depth 0-0.5'	1-2'
Cd	5.7	.4J
Zn	216	BSL

P4A-025	Depth 0-0.5'	1-2'
Se	2.1J	1.6J
Zn	132	BSL

P4A-029	Depth 0-0.5'	1-2'
Cd	.76J	.52J

P4A-026	Depth 0-0.5'	1-2'
Cd	.53J	.44J
Se	2.1J	2.2J
Zn	120	BSL

SOURCE : DONOHUE, 1992B

LEGEND:

● P4A-024	SHALLOW SOIL SAMPLE LOCATION
DH63	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 RI 1991)
D63A	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
60D	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)

NOTES:

1. SHALLOW SOIL SAMPLES WERE COLLECTED 2 FT FROM THE EXTERIOR WALLS OF THE SOUTH PAINT STORAGE BUILDING WITH THE EXCEPTION OF P4A-026 TAKEN AT 20.0FT.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

ASSEMBLY AND SHIPPING BUILDING

N

10 0 10 20

SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

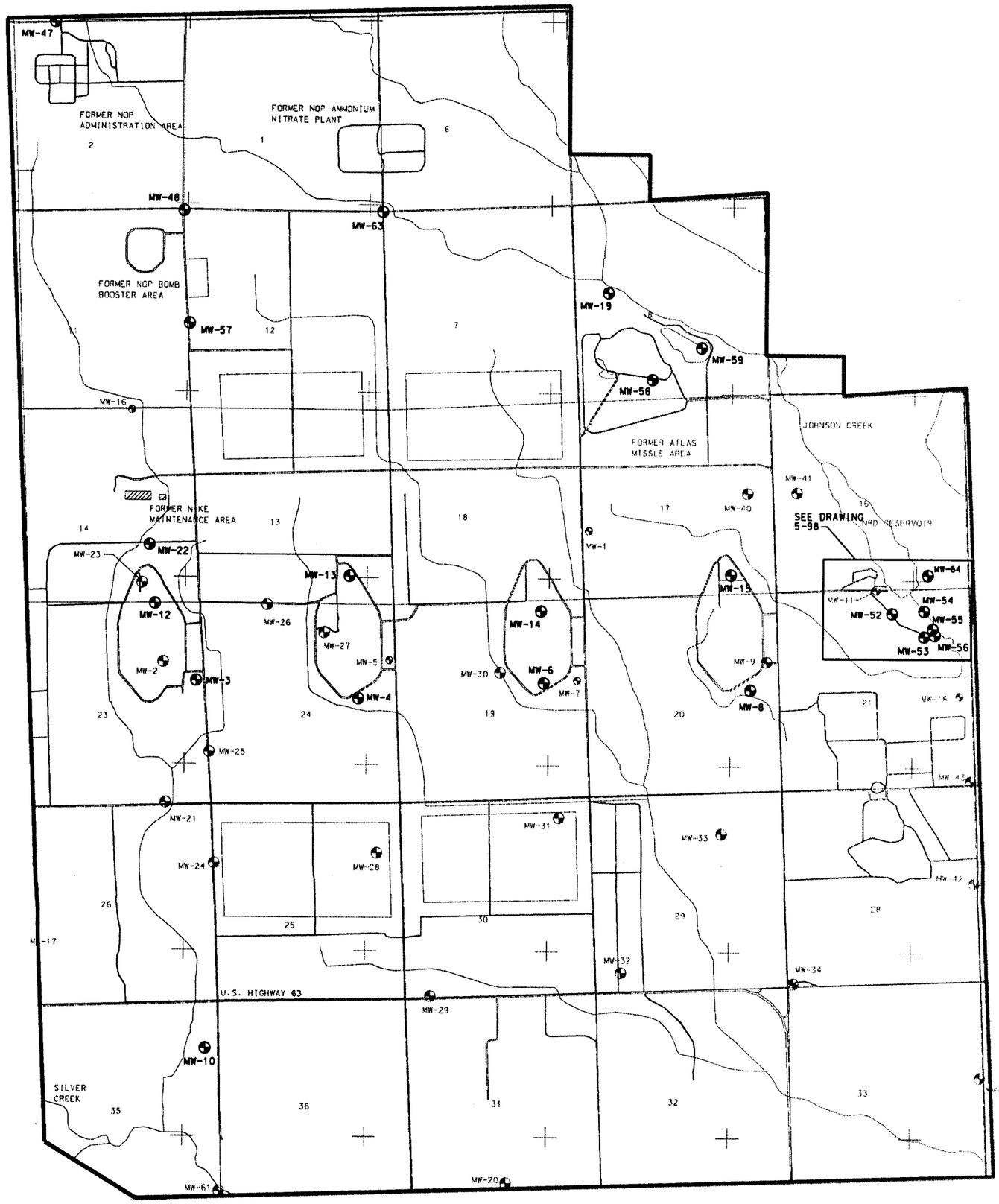
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
SOUTH PAINT STORAGE BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 10 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-87
Sheet number: 1

MCS FILE: OU3P42S



N

3000 0 3000 6000

SCALE FEET

LEGEND:

MW-10 GROUNDWATER MONITORING WELL CLUSTER SAMPLED TO SUPPORT OU3 PHASE I RI

MW-29 OTHER EXISTING GROUNDWATER MONITORING WELL CLUSTER

FORMER NOP BOUNDARY

SOURCE: USGS, 1969.

Revisions			
Symbol	Descriptions	Date	Approved

Woodward-Clyde Consultants
OVERLAND PARK, KANSAS

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

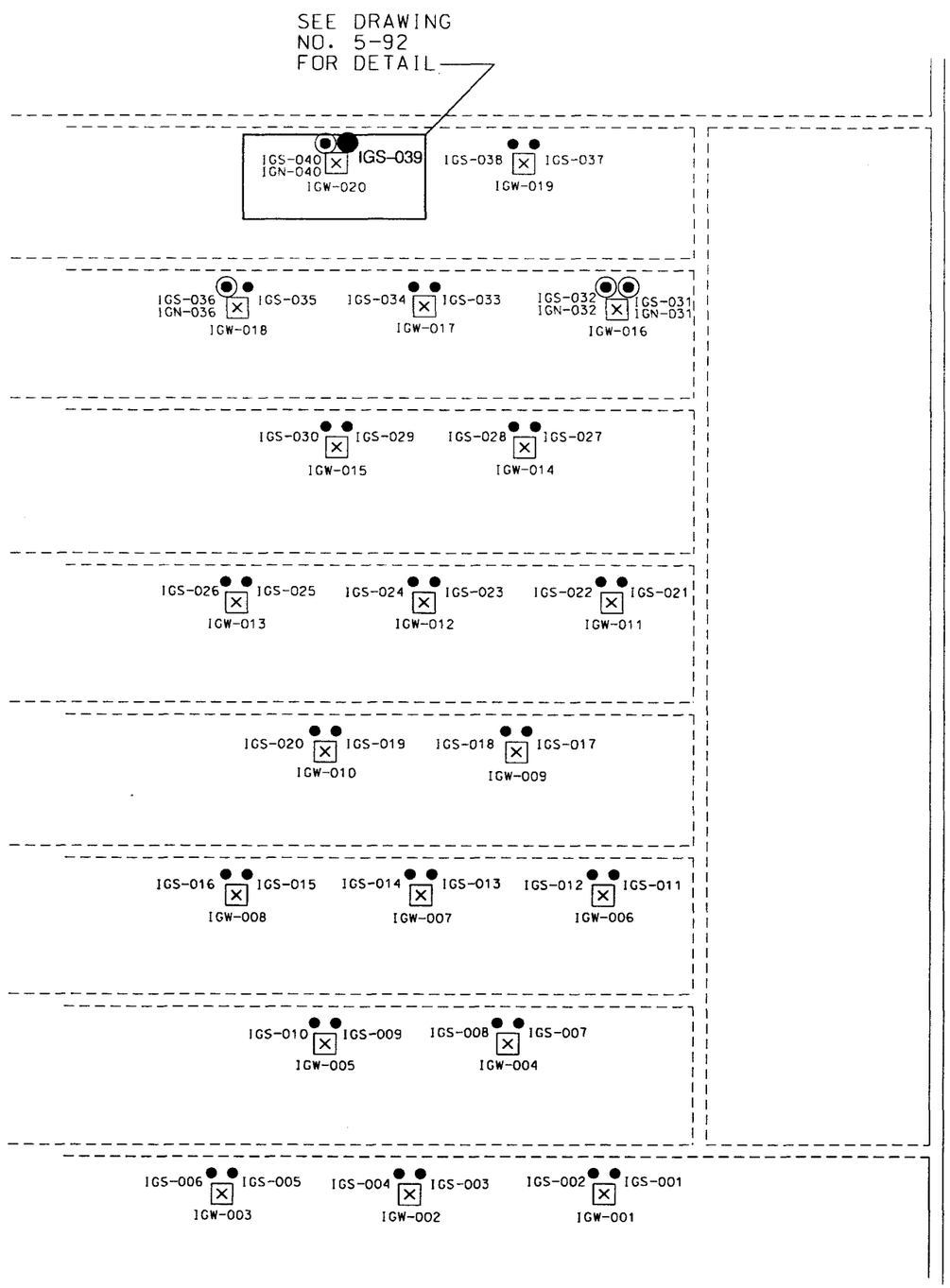
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

GROUNDWATER MONITORING WELLS SAMPLED TO SUPPORT OU3 PHASE I RI

Scale: 1 IN = 1500 FT
Date: FEBRUARY, 1996
Dwg. No.: 5-88
Sheet number: 1

MICRO FILE: OU3MW-1

B07NE003703-03708



LEGEND:

□	IGLOO STORAGE BUILDING
● IGS-001	SHALLOW SOIL SAMPLE LOCATION
◉ IGN-031	CONFIRMATION SOIL SAMPLE LOCATION
× IGW-001	SURFACE WIPE SAMPLE LOCATION
● IGS-039	POSITIVE HE SCREENING RESULTS
:::::	DIRT ROAD
═══	PAVED ROAD

NOTES:

1. ALL SHALLOW SOIL SAMPLES WERE COLLECTED APPROXIMATELY 5 FEET FROM THE CONCRETE ABUTMENTS AT THE ENTRYSIDE CORNERS OF THE IGLOOS.
2. EACH SHALLOW SOIL SAMPLE CONSISTED OF SOIL COLLECTED FROM APPROXIMATELY 0-1 FOOT BGS. EACH SHALLOW SAMPLE WAS SPLIT WITH ONE SAMPLE SUBMITTED FOR HIGH EXPLOSIVE SCREENING AND ONE SAMPLE RETAINED FOR POTENTIAL CONFIRMATION ANALYSIS.
3. ALL SURFACE WIPE SAMPLES WERE COLLECTED APPROXIMATELY AT THE CENTER POINT OF THE IGLOO FLOORS. WIPE SAMPLES WERE ANALYZED FOR EXPLOSIVES.

N

400 0 400 800

SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

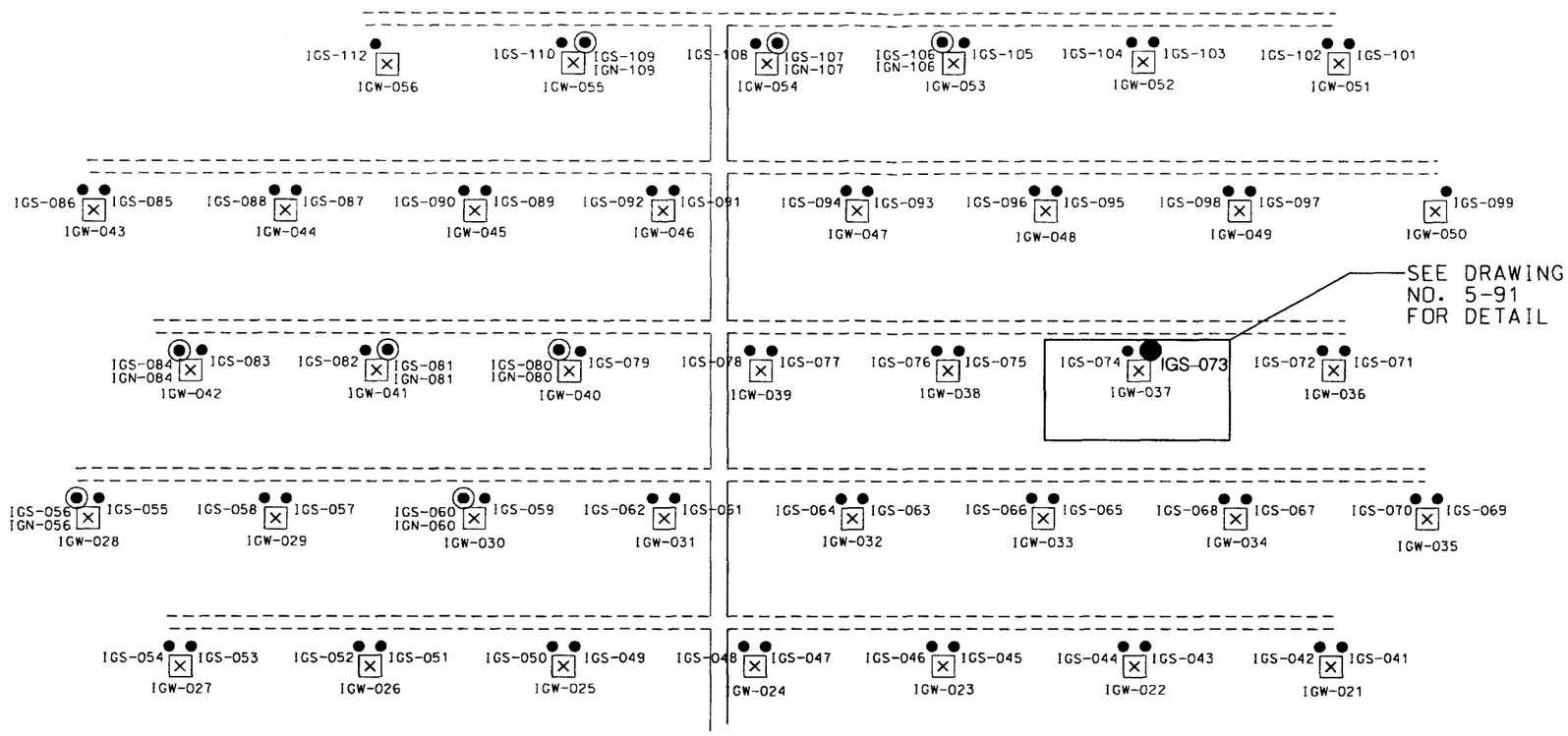
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT-MEAD, NE.

IGLOO STORAGE AREA NORTH OF LOAD LINE 2 SAMPLING LOCATIONS AND RESULTS ABOVE FIELD LAB INSTRUMENT DETECTION LIMITS

Scale: 1 INCH = 400 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-89
Sheet number:

MCS FILE: IGL001A

B07NE003703-03709



LEGEND:

- □ IGLOO STORAGE BUILDING
- ● IGS-041 SHALLOW SOIL SAMPLE LOCATION
- ◉ IGN-056 CONFIRMATION SOIL SAMPLE LOCATION
- × IGW-021 SURFACE WIPE SAMPLE LOCATION
- ● IGS-073 POSITIVE HE SCREENING RESULTS
- ===== DIRT ROAD
- ——— PAVED ROAD

NOTES:

1. ALL SHALLOW SOIL SAMPLES WERE COLLECTED APPROXIMATELY 5 FEET FROM THE CONCRETE ABUTMENTS AT THE ENTRYSIDE CORNERS OF THE IGLOOS.
2. EACH SHALLOW SOIL SAMPLE CONSISTED OF SOIL COLLECTED FROM APPROXIMATELY 0-1 FOOT BGS. EACH SHALLOW SAMPLE WAS SPLIT, WITH ONE SAMPLE SUBMITTED FOR HIGH EXPLOSIVE SCREENING AND ONE SAMPLE RETAINED FOR POTENTIAL CONFIRMATION ANALYSIS.
3. SHALLOW SOIL SAMPLES IGS-100 AND IGS-111 WERE NOT COLLECTED DUE TO THE PRESENCE OF ROCK AND/OR CONCRETE APPROXIMATELY 1 TO 2 INCHES FROM THE SURFACE.
4. ALL SURFACE WIPE SAMPLES WERE COLLECTED APPROXIMATELY AT THE CENTER POINT OF THE IGLOO FLOORS. WIPE SAMPLES WERE ANALYZED FOR EXPLOSIVES.

MCS FILE: IGLOO2A

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

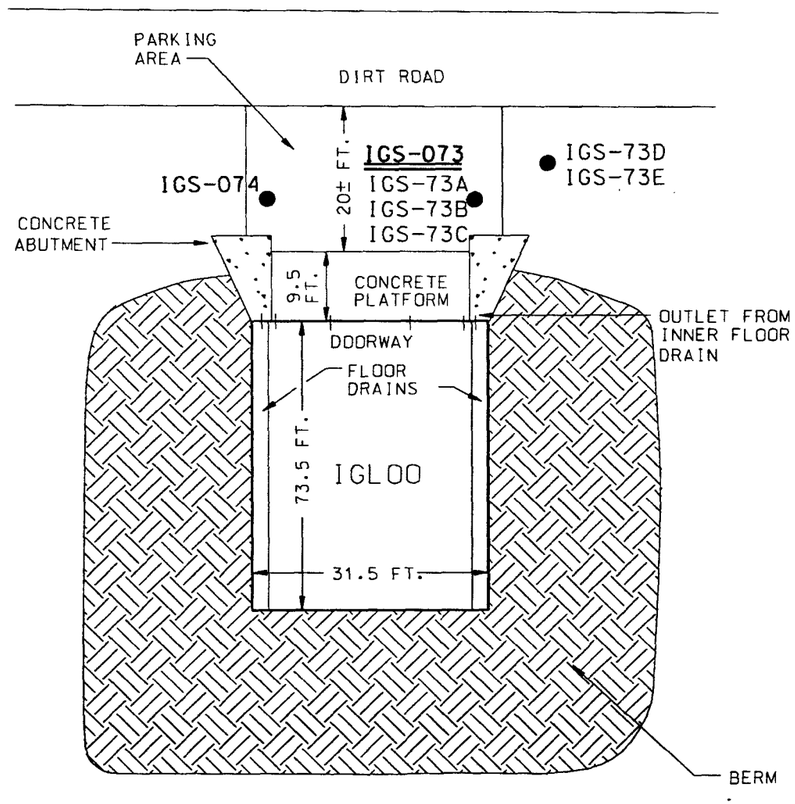
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT-MEAD, NE.

IGLOO STORAGE AREA NORTH OF LOAD LINE 3 SAMPLING LOCATIONS AND RESULTS ABOVE FIELD LAB INSTRUMENT DETECTION LIMITS

Scale: 1 INCH = 400 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-90
Sheet number:

B07NE003703-03710



LEGEND:

IGS-73A ● HE SCREENING AND SOIL SAMPLING LOCATIONS

IGS-073 ● POSITIVE HE SCREENING RESULTS

NOTE:
THE FOLLOWING ADDITIONAL SOIL SAMPLES WERE COLLECTED FOR HE SCREENING AND CONFIRMATION ANALYSIS:

SCREENING I.D.	CONFIRMATION I.D.	DEPTH BGS (FT)
IGS-73A	IGN-073-000	0-0.5
IGS-73B	IGN-073-001	1-2
IGS-73C	IGN-073-004	4-5
IGS-73D	IGN-073-00A	0-0.5
IGS-73E	IGN-073-01A	1-2

N

20 0 20 40

SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

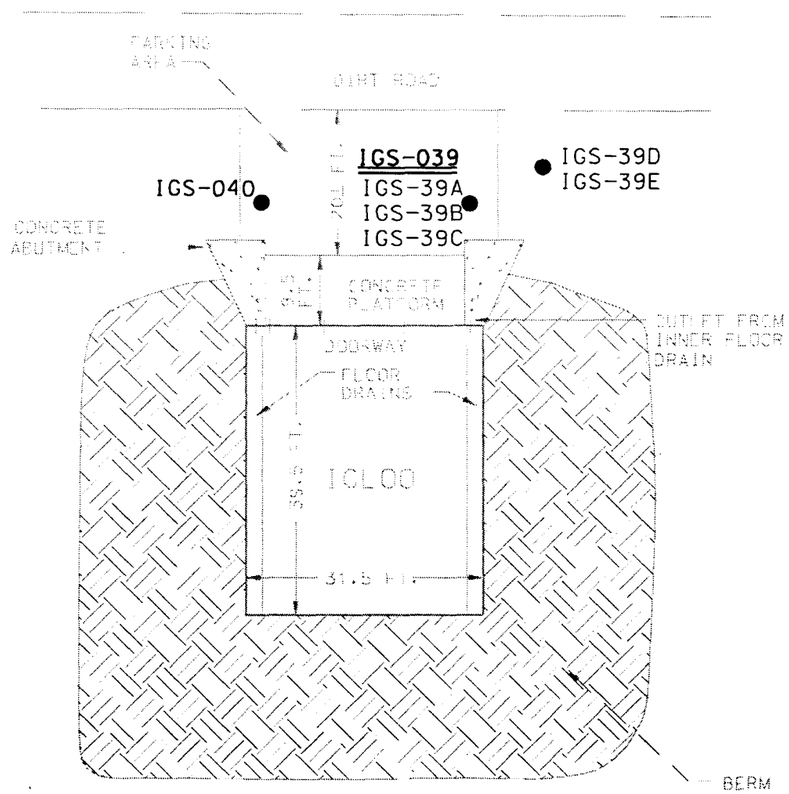
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT-MEAD, NE.

IGLOO STORAGE AREA NORTH OF LOAD LINE 2 ADDITIONAL HE SCREENING LOCATIONS AND RESULTS ABOVE FIELD LAB INSTRUMENT DETECTION LIMITS

Scale: 1 INCH - 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-91
Sheet number:

MCS FILE: IGLOO4A



LEGEND:

IGS-39A ● HE SCREENING AND SOIL SAMPLING LOCATIONS

IGS-039 ● POSITIVE HE SCREENING RESULTS

NOTE:
THE FOLLOWING ADDITIONAL SOIL SAMPLES WERE COLLECTED FOR HE SCREENING AND CONFIRMATION ANALYSIS:

SCREENING I.D.	CONFIRMATION I.D.	DEPTH BGS (FT)
IGS-39A	IGN-039-000	0-0.5
IGS-39B	IGN-039-001	1-2
IGS-39C	IGN-039-004	4-5
IGS-39D	IGN-039-00A	0-0.5
IGS-39E	IGN-039-01A	1-2

N

20 0 20 40

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
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KANSAS CITY, MISSOURI

Designed by: S.J.F.
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Checked by: B.C.O.
Submitted by: RAN

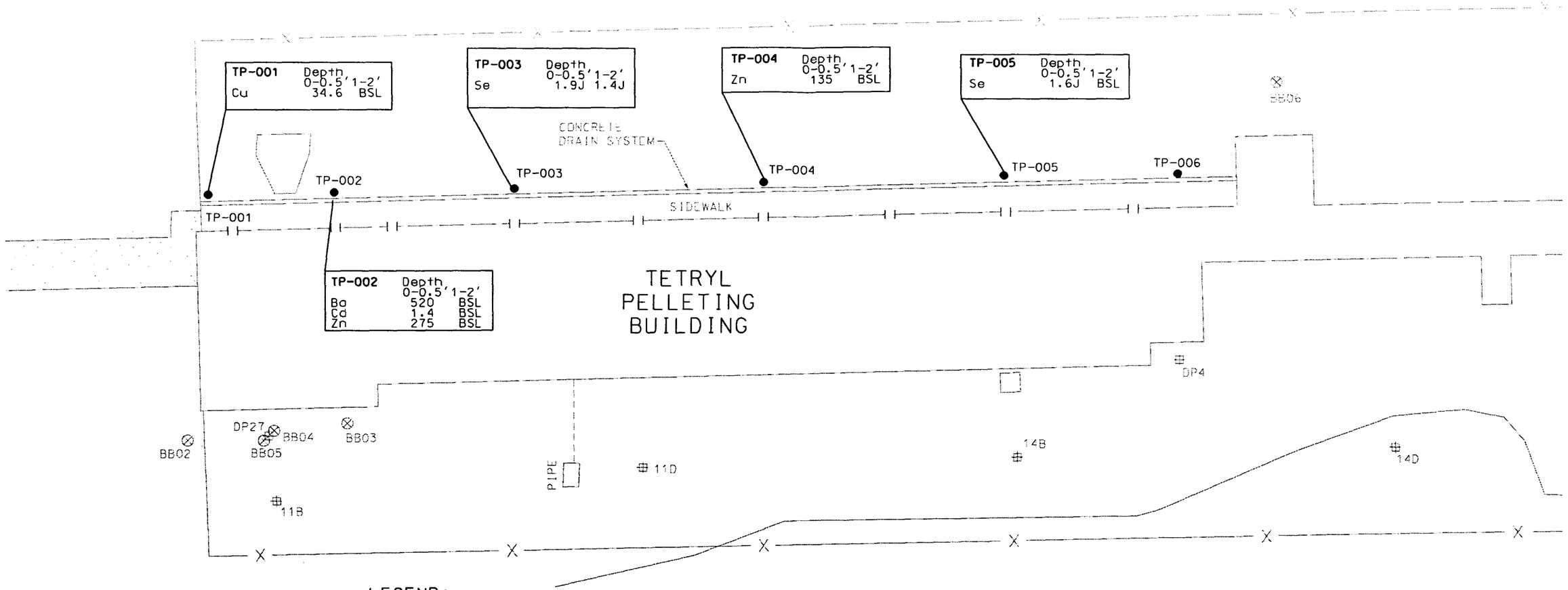
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT-MEAD, NE.

IGLOO STORAGE AREA NORTH OF LOAD LINE 2 ADDITIONAL HE SCREENING LOCATIONS AND RESULTS ABOVE FIELD LAB INSTRUMENT DETECTION LIMITS

Scale: 1 INCH - 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-92
Sheet number:

MCS FILE: IGLOO3A



LEGEND:

● TP-001	SHALLOW SOIL SAMPLE LOCATION ADJACENT TO BUILDING (OU3 PHASE I RI 1995)
⊞ DP27	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
⊗ BB06	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

NOTES:

1. ALL OU3 PHASE I RI SAMPLES WERE ANALYZED FOR EXPLOSIVES AND METALS. NO CONCENTRATIONS OF EXPLOSIVES WERE REPORTED ABOVE SOIL SCREENING LEVELS.
2. ALL OU3 PHASE I RI SHALLOW SOIL SAMPLES WERE COLLECTED APPROXIMATELY 6 FT FROM THE EXTERIOR WALLS OF THE TETRYL PELLETING BUILDING WITH THE FOLLOWING EXCEPTIONS: TP-001 AT 7.0FT, TP-002 AT 7.0FT.

SOURCE: DONOHUE, 1992B

N

20 0 20 40

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

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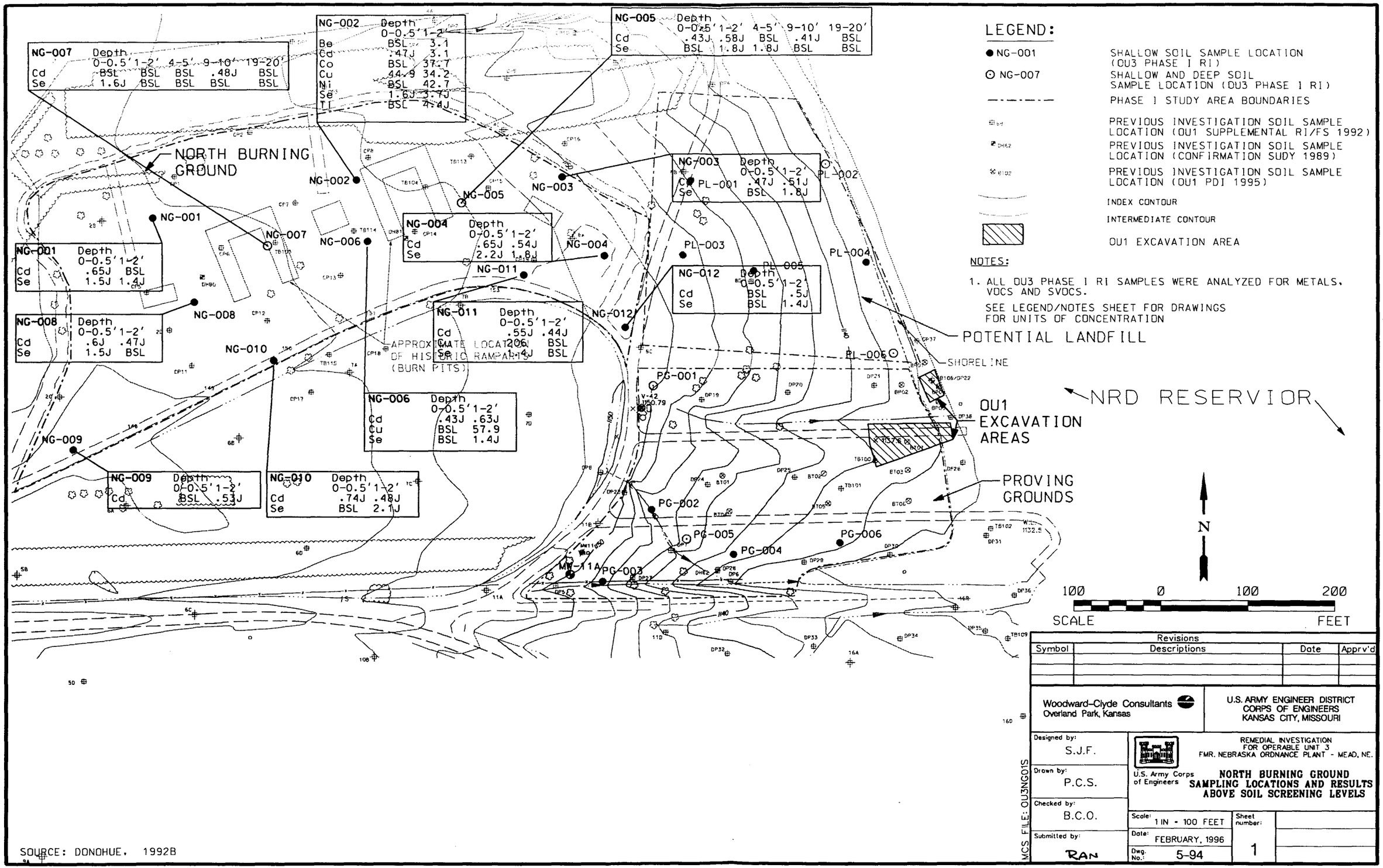
U.S. Army Corps of Engineers

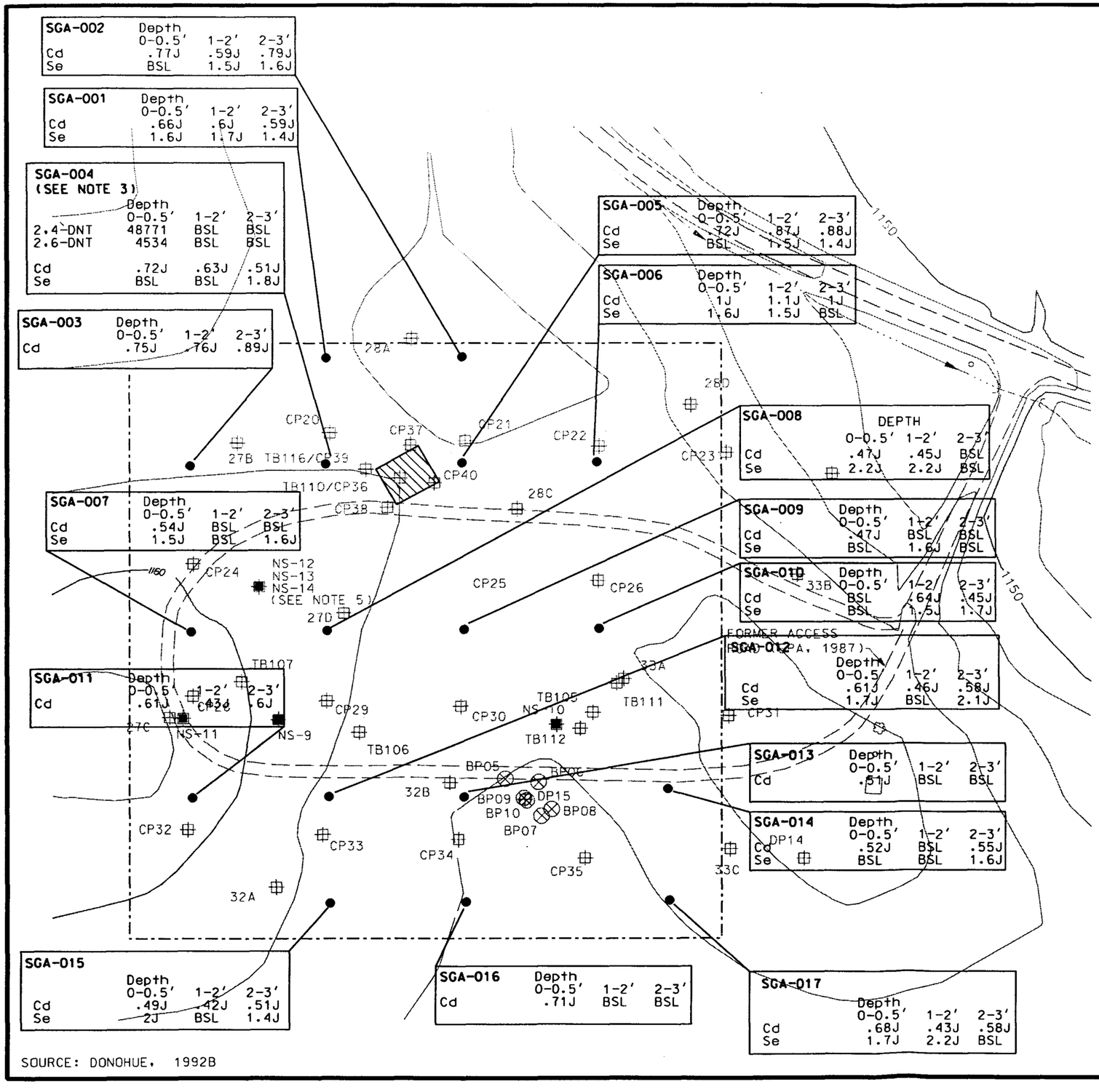
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

TETRYL PELLETING BUILDING SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-93
Sheet number: 1

MCS FILE: OU3TP01S


NG-007 Depth 0-0.5' 1-2' 4-5' 9-10' 19-20'
Cd BSL BSL BSL .48J BSL
Se 1.6J BSL BSL BSL BSL
NG-002 Depth 0-0.5' 1-2'
Be BSL 3.1
Cd .47J 3.1
Co BSL 37.7
Cu 44.9 34.2
Ni BSL 42.7
Se 1.6J 3.7J
Tl BSL 4.4J
NG-005 Depth 0-0.5' 1-2' 4-5' 9-10' 19-20'
Cd .43J .58J BSL .41J BSL
Se BSL 1.8J 1.8J BSL BSL
NG-003 Depth 0-0.5' 1-2'
Cd .47J .51J
Se BSL 1.8J
NG-004 Depth 0-0.5' 1-2'
Cd .65J .54J
Se 2.2J 1.8J
NG-001 Depth 0-0.5' 1-2'
Cd .65J BSL
Se 1.5J 1.4J
NG-008 Depth 0-0.5' 1-2'
Cd .6J .47J
Se 1.5J BSL
NG-011 Depth 0-0.5' 1-2'
Cd .55J .44J
Se 1.4J BSL
NG-012 Depth 0-0.5' 1-2'
Cd BSL .5J
Se BSL 1.4J
NG-006 Depth 0-0.5' 1-2'
Cd .43J .63J
Cu BSL 57.9
Se BSL 1.4J
NG-009 Depth 0-0.5' 1-2'
Cd BSL .53J
NG-010 Depth 0-0.5' 1-2'
Cd .74J .48J
Se BSL 2.1J
NORTH BURNING GROUND
NG-001
NG-002
NG-003
NG-004
NG-005
NG-006
NG-007
NG-008
NG-009
NG-010
NG-011
NG-012
PL-001
PL-002
PL-003
PL-004
PL-005
PL-006
PG-001
PG-002
PG-003
PG-004
PG-005
PG-006
MW-11A
APPROXIMATE LOCATION OF HISTORIC RAMPART (BURN PITS)
POTENTIAL LANDFILL
SHORELINE
NRD RESERVIOR
OU1 EXCAVATION AREAS
PROVING GROUNDS
N
100 0 100 200
SCALE FEET
LEGEND:
NG-001 SHALLOW SOIL SAMPLE LOCATION (OU3 PHASE I RI)
NG-007 SHALLOW AND DEEP SOIL SAMPLE LOCATION (OU3 PHASE I RI)
PHASE I STUDY AREA BOUNDARIES
PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION SUDY 1989)
PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
INDEX CONTOUR
INTERMEDIATE CONTOUR
OU1 EXCAVATION AREA
NOTES:
1. ALL OU3 PHASE I RI SAMPLES WERE ANALYZED FOR METALS, VOCS AND SVOCS.
SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION
SOURCE: DONOHUE, 1992B
Revisions
Symbol Descriptions Date Apprv'd
Woodward-Clyde Consultants
Overland Park, Kansas
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI
Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN
U.S. Army Corps of Engineers
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.
NORTH BURNING GROUND
SAMPLING LOCATIONS AND RESULTS
ABOVE SOIL SCREENING LEVELS
Scale: 1 IN = 100 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-94
Sheet number: 1
MCS FILE: OU3NG01S



SOURCE: DONOHUE, 1992B

LEGEND:

- ● SGA-001 — SHALLOW SOIL SAMPLE LOCATION (SEE NOTE 2) (OU3 PHASE I RI 1995)
- DP14 — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
- BP05 — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
- NS-9 — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (FINAL ENGINEERING REPORT 1991)
- PHASE I STUDY AREA BOUNDARIES
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- OU1 EXCAVATION AREA

NOTES:

1. ALL OU3 PHASE I RI SAMPLES WERE ANALYZED FOR METALS, VOCS AND SVOCS WITH ONE EXCEPTION. THE 0-6 in. bgs SAMPLING INTERVAL WAS NOT ANALYZED FOR VOCs.
2. DUE TO PLOWING AT THIS SITE, SHALLOW SOIL SAMPLES WERE COLLECTED FROM 2-3 ft. AT ALL OU3 PHASE I RI SAMPLE LOCATIONS.
3. 2,4-DNT AND 2,6-DNT ARE FROM TARGET COMPOUND LIST OF SEMI-VOLATILES. THE REPORTED CONCENTRATIONS ARE IN $\mu g/kg$.
4. PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION NS-9 THROUGH NS-12 ARE APPROXIMATE BECAUSE NO COORDINATES WERE AVAILABLE. EACH OF THESE SAMPLES WERE COMPOSITED FROM THREE SUB-SAMPLES.
5. SAMPLES NS-13 AND NS-14 WERE DUPLICATES OF NS-12.
6. CONTOUR INTERVAL IS 2 FT.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

80 0 80 160

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Submitted by: RAN

U.S. Army Corps of Engineers

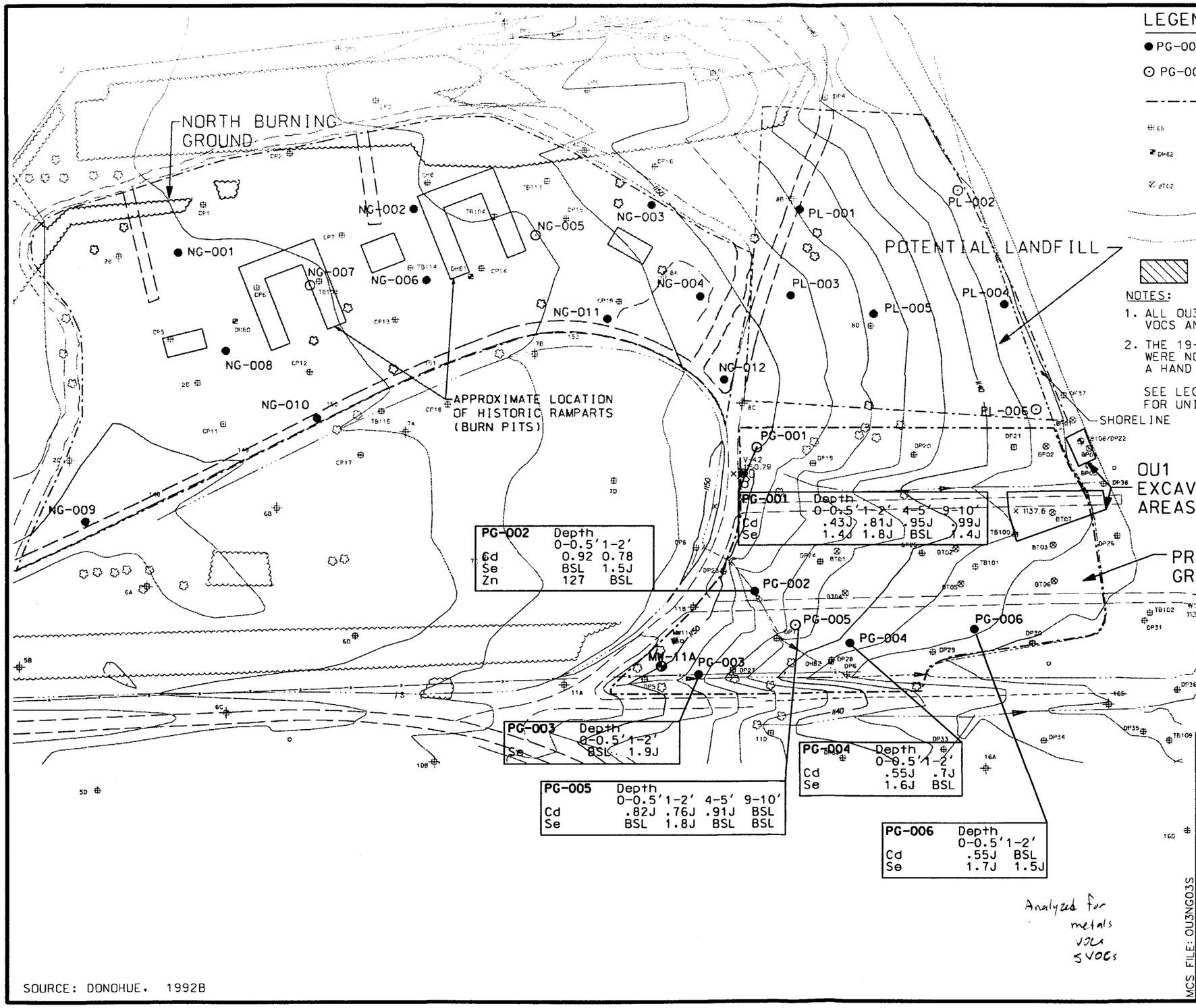
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

SOUTH BURNING GROUND SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 80 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-95
Sheet number: 1

MCS FILE: OU3SG01S

B07NE003703-03715



LEGEND:

- ● PG-002 — SHALLOW SOIL SAMPLE LOCATION (OU3 PHASE I RI)
- ⊙ PG-001 — SHALLOW AND DEEP SOIL SAMPLE LOCATION (OU3 PHASE I RI)
- PHASE I STUDY AREA BOUNDARIES
- PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
- PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION SUDY 1989)
- PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- OU1 EXCAVATION AREA

NOTES:

1. ALL OU3 PHASE I RI SAMPLES WERE ANALYZED FOR METALS, VOCS AND SVOCS.
2. THE 19-20 FT. INTERVAL OF THE FOLLOWING SAMPLE LOCATIONS WERE NOT SAMPLED BECAUSE THEY WERE NOT ATTAINABLE WITH A HAND AUGER: PG-001 AND PG-005.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

SOURCE: DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Submitted by: RAN

U.S. Army Corps of Engineers

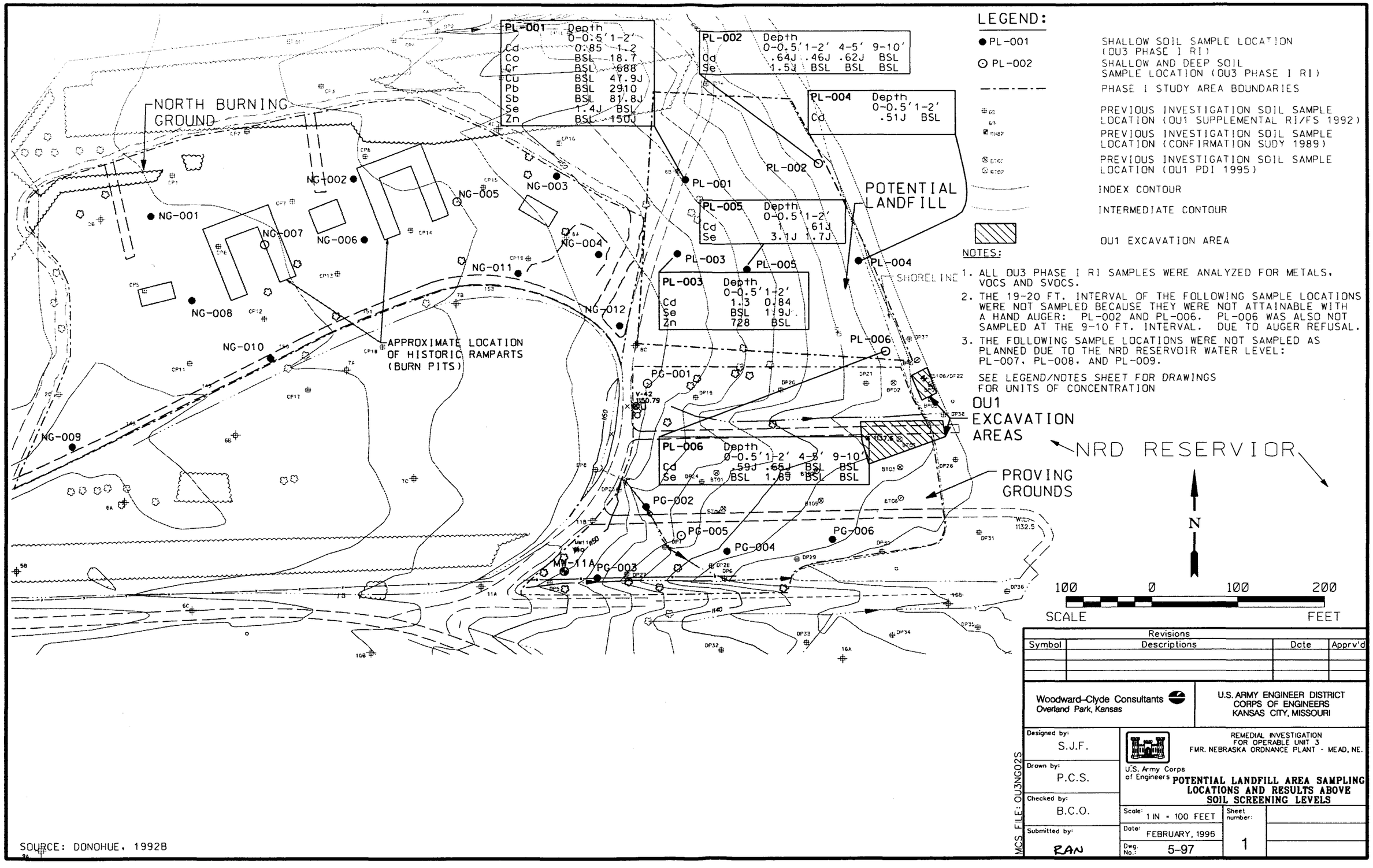
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

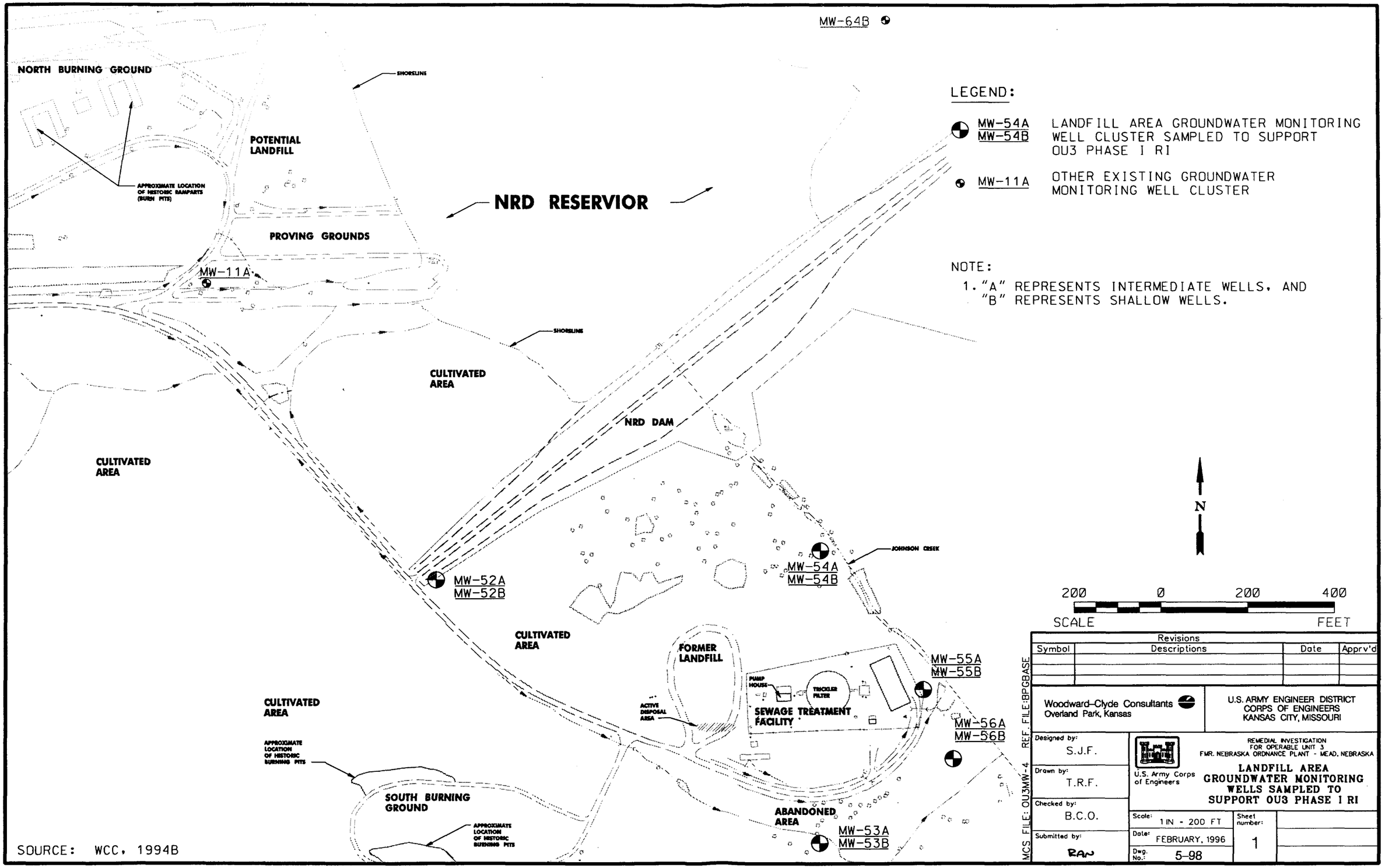
PROVING GROUNDS SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 100 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-96
Sheet number: 1

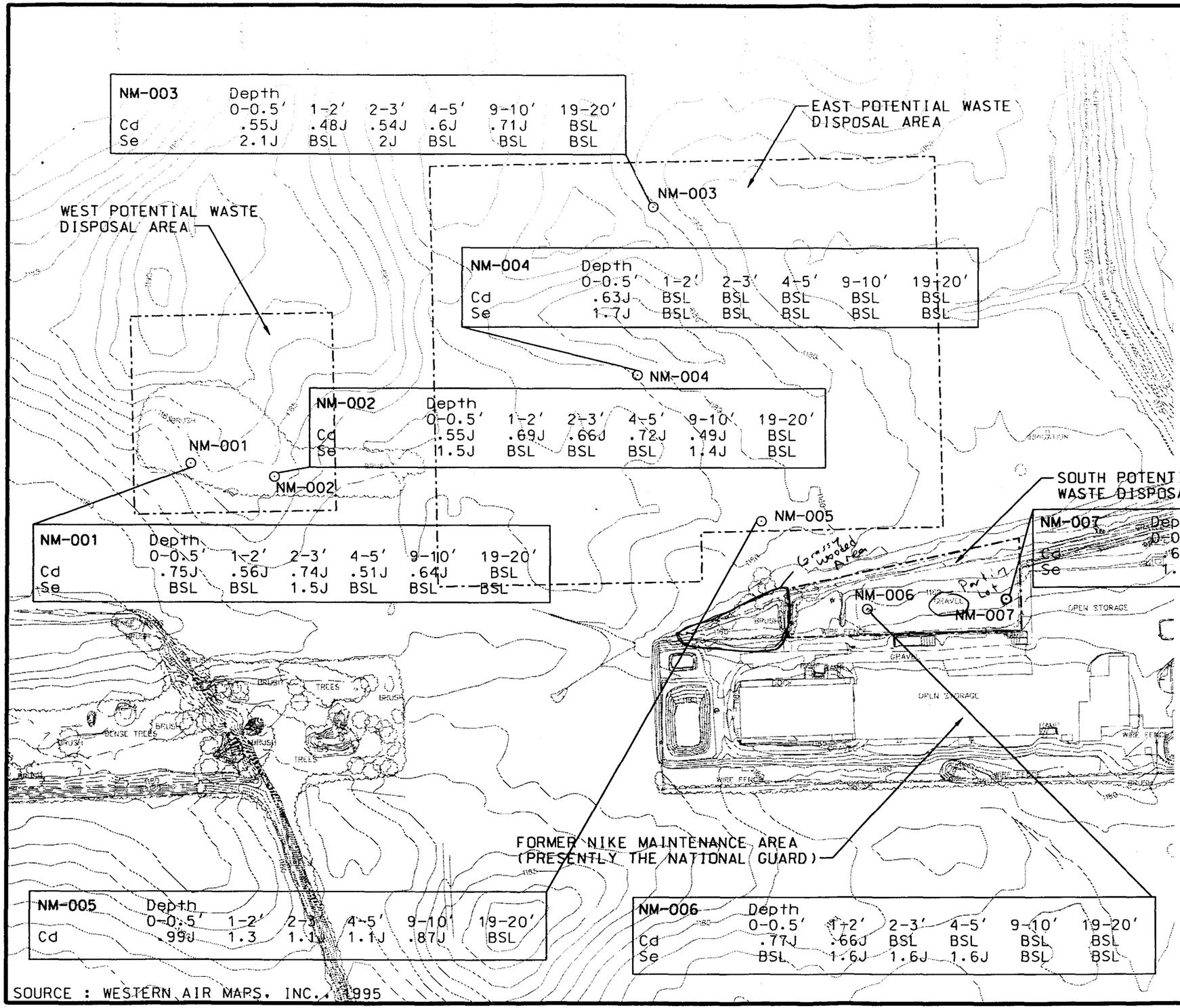
MCS FILE: OU3NG03S

B07NE003703-03716


PL-001 Depth 0-0.5' 1-2'
Cd 0.85 1.2
Co BSL 18.7
Cr BSL 688
Cu BSL 47.9J
Pb BSL 2910
Sb BSL 81.8J
Se 1.4J BSL
Zn BSL 150J
PL-002 Depth 0-0.5' 1-2' 4-5' 9-10'
Cd .64J .46J .62J BSL
Se 1.5J BSL BSL BSL
PL-004 Depth 0-0.5' 1-2'
Cd .51J BSL
PL-005 Depth 0-0.5' 1-2'
Cd 1 .61J
Se 3.1J 1.7J
PL-003 Depth 0-0.5' 1-2'
Cd 1.3 0.84
Se BSL 1.9J
Zn 728 BSL
PL-006 Depth 0-0.5' 1-2' 4-5' 9-10'
Cd .59J .65J BSL BSL
Se BSL 1.8J BSL BSL
NORTH BURNING GROUND
NG-001
NG-002
NG-003
NG-004
NG-005
NG-006
NG-007
NG-008
NG-009
NG-010
NG-011
NG-012
APPROXIMATE LOCATION OF HISTORIC RAMPARTS (BURN PITS)
POTENTIAL LANDFILL
SHORELINE
PG-001
PG-002
PG-003
PG-004
PG-005
PG-006
MW-11A
OU1 EXCAVATION AREAS
NRD RESERVIOR
PROVING GROUNDS
N
100 0 100 200
SCALE FEET
LEGEND:
PL-001 SHALLOW SOIL SAMPLE LOCATION (OU3 PHASE I RI)
PL-002 SHALLOW AND DEEP SOIL SAMPLE LOCATION (OU3 PHASE I RI)
PHASE I STUDY AREA BOUNDARIES
PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION SUDY 1989)
PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)
INDEX CONTOUR
INTERMEDIATE CONTOUR
OU1 EXCAVATION AREA
NOTES:
1. ALL OU3 PHASE I RI SAMPLES WERE ANALYZED FOR METALS, VOCS AND SVOCS.
2. THE 19-20 FT. INTERVAL OF THE FOLLOWING SAMPLE LOCATIONS WERE NOT SAMPLED BECAUSE THEY WERE NOT ATTAINABLE WITH A HAND AUGER: PL-002 AND PL-006. PL-006 WAS ALSO NOT SAMPLED AT THE 9-10 FT. INTERVAL. DUE TO AUGER REFUSAL.
3. THE FOLLOWING SAMPLE LOCATIONS WERE NOT SAMPLED AS PLANNED DUE TO THE NRD RESERVOIR WATER LEVEL: PL-007, PL-008, AND PL-009.
SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION
SOURCE: DONOHUE, 1992B
Revisions
Symbol Descriptions Date Apprv'd
Woodward-Clyde Consultants
Overland Park, Kansas
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI
Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN
U.S. Army Corps of Engineers
REMEDIAL INVESTIGATION FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.
POTENTIAL LANDFILL AREA SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS
Scale: 1 IN = 100 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-97
Sheet number: 1
MCS FILE: OU3NG02S



SOURCE: WCC, 1994B



NM-003	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.55J	.48J	.54J	.6J	.71J	BSL
Se	2.1J	BSL	2J	BSL	BSL	BSL

NM-004	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.63J	BSL	BSL	BSL	BSL	BSL
Se	1.7J	BSL	BSL	BSL	BSL	BSL

NM-002	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.55J	.69J	.66J	.72J	.49J	BSL
Se	1.5J	BSL	BSL	BSL	1.4J	BSL

NM-001	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.75J	.56J	.74J	.51J	.64J	BSL
Se	BSL	BSL	1.5J	BSL	BSL	BSL

NM-007	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.6J	.64J	BSL	BSL	.49J	BSL
Se	1.5J	1.5J	1.8J	BSL	1.4J	BSL

NM-005	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.99J	1.3	1.1J	1.1J	.87J	BSL

NM-006	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.77J	.66J	BSL	BSL	BSL	BSL
Se	BSL	1.6J	1.6J	1.6J	BSL	BSL

LEGEND

⊙NM-001 SHALLOW AND DEEP SOIL SAMPLE LOCATION (SEE NOTE 2)

INDEX CONTOUR

INTERMEDIATE CONTOUR

NOTES:

1. ALL SAMPLES WERE ANALYZED FOR EXPLOSIVES, METALS, VOCs AND SVOCs WITH ONE EXCEPTION. THE 0-6 IN. BGS SAMPLING INTERVAL WAS NOT ANALYZED FOR VOCs.
2. DUE TO PLOWING AT THIS SITE, SHALLOW SOIL SAMPLES WERE COLLECTED FROM 2-3 FT. AT ALL SAMPLE LOCATIONS.
3. CONTOUR INTERVAL IS 1 FT.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

200 0 200 400
SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

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Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

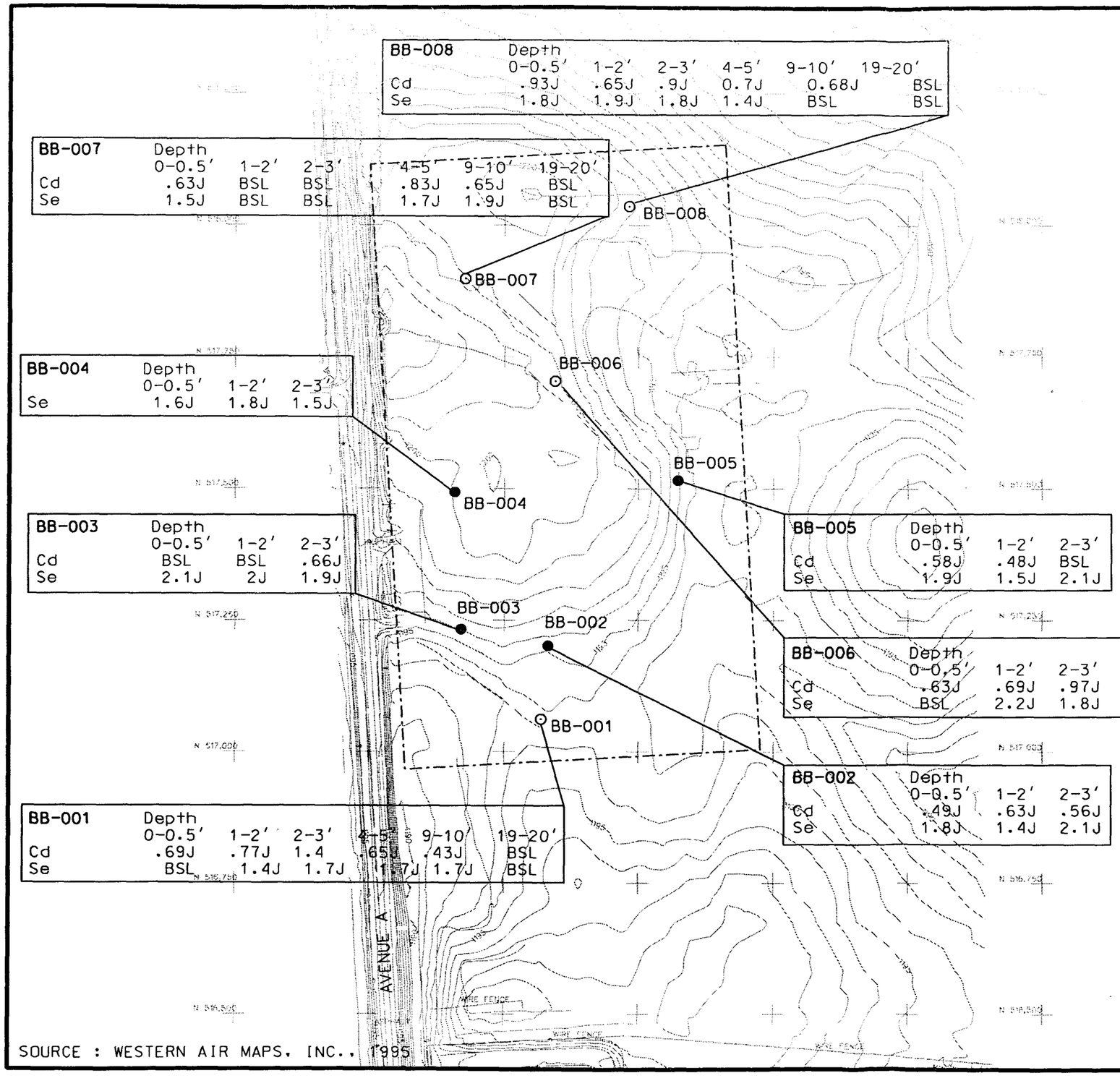
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREAS NORTH OF FORMER NIKE MAINTENANCE AREA SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN - 200 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-99
Sheet number: 1

MCS FILE: OU3NM01S REF. FILE: SIT2



BB-008	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.93J	.65J	.9J	0.7J	0.68J	BSL
Se	1.8J	1.9J	1.8J	1.4J	BSL	BSL

BB-007	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.63J	BSL	BSL	.83J	.65J	BSL
Se	1.5J	BSL	BSL	1.7J	1.9J	BSL

BB-004	Depth 0-0.5'	1-2'	2-3'
Se	1.6J	1.8J	1.5J

BB-003	Depth 0-0.5'	1-2'	2-3'
Cd	BSL	BSL	.66J
Se	2.1J	2J	1.9J

BB-005	Depth 0-0.5'	1-2'	2-3'
Cd	.58J	.48J	BSL
Se	1.9J	1.5J	2.1J

BB-006	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.63J	.69J	.97J	1J	1J	BSL
Se	BSL	2.2J	1.8J	BSL	1.7J	BSL

BB-002	Depth 0-0.5'	1-2'	2-3'
Cd	.49J	.63J	.56J
Se	1.8J	1.4J	2.1J

BB-001	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.69J	.77J	1.4	.65J	.43J	BSL
Se	BSL	1.4J	1.7J	1.7J	1.7J	BSL

SOURCE : WESTERN AIR MAPS, INC., 1995

LEGEND

● BB-002	SHALLOW SOIL SAMPLE LOCATION (SEE NOTE 2)
⊙ BB-001	SHALLOW AND DEEP SOIL SAMPLE LOCATION
-·-·-·-	PHASE I STUDY AREA BOUNDARIES
———	INDEX CONTOUR
———	INTERMEDIATE CONTOUR

NOTES:

1. ALL SAMPLES WERE ANALYZED FOR EXPLOSIVES, METALS, VOCs, SVOCs AND PCBs WITH ONE EXCEPTION. THE 0-6 in. BGS SAMPLING INTERVAL WAS NOT ANALYZED FOR VOCs.
2. DUE TO PLOWING AT THIS SITE SHALLOW SOIL SAMPLES WERE COLLECTED FROM 2-3 FT. AT ALL SHALLOW SOIL SAMPLE LOCATIONS.
3. CONTOUR INTERVAL IS 1 FT.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

200 0 200 400
SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

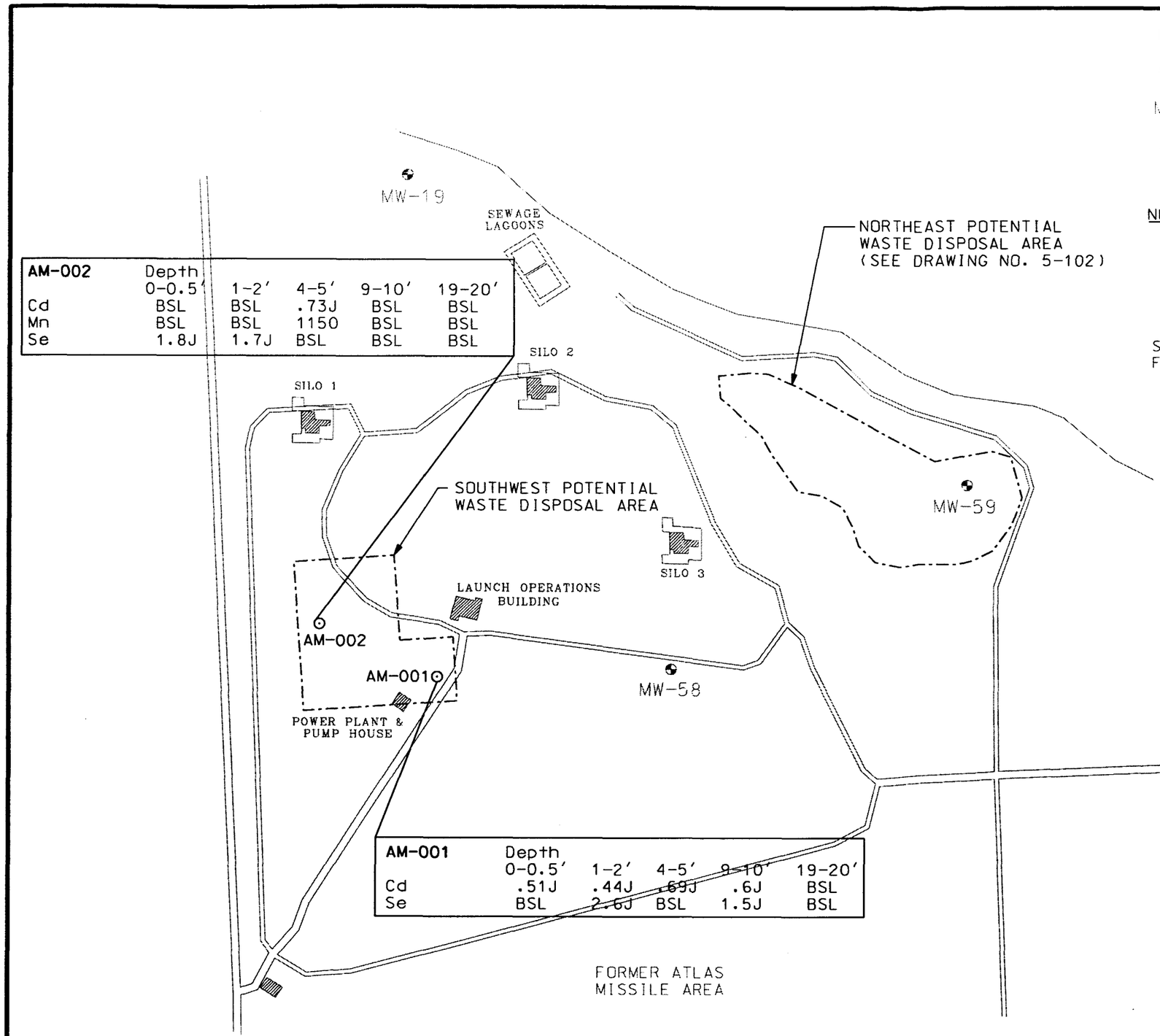
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA SOUTHEAST OF FORMER BOMB BOOSTER AREA SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 200 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-100
Sheet number: 1

MCS FILE: OU3BB01S REF. FILE: SIT3



AM-002	Depth 0-0.5'	1-2'	4-5'	9-10'	19-20'
Cd	BSL	BSL	.73J	BSL	BSL
Mn	BSL	BSL	1150	BSL	BSL
Se	1.8J	1.7J	BSL	BSL	BSL

AM-001	Depth 0-0.5'	1-2'	4-5'	9-10'	19-20'
Cd	.51J	.44J	.69J	.6J	BSL
Se	BSL	2.6J	BSL	1.5J	BSL

SOURCE : WCC, 1994B

LEGEND

AM-001⊙ SHALLOW AND DEEP SOIL SAMPLE LOCATION

MW 59 EXISTING GROUNDWATER MONITORING WELL CLUSTER

—·—·— PHASE I STUDY AREA BOUNDARIES

NOTES:

1. ALL SAMPLES WERE ANALYZED FOR EXPLOSIVES, METALS, VOCs AND SVOCs WITH ONE EXCEPTION. THE 0-6 IN. BGS SAMPLING INTERVAL WAS NOT ANALYZED FOR VOCs.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

500 0 500 1000
SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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KANSAS CITY, MISSOURI

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Checked by: B.C.O.
Submitted by: RAN

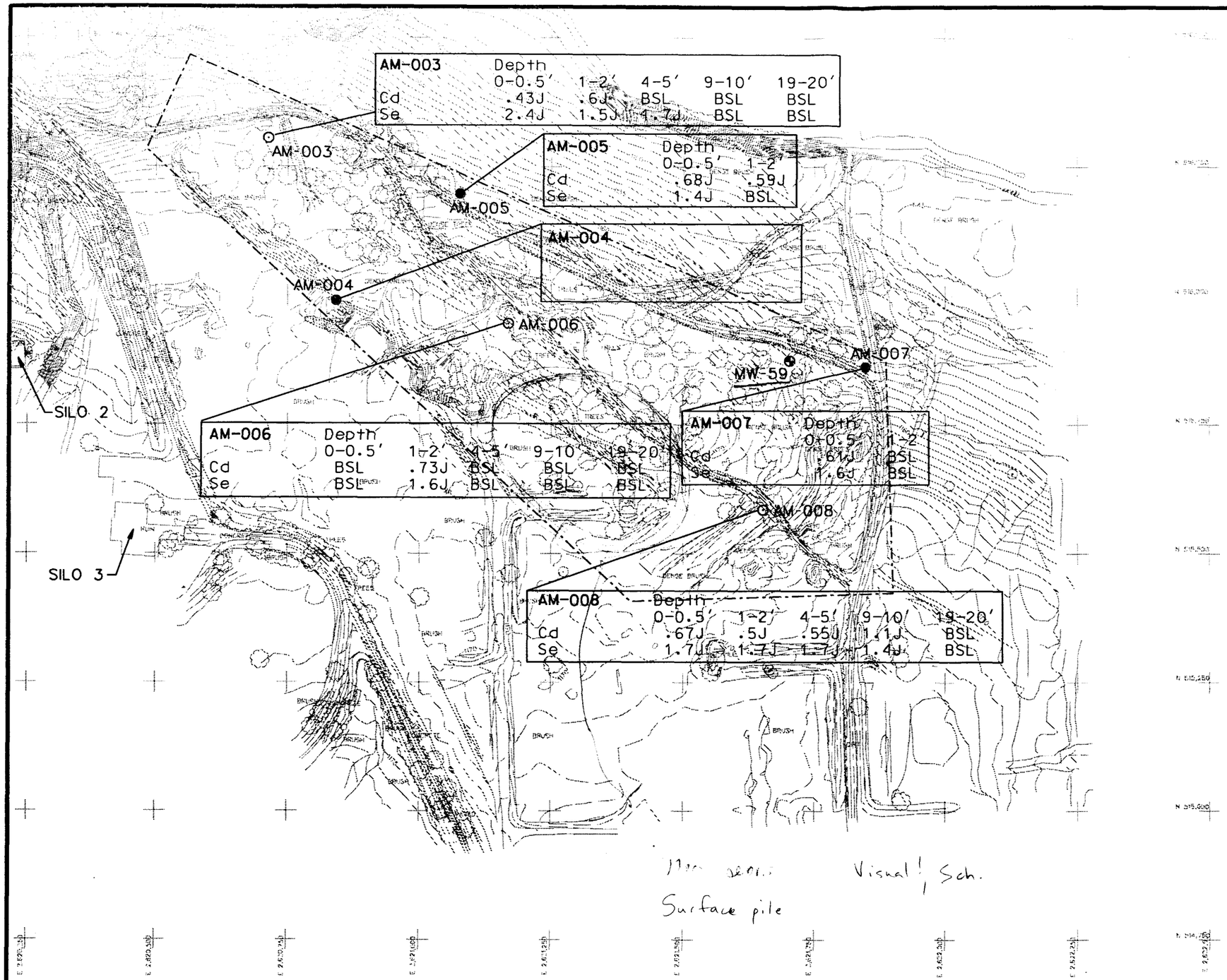
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

SOUTHWEST POTENTIAL WASTE DISPOSAL AREA AT FORMER ATLAS MISSILE AREA SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 500 FT
Date: FEBRUARY, 1996
Dwg. No.: 5-101
Sheet number: 1

MCS FILE: OU3AM02S-RF-BUST.DGN



SOURCE : WESTERN AIR MAPS, INC., 1995

LEGEND

- ● AM-004 SHALLOW SOIL SAMPLE LOCATION
- ⊙ AM-003 SHALLOW AND DEEP SOIL SAMPLE LOCATION
- ⊕ MW-59 GROUNDWATER MONITORING WELL CLUSTER
- PHASE I STUDY AREA BOUNDARIES
- INDEX CONTOUR
- INTERMEDIATE CONTOUR

NOTES:

1. ALL SAMPLES WERE ANALYZED FOR EXPLOSIVES, METALS, VOCs AND SVOCs WITH ONE EXCEPTION. THE 0-6 IN. BGS SAMPLING INTERVAL WAS NOT ANALYZED FOR VOCs.

SEE LEGEND/NOTES FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

200 0 200 400
SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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KANSAS CITY, MISSOURI

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Checked by: B.C.O.
Submitted by: RAN

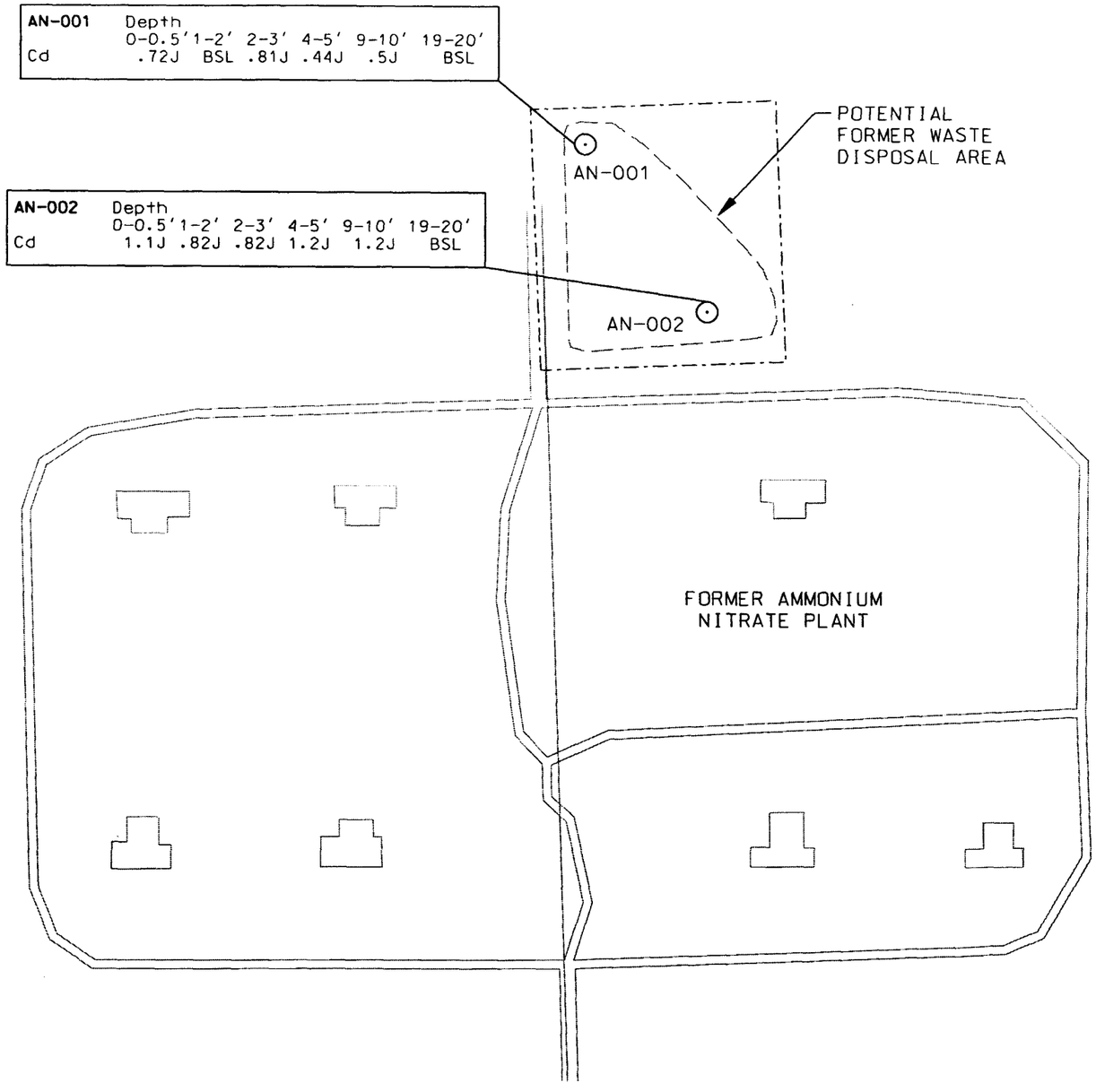
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

NORTHEAST POTENTIAL WASTE DISPOSAL AREA AT FORMER ATLAS MISSILE AREA SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 200 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-102
Sheet number: 1

MCS FILE: OU3AM01S REF. FILE: SIT1



LEGEND:

⊙ AN-001	SHALLOW AND DEEP SOIL SAMPING LOCATION
—·—·—·—	PHASE I STUDY AREA BOUNDARIES
— — — —	APPROXIMATE BOUNDARY OF WASTE DISPOSAL AREA (EPA, 1987)

NOTES:

1. ALL SAMPLES ANALYZED FOR EXPLOSIVES, METALS, SVOCS AND VOCS WITH ONE EXCEPTION. THE 0-6 in. BGS SAMPLING INTERVAL WAS NOT ANALYZED FOR VOCS.
2. NONE OF THE SAMPLES COLLECTED CONTAINED ANALYTES ABOVE SCREENING LEVELS.

N

300 0 300 600

SCALE FEET

SOURCE : WCC, 1994B

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

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Submitted by: RAN

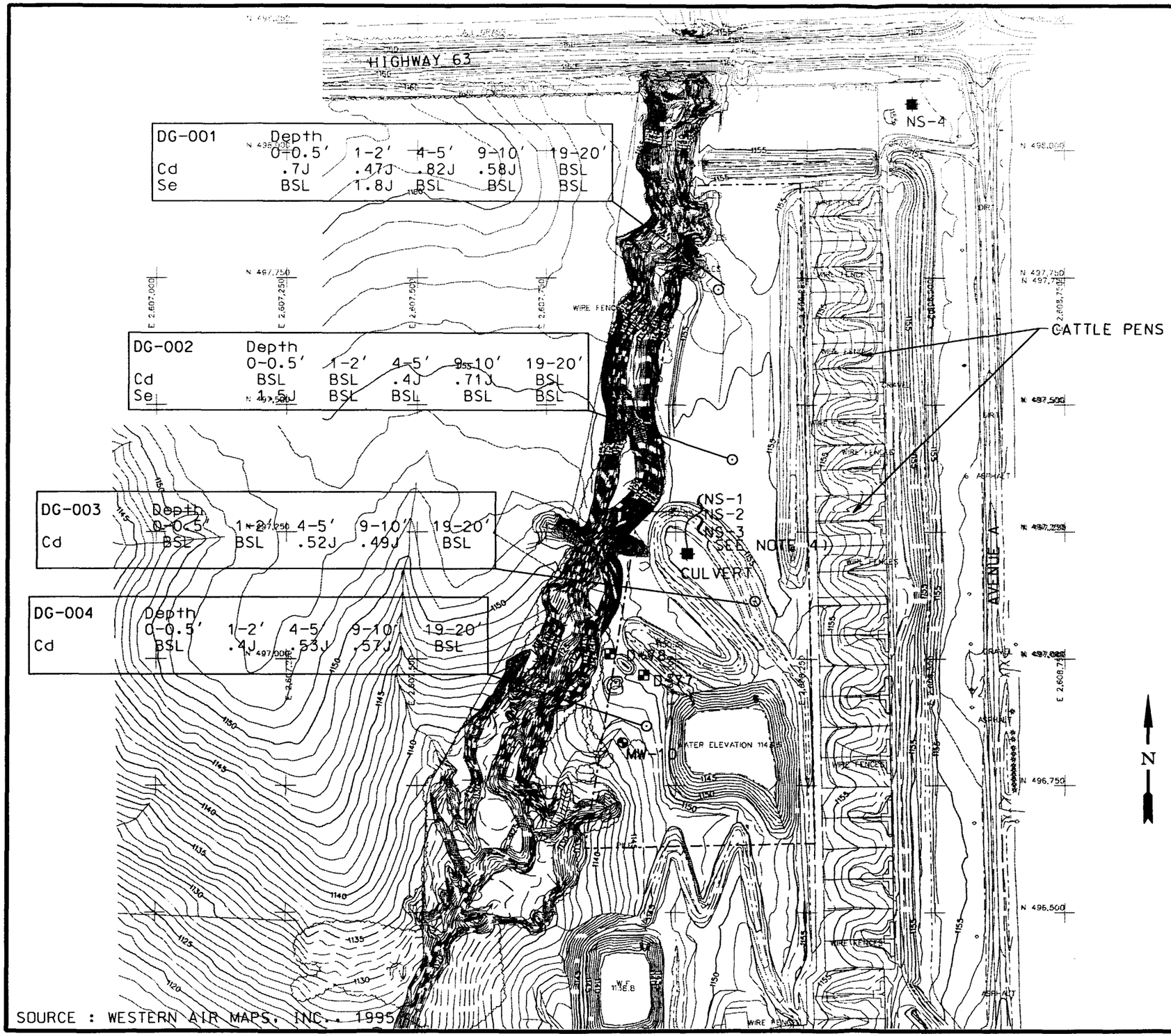
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

WASTE DISPOSAL AREA NORTH OF THE AMMONIUM NITRATE PLANT SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-103
Sheet number: 1

MCS FILE: OU3-F



DG-001	Depth 0-0.5'	1-2'	4-5'	9-10'	19-20'
Cd	.7J	.47J	.82J	.58J	BSL
Se	BSL	1.8J	BSL	BSL	BSL

DG-002	Depth 0-0.5'	1-2'	4-5'	9-10'	19-20'
Cd	BSL	BSL	.4J	.71J	BSL
Se	1.5J	BSL	BSL	BSL	BSL

DG-003	Depth 0-0.5'	1-2'	4-5'	9-10'	19-20'
Cd	BSL	BSL	.52J	.49J	BSL

DG-004	Depth 0-0.5'	1-2'	4-5'	9-10'	19-20'
Cd	BSL	.4J	.53J	.57J	BSL

SOURCE : WESTERN AIR MAPS, INC., 1995

LEGEND

- ⊙ DG-001 — SHALLOW AND DEEP SOIL SAMPLE LOCATION (OU3 PHASE I RI)
- D-77 — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (CONFIRMATION STUDY 1989)
- NS-1 — PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (FINAL ENGINEERING REPORT 1991)
- MW-10 — GROUNDWATER MONITORING WELL CLUSTER (SEE NOTE 2)
- PHASE I STUDY AREA BOUNDARIES
- INDEX CONTOUR
- INTERMEDIATE CONTOUR

NOTES:

1. ALL OUE PHASE I RI SAMPLES WERE ANALYZED FOR EXPLOSIVES, METALS, VOCs AND SVOCs WITH ONE EXCEPTION. THE 0-6 IN. BGS SAMPLING INTERVAL WAS NOT ANALYZED FOR VOCs.
2. NONE OF THE SAMPLES COLLECTED DURING OU3 PHASE I RI CONTAINED ANALYTES ABOVE SCREENING LEVELS.
3. THE LOCATION OF SAMPLES D-77, D-78 AND NS-1 THROUGH NS-4 ARE APPROXIMATE BECAUSE NO SURVEY DATA WAS AVAILABLE.
4. SAMPLE NS-1 WAS A COMPOSITE SAMPLE FROM THREE LOCATIONS IN THE CULVERT. NS-2 AND NS-3 WERE DUPLICATE SAMPLES OF NS-1.
5. COUNTOUR INTERVAL IS 1 FT.

200 0 200 400
SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
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KANSAS CITY, MISSOURI

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Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

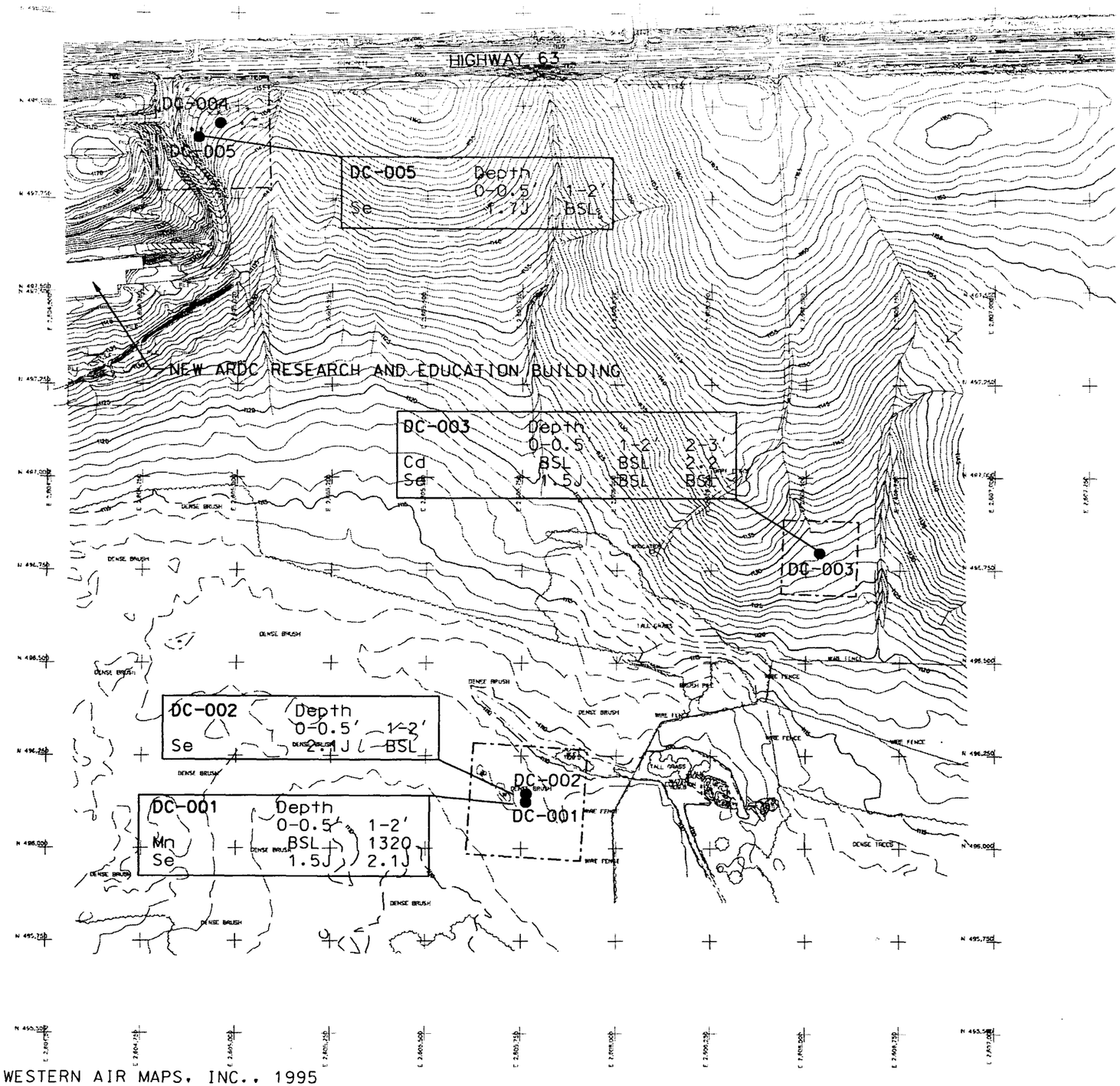
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

DEMOLITION GROUND SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 200 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-104
Sheet number: 1

MCS FILE: OU3DG001 REF. FILE: FL11, FL12

B07NE003703-03724



SOURCE: WESTERN AIR MAPS, INC., 1995

LEGEND

●DC-001	SHALLOW SOIL SAMPLE LOCATION
—·—·—	PHASE I STUDY AREA BOUNDARIES
⌒	INDEX CONTOUR
⌒	INTERMEDIATE CONTOUR

NOTES:

1. ALL SAMPLES WERE ANALYZED FOR EXPLOSIVES, METALS, VOCs AND SVOCs WITH ONE EXCEPTION. THE 0-6 IN. BGS SAMPLING INTERVAL WAS NOT ANALYZED FOR VOCs.
2. SAMPLE LOCATION DCA-003 WAS SAMPLED AT AN ADDITIONAL INTERVAL (2-3 FT.) DUE TO PLOWING THAT HAD TAKEN PLACE AT THIS SAMPLING LOCATION.

SEE LEGEND//NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

300 0 300 600
SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
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Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

DETONATION CRATERS SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-105
Sheet number: 1

MCS FILE: OU3DC01S REF. FILE: FT11, FT12

LEGEND:

● BR-001 SHALLOW SOIL SAMPLE LOCATION (SEE NOTE 1)

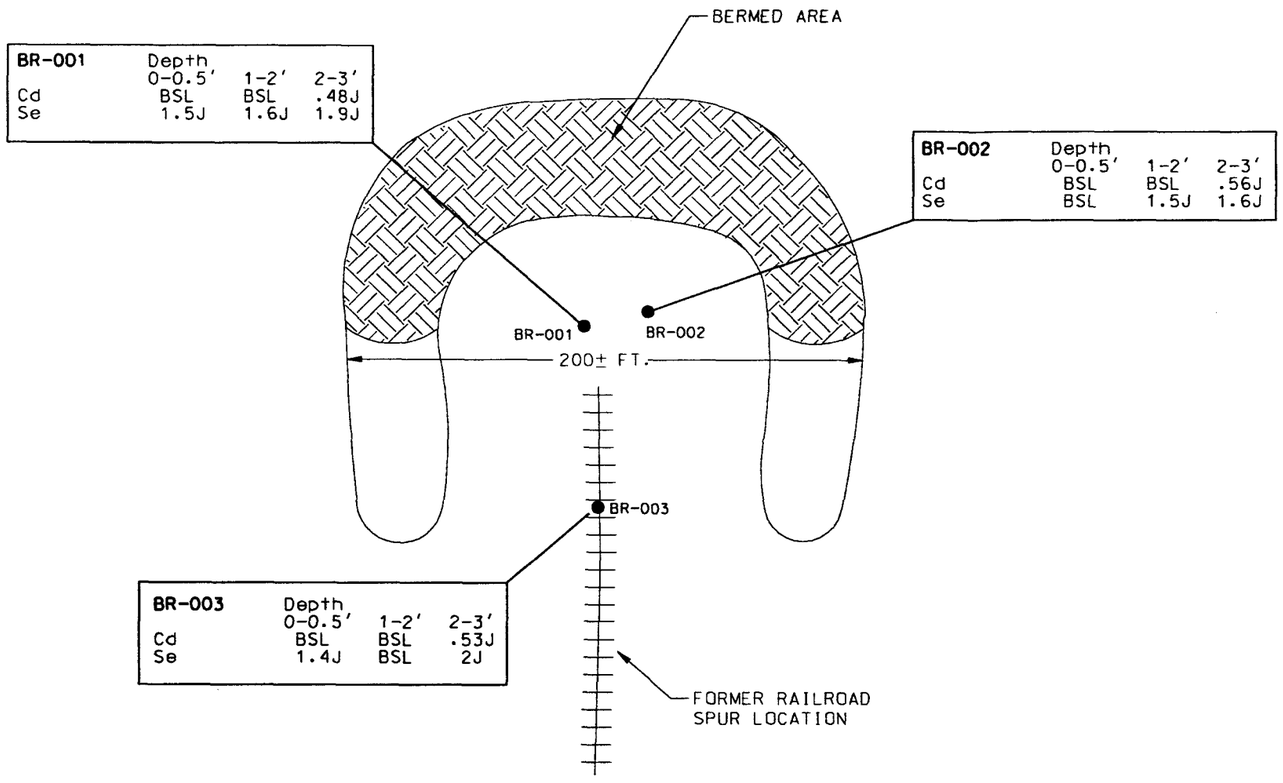
——— REPRESENTS APPROXIMATE BOUNDARY AS SHOWN ON JULY 5, 1955 AIR PHOTOS

——— EXISTING BERMED BOUNDARY

NOTES:

1. DUE TO PLOWING AT THIS SITE, SHALLOW SOIL SAMPLES WERE COLLECTED FROM 2-3 FT. AT ALL SAMPLE LOCATIONS.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION.



BR-001	Depth 0-0.5'	1-2'	2-3'
Cd	BSL	BSL	.48J
Se	1.5J	1.6J	1.9J

BR-002	Depth 0-0.5'	1-2'	2-3'
Cd	BSL	BSL	.56J
Se	BSL	1.5J	1.6J

BR-003	Depth 0-0.5'	1-2'	2-3'
Cd	BSL	BSL	.53J
Se	1.4J	BSL	2J

N

NOT TO SCALE

SOURCE : WCC, 1994B

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

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Submitted by: RAN

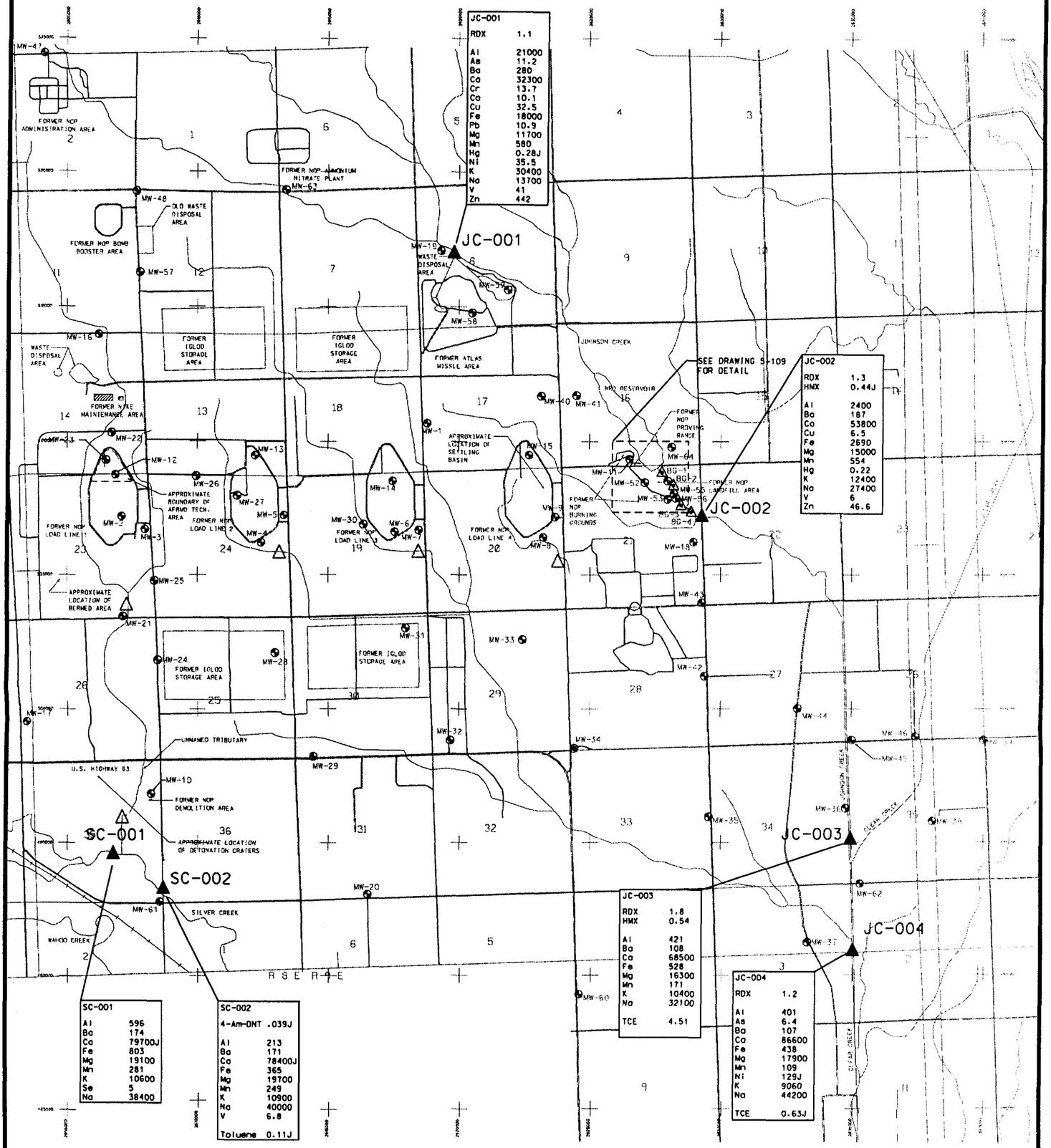
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT-MEAD, NE.

BERMED AREA SOUTHWEST OF LOAD LINE 1 SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: NOT TO SCALE
Sheet number:
Date: FEBRUARY, 1996
Dwg. No.: 5-106

MCS FILE: OU3BR01S



LEGEND:

- JC-001 — JOHNSON CREEK SURFACE WATER AND SEDIMENT SAMPLING STATION (OU3 PHASE I RI)
- SC-001 — SILVER CREEK SURFACE WATER AND SEDIMENT SAMPLING LOCATION (OU3 PHASE I RI)
- △ — PREVIOUS INVESTIGATION SURFACE WATER AND SEDIMENT SAMPLING LOCATION (CONFIRMATION STUDY 1989)
- BG-1 — PREVIOUS INVESTIGATION SURFACE WATER AND SEDIMENT SAMPLING LOCATION (OU1 RI 1991)
- MW-10 — GROUNDWATER MONITORING WELL CLUSTER LOCATION
- 36 — SECTION
- T 14 N — TOWNSHIP 14 NORTH
- R 9 E — RANGE 9 EAST

1. ALL OU3 PHASE I RI SAMPLES WERE ANALYZED FOR EXPLOSIVES, METALS, VOCs, AND SVOCs.
2. ALL SAMPLING LOCATIONS ARE APPROXIMATE BECAUSE THEY WERE NOT SURVEYED.
3. SEE LEGEND / NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATIONS.

N

4000 0 4000 8000

SCALE FEET

SOURCE: USGS, 1969

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

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Submitted by: RAN

U.S. Army Corps of Engineers

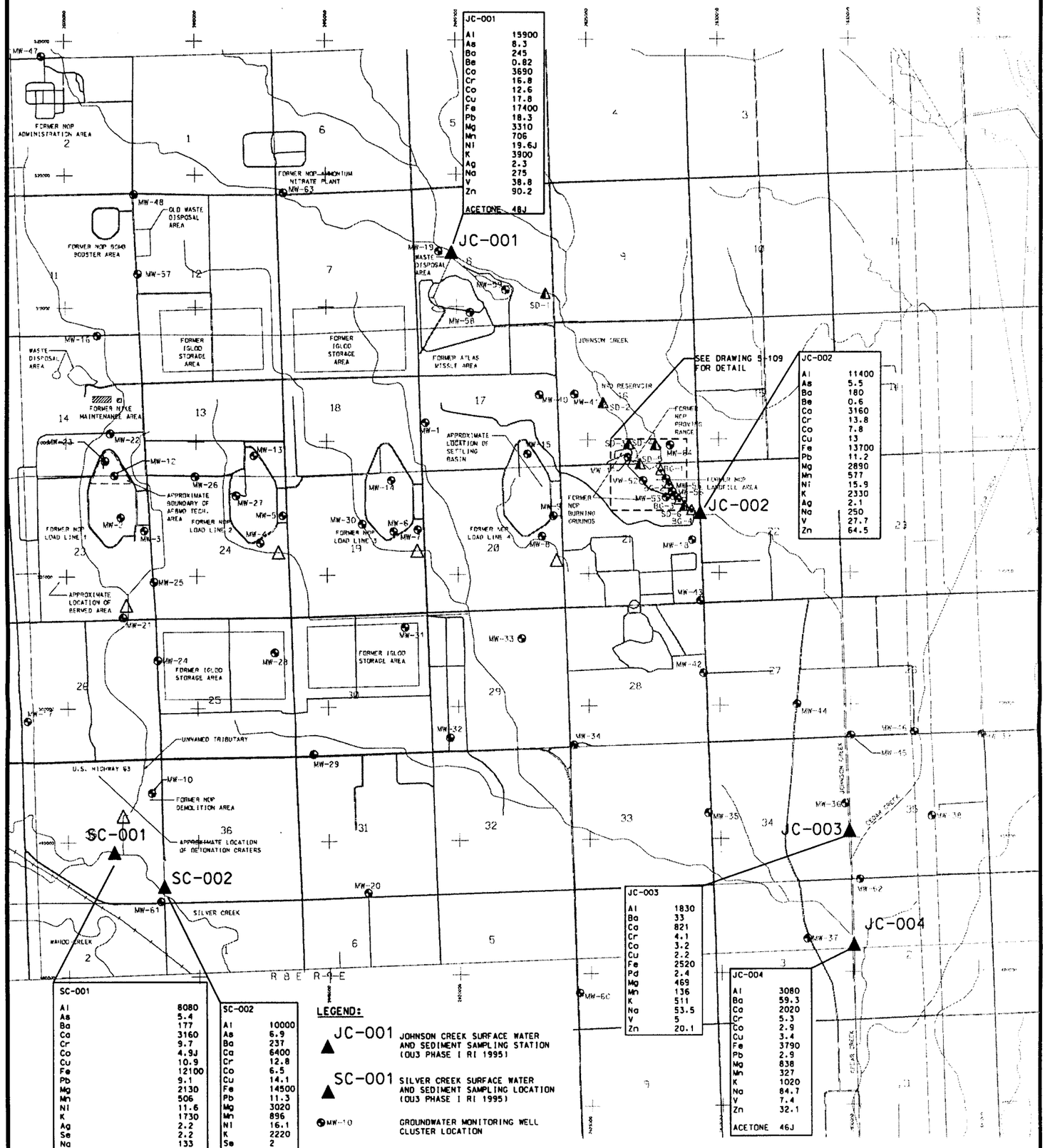
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

JOHNSON, CLEAR, AND SILVER CREEKS SAMPLING STATIONS AND SURFACE WATER SAMPLING RESULTS

Scale: AS NOTED
Date: FEBRUARY, 1996
Dwg. No.: 5-107
Sheet number: 1

MCS FILE: OU3-W4

B07NE003703-03727



JC-001	
Al	15900
As	8.3
Ba	245
Be	0.82
Ca	3690
Cr	16.8
Co	12.6
Cu	17.8
Fe	17400
Pb	18.3
Mg	3310
Mn	706
Ni	19.6J
K	3900
Ag	2.3
Na	275
V	38.8
Zn	90.2
ACETONE	48J

JC-002	
Al	11400
As	5.5
Ba	180
Be	0.6
Ca	3160
Cr	13.8
Co	7.8
Cu	13
Fe	13700
Pb	11.2
Mg	2890
Mn	577
Ni	15.9
K	2330
Ag	2.1
Na	250
V	27.7
Zn	64.5

JC-003	
Al	1830
Ba	33
Ca	821
Cr	4.1
Co	3.2
Cu	2.2
Fe	2520
Pd	2.4
Mg	469
Mn	136
K	511
Na	53.5
V	5
Zn	20.1

JC-004	
Al	3080
Ba	59.3
Ca	2020
Cr	5.3
Co	2.9
Cu	3.4
Fe	3790
Pb	2.9
Mg	838
Mn	327
K	1020
Na	84.7
V	7.4
Zn	32.1
ACETONE	46J

SC-001	
Al	8080
As	5.4
Ba	177
Ca	3160
Cr	9.7
Co	4.9J
Cu	10.9
Fe	12100
Pb	9.1
Mg	2130
Mn	506
Ni	11.6
K	1730
Ag	2.2
Se	2.2
Na	133
V	18
Zn	45.8
4-METHYLPHENOL	2444
DI-N-BUTYLPHTHALATE	575
ACETONE	43J
TOLUENE	246J

SC-002	
Al	10000
As	6.9
Ba	237
Ca	6400
Cr	12.8
Co	6.5
Cu	14.1
Fe	14500
Pb	11.3
Mg	3020
Mn	896
Ni	16.1
K	2220
Se	2
Ag	2.3
Na	286
V	23.2
Zn	58.5
PYRENE	107J

LEGEND:

- JC-001 — JOHNSON CREEK SURFACE WATER AND SEDIMENT SAMPLING STATION (OU3 PHASE I RI 1995)
- SC-001 — SILVER CREEK SURFACE WATER AND SEDIMENT SAMPLING LOCATION (OU3 PHASE I RI 1995)
- MW-10 — GROUNDWATER MONITORING WELL CLUSTER LOCATION
- PREVIOUS INVESTIGATION SURFACE WATER AND SEDIMENT SAMPLING LOCATION (CONFIRMATION STUDY 1989)
- BG-1 — PREVIOUS INVESTIGATION SURFACE WATER AND SEDIMENT SAMPLING LOCATION (OU1 RI 1991)
- SD-1 — PREVIOUS INVESTIGATION SEDIMENT SAMPLING LOCATION (OU1 RI/FS 1992)
- 36 — SECTION
- T 14 N — TOWNSHIP 14 NORTH
- R 9 E — RANGE 9 EAST

1. ALL OU3 PHASE I RI SAMPLES WERE ANALYZED FOR EXPLOSIVES, METALS, VOCs, AND SVOCs.
2. ALL SAMPLING LOCATIONS ARE APPROXIMATE BECAUSE THEY WERE NOT SURVEYED
3. SEE LEGEND / NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATIONS.

N

4000 0 4000 8000

SCALE FEET

SOURCE: USGS, 1969

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
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KANSAS CITY, MISSOURI

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Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

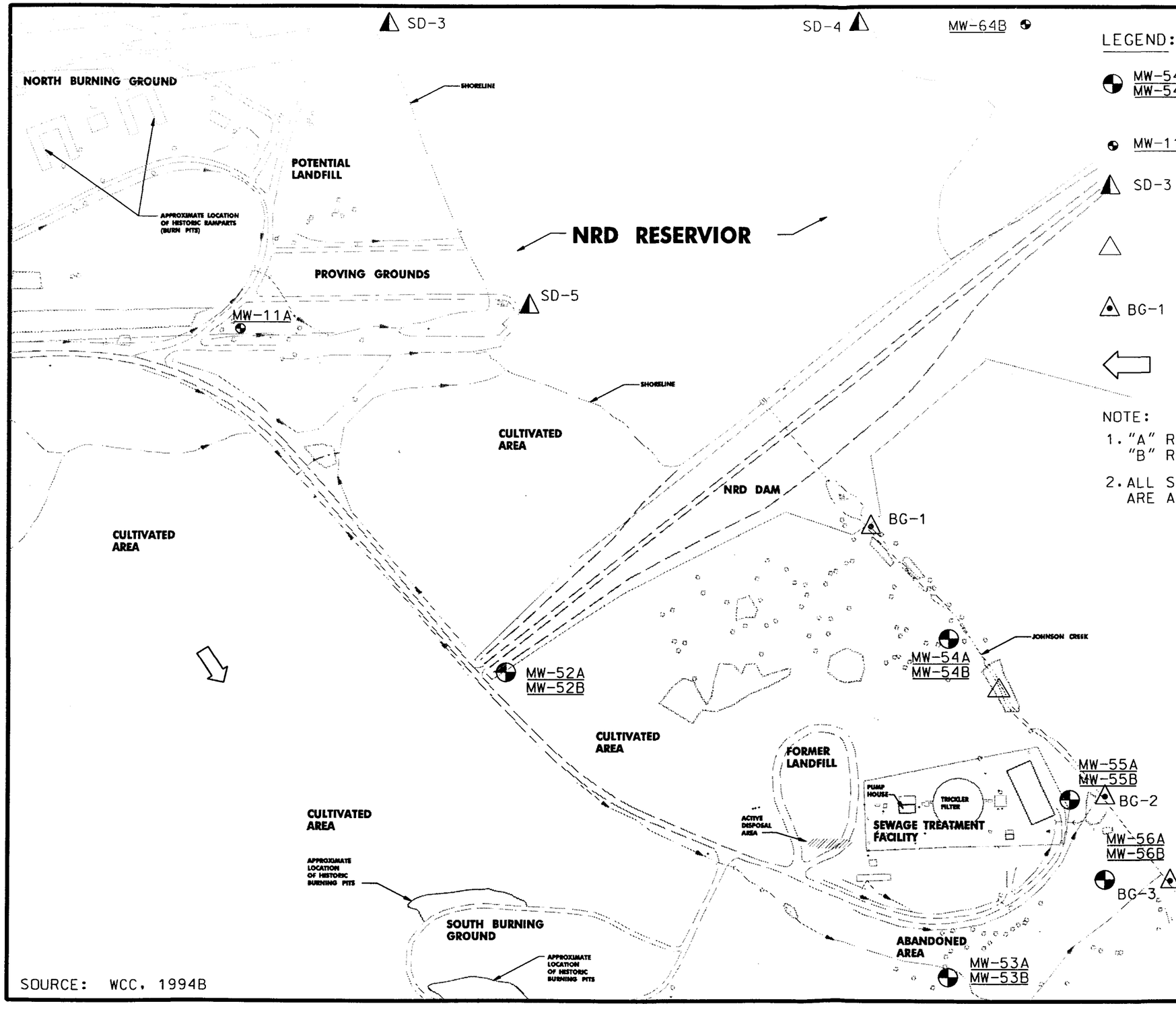
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

JOHNSON, CLEAR, AND SILVER CREEKS SAMPLING STATIONS AND SEDIMENT SAMPLING RESULTS

Scale: AS NOTED
Date: FEBRUARY, 1996
Dwg. No.: 5-108
Sheet number: 1

MCS FILE: OU3-W5

B07NE003703-03728



SOURCE: WCC, 1994B

LEGEND:

MW-54A / MW-54B	LANDFILL AREA GROUNDWATER MONITORING WELL CLUSTER SAMPLED TO SUPPORT OU3 PHASE I RI
MW-11A	OTHER EXISTING GROUNDWATER MONITORING WELL CLUSTER
SD-3	PREVIOUS INVESTIGATION SURFACE WATER AND SEDIMENT SAMPLING LOCATION (OU1 RI/FS 1992)
	PREVIOUS INVESTIGATION SURFACE WATER AND SEDIMENT SAMPLING LOCATION (CONFIRMATION STUDY 1989)
BG-1	PREVIOUS INVESTIGATION SURFACE WATER AND SEDIMENT SAMPLING LOCATION (OU1RI 1991)
	GROUNDWATER FLOW (APPROXIMATE)

NOTE:

1. "A" REPRESENTS INTERMEDIATE WELLS, AND "B" REPRESENTS SHALLOW WELLS.
2. ALL SURFACE WATER/SEDIMENT SAMPLE LOCATIONS ARE APPROXIMATE BECAUSE THEY WERE NOT SURVEYED.

N

200 0 200 400

SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

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Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

PREVIOUS INVESTIGATION SURFACE WATER AND SEDIMENT SAMPLES COLLECTED IN VICINITY OF NRD RESERVOIR

Scale: 1 IN - 200 FT
Date: FEBRUARY, 1996
Dwg. No.: 5-109
Sheet number: 1

MCS FILE: OU3MW-2 REF. FILE:BPGBASE

B07NE003703-03729

LEGEND:

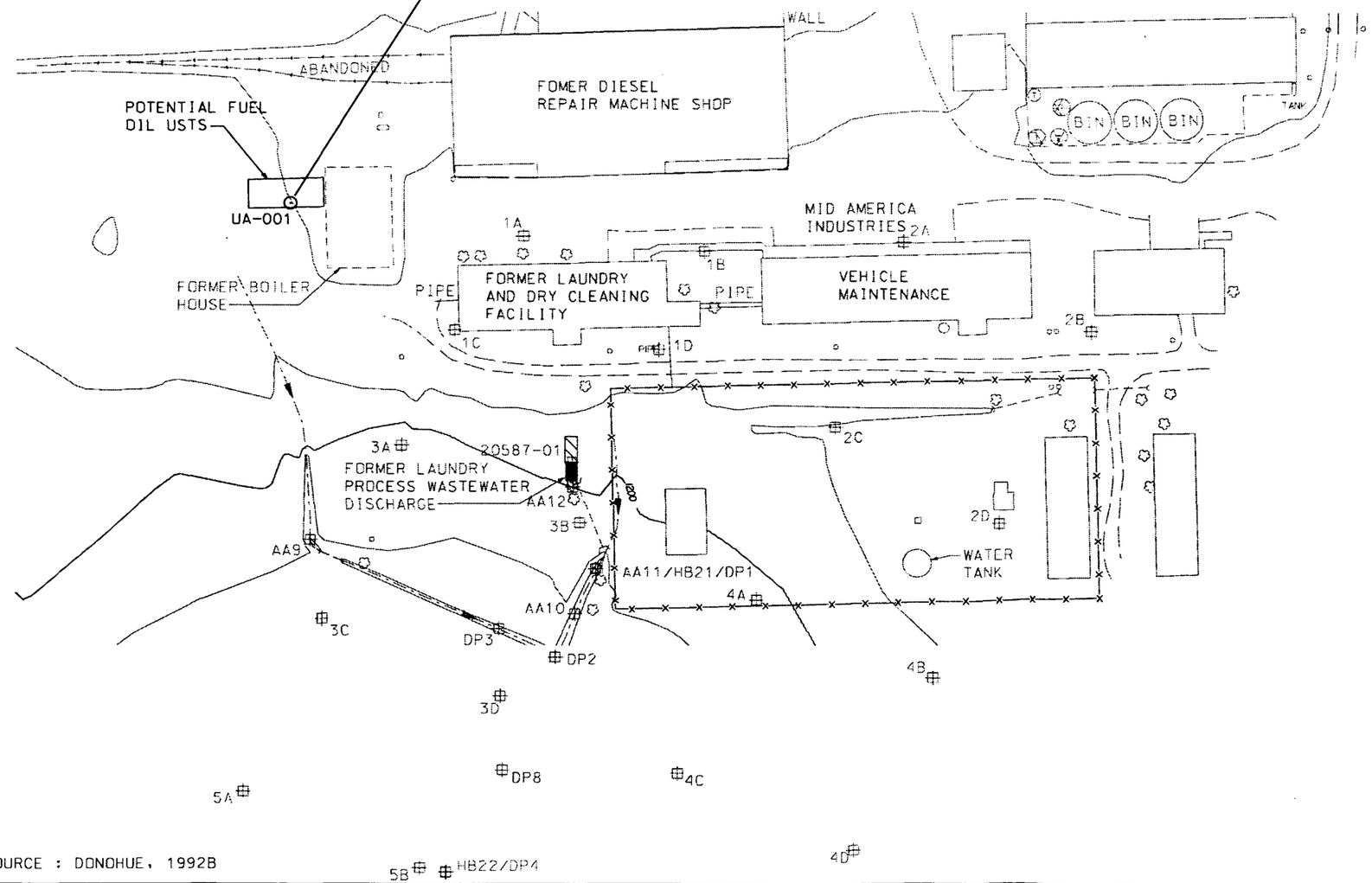
⊙ UA-001	SHALLOW AND DEEP SOIL SAMPLE LOCATION (SEE NOTE 2) (OU3 PHASE I RI)
⊞ 1A	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
▨	OU1 SOIL EXCAVATION AREA

NOTES:

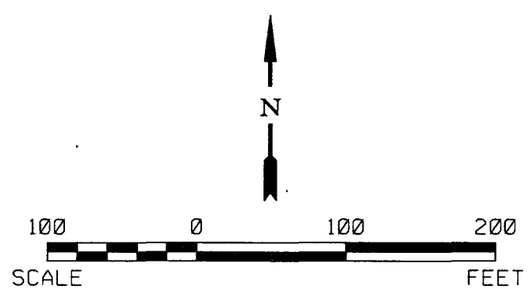
1. ALL OU3 PHASE I RI SAMPLES WERE ANALYZED FOR SVOCs, BTEX AND TRPH.
2. SOIL SAMPLE (28-29 FT BGS) AND A HYDROPUNCH SAMPLE WERE ALSO COLLECTED AT THIS LOCATION. HYDROPUNCH® SET AT 41.4 FT BGS. GROUNDWATER LEVEL AT 36.35 FT BGS.
3. TRPH=TOTAL RECOVERABLE PETROLEUM HYDROCARBONS.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

UA-001	DEPTH					
	0-0.5'	1-2'	4-5'	9-10'	19-20'	28-29'
TRPH	21	BSL	BSL	BSL	BSL	BSL



SOURCE : DONOHUE, 1992B



Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

ADMINISTRATION AREA UST SAMPLING LOCATION AND RESULTS ABOVE SOIL AND GROUNDWATER SCREENING LEVELS

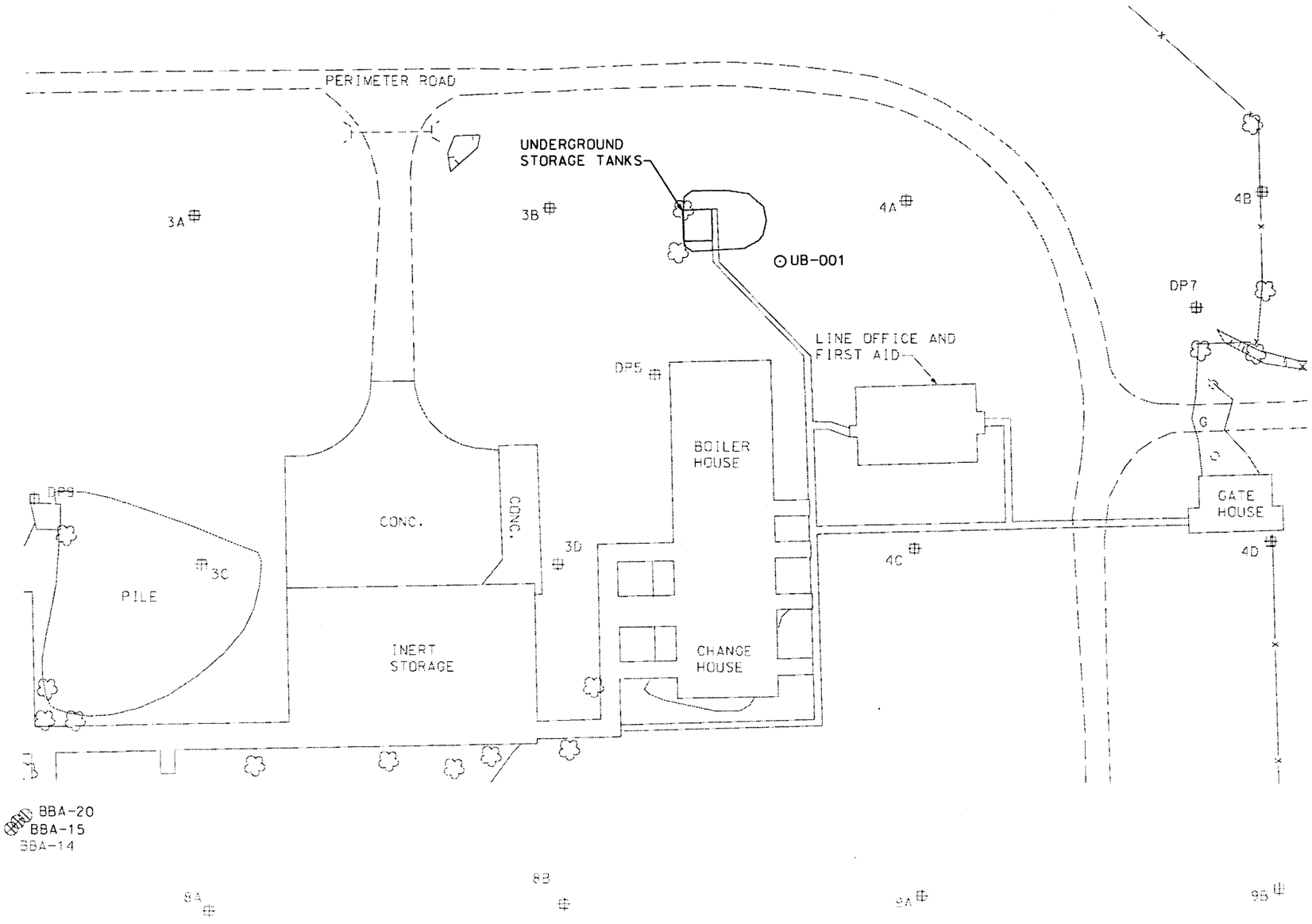
Scale: 1 IN - 100 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-110
Sheet number: 1

MCS FILE: OU3UA01S

B07NE003703-03730

LEGEND:

⊙ UB-001	SHALLOW AND DEEP SOIL SAMPLE LOCATION (SEE NOTE 2) (OU3 PHASE I RI)
⊕ DP5	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 SUPPLEMENTAL RI/FS 1992)
⊘ BBA-20	PREVIOUS INVESTIGATION SOIL SAMPLE LOCATION (OU1 PDI 1995)



SOURCE: DONOHUE, 1992B

NOTES:

1. ALL OU3 PHASE I RI SAMPLES WERE ANALYZED FOR SVOCs, BTEX AND TRPH.
2. A SOIL SAMPLE (29-30 FT BGS) AND A HYDROPUNCH® SAMPLE WERE ALSO COLLECTED AT THIS LOCATION. HYDROPUNCH® SET AT 43.2 FT BGS. GROUNDWATER LEVEL AT 38.75 FT BGS. A SOIL SAMPLE WAS NOT COLLECTED AT THE 39 FT. BGS INTERVAL BECAUSE THE WATER LEVEL WAS ENCOUNTERED AT A SHALLOWER DEPTH.
3. NONE OF THE OU3 PHASE I RI SAMPLES COLLECTED CONTAINED ANALYTES ABOVE SCREENING LEVELS.

N

50 0 50 100

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.

Drawn by: T.R.F.

Checked by: B.C.O.

Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT · MEAD, NE.

BOMB BOOSTER AREA UST SAMPLING LOCATION AND RESULTS ABOVE SOIL AND GROUNDWATER SCREENING LEVELS

Scale: 1 IN = 50 FEET

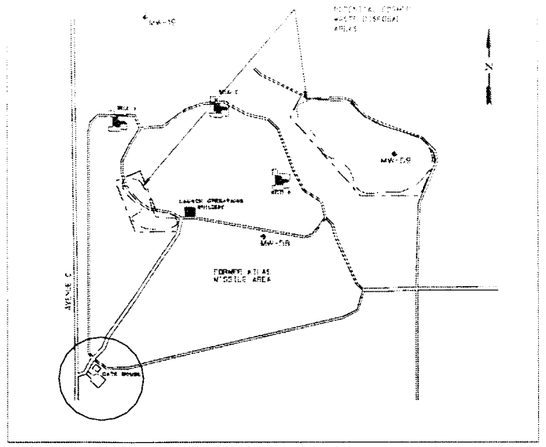
Date: FEBRUARY, 1996

Dwg. No.: 5-111

Sheet number: 1

MCS FILE: OU3UB-1

B07NE003703-03731



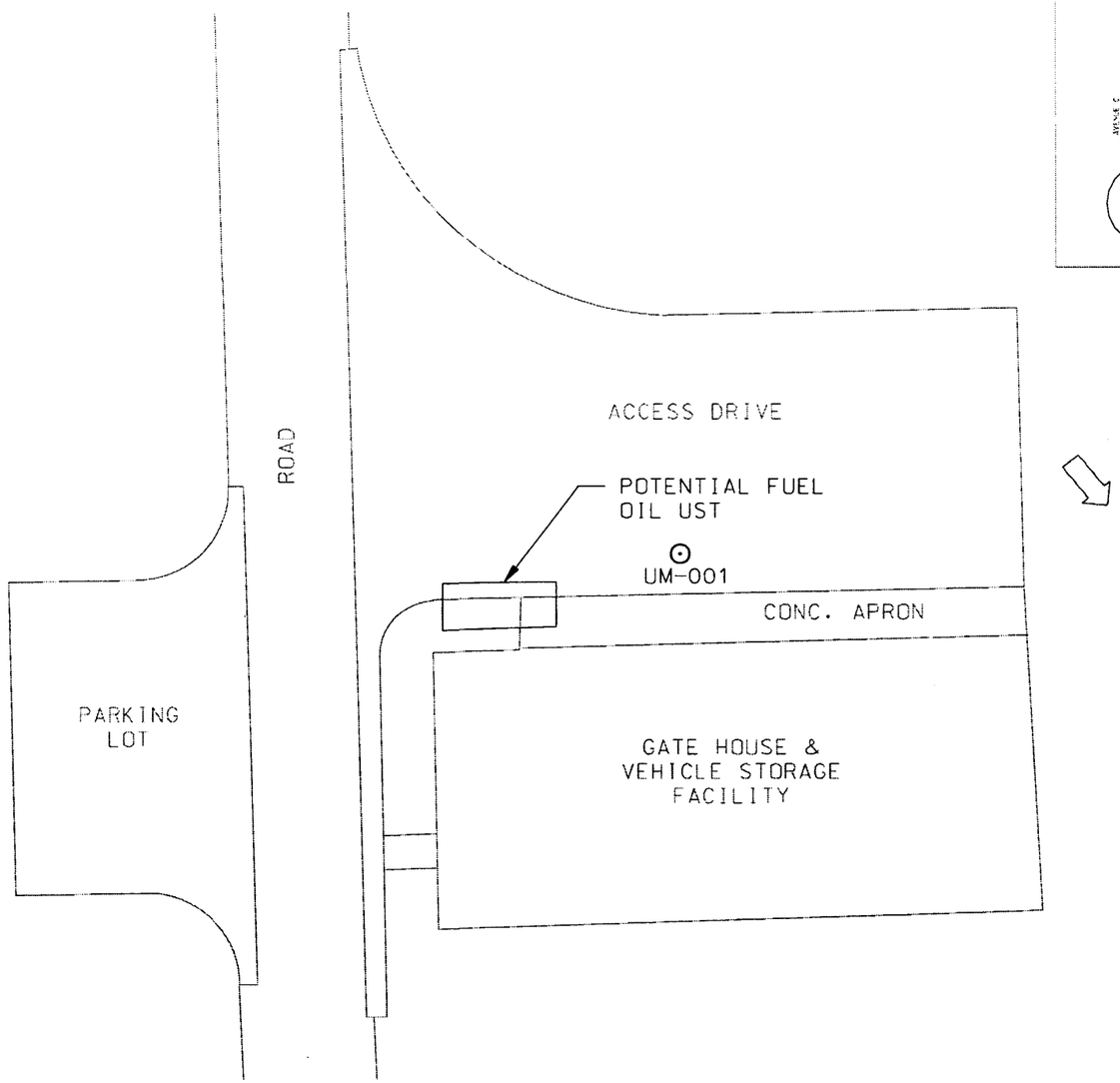
LEGEND:

⊙ UM-001 SHALLOW AND DEEP SOIL SAMPLING LOCATION (SEE NOTE 2)

⇦ GROUNDWATER FLOW (APPROXIMATE)

NOTE:

1. ALL SAMPLES WERE ANALYZED FOR SVOCs, VOCs, TRPH, AND BTEX (BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES).
2. A SOIL SAMPLE (29FT.-30FT. BGS) AND A HYDROPUNCH® SAMPLE WERE ALSO COLLECTED AT THIS LOCATION. HYDROPUNCH® SET AT 52.35 FT. BGS. GROUNDWATER LEVEL AT 48.57 FT. BGS.
3. SHALLOW SOIL SAMPLE UMA-001-000 WAS NOT COLLECTED DUE TO CONCRETE PAD AT SAMPLING LOCATION.
4. NONE OF THE SAMPLES COLLECTED CONTAINED ANALYTES ABOVE SCREENING LEVELS.



N

15 0 15 30

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: L.A.T.
Drawn by: D.R.T.
Checked by: B.C.O.
Submitted by: RAJ

U.S. Army Corps of Engineers

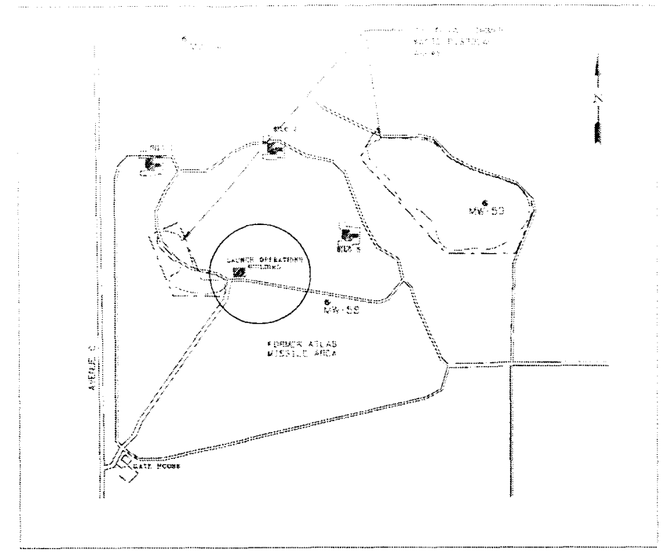
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

ATLAS MISSILE AREA UST SAMPLING LOCATION (GATE HOUSE)AND RESULTS ABOVE SOIL AND GROUNDWATER SCREENING LEVELS

Scale: 1 IN = 15 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-112
Sheet number: 1

MCS FILE: OU3-RR

SOURCE: USACE, 1961.



LEGEND:

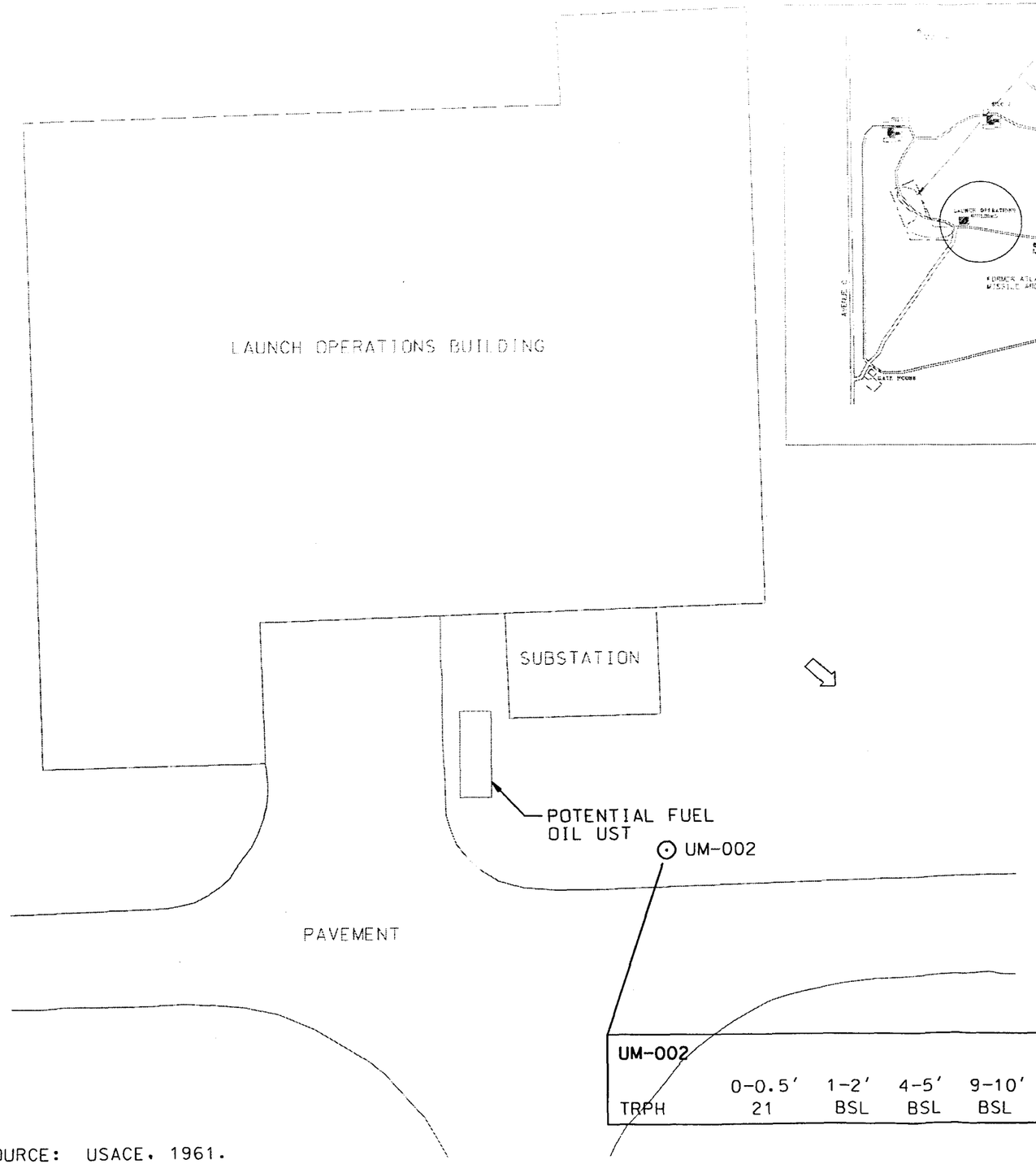
UM-002 SHALLOW AND DEEP SOIL SAMPLING LOCATION (SEE NOTE 2)

GROUNDWATER FLOW (APPROXIMATE)

NOTES:

1. ALL SAMPLES WERE ANALYZED FOR SVOCs, VOCs, TRPH AND BTEX.
2. SOIL SAMPLES (29FT.-30FT. AND 38FT.-39FT. BGS), AND A HYDROPUNCH® SAMPLE WERE ALSO COLLECTED AT THIS LOCATION. HYDROPUNCH® SET AT 44 FT. BGS. GROUNDWATER LEVEL AT 42.09 FT. BGS.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION



UM-002	DEPTH						
	0-0.5'	1-2'	4-5'	9-10'	19-20'	29-30'	38-39'
TRPH	21	BSL	BSL	BSL	BSL	BSL	BLS

SOURCE: USACE, 1961.

N

20 0 20 40

SCALE FEET

Revisions

Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: L.A.T.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

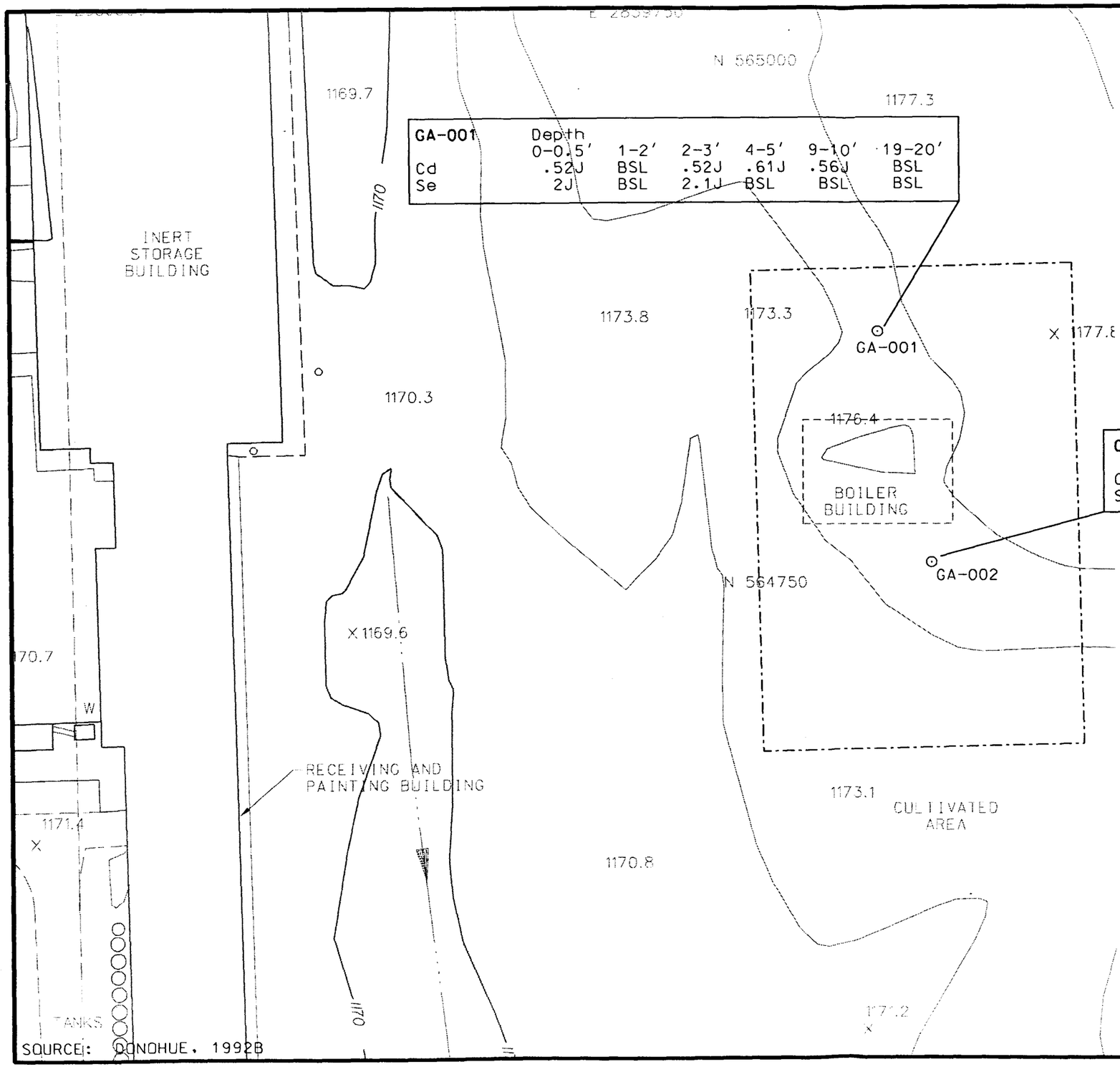
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

ATLAS MISSILE AREA UST SAMPLING LOCATION (LAUNCH OPERATIONS BUILDING) AND RESULTS ABOVE SOIL AND GROUNDWATER SCREENING LEVELS

Scale: 1 IN - 20 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-113
Sheet number: 1

MCS FILE: OU3UM01S



GA-001	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.52J	BSL	.52J	.61J	.56J	BSL
Se	2J	BSL	2.1J	BSL	BSL	BSL

GA-002	Depth 0-0.5'	1-2'	2-3'	4-5'	9-10'	19-20'
Cd	.43J	.6J	NA	.57J	.5J	BSL
Se	BSL	2J	NA	BSL	BSL	BSL

LEGEND:

⊙ GA-001 — SHALLOW AND DEEP SOIL SAMPLE LOCATION

—·—·— PHASE I STUDY AREA BOUNDARIES

NOTES:

1. ALL SAMPLES ANALYZED FOR EXPLOSIVES, METALS, SVOCS AND VOCS WITH ONE EXCEPTION. THE 0-6 in. BGS SAMPLING INTERVAL WAS NOT ANALYZED FOR VOCS.
2. THE SAMPLE COLLECTED FROM 2-3 FEET WAS NOT ANALYZED FOR METALS BY MISTAKE.

SEE LEGEND/NOTES SHEET FOR DRAWINGS FOR UNITS OF CONCENTRATION

N

50 0 50 100
SCALE FEET

SOURCE: DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAW

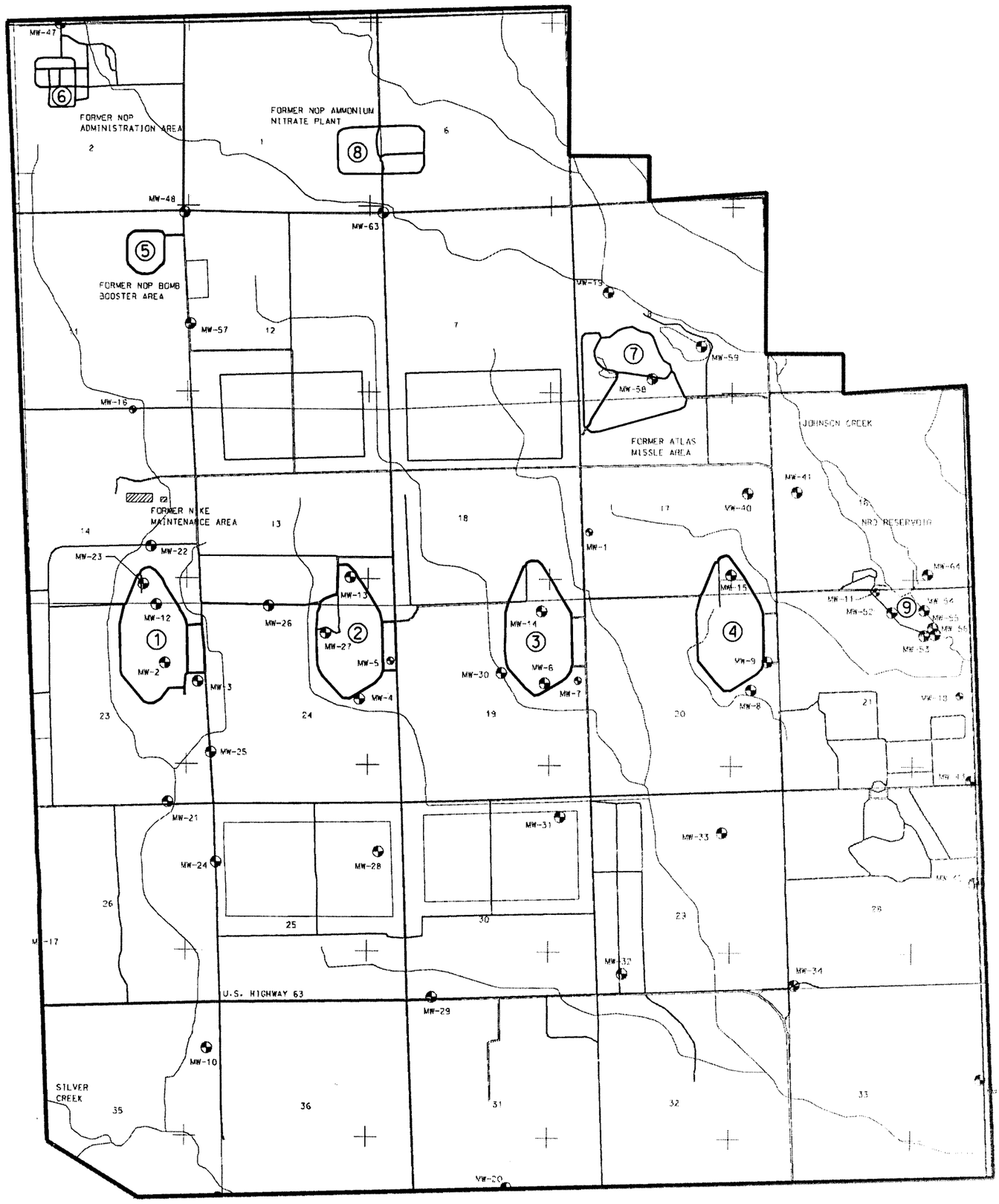
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

GEOPHYSICAL ANOMALY AT LOAD LINE 3 SAMPLING LOCATIONS AND RESULTS ABOVE SOIL SCREENING LEVELS

Scale: 1 IN = 100 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-114
Sheet number: 1

MCS FILE: OU3GA01S REF. FILE: LL3BASE



LOCATIONS KEY:

1. LOAD LINE 1 (SEE DRAWING 5-116)
2. LOAD LINE 2 (SEE DRAWING 5-117)
3. LOAD LINE 3 (SEE DRAWING 5-118)
4. LOAD LINE 4 (SEE DRAWING 5-119)
5. BOMB BOOSTER AREA (SEE DRAWING 5-120)
6. ADMINISTRATION AREA (SEE DRAWING 5-121)
7. ATLAS MISSLE AREA (SEE DRAWING 5-122)
8. AMMONIUM NITRATE PLANT (SEE DRAWING 5-123)
9. SEWAGE TREATMENT PLANT (SEE DRAWING 5-124)

N

3000 0 3000 6000

SCALE FEET

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Symbol	Descriptions	Date	Approved

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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

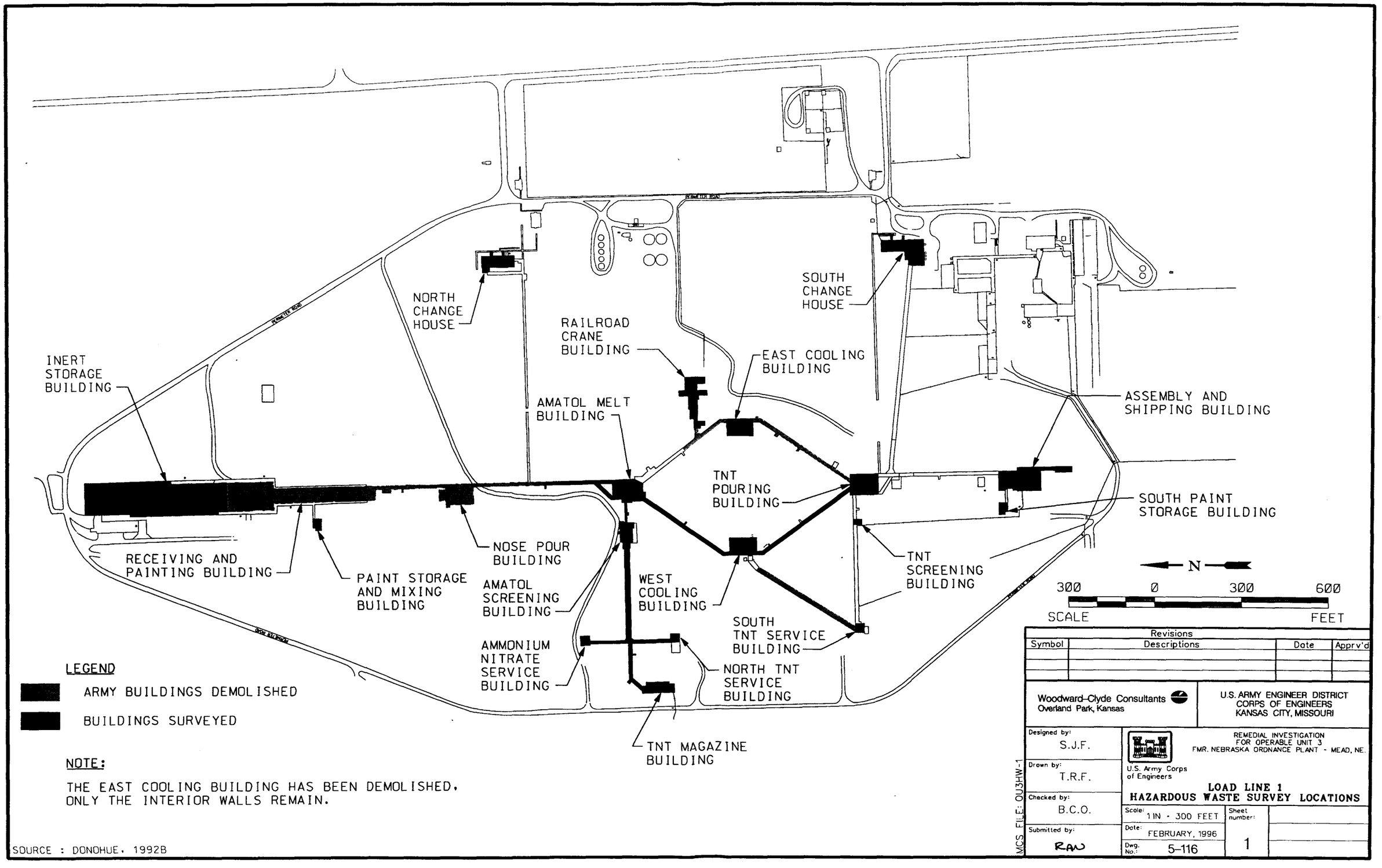
SITE WIDE HAZARDOUS
WASTE SURVEY LOCATIONS

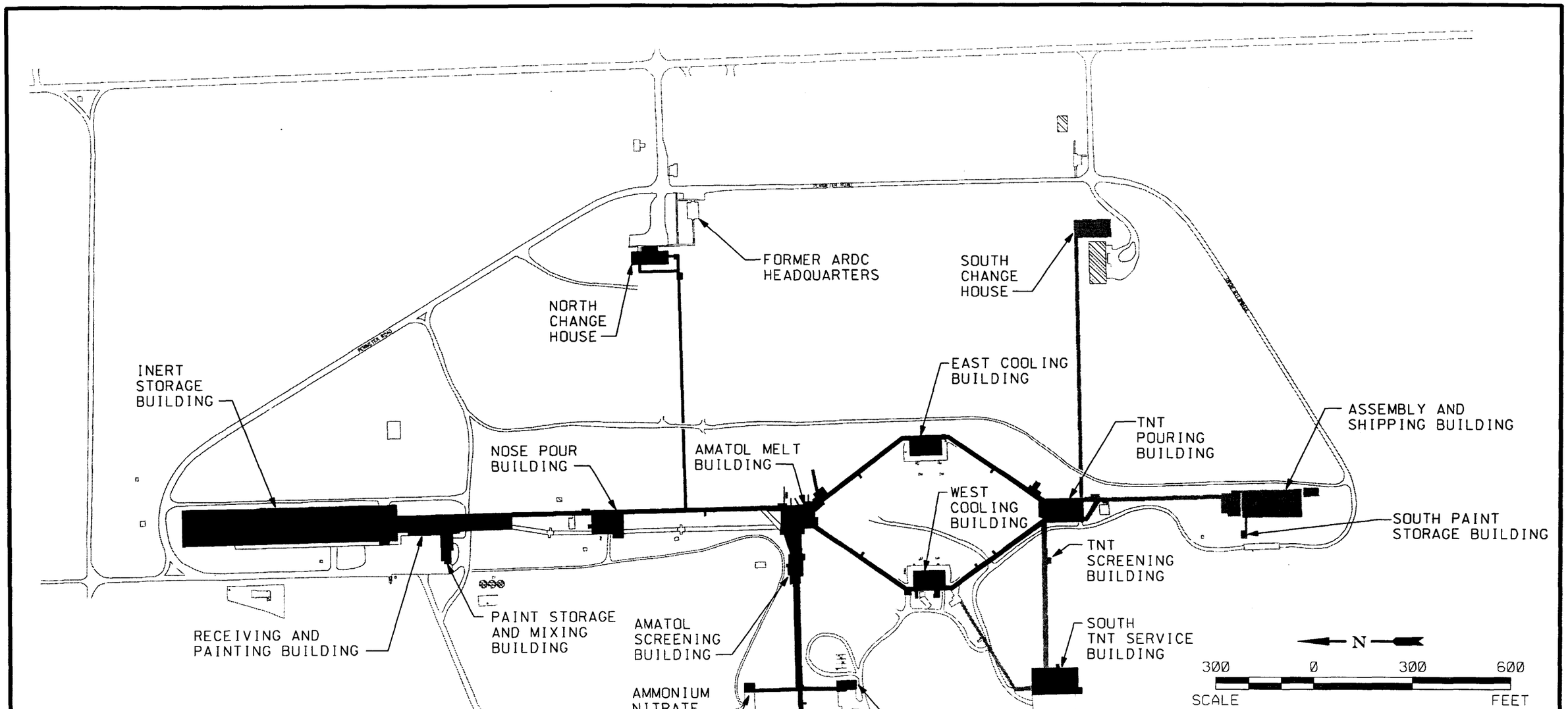
Scale: 1 IN = 3000 FT
Date: FEBRUARY, 1996
Dwg. No.: 5-115
Sheet number: 1

MICRO FILE: OU3-111

SOURCE: USGS, 1969

B07NE003703-03735


PERIMETER ROAD
NORTH CHANGE HOUSE
SOUTH CHANGE HOUSE
RAILROAD CRANE BUILDING
EAST COOLING BUILDING
INERT STORAGE BUILDING
AMATOL MELT BUILDING
ASSEMBLY AND SHIPPING BUILDING
TNT POURING BUILDING
SOUTH PAINT STORAGE BUILDING
NOSE POUR BUILDING
RECEIVING AND PAINTING BUILDING
PAINT STORAGE AND MIXING BUILDING
AMATOL SCREENING BUILDING
WEST COOLING BUILDING
TNT SCREENING BUILDING
SOUTH TNT SERVICE BUILDING
AMMONIUM NITRATE SERVICE BUILDING
NORTH TNT SERVICE BUILDING
TNT MAGAZINE BUILDING
N
300 0 300 600
SCALE FEET
LEGEND
ARMY BUILDINGS DEMOLISHED
BUILDINGS SURVEYED
NOTE:
THE EAST COOLING BUILDING HAS BEEN DEMOLISHED, ONLY THE INTERIOR WALLS REMAIN.
SOURCE : DONOHUE, 1992B
Revisions
Symbol
Descriptions
Date
Apprv'd
Woodward-Clyde Consultants
Overland Park, Kansas
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI
Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAW
U.S. Army Corps of Engineers
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.
LOAD LINE 1
HAZARDOUS WASTE SURVEY LOCATIONS
Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-116
Sheet number: 1
MCS FILE: OU3HW-1



SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

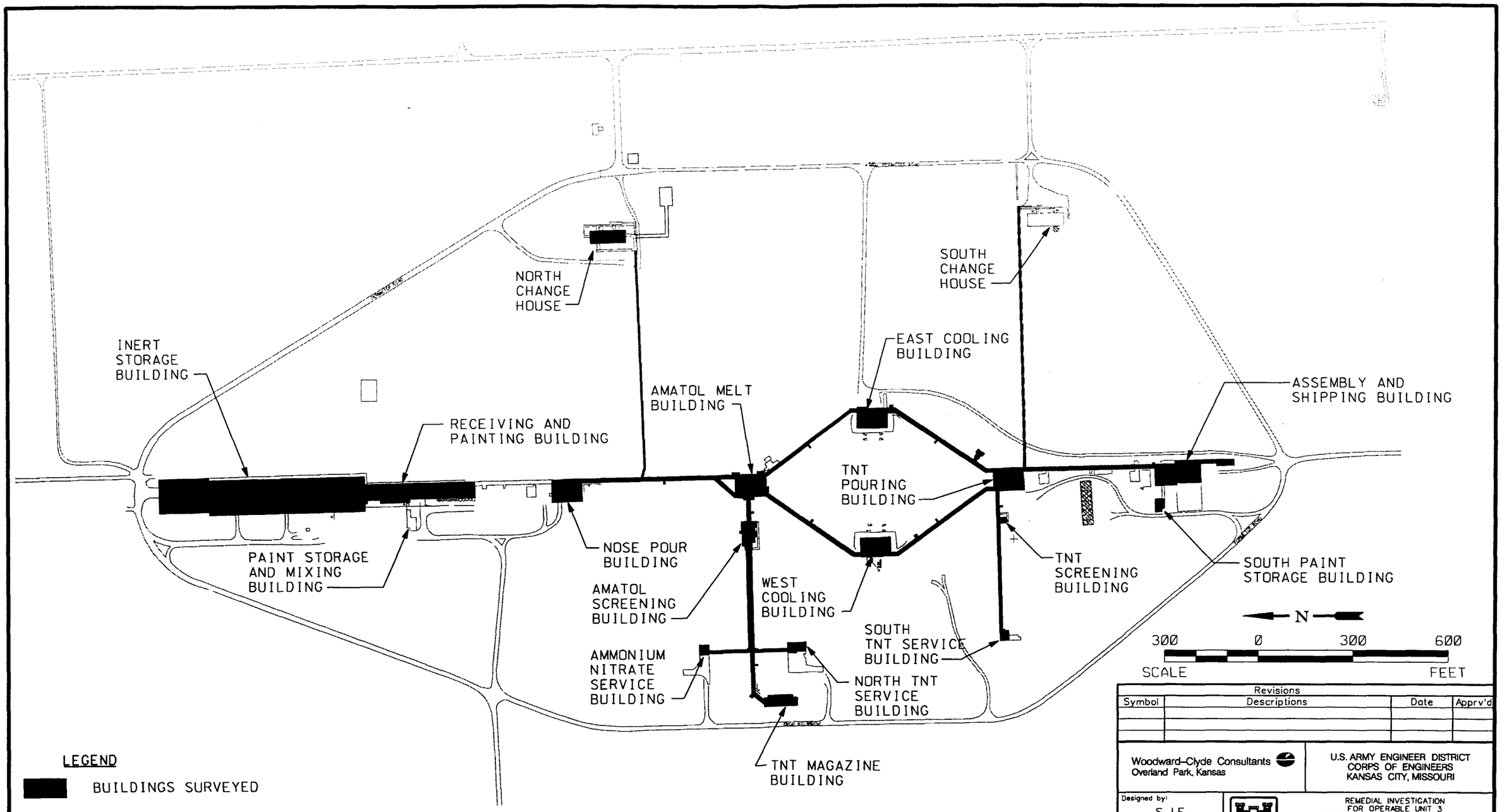
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 2
HAZARDOUS WASTE SURVEY LOCATIONS

Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-117
Sheet number: 1

MCS FILE: OU3HW-2



LEGEND

BUILDINGS SURVEYED

NOTE:

THE SOUTH CHANGE HOUSE AND THE PAINT STORAGE AND MIXING BUILDING WERE NOT SURVEYED BECAUSE ACCESS COULD NOT BE OBTAINED.

SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

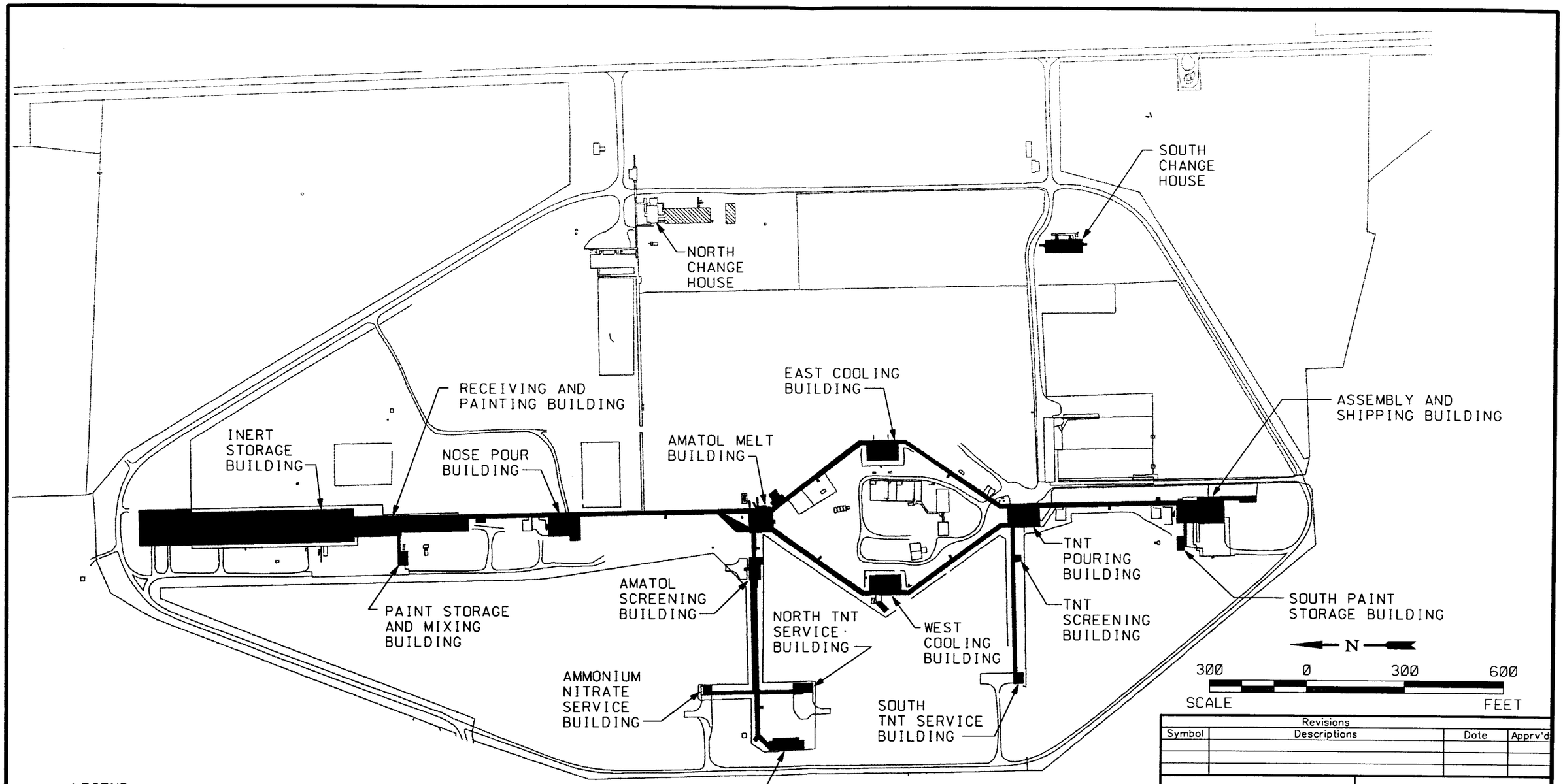
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 3
HAZARDOUS WASTE SURVEY LOCATIONS

Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-118
Sheet number: 1

MCS FILE: OU3HW-3

B07NE003703-03738



LEGEND

BUILDINGS SURVEYED

NOTE:

THE NORTH CHANGE HOUSE WAS NOT SURVEYED BECAUSE ACCESS COULD NOT BE OBTAINED.

SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

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U.S. ARMY ENGINEER DISTRICT
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KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

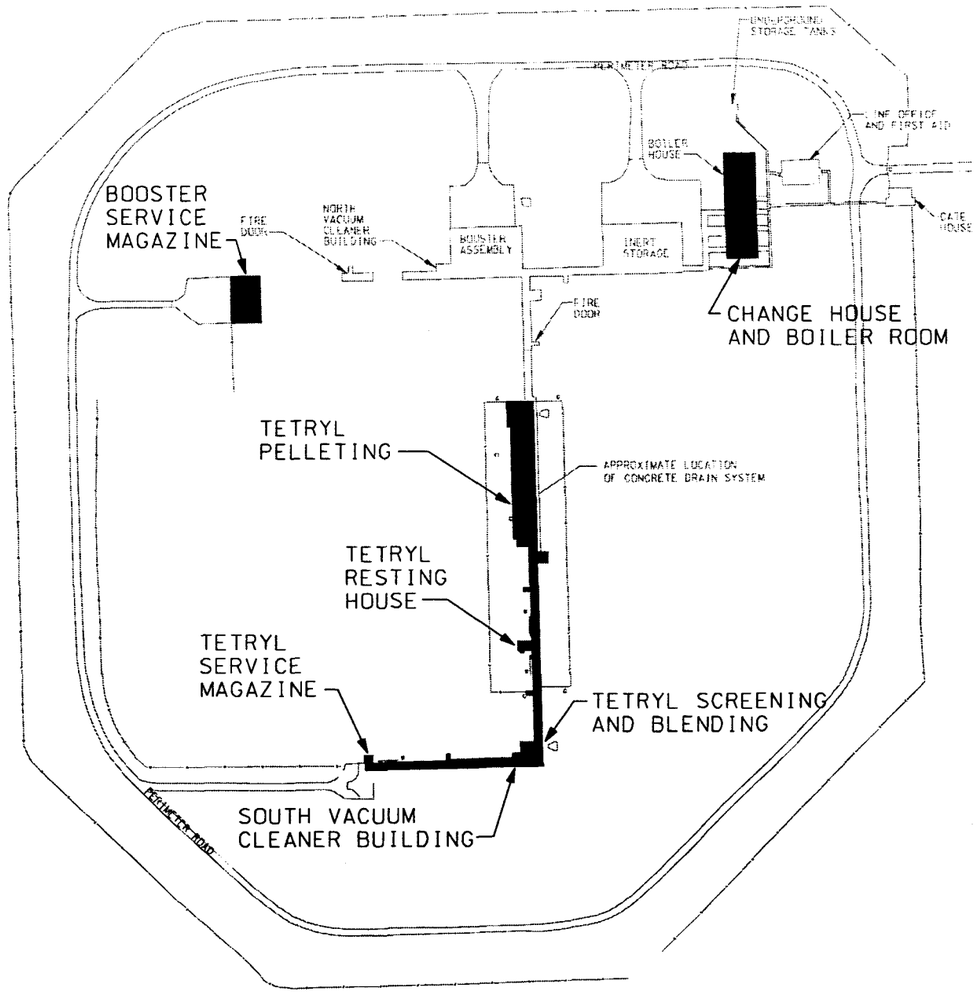
U.S. Army Corps of Engineers

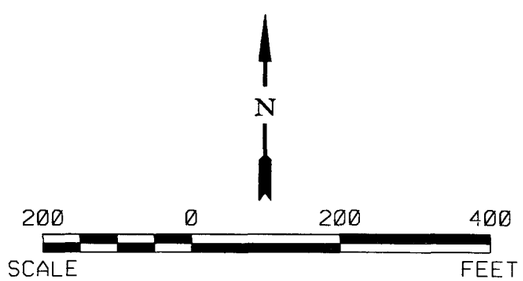
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

LOAD LINE 4
HAZARDOUS WASTE SURVEY LOCATIONS

Scale: 1 IN = 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5–119
Sheet number: 1

MCS FILE: OU3HW-4





LEGEND

BUILDINGS SURVEYED

NOTE:

THE FOLLOWING BUILDINGS WERE NOT SURVEYED BECAUSE THEY ARE PRESENTLY OCCUPIED BY CH INDUSTRIES: LINE OFFICE, INERT STORAGE, AND BOOSTER ASSEMBLY.

SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

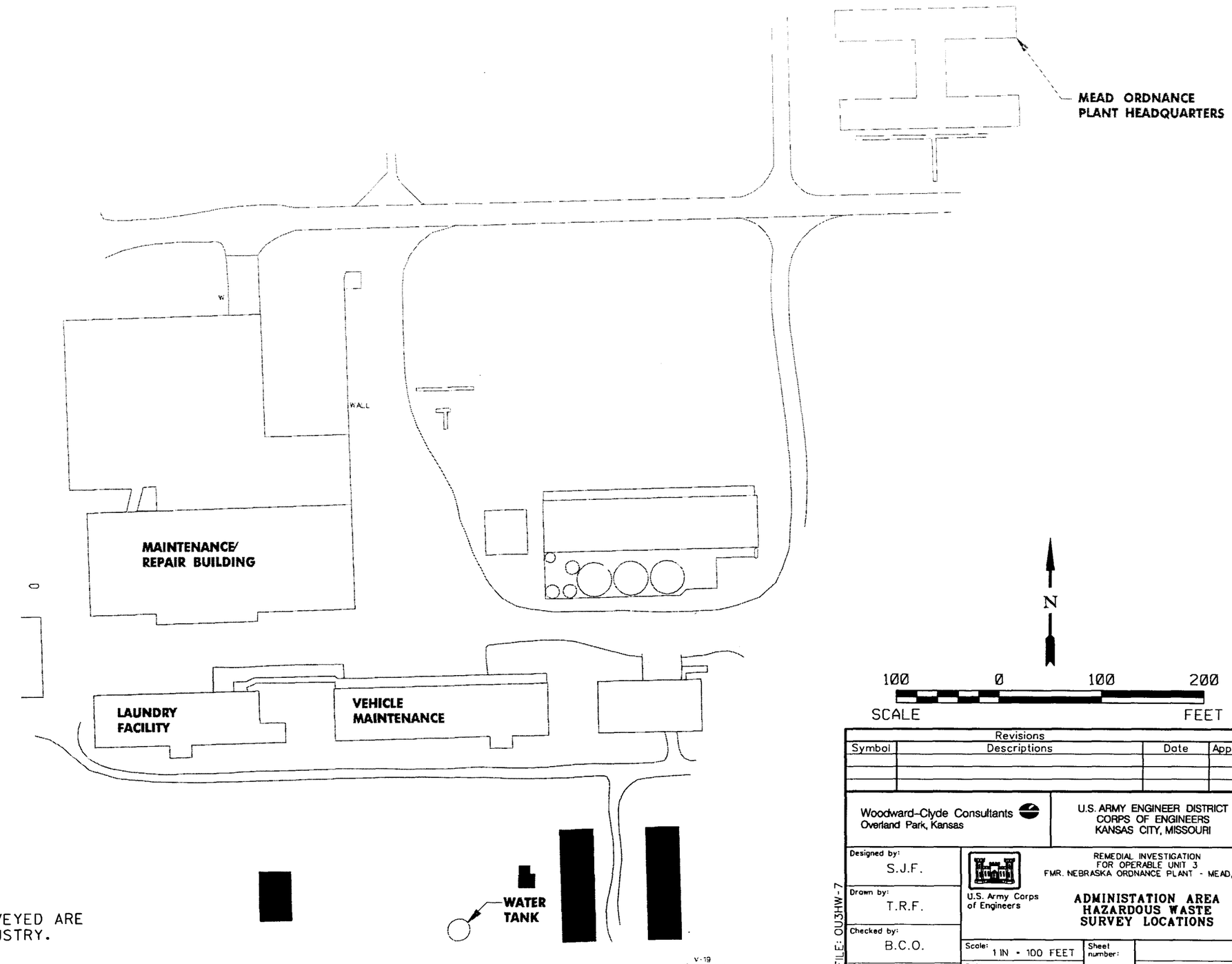
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

BOMB BOOSTER AREA HAZARDOUS WASTE SURVEY LOCATIONS

Scale: 1 IN - 200 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-120
Sheet number: 1

MCS FILE: OU3HW-5



LEGEND

BUILDINGS SURVEYED

NOTE:

ALL OF THE BUILDINGS NOT SURVEYED ARE CURRENTLY BEING USED FOR INDUSTRY.

SOURCE : DONOHUE, 1992B

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: T.R.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

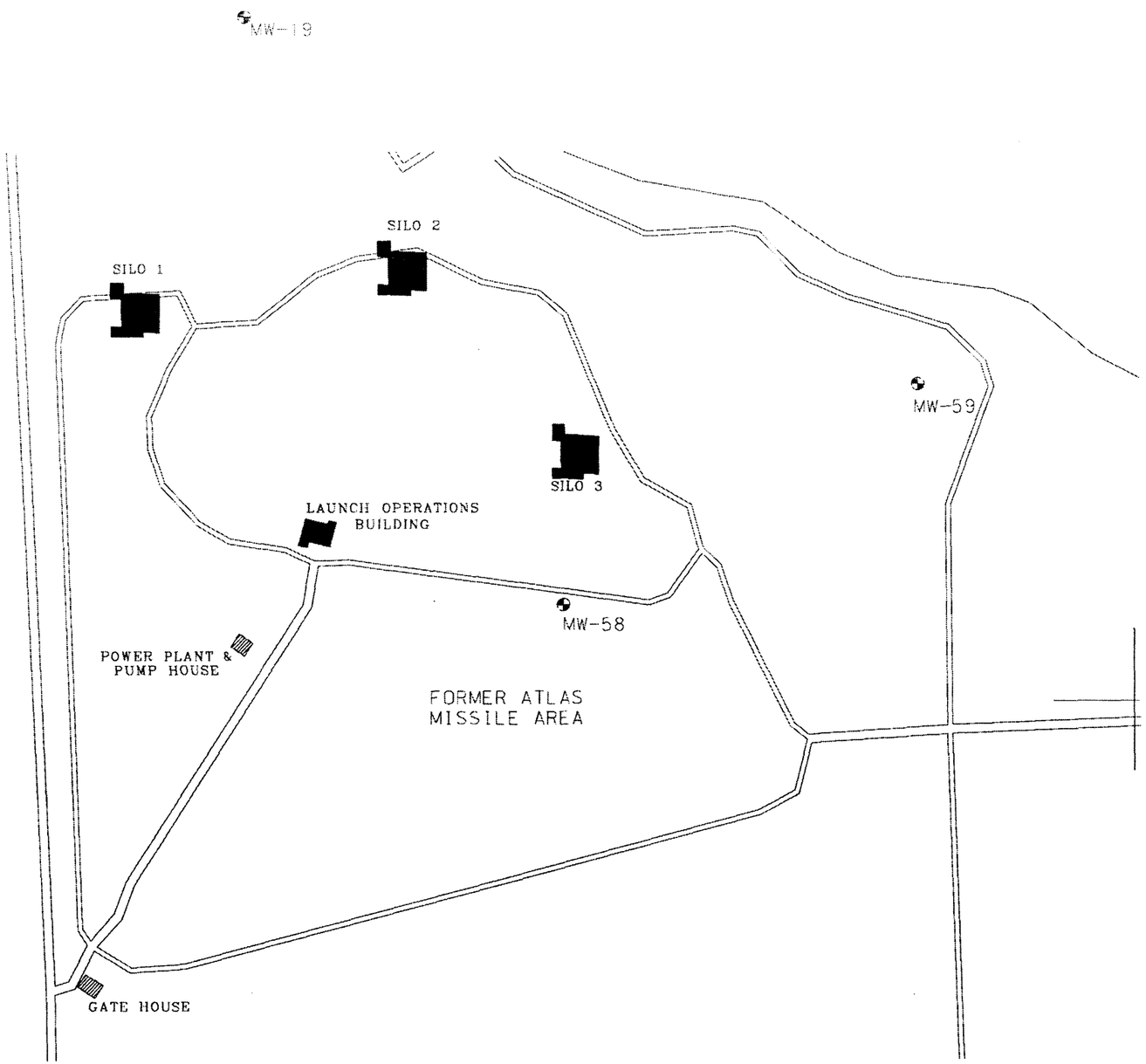
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

ADMINISTATION AREA HAZARDOUS WASTE SURVEY LOCATIONS

Scale: 1 IN = 100 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-121
Sheet number: 1

MCS FILE: OU3HW-7

B07NE003703-03741



SOURCE : WCC, 1994B

LEGEND

BUILDINGS SURVEYED

MW-58 EXISTING GROUNDWATER MONITORING WELL CLUSTER

NOTE:

THE GATE HOUSE WAS NOT SURVEYED BECAUSE IT IS CURRENTLY BEING USED BY THE NATIONAL GUARD AS A CHECK-IN POST FOR WEEKEND TRAINING.

N

500 0 500 1000

SCALE FEET

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.

Drawn by: P.C.S.

Checked by: B.C.O.

Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

FORMER ATLAS MISSILE AREA HAZARDOUS WASTE SURVEY LOCATIONS

Scale: 1 IN = 500 FT

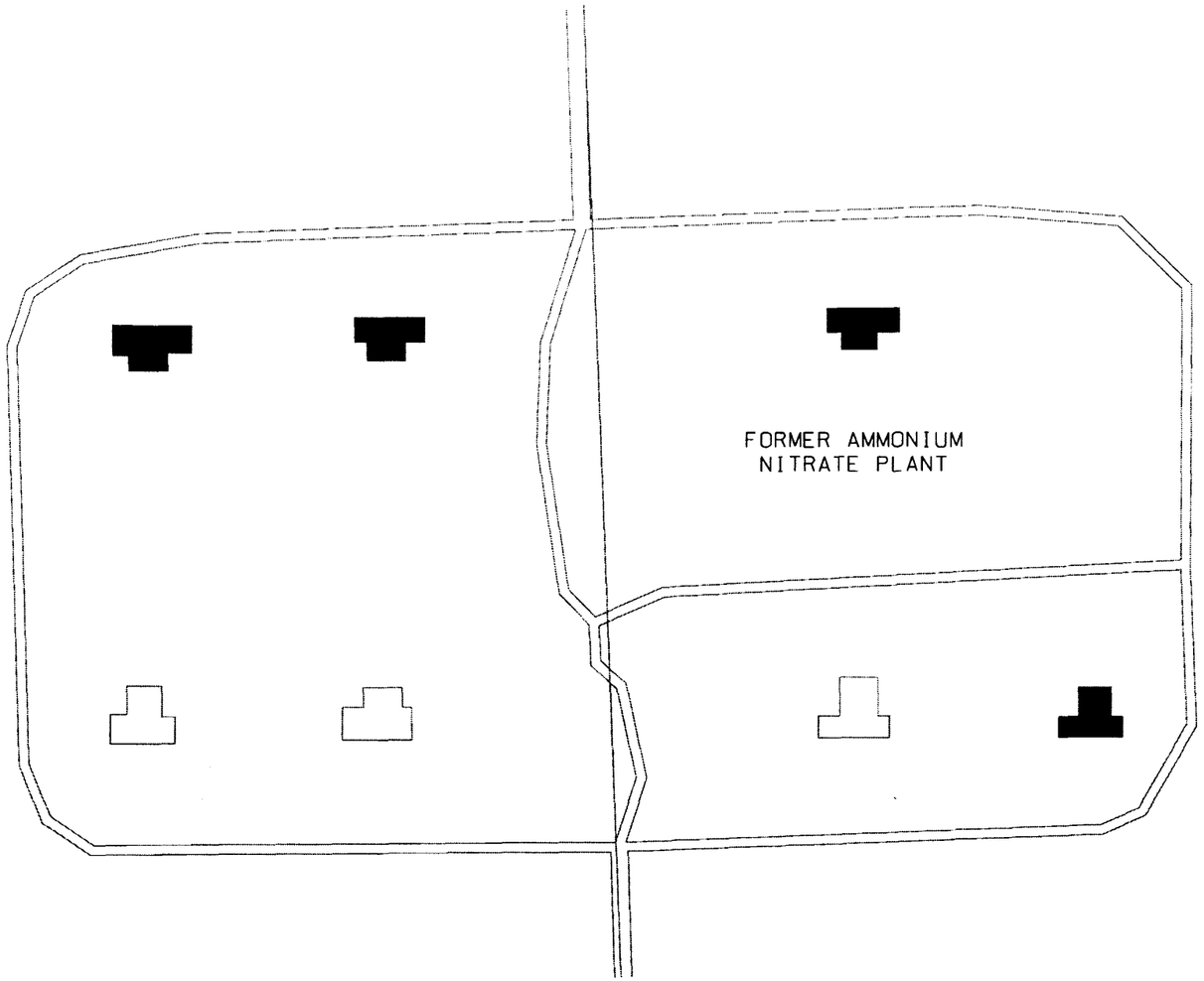
Date: FEBRUARY, 1996

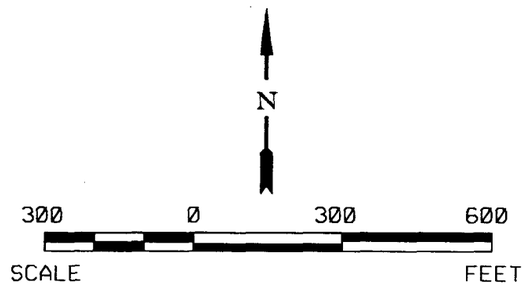
Dwg. No.: 5-122

Sheet number: 1

MCS FILE: OU3HW-9

B07NE003703-03742





LEGEND

BUILDINGS SURVEYED

NOTE:

ALL OF THE BUILDINGS NOT SURVEYED ARE CURRENTLY BEING USED BY PRIVATE INDIVIDUALS AND ACCESS COULD NOT BE OBTAINED.

SOURCE : WCC, 1994B

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: S.J.F.
Drawn by: P.C.S.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

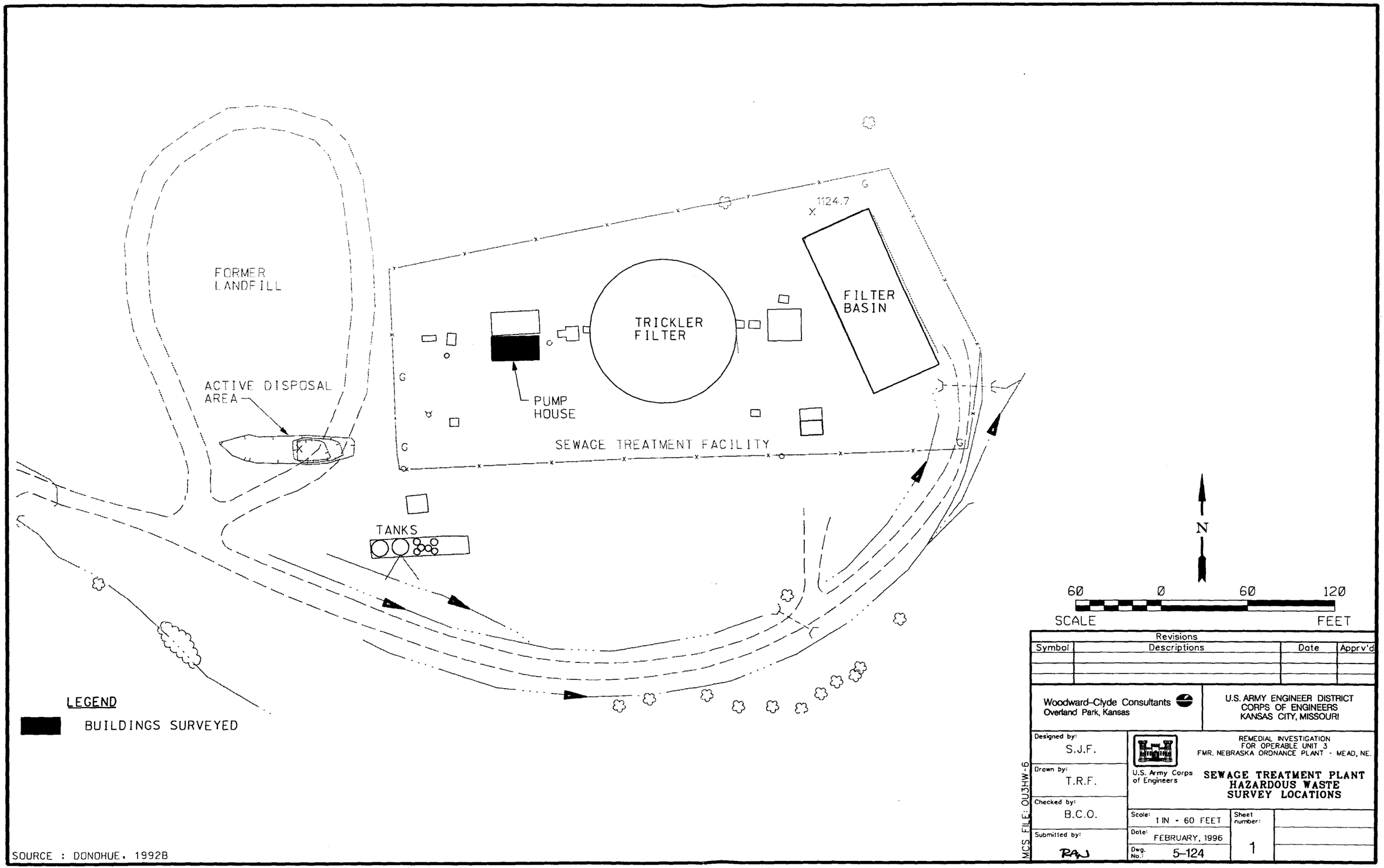
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NEBRASKA

AMMONIUM NITRATE PLANT HAZARDOUS WASTE SURVEY LOCATIONS

Scale: 1 IN - 300 FEET
Date: FEBRUARY, 1996
Dwg. No.: 5-123
Sheet number: 1

MCS FILE: OU3HW-8

B07NE003703-03743



SOURCE : DONOHUE, 1992B

VOLUME III
DRAFT FINAL REPORT

REMEDIAL INVESTIGATION PHASE I PRELIMINARY DATA PACKAGE OPERABLE UNIT NO. 3 FORMER NEBRASKA ORDNANCE PLANT MEAD, NEBRASKA CONTRACT NO. DACA41-92-C-0023

Prepared for
Department of the Army
U.S. Army Engineer District
Kansas City District
Corps of Engineers
Kansas city, Missouri

February 1996

Woodward-Clyde

Woodward-Clyde Consultants
10975 El Monte, Suite 100
Overland Park, Kansas 66211

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Project Number 4E11043A

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Appendix A

APPENDIX A
ANALYTICAL RESULTS ABOVE LABORATORY DETECTION LEVELS

The following notes apply to the Appendix Tables:

GRAS = Generally Recognized As Safe
R = Rejected
J = Estimated Value
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U = Nondetect Value

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Table A-1
Analytical Data for Background Soil
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	BKG-001			BKG-002			BKG-003			BKG-004			BKG-005			BKG-006			BKG-007			BKG-008			BKG-009			BKG-010		
		BKG-001-001 (1-2 ft)			BKG-002-001 (1-2 ft)			BKG-003-001 (1-2 ft)			BKG-004-001 (1-2 ft)			BKG-005-001 (1-2 ft)			BKG-006-001 (1-2 ft)			BKG-007-001 (1-2 ft)			BKG-008-001 (1-2 ft)			BKG-009-001 (1-2 ft)			BKG-010-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS	**(MG/KG)**																														
Aluminum	33852	19400			15200			19000			16200			17500			16300			9660			17200			18100			20700		
Antimony	31		R			R			R			R			R			R			R			R			R			R	
Arsenic	13.5	5.6			7.2			8.1			8.2			8.4			5.8			3.8			7			6.8			6.8		
Barium	440	212			192			208			244			225			219			236			207			244			215		
Beryllium	1.52	0.78	J		0.76	J		0.86	J		0.8	J		0.81	J		0.69	J		0.54	J		0.77	J		0.79	J		0.8	J	
Cadmium	0.4	0.22	J		0.19	J		0.15	J		0.23	J		0.27	J		0.19	J			U	(0.11)	0.16	J		0.36	J		0.17	J	
Calcium	GRAS	2930			3130			3260			3730			3470			2790			2560			2970			3220			2370		
Chromium	37	20.2			16.2			19.9			18.1			19.6			17.8			13.1			18.7			19.9			21.3		
Cobalt	17.2	8.6	J		8.4	J		9.9	J		9.2	J		9.3	J		7.2	J		8.9	J		8.6	J		7.1	J		8.8	J	
Copper	33.9	15.7			17.3			19.1			22.1			21.4			13.4			11.9			16.8			16.5			15.2		
Iron	GRAS	18300			18000			21000			20500			20400			15900			11300			18400			18100			19500		
Lead	400	13.4			14			14.9			14.7			15.5			14.4			14.5			13.9			15.7			13.7		
Magnesium	GRAS	3380			3150			3940			4310			4150			2710			2080			3160			3170			3440		
Manganese	1083	504			513			603			572			578			447			660			523			497			516		
Nickel	39.3	19.1			19.8			23.4			24.6			24.1			15.9			12			19.6			18.7			19.3		
Potassium	GRAS	3150	J		2460	J		2820	J		2110	J		2870	J		2780	J		1720	J		2900	J		3600	J		2980	J	
Selenium	1.33		U	(0.77)		U	(0.78)	1.2				U	(0.82)		U	(0.79)	0.89	J			U	(0.73)	1.2	J		1	J			U	(0.75)
Thallium	1.72		U	(0.81)	0.86	J			U	(0.83)		U	(0.86)		U	(0.83)		U	(0.82)		U	(0.77)		U	(0.84)		U	(0.83)		U	(0.8)
Vanadium	72.5	40.2			31.6			37.5			31.3			38.3			36.2			27.5			38.3			40.2			41.3		
Zinc	119.5	65.6			53.7			62			66.1			67.5			56.6			42.8			55.5			65.5			62.4		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-001						B1A-002						B1A-003						B1A-004					
		B1A-001-000 (0-0.5 ft)			B1A-001-001 (1-2 ft)			B1A-002-000 (0-0.5 ft)			B1A-002-001 (1-2 ft)			B1A-003-000 (0-0.5 ft)			B1A-003-001 (1-2 ft)			B1A-004-000 (0-0.5 ft)			B1A-004-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.2	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)	0.37	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.48	J			U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	0.26	J			U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)	0.41	J			U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	17600	J		20300	J		14900	J		20100	J		20400	J		15200	J		17800	J		14400	J	
Antimony	31	0.48	J			UJ	(0.45)		UJ	(0.48)		UJ	(4.4)		UJ	(0.46)		UJ	(0.43)		UJ	(0.48)		UJ	(0.46)
Arsenic	13.5	11			7.1	J		7.6	J		8.1	J		8.8	J		5.6	J		9	J		6.4	J	
Barium	440	244			250	J		236	J		247	J		264	J		241	J		262	J		199	J	
Beryllium	1.52	0.87			0.89			0.75			0.92			0.9			0.76			0.86			0.66		
Cadmium	0.4		U	(0.12)	0.29	J		***1***	J		***0.54***	J		0.27	J		0.25	J		0.21	J		***0.77***	J	
Calcium	GRAS	5010			4930			17700			5060			4000			3680			4350			4910		
Chromium	37	19.7	J		20.7	J		25.8	J		21	J		21.3	J		16.7	J		19.5	J		17.2	J	
Cobalt	17.2	8.1			10.5			10.8			10.3			11.4			9.2			12.2			9		
Copper	33.9	20.4	J		17.8	J		26.5	J		21.9	J		19.7	J		15	J		19.8	J		19.1	J	
Iron	GRAS	21200			20700	J		18800	J		21300	J		22100	J		16800	J		21300	J		18800	J	
Lead	400	19.4	J		35.5			291			22.8			18.6			14.6			15.5			36.6		
Magnesium	GRAS	4210			3460			4050			3760			4360			3030			4370			2570		
Manganese	1083	354	J		645	J		651	J		635	J		651	J		601	J		679	J		568	J	
Mercury	23		U	(0.12)		U	(0.11)		U	(0.11)		U	(0.11)		U	(0.11)		U	(0.12)		U	(0.11)		U	(0.12)
Nickel	39.3	20.7			21.7			25.9			23.6			23.9			18			24.4			23.8		
Potassium	GRAS	3340			3410			3890			3700			4160			3390			3570			2840		
Selenium	1.33	1.1	J		1.1	J			U	(1.1)		U	(1)		U	(1.1)	1	J		1.1	J			U	(1.1)
Sodium	GRAS		U	(315)		U	(322)		U	(344)		U	(316)		U	(328)		U	(307)		U	(342)		U	(328)
Thallium	1.72		U	(12.8)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.3)
Vanadium	72.5	34.9			42.1	J		35	J		41.9	J		44.9	J		33.8	J		42.5	J		34.3	J	
Zinc	119.5	65.7			68.9	J		***140***	J		76.8	J		62.7	J		56	J		60.9	J		85.2	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-005						B1A-006						B1A-007						B1A-008					
		B1A-005-000 (0-0.5 ft)			B1A-005-001 (1-2 ft)			B1A-006-000 (0-0.5 ft)			B1A-006-001 (1-2 ft)			B1A-007-000 (0-0.5 ft)			B1A-007-001 (1-2 ft)			B1A-008-000 (0-0.5 ft)			B1A-008-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)	0.45	J			U	(0.5)		U	(0.5)		U	(0.5)	***6.4***				U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.33	J			U	(0.5)	***58***				U	(0.5)	***420***			0.65		
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)	0.26	J			U	(0.5)	1.1			0.71			9.9			5		
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	0.17	J			U	(1)	1.1				U	(1)	7.1			1		
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(1.2)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.028	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	17100	J		15200	J		13000			18800			16000	J		20200	J		14100			14900		
Antimony	31		UJ	(0.49)	0.52	J			UJ	(0.45)		UJ	(0.47)		UJ	(0.43)		UJ	(0.46)	0.86	J			UJ	(0.46)
Arsenic	13.5	9	J		7.6	J		6.3	J		9			6.5	J		9.6			5.9	J		8.9		
Barium	440	286	J		232			185			227			173			274			151			207		
Beryllium	1.52	0.83			0.77			0.61			0.85			0.66			0.9			0.56			0.8		
Cadmium	0.4	0.3	J		0.37	J		***2.1***			***0.92***	J		***0.59***	J		0.29	J		***2.2***			0.23	J	
Calcium	GRAS	5850			4430			4890	J		3910	J		6460			4780			37000	J		4870	J	
Chromium	37	20.4	J		17	J		17.3			19.7			18.3			20.2			18.5			16.5		
Cobalt	17.2	12.5			10.2			8.2			10.3			8			11.3			6.3			10.4		
Copper	33.9	22	J		17.8	J		31.3			21.2			20.6	J		20.6	J		***75.3***			21.5		
Iron	GRAS	21300	J		18900	J		15600			20500			16000			22200			13200			19900		
Lead	400	36.2			25.7			394	J		24.8	J		71.4	J		16.7	J		210	J		15	J	
Magnesium	GRAS	5350			3320			2630			3370			2930			3900			2780			3630		
Manganese	1083	763	J		609	J		496	J		594	J		491	J		692	J		375	J		614	J	
Mercury	23		U	(0.11)		U	(0.1)		U	(0.13)		U	(0.12)	0.15	J			U	(0.13)	0.29				U	(0.1)
Nickel	39.3	28.3			21.1			19.8			22.7			18.3			26.4			25			25.4		
Potassium	GRAS	3630			3150			2620			3120			3220			3320			2660			2740		
Selenium	1.33		U	(1.1)		U	(1.1)	1.2	J		***1.7***	J			U	(1)	***1.5***	J		1	J		***1.4***	J	
Sodium	GRAS		U	(351)		U	(326)		U	(317)		U	(336)		U	(306)		U	(325)		U	(303)		U	(326)
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.4)		U	(12.4)		U	(13.2)		U	(1.2)		U	(1.3)
Vanadium	72.5	43.6	J		35.7	J		28.1			39.9			36.2			37.2			24.9			25.1		
Zinc	119.5	68.2	J		67.6	J		***495***			105			83.9			72.5			***277***			56.9		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-009						B1A-010						B1A-011						B1A-012					
		B1A-009-000 (0-0.5 ft)			B1A-009-001 (1-2 ft)			B1A-010-000 (0-0.5 ft)			B1A-010-001 (1-2 ft)			B1A-011-000 (0-0.5 ft)			B1A-011-001 (1-2 ft)			B1A-012-000 (0-0.5 ft)			B1A-012-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	***1.9***				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	***2.3***				U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	***43***			2.4			2.9	J			U	(0.5)	0.21	J			U	(0.5)	***860***			3.2		
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.6				U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	***1***				U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	4.1			3.9			0.25	J			U	(0.5)		U	(0.5)		U	(0.5)	12	J		0.73		
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	3.4			2				U	(1)		U	(1)		U	(1)		U	(1)	14	J		0.56	J	
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.42	J			U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	20500	J		20000	J		15100			18100			18700			***47500***			18000			13100		
Antimony	31	0.52	J		0.59	J			UJ	(0.45)		UJ	(0.45)		R			R		0.51	J			R	
Arsenic	13.5	7.4	J		10.5			6.6	J		9.4			9.3			***17.5***			5.4	J		6.5	J	
Barium	440	169			271			230			214			206			***462***			201			188		
Beryllium	1.52	0.84			0.94			0.65			0.87			0.83			***1.9***			0.54			0.68		
Cadmium	0.4	***0.83***	J		0.24	J		***0.97***	J		0.31	J		0.18	J		***0.55***	J		***1.7***			0.31	J	
Calcium	GRAS	7160			4920			22100	J		4480	J		4030			8830			23200			3840		
Chromium	37	24.5			21.1			22.3			18.9			19			***47***			26.2			15		
Cobalt	17.2	9.7			13.6			8.3			10.4			9.6			***20.8***			7.3			8.8		
Copper	33.9	24.8	J		22.1	J		***39.7***			20.1			16.4	J		***41.8***	J		***49.1***	J		18.3	J	
Iron	GRAS	20500			23500			16700			21000			20100			46900			14900			16500		
Lead	400	42.8	J		17.7	J		214	J		22	J		24.3	J		29.9	J		347			23.4		
Magnesium	GRAS	3870			4530			4500			3610			3740			8950			3710			2790		
Manganese	1083	529	J		827	J		504	J		607	J		545	J		1010	J		443			517		
Mercury	23	0.93				U	(0.13)		U	(0.12)		U	(0.11)		U	(0.13)		U	(0.24)	0.28				U	(0.11)
Nickel	39.3	22.3			28.3			19.9			22.7			21.9			***51.7***			21			19.6		
Potassium	GRAS	3950			3510			3940			3210			4090			8210			3680			2640		
Selenium	1.33		U	(1.1)		U	(1.1)	1.3	J		***2.2***	J		***2.1***	J		***3.1***	J			U	(1.1)	***1.7***	J	
Sodium	GRAS		U	(32.4)		U	(330)		U	(318)		U	(320)	967	J		2690	J		1260			779		
Thallium	1.72		U	(13.2)		U	(13.4)		U	(1.3)		U	(1.3)		U	(13.6)		U	(26.4)		U	(1.4)		U	(1.3)
Vanadium	72.5	43.4			41.1			35			34.4			38.7			***102***			23.7			30.4		
Zinc	119.5	89			63.4			***227***			66			56.9	J		117	J		***406***			66.8		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-013						B1A-014						B1A-015						B1A-016					
		B1A-013-000 (0-0.5 ft)			B1A-013-001 (1-2 ft)			B1A-014-000 (0-0.5 ft)			B1A-014-001 (1-2 ft)			B1A-015-000 (0-0.5 ft)			B1A-015-001 (1-2 ft)			B1A-016-000 (0-0.5 ft)			B1A-016-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)	0.12	J			U	(0.5)		U	(0.5)		U	(0.5)	0.3	J	
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.063	J			U	(0.5)	0.34	J		0.39	J			U	(0.5)	***32***		
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.29	J	
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.28	J			U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.25	J		0.16	J		0.42	J			U	(0.5)		U	(0.5)	0.2	J		0.18	J		15		
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.5	J			U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.34	J			U	(1)	0.23	J			U	(1)	0.27	J		0.28	J		0.34	J		10		
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.11	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	15800			14600			19500			18700			21200			19900			13700			14800		
Antimony	31	0.52	J			R			R			R		0.88	J			R			R			R	
Arsenic	13.5	8.3			7.8	J		8.5	J		10.2			9.1			8.5	J		7.4	J		6	J	
Barium	440	198			222			229			221			282			250			248			197		
Beryllium	1.52	0.77			0.77			0.81			0.9			0.88			0.85			0.74			0.69		
Cadmium	0.4	***0.48***	J		0.35	J		0.35	J		0.21	J		***0.77***	J		***0.57***	J		***0.88***	J		***0.92***	J	
Calcium	GRAS	4130			4190			3470			4110			7270			4390			7220			6360		
Chromium	37	17.7			16.3			20	J		18.8			25			21.6			16.3	J		16.1		
Cobalt	17.2	10.7			9.7			8.8			10.8			11			10.2			8.7			7.9		
Copper	33.9	20.4	J		20.5	J		18.5	J		22.7	J		22.9	J		20.3	J		19.7	J		16	J	
Iron	GRAS	18700			18400			19500			22500			21500			20400			17200			16100		
Lead	400	39.7	J		17.3	J		27.9	J		15.7	J		55.2	J		44.4	J		153	J		20.6	J	
Magnesium	GRAS	3230			3500			3710			4110			4470			3770			3200			3100		
Manganese	1083	638	J		542	J		496	J		628	J		673	J		587	J		565	J		404	J	
Mercury	23		U	(0.1)		U	(0.1)		U	(0.12)		U	(0.12)		U	(0.1)		U	(0.13)		U	(0.13)		U	(0.12)
Nickel	39.3	22.6			22.5			21.8			27.2			25			22.8			19.1			17.8		
Potassium	GRAS	3380			2870			4680			3680			4570			3840			3350			3350		
Selenium	1.33	1.2	J			U	(1.1)	1.2	J		***1.6***	J		1.1	J			U	(1.1)		U	(1.1)		U	(1.1)
Sodium	GRAS	2490	J		814	J		1420	J		916	J		1430	J		856	J		1260	J		1090	J	
Thallium	1.72		U	(12.8)		U	(13.7)		U	(13.5)		U	(14.1)		U	(13.1)		U	(13.9)		U	(14)		U	(13.3)
Vanadium	72.5	37.4			32.1			43.4			38.9			49.9			45			34.7			34.1		
Zinc	119.5	72.6	J		57.9	J		75.7	J		58.7	J		94.6	J		82.1	J		96.5	J		51.4	J	

Note: 1) NA=screening level is not available. 2) R=result. Q=qualifier. QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-017						B1A-018						B1A-019						B1A-020					
		B1A-017-000 (0-0.5 ft)			B1A-017-001 (1-2 ft)			B1A-018-000 (0-0.5 ft)			B1A-018-001 (1-2 ft)			B1A-019-000 (0-0.5 ft)			B1A-019-001 (1-2 ft)			B1A-020-000 (0-0.5 ft)			B1A-020-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)	0.17	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.24	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.36	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.17	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)	0.28	J			U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)	0.31	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.22	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.068	J	
METALS (MG/KG)																									
Aluminum	33852	11500			17700			16600			17600			11800			15600			23200	J		14300	J	
Antimony	31		R			R			R			R			R			R				UJ	(0.48)		UJ	(0.48)
Arsenic	13.5	7.1	J		8.6	J		6.7	J		8.7	J		7.2	J		8	J		10.4			8.2	J	
Barium	440	177			266			239			232			169			199			258			210		
Beryllium	1.52	0.63			0.84			0.72			0.8			0.58			0.75			0.99			0.77		
Cadmium	0.4	0.23	J		0.21	J		***1***	J		***0.41***	J		0.4	J		***0.51***	J		0.23	J		0.16	J	
Calcium	GRAS	4100			3950			7960			3970			4540			3420			4470	J		3700	J	
Chromium	37	14.4	J		19.2			19.7			18.8			13.8			18.4			25.7	J		16.6	J	
Cobalt	17.2	8.3			10.7			8.9			9.8			7.2			10.5			11.6			9.8		
Copper	33.9	16.7	J		20.3	J		22.5	J		19.5	J		15	J		18.9	J		23.8			20.2		
Iron	GRAS	15700			20600			17600			19900			14000			18000			24500			19200		
Lead	400	15.7	J		14	J		300	J		14.2	J		67.4	J		15.8	J		20.6	J		14.7		
Magnesium	GRAS	3220			3950			3790			3670			2740			3230			5210			3840		
Manganese	1083	258	J		523	J		561	J		565	J		437	J		757	J		665			582		
Mercury	23		U	(0.11)		U	(0.12)		U	(0.14)		U	(0.11)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)
Nickel	39.3	18.1			23.1			20.4			23.2			16.4			22.2			29.7			23.3		
Potassium	GRAS	2760			3280			4250			3660			3530			3720			4500			2640		
Selenium	1.33		U	(1.1)		U	(1.1)		U	(1.2)	***1.8***	J			U	(1.1)	***1.6***	J			U	(1.1)		U	(1.1)
Sodium	GRAS	187	J		742	J		1760	J		1230	J		412	J		350	J			U	(341)		U	(341)
Thallium	1.72		U	(13.4)		U	(14.3)		U	(14.9)		U	(13.8)		U	(14.1)		U	(13.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	30.3			37			43			43.1			28.4			40.2			50.5			31.1		
Zinc	119.5	46.8	J		54.4	J		***235***	J		54	J		79.5	J		50.3	J		67.6	J		54.6	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-021						B1A-022						B1A-023											
		B1A-021-000 (0-0.5 ft)			B1A-021-001 (1-2 ft)			B1A-022-000 (0-0.5 ft)			B1A-022-001 (1-2 ft)			B1A-023-000 (0-0.5 ft)			B1A-023-R00 (0-0.5 ft)			B1A-023-001 (1-2 ft)			B1A-023-R01 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)	***27***			***5.3***				U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.18	J			U	(0.5)	***13000***			***1100***				UJ	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)	***5***			0.89				U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)	10			4.7				U	(0.5)		U	(0.0005)		U	(0.5)	0.00014		
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	7.1			2.9				U	(1)		U	(0.001)		U	(1)	0.000088		
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.5)		U	(0.00075)		UJ	(0.5)		U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		R			U	(0.00075)		R			U	(0.00075)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(0.002)		U	(2)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.11	J		0.00029			0.31	J		0.00032		
METALS (MG/KG)																									
Aluminum	33852	18300	J		19200	J		16200				R		10800				NA		6820				NA	
Antimony	31		UJ	(0.48)		UJ	(0.45)	3.2	J			U	(0.46)		R			NA			R			NA	
Arsenic	13.5	7.3	J		7.6	J		6.3	J		6.5	J		8.2	J			NA		3.7	J			NA	
Barium	440	257			283			263	J		231			211				NA		123				NA	
Beryllium	1.52	0.83			0.87			0.75			0.71			0.71				NA		0.38				NA	
Cadmium	0.4	0.22	J		0.24	J		***0.88***	J		0.29	J		0.23	J			NA			UJ	(0.12)		NA	
Calcium	GRAS	3910	J		4560	J		3810			3070			3590				NA		1750				NA	
Chromium	37	20.3	J		22.4	J		22.6			17.8			12.5				NA		7.9				NA	
Cobalt	17.2	10.2			10.9			9.8	J		9.4			9.8				NA		5.4				NA	
Copper	33.9	18.4			19.5			***73***			29			17.8				NA		8.7				NA	
Iron	GRAS	19500			20500			17400			17300			15200				NA		8820				NA	
Lead	400	47.3			16.5			172			23			21.2	J			NA		7.7	J			NA	
Magnesium	GRAS	3770			4300			2820			2940			2610				NA		1620				NA	
Manganese	1083	605			639			537	J		284			531	J			NA		317	J			NA	
Mercury	23		U	(0.13)		U	(0.12)		U	(0.12)		U	(0.11)		U	(0.12)		NA			U	(0.12)		NA	
Nickel	39.3	21.2			22.6			39.3			18.5			19.9				NA		10.3				NA	
Potassium	GRAS	4490			3770			4020			3530			2780				NA		1670				NA	
Selenium	1.33		U	(1.1)		U	(1)		U	(1.1)	***2.4***	J			U	(1.1)		NA			U	(1)		NA	
Sodium	GRAS		U	(340)		U	(320)		U	(344)		U	(330)	74.1	J			NA		118	J			NA	
Thallium	1.72		U	(1.4)		U	(1.3)	-	U	(1.4)		U	(1.3)		U	(1.4)		NA			U	(1.3)		NA	
Vanadium	72.5	41.3			46.2			34.1			32.7			26.3				NA		16.4				NA	
Zinc	119.5	81	J		64.4	J		***187***			68.4			48.9				NA		26.8				NA	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-024												B1A-025						B1A-026					
		B1A-024-000 (0-0.5 ft)			B1A-024-R00 (0-0.5 ft)			B1A-024-001 (1-2 ft)			B1A-024-R01 (1-2 ft)			B1A-025-000 (0-0.5 ft)			B1A-025-001 (1-2 ft)			B1A-026-000 (0-0.5 ft)			B1A-026-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)	0.11	J		0.35	J		0.47	J			U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.68				U	(0.0005)	0.13	J			U	(0.0005)		U	(0.5)		U	(0.5)	0.29	J			U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		UJ	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.0005)	0.18	J			U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)	0.24	J		0.38	J			U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)	0.0003				U	(1)		U	(0.001)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.00075)	3				U	(0.00075)		U	(0.75)	0.33	J			U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			U	(0.00075)		R			U	(0.00075)		U	(0.75)	0.21	J		0.38	J			U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(0.002)		U	(2)		U	(0.002)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.00026				U	(0.5)	0.00034				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	6450				NA		13000				NA		14700			16000			13400			15700		
Antimony	31		R			NA			R			NA			R			UJ	(0.46)		R			R	
Arsenic	13.5	4.8	J			NA		10.1				NA		9.1			7.4	J		5.9	J		5.7	J	
Barium	440	152				NA		249				NA		243			299			218			219		
Beryllium	1.52	0.43				NA		0.79				NA		0.69			0.75			0.68			0.71		
Cadmium	0.4	***2.9***	J			NA		0.3	J			NA		***0.41***	J		***0.47***	J		***1***	J		0.36	J	
Calcium	GRAS	3480				NA		4450				NA		4020			4320			4310			3000		
Chromium	37	9				NA		14.8				NA		17.2	J		20.6			16			17.3		
Cobalt	17.2	6.3				NA		11.6				NA		10.1			10.4			9.7			8.3		
Copper	33.9	14.9				NA		23.7				NA		19.4			18.6	J		20.1			16.2		
Iron	GRAS	12000				NA		19100				NA		19000			18500			15700			16100		
Lead	400	165	J			NA		15.5	J			NA		15.1			14.7	J		93.4			14.3		
Magnesium	GRAS	1770				NA		3920				NA		3980			4220			2640			2750		
Manganese	1083	416	J			NA		768	J			NA		617			716			516			591		
Mercury	23		U	(0.1)		NA		0.18	J			NA			U	(0.13)		U	(0.13)		U	(0.12)		U	(0.1)
Nickel	39.3	13.6				NA		28.7				NA		25.1			22.7			21.4			17.4		
Potassium	GRAS	1750				NA		2190				NA		3550			3470			3260			3400		
Selenium	1.33	***1.6***	J			NA			U	(1.1)		NA			U	(1.1)	1.1	J			U	(1.1)	***1.8***	J	
Sodium	GRAS	108	J			NA		192	J			NA			U	(324)	208	J			U	(334)		U	(342)
Thallium	1.72		U	(1.3)		NA			U	(1.4)		NA			U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)
Vanadium	72.5	17.6				NA		23.6				NA		33.3			38			29.5			33.3		
Zinc	119.5	119				NA		54.7				NA		57.6			62.5			***162***			48.8		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-027						B1A-028						B1A-036						B1A-037					
		B1A-027-000 (0-0.5 ft)			B1A-027-001 (1-2 ft)			B1A-028-000 (0-0.5 ft)			B1A-028-001 (1-2 ft)			B1A-036-000 (0-0.5 ft)			B1A-036-001 (1-2 ft)			B1A-037-000 (0-0.5 ft)			B1A-037-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	***24***				U	(0.5)	***21***			0.2	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	***6.8***				U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.29	J			U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	3			0.29	J		0.7			0.75		
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.23	J			U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)	2.7			0.22	J		1			0.34	J	
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.36	J			U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	14300			15200			21100	J		19600	J		19000	J		19300	J		23600	J		23100	J	
Antimony	31		R			R			UJ	(0.43)		UJ	(0.42)	0.84	J		0.52	J			UJ	(0.48)		UJ	(0.45)
Arsenic	13.5	7.4	J		9.5			9.2			9.3			6.8	J		8.8	J		8.8	J		9.9		
Barium	440	265			289			221			336			227			223			234			255		
Beryllium	1.52	0.7			0.75			0.9			0.86			0.75			0.89			0.91			0.94		
Cadmium	0.4	0.39	J		0.38	J		0.27	J		0.33	J		***1.9***			0.2	J		***0.59***	J		***0.52***	J	
Calcium	GRAS	4340			4080			3770			4200			35000			4370			5340			4790		
Chromium	37	16.1			17.6			22.8	J		23			25.4			19.6			24.4			25.1		
Cobalt	17.2	9.2			11			10.3			11.5			9.2			10.4			10.9			10.9		
Copper	33.9	19.4			21.4			20	J		19.6	J		33.5	J		21	J		25.3	J		21.7	J	
Iron	GRAS	17800			20300			21700			21300			18100			21500			21900			23300		
Lead	400	91			30			17.3	J		14.5	J		319	J		14.7	J		116	J		26	J	
Magnesium	GRAS	3680			3910			4250			4630			3850			4150			4340			4330		
Manganese	1083	527			***1110***			578	J		675	J		574	J		598	J		685	J		583	J	
Mercury	23		U	(0.12)	0.13	J			U	(0.11)		U	(0.11)		U	(0.11)		U	(0.13)		U	(0.13)		U	(0.11)
Nickel	39.3	22			27.2			24.6			25			31.4			25.9			25.3			26.9		
Potassium	GRAS	4030			3450			4770			4410			4870			3620			4250			4010		
Selenium	1.33		U	(1.1)		U	(1.1)		U	(0.99)		U	(0.97)	***2.3***	J		***1.6***	J			U	(1.1)		U	(1)
Sodium	GRAS		U	(330)		U	(337)		U	(304)		U	(29.7)		U	(343)		U	(342)		U	(342)		U	(322)
Thallium	1.72		U	(1.3)		U	(1.4)		U	(1.2)		U	(12.1)		U	(14)		U	(14)	***1.9***	J			U	(13.1)
Vanadium	72.5	29			34			47.6			51.7			42.2			33.6			51.2			51.7		
Zinc	119.5	66.4			57.5			75			59.1			***221***			69.2			107			110		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-038						B1A-039						B1A-040						B1A-043					
		B1A-038-000 (0-0.5 ft)			B1A-038-001 (1-2 ft)			B1A-039-000 (0-0.5 ft)			B1A-039-001 (1-2 ft)			B1A-040-000 (0-0.5 ft)			B1A-040-001 (1-2 ft)			B1A-043-000 (0-0.5 ft)			B1A-043-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	***3***				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.23	J	
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	***180***			0.72			1.2			0.078	J		2.1			0.083	J		0.75				U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	5.8			1.2			0.35	J		0.32	J		0.47	J			U	(0.5)	0.48	J		0.25	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	3.5			0.57	J			U	(1)		U	(1)	0.43	J			U	(1)	0.4	J			U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.28	J			U	(0.5)		U	(0.5)	0.081	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	23000	J		21100	J		21400	J		23200	J		16300			19600			12100			20700		
Antimony	31	0.86	J			UJ	(0.48)	0.78	J			UJ	(0.44)		R			R			R			R	
Arsenic	13.5	8.6			8.7	J		8.6	J		9.4			7.8	J		8.3	J		6.1	J		9.7		
Barium	440	249			237			216			231			220			245			231			251		
Beryllium	1.52	0.88			0.9			0.87			0.98			0.74			0.85			0.6			0.92		
Cadmium	0.4	***0.77***	J		0.4	J		***1.1***	J		0.2	J		***0.91***	J		0.39	J		***2.5***			0.34	J	
Calcium	GRAS	9280			4690			12200			4470			17900	J		8330			10900			4260		
Chromium	37	28.1			24.5			23.2			23			***40.8***			20.1			27.4			22.4		
Cobalt	17.2	10.7			10.8			10.2			10.7			9			10.2			7.9			10.9		
Copper	33.9	29	J		20.6	J		24.8	J		20.5	J		28.9	J		22.4	J		22.9	J		22.3	J	
Iron	GRAS	21700			21800			21100			23500			17800			20600			14900			22200		
Lead	400	93.7	J		39.7	J		79.6	J		16	J		176	J		15	J		265			18.2		
Magnesium	GRAS	4660			4110			4330			4330			4160			4100	J		3350			4430		
Manganese	1083	619	J		633	J		594	J		605	J		558	J		604			474			611		
Mercury	23		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.11)		U	(0.12)		U	(0.13)		U	(0.1)		U	(0.11)
Nickel	39.3	25.8			25.2			23.5			25.3			33.3			23.4			22.6			25.2		
Potassium	GRAS	5130			4350			5210			4280			4560			4200			3320			3790		
Selenium	1.33		U	(1)	1.3	J			U	(1.1)	***1.4***	J			U	(1.1)		U	(1.1)		U	(1.1)		U	(1.1)
Sodium	GRAS		U	(320)		U	(340)		U	(35.2)		U	(30.9)	1330	J		1140	J		1710			538		
Thallium	1.72		U	(13)		U	(13.8)		U	(14.4)		U	(12.6)		U	(13.8)		U	(14)		U	(1.4)		U	(1.3)
Vanadium	72.5	53			42.8			49.3			47			36.8			41.8			29.1			48.2		
Zinc	119.5	***125***			69.6			***125***			68.7			109	J		55	J		***212***			62.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-044						B1A-045						B1A-046						B1A-047					
		B1A-044-000 (0-0.5 ft)			B1A-044-001 (1-2 ft)			B1A-045-000 (0-0.5 ft)			B1A-045-001 (1-2 ft)			B1A-046-000 (0-0.5 ft)			B1A-046-001 (1-2 ft)			B1A-047-000 (0-0.5 ft)			B1A-047-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.24	J		0.16	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.21	J			U	(0.5)	0.093	J			U	(0.5)	0.78				U	(0.5)	0.16	J			U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.48	J			U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9	0.28	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		UJ	(0.5)		UJ	(0.5)	0.3	J			U	(0.5)	0.14	J			UJ	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.48	J			U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.48	J			U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.16	J		0.21	J			U	(0.75)		U	(0.75)	0.66	J			U	(0.75)		U	(0.75)	0.63	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	0.083	J		0.064	J		0.095	J		0.073	J		0.084	J			U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	17200			17000			15500			21700			11100			21300			16800			13700		
Antimony	31		R			R		0.55	J			UJ	(0.48)	0.47	J			UJ	(0.46)		UJ	(0.5)		UJ	(0.48)
Arsenic	13.5	8.2	J		9.9			6.6	J		9.5			6.6	J		10.6			8.3	J		9.6		
Barium	440	223			215			291	J		237	J		298	J		261	J		***446***	J		279	J	
Beryllium	1.52	0.83			0.83			0.7			0.94	J		0.6			0.97			0.78			0.77		
Cadmium	0.4	0.17	J		0.22	J		***1.1***	J			UJ	(0.13)	***1.3***	J			UJ	(0.12)	***17.2***	J		0.2	J	
Calcium	GRAS	7120			3870			35600	J		4540	J		31000	J		4580	J		9310	J		4850	J	
Chromium	37	17.8			18.1			24.6	J		21.8	J		24.1	J		22.3	J		33.2	J		15.8	J	
Cobalt	17.2	10.9			11.6			10.9	J		11.5	J		16.8	J		13.3	J		11.5	J		10.7	J	
Copper	33.9	18	J		21.6	J		26.2	J		21.7	J		27.9	J		24.9	J		***44.6***	J		22.3	J	
Iron	GRAS	20300			20900			18900			23500			15400			24300			20400			20500		
Lead	400	17.6			15.2			216	J		18.9	J		240	J		17.6	J		274	J		15.4	J	
Magnesium	GRAS	3610			4190			4330			4430			4140			4930			4100			3950		
Manganese	1083	656			724			624	J		639	J		***1090***	J		806	J		573	J		620	J	
Mercury	23		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.11)		U	(0.1)		U	(0.13)		U	(0.13)		U	(0.13)
Nickel	39.3	22			24.3			24.3	J		25.7	J		28.7	J		28.9	J		38.9	J		26.4	J	
Potassium	GRAS	3180			2900			4290	J		3840	J		4040	J		3990	J		4220	J		2840	J	
Selenium	1.33		U	(1.1)		U	(1.1)	1.3	J		***1.5***	J		***1.7***	J		1.3	J			U	(1.2)		U	(1.1)
Sodium	GRAS	2520			727				U	(349)		U	(341)		U	(332)		U	(326)		U	(491)		U	(341)
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.5)		U	(1.4)
Vanadium	72.5	36.8			38.1			35			44.9			30.4			43.7			38.6			28.4		
Zinc	119.5	57			56.4			***192***	J		65.5	J		***170***	J		67.1	J		***1890***	J		63.2	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-048						B1A-049						B1A-056						B1A-057					
		B1A-048-000 (0-0.5 ft)			B1A-048-001 (1-2 ft)			B1A-049-000 (0-0.5 ft)			B1A-049-001 (1-2 ft)			B1A-056-000 (0-0.5 ft)			B1A-056-001 (1-2 ft)			B1A-057-000 (0-0.5 ft)			B1A-057-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.55				U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.11	J		0.24	J			U	(0.5)		U	(0.5)	5	J			U	(0.5)	***26***				U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	1.2				U	(0.5)	1	J			UJ	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.2	J			U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)	0.97	J			U	(1)	1.1	J			U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.93)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.67	J			U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		UJ	(0.75)		UJ	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.19	J			U	(0.5)		U	(0.5)	0.13	J			U	(0.5)	0.38	J		0.063	J	
METALS (MG/KG)																									
Aluminum	33852	16600	J		18900	J		16600	J		16700	J		13100			14200			13300			7990		
Antimony	31		UJ	(0.45)		UJ	(0.47)		UJ	(0.47)		UJ	(0.47)		R			R			UJ	(0.48)		UJ	(0.45)
Arsenic	13.5	8.2	J		10			9.4			9.6			7.9	J		9.8			7.8	J		5.1	J	
Barium	440	245			282			248			242			261			310			259	J		176	J	
Beryllium	1.52	0.77			0.92			0.84			0.88			0.61			0.77			0.68			0.45		
Cadmium	0.4	***1.1***	J		0.29	J		0.27	J		0.28	J		***0.69***	J		***0.56***	J		***1.7***	J		0.2	J	
Calcium	GRAS	35000	J		4760	J		4900	J		4650	J		3980			5180			6540	J		3150	J	
Chromium	37	24.1	J		21.1	J		19	J		18.5	J		16.7			17.9			21.1	J		10.5	J	
Cobalt	17.2	10			12.6			10.5			12.1			8.4			12.5			9.6	J		6.9	J	
Copper	33.9	29.7			27.3			21.9			25.3			23.3	J		21.8	J		***35.2***	J		15.9	J	
Iron	GRAS	19000			23500			21000			22200			16300			20200			18000			12700		
Lead	400	121			16.3			18.4			16.2			31.9	J		15.8	J		277	J		13.7	J	
Magnesium	GRAS	4570			4890			4040			4320			3420			4420			3520			2530		
Manganese	1083	625			705			675			720			469	J		782	J		593	J		417	J	
Mercury	23		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.11)		U	(0.1)
Nickel	39.3	34.3			29			25.3			27.7			23			27.2			26.2	J		16.3	J	
Potassium	GRAS	4400			3340			3590			2930			4000			3210			3280	J		1980	J	
Selenium	1.33		U	(1)		U	(1.1)		U	(1.1)		U	(1.1)		U	(1)		U	(1.1)	***1.5***	J			U	(1)
Sodium	GRAS		U	(320)		U	(334)		U	(333)		U	(333)	3500	J		1870	J			U	(341)		U	(318)
Thallium	1.72		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(12.6)		U	(14)		U	(1.4)		U	(1.3)
Vanadium	72.5	37.4			42.8			37.1			31.2			32.9			41.1			32.6			22.3		
Zinc	119.5	109	J		62.4	J		65.8	J		60.9	J		64.6	J		57.1	J		***132***	J		37	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-058						B1A-059						B1A-060						B1A-061					
		B1A-058-000 (0-0.5 ft)			B1A-058-001 (1-2 ft)			B1A-059-000 (0-0.5 ft)			B1A-059-001 (1-2 ft)			B1A-060-000 (0-0.5 ft)			B1A-060-001 (1-2 ft)			B1A-061-000 (0-0.5 ft)			B1A-061-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	***2.5***				U	(0.5)		U	(0.5)		U	(0.5)	1.3				U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.63				U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	***1500***			***18***			0.28	J			U	(0.5)	***68***			0.28	J		2.8				U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	***2***				U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	7.9	J		1.7	J		0.35	J			UJ	(0.5)	54	J		0.69	J		0.37	J		0.51	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA	0.36	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	5.5	J		0.33	J			U	(1)		U	(1)	30				U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	1.3			0.8			1.4			0.71	J		1.7			0.8			0.69	J		0.83		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		UJ	(0.75)		J			UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.4	J			U	(0.5)	0.046	J			U	(0.5)	0.69				U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	17400			14400			15200			16700			14900			13800			7950			13600		
Antimony	31		UJ	(0.45)		UJ	(0.46)		UJ	(0.45)		UJ	(0.45)		UJ	(0.47)	1.2	J			UJ	(0.41)		UJ	(0.4)
Arsenic	13.5	6	J		5.3	J		8.1	J		7.5	J		7.7	J		8.4	J		6.5	J		5.2	J	
Barium	440	252	J		210	J		240	J		250	J		267	J		283	J		190	J		238	J	
Beryllium	1.52	0.66			0.66			0.68			0.8			0.82			0.73			0.5			0.67	J	
Cadmium	0.4	***6.3***	J			UJ	(0.12)	***2.6***	J		0.28	J		***1.9***	J		***2.6***	J		0.36	J		0.14	J	
Calcium	GRAS	9230	J		3930	J		51000	J		4400	J		6970	J		5400	J		4140	J		3780	J	
Chromium	37	24	J		16.4	J		20	J		18.3	J		31.2	J		18.6	J		12.1	J		14.8	J	
Cobalt	17.2	8.8	J		8.6	J		9.4	J		9.9	J		10.4	J		11.3	J		7.7	J		9.3	J	
Copper	33.9	***44.5***	J		13.6	J		19.9	J		18.6	J		26.5	J		25.3	J		17.2	J		13.6	J	
Iron	GRAS	15900			15700			17500			19800			19100			20100			13000			15400		
Lead	400	***417***	J		17.1	J		153	J		17.5	J		145	J		42.7	J		36.3	J		15.6	J	
Magnesium	GRAS	3120			2790			4050			3800			3630			3720			2400			2800		
Manganese	1083	537	J		505	J		606	J		612	J		628	J		670	J		371	J		525	J	
Mercury	23		U	(0.13)		U	(0.12)		U	(0.11)		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.11)		U	(0.11)
Nickel	39.3	21.9	J		16.7	J		20.2	J		22.5	J		23.3	J		34.8	J		17.3	J		16.4	J	
Potassium	GRAS	3570	J		3020	J		3980	J		2920	J		3480	J		2740	J		2600	J		2950	J	
Selenium	1.33	1.2	J			U	(1.1)		U	(1)		U	(1)	***1.7***	J			U	(1.1)	1.2	J		1.1	J	
Sodium	GRAS		U	(316)		U	(329)		U	(319)		U	(319)		U	(336)		U	(328)		U	(290)		U	(286)
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.2)		U	(1.2)
Vanadium	72.5	30			34.1			34.3			30.4			35			28.8			19.6			27.3		
Zinc	119.5	***147***	J		49.8	J		112	J		60	J		117	J		95.4	J		50.5	J		53.6	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-062						B1A-064						B1A-065						B1A-066					
		B1A-062-000 (0-0.5 ft)			B1A-062-001 (1-2 ft)			B1A-064-000 (0-0.5 ft)			B1A-064-001 (1-2 ft)			B1A-065-000 (0-0.5 ft)			B1A-065-001 (1-2 ft)			B1A-066-000 (0-0.5 ft)			B1A-066-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.63	J			U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	14			3.2			12			1.1	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	4.4			1			9.8	J		0.43	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)	0.21	J		0.27	J			U	(1)	3.4			0.31	J		6.7	J			U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.1	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	11500			11700			12200			14000			17200			16600			16100			14400		
Antimony	31		UJ	(0.36)	0.61	J		0.57	J			R		0.47	J		0.66	J		0.61	J			UJ	(0.47)
Arsenic	13.5	7.8			11.9			8	J		8.3	J		10.3			10.7			8.3	J		8	J	
Barium	440	245	J		306	J		224			286			259	J		383	J		326	J		***4710***	J	
Beryllium	1.52	0.6			0.74			0.66			0.76			0.83			0.84			0.73			0.68		
Cadmium	0.4	***0.51***	J		***0.46***	J		***1.8***			***0.44***	J		***1.5***			***0.63***	J		***2.6***			***2.2***		
Calcium	GRAS	4020			4980			8370			4750			5860			8320			9640			79100		
Chromium	37	14.6			15.4			25.4			16.3			28.3			20.6			29.2			17.9		
Cobalt	17.2	8.9	J		11.6	J		10.2			11.5			11.3	J		11.4	J		10.5	J		9.6	J	
Copper	33.9	17.6			23.3			20.1			23			26			25.2			24.5			18.1		
Iron	GRAS	16400			20400			16900			20200			22400			22900			20000			17300		
Lead	400	21			15.9			185			16.2			63			20.9			86.8			25.9		
Magnesium	GRAS	3560			4350			3740			4610			4720			5230			4400			5110		
Manganese	1083	541	J		691	J		573			801			504	J		639	J		607	J		562	J	
Mercury	23		U	(0.1)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.11)		U	(0.1)
Nickel	39.3	22.1			27.6			23			29.1			29.8			30			24.4			23.4		
Potassium	GRAS	3200			2270			2870			2490			3500			3270			3250			3140		
Selenium	1.33	0.88	J		1.3	J			U	(1.1)	***1.5***	J		1.2	J		***2***	J			U	(1.1)	1.2	J	
Sodium	GRAS		U	(255)		U	(322)	165	J		264	J			U	(331)		U	(358)		U	(344)		U	(333)
Thallium	1.72		U	(1)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.5)		U	(1.4)		U	(1.4)
Vanadium	72.5	29.7			31.5			29.5			24.9			40.8			40.4			36			32		
Zinc	119.5	62.9			60.9			78			58.3			80.1			67.2			88.5			54.7		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-067						B1A-068						B1A-069						B1A-070					
		B1A-067-000 (0-0.5 ft)			B1A-067-001 (1-2 ft)			B1A-068-000 (0-0.5 ft)			B1A-068-001 (1-2 ft)			B1A-069-000 (0-0.5 ft)			B1A-069-001 (1-2 ft)			B1A-070-000 (0-0.5 ft)			B1A-070-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)	0.39	J			U	(0.5)		U	(0.5)	0.36	J			U	(0.5)	0.27	J	
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	15				U	(0.5)	0.16	J		0.36	J			U	(0.5)	0.4	J			U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.13	J		0.13	J			U	(0.5)	0.19	J	
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.73				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.18	J			U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.58	J			U	(1)	0.54	J			U	(1)	0.13	J			U	(1)		U	(1)	0.2	J	
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	2.1				U	(0.75)		U	(0.75)		U	(0.75)	0.58	J		0.11	J		0.58	J		0.32	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)	0.2	J			U	(0.75)	0.18	J			U	(0.75)	0.15	J		0.28	J	
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)	0.034	J		0.25	J			U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	18500			17800			17000	J		14700	J		13500	J		13100	J		18700			21900		
Antimony	31		R			R			UJ	(0.48)		UJ	(0.46)		UJ	(0.47)		UJ	(0.48)	0.69	J		0.58	J	
Arsenic	13.5	8.8	J		9.1			8.5	J		8.8			8.8			9.1			7.6	J		6.1	J	
Barium	440	228			259			250			249			276			326			236			225		
Beryllium	1.52	0.85			0.82			0.81			0.82			0.75			0.76			0.78			0.84	J	
Cadmium	0.4	***0.63***	J		***0.52***	J		***1.4***			0.24	J		***0.52***	J		0.37	J		***0.5***	J		0.33	J	
Calcium	GRAS	5520			4470			10000	J		4860	J		5270	J		5340	J		4040			2720		
Chromium	37	20.4			22.5			27.8	J		16.6	J		17.5	J		16.7	J		20.7			22.6		
Cobalt	17.2	10.4			12.3			10.3			12			10.9			11.2			10.5			9.8		
Copper	33.9	21.9			23.5			30.7			21.4			24.3			25.9			16	J		15.1	J	
Iron	GRAS	21500			21300			21500			20100			20000			20300			18900			19700		
Lead	400	27.4			67.5			194			19.2			24.7			14.5			29.9	J		13.9	J	
Magnesium	GRAS	4030			4290			4110			3760			4510			4370			3480			3480		
Manganese	1083	575			661			619			724			640			760			640			507		
Mercury	23		U	(0.1)		U	(0.12)		U	(0.12)		U	(0.1)		U	(0.12)		U	(0.11)		U	(0.12)		U	(0.12)
Nickel	39.3	27.2			27.3			24.7			26.2			26.7			34.2			20.1			19.1		
Potassium	GRAS	3190			3020			3730			2510			4090			2540			4720			4250		
Selenium	1.33	1.1	J		***1.4***	J			U	(1.1)		U	(1.1)		U	(1.1)		U	(1.1)	***1.6***	J		***1.4***	J	
Sodium	GRAS		U	(344)		U	(331)		U	(340)		U	(328)		U	(332)		U	(341)	60.4	J			U	(31.5)
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)
Vanadium	72.5	34			34.6			40.3			28.2			33.8			27.9			43.1			45.6		
Zinc	119.5	63.2			63.4			109	J		56.8	J		61.8	J		67.7	J		69.5			63.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-071						B1A-072						B1A-074						B1A-075					
		B1A-071-000 (0-0.5 ft)			B1A-071-001 (1-2 ft)			B1A-072-000 (0-0.5 ft)			B1A-072-001 (1-2 ft)			B1A-074-000 (0-0.5 ft)			B1A-074-001 (1-2 ft)			B1A-075-000 (0-0.5 ft)			B1A-075-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.12	J			U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.49	J			U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.2	J			U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)	0.48	J			U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.096	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.16	J		1.1		
METALS (MG/KG)																									
Aluminum	33852	16100			20200			19500			16300			22100			23200			15900			19400		
Antimony	31		UJ	(0.46)	0.47	J		0.53	J		0.53	J		0.79	J		0.61	J			UJ	(0.47)	0.48	J	
Arsenic	13.5	6.4	J		5.5	J		8.4			5.8	J		7.9	J		9.1			7.6	J		7.6	J	
Barium	440	228			264			306			224			341			265			291			221		
Beryllium	1.52	0.69			0.81			0.83			0.75			0.92			0.94			0.75			0.78		
Cadmium	0.4	***1.3***			***0.41***	J		***0.41***	J		0.37	J		***0.61***	J		***0.47***	J		0.3	J		0.34	J	
Calcium	GRAS	4580			3820			3630			2870			4370			4020			4330			3560		
Chromium	37	19.6			21.5			21.6			18.1			25.1			24.9			17.5			21.4		
Cobalt	17.2	9.6			10.5			11.6			10.5			11.7			11.2			10.1			10.3		
Copper	33.9	16.9	J		16.3	J		17.5	J		13.8	J		24			21.6	J		19.8	J		16.2	J	
Iron	GRAS	16800			19600			21200			17100			23000			23800			19000			19000		
Lead	400	169	J		15.9	J		16.6	J		14.1	J		102	J		17.7	J		16.6	J		15.2	J	
Magnesium	GRAS	3230			3580			4210			3020			4610			4680			3780			3640		
Manganese	1083	610			644			669			665			547			667			617			596		
Mercury	23		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.11)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)
Nickel	39.3	18.1			19.8			22.2			18.1			25.5			26			24.3			20.9		
Potassium	GRAS	4190			4380			6070			3480			5380			4240			3100			3760		
Selenium	1.33	***1.6***	J			UJ	(1.1)	***1.4***	J		***1.6***	J			U	(1.2)	***1.7***	J			U	(1.1)	***1.5***	J	
Sodium	GRAS	99.6	J		57.6	J		231	J		251	J		141	J		171	J		251	J		113	J	
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.2)		U	(1.5)		U	(1.4)		U	(1.3)		U	(1.3)
Vanadium	72.5	37.6			42.8			42.3			36.9			52			50.3			27.6			47		
Zinc	119.5	***125***			68.9			69.2			59.5			117			68.8			54.9			54.4		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-2
Analytical Data for Load Line 1 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1A-076						B1A-077					
		B1A-076-000 (0-0.5 ft)			B1A-076-001 (1-2 ft)			B1A-077-000 (0-0.5 ft)			B1A-077-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)													
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.16	J		0.022	J		0.023	J		2.7	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)	1.2		
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)	0.52	J			U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)	0.81	J	
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.47	J			U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)	0.46	J			U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.31	J		0.16	J			U	(0.5)		U	(0.5)
METALS (MG/KG)													
Aluminum	33852	6800			11200			14700			10100		
Antimony	31		R			R			R			R	
Arsenic	13.5	5.1	J		7.3	J		6.3	J		6.9	J	
Barium	440	174			241			247			208		
Beryllium	1.52	0.43			0.7			0.73			0.65		
Cadmium	0.4	0.22	J		0.37	J		***0.65***	J		***0.52***	J	
Calcium	GRAS	4360			4070			3510			3520		
Chromium	37	9.1			12.4			17.2			13.2		
Cobalt	17.2	6.4			10.2			10.4			9.1		
Copper	33.9	12.6			17.5			17.2			18.8		
Iron	GRAS	10600			15100			16800			15300		
Lead	400	24.5	J		15.2	J		34.2	J		20.5	J	
Magnesium	GRAS	2070			2870			3340			2680		
Manganese	1083	390	J		635	J		655	J		504	J	
Mercury	23		U	(0.11)		U	(0.11)		U	(0.12)		U	(0.12)
Nickel	39.3	13.8			22			20.3			18.6		
Potassium	GRAS	2120			2410			3760			2420		
Selenium	1.33		U	(1)	1.3	J			U	(1.1)		U	(1)
Sodium	GRAS	94.1	J		96.2	J		47.1	J		146	J	
Thallium	1.72		U	(1.3)		U	(1.3)	-	U	(1.4)		U	(1.3)
Vanadium	72.5	17.2			27.1			33.8			25		
Zinc	119.5	40.8			44.3			63			95	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-3
Analytical Data for Load Line 1 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1B-001			B1B-002			B1B-003			B1B-004			B1B-005			B1B-006			B1B-007			B1B-008		
		B1B-001-000 (0-1 ft)			B1B-002-000 (0-1 ft)			B1B-003-000 (0-1 ft)			B1B-004-000 (0-1 ft)			B1B-005-000 (0-1 ft)			B1B-006-000 (0-1 ft)			B1B-007-000 (0-1 ft)			B1B-008-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)	0.49	J			U	(0.5)		U	(0.5)		U	(0.5)	0.2	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.25	J			U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)	0.061	J			U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.72	J			U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		UJ	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	13900			14000			17000			15800			13400			11500			11200	J		10800		
Antimony	31		UJ	(0.49)		UJ	(0.49)		UJ	(0.49)		UJ	(0.49)		UJ	(0.46)		R			R			R	
Arsenic	13.5	4.8	J		6.3	J		6.7	J		6.7	J		5.7	J		8.5	J		8.4	J		6.6	J	
Barium	440	291			245			219			239			262			240			261			161		
Beryllium	1.52	0.75			0.72			0.78			0.72			0.64			0.66			0.67			0.53		
Cadmium	0.4		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.2)	0.28	J		***0.54***	J		0.19	J	
Calcium	GRAS	3280			3220			2750			2350			2610			4720	J		4300			6940	J	
Chromium	37	16.9			16.4			18.5			17.9			15.4			12.8			13.5			12.3		
Cobalt	17.2	9.8			9.1			9.4			8.6			8.4			10.2			9.8			6.9		
Copper	33.9	15			15			14.9			14.5			12.7			18.5			19			14.8		
Iron	GRAS	15600			16100			17600			16600			14400			16600			17700			14000		
Lead	400	12.8			12.7			12.5			12.9			11.9			13	J		13.6			10	J	
Magnesium	GRAS	2780			2910			3130			2870			2530			3480			3360			3080		
Manganese	1083	782			689			561			539			679			618			597			396		
Nickel	39.3	17.9	J		17.7	J		17.9	J		17.3	J		16.2	J		23.3	J		22.2			18.3	J	
Potassium	GRAS	3230			3370			3840			6920			3940			2310			2600			2240		
Selenium	1.33	1.2	J			U	(1.1)	***1.6***	J			U	(1.1)	1.2	J			U	(1.1)	***1.5***	J			U	(1.1)
Vanadium	72.5	32.6			33.2			37.8			37			32.5			23.2			29			24.7		
Zinc	119.5	52.5			49.6			57.1			51.3			45.6			47	J		51.4			39		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-3
Analytical Data for Load Line 1 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1B-009			B1B-010			B1B-011			B1B-012			B1B-013			B1B-014			B1B-015			B1B-016		
		B1B-009-000 (0-1 ft)			B1B-010-000 (0-1 ft)			B1B-011-000 (0-1 ft)			B1B-012-000 (0-1 ft)			B1B-013-000 (0-1 ft)			B1B-014-000 (0-1 ft)			B1B-015-000 (0-1 ft)			B1B-016-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(2.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	***32***	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(2.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)	0.3	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(2.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(3.8)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)	0.23	J			U	(1)		U	(1)		U	(1)		U	(5)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.6	J			U	(0.75)	0.65	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(3.8)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(3.8)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(2.5)
METALS (MG/KG)																									
Aluminum	33852	13300			11600			18500			18500			12100			16800			12200			16000		
Antimony	31		R			R			R			R			R			UJ	(0.44)		R			U	(0.45)
Arsenic	13.5	10.2			8.8			8.6	J		10.2			7.3	J		8.7			7	J		9.1		
Barium	440	198			290			213			294			191			212			182			271		
Beryllium	1.52	0.66			0.65			0.82			0.84			0.61			0.82			0.67			0.76		
Cadmium	0.4	0.28	J		0.17	J		0.25	J		0.26	J		0.21	J			U	(1.2)	0.21	J			U	(1.2)
Calcium	GRAS	3920	J		4280	J		3660	J		3650	J		4280	J		3690			3180			6530		
Chromium	37	15.9			14.9			19.2			19.1			15.3			18.2			14.3			19.1		
Cobalt	17.2	10.9			9.8			9.3			9.9			7.8			10.2			9.4			10.3		
Copper	33.9	21.4			18.4			20.1			20.9			14.8			20.1			18			23.3		
Iron	GRAS	18700			17400			20300			21200			14800			19900			15800			19900		
Lead	400	13.1	J		14.1	J		13	J		14	J		26.6	J		14.1			14			16		
Magnesium	GRAS	3590			3560			4070			4370			3070			4000			3230			5160		
Manganese	1083	477			553			514			562			455			633			458	J		589		
Nickel	39.3	24.7	J		22.9	J		23.8	J		25.8	J		18.6	J		24.9	J		20	J		27	J	
Potassium	GRAS	2840			2590			3280			3320			2790			3310			2700			3100		
Selenium	1.33		U	(1.1)		U	(1.1)		U	(1.1)	***1.5***	J			U	(1)		U	(1)		U	(1.1)		U	(1)
Vanadium	72.5	31.5			28.5			38.6			38.5			26			37			25.8			40.5		
Zinc	119.5	51.7			53.1			55.8			58.9	J		49.9			55.7			48.5			57.6		

Note: 1) NA=screening level is not available. 2) R=result. Q=qualifier. QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-3
Analytical Data for Load Line 1 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1B-017			B1B-018			B1B-019			B1B-020			B1B-021			B1B-022			B1B-023			B1B-024		
		B1B-017-000 (0-1 ft)			B1B-018-000 (0-1 ft)			B1B-019-000 (0-1 ft)			B1B-020-000 (0-1 ft)			B1B-021-000 (0-1 ft)			B1B-022-000 (0-1 ft)			B1B-023-000 (0-1 ft)			B1B-024-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.6	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.37	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.69	J			U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.61	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	17700			17800			12700			15700			14600			16200			16100			20900		
Antimony	31		UJ	(0.46)		UJ	(0.46)		R			R			UJ	(0.46)		R			UJ	(0.49)		UJ	(0.46)
Arsenic	13.5	10.4			7.7	J		7	J		9.2			7.6	J		7.6	J		9.4			7.8	J	
Barium	440	272			196			227			218			227			225			258			260		
Beryllium	1.52	0.86			0.83			0.65			0.79			0.73			0.77			0.84			0.89		
Cadmium	0.4		U	(1.2)	***0.49***	J		0.24	J		0.25	J			U	(1.2)	0.25	J		***0.43***	J		***0.45***	J	
Calcium	GRAS	9900			3350			3020			3790			3300			3640			4270			3520		
Chromium	37	21.3			18.8			14.1			17.1			17.5			17.3			18.6			24.1		
Cobalt	17.2	11.7			10.1			9.5			9.6			8.5			9.4			10.4			10.5		
Copper	33.9	23			17.6			16.5			20.9			15.1			18.1			20.1			***44.3***		
Iron	GRAS	22400			19500			15500			19500			17900			18800			21200			20900		
Lead	400	15.3			14.5			12.6			13.8			14.1			13.7			15.1			14.9		
Magnesium	GRAS	6280			3720			3010			3960			3100			3700			4300			4010		
Manganese	1083	708			578	J		646	J		604	J		594	J		573	J		601	J		531	J	
Nickel	39.3	29.6	J		23.5			19.7	J		23.2	J		19.9	J		22.9	J		25			24.3		
Potassium	GRAS	3640			3470			2760			2990			3420			3240			3320			4060		
Selenium	1.33		U	(1.1)	1.2	J			U	(1)		U	(1.1)	***1.4***	J			U	(1.1)	1.2	J		1.1	J	
Vanadium	72.5	44.7			36.3			27.5			29			36			31.4			35.2			43.2		
Zinc	119.5	63.6			57.1			44			55			49.1			51.5			60.1			57.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-3
Analytical Data for Load Line 1 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1B-025			B1B-026			B1B-027			B1B-028			B1B-029			B1B-030			B1B-031			B1B-032		
		B1B-025-000 (0-1 ft)			B1B-026-000 (0-1 ft)			B1B-027-000 (0-1 ft)			B1B-028-000 (0-1 ft)			B1B-029-000 (0-1 ft)			B1B-030-000 (0-1 ft)			B1B-031-000 (0-1 ft)			B1B-032-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		UJ	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.086	J			U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	21900			17100			18000			15800			17800			13500			12300			15300		
Antimony	31		UJ	(0.47)	0.51	J			UJ	(0.47)		UJ	(0.46)		UJ	(0.48)		UJ	(0.48)	0.55	J			UJ	(0.46)
Arsenic	13.5	10.2			9.7			10.6			9.6			9.7			9.4			10.2			9.5		
Barium	440	297			232			278			209			236			291			244			306		
Beryllium	1.52	0.95			0.86			0.84			0.79			0.86			0.74			0.73			0.8		
Cadmium	0.4		U	(1.2)		U	(1.2)		U	(1.2)		U	(1.2)	***0.45***	J		***0.49***	J		***0.44***	J		***0.63***	J	
Calcium	GRAS	4500			3900			3710			3580			3940			5290			4790			4740		
Chromium	37	23.8			18.4			19.9			17.1			19			17.5			16.3			18.9		
Cobalt	17.2	14			11.8			11.7			10.4			10.3			10.5			10			11.3		
Copper	33.9	23.4			22.4			23.6			22.1			26.1			21.4			22.8			23.1		
Iron	GRAS	23600			21300			22200			20100			22400			19700			19600			20900		
Lead	400	15.5			14.8			14.9			14.2			15.5			14.2			14.2			15.2		
Magnesium	GRAS	4900			4240			4500			4080			4520			4450			4440			4730		
Manganese	1083	668			696			645			604			575	J		652	J		532	J		708	J	
Nickel	39.3	27.3	J		26.6	J		27.5	J		26.2	J		26.5			26.5			26.4			29.5		
Potassium	GRAS	11600			3200			6750			2750			3380			2930			2660			3100		
Selenium	1.33		U	(1.1)		U	(1.1)	1.1	J			U	(1.1)	1.3	J		***1.4***	J		***1.6***	J			U	(1.1)
Vanadium	72.5	46.2			33.9			37.6			30.4			32.8			31.9			30.6			36.2		
Zinc	119.5	60.7			58.1			58.5			51.2			61.3			55.4			61.7			62.2		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-3
Analytical Data for Load Line 1 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B1B-033			B1B-034			B1B-035			B1B-036			B1B-037			B1B-038		
		B1B-033-000 (0-1 ft)			B1B-034-000 (0-1 ft)			B1B-035-000 (0-1 ft)			B1B-036-000 (0-1 ft)			B1B-037-000 (0-1 ft)			B1B-038-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)	0.2	J			U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.23	J			U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)	0.15	J		0.077	J			U	(0.5)	0.16	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)	0.18	J			U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)	0.044	J		4.4			5.1		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)	0.071	J			U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.099	J			U	(0.5)	0.41	J		0.43	J		1.2			0.63		
METALS (MG/KG)																			
Aluminum	33852	10900	J		14400			11000			9940	J		11600			15500		
Antimony	31		R			UJ	(0.48)		R			R			R			R	
Arsenic	13.5	9.2			10.6			6.3	J		6.4	J		6.3	J		8.3	J	
Barium	440	258			334			188			217			200			264		
Beryllium	1.52	0.66			0.82			0.64			0.61			0.62			0.77		
Cadmium	0.4	***0.75***	J		***0.84***	J		0.37	J		***0.42***	J		0.18	J		0.24	J	
Calcium	GRAS	7830			5020			2840			2640			3310			3210		
Chromium	37	14			19.5			12.4			12			12.4			16.2		
Cobalt	17.2	10.3			14.7			9.3			9.9			8.4			9.5		
Copper	33.9	21			24.2			14			14.2			14.4			17		
Iron	GRAS	18600			21900			14200			13700			14500			18500		
Lead	400	13.5			16.4			13			12.6			11.8			13.7		
Magnesium	GRAS	4570			4940			2560			2290			2890			3550		
Manganese	1083	603			897	J		579	J		572			523	J		705	J	
Nickel	39.3	25.7			32.7			18.8	J		15.7			17.7	J		28.5	J	
Potassium	GRAS	2520			3180			2610			2510			2700			2910		
Selenium	1.33	***1.6***	J			U	(1.1)		U	(0.98)	***2***	J			U	(1.1)		U	(1.1)
Vanadium	72.5	28.6			35.3			23.7			25.4			23			28.1		
Zinc	119.5	54.4			64			42.9			39.7			40.8			51.9		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-001						B2A-002						B2A-003						B2A-004					
		B2A-001-000 (0-0.5 ft)			B2A-001-001 (1-2 ft)			B2A-002-000 (0-0.5 ft)			B2A-002-001 (1-2 ft)			B2A-003-000 (0-0.5 ft)			B2A-003-001 (1-2 ft)			B2A-004-000 (0-0.5 ft)			B2A-004-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)	0.22	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.24	J			U	(0.5)		U	(0.5)		U	(0.5)	0.15	J			U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.43	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA	0.72	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.44	J			U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA	0.72	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(1.4)		U	(1.6)	0.79			0.77			0.52	J			U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.49	J			U	(0.5)	0.36	J		0.46	J		0.4	J		0.06	J			U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	16700			14100			11900			17900			16500	J		19500	J		18300	J		18900	J	
Antimony	31	2.8	J			R		0.91	J		0.51	J		1.7	J		1.3	J		0.53	J			UJ	(0.43)
Arsenic	13.5	7.8	J		7.5	J		4.7	J		8.5			5.6	J		8.9			9.9			8.5		
Barium	440	232			228			145			257			267	J		263	J		240	J		274	J	
Beryllium	1.52	0.77			0.72			0.48			0.81			0.79			0.87			0.8	J		0.82	J	
Cadmium	0.4	***2.6***			***0.5***	J		***12.6***				U	(1.1)	***2.4***			***0.52***	J		***1.3***			***1.6***		
Calcium	GRAS	4120			3340			166000			4620			9180	J		4580	J		3850	J		4970	J	
Chromium	37	25.1			15.8			19.3			20			28.8	J		22.2	J		22.1	J		22.6	J	
Cobalt	17.2	10.7			11			7.1			9.9			9.4			10.8			10.4	J		11.3	J	
Copper	33.9	32.6			16.8	J		20.2			19.4			***50.1***	J		***69.8***	J		19.8	J		19.8	J	
Iron	GRAS	19300			17400			16300			20000			18400	J		21300	J		20600	J		19900	J	
Lead	400	317			26.4			***516***			23.2			***704***	J		23.5	J		***413***	J		207	J	
Magnesium	GRAS	3640			2620			3920			3740			3760			4230			3600			3920		
Manganese	1083	667			762			671			576			549	J		617	J		583	J		786	J	
Mercury	23		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.1)		UJ	(0.12)		UJ	(0.11)		UJ	(0.1)		UJ	(0.1)
Nickel	39.3	37.5			18.7			22.7			22.5			35.1			24.9			21.4			26.8		
Potassium	GRAS	3210			2830			3180			3210			3710			3620			3380			3460		
Selenium	1.33	***1.7***	J			U	(1.1)	1.2	J		***2***	J			U	(1.1)		U	(1)	***1.4***	J			U	(1)
Sodium	GRAS		U	(308)	1350			33.3	U	(332)		U	(307)		U	(333)		U	(308)		U	(310)		U	(305)
Vanadium	72.5	43.3			32.6			33.3			43.7			40.7			45.4			47.6			48.7		
Zinc	119.5	***296***	J		65.5			***205***	J		57.6	J		***254***	J		***215***	J		***122***	J		91.3	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-005						B2A-006						B2A-007						B2A-008					
		B2A-005-000 (0-0.5 ft)			B2A-005-001 (1-2 ft)			B2A-006-000 (0-0.5 ft)			B2A-006-001 (1-2 ft)			B2A-007-000 (0-0.5 ft)			B2A-007-001 (1-2 ft)			B2A-008-000 (0-0.5 ft)			B2A-008-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.96		
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.14	J			U	(0.5)	0.08	J			U	(0.5)	1.4				U	(0.5)	5.1			0.7		
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.28	J		0.27	J			U	(0.5)		U	(0.5)	0.81				U	(0.5)	1			0.95		
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.3	J			U	(0.75)	0.33	J			U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.34	J			U	(1)		U	(1)		U	(1)	0.51	J			U	(1)	1.5				U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)	0.3	J			U	(0.75)		U	(0.75)	***2200***				U	(4.2)	***4300***			***18***	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.053	J		0.07	J			U	(0.5)		U	(0.5)	290			0.64			300	J		5.8		
METALS (MG/KG)																									
Aluminum	33852	15100	J		17600	J		18800	J		21600	J		15000			18600			8930	J		12200		
Antimony	31	0.78	J		0.54	J		1.2	J			UJ	(0.46)	1.1	J			UJ	(0.46)	1.3	J			UJ	(0.48)
Arsenic	13.5	8.9			9.3			7.7	J		10.2			10.9			9.4				U	(7.7)	9.2		
Barium	440	259	J		253	J		248	J		299	J		280			295			166	J		302		
Beryllium	1.52	0.73	J		0.82			0.79			0.95			0.71			0.84			0.44			0.72		
Cadmium	0.4	***0.87***	J			U	(1.2)	***1.5***				U	(1.2)	***0.95***	J			U	(1.2)	***1.7***				U	(1.2)
Calcium	GRAS	6230	J		4560	J		7360	J		4580	J		7120			4860			25100	J		5170		
Chromium	37	20.9	J		20.3	J		23.9	J		23.6	J		27.5			22.4			18.2	J		15.5		
Cobalt	17.2	9.8			10.1			9.7			12.7			10.6			11.3			5.3			11.3		
Copper	33.9	23.3	J		20.8	J		27.3	J		21.9	J		***127***	J		27.4			31.1	J		21.8	J	
Iron	GRAS	19600	J		20900	J		19800	J		23900	J		37700			22100			11700	J		20000		
Lead	400	***830***	J		29.3	J		118	J		20.4	J		***574***			19.6			305	J		20.4		
Magnesium	GRAS	3760			4060			4570			4900			4000			4600			2520			3910		
Manganese	1083	551	J		552	J		522	J		814	J		620			718			307	J		806		
Mercury	23		UJ	(0.11)		UJ	(0.11)		UJ	(0.11)		UJ	(0.12)		U	(0.11)		U	(0.11)		UJ	(0.11)		U	(0.12)
Nickel	39.3	22.1			24.5			27			28.3			***45.4***			26.9			30.3			28.8		
Potassium	GRAS	3500			3470			3850			3650			3250			3680			2050			2530		
Selenium	1.33	***1.6***	J		1.3	J		1.2	J		1.2	J			U	(0.99)	***2.2***	J		0.97	J		1.1	J	
Sodium	GRAS		U	(325)		U	(323)		U	(335)		U	(330)		U	(302)		U	(329)		U	(296)		U	(338)
Vanadium	72.5	42.5			44.6			48.1			49.3			39.9			51.7			23.2			31.2		
Zinc	119.5	106	J		62.3	J		99.3	J		65	J		***150***	J		66.4	J		***191***	J		64.7	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-009						B2A-010						B2A-011						B2A-012					
		B2A-009-000 (0-0.5 ft)			B2A-009-001 (1-2 ft)			B2A-010-000 (0-0.5 ft)			B2A-010-001 (1-2 ft)			B2A-011-000 (0-0.5 ft)			B2A-011-001 (1-2 ft)			B2A-012-000 (0-0.5 ft)			B2A-012-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	1.5			0.9				U	(0.5)	0.12	J			U	(0.5)		U	(0.5)	0.045	J		0.21	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.64	J		0.83	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.33	J		0.35	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA	0.39	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.36	J		0.32	J			U	(1)		U	(1)		U	(1)		U	(1)	0.26	J		0.41	J	
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	***1500***	J		***47***			2.6			1.4				U	(0.75)		U	(0.75)	4.4			4.8		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	220			9.8			0.15	J		0.11	J			U	(0.5)		U	(0.5)	0.7			1.1		
METALS (MG/KG)																									
Aluminum	33852	14100			18300			11500			17900	J		13100			15000			9150			10900		
Antimony	31	0.66	J		0.85	J			R		0.58	J			UJ	(0.46)	0.49	UJ	(4.6)		UJ	(0.46)		UJ	(0.46)
Arsenic	13.5	6.2	J		8.9			7.2	J		7.3	J		8.1	J		10.4			4.1	J		5.6	J	
Barium	440	249			264			210			298	J		201			266			374			170		
Beryllium	1.52	0.71			0.86			0.66			0.85			0.68			0.76			0.47			0.59		
Cadmium	0.4	***1.2***				U	(1.2)	***0.79***	J			U	(1.2)	***0.65***	J		***0.45***	J		***0.78***	J		0.24	J	
Calcium	GRAS	8310			4880			4290			4170	J		3710			3600			3890			3880		
Chromium	37	21			21.9			16			20.5	J		15.4			17.6			12.9			13.8		
Cobalt	17.2	9.3			11.5			10.1			10.3			10			10.9			6.3			7.5		
Copper	33.9	***35.9***			21.5			22.3	J		19.4	J		19.9			21.4			16.6			17.8		
Iron	GRAS	18000			21400			16600			19600	J		17300			20500			12600			17600		
Lead	400	362			46			***736***			25.9	J		182			30.1			318			16.1		
Magnesium	GRAS	3510			4330			2980			3760			3510			4090			2450			2980		
Manganese	1083	574			678			627			658	J		609			604			339			373		
Mercury	23		U	(0.1)		U	(0.12)		U	(0.12)		UJ	(0.12)		UJ	(0.11)		UJ	(0.12)		UJ	(0.12)		UJ	(0.12)
Nickel	39.3	23.5			26.6			19.7			24.7			21.8			26			15.2			18.2		
Potassium	GRAS	3520			3590			2550			3440			2700			2700			2110			2260		
Selenium	1.33		U	(1.1)	***2.4***	J			U	(1.1)		U	(1.1)	1.2	J		***1.7***	J		***1.4***	J			UJ	(1.1)
Sodium	GRAS		U	(329)		U	(332)	1480				U	(327)		U	(328)		U	(326)		U	(330)		U	(324)
Vanadium	72.5	34.4			45.6			29.2			44.2			32.1			38.3			23.6			29.2		
Zinc	119.5	***141***	J		67.7	J		***204***			74.9	J		98.4			60.6			***484***			52.4		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-013						B2A-014						B2A-015						B2A-016					
		B2A-013-000 (0-0.5 ft)			B2A-013-001 (1-2 ft)			B2A-014-000 (0-0.5 ft)			B2A-014-001 (1-2 ft)			B2A-015-000 (0-0.5 ft)			B2A-015-001 (1-2 ft)			B2A-016-000 (0-0.5 ft)			B2A-016-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(2.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)	0.63	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.46	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(2.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(2.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.21	J			U	(2.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.18	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(3.8)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(3.8)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(5)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)	0.26	J	
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(3.8)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	***13***			***61***				U	(0.75)		U	(0.75)	1.4			1				U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(3.8)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	3			9.9			0.076	J		0.1	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	9680			13800			12700			11900	J		20200			22200			14400			14000	J	
Antimony	31		UJ	(0.47)	0.57	J			UJ	(0.44)		R			UJ	(0.45)		UJ	(0.48)		UJ	(0.46)		R	
Arsenic	13.5	6.1	J		6.8	J		7.2	J		8.1	J		10			9.4			8.5			9.4		
Barium	440	170			194			232			170			321			262			253			251		
Beryllium	1.52	0.58			0.65			0.65			0.65			0.94			0.95			0.77			0.76		
Cadmium	0.4	0.22	J		0.25	J		***0.97***	J			U	(1.2)	***0.44***	J		***0.56***	J		0.38	J		***0.43***	J	
Calcium	GRAS	4190			3520			5720			3340			4940			4880			5020			4060		
Chromium	37	11.6			14.4			19.8				UJ	(13.7)	23.3			26.7			17.3			16.6	J	
Cobalt	17.2	7.3			9.3			9.7	J		8			10.6			12			11			10		
Copper	33.9	16.7			17			***75.4***			16.6			24			25.8			19.6			21.6		
Iron	GRAS	13800			15700			18100			16800			23500			23400			19100			19100		
Lead	400	32.7			22.8			287			29.7			15.9			106			14.8			25.9	J	
Magnesium	GRAS	2460			2720			4310			2800			4930			4740			4190			3940		
Manganese	1083	283			418			494			386			575	J		692	J		611	J		596		
Mercury	23		UJ	(0.12)		UJ	(0.1)		U	(0.12)		U	(0.11)		U	(0.13)		U	(0.12)		U	(0.11)		U	(0.11)
Nickel	39.3	17.4			18.4			28.6			18.7			29.2			27.9			23.9			24.8		
Potassium	GRAS	2230			2530			2880			2280			3390			4500			2580			3060		
Selenium	1.33	***1.4***	J		***1.5***	J			U	(1)	1.1	J			U	(1)		U	(1.1)		U	(1.1)	1.3	J	
Sodium	GRAS		U	(334)		U	(308)		U	(309)		U	(315)		U	(320)		U	(338)		U	(324)		U	(331)
Vanadium	72.5	24.5			32.7			32.8	J		28.5			49.8			53.3			31.5			34		
Zinc	119.5	45.2			44			***290***			54.7	J		67			101			56			60.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-017						B2A-018						B2A-019						B2A-020					
		B2A-017-000 (0-0.5 ft)			B2A-017-001 (1-2 ft)			B2A-018-000 (0-0.5 ft)			B2A-018-001 (1-2 ft)			B2A-019-000 (0-0.5 ft)			B2A-019-001 (1-2 ft)			B2A-020-000 (0-0.5 ft)			B2A-020-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	1			0.95				U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.93)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.09	J		0.038	J	
METALS (MG/KG)																									
Aluminum	33852	15600			15500			19400			19500			19700			15200			16200			17300		
Antimony	31		UJ	(0.46)		UJ	(0.44)		UJ	(0.44)		UJ	(0.45)		UJ	(0.48)		UJ	(0.48)		UJ	(0.51)		UJ	(0.49)
Arsenic	13.5	9.6			8.6			8.8			9.1			9.2			8.4	J		8.3	J		11.2		
Barium	440	264			255			244			235			251			258			283			276		
Beryllium	1.52	0.82			0.81			0.87			0.85			0.93			0.82			0.82			0.89		
Cadmium	0.4	0.4	J		0.33	J		***0.48***	J		0.13	J		0.35	J		***0.48***	J		***0.64***	J		***0.53***	J	
Calcium	GRAS	4560			4020			3820			3180			4490			4290			4810			5240		
Chromium	37	19.2			17.3			21			19.6			20.6			17.1			21.6			23.4		
Cobalt	17.2	10.7			10.3			10.9	J		11.5	J		13	J		10.8	J		10.9	J		10.3	J	
Copper	33.9	22			20.1			19			14.4			22.3			23.5			21.8			23.8		
Iron	GRAS	20500			19800			20800			20400			22100			20000			21000			23200		
Lead	400	17.5			14.6			28.8			15.4			26.4			15.8			76.2			15.7		
Magnesium	GRAS	4130			3970			4070			3890			4220			4320			4710			4970		
Manganese	1083	548	J		632	J		605			706			759			718			634			483		
Mercury	23		U	(0.11)		U	(0.12)		U	(0.1)		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.14)		U	(0.12)
Nickel	39.3	24.5			23.5			22.1			20.4			25.6			29.6			25.6			23.1		
Potassium	GRAS	2860			2460			3690			2600			3230			2390			4230			3610		
Selenium	1.33	1.3	J			U	(1)	1	J		1.1	J			U	(1.1)	1.1	J			U	(1.2)	***1.6***	J	
Sodium	GRAS		U	(320)		U	(310)		U	(312)		U	(318)		U	(339)		U	(342)		U	(360)		U	(346)
Vanadium	72.5	34.8			28.4			45.3	J		37.2	J		38.5	J		27.3	J		47.6	J		52.6	J	
Zinc	119.5	64.3			56.1			95.1			57.7			67.6			60.3			95.3			74.1		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-021						B2A-022						B2A-023						B2A-024					
		B2A-021-000 (0-0.5 ft)			B2A-021-001 (1-2 ft)			B2A-022-000 (0-0.5 ft)			B2A-022-001 (1-2 ft)			B2A-023-000 (0-0.5 ft)			B2A-023-001 (1-2 ft)			B2A-024-000 (0-0.5 ft)			B2A-024-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)	***32***			***16***				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	***87***			***37***				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)	***12***			***7.6***				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)	2.8			1.4				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	2.4			1.1				U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)	0.089	J		1.9	J		***12***				U	(0.75)		U	(0.75)	0.2	J		0.089	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.11	J			U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	2.2				U	(1.4)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	9430			14300			18400			9370			9190			11400			13200			13400		
Antimony	31		R			R		0.59	J			R			R			R			R			R	
Arsenic	13.5	7.7	J		7.6	J		9.7			8.8	J		7.4	J		6.3	J		9.2			8.4	J	
Barium	440	220			250			266			223			241			268			227			249		
Beryllium	1.52	0.6			0.78			0.84			0.65			0.59			0.67			0.7			0.7		
Cadmium	0.4	***0.87***	J		0.31	J		0.26	J		***0.43***	J		***0.46***	J		***0.48***	J			U	(1.3)		U	(1.3)
Calcium	GRAS	4910			5470			4170			4030			4870			4850			4670			4630		
Chromium	37	13.5			20			23.3			13.4			13.8			17.5			17.6			18.6		
Cobalt	17.2	9.1			11.7			9.5			10.4			8.9			7.2			9.8			10.8		
Copper	33.9	22.7	J		21	J		24.1	J		22.5	J		20.4			21.3			20.6			20.2		
Iron	GRAS	15700			19900			21400			17400			16400			16200			18900			18100		
Lead	400	217			15.2			23.6			27			32.3	J		13.8	J		18.3			14		
Magnesium	GRAS	3160			4450			4480			3250			3340			4220			3820			3950		
Manganese	1083	614			539			279			478			608			574			622			634		
Mercury	23		U	(0.14)		U	(0.13)		U	(0.12)		U	(0.11)		UJ	(0.13)		UJ	(0.12)		U	(0.11)		U	(0.13)
Nickel	39.3	21.7			22.1			24.4			25.4			21.9			27			24.4			23.3		
Potassium	GRAS	3440			3230			4130			2550			3220			2780			3510			3320		
Selenium	1.33		U	(1.2)		U	(1.1)		U	(1.1)		U	(1.1)		UJ	(1.1)		UJ	(1.1)	***1.7***	J			U	(1.1)
Sodium	GRAS	2120			1230			2720			2640				U	(341)		U	(342)		U	(344)		U	(343)
Vanadium	72.5	26.8			38.1			53.8			27.4			26.8			29			37			37.4		
Zinc	119.5	***147***			70.4			72.2			67.6			79.8	J		62.2	J		68.8			52.3		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-025						B2A-026						B2A-027						B2A-028					
		B2A-025-000 (0-0.5 ft)			B2A-025-001 (1-2 ft)			B2A-026-000 (0-0.5 ft)			B2A-026-001 (1-2 ft)			B2A-027-000 (0-0.5 ft)			B2A-027-001 (1-2 ft)			B2A-028-000 (0-0.5 ft)			B2A-028-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)	0.055	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.18	J		4.4			0.11	J		0.13	J			U	(0.75)	0.21	J		0.62	J		0.49	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)	0.15	J		0.13	J			U	(0.75)	0.17	J			U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.051	J		0.046	J	
METALS (MG/KG)																									
Aluminum	33852	12200			16000			10400			16400			14600			13900			15800			14400		
Antimony	31		R			R			R			R			R			R			UJ	(0.48)		UJ	(0.49)
Arsenic	13.5	8.4	J		9.9			9.4			9.6			9.2	J		7.9	J		8.1	J		9.8		
Barium	440	221			286			221			262			237			264			295			357		
Beryllium	1.52	0.62			0.78			0.63			0.76			0.71			0.74			0.8			0.8		
Cadmium	0.4	***2***				U	(1.3)		U	(1.2)		U	(1.2)		U	(1.4)		U	(1.3)	***0.72***	J		***0.56***	J	
Calcium	GRAS	4660			4510			4860			5240			4550			4640			4730			4680		
Chromium	37	17.7			19.9			14.2			20.3			19.3			18.2			20.2			18.6		
Cobalt	17.2	9.4			10.4			9.8			9.8			10.1			10.6			11.3	J		12.1	J	
Copper	33.9	***36.1***			22.9			20			20.5			19.5			21.4			21.8			23.9		
Iron	GRAS	18500			21000			17800			20100			19100			19200			20500			21000		
Lead	400	***447***			14.4			28.2			13.4			38.5			14.3			99.2			16.2		
Magnesium	GRAS	3360			4580			3310			4260			4260			4380			4380			4650		
Manganese	1083	569			620			566			576			621			834			739			985		
Mercury	23	0.22	J			U	(0.12)		U	(0.12)		U	(0.11)		U	(0.11)		U	(0.11)		U	(0.13)		U	(0.12)
Nickel	39.3	23.9			26			22.8			24.5			24.6			28			28.9			31.3		
Potassium	GRAS	3410			3390			2990			3590			3840			3210			4030			3080		
Selenium	1.33	***1.7***	J			U	(1.1)	1.2	J			U	(1.1)		U	(1.2)		U	(1.2)	***1.9***	J			U	(1.1)
Sodium	GRAS		U	(347)		U	(344)		U	(340)		U	(338)		U	(368)		U	(358)		U	(342)		U	(345)
Vanadium	72.5	34.8			45.3			30.4			46.5			42.3			40.5			43.7	J		42.6	J	
Zinc	119.5	***270***			60.6			119			57.8			82.5			60.4			75.8			70.1		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-029						B2A-030						B2A-031						B2A-032					
		B2A-029-000 (0-0.5 ft)			B2A-029-001 (1-2 ft)			B2A-030-000 (0-0.5 ft)			B2A-030-001 (1-2 ft)			B2A-031-000 (0-0.5 ft)			B2A-031-001 (1-2 ft)			B2A-032-000 (0-0.5 ft)			B2A-032-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	1.4				U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.21	J		0.032	J		0.81				U	(0.5)	***170***			0.48	J		0.11	J		0.14	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.48	J			U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)	0.26	J			U	(0.5)	1.8			0.87			0.15	J			U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	0.21	J			U	(1)	1.3				U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(1)		U	(0.8)	0.25	J			U	(0.75)		U	(0.75)		U	(0.75)	0.23	J			U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	0.04	J			U	(0.5)		U	(0.5)	0.041	J		0.057	J		0.066	J	
METALS (MG/KG)																									
Aluminum	33852	16300	J		18700	J		11700	J		16600	J		8960	J		17800	J		9570	J		12100	J	
Antimony	31		UJ	(0.43)		UJ	(0.46)		R			R			R			R			R			R	
Arsenic	13.5	6.2	J		9.5			6.5	J		9			5.5	J		8.2			7	J		7.2	J	
Barium	440	***516***	J		313	J		202			219			179			247			181			205		
Beryllium	1.52	0.7			0.88			0.59			0.81			0.48			0.82			0.55			0.69		
Cadmium	0.4	***1.4***				U	(1.2)	***0.87***	J		0.16	J		***1.2***			0.36	J		***0.77***	J		0.32	J	
Calcium	GRAS	27700	J		4600	J		28100			3950			91600			3780			49300			4720		
Chromium	37	23.4	J		21.1	J		18.8	J		17.6	J		12.1	J		18.3	J		11.8	J		13.3	J	
Cobalt	17.2	12.8			11.6			8.2			10.3			6.8			11			7			9.4		
Copper	33.9	19.6	J		22.6	J		20.8			19.4			17.1			18.5			16.1			15.9		
Iron	GRAS	18900	J		22600	J		17100			19600			12200			19500			13700			16200		
Lead	400	393	J		16	J		82.3	J		14	J		116	J		14.3	J		32.1	J		17.9	J	
Magnesium	GRAS	4170			4720			4210			3840			4160			3930			3690			3010		
Manganese	1083	645	J		658	J		495			627			553			712			485			579		
Mercury	23		UJ	(0.11)		UJ	(0.1)		U	(0.11)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)
Nickel	39.3	22.2			28.2			19.3			23			16.7			22.7			17.3			20.1		
Potassium	GRAS	3900			3360			3200			2760			2900			2750			2430			2320		
Selenium	1.33	1.2	J			U	(1.1)	1.1	J		1.2	J			U	(1.1)	***1.6***	J			U	(1)	***1.7***	J	
Sodium	GRAS		U	(303)		U	(327)		U	(333)		U	(336)		U	(331)		U	(315)		U	(320)		U	(332)
Vanadium	72.5	40.9			42.8			28.7			32.2			23.4			34.1			22.3			25.7		
Zinc	119.5	***377***	J		60.6	J		99.9			53.6	U	(1.5)	94.8			51.1			72.3			50.1		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-033						B2A-034						B2A-035						B2A-036					
		B2A-033-000 (0-0.5 ft)			B2A-033-001 (1-2 ft)			B2A-034-000 (0-0.5 ft)			B2A-034-001 (1-2 ft)			B2A-035-000 (0-0.5 ft)			B2A-035-001 (1-2 ft)			B2A-036-000 (0-0.5 ft)			B2A-036-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)	***11***				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	***500***			***18***			0.34	J		1				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	1.7			1.3			0.43	J		0.41	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	2.4			0.43	J		0.37	J		0.33	J			U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	10700			17300			7290			13600			14000			15400			9940			12700		
Antimony	31		UJ	(0.45)		UJ	(0.46)	0.94	J		0.48	J		0.51	J			UJ	(0.46)		UJ	(0.46)		UJ	(0.48)
Arsenic	13.5	5.9	J		6.6	J		4.8	J		6.1	J		7.2	J		7.7	J		5	J		9.2		
Barium	440	193			185			270			196			235			237			241			333		
Beryllium	1.52	0.55			0.73			0.35			0.65			0.67			0.74			0.5			0.72		
Cadmium	0.4	***1.2***			0.16	J		***1.1***	J		0.32	J		***0.41***	J		0.23	J		***3.1***			***0.46***	J	
Calcium	GRAS	39900			3280			35800			10900			3400			3260			23100			5050		
Chromium	37	12.9			16.9			14.5			14			15.4			16			15.7			15.5		
Cobalt	17.2	7.2			8			6			8.3			9			9.1			7.3			10.1		
Copper	33.9	18.1			11.9			21.1			13.7			16.5			15.9			***136***			20.7		
Iron	GRAS	14300			17300			15000			15100			16600			17700			14600			18700		
Lead	400	163			13.6			90.2			20.6			68.4			13.2			***478***			16.7		
Magnesium	GRAS	4980			3090			3830			2710			3290			3470			3300			3620		
Manganese	1083	467			396			382			501			547			545			468			640		
Mercury	23		UJ	(0.12)		UJ	(0.11)		UJ	(0.12)		UJ	(0.12)		UJ	(0.11)		UJ	(0.12)		UJ	(0.11)		UJ	(0.13)
Nickel	39.3	18			16.7			28.3			17.6			18.7			20.5			19.8			25.3		
Potassium	GRAS	2960			3000			1760			2740			3550			3210			2560			2580		
Selenium	1.33	***2***	J		***1.5***	J		***1.7***	J		1.1	J			UJ	(1.1)		UJ	(1.1)		UJ	(1.1)		UJ	(1.1)
Sodium	GRAS		U	(322)		U	(328)		U	(328)		U	(330)		U	(350)		U	(329)		U	(324)		U	(341)
Vanadium	72.5	25.3			36.4			18.4			30.1			32.4			32.8			23.5			33.2		
Zinc	119.5	***184***			46.5			***140***			48.4			67			46.8			***654***			59.8		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-037						B2A-038						B2A-039						B2A-040					
		B2A-037-000 (0-0.5 ft)			B2A-037-001 (1-2 ft)			B2A-038-000 (0-0.5 ft)			B2A-038-001 (1-2 ft)			B2A-039-000 (0-0.5 ft)			B2A-039-001 (1-2 ft)			B2A-040-000 (0-0.5 ft)			B2A-040-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	8.4				U	(0.5)	0.6				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.23	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.14	J			U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)	0.17	J			U	(0.75)		U	(0.75)	0.69	J		0.6	J		0.46	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	0.05	J		0.049	J		0.031	J			U	(0.5)	0.096	J			U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	14100			12500			7150	J		7400	J		12400			17200			15200	J		16700	J	
Antimony	31	0.56	J			UJ	(0.45)	1.6	J			R			UJ	(0.47)		UJ	(0.43)		UJ	(0.49)		UJ	(0.45)
Arsenic	13.5	8.3	J		7.3	J		***15.5***			7.5	J		6.9	J		8.7			8.5	J		9.4		
Barium	440	245			281			169			218			213			275			266	J		309	J	
Beryllium	1.52	0.71			0.7			0.4			0.53			0.63			0.83			0.76			0.83		
Cadmium	0.4	***1.2***			0.39	J		***2.5***			0.36	J		***1.3***			0.37	J		***0.53***	J		***0.56***	J	
Calcium	GRAS	5500			4030			44000			6080			11800			4430			5820	J		5330	J	
Chromium	37	17.8			15.2			***70.6***	J		10.3	J		18.6			19.7			23	J		22	J	
Cobalt	17.2	9.4			9.8			10.6			8.2			8.8	J		10.7	J		10.4	J		10.9	J	
Copper	33.9	19.8			20.7			***145***			17.4			24.5			21.8			22.4	J		22.9	J	
Iron	GRAS	18400			18000			118000			13900			16700			20500			19600	J		21300	J	
Lead	400	40.4			13.9			138	J		17.4	J		***1040***			19.9			99.3	J		16	J	
Magnesium	GRAS	3910			3970			3800			2720			4500			4010			4440			4810		
Manganese	1083	567			544			***1090***			499			544			650			631	J		759	J	
Mercury	23		UJ	(0.11)		UJ	(0.12)		U	(0.13)		U	(0.12)		U	(0.12)		U	(0.11)		UJ	(0.13)		UJ	(0.11)
Nickel	39.3	23.6			24.1			***52.4***			20.5			22.2			26.1			25.3			28.3		
Potassium	GRAS	3380			2450			1570			1630			2970			2920			4150			3460		
Selenium	1.33	1.2	J		1.2	J		***3.3***	J			U	(1.1)	***2.1***	J			U	(1)	***1.4***	J		1.3	J	
Sodium	GRAS		U	(333)		U	(323)		U	(342)		U	(331)		U	(337)		U	(307)		U	(346)		U	(323)
Vanadium	72.5	36.3			30.3			35.3			20.4			35.4	J		40.8	J		43.5	J		45.9	J	
Zinc	119.5	65.3			51.7			***404***			53.8			***317***			59			73.6	J		62.1	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-041						B2A-042						B2A-043						B2A-044					
		B2A-041-000 (0-0.5 ft)			B2A-041-001 (1-2 ft)			B2A-042-000 (0-0.5 ft)			B2A-042-001 (1-2 ft)			B2A-043-000 (0-0.5 ft)			B2A-043-001 (1-2 ft)			B2A-044-000 (0-0.5 ft)			B2A-044-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.079	J			U	(0.5)	0.35	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.091	J		0.0036	J	
METALS (MG/KG)																									
Aluminum	33852	16300			17900			12000			9990			12400			13700			15700			19700		
Antimony	31		UJ	(0.49)		UJ	(0.46)		UJ	(0.48)		UJ	(0.46)	0.75	J			UJ	(0.47)	0.78	J			UJ	(0.48)
Arsenic	13.5	8.2	J		8.8			6.2	J		7.5	J		6.9	J		9.1			8.6	J		9.9		
Barium	440	279			329			199			231			190			253			183			253		
Beryllium	1.52	0.79			0.88			0.65			0.62			0.7			0.75			0.62			0.93		
Cadmium	0.4	***0.94***	J		***0.45***	J		***0.5***	J		0.28	J		***1.6***			0.24	J		***4.3***			0.21	J	
Calcium	GRAS	8830			5130			3520			3750			8140			4490			135000			5130		
Chromium	37	29.5			23.3			14.8			12.8			17.1			15.2			23.7			21		
Cobalt	17.2	10.6	J		10	J		7.8			8.7			9.3			10.4			8.3			11.6	J	
Copper	33.9	27.6			24.3			19.7			19.2			28.9			20.1			28.8			23.7		
Iron	GRAS	20700			21700			15400			15900			17400			19000			22300			23000		
Lead	400	200			18.5			172			12.8			***866***			15.1			339			17.2		
Magnesium	GRAS	5190			5170			2880			3510			3190			3560			4150			4120		
Manganese	1083	610			499			401			469			598			627			594	J		639		
Mercury	23		U	(0.13)		U	(0.11)		UJ	(0.12)		UJ	(0.11)		UJ	(0.13)		UJ	(0.12)		U	(0.11)		U	(0.13)
Nickel	39.3	26.8			25.7			16.9			21.2			28.2			24.4			24.6			27.4		
Potassium	GRAS	3800			3550			2950			2160			2870			2400			3580			3070		
Selenium	1.33		U	(1.1)		U	(1.1)	***1.5***	J		1.2	J		***2***	J			UJ	(1.1)		U	(1.2)		U	(1.1)
Sodium	GRAS		U	(345)		U	(329)		U	(343)		U	(324)		U	(345)		U	(335)		U	(369)		U	(340)
Vanadium	72.5	45.6	J		50.6	J		29.2			24.9			31.5			32.5			37.9			39.7	J	
Zinc	119.5	***139***			64			96.5			45.5			***299***			51.8			***151***			62.1		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-045						B2A-046						B2A-047						B2A-048					
		B2A-045-000 (0-0.5 ft)			B2A-045-001 (1-2 ft)			B2A-046-000 (0-0.5 ft)			B2A-046-001 (1-2 ft)			B2A-047-000 (0-0.5 ft)			B2A-047-001 (1-2 ft)			B2A-048-000 (0-0.5 ft)			B2A-048-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)	0.65	J			U	(0.75)		U	(0.75)	0.16	J		0.65	J			U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		R			U	(0.75)		U	(0.75)	0.32	J			U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	0.13	J		0.044	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	17100			19300			15200	J		19200			15100			17200	J		14400			22000		
Antimony	31		UJ	(0.48)		UJ	(0.45)		UJ	(0.49)		R			R			R			R			R	
Arsenic	13.5	9.8			11			8.5	J		9.9			8	J		10.3			7.3	J		9.5		
Barium	440	221			277			184			270			199			240			183			212		
Beryllium	1.52	0.8			0.93			0.63			0.91			0.71			0.84			0.68			0.91		
Cadmium	0.4	***2.2***			***0.53***	J		***1.3***			0.33	J			U	(1.3)		U	(1.2)	***0.89***	J			U	(1.3)
Calcium	GRAS	23300			4850			13500	J		4610			5870			4140			6070			4450		
Chromium	37	20.9			21.7			24.5	J		21.2			19			19.1	J		18.5			22.2		
Cobalt	17.2	9.9			12.3			8.9			12.7			9.3			11.1			8.5			10.4		
Copper	33.9	24			24.5			***42.6***	J		23.7	J		21.6			22.8			20.7			19.3		
Iron	GRAS	22900			23500			25500	J		22900			18900			21700			17300			21800		
Lead	400	***591***			17.3			***495***	J		16.7			346			20.9			***482***			49		
Magnesium	GRAS	4400			4730			3250			4630			3210			4360			2990			3940		
Manganese	1083	603	J		725	J		562			741			548			637			498			581		
Mercury	23	0.39				U	(0.1)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.1)		U	(0.13)		U	(0.13)
Nickel	39.3	24.7			30.1			24.9			29.9			21.6			26.4			23.3			23.1		
Potassium	GRAS	3620			3160			3290			3400			3180			2960			2830			3410		
Selenium	1.33	***1.4***	J		***1.9***	J		***1.7***	J			U	(1.1)	***1.5***	J		1.2	J		***1.8***	J		***1.5***	J	
Sodium	GRAS		U	(339)		U	(321)		U	(350)	2170				U	(344)		U	(333)		U	(355)		U	(347)
Vanadium	72.5	42.7			40.6			38.1			46.1			35.2			40			33.6			46.3		
Zinc	119.5	***247***			64.8			***271***	J		67.6			118			59.2	J		***137***			60		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-049						B2A-050						B2A-051						B2A-052					
		B2A-049-000 (0-0.5 ft)			B2A-049-001 (1-2 ft)			B2A-050-000 (0-0.5 ft)			B2A-050-001 (1-2 ft)			B2A-051-000 (0-0.5 ft)			B2A-051-001 (1-2 ft)			B2A-052-000 (0-0.5 ft)			B2A-052-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.44	J			U	(0.5)		U	(0.5)	0.089	J	
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	***14000***			0.41	J		0.44	J			U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	***3.7***				U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)	0.27	J		4.5			0.22	J			U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.48	J			U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.077	J			U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		UJ	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	0.016	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	10400			12700			9790	J		11000	J		8310	J		11400	J		11000	J		11800	J	
Antimony	31		R			R			R			R			R			R			R			R	
Arsenic	13.5	6.9	J		8.8			5.4	J		9.7			6.2	J		9.1			6.6	J		9.3		
Barium	440	225			213			191	J		277	J		153			270			175			263		
Beryllium	1.52	0.62			0.7			0.6			0.7			0.48			0.68			0.55			0.7		
Cadmium	0.4		U	(1.3)		U	(1.2)	***0.6***	J			U	(1.3)	***1.4***				U	(1.3)	***1.3***				U	(1.2)
Calcium	GRAS	4430			4040			7620	J		15300	J		89000			9440			89200			4910		
Chromium	37	13.1			14.2			15.3	J		14.9	J		12	J		15.1	J		18.1	J		15.8	J	
Cobalt	17.2	8.1			9.3			8			11.1			6.6			9.4			6.8			9.4		
Copper	33.9	17.4			19.3			21.5	J		22.7	J		16.1			20.8			23.9			20.8		
Iron	GRAS	14600			17700			14400	J		19200	J		12300			18100			16200			18800		
Lead	400	118			16.7			***540***	J		25.1	J		177			13.5			280			14.6		
Magnesium	GRAS	2880			3530			2610			3950			4510			3720			5680			4000		
Manganese	1083	454			580			442	J		749	J		485			595			490			561		
Mercury	23		U	(0.13)		U	(0.11)		UJ	(0.13)		UJ	(0.11)		U	(0.11)		U	(0.12)	0.12	J			U	(0.13)
Nickel	39.3	18.4			22.1			18.6			28.8			17.9			23.9			19.4			24.6		
Potassium	GRAS	3170			2660			2650			2590			2620			2520			3150			2540		
Selenium	1.33	1.3	J			U	(1.1)		U	(1.2)		U	(1.1)		UJ	(1.1)	1.3	J			UJ	(1.1)		UJ	(1.1)
Sodium	GRAS		U	(352)		U	(338)		U	(1280)		U	(1420)		U	(341)		U	(340)		U	(338)		U	(340)
Vanadium	72.5	26.7			24.1			25.5			31.6			22.7			31.6			28.3			32.4		
Zinc	119.5	77.3			50.5			***194***	J		66.8	J		***135***	J		57.1	J		***140***	J		56.2	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-053						B2A-054						B2A-055						B2A-056					
		B2A-053-000 (0-0.5 ft)			B2A-053-001 (1-2 ft)			B2A-054-000 (0-0.5 ft)			B2A-054-001 (1-2 ft)			B2A-055-000 (0-0.5 ft)			B2A-055-001 (1-2 ft)			B2A-056-000 (0-0.5 ft)			B2A-056-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.19	J			U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.062	J			U	(0.5)	0.37	J			U	(0.5)		U	(0.5)		U	(0.5)	0.26	J			U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)	0.35	J			U	(0.5)	0.26	J			U	(0.5)		U	(0.5)	0.15	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)	0.52	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	0.28	J			U	(1)	0.23	J			U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)	0.052	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.082	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	7670	J		12600	J		9310	J		10600	J		7880	J		10800	J		10100	J		10900	J	
Antimony	31		R			R			R			R			R			R			R			R	
Arsenic	13.5	4.9	J		9.1			4.6	J		9.4			5.2	J		11.9			6.7	J		8.7		
Barium	440	138			269			134			250			148			263			181			216		
Beryllium	1.52	0.43			0.73			0.43			0.66			0.48			0.69			0.6			0.68		
Cadmium	0.4	***1.2***				U	(1.2)	***0.94***	J			U	(1.2)		U	(1)		U	(1.2)	***3.2***			0.33	J	
Calcium	GRAS	107000			4650			173000			18400			4750			5300			5290			4040		
Chromium	37	10.4	J		16.2	J		12.8	J		14.6	J		10.9	J		14.8	J		16.9	J		12.4	J	
Cobalt	17.2	5.4			9.5			5			8.6			6.6			13			8.1			9.6		
Copper	33.9	13.8			20.7			14.6			20			16.2			24.3			***78.1***			22.4		
Iron	GRAS	11500			19600			11500			17700			12100			19000			15200			17000		
Lead	400	360			15.2			162			19.7			176			16.2			258	J		14.8	J	
Magnesium	GRAS	3410			4020			5470			3870			2170			3550			2830			3260		
Manganese	1083	417			558			374			528			393			776			498			487		
Mercury	23		U	(0.12)		U	(0.12)		U	(0.12)	0.13	J			U	(0.09)		U	(0.11)		U	(0.13)		U	(0.13)
Nickel	39.3	13.7			23.9			13.1			21.9			17.5			29.3			22.3			25.1		
Potassium	GRAS	2520			2630			3470			2570			1960			2320			2450			2020		
Selenium	1.33		UJ	(1.1)	***1.6***	J			UJ	(1.1)	1.2	J		1.3	J		1.3	J			U	(1.1)		U	(1.1)
Sodium	GRAS		U	(323)		U	(335)		U	(338)		U	(333)		U	(274)		U	(340)		U	(345)		U	(326)
Vanadium	72.5	19.8			34			22.8			30.2			20.2			31.3			24.3			23.8		
Zinc	119.5	***133***	J		54.6	J		74	J		60.6	J		***142***	J		58	J		***143***			46.9		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-057						B2A-058						B2A-059						B2A-060					
		B2A-057-000 (0-0.5 ft)			B2A-057-001 (1-2 ft)			B2A-058-000 (0-0.5 ft)			B2A-058-001 (1-2 ft)			B2A-059-000 (0-0.5 ft)			B2A-059-001 (1-2 ft)			B2A-060-000 (0-0.5 ft)			B2A-060-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.12	J			U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.091	J			U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	15700	J		17800	J		21600	J		19900	J		12700	J		12600	J		16400			17300		
Antimony	31	0.63	J		0.72	J		1.1	J		1.1	J			R			R		0.59	J			UJ	(0.47)
Arsenic	13.5	8.2	J		9.4			11.1			7.9	J		8.2	J		8.4			7.1	J		9.7		
Barium	440	233	J		281	J		277	J		236	J		185			242			226			294		
Beryllium	1.52	0.76			0.88			0.95			0.83			0.67			0.69			0.75			0.85		
Cadmium	0.4	***3.6***				U	(1.3)		U	(1.2)	***2.2***			***0.71***	J		***0.43***	J		***0.95***	J			U	(1.2)
Calcium	GRAS	5670	J		5190	J		4940	J		4790	J		4130			5260			4450			7850		
Chromium	37	22	J		22.1	J		26.3	J		28.8	J		16.5	J		16	J		22.4			22		
Cobalt	17.2	10.5			11.4			11.9			11			8.5			9.6			9.7			11.4		
Copper	33.9	***43.4***	J		23.9	J		26	J		***37.7***	J		29.6			21.8			25.7			22.5		
Iron	GRAS	19900	J		22300	J		23700	J		20900	J		16800			17700			19000			21800		
Lead	400	***625***	J		31.2	J		58	J		***406***	J		36.4	J		21.5	J		176			27.3		
Magnesium	GRAS	4100			4670			5200			4180			3430			4520			4480			5970		
Manganese	1083	592	J		670	J		664	J		583	J		465			560			525			626		
Mercury	23		UJ	(0.11)		UJ	(0.12)		UJ	(0.11)		UJ	(0.12)		U	(0.11)		U	(0.12)		U	(0.12)		U	(0.1)
Nickel	39.3	25.7			28.2			28			27.1			22.2			24.4			33.6			27.6		
Potassium	GRAS	3200			3370			3910			3570			2590			2600			3520			3610		
Selenium	1.33		U	(1.1)		U	(1.1)	***1.7***	J		***1.6***	J		1.1	J			U	(1.1)	1.2	J		***1.5***	J	
Sodium	GRAS		U	(344)		U	(349)		U	(336)		U	(328)		U	(334)		U	(323)		U	(321)		U	(337)
Vanadium	72.5	43.7			48.8			57.9			50.8			34.3			32.4			42.6			49.5		
Zinc	119.5	***192***	J		69.1	J		82.1	J		***195***	J		60			54.9			111	J		61.9	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-061						B2A-062						B2A-063						B2A-064					
		B2A-061-000 (0-0.5 ft)			B2A-061-001 (1-2 ft)			B2A-062-000 (0-0.5 ft)			B2A-062-001 (1-2 ft)			B2A-063-000 (0-0.5 ft)			B2A-063-001 (1-2 ft)			B2A-064-000 (0-0.5 ft)			B2A-064-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)	0.24	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.19	J			U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.053	J		0.1	J			U	(0.5)	0.27	J	
METALS (MG/KG)																									
Aluminum	33852	15700			17900			20800			19900			10400			12200	J		19100			20200		
Antimony	31	0.78	J			UJ	(0.47)		UJ	(4.5)		UJ	(0.42)		R			R		1	J		0.63	J	
Arsenic	13.5	6.7	J		8.4	J		9.1			9.2			5.4	J		7.2	J		7	J		8.3	J	
Barium	440	206			269			264			252			128			212			206			243		
Beryllium	1.52	0.67			0.83			0.88			0.83			0.47			0.7			0.75			0.89		
Cadmium	0.4	***1.1***	J			U	(1.2)		U	(1.2)		U	(1.1)	***1***	J		***0.96***	J		***1.5***				U	(1.2)
Calcium	GRAS	25200			5930			5360			4460			40100			6830			10100			4380		
Chromium	37	19			22.5			24			25			20.2			14	J		21.6			20.5		
Cobalt	17.2	8.5			11.2			10.9			11.4			6.8			8.9			9.2			11		
Copper	33.9	19.4			20.4			22.7			***48.9***			***34.4***	J		***38.1***			***45.6***			18.4		
Iron	GRAS	17100			20800			22100			33900			17500			17600			18600			21100		
Lead	400	59.5			15.8			129			34.3			***440***			26.7	J		185			19		
Magnesium	GRAS	3650			5060			5400			4980			3440			3280			3810			3840		
Manganese	1083	508			635			613			622			402			536			524			648		
Mercury	23		U	(0.12)		U	(0.12)		U	(0.11)		U	(0.11)		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.11)
Nickel	39.3	21.4			26.3			26.4			***45.6***			17.4			20.2			21.5			23		
Potassium	GRAS	3830			3660			4940			3720			2360			2310			3820			3660		
Selenium	1.33	***1.4***	J			U	(1.1)	***1.4***	J		***2.2***	J		1.1	J			U	(1.1)	1.2	J		***1.6***	J	
Sodium	GRAS		U	(328)		U	(337)		U	(321)		U	(296)	1890				U	(343)		U	(329)		U	(334)
Vanadium	72.5	40.8			49.2			54.6			51.2			24.3			27.7			44.8			45.2		
Zinc	119.5	71.1	J		55.2	J		84.8	J		60.6	J		***189***			58.8			88.8	J		54.9	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-065						B2A-066						B2A-067						B2A-068					
		B2A-065-000 (0-0.5 ft)			B2A-065-001 (1-2 ft)			B2A-066-000 (0-0.5 ft)			B2A-066-001 (1-2 ft)			B2A-067-000 (0-0.5 ft)			B2A-067-001 (1-2 ft)			B2A-068-000 (0-0.5 ft)			B2A-068-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.034	J			U	(0.5)	0.6				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.43	J			U	(0.5)	12				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)	1.1				U	(0.5)		U	(0.5)	0.99				U	(0.5)	0.25	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		UJ	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	0.77	J			U	(1)		U	(1)	0.53	J			U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		UJ	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.51	J		0.15	J			U	(0.75)		U	(0.75)		U	(0.75)	0.28	J		1.2			0.97		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.35	J		0.052	J		0.34	J			U	(0.5)		U	(0.5)	0.12	J		0.054	J		0.051	J	
METALS (MG/KG)																									
Aluminum	33852	9620			18200	J		20400			23600			17300	J		16400	J		14400	J		18000	J	
Antimony	31		R			J		1.2	J		0.72	J			R			R			UJ	(0.46)	0.46	J	
Arsenic	13.5	6.4	J		8	J		7.3	J		8.4	J		6.9	J		6.6	J		4.6	J		8		
Barium	440	217			196			253			230			191			189			245	J		238	J	
Beryllium	1.52	0.56			0.83			0.83			0.93			0.72			0.71			0.67			0.83		
Cadmium	0.4	***1.9***			***0.42***	J		***1.4***				U	(1.2)	***0.86***	J		0.18	J		***1.5***				U	(1.1)
Calcium	GRAS	11900			6550			8780			5080			5990			3530			3500	J		3410	J	
Chromium	37	13.8			19.3	J		24.4			24.5			21.2	J		17.6	J		18.5	J		19.1	J	
Cobalt	17.2	8.1			9.8			11.2			10.5			8.4			8.1			7.8			10.5		
Copper	33.9	27	J		19.4			29.2			18.9			30.6			14			25.2	J		20.2	J	
Iron	GRAS	14200			20300			20000			22000			17400			16300			16700	J		19700	J	
Lead	400	***664***			19.5	J		152			37.2			244	J		32	J		96.7	J		19	J	
Magnesium	GRAS	2890			3490			3780			3940			3330			2800			3140			3640		
Manganese	1083	646			576			718			599			562			475			410	J		634	J	
Mercury	23		U	(0.13)		U	(0.13)		U	(0.11)		U	(0.12)		U	(0.13)		U	(0.13)		UJ	(0.11)		UJ	(0.12)
Nickel	39.3	18.8			22.2			23.2			23.1			20.3			17.2			15			23.1		
Potassium	GRAS	2450			3030			4270			3900			3290			3080			3700			3640		
Selenium	1.33		U	(1.1)		U	(1.1)	1.2	J		***1.6***	J		***1.6***	J			U	(1.1)		U	(1.1)		U	(0.95)
Sodium	GRAS	758				U	(335)		U	(337)		U	(333)		U	(344)		U	(335)		U	(323)		U	(290)
Vanadium	72.5	23.1			39.5			47.4			53.1			38.5			35			35.9			39.2		
Zinc	119.5	***165***			53			119	J		62	J		110			51.3			106	J		71.3	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-069						B2A-070						B2A-071						B2A-072					
		B2A-069-000 (0-0.5 ft)			B2A-069-001 (1-2 ft)			B2A-070-000 (0-0.5 ft)			B2A-070-001 (1-2 ft)			B2A-071-000 (0-0.5 ft)			B2A-071-001 (1-2 ft)			B2A-072-000 (0-0.5 ft)			B2A-072-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)	0.36	J		0.32	J		0.44	J		0.42	J			U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)	0.12	J		0.046	J			U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)	0.18	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)	0.24	J		0.39	J			U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)	0.18	J		0.37	J		0.38	J			U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	1.3			1.3				U	(0.75)	0.27	J			U	(0.75)	0.26	J			U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)	0.5	U	(0.5)	0.11	J		0.53	J		0.28	J			U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.039	J		0.07	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	20300	J		21400	J		9800			15500			15100			10500			16500			16900		
Antimony	31	0.61	J		0.51	J			R			R			R			R			UJ	(0.48)		U	(0.47)
Arsenic	13.5	7.4	J		8			6	J		6.7	J		7.5	J		7	J		5.1	J		8.8		
Barium	440	219	J		234	J		224			240			208			197			239			265		
Beryllium	1.52	0.84			0.89			0.62			0.72			0.77			0.64			0.92			0.81		
Cadmium	0.4		U	(1.2)		U	(1.1)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.13)	0.13	J	
Calcium	GRAS	5490	J		4400	J		4200			3700			4120			4070			4440			4210		
Chromium	37	22	J		22.4	J		12.2			16.1			16.2			11.6			18.9			19		
Cobalt	17.2	10.1			11.1			8.5			9.2			14			12.8			8.1			10.9		
Copper	33.9	***34.1***	J		18	J		17			16.6			16.8			18.5			22.8			20.9		
Iron	GRAS	19900	J		20500	J		15100			17600			18700			15400			18100			20300		
Lead	400	189	J		22.9	J		22.6	J		13.4	J		18	J		21	J		13.8	J		16.2		
Magnesium	GRAS	3870			3800			3150			3460			3440			3050			3410			3970		
Manganese	1083	575	J		541	J		517			546			613			611			412			579		
Mercury	23		UJ	(0.12)		UJ	(0.12)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)
Nickel	39.3	21.8			21.7			20.6			19.4			19.9			21.2			17.9			22		
Potassium	GRAS	4220			3880			2760			3240			2650			1890			2670			3120		
Selenium	1.33	***1.6***	J		1.1	J		1.3	J			U	(1.1)	***1.7***	J		1.3	J		1.3	J		***1.5***	J	
Sodium	GRAS		U	(326)		U	(31)		U	(332)		U	(327)		U	(347)		U	(332)		U	(351)	259	J	
Vanadium	72.5	47.2			48			22.7			31.5			30.1			17.8			26.9			35.8		
Zinc	119.5	95.5	J		58.3	J		47.9			51.3			50.9			51.5			61.3	J		56		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-4
Analytical Data for Load Line 2 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2A-074						B2A-075						B2A-076						B2A-077					
		B2A-074-000 (0-0.5 ft)			B2A-074-001 (1-2 ft)			B2A-075-000 (0-0.5 ft)			B2A-075-001 (1-2 ft)			B2A-076-000 (0-0.5 ft)			B2A-076-001 (1-2 ft)			B2A-077-000 (0-0.5 ft)			B2A-077-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)	0.16	J		0.94				U	(0.75)	1.1			1.2			1.4			1.1		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.042	J			U	(0.5)	0.038	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	13500	J		13000	J		7970			15800			14600			20000			15500			16400		
Antimony	31		R			R			UJ	(0.45)		UJ	(0.42)		UJ	(0.45)		UJ	(0.44)		UJ	(0.47)		UJ	(0.44)
Arsenic	13.5	6.9	J		7.2	J		3.7	J		8.7			6	J		9.2			7.2	J		9		
Barium	440	213			236			138			311			173			259			252			273		
Beryllium	1.52	0.68			0.7			0.38			0.74			0.63			0.93			0.77			0.8		
Cadmium	0.4	0.2	J		0.29	J		0.38	J		***0.57***	J		***0.72***	J		0.39	J		0.13	J		0.37	J	
Calcium	GRAS	3350			4040			2440			6950			4890			4680			3930			4210		
Chromium	37	15.7	J		16.1	J		10.6			22.2			19.3			22.4			18.5			19.4		
Cobalt	17.2	7.9			9			8.3			10.3			7.7			12			9.3			9.8		
Copper	33.9	16.1			19.8			12.3			22.6			16.7			24.5			18.5			19.5		
Iron	GRAS	16100			17500			9970			18800			15300			23000			18700			19900		
Lead	400	51.1	J		21.9	J		***504***			42.8			91.2			16.2			21.5			43.1		
Magnesium	GRAS	3130			3620			1720			4680			3030			4660			3490			3870		
Manganese	1083	469			534			468	J		599	J		362	J		693	J		522	J		568	J	
Mercury	23		U	(0.12)		U	(0.12)		U	(0.09)		U	(0.12)		U	(0.11)		U	(0.12)		U	(0.12)		U	(0.11)
Nickel	39.3	18.9			21.8			11.5			24.6			17.9			28.6			36.8			22.2		
Potassium	GRAS	2910			2780			2110			3450			3060			3400			3220			3300		
Selenium	1.33		U	(1.1)	***1.6***	J			U	(1)	1.1	J		1.1	J			U	(1)	1.3	J		1.1	J	
Sodium	GRAS		U	(350)		U	(350)		U	(317)		U	(302)		U	(321)		U	(312)		U	(334)		U	(310)
Vanadium	72.5	31.6			32.6			22			43.5			34.6			39.6			36.3			37.6		
Zinc	119.5	53.5			63.3			96.5			66.9			67.3			62.6			54.4			66.9		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-5
Analytical Data for Load Line 2 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2B-001			B2B-002			B2B-003			B2B-004			B2B-005			B2B-006			B2B-007		
		B2B-001-000 (0-1 ft)			B2B-002-000 (0-1 ft)			B2B-003-000 (0-1 ft)			B2B-004-000 (0-1 ft)			B2B-005-000 (0-1 ft)			B2B-006-000 (0-1 ft)			B2B-007-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		UJ	(0.5)		U	(0.5)	0.14	J			U	(0.5)	0.75				U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)	0.38	J			U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)	1.2				U	(0.75)		U	(0.75)	0.8				U	(0.75)	0.66	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.42	J		0.27	J			U	(0.5)	0.34	J			U	(0.5)		U	(0.5)	0.5	J	
METALS (MG/KG)																						
Aluminum	33852	13400	J		14900	J		14500	J		12300			13500			11500			13300		
Antimony	31		R			R			R			R			R			R			R	
Arsenic	13.5	8.2	J		8.3			9.1			8.2			6.5	J		8.6	J		7.1	J	
Barium	440	191	J		202	J		177	J		179			252			226			187		
Beryllium	1.52	0.69			0.75			0.76			0.66			0.66			0.67			0.7		
Cadmium	0.4		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.12)
Calcium	GRAS	4710	J		3780	J		3810	J		3430			3520			4490			2890		
Chromium	37	16.2			16.6			16.9			14.6			15.7			14			14.5		
Cobalt	17.2	8.9			10.4			9.7			8.8			8.7			10			9		
Copper	33.9	20.1	J		19.5	J		21.4	J		19			15			20.4			17.5		
Iron	GRAS	18200	J		19700	J		19800	J		17300	J		17100			18000			17000		
Lead	400	12.3			14			13.7			12.3	J		16.1	J		13.1	J		13.3	J	
Magnesium	GRAS	3920			3900			4060			3470			3540			3300			3010		
Manganese	1083	481	J		668	J		596	J		555			530			664			553		
Nickel	39.3	22.9			23.9			24.4			21.3			18.3			23.6			20.2		
Potassium	GRAS	2460			2560			2840			2340			2290			2320			2550		
Selenium	1.33	1.1	J			U	(1)		U	(1.1)		U	(1)		U	(1)		U	(1.1)	1.2	J	
Sodium	GRAS	266	J		187	J		266	J			U	(311)		U	(317)		U	(342)		U	(326)
Thallium	1.72	1.4	J			U	(1.3)		U	(1.4)		U	(1.3)		U	(12.9)		U	(1.4)		U	(1.3)
Vanadium	72.5	30.5			33.7			34.4			28.8			29.2			26.7			29.7		
Zinc	119.5	50.9			56.8			54.2			49.3	J		48.1	J		51.6	J		46.1	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-5
Analytical Data for Load Line 2 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2B-008			B2B-009			B2B-010			B2B-011			B2B-012			B2B-013			B2B-014		
		B2B-008-000 (0-1 ft)			B2B-009-000 (0-1 ft)			B2B-010-000 (0-1 ft)			B2B-011-000 (0-1 ft)			B2B-012-000 (0-1 ft)			B2B-013-000 (0-1 ft)			B2B-014-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.48	J			U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)	0.44	J			U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)		U	(0.5)		U	(0.5)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		UJ	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)	0.16	J			U	(0.75)	0.38	J			UJ	(0.75)		U	(0.75)	0.082	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		UJ	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.44	J			U	(0.5)		U	(0.5)	0.051	J			UJ	(0.5)	0.32	J		0.11	J	
METALS (MG/KG)																						
Aluminum	33852	11800			16800			9540			11600			13400			14600			14000		
Antimony	31		R			R			R			R			R			R			R	
Arsenic	13.5	8.3	J		8.3	J		6	J		8.5	J		8.8			7.5	J		6.9	J	
Barium	440	214			227			148			232			189			192			147		
Beryllium	1.52	0.64			0.78			0.53			0.66			0.73			0.69			0.7		
Cadmium	0.4		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.12)	0.35	J		0.27	J			U	(0.12)
Calcium	GRAS	4630			3550			3310			3950			3750	J		3520	J		4620		
Chromium	37	14.8			18.9			11.6			15.3			15.5			15.6			14.9		
Cobalt	17.2	8.9			10.2			7.5			8.3			9.9			8.7			8.4		
Copper	33.9	18.8			19.4			15.6			20.9			19.3			14.9			14.5		
Iron	GRAS	18000			19400			13400			18400			18700			16600			16000		
Lead	400	12.4	J		13.9	J		10.5	J		12.2	J		13.7	J		13.1	J		12.3	J	
Magnesium	GRAS	3520			3650			2500			3890			3830			3290			3090		
Manganese	1083	582			583			619			490			608			512			480		
Nickel	39.3	23.1			22.8			17.3			22.1			24	J		18.7	J		17.4		
Potassium	GRAS	2560			3170			1960			2730			2720			3100			2660		
Selenium	1.33		U	(1.1)		U	(1.1)		U	(1)		U	(1.1)		U	(0.99)		U	(0.99)		U	(1.1)
Sodium	GRAS		U	(327)		U	(340)		U	(313)		U	(368)	215	J		193	J			U	(331)
Thallium	1.72		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.2)		U	(1.2)		U	(1.3)
Vanadium	72.5	31.2			40.4			21.9			33.9			30.3			31.6			28.3		
Zinc	119.5	48.6	J		51.4	J		36.2	J		54.3	J		54.9	J		48.9	J		43.7	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-5
Analytical Data for Load Line 2 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2B-015			B2B-016			B2B-017			B2B-018			B2B-019			B2B-020			B2B-021		
		B2B-015-000 (0-1 ft)			B2B-016-000 (0-1 ft)			B2B-017-000 (0-1 ft)			B2B-018-000 (0-1 ft)			B2B-019-000 (0-1 ft)			B2B-020-000 (0-1 ft)			B2B-021-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	3.3				U	(0.5)	0.29	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.32	J	
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)	0.21	J	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	2.2			1.2				U	(0.75)	0.86				U	(0.75)		U	(0.75)	0.64	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		UJ	(0.75)		U	(0.75)		UJ	(0.75)		UJ	(0.75)	0.14	J	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.29	J		0.26	J			U	(0.5)	0.18	J			UJ	(0.5)		UJ	(0.5)		U	(0.5)
METALS (MG/KG)																						
Aluminum	33852	13500			11400			10700			12600			11900			9480			13800		
Antimony	31		R			R			R			R			R			U	(0.44)		U	(0.47)
Arsenic	13.5	7.6	J		11.5			9.3			9.2			9.9			9.1			8.6		
Barium	440	151			228			231			254			262			255			255		
Beryllium	1.52	0.68			0.66			0.64			0.69			0.67			0.6			0.74		
Cadmium	0.4	0.22	J		0.37	J		***0.52***	J		0.4	J		***0.41***	J		0.33	J		0.29	J	
Calcium	GRAS	2930	J		4380	J		4340	J		4700	J		5890	J		3900	J		4120		
Chromium	37	15			15.3			14.6			16.5			15.6			12.2			16.6		
Cobalt	17.2	8.8			10.7			9.2			10.4			10.2			9.5			12.5		
Copper	33.9	14.2			21.2			20.6			20.6			19.9			19.7			22.9		
Iron	GRAS	15600			19300			18100			19000			18500			16200			19600		
Lead	400	13.6	J		13	J		12.9	J		13.3	J		12.9	J		12	J		13.9		
Magnesium	GRAS	2740			4010			3930			4220			3700			3510			4230		
Manganese	1083	522			461			607			605			527			606			709		
Nickel	39.3	17.6	J		24.4	J		25.1	J		25.6	J		23.7	J		24.1	J		26.5		
Potassium	GRAS	3140			2610			2520			2910			3040			1860			2610		
Selenium	1.33		U	(1)		U	(1.1)		U	(1.1)		U	(1.1)		U	(1.2)		U	(1)		U	(1.1)
Sodium	GRAS	191	J		241	J		190	J		183	J		99.1	J		251	J		166	J	
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.4)
Vanadium	72.5	31.3			32.8			30			35.6			30.6			23.4			30.6		
Zinc	119.5	45.9	J		55.7	J		58	J		57.6	J		56.9	J		48.1	J		56.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-5
Analytical Data for Load Line 2 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2B-022			B2B-023			B2B-024			B2B-025			B2B-026			B2B-027			B2B-028		
		B2B-022-000 (0-1 ft)			B2B-023-000 (0-1 ft)			B2B-024-000 (0-1 ft)			B2B-025-000 (0-1 ft)			B2B-026-000 (0-1 ft)			B2B-027-000 (0-1 ft)			B2B-028-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)	***1.9***				U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)	***220***				U	(0.5)		U	(0.5)	0.022	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)	0.19	J			U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)	0.32	J			U	(0.5)		U	(0.5)		U	(0.5)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		UJ	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)	***740***				U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)	35				U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																						
Aluminum	33852	16400			19400			12500			8920	J		20200	J		11500	J		15600	J	
Antimony	31		U	(0.45)		R			R			UJ	(0.44)	0.59	J			UJ	(0.44)		UJ	(0.44)
Arsenic	13.5	10.8			9.8			10.2			7.8	J		10.4			9.1			10.2		
Barium	440	246			182			303			278			277			239			225		
Beryllium	1.52	0.84			0.9			0.71			0.57			0.92			0.72			0.83		
Cadmium	0.4	0.24	J		0.13	J		***0.47***	J		***0.57***	J		***0.66***	J		***0.51***	J		***0.56***	J	
Calcium	GRAS	4170	J		3320	J		4580	J		4000			4230			3960			3920		
Chromium	37	18.3			19.3			16.4			11.9	J		23.7	J		13.6	J		18	J	
Cobalt	17.2	11.5			10.4			10.3			11.8			11.9			10.9			11.1		
Copper	33.9	23			19.7			20.3			19.8	J		24.4	J		23.2	J		25.8	J	
Iron	GRAS	21600			21600			19100			14700			23700			18500			21800		
Lead	400	15.1	J		14.5	J		13.4	J		13.2			15.7			14.6			15.1		
Magnesium	GRAS	4490			4210			4270			3240			5150			3740			4290		
Manganese	1083	695			603			641			898			678			620			628		
Nickel	39.3	29	J		24	J		26.6	J		28.7			29.6			24.2			28		
Potassium	GRAS	2760			2870			2690			2020			3890			2230			2930		
Selenium	1.33		U	(1)		U	(1)		U	(1.1)	1.3	J		***1.6***	J		***1.6***	J		***1.8***	J	
Sodium	GRAS	173	J		157	J		200	J			U	(316)		U	(318)		U	(311)		U	(316)
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)
Vanadium	72.5	36			36.5			31.6			24.1			53.1			27.2			36.3		
Zinc	119.5	58.1	J		59.7			57.6	J		42.7			66.9			52			61.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-5
Analytical Data for Load Line 2 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2B-029			B2B-030			B2B-031			B2B-032			B2B-033			B2B-034			B2B-037		
		B2B-029-000 (0-1 ft)			B2B-030-000 (0-1 ft)			B2B-031-000 (0-1 ft)			B2B-032-000 (0-1 ft)			B2B-033-000 (0-1 ft)			B2B-034-000 (0-1 ft)			B2B-037-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)	0.078	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)	0.39	J			U	(0.5)	0.093	J			U	(0.5)		U	(0.5)		UJ	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)	0.057	J			U	(0.5)		U	(0.5)		UJ	(0.5)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		UJ	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		UJ	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.045	J		0.094	J			UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.13	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.018	J			UJ	(0.5)
METALS (MG/KG)																						
Aluminum	33852	13100	J		12500	J		14700	J		15400	J		15500	J		20000	J		14000	J	
Antimony	31		UJ	(0.47)		UJ	(0.43)		UJ	(0.44)		R			R			R			R	
Arsenic	13.5	9.6			6.8	J		8.5			8.1	J		7.2	J		9.6			9.9		
Barium	440	218			170			186			231	J		266	J		214	J		324	J	
Beryllium	1.52	0.75			0.68			0.74			0.76			0.76			0.89			0.74		
Cadmium	0.4	***0.45***	J		0.33	J		***0.5***	J		0.36	J		***0.44***	J		***0.51***	J		***0.63***	J	
Calcium	GRAS	4000			3160			3880			3500			3120			3560			5170		
Chromium	37	14.7	J		13.8	J		17.3	J		16			16.8			21.8			17.4		
Cobalt	17.2	11.1			9.1			10.1			11.2			10.2			11.1			11.3		
Copper	33.9	24.5	J		18.8	J		22.2	J		16.6			17.3			23.4			22.8		
Iron	GRAS	19400			16100			19100			18200			19000			23100			20600		
Lead	400	14.5			12.5			13.1			14.9			14.3			15			14.5		
Magnesium	GRAS	3900			2900			4070			3350			3350			4520			4580		
Manganese	1083	622			489			505			688			628			620			636		
Nickel	39.3	26			21.2			23.5			21.5			21.1			26.7			27.8		
Potassium	GRAS	2550			2610			2830			3020			3250			3800			3100		
Selenium	1.33	1.2	J		1.2	J		***1.9***	J		1.1	J		***1.4***	J		1.2	J		1.2	J	
Sodium	GRAS		U	(333)		U	(302)		U	(315)		U	(334)		U	(315)		U	(325)		U	(317)
Thallium	1.72		U	(1.4)		U	(1.2)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.3)
Vanadium	72.5	30.5			28.8			35.4			32.1			35.1			46.6			36		
Zinc	119.5	56.2			44.1			49.9			48.3			49.9			58.5			59.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-5
Analytical Data for Load Line 2 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B2B-038		
		B2B-038-000 (0-1 ft)		
		R	Q	QL
EXPLOSIVES (MG/KG)				
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		UJ	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		UJ	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.3	J	
METALS (MG/KG)				
Aluminum	33852	10600	J	
Antimony	31		R	
Arsenic	13.5	9.3		
Barium	440	249	J	
Beryllium	1.52	0.66		
Cadmium	0.4	***0.48***	J	
Calcium	GRAS	5600		
Chromium	37	13.8		
Cobalt	17.2	11.3		
Copper	33.9	21.2		
Iron	GRAS	17900		
Lead	400	14.4		
Magnesium	GRAS	3960		
Manganese	1083	655		
Nickel	39.3	25.5		
Potassium	GRAS	2560		
Selenium	1.33	1.1	J	
Sodium	GRAS		U	(324)
Thallium	1.72		U	(1.3)
Vanadium	72.5	26.2		
Zinc	119.5	51.7		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-001						B3A-002						B3A-003						B3A-004					
		B3A-001-000 (0-0.5 ft)			B3A-001-001 (1-2 ft)			B3A-002-000 (0-0.5 ft)			B3A-002-001 (1-2 ft)			B3A-003-000 (0-0.5 ft)			B3A-003-001 (1-2 ft)			B3A-004-000 (0-0.5 ft)			B3A-004-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.082	J		0.097	J			U	(0.5)	0.17	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.21	J		0.46	J			U	(0.5)		U	(0.5)	0.12	J			U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.18	J			U	(1)		U	(1)	0.36	J			U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)	0.21	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.84)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.096	J			U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	21500			22400			15700			16900			16600			15200			10700	J		10200	J	
Antimony	31	1.3	J			UJ	(0.46)	0.64	J		0.46	J			UJ	(0.5)		UJ	(0.47)		UJ	(0.49)		UJ	(0.5)
Arsenic	13.5	10.2			9.2			10.1			11			10.5			10.7			8.3	J		8.1	J	
Barium	440	234	J		227	J		307	J		***466***	J		315	J		309	J		***2380***			244		
Beryllium	1.52	0.94			0.92			0.79			0.81			0.82			0.8			0.61			0.63		
Cadmium	0.4	***0.77***	J		0.31	J		***0.66***	J		***0.54***	J		***1.1***	J		***0.55***	J		***1.4***			***0.44***	J	
Calcium	GRAS	6200			4420			6710			8890			4660			4920			5820	J		4870	J	
Chromium	37	25.4	J		24.3			20.7	J		21.7			21.9	J		19.8			16.8	J		14.5	J	
Cobalt	17.2	12.4	J		11.6	J		11.6	J		11.3	J		11.9	J		11.3	J		9.3			9.7		
Copper	33.9	***35.7***			22.9			32.6			23.7			23.7			23.7			23.7	J		23.7	J	
Iron	GRAS	24000			22800			22000			22300			23000			22000			17000	J		17400	J	
Lead	400	56.7			19.4			28.3			19			123			21.9			214	J		23.7	J	
Magnesium	GRAS	4330			3900			4350			4850			4710			4560			3530			3430		
Manganese	1083	695	J		655	J		826	J		697	J		774	J		691	J		538			676		
Mercury	23		U	(0.11)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.13)		U	(0.13)
Nickel	39.3	***41.6***			25.1			36.8			30.1			29.5			29.4			30.1			24.3		
Potassium	GRAS	3730			3550			3460			3490			3370			2930			2370			2230		
Selenium	1.33	***2***	J		***1.9***	J			U	(1.1)		U	(1.1)	***1.9***	J		***1.6***	J			U	(1.1)		U	(1.1)
Silver	380		UJ	(0.15)		UJ	(0.14)		UJ	(0.15)		UJ	(0.14)		UJ	(0.16)		UJ	(0.15)		UJ	(0.15)		UJ	(0.16)
Sodium	GRAS		U	(338)		U	(324)		U	(339)		U	(324)		U	(352)		U	(337)		U	(348)		U	(352)
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	50.2			45.8			43.3			47.4			45.5			41.6			28.5			29.1		
Zinc	119.5	85.2			67.2			71.9			69.3			***135***			67.3			***213***	J		63	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-005						B3A-006						B3A-007						B3A-008					
		B3A-005-000 (0-0.5 ft)			B3A-005-001 (1-2 ft)			B3A-006-000 (0-0.5 ft)			B3A-006-001 (1-2 ft)			B3A-007-000 (0-0.5 ft)			B3A-007-001 (1-2 ft)			B3A-008-000 (0-0.5 ft)			B3A-008-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.46	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4	0.37	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.69				U	(0.5)		U	(0.5)		U	(0.5)	0.47	J			U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)	0.37	J			U	(0.5)	0.3	J			U	(0.5)	0.51				U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	0.35	J			U	(1)	0.18	J			U	(1)	0.47	J			U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)	0.12	J			U	(0.75)	0.13	J		0.86			2.4			4.5			4.4		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.3	J		0.26	J		1.4			1.1		
METALS (MG/KG)																									
Aluminum	33852	8700	J		14500	J		10500	J		10800	J		14400			9900	J		16800	J		11600	J	
Antimony	31		UJ	(0.47)		UJ	(0.48)		UJ	(0.51)		UJ	(0.49)		R			UJ	(0.48)		UJ	(0.47)		UJ	(0.49)
Arsenic	13.5	3.1	J		9.7			7.3	J		8.6	J		9.1			8.5	J		8.7			8.7	J	
Barium	440	160			285			225			243			237			249			271			260		
Beryllium	1.52	0.4			0.73			0.58	J		0.67			0.77			0.66			0.78			0.72		
Cadmium	0.4	***1.5***			0.36	J		***2.8***			***0.44***	J		0.29	J		0.23	J		***0.47***	J		0.35	J	
Calcium	GRAS	5370	J		5670	J		15500	J		5580	J		5140			5280	J		6350	J		5070	J	
Chromium	37	15.6	J		18.9	J		14.6	J		13.7	J		17.7			12.7	J		23.4	J		14.8	J	
Cobalt	17.2	6.8			9.7			9.2	J		10.1			10			9.7			10.4			10.6		
Copper	33.9	30.1	J		20.9	J		23.1	J		20.9	J		24.3			21.6	J		25.4	J		24.2	J	
Iron	GRAS	11000	J		19400	J		15700	J		17400	J		19900			16700	J		20300	J		18600	J	
Lead	400	362	J		14.9	J		106	J		18.2	J		35.7	J		18.5	J		83.9	J		15.3	J	
Magnesium	GRAS	2240			4180			3340			3650			3910			3620			4420			3990		
Manganese	1083	404			531			593			555			597			534			620			762		
Mercury	23		U	(0.12)		U	(0.13)		U	(0.14)		U	(0.12)	0.21	J			U	(0.12)	0.14	J			U	(0.13)
Nickel	39.3	***50.9***			23.9			25.8			25.1			26.5			24.6			32			29		
Potassium	GRAS	2410			3310			2550			2370			3160			2040			3690			2380		
Selenium	1.33		U	(1.1)		U	(1.1)		U	(1.2)		U	(1.1)		U	(1.1)		U	(1.1)		U	(1.1)		U	(1.1)
Silver	380	0.33	J			UJ	(0.15)		UJ	(0.16)		UJ	(0.16)		UJ	(0.16)		UJ	(0.15)		UJ	(0.15)		UJ	(0.16)
Sodium	GRAS		U	(334)		U	(339)		U	(359)		U	(349)		U	(349)		U	(339)		U	(337)		U	(350)
Thallium	1.72		U	(1.4)	1.7	J			U	(1.5)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	23.4			40.3			26.2			26.3			34.5			23.3			43.4			25.7		
Zinc	119.5	***161***	J		56	J		84.3	J		54.5	J		71.5			53.5	J		82.2	J		57.7	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-009						B3A-010						B3A-011						B3A-012					
		B3A-009-000 (0-0.5 ft)			B3A-009-001 (1-2 ft)			B3A-010-000 (0-0.5 ft)			B3A-010-001 (1-2 ft)			B3A-011-000 (0-0.5 ft)			B3A-011-001 (1-2 ft)			B3A-012-000 (0-0.5 ft)			B3A-012-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		UJ	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.35	J			R			U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.78	J			U	(0.5)	0.95				U	(0.5)	1.5	J		0.98	J		0.057	J		0.24	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.22	J			U	(0.5)	0.33	J			U	(0.5)	0.85	J		0.82			0.37	J			U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.27	J			U	(1)	0.4	J			U	(1)	0.95	J		0.77	J		0.24	J			U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)	1.2			***110***	J		***26***				UJ	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		UJ	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		R			UJ	(0.75)		R			U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	9.3	J		3.5			0.38	J			U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	16000			18800			14000	J		13000			19900	J		16700			13400			16200		
Antimony	31	0.68	J			UJ	(0.45)		UJ	(0.46)		UJ	(0.47)		U	(0.47)		UJ	(0.46)		R			U	(0.46)
Arsenic	13.5	9.4			10			7.1	J		8.1	J		7.7	J		9.6			6.4	J		8.2	J	
Barium	440	260			262			210			227			205			258			224			238		
Beryllium	1.52	0.76			0.87			0.7			0.67			0.78			0.81			0.63			0.78		
Cadmium	0.4	***1***	J		0.27	J		***0.56***	J		0.3	J		***1.1***	J		***0.54***	J		0.21	J			U	(0.12)
Calcium	GRAS	7060	J		4900	J		5920	J		3980	J		6570			5820			8270			4800		
Chromium	37	20.6			21.1			18.1	J		15.7			24.1			23.1			15.4			18		
Cobalt	17.2	10.4			10.4			8.5			9.2			9.8			10.9			8.1			10.5		
Copper	33.9	32.2	J		24			30.8	J		21.1			***49.8***			30.4			18.7			19.5		
Iron	GRAS	19900			22800			16700	J		17600			20600			22600			16000			19600		
Lead	400	123	J		22.9			137	J		28.1			111	J		31.7	J		27.3	J		20.4		
Magnesium	GRAS	4010			4560			3370			3570			4060			4520			3230			3850		
Manganese	1083	586	J		610			497			561			504			653			602			603		
Mercury	23	0.25	J			UJ	(0.13)		U	(0.12)		UJ	(0.12)	0.15	J			U	(0.12)		U	(0.12)		U	(0.12)
Nickel	39.3	30.1			26.6			22.3			23.2			35.6			29.4			18.3			22.7		
Potassium	GRAS	2890			3090			2950			2520			3750			3140			2700			3030		
Selenium	1.33		U	(1.1)		U	(1)		U	(1.1)		U	(1.1)		U	(1.1)	***1.7***	J			U	(1.1)		U	(1.1)
Silver	380		UJ	(0.15)		UJ	(0.14)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.14)		UJ	(0.15)		U	(0.15)
Sodium	GRAS		U	(342)		U	(316)		U	(328)		U	(330)		U	(330)		U	(324)		U	(329)	50	J	
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)
Vanadium	72.5	35.1			37.5			34.3			27.7			44.3			34.8			30.6			36.7		
Zinc	119.5	***144***	J		75.4			***124***	J		62.9			112			74.5	J		55.1			56.1		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-013						B3A-014						B3A-015						B3A-016					
		B3A-013-000 (0-0.5 ft)			B3A-013-001 (1-2 ft)			B3A-014-000 (0-0.5 ft)			B3A-014-001 (1-2 ft)			B3A-015-000 (0-0.5 ft)			B3A-015-001 (1-2 ft)			B3A-016-000 (0-0.5 ft)			B3A-016-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.2	J			UJ	(0.5)		U	(0.5)		U	(0.5)		U	(0.62)		U	(0.58)	0.18	J			U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		UJ	(0.5)		UJ	(0.5)	0.096	J		0.17	J		0.6			0.29	J			U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		UJ	(1)		UJ	(1)	0.22	J			U	(1)	0.59	J		0.27	J		0.23	J			U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		UJ	(0.75)		U	(0.5)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.43	J			U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			R			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		UJ	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		UJ	(0.5)		UJ	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	12700			18800			16100			17600			12500			18900			19000			19100		
Antimony	31		R			R			UJ	(0.47)		UJ	(0.46)		UJ	(0.48)		UJ	(0.45)		UJ	(0.48)		UJ	(0.45)
Arsenic	13.5	7.7	J		9.6			7.2	J		8	J		6.3	J		8.3			9.2			9.2		
Barium	440	213			241			257			262			182			243			260			238		
Beryllium	1.52	0.68			0.85			0.67			0.83			0.57			0.83			0.85			0.87		
Cadmium	0.4	0.18	J			U	(0.13)	0.28	J		0.18	J		***0.92***	J		0.26	J		0.38	J		0.22	J	
Calcium	GRAS	4590			4790			4110			3820			4460	J		5170	J		7230	J		4540	J	
Chromium	37	18			21.3			17.7			19.4			15.5			20.1			20.5			20.6		
Cobalt	17.2	9.6			11.6			8.3			10.7			7			9.4			11.7			9.1		
Copper	33.9	25.8			23.8			15.6			19.9			***157***			21			28.3	J		23.2	J	
Iron	GRAS	17300			22000			16300			20600			13900			20200			20700			22100		
Lead	400	187	J		20.8			381	J		15.8	J		143			26.2			73.9	J		16.4	J	
Magnesium	GRAS	3260			4440			3080			3990			2690			3590			3940			4380		
Manganese	1083	571			543			510			702			384			385			645	J		530	J	
Mercury	23	0.15	J		0.15	J			U	(0.12)		U	(0.13)		UJ	(0.13)		UJ	(0.12)		UJ	(0.13)		U	(0.12)
Nickel	39.3	24.7			26.3			18.7			23.7			18.1			22.2			36.4			25.4		
Potassium	GRAS	2760			3470			3700			3160			2730			3520			4050			3280		
Selenium	1.33		U	(1.1)	***1.9***	J			U	(1.1)	***1.6***	J		1.3	J		1.1	J		1.1	J		1.1	J	
Silver	380		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.14)		UJ	(0.15)		UJ	(0.14)
Sodium	GRAS		U	(347)		U	(34.6)		U	(332)		U	(330)		U	(340)		U	(317)		U	(344)		U	(320)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.3)
Vanadium	72.5	29.6			45.3			37.8			37.6			30.2			39.9			39.9			40.3		
Zinc	119.5	108			60.6			92.6	J		63.4	J		***262***			74.2			83.9	J		66.1	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-017						B3A-018						B3A-019						B3A-020					
		B3A-017-000 (0-0.5 ft)			B3A-017-001 (1-2 ft)			B3A-018-000 (0-0.5 ft)			B3A-018-001 (1-2 ft)			B3A-019-000 (0-0.5 ft)			B3A-019-001 (1-2 ft)			B3A-020-000 (0-0.5 ft)			B3A-020-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.16	J		0.42	J			U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.16	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.22	J			U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.072	J			U	(0.5)		U	(0.5)		U	(0.5)	0.38	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	18000			19400			15700			15800			11800			11500			10100	J		18300		
Antimony	31		UJ	(0.49)		UJ	(0.44)		UJ	(0.51)		UJ	(0.47)		R			R			R			R	
Arsenic	13.5	8.4	J		8.9			8.4	J		6	J		7.7	J		7.1	J		5.9	J		9.2	J	
Barium	440	236			246			227			236			236			223			244			230		
Beryllium	1.52	0.82			0.87			0.78			0.78			0.64			0.66			0.56			0.87		
Cadmium	0.4	0.27	J		0.2	J		0.37	J		***0.5***	J		0.39	J		0.29	J		0.14	J			U	(0.14)
Calcium	GRAS	5620			4270			5880	J		3640	J		4820			4700			3750			4020		
Chromium	37	19.5			21.2			18.7			17.8			15.2			14.5			11.8			18.8		
Cobalt	17.2	9.6			10.6			10			11			9.2			8.4			7.2			9.7		
Copper	33.9	19.8			21.6			21.5	J		18.3	J		24			19.6			15.1			21.3		
Iron	GRAS	20000			21600			19100			17600			18300			15500			13300			21100		
Lead	400	61.8	J		15.6	J		25.3	J		15.6	J		165	J		104	J		***642***	J		14.7	J	
Magnesium	GRAS	3610			4370			3550			2990			2980			2920			2650			3850		
Manganese	1083	573			636			548	J		739	J		566			490			436			548		
Mercury	23		U	(0.13)		U	(0.12)	0.34			0.21	J		0.16	J			U	(0.13)	0.14	J			U	(0.14)
Nickel	39.3	22.1			25.5			22.3			21.7			21.7			19.5			16.7			24.4		
Potassium	GRAS	3990			3440			3890			3520			3280			2690			2020	J		2990		
Selenium	1.33	1.3	J		1.1	J		1.2	J			U	(1.1)	1.3	J		1.2	J			U	(1.1)	***1.6***	J	
Silver	380		UJ	(0.16)		UJ	(0.14)		UJ	(0.16)		UJ	(0.15)		UJ	(0.16)		UJ	(0.15)		UJ	(0.15)		UJ	(0.17)
Sodium	GRAS		U	(351)		U	(311)		U	(360)		U	(333)		U	(370)		U	(344)		U	(340)		U	(374)
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.5)		U	(1.4)		U	(1.5)		U	(1.4)		U	(1.4)		U	(1.5)
Vanadium	72.5	38.2			40.6			36.7			35.7			29.4			28.2			23.7			39.2		
Zinc	119.5	81.4	J		63.1	J		67.4	J		57.5	J		***126***			88.7			55.2			54.8		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-021						B3A-022						B3A-023						B3A-024					
		B3A-021-000 (0-0.5 ft)			B3A-021-001 (1-2 ft)			B3A-022-000 (0-0.5 ft)			B3A-022-001 (1-2 ft)			B3A-023-000 (0-0.5 ft)			B3A-023-001 (1-2 ft)			B3A-024-000 (0-0.5 ft)			B3A-024-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.066	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.43	J		0.16	J			U	(0.5)		U	(0.5)	***100***				U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.33	J			U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)	0.63	J			U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	***160***			0.14	J			U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.42	J			U	(0.5)		U	(0.5)		U	(0.5)	15				U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	12600			19500			16600			14500			14100			16000			18200			20500		
Antimony	31		R			R			R			R			UJ	(0.41)		UJ	(0.4)		UJ	(0.46)		UJ	(0.46)
Arsenic	13.5	9.2	J		9.7			9.9			9	J		7.3	J		7.8			7.6	J		7.3	J	
Barium	440	234			200			216			229			201			211			235			216		
Beryllium	1.52	0.71			0.89			0.82			0.8			0.66			0.73			0.81			0.85		
Cadmium	0.4	0.32	J		0.19	J		***0.6***	J			U	(0.14)	***0.58***	J		0.29	J		0.22	J		0.14	J	
Calcium	GRAS	5420			3650			4320			4170			3440	J		3580	J		4310			4180		
Chromium	37	14.6			20.2			18.5			16.2			16.7			17.5			19.7			21.3		
Cobalt	17.2	9.1			10.4			10.1			10			8.5			8.9			10.1			10.3		
Copper	33.9	19.8			22.2			25.5			22.3			21	J		19.5	J		18.1	J		17	J	
Iron	GRAS	17400			22000			20400			19800			16600			18400			20100			20600		
Lead	400	65.3	J		15	J		35.5	J		19.2	J		31.8	J		12.6	J		27.2	J		15.9	J	
Magnesium	GRAS	3500			4180			3650			3530			3320			3850			3520			3590		
Manganese	1083	555			572			590			566			489	J		503	J		609			574		
Mercury	23	0.16	J		0.19	J		0.16	J		0.16	J		0.18	J		0.18	J		0.17	J		0.34		
Nickel	39.3	22.2			25.3			24.7			24.9			21.4			23.9			21.4			21.6		
Potassium	GRAS	3620			3240			3440			2690			3450			3170			3760			3590		
Selenium	1.33	***1.4***	J		***2.1***	J			U	(1.2)	***1.7***	J		1.2	J		1.2	J			U	(1.1)	***1.5***	J	
Silver	380		UJ	(0.17)		UJ	(0.15)		UJ	(0.16)		UJ	(0.16)		UJ	(0.13)		UJ	(0.13)		U	(0.15)		U	(0.15)
Sodium	GRAS		U	(384)		U	(346)		U	(368)		U	(365)		U	(293)		U	(283)		U	(328)		U	(330)
Thallium	1.72		U	(1.6)		U	(1.4)		U	(1.5)		U	(1.5)		U	(1.2)		U	(1.2)		U	(1.3)		U	(1.3)
Vanadium	72.5	29.9			41.3			36.9			31.2			32.6			35.5			39.2			40.6		
Zinc	119.5	73.8			58			***157***			68			106	J		47.6	J		75.5			61.8		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-025						B3A-026						B3A-027						B3A-028					
		B3A-025-000 (0-0.5 ft)			B3A-025-001 (1-2 ft)			B3A-026-000 (0-0.5 ft)			B3A-026-001 (1-2 ft)			B3A-027-000 (0-0.5 ft)			B3A-027-001 (1-2 ft)			B3A-028-000 (0-0.5 ft)			B3A-028-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.16	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.21	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.1	J	
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.11	J			U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)	0.11	J	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	.	U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.12	J	
METALS (MG/KG)																									
Aluminum	33852	14600			19000			14400			21000			14700			17600			15200			14900	J	
Antimony	31		UJ	(0.47)		UJ	(0.44)		UJ	(0.48)		UJ	(0.48)	0.9	J			UJ	(0.46)		R			UJ	(0.47)
Arsenic	13.5	7.7	J		7	J		8.2	J		8.9			5.6	J		8.8			6.9	J		6.8	J	
Barium	440	238			205			227			251			241			241			212			253		
Beryllium	1.52	0.71			0.78			0.73			0.93			0.65			0.82			0.74			0.74		
Cadmium	0.4	***0.57***	J		0.31	J		***0.67***	J		0.29	J		0.37	J		0.26	J		0.16	J		0.28	J	
Calcium	GRAS	3970	J		2890	J		4590	J		4120	J		5730	J		4120	J		3630			4100	J	
Chromium	37	18.1			19.3			17.1			21.7			17.7			19.4			17			17.1	J	
Cobalt	17.2	9.4			9.2			10			11.2			8.4			10.2			9.5			9.3		
Copper	33.9	21.2	J		15.9	J		30.8	J		23.9	J		19.9	J		21	J		17.9			17.9		
Iron	GRAS	18400			18800			18300			23300			16100			20900			18000			17200		
Lead	400	32.6	J		16	J		46.4	J		16.7	J		46.8	J		15.4	J		19.5			14.2		
Magnesium	GRAS	3370			3400			3360			4300			3090			4090			3380			3360		
Manganese	1083	513	J		523	J		609	J		617	J		524	J		604	J		571			712		
Mercury	23	0.18	J		0.18	J		0.21	J		0.2	J		0.23	J		0.19	J			U	(0.13)		U	(0.1)
Nickel	39.3	20.8			19.3			23.9			27.4			17.6			25.7			20.8			21.7		
Potassium	GRAS	3820			3340			3690			3620			4500			3290			3110			3000		
Selenium	1.33	***1.8***	J		***2***	J			U	(1.1)	***2***	J		***1.4***	J		***1.7***	J		1.1	J			U	(1.1)
Silver	380		UJ	(0.15)		UJ	(0.14)		UJ	(0.15)		UJ	(0.15)		UJ	(0.17)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)
Sodium	GRAS		U	(332)		U	(311)		U	(344)		U	(339)		U	(385)		U	(327)		U	(328)		U	(331)
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.6)		U	(1.3)		U	(1.3)		U	(1.3)
Vanadium	72.5	36.4			38.3			33.5			42.5			36			35.8			36.9			37.4		
Zinc	119.5	***136***	J		58.7	J		***206***	J		66.5	J		107	J		64.5	J		57			49.9	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-029						B3A-030						B3A-031					
		B3A-029-000 (0-0.5 ft)			B3A-029-001 (1-2 ft)			B3A-030-000 (0-0.5 ft)			B3A-030-001 (1-2 ft)			B3A-031-000 (0-0.5 ft)			B3A-031-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	1.4				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4	0.12	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	***20000***			3.8			***76***				U	(0.5)	12	J		0.5		
2,4-Dinitrotoluene (2,4-DNT)	0.9	***3.4***				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	6				U	(0.5)	1.5				U	(0.5)	0.59	J			U	(0.5)
3-Nitrotoluene (3-NT)	NA	0.62	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	2.7				U	(1)	2.2				U	(1)	0.72	J		2.7		
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)	2.2			0.7	J			U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.14	J		0.049	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	9480			15800			12200			17800			14400			19800		
Antimony	31		R			R			UJ	(0.45)		UJ	(0.47)		R			UJ	(0.49)
Arsenic	13.5	5.3	J		9.4			4.9	J		7.3	J		5.8	J		7.5	J	
Barium	440	160			228			183	J		305	J		234			270		
Beryllium	1.52	0.46			0.76			0.54			0.79			0.74			0.84		
Cadmium	0.4	***1.2***			0.34	J		***1.2***			***0.44***	J		***0.41***	J		0.38	J	
Calcium	GRAS	69800			6020			39700			11900			10300			4450		
Chromium	37	12.2			17.2			14.7			20.3			16.4			21.9		
Cobalt	17.2	6.6			10.4			7	J		10.8	J		8.8			10.6		
Copper	33.9	17.4			19.8			22.6			19.6			20.1			18.9	J	
Iron	GRAS	12500			19600			14500			18900			17200			19900		
Lead	400	90			15.6			114			16.2			32.9	J		16.9	J	
Magnesium	GRAS	2640			3480			2830			3830			2960			3910		
Manganese	1083	504			513			434	J		1040	J		451	J		508		
Mercury	23		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.11)		U	(0.13)		U	(0.13)
Nickel	39.3	24.6			23.9			23.7			24.9			23			23		
Potassium	GRAS	2540			2740			3030			3560			3090			3720		
Selenium	1.33		U	(1.1)		U	(1.1)	1.3	J		***1.5***	J			U	(1.1)	***1.7***	J	
Silver	380		UJ	(0.15)		UJ	(0.16)		UJ	(0.14)		UJ	(0.15)		U	(1.1)		UJ	(0.15)
Sodium	GRAS		U	(339)		U	(349)		U	(319)		U	(331)	71.9	J		135	J	
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)
Vanadium	72.5	22.2			26.6			26.7			40			30.6			46.3		
Zinc	119.5	107			54.3			***121***			59.3			67			61		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-032												B3A-033					
		B3A-032-000 (0-0.5 ft)			B3A-032-R00 (0-0.5 ft)			B3A-032-001 (1-2 ft)			B3A-032-R01 (1-2 ft)			B3A-033-000 (0-0.5 ft)			B3A-033-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)	0.44	J			U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.64			0.00037			0.32	J		0.00038			0.29	J			U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.27	J		0.00022				U	(0.5)		U	(0.0005)	0.51				U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)	0.00034				U	(1)		U	(0.001)	0.53	J		0.4	J	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	4			0.0056				U	(0.75)	0.0026			***150***				U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			U	(0.00075)		R			U	(0.00075)		U	(0.75)	0.13	J	
Nitrobenzene (NB)	NA		U	(2)		U	(0.002)		U	(2)		U	(0.002)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.00048				U	(0.5)	0.00055			4.7				U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	11500				NA		11200				NA		10500			13300		
Antimony	31		R			NA			R			NA			R			R	
Arsenic	13.5	5.5	J			NA		11.8				NA		7	J		10.1		
Barium	440	192				NA		208				NA		219			144		
Beryllium	1.52	0.53				NA		0.72				NA		0.63			0.79		
Cadmium	0.4	***0.96***	J			NA		***0.48***	J			NA		***0.96***	J		0.22	J	
Calcium	GRAS	22100				NA		4490				NA		24900			4980		
Chromium	37	15.7				NA		14.4				NA		13.4			14.5		
Cobalt	17.2	6.9				NA		15.4				NA		8.7			9.9		
Copper	33.9	21.8				NA		22.5				NA		21.9			22.4		
Iron	GRAS	13100				NA		20500				NA		15000			19400		
Lead	400	***4670***	J			NA		15.9	J			NA		79.9	J		16	J	
Magnesium	GRAS	3060				NA		3760				NA		2890			3480		
Manganese	1083	442	J			NA		959	J			NA		606	J		201	J	
Mercury	23	0.11	J			NA			U	(0.13)		NA			U	(0.13)		U	(0.13)
Nickel	39.3	30.2				NA		30				NA		21.2			24.1		
Potassium	GRAS	2800				NA		2360				NA		2770			2450		
Selenium	1.33	1.3	J			NA			U	(1.1)		NA			U	(1.1)		U	(1.1)
Silver	380		U	(1.1)		NA			U	(1.2)		NA			U	(1.2)		U	(1.1)
Sodium	GRAS	142	J			NA		139	J			NA		119	J		147	J	
Thallium	1.72		U	(1.3)		NA			U	(1.4)		NA			U	(1.4)		U	(1.4)
Vanadium	72.5	26.7				NA		27.9				NA		25.6			29.5		
Zinc	119.5	***273***				NA		53.7				NA		103			57.3		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-034									B3A-035					
		B3A-034-000 (0-0.5 ft)			B3A-034-R00 (0-0.5 ft)			B3A-034-001 (1-2 ft)			B3A-035-000 (0-0.5 ft)			B3A-035-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.24	J		0.00019				U	(0.5)	0.052	J		0.062	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)	0.00019				U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)	0.00023			0.25	J			U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.5)		U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			U	(0.00075)		U	(0.75)	0.24	J			U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(0.002)		U	(2)	0.2	J			U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.0005)	0.092	J			U	(0.5)	0.27	J	
METALS (MG/KG)																
Aluminum	33852	9250				NA		16500			14100			13400		
Antimony	31		R			NA			R			R			R	
Arsenic	13.5	5.7	J			NA		9.9			6.6	J		8.3	J	
Barium	440	200				NA		257			233			230		
Beryllium	1.52	0.55				NA		0.84			0.76			0.73		
Cadmium	0.4	***1.1***	J			NA		0.3	J		***0.46***	J		0.34	J	
Calcium	GRAS	23700				NA		4510	J		4650			4640		
Chromium	37	14.4				NA		18.8			16.2			15.3		
Cobalt	17.2	7.5				NA		11			9.3			9.4		
Copper	33.9	17.5				NA		21.7	J		19.9			18.7		
Iron	GRAS	13700				NA		20800			17600			16200		
Lead	400	101	J			NA		15.2	J		46.8	J		15	J	
Magnesium	GRAS	2660				NA		4110			3430			2860		
Manganese	1083	509	J			NA		410	J		543	J		518	J	
Mercury	23	0.14	J			NA			U	(0.13)		U	(0.13)		U	(0.13)
Nickel	39.3	19.3				NA		23.4			20.8			19.2		
Potassium	GRAS	2340				NA		3040			3500			2950		
Selenium	1.33	***1.4***	J			NA			U	(1.1)		U	(1.1)		U	(1.1)
Silver	380		U	(1.1)		NA			UJ	(1.2)		U	(1.2)		U	(1.2)
Sodium	GRAS	98.7	J			NA			U	(346)	77	J		94.6	J	
Thallium	1.72		U	(1.3)		NA			U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	22.7				NA		36.8			31.5			30.6		
Zinc	119.5	115				NA		60	J		87			55.2		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-036												B3A-037					
		B3A-036-000 (0-0.5 ft)			B3A-036-R00 (0-0.5 ft)			B3A-036-001 (1-2 ft)			B3A-036-R01 (1-2 ft)			B3A-037-000 (0-0.5 ft)			B3A-037-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)	0.092	J		0.23	J	
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)	0.0013				U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)	0.00034				U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA	0.34	J			U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.15	J		0.00028				U	(1)		U	(0.001)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.5)		U	(0.00075)		U	(0.5)		U	(0.00075)		U	(0.75)	0.11	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			U	(0.00075)		R			U	(0.00075)	0.22	J			U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(0.002)		U	(2)		U	(0.002)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.0005)	0.043	J			U	(0.0005)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	21700				NA		17200				NA		13300			15000		
Antimony	31		R			NA			U	(0.49)		NA		0.93	J			UJ	(0.49)
Arsenic	13.5	9.9	J			NA		10.9				NA		7.7	J		8	J	
Barium	440	272				NA		317				NA		187			222		
Beryllium	1.52	0.89				NA		0.8				NA		0.58			0.76		
Cadmium	0.4	0.23	J			NA		***0.49***	J			NA		***0.65***	J			U	(0.13)
Calcium	GRAS	6860				NA		4600				NA		30500			4830		
Chromium	37	24.7				NA		19.4				NA		21.2			16.1		
Cobalt	17.2	10.5				NA		11.4				NA		7.6			9.6		
Copper	33.9	29.6				NA		20				NA		21.3			18.2		
Iron	GRAS	22800				NA		22200				NA		16900			18300		
Lead	400	71.7	J			NA		15.2				NA		314			17.9		
Magnesium	GRAS	4380				NA		4040				NA		3600			3390		
Manganese	1083	669				NA		776				NA		578			572		
Mercury	23		U	(0.15)		NA			U	(0.12)		NA			U	(0.12)		U	(0.11)
Nickel	39.3	27.8				NA		28.6				NA		27.3			24.1		
Potassium	GRAS	3880				NA		3120				NA		2600			2570		
Selenium	1.33	***2.2***	J			NA			U	(1.1)		NA		1.2	J			U	(1.1)
Silver	380		UJ	(0.18)		NA			U	(0.15)		NA			UJ	(0.13)		UJ	(0.16)
Sodium	GRAS		U	(400)		NA			U	(348)		NA			U	(301)		U	(350)
Thallium	1.72		U	(1.6)		NA			U	(1.4)		NA			U	(1.2)		U	(1.4)
Vanadium	72.5	51.5				NA		39.2				NA		38.3			25.4		
Zinc	119.5	89.6				NA		60.4				NA		***155***			53.1		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-038												B3A-039								
		B3A-038-000 (0-0.5 ft)			B3A-038-R00 (0-0.5 ft)			B3A-038-001 (1-2 ft)			B3A-038-R01 (1-2 ft)			B3A-039-000 (0-0.5 ft)			B3A-039-R00 (0-0.5 ft)			B3A-039-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)	0.0013				U	(0.5)	0.00013			4.3			0.016				U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.0005)	0.2	J			U	(0.0005)	0.8			0.0014				U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(0.001)	0.087	J			U	(0.001)	1			0.0011				U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.5)		U	(0.00075)		U	(0.5)		U	(0.00075)		U	(0.5)		U	(0.00075)		U	(0.5)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			U	(0.00075)		R			U	(0.00075)		R			U	(0.00075)	0.41	J	
Nitrobenzene (NB)	NA		U	(2)		U	(0.002)		U	(2)		U	(0.002)		U	(2)		U	(0.002)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.11	J			U	(0.0005)	0.31	J			U	(0.0005)	0.049	J			U	(0.0005)		U	(0.5)
METALS (MG/KG)																						
Aluminum	33852	11400				NA		11900				NA		14300				NA		16600		
Antimony	31		R			NA			R			NA			U	(0.51)		NA			U	(0.47)
Arsenic	13.5	6.9	J			NA		10.3				NA		6.7	J			NA		8.7		
Barium	440	202				NA		231				NA		221				NA		323		
Beryllium	1.52	0.56				NA		0.73				NA		0.68				NA		0.77		
Cadmium	0.4	***0.89***	J			NA		0.35	J			NA		***0.62***	J			NA		***0.56***	J	
Calcium	GRAS	11900				NA		4740				NA		7440				NA		4370		
Chromium	37	16.2				NA		13.7				NA		17.7				NA		19		
Cobalt	17.2	8.1				NA		10.6				NA		8.7				NA		12		
Copper	33.9	23.1				NA		22.2				NA		***79.1***				NA		20.1		
Iron	GRAS	15200				NA		18700				NA		17400				NA		19300		
Lead	400	***438***	J			NA		24.1	J			NA		126				NA		23.5		
Magnesium	GRAS	3220				NA		3230				NA		3380				NA		3840		
Manganese	1083	487	J			NA		750	J			NA		524				NA		1030		
Mercury	23		U	(0.13)		NA			U	(0.13)		NA			U	(0.13)		NA			U	(0.13)
Nickel	39.3	21.6				NA		25.1				NA		21.1				NA		25.3		
Potassium	GRAS	2410				NA		2350				NA		3270				NA		3290		
Selenium	1.33	***1.4***	J			NA			U	(1.1)		NA		***1.9***	J			NA		***1.7***	J	
Silver	380		U	(0.15)		NA			U	(1.1)		NA			U	(0.16)		NA			U	(0.15)
Sodium	GRAS		U	(344)		NA		108	J			NA			U	(363)		NA			U	(333)
Thallium	1.72		U	(1.4)		NA			U	(1.4)		NA			U	(1.5)		NA			U	(1.4)
Vanadium	72.5	33.9				NA		27.6				NA		32.8				NA		37.7		
Zinc	119.5	***187***				NA		57.1				NA		117				NA		59.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-040						B3A-041											
		B3A-040-000 (0-0.5 ft)			B3A-040-001 (1-2 ft)			B3A-041-000 (0-0.5 ft)			B3A-041-R00 (0-0.5 ft)			B3A-041-001 (1-2 ft)			B3A-041-R01 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.22	J		0.27	J			U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(0.001)		U	(1)		U	(0.001)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.11	J		0.28	J			U	(0.5)		U	(0.00075)		U	(0.75)		U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		R			U	(0.00075)		R			U	(0.00075)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(0.002)		U	(2)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.25	J		0.048	J			U	(0.0005)		U	(0.5)		U	(0.0005)
METALS (MG/KG)																			
Aluminum	33852	16800			14200			8040				NA		16500				NA	
Antimony	31		UJ	(0.5)		UJ	(0.47)		U	(0.42)		NA			U	(0.47)		NA	
Arsenic	13.5	9.6			8.3	J		5.1	J			NA		7.5	J			NA	
Barium	440	236			265			157				NA		218				NA	
Beryllium	1.52	0.8			0.74			0.49				NA		0.76				NA	
Cadmium	0.4	***0.66***	J		0.3	J		0.28	J			NA		0.38	J			NA	
Calcium	GRAS	5360			4890			4150				NA		3860				NA	
Chromium	37	25.6			17.5			10.5				NA		17.7				NA	
Cobalt	17.2	10.2			9.7			6.7				NA		9.6				NA	
Copper	33.9	32.6	J		20.8	J		13.9				NA		19.5				NA	
Iron	GRAS	25000			19600			11900				NA		19100				NA	
Lead	400	154	J		16.5	J		43.5				NA		14.8				NA	
Magnesium	GRAS	3400			3440			2160				NA		3690				NA	
Manganese	1083	571			545			398				NA		616				NA	
Mercury	23		U	(0.13)		U	(0.13)		U	(0.1)		NA			U	(0.12)		NA	
Nickel	39.3	27.4			23.7			15				NA		24.4				NA	
Potassium	GRAS	3370			2630			2000				NA		2990				NA	
Selenium	1.33	***1.5***	J			U	(1.1)		U	(0.97)		NA			U	(1.1)		NA	
Silver	380		UJ	(0.16)		UJ	(0.15)		U	(0.13)		NA			U	(0.15)		NA	
Sodium	GRAS	207	J		262	J			U	(298)		NA			U	(332)		NA	
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.2)		NA			U	(1.4)		NA	
Vanadium	72.5	39.3			29.8			21.4				NA		30.6				NA	
Zinc	119.5	***172***			59.2			53.5				NA		55.3				NA	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-042						B3A-043						B3A-044								
		B3A-042-000 (0-0.5 ft)			B3A-042-001 (1-2 ft)			B3A-043-000 (0-0.5 ft)			B3A-043-001 (1-2 ft)			B3A-044-000 (0-0.5 ft)			B3A-044-R00 (0-0.5 ft)			B3A-044-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	*R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)	0.12	J			U	(0.5)	0.046	J			U	(0.5)	U	(0.0005)			U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	U	(0.0005)			U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.1	J			U	(0.5)		U	(0.5)	U	(0.0005)			U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	U	(0.0005)			U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)	0.26	J			U	(0.5)		U	(0.5)	U	(0.0005)		0.73		
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	U	(0.00075)			U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	0.22	J			U	(1)		U	(1)	U	(0.001)		0.37	J	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.082	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	U	(0.00075)			U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		R		U	(0.00075)			U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)	U	(0.002)			U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)	U	(0.0005)			U	(0.5)
METALS (MG/KG)																						
Aluminum	33852	19700			18800			9990			18500			6840	J		NA			18200		
Antimony	31		UJ	(0.47)		UJ	(0.47)	0.53	J			UJ	(0.46)		UJ	(0.45)	NA				UJ	(0.47)
Arsenic	13.5	8.7			10.2			5.8	J		9.4			2.6	J		NA			9.3		
Barium	440	246	J		272	J		250			225			93.2			NA			245		
Beryllium	1.52	0.85			0.87			0.47			0.83			0.3			NA			0.81		
Cadmium	0.4	***0.52***	J		***0.52***	J		***1.2***	J		0.3	J		***0.42***	J		NA			***0.96***	J	
Calcium	GRAS	4460			4490			12500			4590			8070	J		NA			7190		
Chromium	37	21.6			21.6			16.5			20.6			14.9	J		NA			21.9		
Cobalt	17.2	10.9	J		11.8	J		7.8			10.6			4.4			NA			11		
Copper	33.9	19.2			23.1			***43.2***	J		20.2	J		10.2			NA			23	J	
Iron	GRAS	21000			22800			24800			21200			8580			NA			21100		
Lead	400	34			16.6			***603***	J		25.1	J		233			NA			34.2	J	
Magnesium	GRAS	3910			4600			2810			3720			2700			NA			3740		
Manganese	1083	622	J		709	J		520			606			234			NA			646		
Mercury	23		U	(0.12)		U	(0.11)		U	(0.13)		U	(0.12)		U	(0.12)	NA				U	(0.12)
Nickel	39.3	23			28.4			23.6			24.4			16.3			NA			28.4		
Potassium	GRAS	4120			3490			2550			3630			1800			NA			3500		
Selenium	1.33	1.1	J		1.2	J		***1.9***	J		***1.8***	J		***1.4***	J		NA			***1.5***	J	
Silver	380		UJ	(0.15)		UJ	(0.15)		UJ	(0.16)		UJ	(0.15)		UJ	(0.14)	NA				UJ	(0.15)
Sodium	GRAS		U	(336)		U	(336)	278	J		89.9	J			U	(330)	NA			172	J	
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.5)		U	(1.3)		U	(1.3)	NA				U	(1.3)
Vanadium	72.5	47.3			43.1			23.4			41.6			18			NA			42.7		
Zinc	119.5	76.9			66			***408***			67			***141***	J		NA			***134***		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-045						B3A-046						B3A-047						B3A-048					
		B3A-045-000 (0-0.5 ft)			B3A-045-001 (1-2 ft)			B3A-046-000 (0-0.5 ft)			B3A-046-001 (1-2 ft)			B3A-047-000 (0-0.5 ft)			B3A-047-001 (1-2 ft)			B3A-048-000 (0-0.5 ft)			B3A-048-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.23	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.17	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)	0.32	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	0.27	J			U	(1)	0.35	J			U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.17	J		0.33	J			U	(0.75)	0.86				U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)	0.16	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	8530			21300			6020	J		20700			8170	J		20300			3500	J		18100		
Antimony	31	0.54	J		0.53	J			UJ	(0.45)		UJ	(0.45)		UJ	(0.42)		UJ	(0.46)		UJ	(0.41)		UJ	(0.47)
Arsenic	13.5	3.1	J		10.3			3.3	J		8.7			4.9	J		8.5			2.1	J		8.7		
Barium	440	101			256	J		119			254			134			256			89			221		
Beryllium	1.52	0.35			0.9			0.31			0.85			0.43			0.83			0.19	J		0.83		
Cadmium	0.4	***0.72***	J		***0.47***	J		0.28	J		0.13	J		0.29	J		0.15	J			U	(0.11)		U	(0.12)
Calcium	GRAS	2860			4870			9020	J		4240	J		5780	J		4360	J		3090	J		4180	J	
Chromium	37	12.7			23.1			9	J		21.9			12.8	J		20.6			5	J		18.9		
Cobalt	17.2	4.5			11.5	J		4.7			9.9			6			10.9			3.1			10.9		
Copper	33.9	9.4	J		21.4			14.2	J		18.5			18.8	J		17.8			5.7	J		21.9		
Iron	GRAS	9070			23100			10100	J		21000			10800	J		20500			4890	J		21000		
Lead	400	157	J		16.4			86.6	J		15.2			99	J		17.2			104	J		19.7		
Magnesium	GRAS	1610			4320			2320			3980			2110			3610			910			4120		
Manganese	1083	197			659	J		305			526			363			693			190			644		
Mercury	23		U	(0.12)		U	(0.13)		U	(0.12)		UJ	(0.12)		U	(0.11)		UJ	(0.13)		U	(0.11)		UJ	(0.12)
Nickel	39.3	9.7			26.1			15.8			21.4			14.8			22.1			6			27.4		
Potassium	GRAS	1950			4330			1600			4010			1950			3820			1210			3240		
Selenium	1.33	1.3	J		1.2	J			U	(1)	***2***	J			U	(0.98)		U	(1.1)		U	(0.95)	***2***	J	
Silver	380		UJ	(0.14)		UJ	(0.15)		UJ	(0.14)		UJ	(0.14)		UJ	(0.13)		UJ	(0.15)		UJ	(0.13)		UJ	(0.15)
Sodium	GRAS	241	J			U	(331)		U	(317)		U	(318)		U	(300)		U	(328)		U	(292)		U	(331)
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.2)		U	(1.3)		U	(1.2)		U	(1.3)
Vanadium	72.5	23.2			49			14.1			43.3			21.7			41.6			9.5			32.5		
Zinc	119.5	***149***			67.1			63.7	J		61.9			68	J		63.7			36.4	J		58.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-049						B3A-050						B3A-051						B3A-052					
		B3A-049-000 (0-0.5 ft)			B3A-049-001 (1-2 ft)			B3A-050-000 (0-0.5 ft)			B3A-050-001 (1-2 ft)			B3A-051-000 (0-0.5 ft)			B3A-051-001 (1-2 ft)			B3A-052-000 (0-0.5 ft)			B3A-052-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.19	J			U	(0.5)	0.8				U	(0.5)	***87***				U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.67				U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)	0.59	J			U	(1)	1.1				U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.78)	4.8			***130***			1.9			2.2			***28***		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.25	J			U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)	0.98			8.7			0.25	J		0.67			2.7		
METALS (MG/KG)																									
Aluminum	33852	13100	J		19400			12300	J		23300			10000	J		22700			8920	J		17900		
Antimony	31		UJ	(0.57)		UJ	(0.47)		UJ	(0.51)		UJ	(0.47)		UJ	(0.48)		UJ	(0.48)		UJ	(0.47)		UJ	(0.46)
Arsenic	13.5	7.6	J		8.9			7.1	J		10.8			6.1	J		11			5.3	J		9.4		
Barium	440	256			257			232			278			200			256			242			259		
Beryllium	1.52	0.76			0.85			0.66			0.99			0.54			1			0.52			0.86		
Cadmium	0.4	0.25	J		0.19	J		***0.64***	J		0.21	J		***2.3***			0.14	J		***0.63***	J		0.35	J	
Calcium	GRAS	5920	J		4740	J		8870	J		4860	J		41500	J		5140	J		7040	J		5150	J	
Chromium	37	15.4	J		21.5			15.8	J		24.4			13.1	J		23.9			11.9	J		19.4		
Cobalt	17.2	10.3			10.1			9.5			12.1			7.9			11.2			6.4			10.7		
Copper	33.9	20.6	J		21.6			22.7	J		25.3			21.5	J		26.3			25.1	J		20.7		
Iron	GRAS	17800	J		21200			16600	J		24900			14100	J		24900			13500	J		21500		
Lead	400	35	J		28.4			140	J		17.3			118	J		20.5			***619***	J		22.5		
Magnesium	GRAS	3460			4620			3210			4970			2800			4760			2530			3930		
Manganese	1083	633			597			577			657			515			658			452			641		
Mercury	23		U	(0.14)		UJ	(0.13)		U	(0.13)		UJ	(0.13)		U	(0.13)		UJ	(0.13)		U	(0.12)		UJ	(0.13)
Nickel	39.3	22.9			25.5			26.9			29.3			24.3			28.8			19.3			25.3		
Potassium	GRAS	3650			3610			3180			3810			3080			3820			2420			3260		
Selenium	1.33	***1.4***	J			U	(1.1)		U	(1.2)	1.2	J			U	(1.1)	***2.3***	J			U	(1.1)	***1.4***	J	
Silver	380		UJ	(0.18)		UJ	(0.15)		UJ	(0.16)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)
Sodium	GRAS		U	(405)		U	(334)		U	(363)		U	(334)		U	(344)		U	(339)		U	(336)		U	(327)
Thallium	1.72		U	(1.6)		U	(1.4)		U	(1.5)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)
Vanadium	72.5	31.1			40.1			30.3			47			24			46.2			21.5			36		
Zinc	119.5	68.3	J		68			***127***	J		66.1			111	J		70.1			***125***	J		61.7		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-053						B3A-054						B3A-055						B3A-056					
		B3A-053-000 (0-0.5 ft)			B3A-053-001 (1-2 ft)			B3A-054-000 (0-0.5 ft)			B3A-054-001 (1-2 ft)			B3A-055-000 (0-0.5 ft)			B3A-055-001 (1-2 ft)			B3A-056-000 (0-0.5 ft)			B3A-056-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.28	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(5000)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(5000)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	***62***	J			UJ	(0.5)		U	(0.5)		UJ	(0.5)	***87000***				UJ	(0.5)	2.4				U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(5000)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.7	J		1.7	J			U	(0.5)		UJ	(0.5)		U	(5000)	0.24	J		1.7			0.26	J	
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(7500)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	1.8	J		1.2	J		0.25	J			UJ	(1)		U	(10000)		UJ	(1)	1.8			0.31	J	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	***1600***	J		***35***	J			U	(0.75)		U	(0.5)		U	(7500)	***6.2***				U	(0.75)		UJ	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			R			U	(0.75)		R			U	(7500)		R			U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)	1.1	J			U	(2)		U	(20000)		UJ	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	46	J		5	J			U	(0.5)		UJ	(0.5)	730	J		1	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	17800			19400			19700			20500			15500			13600			17300			11000	J	
Antimony	31		R			R			R			R			R			R			R			UJ	(0.47)
Arsenic	13.5	6.7	J		8.5	J		6.8	J		9.2			5.8	J		9			6.2	J		7.5	J	
Barium	440	295			254			214			252			230			250			221			218		
Beryllium	1.52	0.79			0.87			0.8			0.95			0.66			0.76			0.68			0.7		
Cadmium	0.4	***0.62***	J		0.14	J		0.33	J			U	(0.13)	***0.65***	J			U	(0.13)	***0.94***	J			U	(0.12)
Calcium	GRAS	17500			4770			4930			4950			11600			6140			5190			4090		
Chromium	37	23.9			20.1			21.8			20.6			19.3			15.6			21.1			12.2	J	
Cobalt	17.2	9.5			11.1			9.3			10.8			8.7			10.8			8.3			9.2		
Copper	33.9	***39.7***			21.4			22.2			22.2			32.6			22.8			25			17.2		
Iron	GRAS	22400			21400			19700			23400			17400			19200			17900			15900	J	
Lead	400	203	J		16.5			117	J		15.5			310	J		23.7			186	J		17.2		
Magnesium	GRAS	4140			3870			3530			4060			3370			3610			3450			3130		
Manganese	1083	632			636			554			601			507			637			522			564		
Mercury	23		U	(0.17)	0.14	J			U	(0.13)		U	(0.13)	0.13	J			U	(0.12)		U	(0.13)		U	(0.13)
Nickel	39.3	***44***			26.4			21.9			25.8			33.5			27			22.5			21.8		
Potassium	GRAS	4480			3680			3840			3650			3220			2620			3840			2180		
Selenium	1.33		U	(1.5)	***1.8***	J			U	(1.1)	***1.9***	J			U	(1.1)		U	(1.1)	1.2	J			U	(1.1)
Silver	380		UJ	(0.2)		UJ	(0.15)		UJ	(0.15)		UJ	(0.16)		UJ	(0.15)		UJ	(0.15)		UJ	(0.16)		UJ	(0.15)
Sodium	GRAS		U	(460)		U	(33.5)		U	(348)	88.7	J			U	(344)		U	(339)		U	(359)	221	U	(337)
Thallium	1.72		U	(1.9)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.5)		U	(1.4)
Vanadium	72.5	42.2			42.6			45			44.7			36.4			31.1			38.7			19.6		
Zinc	119.5	***158***			57.1			106			60.7			***236***			56.1			104			46.4	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-057						B3A-058						B3A-059						B3A-060					
		B3A-057-000 (0-0.5 ft)			B3A-057-001 (1-2 ft)			B3A-058-000 (0-0.5 ft)			B3A-058-001 (1-2 ft)			B3A-059-000 (0-0.5 ft)			B3A-059-001 (1-2 ft)			B3A-060-000 (0-0.5 ft)			B3A-060-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.42	J			U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	15				UJ	(0.5)	14				UJ	(0.5)	5.2				UJ	(0.5)	0.17	J			UJ	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	1.8			0.32	J		1.9			0.45	J		2.3				UJ	(0.5)	0.094	J			UJ	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	1.7				UJ	(1)	1.8			0.28	J		2.2				UJ	(1)	0.15	J		0.16	J	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	3.3			0.81	J		***18***				UJ	(0.75)	1.3				UJ	(0.5)		U	(0.82)		UJ	(0.5)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		R			U	(0.75)		R			U	(0.75)	0.2	J			U	(0.75)		R	
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(0.5)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.51			0.17	J		1.8				U	(0.5)	0.3	J		0.48	J		0.14	J		0.18	J	
METALS (MG/KG)																									
Aluminum	33852	17900			15400			14800			18000			19900	J		15200			17500	J		15100		
Antimony	31		R			R		0.52	J			R			UJ	(0.57)		R			UJ	(0.49)		R	
Arsenic	13.5	7	J		8.8			6.4	J		7.6	J		8	J		8.7			5.7	J		7.9	J	
Barium	440	217			247			214			209			291			217			200			196		
Beryllium	1.52	0.74			0.79			0.61			0.8			0.78			0.78			0.68			0.74		
Cadmium	0.4	***0.67***	J			U	(0.13)	***1.4***				U	(0.13)	***2.4***			0.17	J		***3.1***				U	(0.13)
Calcium	GRAS	9610			5850			8270			4070			18400	J		5040			31000	J		4390		
Chromium	37	21.9			16.6			25.2			18.1			26.8	J		19.6			23.2	J		16.5		
Cobalt	17.2	10.2			10.5			9.2			9.4			10.9			10.4			8.8			9.4		
Copper	33.9	28.3			21.2			31.7			19.5			***35.7***	J		21.5			25.7	J		19.7		
Iron	GRAS	18800			19700			23500			19500			24700	J		19100			17100	J		18200		
Lead	400	73	J		20.4			89.7	J		16.7	J		123	J		22.2	J		116	J		17.7	J	
Magnesium	GRAS	3550			3540			3040			3640			3880			3660			3400			3320		
Manganese	1083	550			617			542			536			673			590			520			535		
Mercury	23		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.15)		U	(0.13)		U	(0.12)		U	(0.13)
Nickel	39.3	33.1			25.1			31.2			22.1			35.2			25			30			22.3		
Potassium	GRAS	3570			2800			3430			3210			4270			2770			3850			2760		
Selenium	1.33	1.2	J		***2.1***	J		1.3	J		1.2	J			U	(1.3)		U	(1.1)		U	(1.1)	1.3	J	
Silver	380		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.18)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)
Sodium	GRAS		U	(329)					U	(331)		U	(347)		U	(407)		U	(335)		U	(346)		U	(339)
Thallium	1.72		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.4)	***1.8***	J			U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	40.8			30.2			36.2			37.3			44.1			31.8			41.8			34		
Zinc	119.5	73.8			56.4			115			53.1			***126***	J		55.4			104	J		51.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-061						B3A-062						B3A-064						B3A-065					
		B3A-061-000 (0-0.5 ft)			B3A-061-001 (1-2 ft)			B3A-062-000 (0-0.5 ft)			B3A-062-001 (1-2 ft)			B3A-064-000 (0-0.5 ft)			B3A-064-001 (1-2 ft)			B3A-065-000 (0-0.5 ft)			B3A-065-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	***29***			6.5	J			U	(0.61)		U	(0.5)		U	(0.5)		U	(0.5)	0.64				U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	2.6			0.27	J		0.3	J			U	(0.5)		U	(0.5)	0.21	J		0.29	J			U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	2.2			0.12	J			U	(1)		U	(1)		U	(1)	0.24	J		0.27	J			U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	1.2				UJ	(0.5)		U	(0.75)		U	(0.75)	1.2			1.7			0.32	J		0.88		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		R			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.35	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	11800			16000			17100			19700			7950			18200			9780			14800		
Antimony	31		R			R			UJ	(0.46)		UJ	(0.46)	0.43	J		0.59	J		1.5	J			UJ	(0.47)
Arsenic	13.5	5.1	J		9.4			9.2			7.6	J		5.9	J		8.4	J		4.5	J		9.6		
Barium	440	248			204			235			223			85.4			212			143			272		
Beryllium	1.52	0.58			0.76			0.83			0.81			0.53			0.77			0.61			0.77		
Cadmium	0.4	***2.5***			0.29	J		***0.41***	J		0.25	J		***0.85***	J		***0.67***	J		***3***			0.36	J	
Calcium	GRAS	45600			4900			4150			3180			64100			24900			45700	J		6200	J	
Chromium	37	18.9			16.9			19			20.6			26.5			20.5			26.7			16.7		
Cobalt	17.2	8.8			9.8			10.1			9.2			5.4			8.9			6.2			10		
Copper	33.9	***66.1***			19.9			23.5			15.4			16.6			21.5			***38.6***			21.7		
Iron	GRAS	14700			19400			20200			19000			11900			19900			14500			19400		
Lead	400	114			24.7	J		26.1	J		14.2	J		131	J		24.4	J		278			33.8		
Magnesium	GRAS	2830			3530			3940			3540			8390			4490			5180			3710		
Manganese	1083	543			577			600			537			265			545			335			600		
Mercury	23	0.13	J			U	(0.13)		U	(0.13)		U	(0.13)	0.72				U	(0.13)		UJ	(0.12)		UJ	(0.13)
Nickel	39.3	***60***			22.1			24			19.6			18			23.4			***42.2***			24.9		
Potassium	GRAS	3240			2890			3720			3750			3080			3670			2670			2970		
Selenium	1.33		U	(1.1)	***1.8***	J			U	(1.1)	***2.1***	J		***1.7***	J		1.2	J			U	(1.1)	1.3	J	
Silver	380		UJ	(0.14)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)	79.3	J			UJ	(0.15)	3.8	J			UJ	(0.15)
Sodium	GRAS		U	(322)		U	(334)		U	(329)		U	(329)		U	(309)		U	(341)		U	(323)		U	(331)
Thallium	1.72		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.2)		U	(1.4)		U	(1.3)		U	(1.4)
Vanadium	72.5	26.9			33.5			37.5			43.2			17.9			40.6			23			31.1		
Zinc	119.5	***121***			52.6			***165***	J		62	J		98.7	J		68.3	J		***143***			58.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-066						B3A-067						B3A-068						B3A-069					
		B3A-066-000 (0-0.5 ft)			B3A-066-001 (1-2 ft)			B3A-067-000 (0-0.5 ft)			B3A-067-001 (1-2 ft)			B3A-068-000 (0-0.5 ft)			B3A-068-001 (1-2 ft)			B3A-069-000 (0-0.5 ft)			B3A-069-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.81)		U	(0.5)		U	(0.5)		U	(0.52)	1.9				U	(0.5)	1.6				U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.23	J		1.3			0.2	J		0.89			0.49	J		0.18	J		1.3				U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.26	J			U	(1)		U	(1)	0.2	J		0.46	J			U	(1)	1.1	J			U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	***14***			4.3			0.67	J		2.3				U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	1.8			1.4			0.096	J		0.89			0.1	J		0.13	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	15000			17300			14900			17000			15800			20500			11700	J		12000	J	
Antimony	31		UJ	(0.48)		UJ	(0.48)	0.54	J			UJ	(0.49)	0.68	J			UJ	(0.49)		UJ	(0.51)		UJ	(0.51)
Arsenic	13.5	8.6	J		9			9.6			9.5			7	J		9.6			9.3	J		9.6		
Barium	440	237			250			282			252			233			222			225			255		
Beryllium	1.52	0.77			0.83			0.71			0.85			0.66			0.93			0.74			0.78		
Cadmium	0.4	***0.48***	J		0.23	J		***2.8***			0.19	J		***1.7***				U	(0.13)	***0.42***	J		0.26	J	
Calcium	GRAS	5080	J		4860	J		7250			5000			14000	J		5170	J		5030			5180		
Chromium	37	18.1			19			21.5			18.7			20.2			20.8			14.2	J		14.1	J	
Cobalt	17.2	10.5			10.6			9.4			10.8			9.3			10.9			10.2			11.1		
Copper	33.9	22.5			23.3			25.6			27			22.6			23.3			22.4			21.9		
Iron	GRAS	19800			21100			17800			21500			17700			23300			17300	J		18200	J	
Lead	400	76.8			17.4			120	J		18.1	J		142			24.1			35.4	J		19.1	J	
Magnesium	GRAS	3590			4140			3400			4320			3750			4260			3440			3640		
Manganese	1083	628			525			522			625			580			593			614			692		
Mercury	23		UJ	(0.13)		UJ	(0.13)		U	(0.13)		U	(0.13)	0.13	J			UJ	(0.13)		U	(0.13)		U	(0.14)
Nickel	39.3	26.5			27			31.5			28.3			24.7			29.3			25.5			25.6		
Potassium	GRAS	3420			3110			3360			3130			3510			3510			3170			3090		
Selenium	1.33		U	(1.1)	***2.1***	J		***1.6***	J		***1.6***	J		1.1	J		***2.5***	J		***2.1***	J		***2.1***	J	
Silver	380		UJ	(0.15)		UJ	(0.15)	0.42	J			UJ	(0.16)	1.4	J			UJ	(0.15)		UJ	(0.16)		UJ	(0.16)
Sodium	GRAS		U	(343)		U	(341)		U	(340)		U	(349)		U	(330)		U	(346)		UJ	(361)		U	(364)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.4)	1.7	J			U	(1.3)		U	(1.4)		U	(1.5)		U	(1.5)
Vanadium	72.5	33			33.7			34.7			32.3			34.3			33.1			27.3			26.8		
Zinc	119.5	77.5			60.8			***155***	J		63.4	J		104			65.9			73.7	J		57.3	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-070						B3A-071						B3A-072						B3A-074					
		B3A-070-000 (0-0.5 ft)			B3A-070-001 (1-2 ft)			B3A-071-000 (0-0.5 ft)			B3A-071-001 (1-2 ft)			B3A-072-000 (0-0.5 ft)			B3A-072-001 (1-2 ft)			B3A-074-000 (0-0.5 ft)			B3A-074-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.17	J		0.47	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	14800	J		12800	J		11300	J		12100	J		11300	J		12600	J		12800	J		15100	J	
Antimony	31		UJ	(0.53)		UJ	(0.5)		UJ	(0.43)		UJ	(0.47)		UJ	(0.48)		UJ	(0.48)		UJ	(0.49)		UJ	(0.48)
Arsenic	13.5	9.4	J		8.3	J		7.2	J		9			9.4			8.8	J		8.4	J		9.6		
Barium	440	267			245			210			245			259			260			245			250		
Beryllium	1.52	0.82			0.73			0.65			0.76			0.72			0.72			0.77			0.83		
Cadmium	0.4	0.31	J		0.18	J		***0.43***	J		0.24	J		0.25	J			U	(0.13)	***0.41***	J		0.27	J	
Calcium	GRAS	4040			4280			3560			4200			4300			4060			4050			4520		
Chromium	37	17	J		15.4	J		13.2	J		13.7	J		13.7	J		14.9	J		15.2	J		16.8	J	
Cobalt	17.2	10.5			9.7			9.1			10.4			10.2			10.3			9.9			11.6		
Copper	33.9	23.9			20.4			20.9			23.3			21.3			19.7			21.1			22.3		
Iron	GRAS	19300	J		18600	J		15700	J		18500	J		18000	J		18300	J		18100	J		20100	J	
Lead	400	39.9	J		15	J		66	J		16.5	J		17.2	J		15	J		41.1	J		24.5	J	
Magnesium	GRAS	3460			3750			2870			3890			3430			3670			3330			3760		
Manganese	1083	639			585			552			655			628			646			587			680		
Mercury	23		U	(0.15)		U	(0.13)		U	(0.12)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)
Nickel	39.3	23.3			23.5			20.3			28.9			24.1			23.7			22.1			25		
Potassium	GRAS	4260			3050			2660			2170			3370			2590			3940			3500		
Selenium	1.33	***2***	J			U	(1.2)	***1.4***	J		***2.1***	J			U	(1.1)	***1.6***	J		***2.8***	J		***1.9***	J	
Silver	380		UJ	(0.17)		UJ	(0.16)		UJ	(0.14)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)
Sodium	GRAS		U	(378)		U	(355)					U	(335)		U	(344)		U	(342)		U	(346)		U	(341)
Thallium	1.72		U	(1.5)		U	(1.4)		U	(1.2)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	35.2			30.2			26.5			22.5			27.3			28.7			29.4			31		
Zinc	119.5	83.8	J		55.5	J		61.7	J		55.6	J		57.2	J		56	J		***138***	J		71.4	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-6
Analytical Data for Load Line 3 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3A-075						B3A-076					
		B3A-075-000 (0-0.5 ft)			B3A-075-001 (1-2 ft)			B3A-076-000 (0-0.5 ft)			B3A-076-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)													
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
1,3-Dinitrobenzene (1,3-DNB)	3.4		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.23	J		0.46	J			U	(0.5)	0.37	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.3	J		0.28	J			U	(0.5)
METALS (MG/KG)													
Aluminum	33852	9650	J		12800			19200			20800		
Antimony	31		UJ	(0.46)		U	(0.47)		UJ	(0.44)		UJ	(0.52)
Arsenic	13.5	7.1	J		8.4	J		8.1			10		
Barium	440	234			251			220			296		
Beryllium	1.52	0.63			0.75			0.81			0.96		
Cadmium	0.4	***0.42***	J		0.27	J		0.24	J		0.23	J	
Calcium	GRAS	4450			5080			4560			4320		
Chromium	37	17.3	J		14.4	J		20.4			22.8		
Cobalt	17.2	8.1			9.9			9.8			12.1		
Copper	33.9	26.1			18.7			19.3			21.7		
Iron	GRAS	14900	J		17400	J		19900			23400		
Lead	400	146	J		18.9	J		24.6	J		19.3	J	
Magnesium	GRAS	2790			3250			3950			4470		
Manganese	1083	499			594			563			751		
Mercury	23		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.14)
Nickel	39.3	22.4			21.8			22.1			26.5		
Potassium	GRAS	2900			2520			4590			4240		
Selenium	1.33	***1.5***	J		***1.4***	J		***1.7***	J		***2.4***	J	
Silver	380		UJ	(0.14)		UJ	(0.15)		UJ	(0.14)		UJ	(0.16)
Sodium	GRAS		U	(324)		U	(333)		U	(314)		U	(370)
Thallium	1.72		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.5)
Vanadium	72.5	24.1			28.3			42.3			46.9		
Zinc	119.5	63.1	J		49	J		64.8	J		67.7	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-7
Analytical Data for Load Line 3 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3B-001			B3B-002			B3B-003			B3B-004			B3B-005			B3B-006			B3B-007			B3B-008		
		B3B-001-000 (0-1 ft)			B3B-002-000 (0-1 ft)			B3B-003-000 (0-1 ft)			B3B-004-000 (0-1 ft)			B3B-005-000 (0-1 ft)			B3B-006-000 (0-1 ft)			B3B-007-000 (0-1 ft)			B3B-008-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.16	J			U	(0.5)		U	(0.5)	0.12	J			U	(0.5)		U	(0.5)		U	(0.5)	0.14	J	
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.073	J			U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)	0.24	J			U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.3	J			U	(0.5)	0.28	J			U	(0.5)	0.22	J		0.3	J		0.42	J	
METALS (MG/KG)																									
Aluminum	33852	17400			13100			13700			14100			16300			16100			17600			14500		
Antimony	31		UJ	(0.46)		UJ	(0.45)		UJ	(0.47)		UJ	(0.46)	0.46	J		0.63	J			R			R	
Arsenic	13.5	9.2			10.1			10.7			9.6			11.2			10.7			9.5			6.9	J	
Barium	440	391			298			272			356			237			252			243			178		
Beryllium	1.52	0.82			0.73			0.77			0.76			0.82			0.85			0.82			0.66		
Cadmium	0.4		U	(1.2)		U	(1.2)		U	(1.2)		U	(1.2)		U	(1.2)		U	(1.2)	0.28	J		0.22	J	
Calcium	GRAS	3760			5660			4410			4230			4070			4580			5560			4190		
Chromium	37	19			15.9			17			17.5			19.3			18.1			19.4			15.7		
Cobalt	17.2	10.9			10.9			10.6			12.2			11.1			11.7			11.3			9.9		
Copper	33.9	20.9			21.8			23.6			23			23.9			23.9			20.4			14.2		
Iron	GRAS	20900			19800			21200			20300			22100			22300			20700			17600		
Lead	400	13.8			14			14.4			15.2			14.5			15.6			69			13.4		
Magnesium	GRAS	4520			4330			4760			4460			4780			4580			4490			3650		
Manganese	1083	636			651			624			617			668			650			579	J		644	J	
Mercury	23		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.13)		U	(0.12)
Nickel	39.3	26.2	J		28.1	J		29.8	J		28.6	J		29.4	J		27.7	J		25.7	J		17.7	J	
Potassium	GRAS	2940			2760			2650			2930			3170			3240			3210			2690		
Selenium	1.33		U	(1.1)		U	(1)		U	(1.1)		U	(1.1)		U	(1.1)		U	(1.1)		U	(1.1)		U	(1)
Sodium	GRAS	622				U	(318)	624				U	(329)		U	(326)		U	(331)		U	(348)		U	(311)
Vanadium	72.5	36.6			31.8			31.2			34			38			36			38.1			27.8		
Zinc	119.5	55.7			53.5			59.6			60.1			61.6			60.1			58.7			50.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-7
Analytical Data for Load Line 3 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3B-009			B3B-010			B3B-011			B3B-012			B3B-013			B3B-014			B3B-015			B3B-016		
		B3B-009-000 (0-1 ft)			B3B-010-000 (0-1 ft)			B3B-011-000 (0-1 ft)			B3B-012-000 (0-1 ft)			B3B-013-000 (0-1 ft)			B3B-014-000 (0-1 ft)			B3B-015-000 (0-1 ft)			B3B-016-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)	0.15	J		0.19	J		0.2	J		0.21	J			U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.19	J			U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)	0.12	J			U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	3.6		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.52			0.41	J			U	(0.5)	0.5			0.48	J		0.41	J		0.24	J	
METALS (MG/KG)																									
Aluminum	33852	14200			15400			16200			12900			15300			11800			14600			12800		
Antimony	31		R			R			R			R			R			R			R			R	
Arsenic	13.5	10.3			8.7			9.3			7	J		6.3	J		6.3	J		5.6	J		7.2	J	
Barium	440	253			201			222			229			189			266			191			214		
Beryllium	1.52	0.76			0.76			0.8			0.67			0.72			0.66			0.74			0.62		
Cadmium	0.4	0.14	J		0.2	J		0.34	J		0.29	J		0.18	J		0.38	J		0.25	J		0.25	J	
Calcium	GRAS	4030			3910			4310			3050			2620			2580			2980			3300		
Chromium	37	15.8			16.9			17.8			14			16.2			13.2			17.8			15.8		
Cobalt	17.2	10.3			12.9			10.9			9.2			9.7			9.9			10.1			9.7		
Copper	33.9	21.4			14.8			20.5			14.9			14.6			13.9			15.2			17.4		
Iron	GRAS	19800			19800			20300			15700			16600			14500			16400			16200		
Lead	400	14.3			14.5			14.2			12.3			12.7			12.7			12.7			12		
Magnesium	GRAS	4020			4170			4320			3030			3010			2580			2990			3280		
Manganese	1083	589	J		727	J		636	J		545	J		554	J		675	J		621	J		419	J	
Mercury	23		U	(0.13)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)
Nickel	39.3	26.2	J		22.2	J		25.8	J		19.3	J		18.1	J		19	J		19.7	J		23.7	J	
Potassium	GRAS	2570			2800			3240			2700			3280			2720			3240			2640		
Selenium	1.33		U	(1.1)		U	(1.1)	1.1	J			U	(0.98)		U	(1)	1.1	J			U	(1)		U	(1)
Sodium	GRAS		U	(338)		U	(324)		U	(299)		U	(301)		U	(310)		U	(307)		U	(320)		U	(318)
Vanadium	72.5	30			33			35.5			27			32.6			24.8			29.8			28.4		
Zinc	119.5	52			55.3			55.9			42.6			49.5			46.3			51.5			48.8		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-7
Analytical Data for Load Line 3 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3B-017			B3B-018			B3B-019			B3B-020			B3B-021			B3B-022			B3B-023			B3B-024		
		B3B-017-000 (0-1 ft)			B3B-018-000 (0-1 ft)			B3B-019-000 (0-1 ft)			B3B-020-000 (0-1 ft)			B3B-021-000 (0-1 ft)			B3B-022-000 (0-1 ft)			B3B-023-000 (0-1 ft)			B3B-024-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)	0.68				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.86				U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	0.039	J		0.048	J			U	(0.5)	0.021	J		0.1	J		0.072	J	
METALS (MG/KG)																									
Aluminum	33852	12200	J		16400			16200	J		22600			14800			12900	J		10600	J		13200	J	
Antimony	31		R			UJ	(4.3)		R			UJ	(0.49)		UJ	(0.49)		R			R			R	
Arsenic	13.5	8	J		9.5			8			7.4	J		6.8	J		5.9	J		8.4	J		6.4	J	
Barium	440	241			242			218			232			162			229			285			236		
Beryllium	1.52	0.7			0.85			0.78			0.99			0.68			0.68			0.63			0.69		
Cadmium	0.4	***0.5***	J		***0.41***	J		***0.52***	J		***0.49***	J		0.39	J		***0.45***	J		***0.51***	J		0.4	J	
Calcium	GRAS	3590			3720			3530			4000			3540			3320			4010			3380		
Chromium	37	13.9			17.9			16.8			23.3			16.6			14.3			13.4			14.6		
Cobalt	17.2	9.5			10.3			10.1			11.6			11			8.4			12.9			8.5		
Copper	33.9	18.5			21.1			18.3			21.1			16.2			15.7			20.3			16.2		
Iron	GRAS	17700			21100			20100			21100			17400			14400			18700			14700		
Lead	400	13.3			15.1			13.9			16.1			11.9			13.1			13.7			13.2		
Magnesium	GRAS	3300			4100			3780			4580			3450			2940			3750			3000		
Manganese	1083	557			621	J		572			324	J		853	J		270	J		388			276		
Mercury	23		U	(0.13)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)
Nickel	39.3	23			25			22.5			26.1			21.7			19.5	J		21			20		
Potassium	GRAS	2570			2950			2970			4210			3070			2900			2600			2980		
Selenium	1.33	***1.5***	J		***1.8***	J		***2.1***	J		1.2	J			U	(1.1)	***1.4***	J			U	(1.1)		U	(1.1)
Sodium	GRAS		U	(335)		U	(307)		U	(306)		U	(350)		U	(346)		U	(328)		U	(340)		U	(338)
Vanadium	72.5	29			33.4			32.7			48.3			33.9			29.7			27.8			30.4		
Zinc	119.5	49.5			57.3			53			63.5			44.4			44.9			53.5			45.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-7
Analytical Data for Load Line 3 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3B-025			B3B-026			B3B-027			B3B-028			B3B-029			B3B-030			B3B-031			B3B-032		
		B3B-025-000 (0-1 ft)			B3B-026-000 (0-1 ft)			B3B-027-000 (0-1 ft)			B3B-028-000 (0-1 ft)			B3B-029-000 (0-1 ft)			B3B-030-000 (0-1 ft)			B3B-031-000 (0-1 ft)			B3B-032-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.26	J			U	(0.75)	0.084	J	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.0073	J		0.059	J			U	(0.5)	0.074	J			U	(0.5)		U	(0.5)	0.076	J		0.022	J	
METALS (MG/KG)																									
Aluminum	33852	13900	J		17800			15900			14500			18600			16400			13900			17500		
Antimony	31		R			UJ	(0.44)		UJ	(0.42)		UJ	(0.44)		UJ	(0.46)		UJ	(0.44)		UJ	(0.44)		UJ	(0.42)
Arsenic	13.5	11.2			7.7	J		7.8			8.4			8.3	J		8.1	J		8	J		7.8		
Barium	440	231			346			218			237			266			183			201			299		
Beryllium	1.52	0.73			0.8			0.71			0.75			0.87			0.81			0.75			0.79		
Cadmium	0.4	***0.61***	J		***0.58***	J		***0.42***	J		***0.47***	J		0.4	J		***0.45***	J		***0.46***	J		***0.42***	J	
Calcium	GRAS	3660			3160			3420			3540			3630			3340			3190			3320		
Chromium	37	14.9			19.6			16.9			16			19.5			17.7			15.6			18.6		
Cobalt	17.2	9.7			11.1			8.3			9.9			11.1			9.6			9.8			9.3		
Copper	33.9	19.7			18.9			16.5			18.6			18.4			18.9			17.8			18.6		
Iron	GRAS	18700			19100			17800			18200			21000			19400			17800			19300		
Lead	400	13			16.1			13.2			14			16.3			14.3			14.5			14		
Magnesium	GRAS	3620			3530			3350			3560			4060			3560			3130			3640		
Manganese	1083	315			700	J		485	J		576	J		542	J		579			564	J		539	J	
Mercury	23		U	(0.12)		U	(0.12)		U	(0.11)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.11)
Nickel	39.3	22.3			22.2			19.7			21.8			22.8			22.6			21			21.7		
Potassium	GRAS	2630			3680			3150			3110			3510			3240			3040			3590		
Selenium	1.33	***1.7***	J		***2.1***	J		***1.5***	J		***1.8***	J		1.2	J		***1.7***	J		***1.7***	J		***1.5***	J	
Sodium	GRAS		U	(318)		U	(316)		U	(295)		U	(312)		U	(326)		U	(316)		U	(315)		U	(299)
Vanadium	72.5	31.6			39.8			34.2			31.1			36.6			35.7			32.8			38.6		
Zinc	119.5	50.9			52.7			50.3			51			59.4			51.6			49.6			52.3		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-7
Analytical Data for Load Line 3 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B3B-033			B3B-034			B3B-035			B3B-036			B3B-037			B3B-038		
		B3B-033-000 (0-1 ft)			B3B-034-000 (0-1 ft)			B3B-035-000 (0-1 ft)			B3B-036-000 (0-1 ft)			B3B-037-000 (0-1 ft)			B3B-038-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)	0.15	J			U	(0.5)		U	(0.5)		U	(0.5)	0.82		
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	***3.5***		
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)	0.036	J			U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.09	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	14100			6220			14500	J		13500	J		9010	J		12200	J	
Antimony	31		R.			UJ	(0.41)		R			R			R			R	
Arsenic	13.5	7.8	J		2.9	J		8.8			7.2	J		5.9	J		7.8	J	
Barium	440	216			76.8			232			191			158			200		
Beryllium	1.52	0.78			0.33			0.71			0.68			0.53			0.69		
Cadmium	0.4	0.25	J			U	(0.11)	***0.47***	J		***0.42***	J		0.28	J		***0.44***	J	
Calcium	GRAS	3500			2100			3660			3290			2880			3410		
Chromium	37	14.6			7			16.2			14.9			10.3			13.3		
Cobalt	17.2	10.1			4			10.6			9.3			7.4			9.9		
Copper	33.9	18.7			7.2			19.5			16.5			12.6			31.6	J	
Iron	GRAS	17600			7710			19700			17600			13100			17500		
Lead	400	13.9			6.2			13.8			13.2			10.5			15.1		
Magnesium	GRAS	3240			1480			3870			3380			2350			3170		
Manganese	1083	579	J		223	J		624			570			454			659		
Mercury	23		U	(0.12)		U	(0.11)		U	(0.12)	0.17	J			U	(0.12)		U	(0.12)
Nickel	39.3	22.8	J		9.4			23.1			20.2			16			24		
Potassium	GRAS	2770			1470			3000			2770			2200			2530		
Selenium	1.33		U	(1)		U	(0.94)	***1.4***	J			U	(1)	***2***	J		***2***	J	
Sodium	GRAS		U	(318)		U	(289)		U	(316)		U	(309)	246	J		250	J	
Vanadium	72.5	27.7			14.6			33.1			29.7			21.3			27.9		
Zinc	119.5	48.5			19.8			53.8			48.8			35.1			54.9		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-001						B4A-002						B4A-003						B4A-004					
		B4A-001-000 (0-0.5 ft)			B4A-001-001 (1-2 ft)			B4A-002-000 (0-0.5 ft)			B4A-002-001 (1-2 ft)			B4A-003-000 (0-0.5 ft)			B4A-003-001 (1-2 ft)			B4A-004-000 (0-0.5 ft)			B4A-004-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.1	J			U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.46	J			U	(0.5)	0.47	J		0.14	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.39	J			U	(0.5)	0.26	J			U	(0.5)	0.4	J		0.54				U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.32	J			U	(1)	0.25	J			U	(1)	0.3	J		0.17	J			U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)	0.69	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.093	J			U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.064	J			U	(0.5)		U	(0.5)	0.086	J		0.4	J		0.072	J		0.28	J		0.083	J	
METALS (MG/KG)																									
Aluminum	33852	15500			10200			12600			11900			11700			11600			18100			15300		
Antimony	31		UJ	(0.46)		UJ	(0.47)		R			R			R			R			UJ	(0.47)	0.51	J	
Arsenic	13.5	7.1	J		5	J		5.5	J		3.1	J		5.3	J		6.5	J		7.6	J		6.9	J	
Barium	440	203			265			201			241			195			215			216			247		
Beryllium	1.52	0.73			0.65			0.63			0.66			0.59			0.64				U	(0.8)	0.8		
Cadmium	0.4	***4***			0.23	J		***2.2***			***0.49***	J		***10.3***			***0.75***	J		***8.8***	J		***0.47***	J	
Calcium	GRAS	3870			3430			3020			3070			3890			3560			3380			3660		
Chromium	37	18.7			13.5			14.6			14.5			18			13.7			20			17.6		
Cobalt	17.2	9.1			8.8			9.3			9.1			7.9			8			10.3			9		
Copper	33.9	31.6	J		14.7	J		26			16.5			29.7			15.9			***44.3***	J		18.2	J	
Iron	GRAS	17500			13200			14800			10900			14100			14400			19200			17400		
Lead	400	98.9	J		15.4	J		28.5			15.4			237			23.7			162	J		17.6	J	
Magnesium	GRAS	2890			2400			2340			2440			2360			2360			3390			3500		
Manganese	1083	540			790			566			525			507			572			681			559		
Mercury	23	0.22	J		0.14	J		0.14	J		0.14	J		0.2	J		0.18	J			U	(0.13)	0.16	J	
Nickel	39.3	25.4			15.5			17.9			17.2			20			16.2			22.4			21.9		
Potassium	GRAS	3210			2590			2730			2860			2810			2800			3760			3360		
Selenium	1.33	1.3	J		***1.8***	J			U	(1)		U	(1.1)		U	(1.1)		U	(1.1)	***2.4***	J		***1.9***	J	
Sodium	GRAS		U	(327)		U	(336)		U	(315)		U	(325)		U	(334)		U	(342)		U	(337)		U	(344)
Thallium	1.72		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	33.1			26.3			28.9			25			26.9			26.9			38.5			29.9		
Zinc	119.5	88			44.1			61.4			46.9			***155***			48.9			***128***	J		55.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-005						B4A-006						B4A-007						B4A-008					
		B4A-005-000 (0-0.5 ft)			B4A-005-001 (1-2 ft)			B4A-006-000 (0-0.5 ft)			B4A-006-001 (1-2 ft)			B4A-007-000 (0-0.5 ft)			B4A-007-001 (1-2 ft)			B4A-008-000 (0-0.5 ft)			B4A-008-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.32	J		0.16	J		0.37	J			U	(0.5)	5.1				U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.19	J			U	(0.5)	0.31	J			U	(0.5)	0.22	J			U	(0.5)	0.2	J			U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.26	J		0.18	J		0.32	J			U	(1)	0.21	J			U	(1)	0.29	J			U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)	0.098	J		0.1	J		3.3			0.74	J		***74***			***6.3***		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	0.16	J		0.12	J		0.85			0.41	J		7.5			1.7		
METALS (MG/KG)																									
Aluminum	33852	19400			21600			12000			12600			9850			11100			11900			12300		
Antimony	31		UJ	(0.48)		UJ	(0.47)		R			R			R			R		0.48	J			R	
Arsenic	13.5	7	J		8	J		6.9	J		8.5	J		8.1	J		8.3	J		7.4	J		8.3		
Barium	440	209			222			199			250			236			266			206			288		
Beryllium	1.52	0.81			0.89			0.58			0.69			0.53			0.64			0.66			0.69		
Cadmium	0.4	***1.2***	J		***0.53***	J		***2.1***			0.32	J		***0.79***	J		0.23	J		***0.97***	J		***0.47***	J	
Calcium	GRAS	3410			3530			11900			4580			10100			4490			7780			4780		
Chromium	37	21.1			23.3			20.7			15.6			16.9			14			27.5			15.7		
Cobalt	17.2	9.8			9.9			8.6			11			8.2			8.9			9.2			10.1		
Copper	33.9	18.5			17.4			26.9			20.9			26.9			20.5			28.2			21.1		
Iron	GRAS	20000			22600			16500			19100			34900			17600			16900			18400		
Lead	400	274			22.3			27.1			16.1			43	J		13.7	J		98.5	J		14	J	
Magnesium	GRAS	3340			3870			5110			3750			3200			3580			3320			3820		
Manganese	1083	499			565			519			610			547			497			566			619		
Mercury	23		U	(0.13)		U	(0.13)	0.19	J		0.14	J			U	(0.12)		U	(0.12)	0.14	J			U	(0.12)
Nickel	39.3	20.8	J		23.3	J		29.9			25.1			23.5			22.9			23.1			26		
Potassium	GRAS	3760			3800			2930			2540			3540			3000			3610			2770		
Selenium	1.33	1.3	J			UJ	(1.1)	1.1	J			U	(1.1)	***1.4***	J			U	(1.1)		U	(1.1)		U	(1)
Sodium	GRAS		U	(344)		U	(332)		U	(305)		U	(339)		U	(321)		U	(333)		UJ	(334)		U	(312)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.2)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.3)
Vanadium	72.5	42.4			44			31			30.8			26			27			26.6			31.4		
Zinc	119.5	85.9			58.9			63.9			***130***			61.2			48.9			83.1			51.9		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-009						B4A-010						B4A-011						B4A-012					
		B4A-009-000 (0-0.5 ft)			B4A-009-001 (1-2 ft)			B4A-010-000 (0-0.5 ft)			B4A-010-001 (1-2 ft)			B4A-011-000 (0-0.5 ft)			B4A-011-001 (1-2 ft)			B4A-012-000 (0-0.5 ft)			B4A-012-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)	0.088	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	2.5			0.46	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.52				U	(0.5)		U	(0.5)		U	(0.5)	0.12	J		0.079	J			U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.87	J			U	(1)		U	(1)		U	(1)	0.18	J		0.12	J			U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	***24***			0.34	J			U	(0.75)		U	(0.75)	3.4			0.79			2.2			0.34	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	4.7			0.28	J			U	(0.5)	0.33	J			U	(0.5)	0.069	J			U	(0.5)	0.13	J	
METALS (MG/KG)																									
Aluminum	33852	15000			12700			12000			17800			12000			12700			5710			14500		
Antimony	31		R			R			UJ	(0.42)		UJ	(0.45)	1.4	J			R			UJ	(0.44)		UJ	(0.44)
Arsenic	13.5	6.9	J		9.1			7.5	J		7.9	J		***15.3***			7.3	J		3.5	J		9.4		
Barium	440	164			207			163			234			210			241			149			256		
Beryllium	1.52	0.7			0.71			0.6			0.78			0.59			0.66			0.28			0.74		
Cadmium	0.4	***1.7***			***0.46***	J		***1.1***			***0.54***	J		***1.6***			***0.57***	J		***0.92***	J		***0.55***	J	
Calcium	GRAS	5790			4490			3610			4020			19600			4580			13900			5470		
Chromium	37	21			15.5			14			19			***57***			17.5			15.1			17.9		
Cobalt	17.2	8.9			10.5			9.5			9.7			13.5			9.6			5			10.5		
Copper	33.9	31.5			22.8			28.1			18.9			***79.8***	J		26.2			25.6			23		
Iron	GRAS	19700			19600			19000			20500			70600			20700			13100			20800		
Lead	400	125	J		18.9	J		291			20.3			159	J		21.7			47.5			14.8		
Magnesium	GRAS	3340			3470			2890			3880			4250			3750			2200			4420		
Manganese	1083	557			644			585			570			864			603			399			635		
Mercury	23	0.38				U	(0.13)		U	(0.11)		U	(0.12)	0.25	J		0.17	J		0.14	J			U	(0.12)
Nickel	39.3	25.6			27.7			18.5	J		23	J		***61.7***			26			14.5	J		27	J	
Potassium	GRAS	3610			2660			2870			3240			3110			2760			1550			3060		
Selenium	1.33	1.1	J			U	(1.1)	1.3	J		***1.6***	J		***3.3***	J			U	(1.1)		UJ	(1)	***1.6***	J	
Sodium	GRAS		U	(321)		U	(338)		U	(296)		U	(323)		U	(340)		U	(325)		U	(312)		U	(313)
Thallium	1.72		U	(1.3)		U	(1.4)		U	(1.2)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.3)
Vanadium	72.5	32			33.8			27.2			36.2			37			34.4			16.4			35		
Zinc	119.5	***159***			56.5			***212***			58.1			***234***			60.5			63.4			57.7		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-013						B4A-014						B4A-015						B4A-016					
		B4A-013-000 (0-0.5 ft)			B4A-013-001 (1-2 ft)			B4A-014-000 (0-0.5 ft)			B4A-014-001 (1-2 ft)			B4A-015-000 (0-0.5 ft)			B4A-015-001 (1-2 ft)			B4A-016-000 (0-0.5 ft)			B4A-016-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)	0.093	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.37	J		0.4	J			U	(0.5)	0.45	J			U	(0.5)	0.071	J		0.44	J		0.071	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)	0.14	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)	0.14	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA	0.72	J			U	(2)		U	(2)		U	(2)		U	(2)	1.6	J			U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)	0.35	J			U	(0.5)		U	(0.5)	0.28	J			U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	9740			10500			19800			17800			15000			18500			21100			22500		
Antimony	31		R			R			U	(0.51)	0.51	J		0.74	J			UJ	(0.52)	0.59	J			UJ	(0.49)
Arsenic	13.5	5.5	J		10.4			10.7			10.5			8.2	J		10			10.7			9.9		
Barium	440	169			237			283			329			283			323			243			228		
Beryllium	1.52	0.53			0.7			0.9			0.88			0.75			0.89			0.97			0.97		
Cadmium	0.4	***0.7***	J		***0.5***	J		***0.5***	J		0.38	J		***0.81***	J		0.23	J		***0.63***	J			U	(0.13)
Calcium	GRAS	5260			4200			5170			5070			6180			5340			4090			3840		
Chromium	37	13.1			14			23.5			21.7			19.9			22.7			25			23.8		
Cobalt	17.2	7.5			11.7			12.4			11.9			10.5			11.6			12.8			11.5		
Copper	33.9	21.6			26.7			***112***			28.2			***36.5***			27.3			***34.2***			28.2		
Iron	GRAS	14700			20100			24100			24300			20500			24200			25200			25300		
Lead	400	201			18.4	J		59.8			17.1	J		90.7			17.7	J		110			21.4	J	
Magnesium	GRAS	2540			3530			4690			5250			4150			5100			4920			4960		
Manganese	1083	465			646			727			706			633			687			741			615		
Mercury	23		U	(0.13)		U	(0.13)		U	(0.14)		U	(0.14)	0.14	J			U	(0.14)		U	(0.14)		U	(0.13)
Nickel	39.3	20.9			29.2			31.4			32			26.7			30.3			29.7			29.9		
Potassium	GRAS	2330			2400			5080			3740			3980			3910			4240			3820		
Selenium	1.33		U	(1.1)		U	(1.1)	***1.6***	J		***1.7***	J		***1.4***	J			U	(1.2)	1.3	J			U	(1.1)
Sodium	GRAS		UJ	(343)		U	(343)	10200			3890	J		2270				UJ	(422)	711			3380	J	
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.5)		U	(1.4)		U	(1.5)		U	(1.5)		U	(1.5)		U	(1.4)
Vanadium	72.5	25.2			30.7			44.9			45.5			37.4			47.4			48.6			43.6		
Zinc	119.5	***147***			60.8			***120***			69.2			***153***			69.2			117			68.2		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-017						B4A-018						B4A-019						B4A-020					
		B4A-017-000 (0-0.5 ft)			B4A-017-001 (1-2 ft)			B4A-018-000 (0-0.5 ft)			B4A-018-001 (1-2 ft)			B4A-019-000 (0-0.5 ft)			B4A-019-001 (1-2 ft)			B4A-020-000 (0-0.5 ft)			B4A-020-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)	0.095	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.46	J		0.48	J		0.46	J			U	(0.5)		U	(0.5)	0.15	J			U	(0.5)	0.089	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.23	J		0.29	J		0.28	J		0.36	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	15100			16000			21700			25300			20600			18500			21300	J		23400		
Antimony	31	0.74	J		0.52	J		0.56	J		0.51	J		0.57	J			UJ	(0.45)		R			UJ	(0.46)
Arsenic	13.5	8.8	J		9.7			8.9	J		8.5	J		8.7	J		6.7	J		7.3	J		7.5	J	
Barium	440	229			261			273			235			264			222			211			221		
Beryllium	1.52	0.81			0.88			0.94			1			0.88			0.8			0.89			0.93		
Cadmium	0.4	***0.62***	J		0.14	J		***0.5***	J		0.17	J		***0.52***	J		0.22	J		0.21	J		0.22	J	
Calcium	GRAS	3970			4120			5140			3960			5130			4010			2910			3140		
Chromium	37	19.3			18.1			23.5			25.1			23.5			19.6			23.5			23.5		
Cobalt	17.2	11.2			12.5			11.7			11.7			11.1			10.6			10.5			10.9		
Copper	33.9	33.1			27			25.6			19.8			23.5			16.6			20.6			18.3		
Iron	GRAS	21600			22900			23500			24700			22000			18600			21400			22100		
Lead	400	205			19.8	J		85			17.6	J		103			15.4	J		19.7			15	J	
Magnesium	GRAS	4080			4480			4320			4660			3990			3290			4100			4060		
Manganese	1083	642			778			711			651			637			697			583			648		
Mercury	23		U	(0.14)		U	(0.14)		U	(0.14)		U	(0.13)		U	(0.14)		U	(0.13)		U	(0.14)		U	(0.12)
Nickel	39.3	28			30.8			26.5			25.8			24.8			20.9			21.8			22.9		
Potassium	GRAS	3400			2760			5600			4570			4870			3960			4720			4010		
Selenium	1.33	***1.8***	J			U	(1.2)	***1.8***	J		***1.7***	J		1.2	J		***1.6***	J		***2***	J		1.2	J	
Sodium	GRAS	9630				U	(369)	1950			1780	J		6060			3950	J		3000				UJ	(330)
Thallium	1.72		U	(1.5)		U	(1.5)		U	(1.6)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.5)		U	(1.3)
Vanadium	72.5	34.7			30.4			49.2			51.7			47.1			40.9			46.9			45.7		
Zinc	119.5	***223***			69.7			***121***			68.1			***131***			54			74.7			58.7		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-021						B4A-022						B4A-023						B4A-024					
		B4A-021-000 (0-0.5 ft)			B4A-021-001 (1-2 ft)			B4A-022-000 (0-0.5 ft)			B4A-022-001 (1-2 ft)			B4A-023-000 (0-0.5 ft)			B4A-023-001 (1-2 ft)			B4A-024-000 (0-0.5 ft)			B4A-024-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)	0.12	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.46	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.12	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.35	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)	0.21	J	
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	0.43	J			U	(0.5)		U	(0.5)		U	(0.5)	0.075	J		0.05	J	
METALS (MG/KG)																									
Aluminum	33852	20000			25400			16900			13900			15900			17700			15700			16800		
Antimony	31		U	(0.52)		U	(0.52)		U	(0.65)		U	(0.5)		UJ	(0.47)		UJ	(0.51)		UJ	(0.47)		R	
Arsenic	13.5	7.5	J		8.2	J		7.6	J		6.5	J		7	J		5.9	J		8.3	J		7.8	J	
Barium	440	285			255			266			252			256			205			201			197	J	
Beryllium	1.52	0.9			1			0.82			0.66			0.73			0.77			0.83			0.78		
Cadmium	0.4	0.15	J		0.26	J		***1.3***	J		***0.77***	J		***0.49***	J		***0.41***	J		***0.47***	J		***0.43***	J	
Calcium	GRAS	3580			4020			5800			3290			11400			4380			4570			4120		
Chromium	37	21.3			25.3			21.5			17.3			17.7			18.9			16.9			17.8		
Cobalt	17.2	11.1			13.8			10.6			9.2			12			9.1			8.1			9.1		
Copper	33.9	19.7			20.3			***35.9***			26.2			15.7			15.1			19.9			19.4		
Iron	GRAS	22500			23900			19700			16400			18100			19200			20700			20000		
Lead	400	23.1			17.6			226			130			16.5			14.3			25			14.2		
Magnesium	GRAS	3950			4410			3640			2700			4620			3610			3480			3690		
Manganese	1083	727			942			704			577			947			542			466			530		
Mercury	23		U	(0.14)		U	(0.14)		U	(0.18)		U	(0.13)		U	(0.13)		U	(0.14)		U	(0.13)		U	(0.13)
Nickel	39.3	20.9			26.3			23.2			17.3			21.2	J		18.3	J		20.8	J		22.1		
Potassium	GRAS	6090			5360			6020			3480			4140			3650			2900			3150		
Selenium	1.33	***1.5***	J		***2.5***	J		***2.1***	J			U	(1.1)		UJ	(1.1)		UJ	(1.2)	1.2	J		***1.5***	J	
Sodium	GRAS	157	J		472			806			1210				U	(334)		U	(360)		U	(331)		U	(337)
Thallium	1.72		U	(1.5)		U	(1.5)		U	(1.9)		U	(1.4)		U	(1.4)		U	(1.5)		U	(1.4)		U	(1.4)
Vanadium	72.5	40.9			48.6			38.8			31			36			40.7			28.8			37.1		
Zinc	119.5	81.6			70.9			***227***			114			51.4			50.5			64.6			52		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-025						B4A-026						B4A-027						B4A-028					
		B4A-025-000 (0-0.5 ft)			B4A-025-001 (1-2 ft)			B4A-026-000 (0-0.5 ft)			B4A-026-001 (1-2 ft)			B4A-027-000 (0-0.5 ft)			B4A-027-001 (1-2 ft)			B4A-028-000 (0-0.5 ft)			B4A-028-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.87			0.5	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	0.48	J		0.24	J			U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)	***28***				U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)	0.73	J			U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	2.9			0.45	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	11600			18100			15200			16200			15400			14100			18800			25600		
Antimony	31	0.6	J			UJ	(0.45)	0.82	J			UJ	(0.46)		UJ	(0.48)		UJ	(0.46)		UJ	(0.54)		UJ	(0.49)
Arsenic	13.5	8.8			7.4	J		6.7	J		7.4	J		7.2	J		5.4	J		8.6	J		10.3		
Barium	440	305			153			227			242			212			268			262			242		
Beryllium	1.52	0.69	J		0.85			0.72			0.78			0.74			0.69			0.84			1		
Cadmium	0.4	***0.79***	J		0.39	J		***0.77***	J		***0.55***	J		***0.49***	J		***0.42***	J		0.27	J		0.13	J	
Calcium	GRAS	4050			2910			5690			4940			4010			2940			3990			3720		
Chromium	37	15.9			19.4			***40.5***			17.7			17.2			16.4			21.5			25.8		
Cobalt	17.2	13.6			9.4			8.6			10.5			11.8			14.9			11			12.1		
Copper	33.9	19.5	J		18.4			21.1			18.8			16.5			13.8			20.5			25.3		
Iron	GRAS	17200			20300			18600			19700			18500			16700			20700			25600		
Lead	400	114	J		13.8			85.7			16			28.6			17.5			45.6	J		19	J	
Magnesium	GRAS	2930			3560			2520			3160			3310			2780			4260			5200		
Manganese	1083	960			592			433			609			646			924			634			710		
Mercury	23		U	(0.13)		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.14)		U	(0.13)
Nickel	39.3	21			22	J		27	J		22.8	J		20.5	J		17.6	J		23.9			30.1		
Potassium	GRAS	4820			3950			3390			3220			3860			3030			4780			4740		
Selenium	1.33	***1.7***	J		1.1	J		1.3	J		1.3	J			UJ	(1.1)	1.1	J		***1.7***	J			U	(1.1)
Sodium	GRAS		U	(341)		U	(322)		U	(341)		U	(326)		U	(342)		U	(327)		U	(381)		U	(345)
Thallium	1.72		U	(1.4)		U	(13.1)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.6)		U	(1.4)
Vanadium	72.5	33.9			38.7			34.4			34.5			35.8			37.5			45.2			52.3		
Zinc	119.5	***183***	J		55.6			***181***			57.5			61.7			43.5			74.5	J		69.8	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-029						B4A-030						B4A-031						B4A-032					
		B4A-029-000 (0-0.5 ft)			B4A-029-001 (1-2 ft)			B4A-030-000 (0-0.5 ft)			B4A-030-001 (1-2 ft)			B4A-031-000 (0-0.5 ft)			B4A-031-001 (1-2 ft)			B4A-032-000 (0-0.5 ft)			B4A-032-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		UJ	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		UJ	(0.5)		U	(0.54)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.13	J		0.37	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.41	J	
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.02	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		UJ	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.093	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	14000			19600			11000			15500			15600			17600			15000			13000		
Antimony	31		UJ	(0.47)		UJ	(0.46)		R			R			R			R			R			R	
Arsenic	13.5	7	J		8.7			6.2	J		7.3	J		7.5	J		6.5	J		8.1	J		5	J	
Barium	440	274			248			217			279			241			247			265			205		
Beryllium	1.52	0.7			0.86			0.6			0.78			0.78			0.8			0.78			0.59		
Cadmium	0.4	***0.63***	J		0.2	J		***0.64***	J		0.24	J		***0.89***	J		0.31	J		***0.77***	J			U	(0.13)
Calcium	GRAS	8420			3900	J		14200			4440			6820			4990			8860			3180		
Chromium	37	18.6			20.7			13.4			16.9			18.8			19.3			17.9			14.7		
Cobalt	17.2	10.4			12.1			8			10.6			10.2			11.4			10.2			8.1		
Copper	33.9	29	J		16.4			19.4			16.5			22.8			14.4			23.1			11.7		
Iron	GRAS	21800			21800			15500			19100			19600			19800			19900			14900		
Lead	400	142	J		17			124	J		19.2	J		97.3	J		17.2	J		65.2	J		14.1	J	
Magnesium	GRAS	3770			4240			2910			3350			3770			3720			3750			2840		
Manganese	1083	674			690			529			722			626			769			631			531		
Mercury	23	0.13	J			UJ	(0.13)	0.15	J		0.15	J		0.16	J		0.14	J		0.19	J		0.14	J	
Nickel	39.3	25.1			21.8			18.7			20.1			23.2			18.8			22.4			14.2		
Potassium	GRAS	4110			3780			3410			3320			4040			3650			3650			3020		
Selenium	1.33	***1.5***	J			U	(1.1)	***2.2***	J		***1.5***	J			U	(1.3)	***2.1***	J		1.3	J			U	(1.1)
Sodium	GRAS		U	(337)		U	(328)		U	(342)		U	(346)		U	(398)		U	(365)		U	(385)		U	(350)
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.6)		U	(1.5)		U	(1.6)		U	(1.4)
Vanadium	72.5	31.9			38.4			25.3			31.3			35.9			37.2			34.3			28		
Zinc	119.5	114			76.1			102			62.7			104			66.1			99.1			50.9		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-033						B4A-034						B4A-035						B4A-036					
		B4A-033-000 (0-0.5 ft)			B4A-033-001 (1-2 ft)			B4A-034-000 (0-0.5 ft)			B4A-034-001 (1-2 ft)			B4A-035-000 (0-0.5 ft)			B4A-035-001 (1-2 ft)			B4A-036-000 (0-0.5 ft)			B4A-036-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7	0.032	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.47	J			U	(0.5)	0.23	J		0.18	J		0.24	J			U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)	0.13	J			U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		UJ	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.16	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	10500			16400			11900			16500			8210	J		20000	J		16500			17200		
Antimony	31		R			R			R			UJ	(0.49)		UJ	(0.44)		UJ	(0.48)		R			R	
Arsenic	13.5	5.3	J		7	J		5.2	J		7.2	J		4.1	J		10.4			9.3			9.3	J	
Barium	440	210			249			247			267			268			266			222			228		
Beryllium	1.52	0.55			0.76			0.59			0.75			0.53			0.94			0.8			0.86		
Cadmium	0.4	***0.46***	J		0.27	J		***0.78***	J		0.33	J		***0.56***	J			U	(0.13)	0.23	J			U	(0.14)
Calcium	GRAS	5950			4250			7450			5570	J		9000			3660			4590			4180		
Chromium	37	13.2			18.1			14.4			18.9			10.4	J		20.7	J		18.9			18.2		
Cobalt	17.2	8			10.2			8.7			10.5			6.7			12.4			11.3			11		
Copper	33.9	17.9			15.8			21.3			15.4	J		22.5			27.1			22.8			22.2		
Iron	GRAS	14800			19000			15500			19700			12800	J		23700	J		20700			21300		
Lead	400	193	J		20	J		204	J		16.9	J		90.5	J		17.3			24.9	J		16.9	J	
Magnesium	GRAS	2760			3570			3230			3680			3330			4580			3900			3950		
Manganese	1083	522			650			564			688	J		525			747			661			702		
Mercury	23	0.16	J		0.2	J			U	(0.14)	0.2	J			U	(0.12)		U	(0.13)	0.16	J		0.18	J	
Nickel	39.3	18.1			18.8			19.2			18.6			16.6			28.6			26.2			26.8		
Potassium	GRAS	2880			3640			3340			3780			3380			5870			4240			3400		
Selenium	1.33		U	(1.2)	***1.8***	J		***1.4***	J		***1.7***	J		***1.7***	J		***1.6***	J		***1.6***	J		***1.8***	J	
Sodium	GRAS		U	(356)		U	(336)		U	(380)		U	(348)		U	(314)		U	(340)		U	(360)		U	(370)
Thallium	1.72		U	(1.5)		U	(1.4)		U	(1.5)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.5)		U	(1.5)
Vanadium	72.5	24.2			35.4			26.5			34.9			17.6			37.3			35.8			34.9		
Zinc	119.5	***144***			68.5			***142***			68	J		101	J		61.9	J		69.1			56.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-037						B4A-038						B4A-039						B4A-040					
		B4A-037-000 (0-0.5 ft)			B4A-037-001 (1-2 ft)			B4A-038-000 (0-0.5 ft)			B4A-038-001 (1-2 ft)			B4A-039-000 (0-0.5 ft)			B4A-039-001 (1-2 ft)			B4A-040-000 (0-0.5 ft)			B4A-040-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	2				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)	0.088	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.34	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA	0.29	J		0.17	J			U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		R			U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.3	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	17600	J		16700	J		16800	J		21900	J		9930			16000			14800			12500		
Antimony	31		UJ	(0.5)		UJ	(0.49)	0.57	J			UJ	(0.52)		R			R			UJ	(0.48)		UJ	(0.38)
Arsenic	13.5	10.9			11			10.4			11.3			7.7	J		8.3	J		7.5	J		7.8		
Barium	440	251			288			253			266			201			231			185			218		
Beryllium	1.52	0.87			0.89			0.82			1			0.6			0.79			0.74			0.64		
Cadmium	0.4	***0.41***	J			U	(0.13)	***0.43***	J		0.14	J		0.37	J		0.15	J		***0.53***	J		0.34	J	
Calcium	GRAS	5080			4640			5040			4870			8170			4200			4430	J		3810	J	
Chromium	37	20.9	J		17.8	J		20.6	J		22.5	J		12.8			16.7			17.5			15		
Cobalt	17.2	10.9			12			10.7			12.7			8.7			9.5			10.4			9.1		
Copper	33.9	24.9			24.7			25			28.1			19.9			20.2			32.7	J		18.9	J	
Iron	GRAS	22200	J		22800	J		21300	J		25900	J		16000			19700			17600			16900		
Lead	400	31.7	J		17.1	J		43.6	J		18.3	J		40.1	J		14.9			40.6	J		12.7	J	
Magnesium	GRAS	4280			4380			4140			5260			3250			3670			3100			3270		
Manganese	1083	610			716			627			723			533			554			642	J		503	J	
Mercury	23		U	(0.13)		U	(0.14)		U	(0.13)	0.16	J		0.16	J		0.15	J		0.31			0.17	J	
Nickel	39.3	27.9			28			28.9			31.1			22.3			23.9			22.2			22.7		
Potassium	GRAS	4670			3310			4270			3830			2980			3000			3350			2640		
Selenium	1.33	***2.1***	J		1.3	J		***2.2***	J		***1.4***	J			U	(1.1)		U	(1.1)	***1.6***	J			U	(0.88)
Sodium	GRAS		U	(358)		U	(351)		U	(358)		U	(371)		U	(344)		U	(336)		U	(340)		U	(269)
Thallium	1.72		U	(1.5)		U	(1.4)		U	(1.5)		U	(1.5)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.1)
Vanadium	72.5	40.2			33.9			38.8			45			24.6			32.5			32.6			28		
Zinc	119.5	75.7	J		66.5	J		85.8	J		72	J		64.7			53.4			88.4	J		48.5	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-041						B4A-043						B4A-044						B4A-045					
		B4A-041-000 (0-0.5 ft)			B4A-041-001 (1-2 ft)			B4A-043-000 (0-0.5 ft)			B4A-043-001 (1-2 ft)			B4A-044-000 (0-0.5 ft)			B4A-044-001 (1-2 ft)			B4A-045-000 (0-0.5 ft)			B4A-045-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)	0.48	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.23	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	12400			15700			14200			16900			9310			17200			17000			13800		
Antimony	31		UJ	(0.47)		UJ	(0.45)	0.62	J			UJ	(0.47)		UJ	(0.47)		UJ	(0.47)		UJ	(0.43)		R	
Arsenic	13.5	6.5	J		8.1	J		7.4	J		6.6	J		5.3	J		7.9	J		6.4	J		7.4	J	
Barium	440	179			255			221			259			174			234			240			227		
Beryllium	1.52	0.62			0.8			0.7			0.8			0.52			0.83			0.71			0.73		
Cadmium	0.4	***0.74***	J		***0.45***	J		***0.6***	J		0.29	J		***0.47***	J			U	(0.12)	0.33	J		0.22	J	
Calcium	GRAS	3800	J		4140	J		5140			4260			5130			4060			3630			4140		
Chromium	37	17.2			17.9			21.5			18.7			13.3			18.4			22.3			15.4		
Cobalt	17.2	8.2			10.2			9.9			10.5			7.1			10.3			8.7			9.6		
Copper	33.9	19.1	J		20.3	J		27	J		19.5	J		22.6	J		17	J		21.2			18.6		
Iron	GRAS	15900			20000			19300			19900			14400			20700			19700			18200		
Lead	400	89.5	J		23.4	J		86.4	J		17.7	J		88.9	J		14.9	J		35.4	J		14.7		
Magnesium	GRAS	3700			3700			3290			3370			2730			3310			3330			3200		
Manganese	1083	481	J		641	J		624			734			438			605			527			646		
Mercury	23	0.2	J		0.19	J		0.15	J		0.15	J		0.15	J		0.21	J			U	(0.12)	0.15	J	
Nickel	39.3	22.3			22.8			28.7			26.8			19.8			20.2			23.3			23		
Potassium	GRAS	3270			3220			4030			3090			3520			3040			4860			2580		
Selenium	1.33	***1.6***	J		***1.8***	J		***2***	J		1.2	J		***2.1***	J			U	(1.1)	1.3	J			U	(1.1)
Sodium	GRAS		U	(334)		U	(318)		U	(344)		U	(336)		U	(331)		U	(334)	1740	J			U	(344)
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.2)		U	(1.4)
Vanadium	72.5	30.6			31.6			34			30.2			23.2			35.6			37.2			30.8		
Zinc	119.5	105	J		67.1	J		***167***			61.5			91.9			62.8			75.8			50.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-046						B4A-047						B4A-048					
		B4A-046-000 (0-0.5 ft)			B4A-046-001 (1-2 ft)			B4A-047-000 (0-0.5 ft)			B4A-047-001 (1-2 ft)			B4A-048-000 (0-0.5 ft)			B4A-048-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.089	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.045	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		R			U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		UJ	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	12000			16600			11500			17700			14500			14100		
Antimony	31		R			R			R			R			R			R	
Arsenic	13.5	6.4	J		7.8	J		6.6	J		8	J		7.3	J		6.8	J	
Barium	440	237	J		251	J		192	J		223	J		195			213	J	
Beryllium	1.52	0.63			0.76			0.54			0.79			0.67			0.69		
Cadmium	0.4	***0.65***	J		0.39	J		***0.94***	J		***0.59***	J		***0.46***	J		***0.43***	J	
Calcium	GRAS	14000			4220			6950			4750			4660			4090		
Chromium	37	19.9			16.9			16.9			18.4			17.4			15.2		
Cobalt	17.2	9			10.5			7.9			9.2			8.5			8.1		
Copper	33.9	20.8			17			24.9			18.5			20.6			16.7		
Iron	GRAS	16500			19700			17900			20100			18000			17500		
Lead	400	313			14.5			133			15.2			183	J		69.6		
Magnesium	GRAS	2710			3220			3190			3730			3180			2950		
Manganese	1083	498			730			514			517			516			420		
Mercury	23		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)
Nickel	39.3	25.9			23.2			19.6			21.5			21.6			18.6		
Potassium	GRAS	3200			2950			3050			3180			3460			2790		
Selenium	1.33	1.3	J		***1.4***	J			U	(1.2)		U	(1.1)	***1.8***	J		***1.7***	J	
Sodium	GRAS		U	(345)		U	(335)		U	(354)		U	(350)		U	(345)		U	(346)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(14.1)		U	(1.4)
Vanadium	72.5	26.2			35.8			27.4			38			33.7			31.1		
Zinc	119.5	75.3			49.1			109			52.7			***129***	J		61.2		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-049												B4A-050						B4A-051					
		B4A-049-000 (0-0.5 ft)			B4A-049-R00 (0-0.5 ft)			B4A-049-001 (1-2 ft)			B4A-049-R01 (1-2 ft)			B4A-050-000 (0-0.5 ft)			B4A-050-001 (1-2 ft)			B4A-051-000 (0-0.5 ft)			B4A-051-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		UJ	(0.5)		U	(0.0005)		UJ	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)	0.08	J		0.24	J		3.2	J		0.94		
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)	0.69			1	J		1.1		
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(0.001)		U	(1)		U	(0.001)		U	(1)	0.39	J		0.65	J		0.67	J	
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.00075)		U	(0.75)	0.00012				U	(0.75)	0.13	J		***14***	J		2.2		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			U	(0.00075)		R			U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)		R	
Nitrobenzene (NB)	NA		U	(2)		U	(0.002)		U	(2)		U	(0.002)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.4	J			U	(0.0005)	0.37	J			U	(0.0005)		U	(0.5)		U	(0.5)	1.1			0.4	J	
METALS (MG/KG)																									
Aluminum	33852	11600	J			NA		11200	J			NA		8640	J		11100	J		10700	J		11100	J	
Antimony	31		R			NA		0.5	J			NA			R			R			R			R	
Arsenic	13.5	7.3	J			NA		8.2	J			NA		5	J		8.2	J		6	J		9.2		
Barium	440	177				NA		178				NA		148			188			182			226		
Beryllium	1.52	0.62				NA		0.71				NA		0.49			0.65			0.66			0.68		
Cadmium	0.4		U	(0.13)		NA			U	(0.12)		NA		0.23	J			U	(0.12)		U	(0.13)	0.21	J	
Calcium	GRAS	3440				NA		3400				NA		3840			4160			13800			4270		
Chromium	37	12.4				NA		12.6				NA		11.7			12.9			14			12.6		
Cobalt	17.2	8.3				NA		9.2				NA		6.6			8.9			7.6			10.5		
Copper	33.9	19.7				NA		15.5				NA		16.5			16.1			16.5			21.4		
Iron	GRAS	15400				NA		15900				NA		12600			16100			13900			17200		
Lead	400	19.4				NA		13.5				NA		219			15.4			77.2			17.5		
Magnesium	GRAS	2690				NA		2790				NA		2100			2470			2400			2760		
Manganese	1083	510	J			NA		550	J			NA		392	J		555	J		376	J		637	J	
Mercury	23		U	(0.13)		NA			U	(0.12)		NA			U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)
Nickel	39.3	18.2				NA		18.9				NA		15.9			19.9			18.9			21.6		
Potassium	GRAS	2870				NA		2220				NA		2000			2240			2510			2380		
Selenium	1.33	***1.7***	J			NA		***1.7***	J			NA		***1.6***	J			UJ	(1.1)	1.3	J		***1.5***	J	
Sodium	GRAS		U	(344)		NA			U	(328)		NA			U	(328)		U	(325)		U	(339)		U	(329)
Thallium	1.72		U	(1.4)		NA			U	(1.3)		NA		1.5	J			U	(1.3)		U	(1.4)		U	(1.3)
Vanadium	72.5	25.7				NA		24.9				NA		20.8			26.5			23.4			26.6		
Zinc	119.5	47.5				NA		43.5				NA		101			45.5			53.6			48.9		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-052											
		B4A-052-000 (0-0.5 ft)			B4A-052-R00 (0-0.5 ft)			B4A-052-001 (1-2 ft)			B4A-052-R01 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)													
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		UJ	(0.5)		U	(0.0005)		UJ	(0.5)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		UJ	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		UJ	(0.5)		U	(0.0005)		U	(0.5)	0.00038		
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(0.001)		U	(1)	0.00028		
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	1.2				U	(0.00075)	0.097	J		0.00028		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			U	(0.00075)		R			U	(0.00075)
Nitrobenzene (NB)	NA		U	(2)		U	(0.002)		U	(2)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.2	J			U	(0.0005)	0.1	J		0.00032		
METALS (MG/KG)													
Aluminum	33852	13200				NA		14900	J			NA	
Antimony	31		U	(0.53)		NA			R			NA	
Arsenic	13.5	7.1	J			NA		6.2	J			NA	
Barium	440	190				NA		204				NA	
Beryllium	1.52	0.64				NA		0.71				NA	
Cadmium	0.4	***0.92***	J			NA		0.2	J			NA	
Calcium	GRAS	12100				NA		3890				NA	
Chromium	37	16.5				NA		15.3				NA	
Cobalt	17.2	8.2				NA		7.9				NA	
Copper	33.9	24.7				NA		20.8				NA	
Iron	GRAS	17300				NA		16200				NA	
Lead	400	181				NA		18.3				NA	
Magnesium	GRAS	3010				NA		2900				NA	
Manganese	1083	471				NA		416	J			NA	
Mercury	23		U	(0.14)		NA			U	(0.13)		NA	
Nickel	39.3	21.5				NA		19.6				NA	
Potassium	GRAS	2940				NA		3020				NA	
Selenium	1.33	***1.5***	J			NA			UJ	(1.1)		NA	
Sodium	GRAS	91	J			NA			U	(333)		NA	
Thallium	1.72		U	(1.5)		NA		1.4	J			NA	
Vanadium	72.5	29.2				NA		30.4				NA	
Zinc	119.5	***227***				NA		48.5				NA	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-053												B4A-054					
		B4A-053-000 (0-0.5 ft)			B4A-053-R00 (0-0.5 ft)			B4A-053-001 (1-2 ft)			B4A-053-R01 (1-2 ft)			B4A-054-000 (0-0.5 ft)			B4A-054-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		UJ	(0.5)		U	(0.0005)		UJ	(0.5)		U	(0.0005)		UJ	(0.5)		UJ	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)	0.00036			0.094	J			U	(0.0005)	0.46	J		0.23	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.0005)	0.4	J		0.00091				U	(0.5)	0.53		
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(0.001)	0.3	J		0.00052				U	(1)	0.26	J	
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)	0.56	J		***11***		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			U	(0.00075)		R			U	(0.00075)		R			R	
Nitrobenzene (NB)	NA		U	(2)		U	(0.002)		U	(2)		U	(0.002)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)	0.38	J		0.62		
METALS (MG/KG)																			
Aluminum	33852	7440	J			NA		13500	J			NA		7200	J		12500	J	
Antimony	31		R			NA			R			NA			R			R	
Arsenic	13.5	3.8	J			NA		5.6	J			NA		4.1	J		4.6	J	
Barium	440	164				NA		192				NA		169			175		
Beryllium	1.52	0.43				NA		0.66				NA		0.45			0.7		
Cadmium	0.4	0.38	J			NA			U	(0.13)		NA		0.32	J			U	(0.12)
Calcium	GRAS	5790				NA		3680				NA		6190			6070		
Chromium	37	10.4				NA		14				NA		10.4			14.2		
Cobalt	17.2	6.6				NA		8.1				NA		6.3			8.4		
Copper	33.9	23.1				NA		18.6				NA		16.1			17.4		
Iron	GRAS	11600				NA		14400				NA		11600			15000		
Lead	400	187				NA		16.2				NA		298			29.9		
Magnesium	GRAS	2180				NA		2570				NA		2250			2550		
Manganese	1083	422	J			NA		318	J			NA		401	J		308	J	
Mercury	23		U	(0.13)		NA			U	(0.13)		NA			U	(0.13)		U	(0.13)
Nickel	39.3	18.8				NA		16.5				NA		16.5			18.5		
Potassium	GRAS	2030				NA		2800				NA		2210			2600		
Selenium	1.33		UJ	(1.1)		NA			UJ	(1.1)		NA		1.2	J		1.2	J	
Sodium	GRAS		U	(338)		NA			U	(351)		NA			U	(354)		U	(328)
Thallium	1.72		U	(1.4)		NA			U	(1.4)		NA			U	(1.4)		U	(1.3)
Vanadium	72.5	17.7				NA		28.6				NA		18.1			26.7		
Zinc	119.5	***145***				NA		42.1				NA		***355***			63.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-055												B4A-056						B4A-057					
		B4A-055-000 (0-0.5 ft)			B4A-055-R00 (0-0.5 ft)			B4A-055-001 (1-2 ft)			B4A-055-R01 (1-2 ft)			B4A-056-000 (0-0.5 ft)			B4A-056-001 (1-2 ft)			B4A-057-000 (0-0.5 ft)			B4A-057-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		UJ	(0.5)		U	(0.0005)		UJ	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.0005)	0.53			0.00048				U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(0.001)	0.41	J		0.00034				U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R			U	(0.00075)		R			U	(0.00075)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(0.002)		U	(2)		U	(0.002)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.0005)	0.12	J			U	(0.0005)	0.091	J			U	(0.5)	0.39	J			U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	4950	J			NA		12300	J			NA		7080			14000			12100			17500		
Antimony	31		R			NA			R			NA			R			UJ	(0.47)	0.48	J			UJ	(0.5)
Arsenic	13.5	2.3	J			NA		6.7	J			NA		4.3	J		9.1			5.6	J		9.5		
Barium	440	68.2				NA		202				NA		137			264			174			228		
Beryllium	1.52	0.25				NA		0.63				NA		0.36			0.74			0.61			0.84		
Cadmium	0.4	0.22	J			NA			U	(0.12)		NA		***0.49***	J		***0.56***	J		***1.3***			***0.49***	J	
Calcium	GRAS	1670				NA		3800				NA		31300			4750			51000			5410		
Chromium	37	8.7				NA		12.8				NA		9.2			16.9			22.9			19.2		
Cobalt	17.2	3.7				NA		8.4				NA		5.1			10.4			8.3			10.2		
Copper	33.9	12				NA		18.8				NA		11.8			21.5			20.9			21.7		
Iron	GRAS	7250				NA		15200				NA		9460			20400			15600			23100		
Lead	400	168				NA		17.9				NA		85.1	J		16.5			298			18.2		
Magnesium	GRAS	1110				NA		2400				NA		2110			3990			3270			3980		
Manganese	1083	218	J			NA		501	UJ	(0.98)		NA		323			637			478			365		
Mercury	23		U	(0.12)		NA			U	(0.12)		NA			U	(0.1)		U	(0.13)		U	(0.12)		U	(0.13)
Nickel	39.3	7.8				NA		18.3				NA		12.2			26	J		18.9	J		21.9	J	
Potassium	GRAS	1190				NA		2380				NA		2100			3070			3140			3400		
Selenium	1.33		UJ	(1)		NA			UJ	(1.1)		NA		0.96	J		1.1	J			UJ	(1)	1.2	J	
Sodium	GRAS		U	(315)		NA			U	(331)		NA			U	(274)		U	(331)		U	(320)		U	(354)
Thallium	1.72		U	(1.3)		NA			U	(1.3)		NA			U	(1.1)		U	(1.4)		U	(1.3)		U	(1.4)
Vanadium	72.5	12.7				NA		26.3				NA		16.7			30.4			27.4			37.3		
Zinc	119.5	105				NA		44.5				NA		66.3			57.8			***137***			60.4		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-058						B4A-059						B4A-060						B4A-061					
		B4A-058-000 (0-0.5 ft)			B4A-058-001 (1-2 ft)			B4A-059-000 (0-0.5 ft)			B4A-059-001 (1-2 ft)			B4A-060-000 (0-0.5 ft)			B4A-060-001 (1-2 ft)			B4A-061-000 (0-0.5 ft)			B4A-061-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.46	J			U	(0.5)	0.45	J		0.082	J			U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)	0.18	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)	0.21	J			U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)	0.043	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	0.25	J			U	(0.5)	0.38	J			U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	10800			15300			10100			12000			10700			12300			10900			12900		
Antimony	31		R			R		0.68	J			UJ	(0.46)		R			R			R			R	
Arsenic	13.5	7.3	J		8.4	J		5.6	J		9.5			5.6	J		7.3	J		7.2	J		7.2	J	
Barium	440	214			246			195			237			201			246			205			229		
Beryllium	1.52	0.62			0.74			0.52			0.69			0.56			0.69			0.65			0.69		
Cadmium	0.4	***0.55***	J		0.27	J		***0.63***	J		***0.72***	J		***0.88***	J		***0.59***	J		***0.55***	J		0.37	J	
Calcium	GRAS	6390			4800			44600			4990			9920			4280			6350			4110		
Chromium	37	15.1			18.7			29			16			20.8			16			13.7			15.3		
Cobalt	17.2	8.8			10			7.6			10.5			8.7			10.1			8.4			9		
Copper	33.9	24.3			23.1			26.1			23.9			26.2			21.5			23.6			18.2		
Iron	GRAS	17700			20400			14700			21200			20000			18800			15900			16900		
Lead	400	153	J		32.9	J		149			26.5			107	J		36.2	J		154	J		15.5	J	
Magnesium	GRAS	2900			3630			2820			3840			3450			3570			2800			3180		
Manganese	1083	547			559			409			658			524			683			452			562		
Mercury	23		U	(0.12)		U	(0.13)	0.13	J			U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.13)
Nickel	39.3	23.4			23.5			21.4			25.6	J		25			24			19.2			22.3		
Potassium	GRAS	2260			2940			2220			2450			2400			2650			2510			2970		
Selenium	1.33		U	(1.1)	***1.4***	J			U	(1.1)		UJ	(1.1)	1.1	J			U	(1.1)		U	(1.1)	***1.4***	J	
Sodium	GRAS		U	(335)		U	(345)		U	(332)		U	(330)		U	(335)		U	(327)	288	J		323	J	
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)
Vanadium	72.5	26.9			34.6			23.8			25.2			26.7			29.8			25.9			30.8		
Zinc	119.5	103			61.5			***142***			59.9			92.5			65.9			101			52		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-062						B4A-064						B4A-065						B4A-066					
		B4A-062-000 (0-0.5 ft)			B4A-062-001 (1-2 ft)			B4A-064-000 (0-0.5 ft)			B4A-064-001 (1-2 ft)			B4A-065-000 (0-0.5 ft)			B4A-065-001 (1-2 ft)			B4A-066-000 (0-0.5 ft)			B4A-066-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)	0.43	J			U	(0.5)	0.47	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.084	J			U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.094	J			U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)	0.35	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	18200			19300			14300			18400			18400			20900			17000			17600		
Antimony	31		UJ	(0.49)		UJ	(0.44)		UJ	(0.49)		UJ	(0.54)	0.79	J			UJ	(0.53)	1	J			UJ	(0.54)
Arsenic	13.5	8.3	J		8.5			6.8	J		7.4	J		7.4	J		8.6	J		8.1	J		9.3	J	
Barium	440	242			211			193			247			239			262			213			245		
Beryllium	1.52	0.81			0.84			0.67			0.89			0.78			0.91			0.69			0.86		
Cadmium	0.4	0.28	J		0.18	J		0.38	J		0.18	J		***0.73***	J		0.2	J		0.33	J		0.15	J	
Calcium	GRAS	3890			3320			5170			4650			11300			4870			10700			5580		
Chromium	37	19.2			19.9			33.6			18.7			22.3			22			33.1			22		
Cobalt	17.2	11.1			9			8.9			10.4			9.9			11.2			10.4			11		
Copper	33.9	20.5			19.6			30.6			23.1			21.4			22.2			***37.7***			31.9		
Iron	GRAS	20600			20800			21800			21300			19900			22500			38000			26300		
Lead	400	32.5	J		14.3	J		74.4	J		16	J		67.2	J		16.5	J		53.3	J		17.2	J	
Magnesium	GRAS	3730			3890			3170			3990			3910			4140			3620			4220		
Manganese	1083	743			482			541			630			632			666			739			661		
Mercury	23		U	(0.14)		U	(0.12)		U	(0.13)		U	(0.14)		U	(0.12)		U	(0.14)		U	(0.14)		U	(0.14)
Nickel	39.3	23.3			22			23.3			26.2			24			26.5			31.6			33.5		
Potassium	GRAS	5100			3720			3340			3140			4050			3720			3610			3630		
Selenium	1.33	***1.6***	J			U	(1)	***1.4***	J		***1.4***	J		***1.9***	J		***1.5***	J		***2.6***	J		***1.7***	J	
Sodium	GRAS	3750	J		1530	J		2460	J		2300	J			U	(332)		UJ	(576)	1170	J		2890	J	
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.5)		U	(1.4)		U	(1.5)		U	(1.5)		U	(1.6)
Vanadium	72.5	37.9			39.1			33.7			28.7			42.4			39.3			39.4			39.2		
Zinc	119.5	67.2			56.1			82.8			57.2			90.7			61			91.7			64.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-067						B4A-068						B4A-069						B4A-070					
		B4A-067-000 (0-0.5 ft)			B4A-067-001 (1-2 ft)			B4A-068-000 (0-0.5 ft)			B4A-068-001 (1-2 ft)			B4A-069-000 (0-0.5 ft)			B4A-069-001 (1-2 ft)			B4A-070-000 (0-0.5 ft)			B4A-070-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.16	J			U	(0.5)	***37***			0.4	J		0.099	J		0.3	J	
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)	0.36	J			U	(0.5)		U	(0.5)	0.65			0.14	J			U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)	0.32	J			U	(1)		U	(1)	0.73	J		0.097	J			U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)	0.41	J			U	(0.75)		U	(0.75)	***36***			0.59	J			U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		UJ	(0.75)		UJ	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	3.9			0.04	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	9070			24400			22200			19400			12100			15100			17800			11900		
Antimony	31		UJ	(0.4)		UJ	(0.53)		UJ	(0.48)		UJ	(0.52)		R			R			UJ	(0.53)		R	
Arsenic	13.5	3	J		7.1	J		7.8	J		10			6.7	J		6.3	J		10.2			9.8	J	
Barium	440	126			266			195			277			207			207			325			234	J	
Beryllium	1.52	0.37			1			0.88				U	(0.87)	0.67			0.71			0.88			0.73		
Cadmium	0.4	0.32	J		0.14	J		***0.43***	J		0.37	J		0.3	J		0.18	J		***0.44***	J		***0.56***	J	
Calcium	GRAS	12700			4840			6530			5030			3900			3500			5260			4530		
Chromium	37	15.6			25.8			23.5			22.3			17.3			16			21.3			14.9		
Cobalt	17.2	4.5			7.6			9.8			11.9			9.5			8.5			11.9			11.3		
Copper	33.9	17.3			20.8			20.8			23.3	J		18.3			16			27.2			24		
Iron	GRAS	12100			23200			21700			23100			17100			17000			23300			20300		
Lead	400	150	J		18.8	J		52.3	J		19	J		44	J		14.3	J		44.7	J		15.9		
Magnesium	GRAS	2210			4070			3900			4220			2950			3070			4800			4110		
Manganese	1083	297			277			536			770			594			539			758			703		
Mercury	23		U	(0.11)		U	(0.15)		U	(0.13)		U	(0.14)		U	(0.13)		U	(0.13)		U	(0.14)		U	(0.14)
Nickel	39.3	15.5			22.6			21.6			29.1			22.3			19.5			30.2			28.3		
Potassium	GRAS	2460			5360			4670			4570			2930			3000			5450			3230		
Selenium	1.33		U	(0.93)		U	(1.2)	***1.4***	J		***1.7***	J		***1.7***	J			U	(1.1)		U	(1.2)		U	(1.3)
Sodium	GRAS	2030	J			UJ	(376)		UJ	(343)		U	(369)		U	(356)		U	(338)		UJ	(374)		U	(386)
Thallium	1.72		U	(1.2)		U	(1.5)		U	(1.4)		U	(1.5)		U	(1.5)		U	(1.4)		U	(1.5)		U	(1.6)
Vanadium	72.5	21.3			51.3			47.8			40.8			28.1			30.9			43.7			29.2		
Zinc	119.5	74.9			67.1			85.6			70.5	J		61			46.9			80.8			57.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-071						B4A-072						B4A-074						B4A-075					
		B4A-071-000 (0-0.5 ft)			B4A-071-001 (1-2 ft)			B4A-072-000 (0-0.5 ft)			B4A-072-001 (1-2 ft)			B4A-074-000 (0-0.5 ft)			B4A-074-001 (1-2 ft)			B4A-075-000 (0-0.5 ft)			B4A-075-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)		U	(0.5)	0.1	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)	0.5	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)	0.44	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	18000			15400			20300			13400			16200			22500			18200			18500		
Antimony	31		U	(0.52)		U	(0.53)		U	(0.52)		U	(0.48)		U	(0.48)		U	(0.51)		UJ	(0.46)		UJ	(0.44)
Arsenic	13.5	11.4			11.1			11			9			6.2	J		7.9	J		7.5	J		7.3	J	
Barium	440	248			347			264			287			167			216			203			222		
Beryllium	1.52	0.9			0.84			0.93			0.76			0.71			0.97			0.78			0.8		
Cadmium	0.4	***0.45***	J		0.29	J		0.27	J		0.28	J			U	(0.13)	0.23	J		***0.57***	J		***0.45***	J	
Calcium	GRAS	4630			4900			4570			4550			2810			3980			4520			3570		
Chromium	37	20.8			19.7			22.9			16.4			17			23.3			18.7			18.8		
Cobalt	17.2	12.5			13.1			11.5			10.8			8.8			11.9			9.5			9.7		
Copper	33.9	27.5			28			30.6			25.7			16.6			20.8			18.6			16.4		
Iron	GRAS	24000			23000			24900			20400			17700			23200			19600			20100		
Lead	400	45.7			20.3			20.3			15.6			18.2			17.1			23.8			14		
Magnesium	GRAS	4740			4880			5120			4400			3180			4260			3880			3810		
Manganese	1083	693			767			672			669			501			703			566			564		
Mercury	23		U	(0.14)		U	(0.14)		U	(0.14)		U	(0.14)		U	(0.13)		U	(0.14)		U	(0.13)		U	(0.12)
Nickel	39.3	30.4			32.5			32.7			29.8			19.6			26.3			20.4	J		20.7	J	
Potassium	GRAS	6070			3460			4620			2760			4350			4070			5150			3210		
Selenium	1.33	***2***	J		***1.4***	J		***1.8***	J			U	(1.1)	***1.6***	J		***2***	J			UJ	(1.1)	1.3	J	
Sodium	GRAS	5860			4420			665			8470			1390			3270				U	(328)		U	(312)
Thallium	1.72		U	(1.5)		U	(1.5)		U	(1.5)		U	(1.4)		U	(1.4)		U	(1.5)		U	(1.3)		U	(1.3)
Vanadium	72.5	37.8			29.8			40.9			25.1			34.3			44			39.2			37.6		
Zinc	119.5	85.5			73.2			72.9			65.7			53.8			64.2			63.1			52		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-8
Analytical Data for Load Line 4 Bomb Production Buildings Adjacent Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4A-076					
		B4A-076-000 (0-0.5 ft)			B4A-076-001 (1-2 ft)		
		R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)							
1,3,5-Trinitrobenzene (1,3,5-TNB)	1.7		U	(0.5)		U	(0.5)
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)
2,4-Dinitrotoluene (2,4-DNT)	0.9		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)
METALS (MG/KG)							
Aluminum	33852	20700			20900		
Antimony	31		UJ	(0.48)		UJ	(0.46)
Arsenic	13.5	8.1	J		7.7	J	
Barium	440	252			226		
Beryllium	1.52		U	(0.85)	0.84		
Cadmium	0.4	0.4	J		0.27	J	
Calcium	GRAS	4030			3030	J	
Chromium	37	22.8			21.4		
Cobalt	17.2	11.1			9.8		
Copper	33.9	19.8	J		16.1	J	
Iron	GRAS	21800			20800		
Lead	400	25.5	J		14.4	J	
Magnesium	GRAS	4180			3710		
Manganese	1083	657			559		
Mercury	23		U	(0.13)		U	(0.12)
Nickel	39.3	23.6			21.5		
Potassium	GRAS	6010			4160		
Selenium	1.33	***1.4***	J		***1.9***	J	
Sodium	GRAS		U	(340)	187	J	
Thallium	1.72		U	(1.4)		U	(1.3)
Vanadium	72.5	43.2			42.3		
Zinc	119.5	88.4	J		58.4	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-9
Analytical Data for Load Line 4 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4B-001			B4B-002			B4B-003			B4B-004			B4B-005			B4B-006			B4B-007			B4B-009		
		B4B-001-000 (0-1 ft)			B4B-002-000 (0-1 ft)			B4B-003-000 (0-1 ft)			B4B-004-000 (0-1 ft)			B4B-005-000 (0-1 ft)			B4B-006-000 (0-1 ft)			B4B-007-000 (0-1 ft)			B4B-009-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	10200	J		10600	J		11600	J		15700	J		15100	J		13400	J		15500	J		9600	J	
Antimony	31		R			R			R			R			R			UJ	(0.46)		UJ	(0.47)		UJ	(0.46)
Arsenic	13.5	6.5	J		8.3	J		9.1			6.8	J		8.4			9.3			9.3			8.3	J	
Barium	440	262			179			264			260			209			246			231			217		
Beryllium	1.52	0.59			0.63			0.67			0.69			0.75			0.72			0.8			0.59		
Cadmium	0.4	***0.42***	J		***0.44***	J		***0.83***	J		***0.47***	J		***0.45***	J		***0.62***	J		***0.59***	J		***0.48***	J	
Calcium	GRAS	3760			3400			5540			2820			3620			4240			8370			4730		
Chromium	37	11.7			12.5			14.4			16.8			16.2			17.2	J		17.7	J		13	J	
Cobalt	17.2	8.4			10.5			12.8			10			10.7			9.7			10.6			8.6		
Copper	33.9	16.6			17.4			20.9			15.5			19.7			22.1	J		22.9	J		18.7	J	
Iron	GRAS	15500			16900			19200			17500			20000			19500			20500			16000		
Lead	400	12.3			13			13.9			13.9			14.5			13.4			14.6			11.7		
Magnesium	GRAS	2900			2860			3770			3020			3710			4060			4780			3450		
Manganese	1083	672			654			948			655			617			618			667			523		
Nickel	39.3	20.9			19.4			28.6			18.3			24.1			27			26.4			22.4		
Potassium	GRAS	2220			2570			2730			3480			2830			2820			3000			2270		
Selenium	1.33	***1.8***	J			U	(1.1)	***1.6***	J			U	(1.1)	1.3	J			U	(1.1)	***1.4***	J			U	(1.1)
Vanadium	72.5	22.2			27.6			26			34.3			29.7			34.6			37.3			25		
Zinc	119.5	42.9			44.3			53.2			48.3			52.2			56			53.4			47.1		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-9
Analytical Data for Load Line 4 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4B-010			B4B-011			B4B-012			B4B-013			B4B-014			B4B-015			B4B-016			B4B-017		
		B4B-010-000 (0-1 ft)			B4B-011-000 (0-1 ft)			B4B-012-000 (0-1 ft)			B4B-013-000 (0-1 ft)			B4B-014-000 (0-1 ft)			B4B-015-000 (0-1 ft)			B4B-016-000 (0-1 ft)			B4B-017-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)	0.062	J			U	(0.75)		U	(0.75)		U	(0.75)	0.31	J		0.3	J			U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.066	J		0.11	J			U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	14000	J		13100	J		16200	J		12900	J		13100	J		15000			18300			15300	J	
Antimony	31		R			UJ	(0.42)		UJ	(0.44)		UJ	(0.44)		UJ	(0.43)		UJ	(0.45)		UJ	(0.49)		UJ	(0.47)
Arsenic	13.5	9.4			8.4			9.5			9.8			7.4	J		9.8			8.4	J		7.6	J	
Barium	440	208	J		234			285			210			157			194			282			236		
Beryllium	1.52	0.75			0.71			0.75			0.75			0.72			0.8			0.82			0.76		
Cadmium	0.4	***0.45***	J		***0.41***	J		***0.61***	J		***0.61***	J		0.29	J		***0.44***	J		***0.48***	J		0.36	J	
Calcium	GRAS	4060			4070			6220			4260			3250			4540			3180			4030		
Chromium	37	16.9			15.4	J		21.1	J		15.3	J		13.8	J		17.5			18.5			15.8	J	
Cobalt	17.2	10.4			9.9			10.4			10.2			9.8			10.7			13.7			10		
Copper	33.9	21.8			22.1	J		24.3	J		22.2	J		15	J		23.6			16.9			19.7	J	
Iron	GRAS	20100			18400			21300			19200			16600			20500			20100			18100		
Lead	400	14			13			13.6			13.9			14.2			14.9			14.5			13.7		
Magnesium	GRAS	4080			3800			4580			3870			3210			4140			3510			3350		
Manganese	1083	597			595			643			645			619			617			807			567		
Nickel	39.3	26.4			24.3			26			26.2			19.4			25.9			22.3			21.3		
Potassium	GRAS	2880			2640			3390			2690			2170			3010			3470			3020		
Selenium	1.33		U	(1.1)	1.1	J			U	(1)	***1.7***	J		***1.4***	J		***1.4***	J		1.3	J		1.3	J	
Vanadium	72.5	32.8			29.7			43.1			30.7			23.1			33.5			36.7			30.5		
Zinc	119.5	56.9			54			56			54.5			44.9			56.6			54.3			49.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-9
Analytical Data for Load Line 4 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4B-018			B4B-019			B4B-020			B4B-021			B4B-022			B4B-023			B4B-024			B4B-025		
		B4B-018-000 (0-1 ft)			B4B-019-000 (0-1 ft)			B4B-020-000 (0-1 ft)			B4B-021-000 (0-1 ft)			B4B-022-000 (0-1 ft)			B4B-023-000 (0-1 ft)			B4B-024-000 (0-1 ft)			B4B-025-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.59	J		0.24	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.19	J		0.17	J	
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)	0.0053	J			U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	16000			6570			17400	J		14200			13800			13100			17400			12500		
Antimony	31		UJ	(0.48)		UJ	(0.42)		R			UJ	(0.47)		UJ	(0.47)		UJ	(0.46)		UJ	(0.47)		UJ	(0.46)
Arsenic	13.5	10			4.1	J		9.1			7.4	J		8.1	J		6.6	J		9.5			8.8		
Barium	440	302			109			183			197			217			230			198			296		
Beryllium	1.52	0.89			0.42			0.79			0.73			0.72			0.7			0.89			0.75		
Cadmium	0.4	0.35	J		0.16	J		***0.46***	J		0.39	J		0.37	J		0.38	J		***0.41***	J		***0.45***	J	
Calcium	GRAS	4200			1950			3820			3330			3920			3180			3820			3740		
Chromium	37	16.2			7.4			18.1			15.2			15.5			15			18.2			13		
Cobalt	17.2	11.4			6.2			10			10.3			10.3			9.9			12			8.3		
Copper	33.9	25.3			9.8			19.6			14.2			18.7			15.6			22			21.8		
Iron	GRAS	21400			9040			21300			18400			18600			18000			22000			21400		
Lead	400	16.3			8.7			13.9			14.5			14.3			14.5			16.8			14		
Magnesium	GRAS	4070			1610			4030			3310			3550			3220			3940			3400		
Manganese	1083	599			376			589			639			621			630			701			311		
Nickel	39.3	27.2			11.2			23.6			18			21.7			17.6			25.1			23		
Potassium	GRAS	2800			1500			3190			2870			3000			2800			3170			2230		
Selenium	1.33	***1.5***	J		1.2	J			U	(1)	1.3	J		***1.6***	J			U	(1.1)	***1.9***	J		1.3	J	
Vanadium	72.5	31.3			16.1			35.3			30.1			29.9			28.9			35.8			21.5		
Zinc	119.5	57.8			24.4			56.6			56.4			55			58.2			59.7			51.7		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-9
Analytical Data for Load Line 4 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4B-026			B4B-027			B4B-028			B4B-029			B4B-030			B4B-031			B4B-032		
		B4B-026-000 (0-1 ft)			B4B-027-000 (0-1 ft)			B4B-028-000 (0-1 ft)			B4B-029-000 (0-1 ft)			B4B-030-000 (0-1 ft)			B4B-031-000 (0-1 ft)			B4B-032-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)	0.12	J		0.35	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.1	J		0.038	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																						
Aluminum	33852	14600			12700			17100			13500			11400	J		10900			13300	J	
Antimony	31		UJ	(0.46)		UJ	(0.44)		UJ	(0.48)		UJ	(0.45)		UJ	(0.48)		UJ	(0.5)		UJ	(0.48)
Arsenic	13.5	7	J		7.3	J		8.2	J		5.7	J		9.7			6.3	J		8.1	J	
Barium	440	253			151			266			152			232			263			211		
Beryllium	1.52	0.77			0.72			0.83			0.71			0.69			0.68			0.73		
Cadmium	0.4	0.39	J		0.32	J		***0.58***	J		0.39	J		***0.6***	J		***0.5***	J		***0.48***	J	
Calcium	GRAS	3040			3640			3520			3190			4380			3800			3800		
Chromium	37	16.1			14.2			18.6			15.2			13.9	J		12.7			14.9	J	
Cobalt	17.2	8.5			9.7			11.2			7.7			12.7			8.5			9.4		
Copper	33.9	16.9			18.8			19.3			15.9			21.8	J		19.4			19.7	J	
Iron	GRAS	17300			16900			19000			14300			21400			15000			18100		
Lead	400	14.4			13.5			15.5			12.9			13.6			15.6			13.6		
Magnesium	GRAS	3160			3470			3690			2720			3890			2880			3460		
Manganese	1083	387			609			436			381			972			324			583		
Nickel	39.3	17.7			21.3			22			15.4			24.8			19.2			23.4		
Potassium	GRAS	3260			2370			3500			3050			2570			3460			2760		
Selenium	1.33	1.1	J		1.2	J		1.1	J			U	(1)	***1.4***	J		***1.7***	J			U	(1.1)
Vanadium	72.5	32.6			23.1			36.4			27.5			28.6			26.9			30.2		
Zinc	119.5	55.8			47.9			60.6			44.5			52.3			51.7			51.1		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-9
Analytical Data for Load Line 4 Bomb Production Buildings Beneath Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	B4B-033			B4B-034			B4B-035			B4B-036			B4B-037			B4B-038		
		B4B-033-000 (0-1 ft)			B4B-034-000 (0-1 ft)			B4B-035-000 (0-1 ft)			B4B-036-000 (0-1 ft)			B4B-037-000 (0-1 ft)			B4B-038-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.056	J			U	(0.5)		U	(0.5)		U	(0.5)
3-Nitrotoluene (3-NT)	NA		U	(0.75)		U	(0.75)	0.12	J			U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)	0.3	J			U	(1)		U	(1)		U	(1)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.34	J			U	(0.75)
Nitrobenzene (NB)	NA		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)		U	(2)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	0.15	J			U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	15200	J		16600			14300			12300	J		12500			12200	J	
Antimony	31		UJ	(0.46)		UJ	(0.48)		UJ	(0.46)		UJ	(0.44)		UJ	(0.46)		UJ	(0.45)
Arsenic	13.5	6.8	J		4.3	J		9.2			8.9			7	J		7.1	J	
Barium	440	256			188			258			190			164			229		
Beryllium	1.52	0.7			0.8			0.76			0.69			0.7			0.71		
Cadmium	0.4	0.37	J		***0.96***	J		***0.41***	J		0.4	J		***0.41***	J		***0.43***	J	
Calcium	GRAS	3060			3160			3770			3330			2900			3410		
Chromium	37	27.3	J		17.1			15.7			13.9	J		13.6			13.5	J	
Cobalt	17.2	10.9			7			10.4			9.1			8.6			10.5		
Copper	33.9	17.4	J		17.8			22.4			***80.6***	J		15.8			16.9	J	
Iron	GRAS	18200			16900			19500			17400			15900			16500		
Lead	400	14.2			14			14.3			16.4			13			14.2		
Magnesium	GRAS	3320			3260			3910			3460			2840			2970		
Manganese	1083	499			158			589			570			533			652		
Nickel	39.3	27.9			20.4			24.4			22.9			18.3			20.7		
Potassium	GRAS	3240			3530			2870			2340			2670			2630		
Selenium	1.33	***1.5***	J		***1.4***	J		***1.6***	J		***1.6***	J		***1.4***	J		***2.4***	J	
Vanadium	72.5	36.9			35.8			31.3			27.6			27.5			27.3		
Zinc	119.5	49			53.6			52			50.3			48.8			47.7		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-10
Analytical Data for Load Line 1 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B1W-005			B1W-006			B1W-007			B1W-008			B1W-009			B1W-010			B1W-011		
	B1W-005-FLR			B1W-006-FLR			B1W-007-NWL			B1W-008-EWL			B1W-009-SWL			B1W-010-WWL			B1W-011-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0003	J			U	(0.0005)		U	(0.0005)	0.0085				U	(0.0005)		U	(0.0005)	0.013		
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0024				U	(0.0005)		U	(0.0005)	0.0016		
2-Nitrotoluene (2-NT)		U	(0.0008)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.0008)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)	0.0013		
4-Nitrotoluene (4-NT)		U	(0.0008)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.0008)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			R			UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)	0.000072	J			U	(0.0005)		U	(0.0005)	0.0006				U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-10
Analytical Data for Load Line 1 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B1W-012			B1W-013			B1W-014			B1W-015			B1W-016			B1W-017			B1W-018		
	B1W-012-FLR			B1W-013-NWL			B1W-014-EWL			B1W-015-SWL			B1W-016-WWL			B1W-017-FLR			B1W-018-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.013			0.00063			0.0062			0.0022				U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	0.0055				U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.0056				U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)	0.00029	J			U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00032	J			U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0028			0.0013				U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00066				U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-10
Analytical Data for Load Line 1 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B1W-019			B1W-020			B1W-021			B1W-022			B1W-023			B1W-024			B1W-025		
	B1W-019-NWL			B1W-020-EWL			B1W-021-SWL			B1W-022-WWL			B1W-023-FLR			B1W-024-FLR			B1W-025-NWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.046			0.0092			0.022			0.00091			0.037			0.0051			0.0082		
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	0.0044			0.00039	J		0.0015				U	(0.0005)	0.0013			0.0012			0.0015		
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.001)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.0039				U	(0.001)	0.00093	J			U	(0.001)	0.0034			0.001			0.0008	J	
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0026				U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0027		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00089			0.00027	J		0.0012			0.00026	J			U	(0.0005)		U	(0.0005)	0.0005		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-10
Analytical Data for Load Line 1 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B1W-026			B1W-027			B1W-028			B1W-029			B1W-030			B1W-031			B1W-032		
	B1W-026-EWL			B1W-027-SWL			B1W-028-WWL			B1W-029-FLR			B1W-030-FLR			B1W-031-NWL			B1W-032-EWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0037			0.031				U	(0.0005)	0.0026			0.0016			0.005			0.0036		
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	0.0012			0.0031			0.00043	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.0018			0.0046				U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00063	J			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)	0.0005				U	(0.0005)	0.00013	J			U	(0.0005)	0.00024	J			U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-10
Analytical Data for Load Line 1 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B1W-033			B1W-034			B1W-035			B1W-036			B1W-037			B1W-038			B1W-039		
	B1W-033-SWL			B1W-034-WWL			B1W-035-FLR			B1W-036-FLR			B1W-037-NWL			B1W-038-EWL			B1W-039-SWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)	0.0005	J		0.00023	J		0.0001	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.052	J		0.032			0.0037			0.0047			0.0013			0.011	J		0.003		
2,4-Dinitrotoluene (2,4-DNT)	0.0005	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)	0.0089	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	0.0084	J		0.0024			0.001				U	(0.0005)		U	(0.0005)	0.0066	J		0.00052		
2-Nitrotoluene (2-NT)	0.042	J			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.0048	J		0.0013			0.0017			0.0003	J			U	(0.001)	0.0019	J		0.0019		
4-Nitrotoluene (4-NT)	0.042	J			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00065	J			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.00063	J			U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)	0.002	J			U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0029	J		0.00046	J		0.0002	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-10
Analytical Data for Load Line 1 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B1W-040			B1W-041			B1W-042			B1W-043			B1W-044			B1W-045			B1W-046		
	B1W-040-WWL			B1W-041-FLR			B1W-042-FLR			B1W-043-NWL			B1W-044-EWL			B1W-045-SWL			B1W-046-WWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00025	J		0.00011	J			U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0014			0.0022	J			U	(0.0005)	0.006			0.0013	J			U	(0.0005)	0.00096	J	
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0027				U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)	0.0025				U	(0.001)	0.0036				U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0027				U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0024				U	(0.00075)	0.0013				U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		R			UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0017)		U	(0.0005)	0.0029				U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-10
Analytical Data for Load Line 1 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B1W-047			B1W-048			B1W-049			B1W-050			B1W-051			B1W-052			B1W-053		
	B1W-047-FLR			B1W-048-FLR			B1W-049-WWL			B1W-050-NWL			B1W-051-EWL			B1W-052-SWL			B1W-053-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)	0.0071			0.0022			0.026			0.0017			0.04	J	
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0025				U	(0.0005)	0.0024	J	
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)	0.00036	J			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		R			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		R	
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)	0.00032	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0012)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-10
Analytical Data for Load Line 1 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B1W-054			B1W-059			B1W-060			B1W-061			B1W-062			B1W-063			B1W-064		
	B1W-054-FLR			B1W-059-FLR			B1W-060-FLR			B1W-061-NWL			B1W-062-EWL			B1W-063-SWL			B1W-064-WWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		R			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0016	J			U	(0.0005)		U	(0.0005)	0.0013			0.0072			0.003			0.0034		
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0012			0.0025		
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)	0.00047				U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)	0.00037	J		0.00023	J			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		R			U	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-10
Analytical Data for Load Line 1 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B1W-065			B1W-066			B1W-067			B1W-068			B1W-069			B1W-070			B1W-071		
	B1W-065-FLR			B1W-066-FLR			B1W-067-NWL			B1W-068-EWL			B1W-069-SWL			B1W-070-WWL			B1W-071-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0032	J			U	(0.0005)	0.0048				UJ	(0.0005)	0.0023			0.015			0.0011		
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)	0.00079			0.0026				U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)	0.0016				UJ	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)					U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			R			UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		R	
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		UJ	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00022	J			U	(0.0005)	0.00049	J			U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-10
Analytical Data for Load Line 1 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B1W-072			B1W-073			B1W-074			B1W-075			B1W-076			B1W-077			B1W-078		
	B1W-072-FLR			B1W-073-NWL			B1W-074-EWL			B1W-075-SWL			B1W-076-WWL			B1W-077-FLR			B1W-078-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		UJ	(0.0005)	0.00095	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0012)	0.036	J		0.017	J		0.072			0.048				U	(0.0005)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0068			0.007				U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)	0.0049	J		0.0031			0.0045				U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00022	J			U	(0.00075)	0.0015	J		0.0088			0.042				U	(0.00075)	0.00066	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		R			U	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)	0.002	J			U	(0.0005)	0.002			0.0067				U	(0.0005)	0.00071		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-001						B2W-002						B2W-003						B2W-004		
	B2W-001-NWL			B2W-001-RNW			B2W-002-EWL			B2W-002-REW			B2W-003-SWL			B2W-003-RSW			B2W-004-WWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)	0.00061	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.1				U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.16			0.018			0.012				U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0012	J	
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)	0.021	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	0.0028			0.0035				U	(0.0005)	0.0079				U	(0.0005)		U	(0.0005)	0.0019	J	
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.005				U	(0.001)	0.012				U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0035				U	(0.0011)	0.0083				U	(0.00075)	0.00063	J			U	(0.00075)	0.0013	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		U	(0.00075)		U	(0.00075)		R			U	(0.00075)		UJ	(0.00075)		U	(0.00075)		UJ	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00046	J			U	(0.0005)	0.00065				U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.00085)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-005						B2W-006			B2W-007						B2W-008					
	B2W-005-FLR			B2W-005-RFL			B2W-006-FLR			B2W-007-NWL			B2W-007-RNW			B2W-008-EWL			B2W-008-REW		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)	0.00092				U	(0.0005)		U	(0.0005)	0.00056			0.033			0.0091		
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0065	J			U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)	0.00022				U	(0.0005)	0.00039	J			U	(0.0005)		U	(0.0025)	0.0069		
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)	0.00047	J			U	(0.001)		U	(0.0025)	0.0047		
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0042	J		0.0043			0.0045			0.0036				U	(0.0015)	0.014			0.0095		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			U	(0.00075)		R			R			U	(0.00075)		R			U	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.003	J			U	(0.0005)	0.0022			0.00043	J			U	(0.0005)	0.0022				U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-009			B2W-010			B2W-011						B2W-012			B2W-013					
	B2W-009-SWL			B2W-010-WWL			B2W-011-FLR			B2W-011-RFL			B2W-012-FLR			B2W-013-NWL			B2W-013-RNW		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)	0.00058			0.0027				U	(0.0005)	0.004			0.0064	J	
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00017				U	(0.0005)		U	(0.0005)		UJ	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00053				U	(0.0005)		U	(0.0005)	0.0053	J	
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0075	J	
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)	0.00051				U	(0.001)	0.0008	J		0.0017	J	
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0075	J	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0022	J		0.11	J		0.0022				U	(0.00096)	0.00088			0.006			0.017	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		R			U	(0.00075)		R			R			UJ	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0019)		U	(0.0068)	0.0013			0.00062				U	(0.0005)	0.00052				UJ	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-014			B2W-015			B2W-016			B2W-017						B2W-018			B2W-019		
	B2W-014-EWL			B2W-015-SWL			B2W-016-WWL			B2W-017-FLR			B2W-017-RFL			B2W-018-FLR			B2W-019-NWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0023	J		0.0049	J		0.0058	J		0.046			0.0014			0.0032			1.1		
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0011		
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	0.0038	J		0.0042	J		0.0043	J		0.0055				U	(0.0005)		R		0.023		
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.00055	J			U	(0.001)		U	(0.001)	0.0039			0.001				U	(0.001)	0.018		
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0028	J		0.0065	J		0.0039	J		0.26			0.011			0.01			0.12		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		R			U	(0.00075)		U	(0.00075)		R	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.00078)		U	(0.0014)		U	(0.00096)	0.071			0.0067			0.0046			0.0053		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-020			B2W-021			B2W-022			B2W-023			B2W-024			B2W-025			B2W-026		
	B2W-020-EWL			B2W-021-SWL			B2W-022-WWL			B2W-023-FLR			B2W-024-FLR			B2W-025-NWL			B2W-026-EWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0092	J		0.055			0.034			0.0027			0.016			0.0044				UJ	(0.004)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0002	J			U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00056			0.0042				U	(0.0005)		UJ	(0.011)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)	0.00049	J		0.0017			0.007				U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0017	J		0.013	J		0.013			0.16			0.14			0.00096				U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		R			R			R			UJ	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		UJ	(0.0005)	0.0019			0.065			0.056			0.00023	J			U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-027			B2W-028			B2W-029			B2W-030			B2W-031			B2W-032			B2W-033		
	B2W-027-SWL			B2W-028-WWL			B2W-029-FLR			B2W-030-FLR			B2W-031-NWL			B2W-032-EWL			B2W-033-SWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0058	J		0.0056	J		0.00082			0.0012				U	(0.0005)		U	(0.0005)	0.0066		
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	0.0074	J		0.005	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00053		
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.002	J		0.0012	J		0.0078			0.0055			0.0015			0.0014	J		0.0018		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		R			R			R			UJ	(0.00075)		UJ	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)	0.00097						0.00091				U	(0.00087)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-034			B2W-035			B2W-036			B2W-037			B2W-038			B2W-039			B2W-040		
	B2W-034-WWL			B2W-035-FLR			B2W-036-FLR			B2W-037-NWL			B2W-038-EWL			B2W-039-SWL			B2W-040-WWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0066	J		0.00074			0.14			0.0021	J			U	(0.00053)		U	(0.0005)		UJ	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)	0.0011				U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)	0.0057			0.0062	J			U	(0.0005)		U	(0.0005)		UJ	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.0075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.000758)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)	0.0042				U	(0.001)		U	(0.001)	0.00041	J			UJ	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0016	J		0.0084			0.064			0.0062	J		0.0037	J			U	(0.00075)	0.0042	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		R			R			UJ	(0.00075)		R			R			UJ	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)	0.023			0.019				U	(0.0005)	0.00052	J			U	(0.0005)		UJ	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-041			B2W-042			B2W-043			B2W-044			B2W-045			B2W-046			B2W-047			B2W-048		
	B2W-041-FLR			B2W-042-FLR			B2W-043-NWL			B2W-044-EWL			B2W-045-SWL			B2W-046-WWL			B2W-047-FLR			B2W-048-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																								
1,3,5-Trinitrobenzene (1,3,5-TNB)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.061	J	
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0031	J		0.00032	J		0.0017	J			U	(0.00075)		U	(0.00075)		U	(0.00075)	0.078	J			U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			R			UJ	(0.00075)		R			R			R			R			R	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00074	J			U	(0.0005)	0.0013	J			U	(0.0005)		U	(0.0005)		U	(0.0005)	0.012	J			U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-049			B2W-050			B2W-051			B2W-052			B2W-053			B2W-054			B2W-055			B2W-056		
	B2W-049-WWL			B2W-050-NWL			B2W-051-EWL			B2W-052-SWL			B2W-053-FLR			B2W-054-FLR			B2W-055-WWL			B2W-056-NWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																								
1,3,5-Trinitrobenzene (1,3,5-TNB)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.021				J			U	(0.0005)		U	(0.0005)		U	(0.00054)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	0.0032				J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)	0.0034				U	(0.00075)		J			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0024		
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.01	U	(0.00075)		J		0.0018	J			U	(0.00075)	0.00015	J			U	(0.00075)		U	(0.00075)	0.024		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			UJ	(0.00075)		U	(0.00075)		R			R			R			R			R	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)	0.00071	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00075		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-057			B2W-058			B2W-059			B2W-060			B2W-061			B2W-062			B2W-063		
	B2W-057-EWL			B2W-058-SWL			B2W-059-FLR			B2W-060-FLR			B2W-061-NWL			B2W-062-EWL			B2W-063-SWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.00055)		U	(0.0005)		U	(0.0005)	0.0018	J	
2,4-Dinitrotoluene (2,4-DNT)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		UJ	(0.00075)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		UJ	(0.00075)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		UJ	(0.001)		UJ	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		UJ	(0.00075)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		UJ	(0.00075)	0.0024	J			U	(0.00075)	0.0011	J			U	(0.00075)	0.00047	J		0.0094	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			UJ	(0.00075)		R			R			R			R			R	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		UJ	(0.0005)	0.00039	J		0.00021	J		0.00078	J			U	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-064			B2W-065			B2W-066			B2W-073			B2W-074			B2W-075			B2W-076			B2W-077		
	B2W-064-WWL			B2W-065-FLR			B2W-066-FLR			B2W-073-NWL			B2W-074-EWL			B2W-075-SWL			B2W-076-WWL			B2W-077-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																								
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0012				U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0016	J			U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0003	J	
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.00062	J	
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0028			0.0037			0.01				U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.00075)	0.0015	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			UJ	(0.00075)		R			R			UJ	(0.00075)		R			UJ	(0.00075)		R	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00026	J		0.0004	J		0.00054				U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-11
Analytical Data for Load Line 2 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B2W-078		
	B2W-078-FLR		
	R	Q	QL
EXPLOSIVES (MG/WIPE)			
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.0008)
3-Nitrotoluene (3-NT)		U	(0.0008)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.0008)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.0008)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-12
Analytical Data for Load Line 3 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B3W-001			B3W-002			B3W-003			B3W-004			B3W-005			B3W-006			B3W-007			B3W-008		
	B3W-001-NWL			B3W-002-EWL			B3W-003-SWL			B3W-004-WWL			B3W-005-FLR			B3W-006-FLR			B3W-007-NWL			B3W-008-EWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																								
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00057			0.0005	J		0.00037	J			U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)		U	(0.00075)	0.002				U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.00048	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			UJ	(0.00075)		R			R			R			R			UJ	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized

Table A-12
Analytical Data for Load Line 3 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B3W-009			B3W-010			B3W-011			B3W-012			B3W-013			B3W-014			B3W-015			B3W-016		
	B3W-009-SWL			B3W-010-WWL			B3W-011-FLR			B3W-012-FLR			B3W-013-NWL			B3W-014-EWL			B3W-015-SWL			B3W-016-WWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																								
1,3,5-Trinitrobenzene (1,3,5-TNB)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		R			U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		R			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.00076)	0.002	J			R		0.00093	J		0.0069	J		0.023	J			U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		R			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		R			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		R			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		R			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		R			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		R			U	(0.001)	0.00065	J			U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		R			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)	0.00056	J		0.00016	J			R			U	(0.00075)	0.00078	J		0.0066	J			U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		R			R			UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		R			U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)		U	(0.0005)		R			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-12
Analytical Data for Load Line 3 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B3W-017			B3W-018			B3W-019			B3W-020			B3W-021			B3W-022			B3W-023			B3W-024		
	B3W-017-FLR			B3W-018-FLR			B3W-019-NWL			B3W-020-EWL			B3W-021-SWL			B3W-022-WWL			B3W-023-FLR			B3W-024-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																								
1,3,5-Trinitrobenzene (1,3,5-TNB)		UJ	(0.0005)	R			U	(0.0005)			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)	R			U	(0.0005)			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0062	J		R			U	(0.0005)		0.98	J		0.00084	J		0.092	J		0.015	J		0.017	J	
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)	R			U	(0.0005)			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)	R			U	(0.0005)			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	0.0027	J		R			U	(0.0005)		0.021	J			U	(0.0005)		U	(0.0005)	0.0022	J		0.00081	J	
2-Nitrotoluene (2-NT)		U	(0.00075)	R			U	(0.0008)			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)	R			U	(0.0008)			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.0054	J		R			U	(0.001)		0.0046	J			U	(0.001)		U	(0.001)	0.002	J		0.00078	J	
4-Nitrotoluene (4-NT)		U	(0.00075)	R			U	(0.0008)			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00034	J		R			U	(0.0008)			U	(0.00075)	0.00038	J			U	(0.00075)	0.0035	J		0.0018	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)	R			R				R			R			R			R			U	(0.00075)
Nitrobenzene (NB)		U	(0.002)	R			U	(0.002)			U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)	R			U	(0.0005)			U	(0.0005)		U	(0.00031)		U	(0.0005)	0.00035	J		0.00063	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-12
Analytical Data for Load Line 3 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B3W-025			B3W-026			B3W-027			B3W-028			B3W-029			B3W-030			B3W-031		
	B3W-025-NWL			B3W-026-EWL			B3W-027-SWL			B3W-028-WWL			B3W-029-FLR			B3W-030-FLR			B3W-031-NWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)	0.0015	J		0.0092	J		0.00099	J		0.045	J		0.0055	J		0.51	J	
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.012	J	
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0006	J		0.0014	J		0.0455	J	
2-Nitrotoluene (2-NT)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)	0.003	J		0.0013	J			U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.0008)		U	(0.00075)	0.00016	J			U	(0.00075)		U	(0.00075)		U	(0.0008)	0.0946	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			R			R			R			U	(0.00075)		R			U	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0001	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-12
Analytical Data for Load Line 3 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B3W-032			B3W-033			B3W-034			B3W-035			B3W-036			B3W-037			B3W-038		
	B3W-032-EWL			B3W-033-SWL			B3W-034-WWL			B3W-035-FLR			B3W-036-FLR			B3W-037-NWL			B3W-038-EWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)	0.0018	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.16	J		0.0046	J		0.09	J		0.011	J		0.0029	J			U	(0.0005)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	0.0134	J			U	(0.0005)		U	(0.0005)	0.0023	J		0.00063	J			U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.0011	J			U	(0.001)		U	(0.001)	0.0021	J		0.00065	J			U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0155	J			U	(0.00075)		U	(0.00075)	0.0039	J		0.0015	J			U	(0.00075)	0.0012	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			R			R			U	(0.00075)		R			UJ	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)	0.1	J			U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00065	J		0.00022	J			U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-12
Analytical Data for Load Line 3 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B3W-039			B3W-040			B3W-041			B3W-042			B3W-043			B3W-044			B3W-045			B3W-046		
	B3W-039-SWL			B3W-040-WWL			B3W-041-FLR			B3W-042-FLR			B3W-043-NWL			B3W-044-EWL			B3W-045-SWL			B3W-046-WWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																								
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.0001	J			U	(0.0005)		U	(0.0005)	0.0024			0.00093	J			U	(0.0005)	0.0016					
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00031	J			U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0001	J			U	(0.00075)		U	(0.0008)	0.0026			0.0011	J			U	(0.00075)	0.00092					
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		UJ	(0.00075)		UJ	(0.00075)		R			R			UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-12
Analytical Data for Load Line 3 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B3W-047			B3W-048			B3W-049			B3W-050			B3W-051			B3W-052			B3W-053			B3W-054		
	B3W-047-FLR			B3W-048-FLR			B3W-049-WWL			B3W-050-NWL			B3W-051-EWL			B3W-052-SWL			B3W-053-FLR			B3W-054-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																								
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)	0.0003	J			U	(0.0005)		U	(0.0005)	0.00018	J		0.0031				U	(0.0005)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.0008)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.0008)
3-Nitrotoluene (3-NT)		U	(0.0008)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.0008)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)	0.0019				U	(0.001)	0.0004	J	
4-Nitrotoluene (4-NT)		U	(0.0008)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.0008)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.0008)		U	(0.0008)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0003	J			U	(0.0008)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			R			UJ	(0.00075)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)		R			R	
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.0002	J		0.0001	J			U	(0.0005)		U	(0.0005)		U	(0.0004)		U	(0.0005)		U	(0.0005)	0.000014	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-12
Analytical Data for Load Line 3 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B3W-055			B3W-056			B3W-057			B3W-058			B3W-059			B3W-060			B3W-061			B3W-062		
	B3W-055-WWL			B3W-056-NWL			B3W-057-EWL			B3W-058-SWL			B3W-059-FLR			B3W-060-FLR			B3W-061-NWL			B3W-062-EWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																								
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		R			R	
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.001)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)	0.0037				U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0051	J			U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.001)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.001)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	0.0033				U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.001)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.0008)		U	(0.0015)	0.0016	J	
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.0008)		U	(0.0015)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.0033				U	(0.001)	0.00091	J			U	(0.001)		U	(0.001)		U	(0.001)	0.0051	J		0.0084	J	
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.0008)		U	(0.0008)		U	(0.0015)	0.0016	J	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0035			0.0016	J			U	(0.0008)	0.023	J			U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		R			R			R			R	
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.004)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0029	J			UJ	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-12
Analytical Data for Load Line 3 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B3W-063			B3W-064			B3W-065			B3W-066			B3W-067			B3W-068			B3W-069		
	B3W-063-SWL			B3W-064-WWL			B3W-065-FLR			B3W-066-FLR			B3W-067-NWL			B3W-068-EWL			B3W-069-SWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		R			R			R			R			R			R			R	
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.009	J		0.002	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00026	J	
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)	0.00039	J			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)	0.0004	J		0.0011	J			U	(0.00075)		U	(0.00075)	0.0011	J	
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.0065	J		0.0057	J			U	(0.001)		U	(0.001)	0.011	J		0.017	J		0.012	J	
4-Nitrotoluene (4-NT)	0.00039	J			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00069	J		0.00043	J			U	(0.00075)	0.00051	J			U	(0.00075)		U	(0.00075)		U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			R			R			R			R		0.0017	J		0.00056	J	
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-12
Analytical Data for Load Line 3 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B3W-070			B3W-071			B3W-072			B3W-073			B3W-074			B3W-075			B3W-076		
	B3W-070-WWL			B3W-071-FLR			B3W-072-FLR			B3W-073-NWL			B3W-074-EWL			B3W-075-SWL			B3W-076-WWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		R			R			R		0.0013	J			R			R		0.00068	J	
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00018	J	
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.003				U	(0.0005)		U	(0.0005)	0.016			0.0022	J		0.018			0.026		
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0057	U	(0.0005)	0.0085		
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0047		
2-Nitrotoluene (2-NT)	0.007			0.0016				U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0014		
3-Nitrotoluene (3-NT)	0.00089			0.0013			0.0014			0.0042				U	(0.00075)		U	(0.00075)	0.096		
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.0075				U	(0.001)		U	(0.001)	0.0033			0.0016	J		0.0087	U	(0.001)	0.0049		
4-Nitrotoluene (4-NT)	0.007			0.0016				U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0014		
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00078				U	(0.00075)		U	(0.00075)	0.00096			0.0059	J		0.0015			0.0014		
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			R			R		0.019	J			R			R			R	
Nitrobenzene (NB)		U	(0.002)	0.003				U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)	0.093		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-12
Analytical Data for Load Line 3 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B3W-077			B3W-078		
	B3W-077-FLR			B3W-078-FLR		
	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)						
1,3,5-Trinitrobenzene (1,3,5-TNB)		R			U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)		U	(0.00075)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)		R			U	(0.00075)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		UJ	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-001			B4W-002			B4W-003			B4W-004			B4W-005			B4W-006			B4W-007			B4W-008		
	B4W-001-NWL			B4W-002-EWL			B4W-003-SWL			B4W-004-WWL			B4W-005-FLR			B4W-006-FLR			B4W-007-NWL			B4W-008-EWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																								
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00082				U	(0.0005)	0.003				U	(0.00057)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)	0.0021				U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)		U	(0.00075)		U	(0.0075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.00074)		U	(0.0005)		U	(0.0028)		U	(0.0005)	0.00054	J			U	(0.00075)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-009			B4W-010			B4W-011			B4W-012			B4W-013			B4W-014			B4W-015			B4W-016		
	B4W-009-SWL			B4W-010-WWL			B4W-011-FLR			B4W-012-FLR			B4W-013-NWL			B4W-014-EWL			B4W-015-SWL			B4W-016-WWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																								
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)	0.0013	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0011	J			U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)	0.00066	J			U	(0.001)		U	(0.001)		U	(0.001)	0.00076	J			U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)		U	(0.00075)	0.0026	J			U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0025	J			U	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)	0.00049	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-017			B4W-018			B4W-019			B4W-020			B4W-021			B4W-022		
	B4W-017-FLR			B4W-018-FLR			B4W-019-NWL			B4W-020-EWL			B4W-021-SWL			B4W-022-WWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																		
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0002)		UJ	(0.00056)	0.04				U	(0.094)	0.0083			0.0071		
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)	0.0022			0.0051			0.00037	J			U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)	0.00083	J		0.00088	J		0.0026			0.00045	J			U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)	0.0027	J		0.053			0.081			0.026			0.0026		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00044	J			U	(0.00075)	0.0027			0.0076			0.0028			0.00033	J	.

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-023			B4W-024			B4W-025			B4W-026			B4W-027			B4W-028			B4W-029		
	B4W-023-FLR			B4W-024-FLR			B4W-025-NWL			B4W-026-EWL			B4W-027-SWL			B4W-028-WWL			B4W-029-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0014			0.0007				U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00066	J		0.00064	J		0.0012	J			U	(0.00075)	0.00038	J			U	(0.00075)		U	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)	0.00085				U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-030			B4W-031			B4W-032			B4W-033			B4W-034			B4W-035		
	B4W-030-FLR			B4W-031-NWL			B4W-032-EWL			B4W-033-SWL			B4W-034-WWL			B4W-035-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																		
1,3,5-Trinitrobenzene (1,3,5-TNB)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)	0.00053	J			UJ	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)	0.0007			0.0006	J		0.0092			0.00044	J		0.00099		
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00054				U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)	0.0007	J		0.0016	J		0.0053				U	(0.00075)	0.0063		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)	0.00082			0.00097	J		0.00049	J			U	(0.0005)	0.0038		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-036			B4W-037			B4W-038			B4W-039			B4W-040			B4W-041			B4W-042		
	B4W-036-FLR			B4W-037-NWL			B4W-038-EWL			B4W-039-SWL			B4W-040-WWL			B4W-041-FLR			B4W-042-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)	0.00049	J			U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00023	J		0.00032	J			U	(0.0005)		U	(0.0005)	0.00026	J			U	(0.00075)		U	(0.00075)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-043			B4W-044			B4W-045			B4W-046			B4W-047			B4W-048			B4W-049		
	B4W-043-NWL			B4W-044-EWL			B4W-045-SWL			B4W-046-WWL			B4W-047-FLR			B4W-048-FLR			B4W-049-WWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0014	J		0.0014	J			U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00032	J	
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0086	J			U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.0086	J			U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0076				U	(0.00075)		U	(0.00075)	0.00031	J		0.00097	J			U	(0.00075)		U	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00039	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.00075)		U	(0.00075)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-050			B4W-051			B4W-052			B4W-053			B4W-054			B4W-055			B4W-056		
	B4W-050-NWL			B4W-051-EWL			B4W-052-SWL			B4W-053-FLR			B4W-054-FLR			B4W-055-WWL			B4W-056-NWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)	0.000096	J		0.0004	J			UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		UJ	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.00088	J			U	(0.00075)		U	(0.00075)		U	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00021	J		0.00021	J			U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-057			B4W-058			B4W-059			B4W-060			B4W-061			B4W-062			B4W-063		
	B4W-057-EWL			B4W-058-SWL			B4W-059-FLR			B4W-060-FLR			B4W-061-NWL			B4W-062-EWL			B4W-063-SWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0039				U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00075				U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.006	J			U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)	0.00024	J			U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.006	J			U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)		U	(0.00075)		U	(0.00075)	0.00041	J		0.0095				U	(0.00075)		U	(0.0075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)	0.00022	J			U	(0.0005)	0.0015				U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-064			B4W-065			B4W-066			B4W-067			B4W-068			B4W-069		
	B4W-064-WWL			B4W-065-FLR			B4W-066-FLR			B4W-067-NWL			B4W-068-EWL			B4W-069-SWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																		
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)	0.00011	J			U	(0.0005)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.004			0.00011	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0038)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)	0.0021	J			U	(0.001)	0.0025	J	
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0062				U	(0.00075)	0.00028	J			U	(0.00075)		U	(0.00075)		U	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-070			B4W-071			B4W-072			B4W-073			B4W-074			B4W-075			B4W-076		
	B4W-070-WWL			B4W-071-FLR			B4W-072-FLR			B4W-073-NWL			B4W-074-EWL			B4W-075-SWL			B4W-076-WWL		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.0022				U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		UJ	(0.00065)		U	(0.0005)		U	(0.0005)	0.00077	J			U	(0.0005)		U	(0.0005)	0.00035	J	
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.0012	J			U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)	0.00021	J			U	(0.0005)	0.000056	J			U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-13
Analytical Data for Load Line 4 Bomb Production Buildings Surface Wipe Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	B4W-077			B4W-078		
	B4W-077-FLR			B4W-078-FLR		
	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)						
1,3,5-Trinitrobenzene (1,3,5-TNB)		U	(0.0005)		U	(0.0005)
1,3-Dinitrobenzene (1,3-DNB)		U	(0.0005)		U	(0.0005)
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)
2,6-Dinitrotoluene (2,6-DNT)		U	(0.0005)		U	(0.0005)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)		U	(0.0005)		U	(0.0005)
2-Nitrotoluene (2-NT)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)
4-Nitrotoluene (4-NT)		U	(0.00075)		U	(0.00075)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.00075)		U	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-14
Analytical Data for Load Line 1 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P1A-001						P1A-002						P1A-003						P1A-004						P1A-005					
		P1A-001-000 (0-0.5 ft)			P1A-001-001 (1-2 ft)			P1A-002-000 (0-0.5 ft)			P1A-002-001 (1-2 ft)			P1A-003-000 (0-0.5 ft)			P1A-003-001 (1-2 ft)			P1A-004-000 (0-0.5 ft)			P1A-004-001 (1-2 ft)			P1A-005-000 (0-0.5 ft)			P1A-005-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																															
Aluminum	33852	13000			12600			13900	J		18800	J		15900			18700			11400	J		17600			12400			15500		
Antimony	31	0.8	J		0.62	J			UJ	(0.43)		UJ	(0.46)	***40.3***	J		3.6	J			UJ	(0.44)	0.6	J		5.6	J		0.98	J	
Arsenic	13.5	8.3	J		9.3			6.4	J		9.4			8.5			8.1	J		9.6			6.9	J		5.2	J		5.9	J	
Barium	440	240			259			236			310			246			276			270			259			261			249		
Beryllium	1.52	0.66			0.69			0.67			0.92			0.77			0.82			0.66			0.81			0.67			0.78		
Cadmium	0.4	***0.74***	J		***0.46***	J		0.29	J		0.29	J		0.32	J			U	(0.12)	0.27	J		0.22	J		***0.52***	J		0.15	J	
Calcium	GRAS	5740			5870			3440	J		4340	J		4970			4090			4350	J		3400			4680			3030		
Chromium	37	23			18			16.9	J		21.5	J		28.8			20.6			14.7	J		18.8			22			17.4		
Cobalt	17.2	9.4			10.5			9.6			12.2			10.8			10.3			9.7			10.4			9.9			10.7		
Copper	33.9	28.8			23.2			18.3			24.5			31.8			16.8			20.3			17.5			33.1			16.9		
Iron	GRAS	18000			18700			17200			22500			20300			21700			18700			20000			15900			18000		
Lead	400	260			40.4			17.8			16.3			108			17.3			13.6			14.3			127			17.9		
Magnesium	GRAS	3690	J		3640	J		3890			4950			3960	J		4050	J		4020	J		3720	J		3080	J		3180	J	
Manganese	1083	505			667			545			733			574			632			610			656			638			617		
Mercury	23		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.11)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0 13)		U	(0.12)
Nickel	39.3	23.2	J		25.6	J		18.8			27.5			25.4	J		20.3	J		24.5	J		20.9	J		19.9	J		19	J	
Potassium	GRAS	3600	J		3300	J		4660			4340			4490	J		3750	J		2750	J		3400	J		4120	J		3670	J	
Selenium	1.33	1.3	J			U	(1.1)		U	(1)		U	(1.1)	***1.5***	J		***1.4***	J			U	(1)	***1.6***	J		***1.9***	J		***1.4***	J	
Sodium	GRAS	185	J		215	J			U	(306)		U	(329)	97	J		88.4	J			U	(314)		U	(321)		U	(350)		U	(32.7)
Thallium	1.72		U	(1.3)		U	(1.4)		U	(1.2)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)	1.5	J			U	(1.4)		U	(1.3)
Vanadium	72.5	26.2			24			30.2			39.1			33.9			35.2			24.7			34.5			30.4			34.5		
Zinc	119.5	***137***			73.5			53.1	J		60.7	J		***123***			64.3			57.5	J		68.7			110			64.2		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-14
Analytical Data for Load Line 1 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P1A-006						P1A-007						P1A-008						P1A-009						P1A-010					
		P1A-006-000 (0-0.5 ft)			P1A-006-001 (1-2 ft)			P1A-007-000 (0-0.5 ft)			P1A-007-001 (1-2 ft)			P1A-008-000 (0-0.5 ft)			P1A-008-001 (1-2 ft)			P1A-009-000 (0-0.5 ft)			P1A-009-001 (1-2 ft)			P1A-010-000 (0-0.5 ft)			P1A-010-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																															
Aluminum	33852	16100			14300			13400			12400			13400			17600			13100			15600			17400			17000		
Antimony	31	6.4	J		0.49	J		0.83	J			UJ	(0.46)	7.2	J			UJ	(0.46)	2.1	J			UJ	(0.45)	0.54	J			UJ	(0.47)
Arsenic	13.5	6.6	J		5.7	J		6.9	J		8.3	J		5.9	J		6.8	J		7.4	J		7.5	J		7.9	J		9.2		
Barium	440	250			266			246			262			252			240			215			241			241			244		
Beryllium	1.52	0.72			0.77			0.65			0.69			0.7			0.81			0.68			0.79			0.8			0.81		
Cadmium	0.4	***0.93***	J			U	(0.12)	0.25	J		0.18	J		***2.3***				U	(0.12)	***0.98***	J		0.2	J			U	(0.13)		U	(0.12)
Calcium	GRAS	5630			3180			6830			4350			9660			3040			4860			4420			3470			3500		
Chromium	37	25.2			16.3			17.1			15.2			31			19.5			22.4			23.8			18.9			17.9		
Cobalt	17.2	9.8			11.1			8.4			9.9			8.8			11.2			9.4			12.7			10.5			11		
Copper	33.9	23.3	J		17.5			21.4			21.1			***53.6***			16.6			***36.3***			16.1			21.3			18.3		
Iron	GRAS	17200			17100			17800			19300			16200			19600			16500			18900			19700			21100		
Lead	400	164	J		14.4			30.3			14.1			148			16.9			95.7	J		17.1	J		20.8			15.5		
Magnesium	GRAS	3680			3010	J		4270	J		4010	J		3360	J		3370	J		3330			3310			3570			4040		
Manganese	1083	614			727			489			612			440			624			542			767			610			663		
Mercury	23		U	(0.12)		U	(0.13)		U	(0.13)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.11)		U	(0.11)		U	(0.12)
Nickel	39.3	20.6			19	J		20.9	J		24.6	J		***49.5***	J		19.6	J		21.1			20			19.7			22.2		
Potassium	GRAS	4350			3580	J		4290	J		2680	J		3580	J		4300	J		4490			3340			3630			2600		
Selenium	1.33	***1.7***	J		1.3	J		1.2	J		***1.4***	J			U	(1.1)		U	(1.1)		U	(1.1)		U	(1)	1.2	J		1.1	J	
Sodium	GRAS	40.2	J			U	(31.7)		U	(320)		U	(329)		U	(337)		U	(324)		U	(336)		U	(321)		U	(34)		U	(332)
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)
Vanadium	72.5	38.3			32.8			34.7			25.2			29.3			38.6			30.9			31.1			36			32.9		
Zinc	119.5	92			59.8			61.1			60.8			118			64.8			101			65			63.7			56.2		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-14
Analytical Data for Load Line 1 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P1A-011						P1A-012						P1A-013						P1A-014						P1A-015					
		P1A-011-000 (0-0.5 ft)			P1A-011-001 (1-2 ft)			P1A-012-000 (0-0.5 ft)			P1A-012-001 (1-2 ft)			P1A-013-000 (0-0.5 ft)			P1A-013-001 (1-2 ft)			P1A-014-000 (0-0.5 ft)			P1A-014-001 (1-2 ft)			P1A-015-000 (0-0.5 ft)			P1A-015-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																															
Aluminum	33852	17200			14200			16200			17600			14400			15200			17300			15200			16200			15900		
Antimony	31	0.65	J			UJ	(0.45)	1.3	J			UJ	(0.44)		UJ	(4.5)	0.66	J		0.56	J			UJ	(0.43)		UJ	(0.48)		UJ	(4.8)
Arsenic	13.5	7.7	J		6	J		7.1	J		8.7			9.4			7.7	J		7.9	J		7.6	J		9			10.7		
Barium	440	224			262			231			240			232			251			270			240			267			318		
Beryllium	1.52	0.79			0.73			0.76			0.83			0.77			0.77			0.78			0.73			0.79			0.92		
Cadmium	0.4	0.2	J			U	(0.12)	0.3	J		0.18	J		0.32	J			U	(0.11)	0.15	J			U	(0.11)	0.14	J			U	(0.12)
Calcium	GRAS	3060			3470			3420			3430			4420			3860			3600			3500			3820			4860		
Chromium	37	19.1			16.3			18.4			18.6			20.5			16.8			19.2			16.5			18.3			17.6		
Cobalt	17.2	10.6			9.7			10.3			11.1			10.9			13.3			11			9.3			11.4			13.4		
Copper	33.9	17.7			14.4			17.7			17.3			27.4			16.5			16.8			15.2			21.7			20.4		
Iron	GRAS	19100			17400			18600			20600			19900			19400			20800			19300			20900			23800		
Lead	400	19.7			20.3			27.1			16.3	J		48.3			18.9			21.9			14.7			39.6			22.9		
Magnesium	GRAS	3350			3130			3360	J		3930			3670			3530			3920			3910			4220	J		4720	J	
Manganese	1083	605			608			600			672			673			840			679			561			705			878		
Mercury	23		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.11)		U	(0.1)		U	(0.13)		U	(0.12)
Nickel	39.3	20			18.7			19.3	J		21			24.5			20.2			21			18.7			24.2	J		30.3	J	
Potassium	GRAS	4240			3420			3830	J		2690			3880			2880			3760			2330			3220	J		2490	J	
Selenium	1.33		U	(1.1)	***1.5***	J		1.1	J			U	(1)	***1.9***	J		1.1	J			U	(1.1)		U	(1)	1.2	J		***1.6***	J	
Sodium	GRAS		U	(33.5)		U	(318)		U	(345)		U	(314)		U	(321)		U	(309)		U	(33.3)		U	(307)		U	(344)		U	(338)
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)
Vanadium	72.5	36			24.3			36.1			32.2			31.6			26.7			38.1			27.5			31.9			27.9		
Zinc	119.5	63.7			55.2			65.7			61.9			77.6			62.6			69.8			52.8			70.6			75.4		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-14
Analytical Data for Load Line 1 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P1A-016						P1A-017						P1A-018						P1A-019						P1A-020					
		P1A-016-000 (0-0.5 ft)			P1A-016-001 (1-2 ft)			P1A-017-000 (0-0.5 ft)			P1A-017-001 (1-2 ft)			P1A-018-000 (0-0.5 ft)			P1A-018-001 (1-2 ft)			P1A-019-000 (0-0.5 ft)			P1A-019-001 (1-2 ft)			P1A-020-000 (0-0.5 ft)			P1A-020-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																															
Aluminum	33852	7070			10900			13400			12800			11300			9520			8920			13400			5610			13400		
Antimony	31	0.5	J		0.49	J			UJ	(0.45)	0.56	J		0.55	J			UJ	(0.46)	0.72	J			R		***47.2***	J		0.55	J	
Arsenic	13.5	4.8	J		7.5	J		7.7	J		9.7			6.5	J		8	J		4.9	J		10.5			3.4	J		8.2	J	
Barium	440	132			191			221			306			186			238			181			339			112			202		
Beryllium	1.52	0.57			0.65			0.7			0.74			0.58			0.63			0.51			0.78			0.36			0.76		
Cadmium	0.4		U	(0.12)	0.18	J		0.22	J		0.24	J		***0.59***	J		0.38	J		0.25	J		0.21	J		0.22	J		0.14	J	
Calcium	GRAS	4330			3870			3420			4210			3700			4380			4190			5890			2540			3930		
Chromium	37	9.5			13.2			16.1			15.5			18.5			12.6			13.2			17.9			***44***			14.4		
Cobalt	17.2	6.3			9.2			10.3			11.2			8			11.3			7.4			11			7.7			12.7		
Copper	33.9	12.8			16.4			18.8			22.9			21.7			19.2			20.4			23.6			15.1			19.3		
Iron	GRAS	11800			16000			18100			20600			15400			16800			13100			21000			8440			18400		
Lead	400	22.7			17.2			23.6			17.1			72.3			15.5			27.7	J		15.4	J		232	J		18.3	J	
Magnesium	GRAS	1870			3110			3450	J		4150	J		2780	J		3440	J		2460			4240			1470			3250		
Manganese	1083	373			564			617			670			447			726			432			682			268	J		801		
Mercury	23		U	(0.1)		U	(0.12)		U	(0.12)		U	(0.13)	0.24	J			U	(0.12)	0.16	J			UJ	(0.12)		UJ	(0.12)		UJ	(0.12)
Nickel	39.3	14.2			21.3			22.5			29.3	J		18.2	J		25.1	J		16.1			28.7			11			24.8		
Potassium	GRAS	1820			2370			3220			2840	J		2940	J		2730	J		2690			2960			1720			3940		
Selenium	1.33	1	J			U	(1.1)	1.1	J			U	(1.1)		U	(1.1)	1.1	J		***1.4***	J			UJ	(1.1)		UJ	(1)		UJ	(1.1)
Sodium	GRAS		U	(314)		U	(322)		U	(318)		U	(334)		U	(323)		U	(324)		U	(298)		U	(340)		U	(317)		U	(328)
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.2)		U	(1.4)		U	(1.3)		U	(1.3)
Vanadium	72.5	18.7			25			28.1			26.5			26.1			22.1			24.1			35.2			14.3			28.7		
Zinc	119.5	40.3			49.7			60.1			66.8			80.6			57.8			61.1	J		65.1	J		***266***	J		50.4	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-14
Analytical Data for Load Line 1 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P1A-021						P1A-022						P1A-023						P1A-024						P1A-025					
		P1A-021-000 (0-0.5 ft)			P1A-021-001 (1-2 ft)			P1A-022-000 (0-0.5 ft)			P1A-022-001 (1-2 ft)			P1A-023-000 (0-0.5 ft)			P1A-023-001 (1-2 ft)			P1A-024-000 (0-0.5 ft)			P1A-024-001 (1-2 ft)			P1A-025-000 (0-0.5 ft)			P1A-025-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																															
Aluminum	33852	5840			5550			10200			8020			11000			12700			22200			21000			8390			22600		
Antimony	31		R			R			R			R		0.98	J			R		0.5	J			UJ	(0.47)	0.78	J			UJ	(0.44)
Arsenic	13.5	3.5	J		2.1	J		7.1	J		9.8			8.8			10			7	J		7.7	J		4.6	J		9.8		
Barium	440	149			84.8			237			265			275			285			253			254			136			304		
Beryllium	1.52	0.33			0.27			0.65			0.62			0.68			0.74			0.84			0.88			0.43			0.94		
Cadmium	0.4	0.23	J			U	(0.12)		U	(0.12)		U	(0.12)	0.27	J		0.27	J		***0.85***	J		0.32	J		***0.57***	J		0.35	J	
Calcium	GRAS	2570			1390			3880			4340			4480			4950			11200	J		4110	J		2700	J		4340	J	
Chromium	37	9.6			6.2			12.6			11.1			15.2			16.8			33.2			24.1			16			24.5		
Cobalt	17.2	5.1			4			9.8			9.1			10			10.5			10.6			11.1			6.3			11.5		
Copper	33.9	12.2			6			18.9			21.8			23.1			23.6			26.1	J		19.1	J		14.5	J		24	J	
Iron	GRAS	8510			6820			15900			16800			18300			19900			21100			21000			11200			23500		
Lead	400	76.9	J		7	J		13.5	J		13.9	J		21.8	J		14.6	J		123	J		16.6	J		124	J		19.3		
Magnesium	GRAS	1570			1240			3150			3530			3780			4440			6360			4310			2230			4750		
Manganese	1083	325			224			580			594			661			538			604	J		602	J		350	J		637	J	
Mercury	23		UJ	(0.12)		UJ	(0.11)		UJ	(0.11)		UJ	(0.1)		UJ	(0.12)		UJ	(0.12)		U	(0.1)		U	(0.11)		U	(0.11)		U	(0.1)
Nickel	39.3	9.8			7.7			21.4			22.5			23.7			26.7			***39.5***			24.3			14			27.1		
Potassium	GRAS	1860			1090			2410			1760			3160			2610			4850			4400			2660			4280		
Selenium	1.33		UJ	(1)		UJ	(1.1)		UJ	(1.1)	***2***	J		***1.4***	J			UJ	(1.1)		U	(1.1)		U	(1.1)		U	(1.1)		U	(1)
Sodium	GRAS		U	(314)		U	(32.5)		U	(332)		U	(330)		U	(341)		U	(337)		U	(337)		U	(334)		U	(332)		U	(314)
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)
Vanadium	72.5	15.6			14.7			25.4			25			31.4			36.3			51.8			46			23.4			51.1		
Zinc	119.5	45.1	J		20	J		51.4	J		53.7	J		66.5	J		59.2	J		***173***	J		72	J		82	J		75.3	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-14
Analytical Data for Load Line 1 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P1A-026						P1A-027						P1A-028						P1A-029					
		P1A-026-000 (0-0.5 ft)			P1A-026-001 (1-2 ft)			P1A-027-000 (0-0.5 ft)			P1A-027-001 (1-2 ft)			P1A-028-000 (0-0.5 ft)			P1A-028-001 (1-2 ft)			P1A-029-000 (0-0.5 ft)			P1A-029-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	15100			21300			5270			14500			14300			24800			4620			14300		
Antimony	31	0.5	J			UJ	(0.44)	4.7	J		0.65	J			UJ	(0.49)		UJ	(0.48)		UJ	(4.1)	4.7	J	
Arsenic	13.5	7.8	J		9.8			2.6	J		7.7	J		8.1	J		7.4	J		2.8	J		8.7		
Barium	440	183			335			109			242			296			262			154			256		
Beryllium	1.52	0.72			0.94			0.28			0.71			0.75			0.93			0.24			0.74		
Cadmium	0.4	0.28	J		0.23	J		***2***			0.29	J		0.38	J		0.3	J		***144***			***0.46***	J	
Calcium	GRAS	4340	J		4290	J		12200	J		4620			4850	J		3490	J		28300			4840		
Chromium	37	19.7			23.1			***41.3***			18.6			17.7			25.9			***140***			23.1		
Cobalt	17.2	9.5			12.9			4.2			10.3			10.8			10.5			9.8			9.9		
Copper	33.9	20.1	J		23.4	J		***45.9***	J		27.3			20	J		17.1	J		29.1			20.4		
Iron	GRAS	18800			22800			7320			18000			18600			21200			7210			19200		
Lead	400	16.3	J		16.5	J		302	J		21.4	J		42.3	J		14.3	J		***794***	J		50.9	J	
Magnesium	GRAS	4150			4700			1620			3630			3940			4130			1900			3490		
Manganese	1083	520	J		750	J		200	J		616			672	J		568	J		246			605		
Mercury	23		U	(0.1)		U	(0.12)		U	(0.11)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.11)		U	(0.12)
Nickel	39.3	23			26			9.1			21.2			24.8			21.4			12.3			21.6		
Potassium	GRAS	4770			4220			1540			2930			3300			4760			1620			3480		
Selenium	1.33		U	(1.1)		U	(1)		U	(0.94)	***1.4***	J			U	(1.1)		U	(1.1)		U	(0.94)		U	(1)
Sodium	GRAS		U	(328)		U	(310)		U	(288)		U	(332)		U	(346)		U	(33.8)		U	(289)		U	(310)
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.2)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.2)		U	(1.3)
Vanadium	72.5	42.5			43			16			31.3			33.1			53.1			15.1			32		
Zinc	119.5	73.6	J		69.7	J		***144***	J		54.4			90.1	J		61.7	J		***193***			65.4		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-15
Analytical Data for Load Line 2 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P2A-001						P2A-002						P2A-003						P2A-004					
		P2A-001-000 (0-0.5 ft)			P2A-001-001 (1-2 ft)			P2A-002-000 (0-0.5 ft)			P2A-002-001 (1-2 ft)			P2A-003-000 (0-0.5 ft)			P2A-003-001 (1-2 ft)			P2A-004-000 (0-0.5 ft)			P2A-004-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	12600	J		11300	J		17100			16200			13600			15000			14500	J		21600	J	
Antimony	31	0.73	J		1.1	J			UJ	(0.46)		UJ	(4.4)		UJ	(4.9)		UJ	(4.7)		UJ	(4.7)		UJ	(0.46)
Arsenic	13.5	8.3	J		9.4			9			7.4	J		***14.6***			10.8			8.2	J		8.1	J	
Barium	440	221			205			265			219			423			372			231			232		
Beryllium	1.52	0.66			0.62			0.83			0.78			0.95			0.84			0.76			0.91		
Cadmium	0.4	***0.57***	J			U	(1.2)	***0.41***	J		0.33	J		***13.8***			***0.9***	J		0.22	J			U	(0.12)
Calcium	GRAS	4080			5350			5290			4380			8420			5290			3770	J		3550	J	
Chromium	37	20.5	J		16.6	J		20.7			20			***840***			35.8			18.8	J		22	J	
Cobalt	17.2	9			8.7			11.6			8.8			***44.9***			13.4			11			10.6		
Copper	33.9	22.3			20.2			22.3			18.3			***86***			29.1			20.7			16.9		
Iron	GRAS	16700			16200			20900			17800			26800			21900			18900			22300		
Lead	400	121	J		59.5			16.9			33.6			***3960***			128			21.8			15.8		
Magnesium	GRAS	3650			3870			4760			3620			4000			4670			3600			4260		
Manganese	1083	538			544			697	J		493	J		668	J		969	J		630			585		
Mercury	23		U	(0.12)	0.16	J			U	(0.12)		U	(0.13)	0.76				U	(0.11)	0.16	J			U	(0.13)
Nickel	39.3	21.8			20.6			27			19.1			***63***			35.1			23.6			21.3		
Potassium	GRAS	2570			2330			2910			3630			2710			2950			2850			3140		
Selenium	1.33		U	(1.1)		UJ	(1.1)		U	(1.1)	1.2	J			U	(1.1)		U	(1.1)		U	(1.1)		U	(1.1)
Silver	380		UJ	(0.15)		UJ	(0.15)		UJ	(0.14)		UJ	(0.14)		UJ	(0.16)		UJ	(0.15)		UJ	(0.15)		UJ	(0.14)
Sodium	GRAS		U	(337)		U	(333)		U	(326)		U	(313)		U	(352)		U	(332)		U	(337)		U	(326)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)
Vanadium	72.5	34			30.5			35.9			40.7			32.8			35.9			31.7			40.1		
Zinc	119.5	***120***			65.4	J		58.4			60.3			***486***			81.2			54.5	J		68.2	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-15
Analytical Data for Load Line 2 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P2A-005						P2A-006						P2A-007						P2A-008					
		P2A-005-000 (0-0.5 ft)			P2A-005-001 (1-2 ft)			P2A-006-000 (0-0.5 ft)			P2A-006-001 (1-2 ft)			P2A-007-000 (0-0.5 ft)			P2A-007-001 (1-2 ft)			P2A-008-000 (0-0.5 ft)			P2A-008-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	14600			12400			15000	J		14100	J		15200			18500			9270			14700		
Antimony	31	***37.4***	J		1.7	J		4.2	J			UJ	(0.55)		U	(0.48)		UJ	(0.49)		R		0.62	J	
Arsenic	13.5	8	J		8.4	J		8.2	J		11.2			8.5	J		9.8			6.9	J		9.5		
Barium	440	230			245			248			328			240			276			196			257		
Beryllium	1.52	0.73			0.71			0.75			0.87			0.74			0.84			0.6			0.77		
Cadmium	0.4	***1.1***	J			U	(0.12)	0.36	J		***0.5***	J		0.25	J		***0.51***	J		***1.1***	J		0.36	J	
Calcium	GRAS	5060			4750			10200	J		6460	J		3900			4550			4430			5180		
Chromium	37	***94.4***			15.2			19	J		19.3	J		18.3			22.2			31.1			19		
Cobalt	17.2	13.4			10.6			9.3			12.4			9.9			11.9			8.6			10.6		
Copper	33.9	***72.3***			20.1			21.3			27.9			19.5			22.9	J		***35.2***	J		22.6		
Iron	GRAS	23100			18200			18600			23400			19600			22400			17100			20500		
Lead	400	***490***	J		15.7	J		41.6			18.4			16			16.7	J		183			14.8		
Magnesium	GRAS	3360			3480			4260			4960			3950			4790			2720			4360		
Manganese	1083	610			624			575			759			564			725			507			515		
Mercury	23		UJ	(0.12)		UJ	(0.13)		U	(0.12)		U	(0.14)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.12)
Nickel	39.3	33.7			24.7			22.4			31.6			23.3			28.4			***43.6***			24.4		
Potassium	GRAS	3030			2230			3230			2650			3730			3210			2480			3090		
Selenium	1.33		UJ	(1.1)	1.1	J			U	(1.1)		U	(1.3)		U	(1.1)		U	(1.1)		U	(1.1)		U	(1.1)
Silver	380		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.17)		U	(0.15)		UJ	(0.15)		UJ	(1.5)		U	(0.15)
Sodium	GRAS		U	(340)		U	(328)		U	(327)		U	(389)	6100			258	J		2020			3010		
Thallium	1.72		U	(1.4)		U	(1.3)		U	(1.3)	***2.2***	J			U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	35.6			30.6			34.3			34.3			39.7			44.4			24.9			41.6		
Zinc	119.5	***166***	J		52.3	J		66.3	J		69.3	J		56.7			69			***133***			56.1		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-15
Analytical Data for Load Line 2 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P2A-009						P2A-010						P2A-011						P2A-012					
		P2A-009-000 (0-0.5 ft)			P2A-009-001 (1-2 ft)			P2A-010-000 (0-0.5 ft)			P2A-010-001 (1-2 ft)			P2A-011-000 (0-0.5 ft)			P2A-011-001 (1-2 ft)			P2A-012-000 (0-0.5 ft)			P2A-012-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	16300			14100	J		12500	J		14800	J		13200	J		13400	J		3380	J		10700	J	
Antimony	31		R			R			R			R		0.6	J			R			R			R	
Arsenic	13.5	9.6			8.9			7.4	J		7.7	J		9			9.9			1.7	J		9.4		
Barium	440	241			247			220			208			245			270			69.5			286		
Beryllium	1.52	0.78			0.73			0.68			0.72			0.69			0.7			0.22	J		0.64		
Cadmium	0.4		U	(1.3)		U	(1.2)	***1.5***				U	(1.2)	***0.79***	J			U	(1.3)		U	(1.3)		U	(1.3)
Calcium	GRAS	3980			4020			6290			3720			6590			4900			16100			4170		
Chromium	37	18.1			17.1	J		14.9	J		17.2	J		18.5	J		17	J		5.8	J		13.6	J	
Cobalt	17.2	10.3			9.9			8.3			8.7			9.8			10.7			3.2			9.7		
Copper	33.9	20.1			19			16.3			17.5			21			20.9			17.1			20.5		
Iron	GRAS	19700			19200			16300			17900			18300			19100			5320			17000		
Lead	400	56.2			17.1			18.2			14.8			65.1			14.5			20.9			13		
Magnesium	GRAS	3960			4170			3170			3660			4270			3860			1390			3490		
Manganese	1083	633			556			461			517			600			628			205			590		
Mercury	23		U	(0.13)		U	(0.12)		U	(0.12)		U	(0.12)	0.29			0.13	J			U	(0.12)	0.15	J	
Nickel	39.3	24.7			21.9			19.5			20.5			23.6			23.9			6.9			22.1		
Potassium	GRAS	3440			2740			3030			2980			2870			2680			1080			2300		
Selenium	1.33	***1.9***	J		***1.4***	J			UJ	(1.1)		UJ	(1.1)		UJ	(1.1)		UJ	(1.1)		UJ	(1.2)	***1.4***	J	
Silver	380		UJ	(0.16)		UJ	(0.15)		UJ	(0.15)		UJ	(0.14)		UJ	(0.15)		UJ	(0.15)		UJ	(0.16)		UJ	(0.15)
Sodium	GRAS		U	(352)		U	(339)		U	(328)		U	(323)		U	(328)		U	(341)		U	(354)		U	(343)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	38.2			35			29.5			36.9			36.8			37.5			9.6			28.1		
Zinc	119.5	66			54.1	J		51.9	J		51.8	J		***220***	J		66.3	J		27.8	J		49.7	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-15
Analytical Data for Load Line 2 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P2A-013						P2A-015						P2A-016						P2A-017					
		P2A-013-000 (0-0.5 ft)			P2A-013-001 (1-2 ft)			P2A-015-000 (0-0.5 ft)			P2A-015-001 (1-2 ft)			P2A-016-000 (0-0.5 ft)			P2A-016-001 (1-2 ft)			P2A-017-000 (0-0.5 ft)			P2A-017-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	13900	J		20100	J		13300			10900			13200			15500			10800	J		16400	J	
Antimony	31	7.7	J		3.2	J			R			R			R			R		1.3	J			UJ	(0.48)
Arsenic	13.5	5.6	J		7.5	J		7.7	J		8.6	J		8.6			9.1			5	J		9.2	J	
Barium	440	150	J		199	J		203			206			218			221			153	J		265	J	
Beryllium	1.52	0.62			0.76			0.67			0.64			0.68			0.75			0.52			0.84		
Cadmium	0.4		U	(0.11)		U	(0.12)		U	(1.2)		U	(1.2)		U	(1.2)		U	(1.2)	0.38	J		0.25	J	
Calcium	GRAS	3020			1350			3690			3700			4060			3670			2770			4140		
Chromium	37	18.5	J		21.6	J		16			13.4			15.3			17.5			15.9	J		18.1	J	
Cobalt	17.2	6.8			9.3			8.9			9.2			9.5			9.8			6.8			11.1		
Copper	33.9	17.3	J		17.3	J		17.3			18.2			18.3			19.4			12.8	J		23.9	J	
Iron	GRAS	15800	J		20500	J		17000			16600			17200			19400			13200	J		21400	J	
Lead	400	144			35.2			17.4			16.5			18.8			13.4			88.4			17.4		
Magnesium	GRAS	2630			3330			3550			3380			3230			4020			2400			4290		
Manganese	1083	207	J		398	J		531			551			606			575			437	J		678	J	
Mercury	23		U	(0.12)		U	(0.11)		U	(0.1)		U	(0.13)		U	(0.1)		U	(0.11)		U	(0.13)		U	(0.12)
Nickel	39.3	14.8			19.2			20.7			21.3			20.3			23.3			13.7			27.3		
Potassium	GRAS	2770			3610			2620			2180			3100			2870			2270			2810		
Selenium	1.33		U	(1)		U	(1)		U	(1.1)	1.3	J		1.2	J		***1.6***	J			U	(1.1)		U	(1.1)
Silver	380		UJ	(0.14)		UJ	(0.14)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		UJ	(0.14)		UJ	(0.15)		UJ	(0.15)
Sodium	GRAS		U	(308)		U	(316)		U	(334)		U	(335)		U	(328)		U	(320)		U	(331)		U	(340)
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)
Vanadium	72.5	35.2	J		44.2	J		34.6			27.4			31.8			37.2			28.6	J		31.9	J	
Zinc	119.5	119	J		70.7	J		49.2			47.7			55.5			49.9			***154***	J		71.5	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-15
Analytical Data for Load Line 2 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P2A-018						P2A-019						P2A-020						P2A-021					
		P2A-018-000 (0-0.5 ft)			P2A-018-001 (1-2 ft)			P2A-019-000 (0-0.5 ft)			P2A-019-001 (1-2 ft)			P2A-020-000 (0-0.5 ft)			P2A-020-001 (1-2 ft)			P2A-021-000 (0-0.5 ft)			P2A-021-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	14600			16000	J		14000	J		21500	J		10200			18600			9550			12600		
Antimony	31		UJ	(0.48)		UJ	(0.47)		UJ	(0.42)		UJ	(0.45)		UJ	(4.1)		UJ	(0.43)		UJ	(0.43)		UJ	(0.43)
Arsenic	13.5	7.7	J		5.8	J		6.7	J		10.7	J		7.3	J		10.3			6.2	J		9.9		
Barium	440	270			204	J		229	J		261	J		186			240			165			236		
Beryllium	1.52	0.77			0.76			0.68			0.96			0.57			0.87			0.5			0.73		
Cadmium	0.4	***0.68***	J		0.28	J		0.15	J		0.27	J		***0.57***	J		0.29	J			U	(0.11)	0.2	J	
Calcium	GRAS	6470	J		3760			5440			4140			4680	J		4430	J		3660	J		4160	J	
Chromium	37	18.7			18	J		16.7	J		22.7	J		21			23.1			12			15.4		
Cobalt	17.2	16.7			9.4			8.4			11.4			8.4			11.7			6.3			10.5		
Copper	33.9	21.8			18.3	J		17.8	J		25.6	J		17			24.1			13.2			22.5		
Iron	GRAS	18700			17500	J		17000	J		24700	J		14600			22400			12400			19400		
Lead	400	38.1	J		23.4			17.1			16.9			54.6	J		16	J		11.4	J		14.9	J	
Magnesium	GRAS	3010			3380			3420			4860			2730			4740			2590			3830		
Manganese	1083	1080	J		490	J		483	J		635	J		382	J		645	J		335	J		640	J	
Mercury	23		U	(0.13)		U	(0.12)		U	(0.11)		U	(0.12)		U	(0.11)		U	(0.11)		U	(0.1)		U	(0.11)
Nickel	39.3	21			19.1			19.6			29.4			19.1			28			15.1			25.4		
Potassium	GRAS	3420			3550			3160			3500			2220			3360			2020			2230		
Selenium	1.33	***1.4***	J			U	(1.1)		U	(0.98)		U	(1)		U	(0.95)	1.1	J			U	(0.99)	1.1	J	
Silver	380		U	(0.15)		UJ	(0.15)		UJ	(0.13)		UJ	(0.14)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.14)
Sodium	GRAS		U	(339)		U	(337)		U	(300)		U	(319)		U	(291)		U	(304)		U	(303)		U	(306)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.2)		U	(1.3)		U	(1.2)		U	(1.2)		U	(1.2)		U	(1.2)
Vanadium	72.5	41.8			39.6	J		34.9	J		49.7	J		24.2			47.9			23.6			26.3		
Zinc	119.5	66.6			58.8	J		51.2	J		64.1	J		60.8			65.3			50.3			56.1		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-15
Analytical Data for Load Line 2 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P2A-022						P2A-023						P2A-024						P2A-025					
		P2A-022-000 (0-0.5 ft)			P2A-022-001 (1-2 ft)			P2A-023-000 (0-0.5 ft)			P2A-023-001 (1-2 ft)			P2A-024-000 (0-0.5 ft)			P2A-024-001 (1-2 ft)			P2A-025-000 (0-0.5 ft)			P2A-025-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	10500			24800			19000			22400			18800			15900			20200			17200		
Antimony	31	0.7	J			UJ	(0.44)		UJ	(0.44)		UJ	(0.44)		UJ	(0.45)		UJ	(0.47)		UJ	(0.44)	3.2	J	
Arsenic	13.5	6.6	J		9.2			9			9.3			11			11.9			9.5			9.3		
Barium	440	155			227			216			244			289			306			240			150		
Beryllium	1.52	0.59			0.97			0.84			0.93			0.89			0.84			0.87			0.77		
Cadmium	0.4	0.27	J		0.12	J		0.32	J		0.27	J		***0.44***	J		***0.58***	J		***0.44***	J		0.17	J	
Calcium	GRAS	3640	J		3770	J		3980	J		4020	J		6690	J		7050	J		5360	J		4480	J	
Chromium	37	12.9			25.6			21.5			23.7			21.9			20.6			23.5			23.4		
Cobalt	17.2	7.1			7.6			10.3			11.3			11.5			11.6			10.6			10		
Copper	33.9	15.2	J		22.3	J		20.5	J		21.8	J		24.6			24.7			22.5			22.6		
Iron	GRAS	13500			23900			20700			23000			23300			22900			21700			20100		
Lead	400	23.1	J		13.7	J		16.3	J		15.5	J		17.4	J		15.1	J		23.6	J		35.7	J	
Magnesium	GRAS	2310			4600			4130			4560			5520			6110			4880			4160		
Manganese	1083	366	J		352	J		650	J		612	J		671	J		678	J		617	J		576	J	
Mercury	23		U	(0.11)		U	(0.12)		U	(0.11)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.12)
Nickel	39.3	17			22.1			25.3			25.9			27.9			28.8			25.2			25		
Potassium	GRAS	2860			4200			3770			3560			3630			3660			3910			3190		
Selenium	1.33		U	(0.99)		U	(1)		U	(1)		U	(1)	1.2	J			U	(1.1)	***1.4***	J			U	(1)
Silver	380		U	(1)					U	(1)		U	(1)		U	(0.14)		U	(0.15)		U	(0.14)		U	(0.14)
Sodium	GRAS		U	(305)		U	(314)		U	(314)		U	(312)		U	(321)		U	(334)		U	(314)		U	(310)
Thallium	1.72		U	(1.2)	1.4	J			U	(1.3)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)
Vanadium	72.5	27.5			49.6			42.6			44.1			45.1			45.7			50.1			38.9		
Zinc	119.5	54.9	J		60.2	J		62.5	J		64.3	J		64			63.4			61.8			58.8		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-15
Analytical Data for Load Line 2 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P2A-026						P2A-027						P2A-028						P2A-029					
		P2A-026-000 (0-0.5 ft)			P2A-026-001 (1-2 ft)			P2A-027-000 (0-0.5 ft)			P2A-027-001 (1-2 ft)			P2A-028-000 (0-0.5 ft)			P2A-028-001 (1-2 ft)			P2A-029-000 (0-0.5 ft)			P2A-029-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	20000			23200			12600	J		18800	J		19700			27000			15600	J		23300	J	
Antimony	31		UJ	(0.51)		UJ	(0.5)	4.2	J		0.74	J			UJ	(0.44)		UJ	(0.47)	6.3	J		5.5	J	
Arsenic	13.5	10.1			12.7			5.8	J		8.7	J		9.4			9.8			7	J		10.3	J	
Barium	440	289			236			171	J		325	J		283			204			214	J		273	J	
Beryllium	1.52	0.86			0.99			0.57			0.93			0.88			1.1			0.73			1		
Cadmium	0.4	0.31	J		0.37	J		0.21	J		0.2	J		0.39	J		0.37	J		0.23	J			U	(0.12)
Calcium	GRAS	5640	J		4320	J		8440			4540			4170	J		3740	J		6100			4410		
Chromium	37	23.4			26.8			16.9	J		18.6	J		21.9			27			25.1	J		24.1	J	
Cobalt	17.2	11.5			12.6			7.7			10.7			10.7			11.6			8.9			11.4		
Copper	33.9	21.1			24.7			15	J		20.8	J		22.1			23.8			18.3	J		23.8	J	
Iron	GRAS	21800			26100			14400	J		22100	J		21400			26200			18200	J		25800	J	
Lead	400	17.3	J		17.6	J		32.4			15.8			17.7	J		15.8	J		60.2			16.6		
Magnesium	GRAS	5250			5240			3060			4010			4420			5010			3950			5110		
Manganese	1083	680	J		704	J		420	J		617	J		655	J		623	J		522	J		622	J	
Mercury	23		U	(0.14)		U	(0.13)		U	(0.12)		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.13)		U	(0.12)
Nickel	39.3	25.6			31			17.3			25.2			24.1			27.6			20.8			28		
Potassium	GRAS	3930			4350			2650			3410			3900			4430			3390			4000		
Selenium	1.33		U	(1.2)		U	(1.1)		U	(0.97)		U	(1.1)	***1.4***	J		***1.9***	J			U	(1.1)		U	(1)
Silver	380		U	(0.16)		U	(0.16)		UJ	(0.13)		UJ	(0.15)		U	(0.14)		U	(0.15)		UJ	(0.15)		UJ	(0.14)
Sodium	GRAS		U	(365)		U	(352)		U	(298)		U	(332)		U	(313)		U	(336)		U	(344)		U	(320)
Thallium	1.72		U	(1.5)		U	(1.4)		U	(1.2)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.3)
Vanadium	72.5	53.7			60.5			31.8	J		41.1	J		47.2			56.8			39	J		50.9	J	
Zinc	119.5	59.8			67.5			45.2	J		57.8	J		59			65.9			76.3	J		64.4	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-16
Analytical Data for Load Line 3 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P3A-001						P3A-002						P3A-003						P3A-004					
		P3A-001-000 (0-0.5 ft)			P3A-001-001 (1-2 ft)			P3A-002-000 (0-0.5 ft)			P3A-002-001 (1-2 ft)			P3A-003-000 (0-0.5 ft)			P3A-003-001 (1-2 ft)			P3A-004-000 (0-0.5 ft)			P3A-004-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	13500			15600			15500			13100			11700			17800			14300			14900		
Antimony	31		UJ	(4.9)		UJ	(5.3)	1.1	J			UJ	(0.44)		UJ	(4.8)	13.3	J		26.1	J		17.8	J	
Arsenic	13.5	7.7	J		9.4	J		7.9	J		6.7	J		10.4			10.2			9.4			10.7		
Barium	440	242			247			194			253			***516***			273			295			350		
Beryllium	1.52	0.73			0.76			0.75			0.72			0.74			0.87			0.78			0.81		
Cadmium	0.4	0.33	J		0.37	J			U	(0.12)	0.22	J		***5.8***			***0.61***	J		0.35	J		0.3	J	
Calcium	GRAS	5270			10500			3650			4050			6120			6180			4390			4830		
Chromium	37	***57.1***			***59.6***			18.4			15.6			***806***			24.5			***58.9***			36.1		
Cobalt	17.2	11.7			13			6.6			9.1			***25.2***			11			15.1			13.5		
Copper	33.9	20.6			23			16.7			16.3			***194***			33.6			21.4			23.8		
Iron	GRAS	17600			18900			19300			16700			30100			21800			19800			21100		
Lead	400	280			271			26.3			15			***3730***	J		66.3	J		300	J		118	J	
Magnesium	GRAS	3360			4260			3670			3290			3470			5130			4450			4880		
Manganese	1083	531			705			399			669			570			546			713			692		
Mercury	23		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.12)	0.29				U	(0.13)		U	(0.12)		U	(0.12)
Nickel	39.3	20.6			25			19.3			19.9			***194***			30.5			27.3			28.7		
Potassium	GRAS	2990			3260			3210			2990			2510			3480			3100			2830		
Selenium	1.33	***1.4***	J		***1.5***	J			U	(1.1)	***1.4***	J		1.3	J		***1.5***	J			U	(1.1)		U	(1)
Sodium	GRAS		U	(346)		U	(375)		U	(333)		U	(310)		U	(340)		U	(333)		U	(338)		U	(318)
Thallium	1.72		U	(1.4)		U	(1.5)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)
Vanadium	72.5	33.4			38.9			30.4			31.8			31			43.8			35.6			37.2		
Zinc	119.5	91.8			96			65.6			52.1			***551***			83.4			95.3			69		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-16
Analytical Data for Load Line 3 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P3A-005						P3A-006						P3A-007						P3A-008					
		P3A-005-000 (0-0.5 ft)			P3A-005-001 (1-2 ft)			P3A-006-000 (0-0.5 ft)			P3A-006-001 (1-2 ft)			P3A-007-000 (0-0.5 ft)			P3A-007-001 (1-2 ft)			P3A-008-000 (0-0.5 ft)			P3A-008-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	11300			17200			9120			13600			9450			14700			16200			12500		
Antimony	31	***54.8***	J		2.2	J		2.3	J			R			R			R		0.6	J			R	
Arsenic	13.5	8.7	J		10.1			7	J		6.9	J		6.7	J		5.9	J		5.4	J		5	J	
Barium	440	285			288			266			214			239			203			200			227		
Beryllium	1.52	0.69			0.83			0.65			0.8			0.65			0.75			0.73			0.69		
Cadmium	0.4	***2.4***			0.28	J		***0.91***	J			U	(0.13)	0.22	J			U	(0.12)		U	(0.13)		U	(0.12)
Calcium	GRAS	5470			9490	J		6390			4510			4600			3050			3820			3850		
Chromium	37	***140***			22.1			18.1			15.1			13.5			16.1			18.2			14.5		
Cobalt	17.2	***18.6***			11.3			10.1			7.7			10.7			8.9			6.4			8.4		
Copper	33.9	***218***			23.9			***37.7***			16.5			17.4			14.8			15.4			14.5		
Iron	GRAS	20000			22000			15600			17600			14900			16600			17600			15100		
Lead	400	***996***	J		18.9			79.6	J		14.1	J		41.2	J		14	J		62.8			13.6		
Magnesium	GRAS	3730			6150			3650			3530			3250			2990			3500			2860		
Manganese	1083	647			642			615			270			673			555			341			523		
Mercury	23	0.28	J			UJ	(0.13)		UJ	(0.12)	0.15	J			UJ	(0.13)		UJ	(0.12)		U	(0.11)		U	(0.13)
Nickel	39.3	***110***			26.9			35.5			20.4			22.8			18.6			17.3			16.8		
Potassium	GRAS	2440			3290			2570			2580			2690			3100			3550			3010		
Selenium	1.33		UJ	(1.2)	1.3	J		***1.4***	J			UJ	(1.1)	***1.7***	J			UJ	(1.1)		U	(1.1)	***1.5***	J	
Sodium	GRAS		U	(378)		U	(333)		U	(323)		U	(341)		U	(343)		U	(326)		U	(351)		U	(328)
Thallium	1.72		U	(1.5)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.3)
Vanadium	72.5	31.5			44.1			25.9			29.7			27.5			35.1			35.3			30.7		
Zinc	119.5	***326***	J		68.5			67.1	J		47.1	J		52.1	J		46.4	J		64.1			44.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-16
Analytical Data for Load Line 3 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P3A-009						P3A-010						P3A-011						P3A-012					
		P3A-009-000 (0-0.5 ft)			P3A-009-001 (1-2 ft)			P3A-010-000 (0-0.5 ft)			P3A-010-001 (1-2 ft)			P3A-011-000 (0-0.5 ft)			P3A-011-001 (1-2 ft)			P3A-012-000 (0-0.5 ft)			P3A-012-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	10400			13300			11300			12900			11400			16800			13800			10500		
Antimony	31		R			R			R			R		0.58	J			R			R			R	
Arsenic	13.5	5.1	J		6.9	J		6	J		8.7			6.2	J		9.3			8.5			9.1		
Barium	440	136			245			208			238			211			219			266			305		
Beryllium	1.52	0.52			0.68			0.63			0.74			0.61			0.84			0.75			0.65		
Cadmium	0.4		U	(0.11)	0.28	J		0.23	J		0.22	J		0.33	J		0.16	J		0.25	J		0.16	J	
Calcium	GRAS	5950			6490			12500			4840			3880			4170			4740			3860		
Chromium	37	12.4			16.4			14.6			15.9			16.8			19.8			17			12.8		
Cobalt	17.2	6.5			9.7			8.8			10.6			9.1			11.5			10.9			10.1		
Copper	33.9	12.8			17.5			17.2			20.9			19.5			22			21.9			22		
Iron	GRAS	12400			16900			15300			18600			15600			20800			19700			17500		
Lead	400	22.5			14.5			33.8			18			65.8			19.5			16.6			13.6		
Magnesium	GRAS	2500			4280			3390			3960			3080			4220			4180			3640		
Manganese	1083	336			614			541			644			546			653			671			602		
Mercury	23		U	(0.1)	0.14	J			U	(0.12)		U	(0.12)	0.21	J			U	(0.11)		U	(0.12)	0.11	J	
Nickel	39.3	15.1			21.3			20.1			25.6			21.9			29.2			26.7			25.7		
Potassium	GRAS	2270			3030			3280			2760			2800			2770			3130			2030		
Selenium	1.33		U	(0.99)	***1.4***	J			U	(1.1)	***1.6***	J		***1.5***	J		***1.6***	J		***1.6***	J		***1.4***	J	
Sodium	GRAS		U	(305)		U	(334)		U	(329)		U	(332)		U	(333)		U	(327)		U	(309)		U	(315)
Thallium	1.72		U	(1.2)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.3)
Vanadium	72.5	25.2			34.7			28.2			32.5			28.5			36.2			34.3			28.5		
Zinc	119.5	***162***			75.7			66.6			55.1			***153***			56.2			57.6			51.8		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-16
Analytical Data for Load Line 3 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P3A-013						P3A-015						P3A-016						P3A-017					
		P3A-013-000 (0-0.5 ft)			P3A-013-001 (1-2 ft)			P3A-015-000 (0-0.5 ft)			P3A-015-001 (1-2 ft)			P3A-016-000 (0-0.5 ft)			P3A-016-001 (1-2 ft)			P3A-017-000 (0-0.5 ft)			P3A-017-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	12900			15200			12800			16400			15000			11800			13600			17500		
Antimony	31	3.8	J			UJ	(0.44)		UJ	(0.46)		UJ	(0.48)	0.66	J			UJ	(0.47)		UJ	(0.47)		U	(0.47)
Arsenic	13.5	7.6	J		9.8			5.8	J		8.6	J		8	J		8	J		7.6	J		8.1	J	
Barium	440	394			332			148			257			235			243			234			267		
Beryllium	1.52	0.69			0.8			0.61			0.82			0.77			0.71			0.73			0.86		
Cadmium	0.4	***0.47***	J		0.37	J		0.39	J		0.21	J		0.39	J		0.39	J		0.24	J		0.13	J	
Calcium	GRAS	4730			4930			2770			3910			5780	J		4560	J		3830			4120		
Chromium	37	20.6			19.5			15.1			17.7			18.6			15.3			15.1			18.5		
Cobalt	17.2	9.2			11.4			7.7			12.2			10			10.5			11.7			10.9		
Copper	33.9	21.2	J		24.1	J		17	J		22.6	J		20.2	J		21.1	J		19.8	J		22.4		
Iron	GRAS	18300			21600			15000			21300			19300			18400			18000			21400		
Lead	400	155	J		17.2	J		71.5	J		18.1	J		20.2	J		15.7	J		59.6	J		40.3		
Magnesium	GRAS	3650			4750			2730			4190			4100			3890			3360			4310		
Manganese	1083	479			725			472			813			547	J		596	J		737			664		
Mercury	23	0.14	J		0.13	J		0.16	J		0.16	J		0.21	J		0.18	J		0.14	J			U	(0.13)
Nickel	39.3	24.3			28.2			16.6			28.2			23.8			24.4			23.3			25.1		
Potassium	GRAS	3150			3120			2510			2760			3230			2570			2290			2700		
Selenium	1.33	***1.6***	J		1.1	J			U	(1.1)	***1.7***	J		1.1	J		***1.6***	J			U	(1.1)	1.1	J	
Sodium	GRAS		U	(305)		U	(313)		U	(325)		U	(338)		U	(339)		U	(341)		U	(335)	441		
Thallium	1.72		U	(1.2)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	30.4			37.7			29.3			29.3			36.2			24.1			22.5			29		
Zinc	119.5	108			74.4			101			64.3			61.8	J		59.6	J		73.2			59.3		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-16
Analytical Data for Load Line 3 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P3A-018						P3A-019						P3A-020						P3A-021					
		P3A-018-000 (0-0.5 ft)			P3A-018-001 (1-2 ft)			P3A-019-000 (0-0.5 ft)			P3A-019-001 (1-2 ft)			P3A-020-000 (0-0.5 ft)			P3A-020-001 (1-2 ft)			P3A-021-000 (0-0.5 ft)			P3A-021-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	9000			12800			13400			14100			8510			11400			14200			14200		
Antimony	31		R			R		7.9	J			R		0.63	R			R			R			R	
Arsenic	13.5	6.7	J		8	J		7.5	J		8.3	J		2.9	J		7.3	J		7.2	J		8.7		
Barium	440	199			225			210			232			130			221			206			241		
Beryllium	1.52	0.56			0.69			0.71			0.75			0.87			0.66			0.73			0.75		
Cadmium	0.4	***0.41***	J		0.3	J			U	(0.13)	0.15	J		0.19	J		0.33	J		0.22	J		0.16	J	
Calcium	GRAS	4180			3980			3390			3750			7250			3960			3510			3750		
Chromium	37	12.7			14.9			23.2			15.2			24.1			14.4			15.3			16.4		
Cobalt	17.2	8.4			9.1			11.1			9.8			6.3			9.8			9.6			10.1		
Copper	33.9	21.5			20.1			18.5			22.2			13.1			20.8			20.1			22.3		
Iron	GRAS	14600			18600			17700			19000			13900			17400			18000			19800		
Lead	400	21.6			13.3			63.1			14.5			84.6			14.1			16.7			14.7		
Magnesium	GRAS	3060			3850			3420			3880			1940			3670			3440			4080		
Manganese	1083	551			531			608			601			359			597			564			582		
Mercury	23	0.15	J		0.16	J		0.15	J		0.17	J			U	(0.12)	0.13	J		0.17	J		0.15	J	
Nickel	39.3	22.2			24.5			22.2			24.8			18.4			25.5			21.7			26.5		
Potassium	GRAS	2310			2570			2550			2280			1980			2210			2900			2720		
Selenium	1.33		U	(1)		U	(1.1)	1.2	J		***1.4***	J			U	(1.1)	1.2	J			U	(1.1)		U	(1.1)
Sodium	GRAS		U	(320)		U	(342)		U	(340)		U	(338)		U	(328)		U	(334)		U	(349)		U	(324)
Thallium	1.72		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.3)
Vanadium	72.5	19.7			30.5			28			28.4			23			25.6			29.9			30.4		
Zinc	119.5	50.5			51.8			53.3			52.9			41.6			49.3			50.1			54		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-16
Analytical Data for Load Line 3 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P3A-022						P3A-023						P3A-024						P3A-025					
		P3A-022-000 (0-0.5 ft)			P3A-022-001 (1-2 ft)			P3A-023-000 (0-0.5 ft)			P3A-023-001 (1-2 ft)			P3A-024-000 (0-0.5 ft)			P3A-024-001 (1-2 ft)			P3A-025-000 (0-0.5 ft)			P3A-025-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	14900			13000			15300			14200			24200			21900			6680	J		21700	J	
Antimony	31		R			R			UJ	(0.48)		UJ	(0.47)	2.3	J			UJ	(0.47)	1	J			UJ	(0.47)
Arsenic	13.5	6.8	J		8.3	J		9			9.6			9.1			9			5.8	J		9.7		
Barium	440	210			263			245			261			267			254			58			233		
Beryllium	1.52	0.73			0.71			0.81			0.8			0.95			0.93			0.31			0.93		
Cadmium	0.4	0.32	J		0.22	J		0.16	J			U	(0.12)	***0.74***	J		0.38	J		***1.4***			***0.5***	J	
Calcium	GRAS	4000			3850			4150			4090			4450	J		3700	J		64000			7450		
Chromium	37	23.6			14.8			17			16.1			28.8			22.8			11.3			23.7		
Cobalt	17.2	9.5			10.2			10.9			11			13.1			11.5			4.3			10.5		
Copper	33.9	19.5	J		21.6	J		22.8	J		24.1	J		23.2	J		20.7	J		8.8	J		21.3	J	
Iron	GRAS	18100			18800			20900			21100			22200			22200			8480			23300		
Lead	400	15.8	J		15.1	J		18.1	J		16.1	J		122	J		15.8	J		26.7	J		32	J	
Magnesium	GRAS	3620			3730			4010			3980			4550			4320			4650			4360		
Manganese	1083	598			618			636			645			742	J		660	J		258	J		582	J	
Mercury	23	0.18	J		0.17	J		0.15	J		0.14	J			U	(0.12)	0.22	J			U	(0.11)		U	(0.12)
Nickel	39.3	25.7			26.4			26.9			27			24			25.3			12.5			25.5		
Potassium	GRAS	2890			2350			3140			2490			5290			3920			2120			3810		
Selenium	1.33		U	(1.1)		U	(1.1)	1.1	J		***1.4***	J			U	(1.1)		U	(1.1)		U	(0.93)		U	(1.1)
Sodium	GRAS		U	(338)		U	(338)		U	(342)		U	(334)		U	(34)		U	(334)		U	(286)		U	(33.3)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(11.6)		U	(13.6)
Vanadium	72.5	34.3			25.5			27.7			28.4			59.1			47			20.8			50		
Zinc	119.5	51.4			51.7			61			58.7			100	J		63.1	J		52.5			83.5		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-16
Analytical Data for Load Line 3 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P3A-026						P3A-027						P3A-028						P3A-029					
		P3A-026-000 (0-0.5 ft)			P3A-026-001 (1-2 ft)			P3A-027-000 (0-0.5 ft)			P3A-027-001 (1-2 ft)			P3A-028-000 (0-0.5 ft)			P3A-028-001 (1-2 ft)			P3A-029-000 (0-0.5 ft)			P3A-029-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	8470	J		19800	J		9090			15700			18700			20800			6430			20000	J	
Antimony	31		UJ	(0.44)		UJ	(0.44)	1.5	J			UJ	(0.41)	2.9	J		0.59	J		2.7	J		1.3	J	
Arsenic	13.5	3.7	J		8.7			3.6	J		7.2	J		7.1			9.2			3.2	J		13.4		
Barium	440	114			251			210			194			223			256			104			235		
Beryllium	1.52	0.38			0.86			0.38			0.69			0.77			0.91			0.32			0.85		
Cadmium	0.4	0.37	J		0.27	J		***3.7***			0.25	J		0.3	J		0.39	J		***0.55***	J		0.23	J	
Calcium	GRAS	6350			4410			124000	J		4010	J		3200	J		3710	J		15200	J		5740		
Chromium	37	11.7			21.3			18.8			16.4			21.2			22.6			14.3			***37.2***		
Cobalt	17.2	4.9			10			4.9			8			9.4			11.4			4.6			10.9		
Copper	33.9	8.5	J		18.7	J		***35.5***	J		18	J		17.8	J		20.5	J		9.8	J		***98.3***	J	
Iron	GRAS	8970			20900			10300			16600			18400			21800			8050			45000		
Lead	400	18.3	J		14.2	J		206	J		12.7	J		19.3	J		16.7	J		46.7	J		42.9	J	
Magnesium	GRAS	1670			4030			3020			3100			3790			4260			1810			4130		
Manganese	1083	279	J		632	J		441	J		458	J		538	J		676	J		243	J		663	J	
Mercury	23		U	(0.12)		U	(0.11)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.11)		U	(0.11)		U	(0.1)
Nickel	39.3	10.4			22.6			13			19.3			21			25			10.7			35		
Potassium	GRAS	2090			3870			2810			2620			3700			3820			1690			3730		
Selenium	1.33		U	(1)		U	(1)		U	(0.93)		U	(0.94)		U	(0.85)	***1.8***	J			U	(0.96)		U	(1)
Sodium	GRAS		U	(31.3)		U	(31.2)		U	(287)		U	(289)		U	(262)		U	(340)		U	(293)		U	(321)
Thallium	1.72		U	(12.7)		U	(12.7)		U	(1.2)	1.2	J			U	(1.1)		U	(1.4)		U	(1.2)		U	(13.1)
Vanadium	72.5	22.6			43.1			22.4			28.9			45.7			44.9			20.6			42.4		
Zinc	119.5	34.4			63.2			***281***	J		51.1	J		59.6	J		66.4	J		45.9	J		76.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-17
Analytical Data for Load Line 4 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P4A-001						P4A-002						P4A-003						P4A-004					
		P4A-001-000 (0-0.5 ft)			P4A-001-001 (1-2 ft)			P4A-002-000 (0-0.5 ft)			P4A-002-001 (1-2 ft)			P4A-003-000 (0-0.5 ft)			P4A-003-001 (1-2 ft)			P4A-004-000 (0-0.5 ft)			P4A-004-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	16600			18900			14900			14500			6270			7550			17500			17900		
Antimony	31	***171***	J		10	J			UJ	(0.45)		UJ	(0.47)	3	J		5	J		***38.4***	J		1.9	J	
Arsenic	13.5	8.3	J		8.2	J		5.6	J		5	J		3.5	J		3.9	J		7.7	J		7.6	J	
Barium	440	234			272			186			246			125			152			246			209		
Beryllium	1.52		U	(0.24)		U	(0.24)		U	(0.24)		U	(0.24)		U	(0.24)		U	(0.24)		U	(0.27)		U	(0.25)
Cadmium	0.4	***3.2***	J		0.27	J		0.14	J			UJ	(0.12)		UJ	(0.12)		UJ	(0.12)	***0.52***	J		0.25	J	
Calcium	GRAS	4350			4510			3740			3030			2600			2210			4350			3240		
Chromium	37	***48.2***			21.3			17.5			17.4			15			14.8			***55.5***			19.2		
Cobalt	17.2	11.1			10.6			7.2			10			5.6			7			13			9.8		
Copper	33.9	25.5	J		22.8	J		15.1	J		14	J		9.6	J		9.8	J		19.7	J		15.6	J	
Iron	GRAS	19300			22000			15900			15400			8460			9680			20300			19200		
Lead	400	209	J		18.1	J		17.4	J		12.6	J		46.5	J		34.5	J		215	J		15.6	J	
Magnesium	GRAS	3390			4090			2900			2910			1380			1610			3650			3360		
Manganese	1083	552			666			461			585			335			347			740			556		
Nickel	39.3	24.9			29.9			16.7			16			10.1			9.9			25			21.2		
Potassium	GRAS	3680			3500			2990			3060			1590			1950			4360			3580		
Selenium	1.33		U	(1.1)	***1.5***	J		1.1	J		***1.4***	J			U	(1)	1.2	J			U	(1.2)	***2.1***	J	
Sodium	GRAS		U	(323)		U	(330)		U	(321)		U	(330)		U	(321)		U	(328)		U	(365)		U	(339)
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.5)		U	(1.4)
Vanadium	72.5	37.7			39.5			30.8			32.7			15.7			24.7			38.3			38.5		
Zinc	119.5	108	J		61	J		50.8	J		43.9	J		31.4	J		30.8	J		76.5	J		53.4	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-17
Analytical Data for Load Line 4 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P4A-005						P4A-006						P4A-007						P4A-008					
		P4A-005-000 (0-0.5 ft)			P4A-005-001 (1-2 ft)			P4A-006-000 (0-0.5 ft)			P4A-006-001 (1-2 ft)			P4A-007-000 (0-0.5 ft)			P4A-007-001 (1-2 ft)			P4A-008-000 (0-0.5 ft)			P4A-008-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	16900			18900			16000			18600			16400	J		15700	J		12700			15200		
Antimony	31	15.4	J		2.1	J		1.6	J			UJ	(0.48)	6.5	J			R			R			R	
Arsenic	13.5	8.5	J		7.1	J		7.8	J		8.2	J		7.7	J		9	J		6.2	J		5.9	J	
Barium	440	218			216			212			241			237			180			172	J		199	J	
Beryllium	1.52		U	(0.25)		U	(0.25)		U	(0.71)		U	(0.81)	0.73			0.8			0.59			0.68		
Cadmium	0.4	***2.3***	J		0.28	J		***1.1***	J		0.17	J		***2.4***				U	(0.13)	0.38	J		***0.52***	J	
Calcium	GRAS	5450			3920			3940			3560			4240			3900			2750			2760		
Chromium	37	29.6			20.8			19.6			20.2			31.8			16.5			14.3			16.1		
Cobalt	17.2	12.6			9.9			9.3			10.2			12.1			9.9			8			9.4		
Copper	33.9	***37.2***	J		18.3	J		20.6	J		19.3	J		27.1			18.9			14.7			15		
Iron	GRAS	20400			20000			18300			20900			18800			20300			15600			16600		
Lead	400	100	J		15.7	J		38.8	J		15	J		136			15			11.9			13.1		
Magnesium	GRAS	3450			3770			3480			3960			3270			3260			2990			2950		
Manganese	1083	766			586			594			601			810	J		386	J		486			608		
Nickel	39.3	34.2			22.7			24.3			24.1			28.3			22.6			17.8			19.1		
Potassium	GRAS	3400			3660			3730			3370			3760			2950			2830			3330		
Selenium	1.33	***1.8***	J		1.1	J			U	(1.2)	1.3	J			U	(1.1)	***2.3***	J			U	(1.1)	1.3	J	
Sodium	GRAS		U	(344)		U	(334)		U	(359)		U	(340)		U	(350)		U	(358)		U	(322)		U	(312)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.5)		U	(1.4)		U	(1.4)	***1.8***	J			U	(1.3)		U	(1.3)
Vanadium	72.5	37.4			40			34.1			37.4			38.7			32.8			29.3			34		
Zinc	119.5	103	J		56.9	J		70.4	J		58.6	J		***264***			50.8			41.5			44.3		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-17
Analytical Data for Load Line 4 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P4A-009						P4A-010						P4A-011						P4A-012					
		P4A-009-000 (0-0.5 ft)			P4A-009-001 (1-2 ft)			P4A-010-000 (0-0.5 ft)			P4A-010-001 (1-2 ft)			P4A-011-000 (0-0.5 ft)			P4A-011-001 (1-2 ft)			P4A-012-000 (0-0.5 ft)			P4A-012-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	7740			11100			11100			13000			8760			13500			15000			13800		
Antimony	31		R			R			R			R		5.1	J			R			R			R	
Arsenic	13.5	3.4	J		5	J		5	J		6.3	J		7.1	J		7.5	J		6.2	J		6.9	J	
Barium	440	128	J		181	J		153	J		193	J		204	J		197	J		207	J		226	J	
Beryllium	1.52	0.37			0.58			0.54			0.61			0.52			0.66			0.71			0.71		
Cadmium	0.4	***0.51***	J		0.31	J		***0.67***	J		***0.42***	J		***19.7***			***0.54***	J		***0.49***	J		***0.43***	J	
Calcium	GRAS	3100			2470			2660			2510			4180			3760			3210			3360		
Chromium	37	14.5			12.5			13.1			14.3			***123***			14.5			16.5			15.1		
Cobalt	17.2	4.3			7.1			7.1			8.1			9.6			9			8.7			9.5		
Copper	33.9	13.2			13			14.8			15.4			33.7			15.9			17.8			18.9		
Iron	GRAS	9130			13100			13800			16200			17200			17700			17900			17900		
Lead	400	326			12.5			21.2			10.9			***600***			13.4			16.9			13.3		
Magnesium	GRAS	2890			2300			2520			2850			2010			2770			3270			3390		
Manganese	1083	222			409			433			496			605			567			521			586		
Nickel	39.3	16.8			14.7			15.5			18			24.1			19.7			20			21.5		
Potassium	GRAS	1970			2670			4560			4490			2180			2820			3430			2730		
Selenium	1.33	***1.8***	J			U	(1.1)	1.1	J			U	(1.1)	***1.5***	J		***1.8***	J			U	(1.1)		U	(1.1)
Sodium	GRAS		U	(366)		U	(336)		U	(333)		U	(325)		U	(360)		U	(338)		U	(340)		U	(339)
Thallium	1.72		U	(1.5)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.5)		U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	26			25.7			24.7			30			26.4			29.9			33			29.6		
Zinc	119.5	***138***			37.7			44.9			40.3			***147***			45.1			49.9			47.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-17
Analytical Data for Load Line 4 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P4A-013						P4A-014						P4A-015						P4A-016					
		P4A-013-000 (0-0.5 ft)			P4A-013-001 (1-2 ft)			P4A-014-000 (0-0.5 ft)			P4A-014-001 (1-2 ft)			P4A-015-000 (0-0.5 ft)			P4A-015-001 (1-2 ft)			P4A-016-000 (0-0.5 ft)			P4A-016-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	13400			15400			12600			13100	J		13600	J		13500	J		14000	J		13300	J	
Antimony	31	15.8	J		1.5	J			R			R			R			R			R			R	
Arsenic	13.5	6.4	J		8.1	J		7.5	J		6.9	J		6.9	J		7.2	J		6	J		6.8	J	
Barium	440	187	J		201	J		206	J		219	J		183	J		189	J		194	J		202	J	
Beryllium	1.52	0.66			0.75			0.68			0.67			0.66			0.69			0.66			0.69		
Cadmium	0.4	***1.3***			***0.64***	J		***0.57***	J			U	(0.12)		U	(0.13)		U	(0.13)		U	(0.13)		U	(0.12)
Calcium	GRAS	4120			3850			3380			3250	J		2620	J		2460	J		2720	J		2900	J	
Chromium	37	24.2			17.2			15.3			14.8			15.5			15.3			15.7			14.7		
Cobalt	17.2	9.2			9.6			9			8.9			8.3			8.8			7.9			8.8		
Copper	33.9	32.1			20.5			17.7			14	J		15.8	J		14.1	J		14.2	J		16	J	
Iron	GRAS	16600			19600			17000			16000	J		15300	J		15900	J		15500	J		16700	J	
Lead	400	112			17.1			45.9			13.7			47.3			14.1			14.3			12.9		
Magnesium	GRAS	2860			3750			3050			2880			2750			2670			2700			2960		
Manganese	1083	543			578			542			549	J		516	J		555	J		497	J		535	J	
Nickel	39.3	18.5			23.5			19.6			17.8			16.7			17.2			16.6			18.8		
Potassium	GRAS	3320			3010			3340			2760			2950			2710			3250			2570		
Selenium	1.33	***1.5***	J			U	(1.1)	1.2	J		***1.6***	J			U	(1.1)	1.2	J		1.1	J			U	(1.1)
Sodium	GRAS		U	(352)		U	(341)		U	(341)	197	J		137	J		141	J		185	J		89.9	J	
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)
Vanadium	72.5	31.9			34.4			27.7			30			31.4			32.5			32.7			29.6		
Zinc	119.5	93.5			51.3			69.4			45.6			69.3			43.2			44.1			45.4		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-17
Analytical Data for Load Line 4 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P4A-017						P4A-018						P4A-019						P4A-020					
		P4A-017-000 (0-0.5 ft)			P4A-017-001 (1-2 ft)			P4A-018-000 (0-0.5 ft)			P4A-018-001 (1-2 ft)			P4A-019-000 (0-0.5 ft)			P4A-019-001 (1-2 ft)			P4A-020-000 (0-0.5 ft)			P4A-020-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	8020	J		16200	J		10000	J		15100	J		10300	J		17100	J		10100			12900		
Antimony	31	0.71	J			R		0.8	J			R		1.1	J			R			R			R	
Arsenic	13.5	4.4	J		6.1	J		6.3	J		5.9	J		6.9	J		8.4	J		5.2	J		6	J	
Barium	440	115	J		193	J		157	J		199	J		198	J		204	J		156			187		
Beryllium	1.52	0.43			0.74			0.58			0.71			0.6			0.8			0.54			0.66		
Cadmium	0.4	*0.77*	J			U	(0.12)	0.29	J			U	(0.13)		U	(0.13)		U	(0.12)		U	(0.13)		U	(0.12)
Calcium	GRAS	2230	J		2860	J		3540	J		2940	J		3650	J		3590	J		3320			3190		
Chromium	37	13.9			17.5			12.3			15.8			12.8			17.9			12.6			14.7		
Cobalt	17.2	5.7			8.9			7.4			8.7			8.2			9.4			7			7.9		
Copper	33.9	14.1	J		15.2	J		19.9	J		14.5	J		16.7	J		18.3	J		15.8			13.3		
Iron	GRAS	10000	J		17200	J		14500	J		17200	J		14400	J		19700	J		13300			15500		
Lead	400	95.7			15.5			19.4			13.2			16.7			23.3			18.8	J		12.8	J	
Magnesium	GRAS	1780			3090			2360			2960			2540			3640			2370			2650		
Manganese	1083	345	J		542	J		432	J		488	J		525	J		555	J		437			458		
Nickel	39.3	10.8			17.7			17			16.6			17.7			21.4			15.7			16.1		
Potassium	GRAS	1840			3010			2520			2890			2230			2820			2500			2650		
Selenium	1.33	1.1	J			U	(1.1)		U	(1.1)		U	(1.1)		U	(1.1)	*1.7*	J			U	(1.1)	1.1	J	
Sodium	GRAS	157	J		90.6	J		226	J		196	J		223	J		203	J			U	(346)		U	(324)
Thallium	1.72		U	(1.4)	1.4	J			U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)
Vanadium	72.5	18.9			35.7			24.4			30.9			25			35.6			25.2			30.4		
Zinc	119.5	78.9			51.1			47.5			49.4			43.9			52.5			43.7	J		42.1	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-17
Analytical Data for Load Line 4 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P4A-021						P4A-022						P4A-023						P4A-024					
		P4A-021-000 (0-0.5 ft)			P4A-021-001 (1-2 ft)			P4A-022-000 (0-0.5 ft)			P4A-022-001 (1-2 ft)			P4A-023-000 (0-0.5 ft)			P4A-023-001 (1-2 ft)			P4A-024-000 (0-0.5 ft)			P4A-024-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	16800			14100			10700			10500			13100			10600			8150			14000		
Antimony	31		R			R			R			R			R			R			UJ	(0.41)	0.54	J	
Arsenic	13.5	8.3	J		5.8	J		5.5	J		4.9	J		6.3	J		4.9	J		4.1	J		7	J	
Barium	440	187			207			152			256			177			198			109			191		
Beryllium	1.52	0.74			0.68			0.53			0.6			0.63			0.58			0.41			0.63		
Cadmium	0.4		U	(0.12)		U	(0.13)		U	(0.11)		U	(0.13)		U	(0.12)		U	(0.12)	0.13	J			U	(0.11)
Calcium	GRAS	3430			2640			2570			3040			3050			2870			1800			2670		
Chromium	37	18.9			15.1			12.2			13.3			15			13.4			9.5			14.7		
Cobalt	17.2	9.5			7.6			7.4			7.8			8.2			6.2			5.8			8.6		
Copper	33.9	21.1			13.4			13.3			11.9			15.4			11.7			9.3			12.4		
Iron	GRAS	19200			15200			12800			12700			15600			12300			9860			16500		
Lead	400	15	J		11.6	J		9.5	J		11.9	J		11.8	J		11.1	J		17.9	J		12.2		
Magnesium	GRAS	3640			2590			2490			2180			2830			2190			1900			3120		
Manganese	1083	533			496			493			699			443			420			330			510		
Nickel	39.3	22.6			15.4			15.5			13.7			17.4			13.6			11.2			16.5		
Potassium	GRAS	4430			3990			2010			2250			2520			2320			2190			2440		
Selenium	1.33		U	(1.1)		U	(1.1)		U	(1)	***1.4***	J			U	(1)		U	(1)		U	(0.96)		U	(1)
Sodium	GRAS		U	(330)		U	(339)		U	(306)		U	(345)		U	(314)		U	(320)		U	(293)		U	(310)
Thallium	1.72		U	(1.3)		U	(1.4)		U	(1.2)		U	(14.1)		U	(1.3)		U	(1.3)		U	(1.2)		U	(1.3)
Vanadium	72.5	40.2			31.1			24.7			26.6			28.6			24.6			19.5			30.3		
Zinc	119.5	53.5	J		44.1	J		33.2	J		38.9	J		42.4	J		36	J		34.4			47.8		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-17
Analytical Data for Load Line 4 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P4A-025						P4A-026						P4A-027						P4A-028					
		P4A-025-000 (0-0.5 ft)			P4A-025-001 (1-2 ft)			P4A-026-000 (0-0.5 ft)			P4A-026-001 (1-2 ft)			P4A-027-000 (0-0.5 ft)			P4A-027-001 (1-2 ft)			P4A-028-000 (0-0.5 ft)			P4A-028-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	4810			17600			6230			17700			4430			13900			18900			20300		
Antimony	31		UJ	(0.88)	0.56	J			UJ	(0.68)	0.5	J			UJ	(0.43)	0.46	J			UJ	(0.49)		UJ	(0.48)
Arsenic	13.5		U	(1.6)	8.6	J		3.2	J		8.6			1.9	J		6.8	J		7.6	J		7.2	J	
Barium	440	184			278			231			209	J		145			201			240			260		
Beryllium	1.52	0.22	J		0.8			0.33	J		0.79			0.21	J		0.64			0.83			0.88		
Cadmium	0.4	0.31	J		0.27	J		***0.53***	J		***0.44***	J		***5.7***			0.4	J		0.32	J		0.22	J	
Calcium	GRAS	13700			2620			15900			3330			167000			4080			3650			3340		
Chromium	37	8.5	J		18.9			10.3			19.5			9.7			16.2			20.6			21		
Cobalt	17.2	2.8			11.4			4			10.2	J		2.9			8.3			10.6			10.7		
Copper	33.9	22.4			15.9			23.6			18.4			31.3			28.6			18.9			17.3		
Iron	GRAS	6120			21200			7950			20100			5460			15400			19500			20500		
Lead	400	37.7			15.3			19.1			15.5			95.5	J		26.7	J		36.4	J		14.8	J	
Magnesium	GRAS	2960			3800			3390			3690			2610			2850			3660			3650		
Manganese	1083	239			770			336			661	J		326			477			671			607		
Nickel	39.3	8.8			21.9			12.9			23.7			7.7			17.7			21.4			22.1		
Potassium	GRAS	4960			6430			6420			5300			2950			4730			4300			3570		
Selenium	1.33	***2.1***	J		***1.6***	J		***2.1***	J		***2.2***	J			U	(1)		U	(1.1)		U	(1.1)		U	(1.1)
Sodium	GRAS		U	(624)		U	(342)		U	(483)		U	(321)		U	(308)		U	(323)		U	(346)		U	(339)
Thallium	1.72		U	(2.5)		U	(1.4)		U	(2)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)
Vanadium	72.5	11.9			39.6			14.7			35.7			12.8			31.8			42			40.4		
Zinc	119.5	***132***			61.8			***120***			58			***216***			100			70.6			61		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-17
Analytical Data for Load Line 4 Paint Operation Buildings Shallow Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	P4A-029					
		P4A-029-000 (0-0.5 ft)			P4A-029-001 (1-2 ft)		
		R	Q	QL	R	Q	QL
METALS (MG/KG)							
Aluminum	33852	3520			17500		
Antimony	31	1.2	J			UJ	(0.48)
Arsenic	13.5	1.5	J		6.7	J	
Barium	440	78.2			258		
Beryllium	1.52	0.19	J		0.77		
Cadmium	0.4	***0.76***	J		***0.52***	J	
Calcium	GRAS	14900			2950		
Chromium	37	15.9			18.6		
Cobalt	17.2	3.3			9.7		
Copper	33.9	14.2			20.8		
Iron	GRAS	6080			18200		
Lead	400	133	J		23.5	J	
Magnesium	GRAS	1370			3210		
Manganese	1083	151			541		
Nickel	39.3	6.7			20.1		
Potassium	GRAS	2180			5840		
Selenium	1.33		U	(0.97)		U	(1.1)
Sodium	GRAS		U	(297)		U	(343)
Thallium	1.72		U	(1.2)		U	(1.4)
Vanadium	72.5	9.9			38.4		
Zinc	119.5	89.7			69.1		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-18

Analytical Data for Groundwater Sampling at Existing Monitoring Wells at Load Lines Paint Operation Buildings

Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-03A						MW-03B						MW-04A						MW-04B					
		AMW-003-114			AMW-003-035			BMW-003-114			BMW-003-035			AMW-004-114			AMW-004-035			BMW-004-114			BMW-004-035		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
DISSOLVED METALS (UG/L)																									
Aluminum	37000	81.8	B		87.8	B		81.7	B		145	B		91	B		63.8	B		91	B		96.4	B	
Antimony	6		U	(1.9)		U	(1.9)		U	(1.9)	***12.6***	B			U	(2)		U	(2)		U	(1.9)		U	(1.9)
Arsenic	50	7.9	B		4.2	B		6.7	B		9.6	B		15.4			9.7	B		13			7.2	B	
Barium	2000	241			232			456			475			108	B		108	B		143	B		108	B	
Beryllium	4		U	(0.1)		U	(0.1)		U	(0.1)	1.2	B			U	(0)		U	(0)		U	(0.1)		U	(0.1)
Cadmium	5		U	(0.5)		U	(0.5)		U	(0.5)	1.1	B			U	(1)		U	(1)		U	(0.5)		U	(0.5)
Calcium	GRAS	74600			73900			73400			70300			72600			74500			55800			59200		
Chromium	100		U	(2.2)		U	(2.2)	2.2	B		4.4	B			U	(2)		U	(2)		U	(2.2)		U	(2.2)
Cobalt	2200		U	(0.5)		U	(0.5)		U	(0.5)	12.9	B			U	(1)	0.64	B			U	(0.5)		U	(0.5)
Copper	1300		U	(0.8)		U	(0.8)		U	(0.8)	6.1	B			U	(1)		U	(1)		U	(0.8)		U	(0.8)
Iron	GRAS		U	(27)		U	(27)		U	(27)		U	(27)	66.9	B		65.4	B			U	(27)		U	(27)
Lead	15		U	(1.6)		U	(1.6)	1.7	B		2	B			U	(2)		U	(2)		U	(1.6)		U	(1.6)
Magnesium	GRAS	15600			15400			25500			24200			12100			11900			13200			13000		
Manganese	180	1	B		0.79	B			U	(0.4)	4.1	B		37.9			44			0.54	B		0.57	B	
Mercury	2		U	(0.2)		U	(0.2)		U	(0.2)		U	(0.2)		UN	(0)		U	(0)		UN	(0.2)		U	(0.2)
Nickel	100		U	(1.5)		U	(1.5)		U	(1.5)	11.3	B		2.2	B		1.9	B		3.6	B		4.4	B	
Potassium	GRAS	13500			11700	E		13200			11200	E		13400			11700	E		12100			10400	E	
Selenium	50	28			31.6	*		23.4			25.9	*		11.2			13.8	*		14.9			18.3	*	
Silver	100		U	(0.6)		U	(0.6)		U	(0.6)	2.5	B			U	(1)		U	(1)		U	(0.6)		U	(0.6)
Sodium	GRAS	18700			19000			23600			23900			19000			19500			15800			16600		
Thallium	2		U	(5.5)		U	(5.5)	***8.7***	B		***8***	B		***6.7***	B			U	(6)		U	(5.5)		U	(5.5)
Vanadium	260	4.7	B		5	B		4.4	B		17.5	B		4.1	B		4.7	B		10.6	B		11.4	B	
Zinc	2000	2.3	B		11	B		2.8	B		16.9	B		1.1	B		2.3	B		0.87	B		3.4	B	
TOTAL METALS (UG/L)																									
Aluminum	37000	96.5	B		124	B		116	B		97.3	B		174	B		140	B		133	B		124	B	
Arsenic	50		U	(3.5)	6.8	B			U	(3.5)		U	(3.5)	12.1			9.6	B		11.2			7.9	B	
Barium	2000	231			231			434			399			106	B		99.5	B		139	B		105	B	
Beryllium	4		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0)		U	(0)		U	(0.1)		U	(0.1)
Calcium	GRAS	73000			72700			71000			67300			76800			65800			57500			57600		
Chromium	100		U	(2.2)		U	(2.2)	2.5	B		2.4	B			U	(2)		U	(2)		U	(2.2)		U	(2.2)
Cobalt	2200		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(1)		U	(1)		U	(0.5)		U	(0.5)
Copper	1300		U	(0.8)		U	(0.8)	0.84	B			U	(0.8)		U	(1)		U	(1)		U	(0.8)		U	(0.8)
Iron	GRAS		U	(27)		U	(27)		U	(27)		U	(27)	92.6	B		198				U	(27)		U	(27)
Lead	15		U	(1.6)		U	(1.6)		U	(1.6)		U	(1.6)		U	(2)		U	(2)		U	(1.6)		U	(1.6)
Magnesium	GRAS	15700			15200			25500			23100			12200			10500			13000			12500		
Manganese	180	1.6	B		1.2	B			U	(0.4)	3	B		40.1			40.3			0.9	B		0.85	B	
Nickel	100	1.7	B		1.6	B		2.6	B		1.5	B		2.2	B		2.1	B		3.8	B		3.6	B	
Potassium	GRAS	10400	E		10500	E		10200	E		9510	E		11200			9380	E		9890			9200	E	
Selenium	50	15.9			19.1			5.5			6.2			5.4				U	(4)	10.6			6.1		
Silver	100		U	(0.6)		U	(0.6)		U	(0.6)		U	(0.6)		U	(1)		U	(1)		U	(0.6)		U	(0.6)
Sodium	GRAS	18600	E		18500			23400	E		22100			18400			17300			15100			15800		
Vanadium	260	4.7	B		4.6	B		4.2	B		4.8	B		4.7	B		3.8	B		11.5	B		11	B	
Zinc	2000	2.1	B*		11.6	B			U*	(0.6)	12.5	B		0.66	B		5.5	B		3.6	B		14.1	B	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-18
Analytical Data for Groundwater Sampling at Existing Monitoring Wells at Load Lines Paint Operation Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-06A						MW-06B						MW-08A						MW-08B					
		AMW-006-114			AMW-006-035			BMW-006-114			BMW-006-035			AMW-008-114			AMW-008-035			BMW-008-114			BMW-008-035		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
DISSOLVED METALS (UG/L)																									
Aluminum	37000	53.5	B		77.4	B		87.8	B		98.4	B		58.1	B		59.8	B		56.2	B		34.2	B	
Antimony	6		U	(1.9)		U	(1.9)		U	(1.9)		U	(1.9)		U	(1.9)		U	(1.9)		U	(1.9)		U	(1.9)
Arsenic	50	7.6	B		6.2	B		6.4	B			U	(3.5)	6.8	B		6.2	B		4.1	B		5.8	B	
Barium	2000	183	B		182	B		275			270			102	B		101	B		282			284		
Beryllium	4		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)
Cadmium	5		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
Calcium	GRAS	66200			67000			50800			52400			66100			68800			52700			53500		
Chromium	100		U	(2.2)		U	(2.2)		U	(2.2)		U	(2.2)		U	(2.2)		U	(2.2)	3.3	B		3.1	B	
Cobalt	2200		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
Copper	1300		U	(0.8)		U	(0.8)		U	(0.8)		U	(0.8)		U	(0.8)	0.99	B			U	(0.8)	0.92	B	
Iron	GRAS		U	(27)		U	(27)		U	(27)		U	(27)		U	(27)		U	(27)		U	(27)		U	(27)
Lead	15		U	(1.6)		U	(1.6)		U	(1.6)		U	(1.6)		U	(1.6)		U	(1.6)		U	(1.6)		U	(1.6)
Magnesium	GRAS	12000			11700			14900			14700			15600			16100			18600			19200		
Manganese	180		U	(0.4)		U	(0.4)		U	(0.4)		U	(0.4)		U	(0.4)		U	(0.4)		U	(0.4)		U	(0.4)
Mercury	2		UN	(0.2)		U	(0.2)		UN	(0.2)		U	(0.2)		U	(0.2)		U	(0.2)		U	(0.2)		U	(0.2)
Nickel	100		U	(1.5)		U	(1.5)		U	(1.5)		U	(1.5)		U	(1.5)		U	(1.5)		U	(1.5)		U	(1.5)
Potassium	GRAS	12000			10100	E		10800			9080	E		13300	E		11600	E		11800	E		10200	E	
Selenium	50	18.2			22.7	*		15.3			17.4	*		13.2			13.8			7.4			5.2		
Silver	100		U	(0.6)		U	(0.6)		U	(0.6)		U	(0.6)		U	(0.6)		U	(0.6)		U	(0.6)		U	(0.6)
Sodium	GRAS	18300			18900			14800			15500			26300			27400			15200			15800		
Thallium	2	*5.6*	B			U	(5.5)		U	(5.5)		U	(5.5)		U	(5.5)		U	(5.5)	*7.5*	B		*7.5*	B	
Vanadium	260	5.1	B		5.7	B		4.2	B		5.2	B		2.6	B		3.2	B		2.9	B		3	B	
Zinc	2000	0.85	B		2.2	B		0.94	B		2.4	B		0.69	B		23.7			2	B		25		
TOTAL METALS (UG/L)																									
Aluminum	37000	132	B		78.7	B		163	B		156	B		153	B		48.3	B		131	B		99	B	
Arsenic	50	5.3	B		4.8	B		5.2	B			U	(3.5)		U	(3.5)	3.7	B			U	(3.5)		U	(3.2)
Barium	2000	177	B		180	B		266			253			105	B		96.7	B		297			277		
Beryllium	4		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.2)		U	(0.1)		U	(0.2)
Calcium	GRAS	67800			66800			52900			48500			67600			64900			55100			52000		
Chromium	100		U	(2.2)		U	(2.2)		U	(2.2)		U	(2.2)		U	(2.2)	1.4	B		4	B		3.5	B	
Cobalt	2200		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.6)		U	(0.5)		U	(0.6)
Copper	1300		U	(0.8)		U	(0.8)		U	(0.8)		U	(0.8)		U	(0.8)	0.82	B			U	(0.8)		U	(0.7)
Iron	GRAS		U	(27)		U	(27)		U	(27)		U	(27)	98.3	B			U	(16)		U	(27)		U	(16)
Lead	15		U	(1.6)		U	(1.6)		U	(1.6)	2.1	B			U	(1.6)		U	(1.9)		U	(1.6)		U	(1.9)
Magnesium	GRAS	11800			11700			14800			13700			15800			15200			19300			18500		
Manganese	180	0.42	B		0.71	B			U	(0.4)	1.7	B		0.72	B		0.35	B		0.43	B		0.34	B	
Nickel	100		U	(1.5)		U	(1.5)	1.6	B			U	(1.5)		U	(1.5)	1.7	B			U	(1.5)		U	(1.4)
Potassium	GRAS	9720			9140	E		8970			7730	E		11600			9730	E		10600			8880	E	
Selenium	50	13.2			7.5			5.9				U	(4.4)	7.7			7.4				U	(4.4)		U	(4.4)
Silver	100		U	(0.6)		U	(0.6)		U	(0.6)		U	(0.6)		U	(0.6)		U	(0.5)		U	(0.6)		U	(0.5)
Sodium	GRAS	17400			18400			14300			14300			26100			24800			15600			15000		
Vanadium	260	6	B		5.3	B		5	B		4.6	B		3.2	B		2.7	B		3.3	B		3.1	B	
Zinc	2000	1.1	B		3.6	B		1.2	B		8.6	B		1.5	B		3.8	B			U	(0.6)	25.6		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-18
Analytical Data for Groundwater Sampling at Existing Monitoring Wells at Load Lines Paint Operation Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-12A						MW-13A						MW-14A						MW-15A					
		AMW-012-114			AMW-012-035			AMW-013-114			AMW-013-035			AMW-014-114			AMW-014-035			AMW-015-114			AMW-015-035		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
DISSOLVED METALS (UG/L)																									
Aluminum	37000	160	B		104	B		313			119	B		136	B		70.2	B		149	B		71.4	B	
Antimony	6		U	(1.2)		U	(1.9)		U	(1.2)		U	(1.9)		U	(1.2)		U	(1.9)		U	(1.2)		U	(1.9)
Arsenic	50	6.2	B			U	(3.5)	6	B			U	(3.5)	4.7	B			U	(3.5)	5.3	B		4.7	B	
Barium	2000	251			258			200	B		171	B		288			294			260			233		
Beryllium	4		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)		U	(0.1)
Cadmium	5	0.32	B			U	(0.5)		U	(0.3)		U	(0.5)		U	(0.3)		U	(0.5)		U	(0.3)		U	(0.5)
Calcium	GRAS	49600			49700			33200			29400			54400			54800			39500			35400		
Chromium	100	1.5	B			U	(2.2)	1.6	B			U	(2.2)	2.4	B			U	(2.2)	2.9	B		2.5	B	
Cobalt	2200		U	(0.5)		U	(0.5)	1.2	B			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
Copper	1300	0.44	B			U	(0.8)	3	B		1.1	B			U	(0.3)	1.2	B			U	(0.3)	0.82	B	
Iron	GRAS		U	(7)		U	(27)	334				U	(27)		U	(7)		U	(27)		U	(7)		U	(27)
Lead	15		U	(1.4)		U	(1.6)	3.6				U	(1.6)		U	(1.4)		U	(1.6)		U	(1.4)		U	(1.6)
Magnesium	GRAS	16800			16800			12700			11400			21200			21400			14900			13300		
Manganese	180	1.4	B		0.4	B		27.1				U	(0.4)	0.55	B			U	(0.4)	0.43	B			U	(0.4)
Mercury	2		UN	(0.2)		U	(0.2)		UN	(0.2)		U	(0.2)		UN	(0.2)		U	(0.2)		UN	(0.2)	0.32		
Nickel	100	6.6	B		5.8	B		2.6	B		1.9	B			U	(0.7)		U	(1.5)	0.84	B			U	(1.5)
Potassium	GRAS	14100			12400	E		8410			6740	E		8610			7350	E		7540			5950	E	
Selenium	50	10.2			6.7	*		12.7			9.2	*		15.4			19.6			11.3			13.5		
Silver	100		U	(0.5)		U	(0.6)		U	(0.5)		U	(0.6)		U	(0.5)		U	(0.6)		U	(0.5)		U	(0.6)
Sodium	GRAS	15200	E		14200			13400	E		12800			22100	E		21800	E		16200	E		13600	E	
Thallium	2		U	(3)		U	(5.5)		U	(3)		U	(5.5)		U	(3)		U	(5.5)		U	(3)		U	(5.5)
Vanadium	260	6	B		6.1	B		7.1	B		5.9	B		3.2	B		3	B		3.8	B		3.6	B	
Zinc	2000	8.3	B		4.4	B		3.7	B		5.4	B		1.2	B		4.4	B		1.1	B		3.2	B	
TOTAL METALS (UG/L)																									
Aluminum	37000	4160			1320			1050			707			1340			2030			3690			127	B	
Arsenic	50	9.6	B			U	(3.5)	4.2	B		4.1	B		3.7	B			U	(3.5)	5.4	B			U	(3.5)
Barium	2000	308			264			206			167	B		290			282			306			0.48	B	
Beryllium	4	0.83	B			U	(0.1)		U	(0.2)		U	(0.1)		U	(0.2)		U	(0.1)	0.24	B			U	(0.1)
Calcium	GRAS	46200			47500			30600			26500			50800			46200			35000			48.5	B	
Chromium	100	12.6			3.5	B			U	(5.7)	2.5	B			U	(5.7)	4.7	B		5.8	B			U	(2.2)
Cobalt	2200		U	(13)	1.5	B			U	(13)	0.7	B			U	(13)	0.88	B			U	(13)		U	(0.5)
Copper	1300	10.5	B		3.4	B		4.1	B		2.8	B		2.7	B		4	B		5	B		8.8	B	
Iron	GRAS	6040	*		1860			1170	*		681			1180	*		2300			3370	*			U	(27)
Lead	15	13.6			3.3			4.7			1.7	B		3.2			5.5			10.2	S		1.8	B	
Magnesium	GRAS	17000			15900			12600			10000			21100			18000			14600			7.1	B	
Manganese	180	63.9	E		16.6			26.7	E		22.5			33.3	E		67.5			***345***	E			U	(0.4)
Nickel	100	27.1	B		8.6	B			U	(18)	3.5	B			U	(18)	2.9	B			U	(18)		U	(1.5)
Potassium	GRAS	12900			10900	E		7040			5460	E		7150			5850			6630			109	B	
Selenium	50		UWN	(2.7)		U	(4.4)		UWN	(2.7)		U	(4.4)		UWN	(2.7)		U	(4.4)		UWN	(2.7)		U	(4.4)
Silver	100		U	(4.5)		U	(0.6)		U	(4.5)		U	(0.6)		U	(4.5)		U	(0.6)		U	(4.5)	0.76	B	
Sodium	GRAS	13800	E		13200			12800	E		10800			20900	E		17000	E		14400	E		839	BE	
Vanadium	260	24.5	B		10.4	B		8.9	B		6.7	B		6.7	B		5.9	B		10	B			U	(0.5)
Zinc	2000	50.5			28.5			39.8			117			92.6			37.2			30.4			4.9	B	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-19
Analytical Data for Groundwater Sampling of Background Monitoring Wells
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-19A						MW-19B						MW-19C					
		AMW-019-114			AMW-019-035			BMW-019-114			BMW-019-035			CMW-019-114			CMW-019-035		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
DISSOLVED METALS (UG/L)																			
Aluminum	37000	43	B			U	(19.2)	70.3	B			U	(19.2)	150	B		58.6	B	
Arsenic	50	19.2			19.4			20.7			21.9			4	B			U	(3.5)
Barium	2000	17.4	B		17	B		25.6	B		23.6	B		510			496		
Calcium	GRAS	169000			165000			127000			124000			66900			61700		
Chromium	100		U	(0.7)		U	(2.2)		U	(0.7)		U	(2.2)	0.94	B			U	(2.2)
Cobalt	2200	1.2	B		1.2	B		3.9	B		4.1	B			U	(0.5)		U	(0.5)
Copper	1300		U	(0.3)		U	(0.8)		U	(0.3)		U	(0.8)		U	(0.3)		U	(0.8)
Iron	GRAS	1930			1790			751			724				U	(7)		U	(27.2)
Lead	15		U	(1.4)		U	(1.6)		U	(1.4)		U	(1.6)		U	(1.4)		U	(1.6)
Magnesium	GRAS	33100			32100			24500			23800			23100			21700		
Manganese	180	***358***			***354***			***343***			***343***			53.7			33.6		
Nickel	100		U	(0.7)		U	(1.5)		U	(0.7)		U	(1.5)	3.8	B		2.2	B	
Potassium	GRAS	36200			33800	E		26900			25100	E		6640			5080	E	
Selenium	50	11.6			11.6	*		14.5			15.5			8			11.4		
Sodium	GRAS	205000	E		200000			108000	E		106000	E		22400	E		20300	E	
Thallium	2		U	(3)		U	(5.5)		U	(3)		U	(5.5)		U	(3)		U	(5.5)
Vanadium	260		U	(0.4)	0.53	B		0.59	B			U	(0.5)	2.8	B		2.6	B	
Zinc	2000		U	(0.2)	2.7	B		10.2	B		19	B		0.73	B		2.3	B	
TOTAL METALS (UG/L)																			
Aluminum	37000	213			24.6	B		117	B		81	B			U	(33.8)	188	B	
Arsenic	50	18.8			17.8			19.8			16.6			2.7	B			U	(3.5)
Barium	2000	17.6	B		17.3	B		22.5	B		22.9	B			U	(0.6)	455		
Calcium	GRAS	157000			169000			118000			119000				U	(53.7)	59500		
Cobalt	2200		U	(12.6)	1.1	B			U	(12.6)	3.4	B			U	(12.6)		U	(0.5)
Iron	GRAS	1810	*		1840			746	*		713				U*	(20.8)		U	(27.2)
Magnesium	GRAS	31000			32900			23600			23000				U	(27.3)	20300		
Manganese	180	***327***	E		***361***			***323***	E		***325***				UE	(1)	34.2		
Nickel	100		U	(17.8)		U	(1.5)		U	(17.8)		U	(1.5)		U	(17.8)	2.3	B	
Potassium	GRAS	21000			31400	E		17500			22800				U	(341)	4210	B	
Selenium	50		UWN	(2.7)		U	(4.4)		UN	(27)		U	(4.4)		UEN	(2.7)		U	(4.4)
Silver	100		U	(4.5)		U	(0.6)	4.7	B			U	(0.6)		U	(4.5)		U	(0.6)
Sodium	GRAS	191000	E		200000			105000	E		101000	E			UE	(93.8)	18700	E	
Vanadium	260		U	(2.9)		U	(0.5)		U	(2.9)		U	(0.5)		U	(2.9)	2.3	B	
Zinc	2000	107			7.8	B		20.8			17.3	B			U	(3.1)	7	B	
VOLATILES (UG/L)																			
Chloromethane	3		U	(1)		U	(1)	0.6	J			U	(1)		U	(1)		U	(1)
Methylene chloride	5		U	(2)	2	B			U	(2)	0.6	JB		0.6	JB		0.7	JB	
WATER QUALITY (mg/L)																			
Nitrite	1		U	(0.05)		NA			U	(0.05)		NA			NA			NA	
Nitrate	10		U	(0.05)		NA			U	(0.05)		NA			NA			NA	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-19
Analytical Data for Groundwater Sampling of Background Monitoring Wells
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-47A						MW-47B						MW-48A			MW-48B			MW-48D		
		AMW-047-114			AMW-047-035			BMW-047-114			BMW-047-035			AMW-048-114			BMW-048-114			DMW-048-114		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
DISSOLVED METALS (UG/L)																						
Aluminum	37000	96.5	B		39	B		99.5	B		81.1	B		75	B		54	B		83.8	B	
Arsenic	50	26.3			24.3			22.8			19.7			11.8			9	B		21.4		
Barium	2000	144	B		141	B		159	B		151	B		125	B		301			135	B	
Calcium	GRAS	86700			85700			89000			88400			75100			77300			70700		
Chromium	100		U	(2.2)		U	(2.2)		U	(2.2)		U	(2.2)		U	(2.2)		U	(2.2)		U	(2.2)
Cobalt	2200		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.98	B	
Copper	1300		U	(0.8)	1.1	B			U	(0.8)	0.88	B			U	(0.8)		U	(0.8)		U	(0.8)
Iron	GRAS	1720			1770			1870			1850			289				U	(27.2)	1400		
Lead	15		U	(1.6)	1.6	B			U	(1.6)		U	(1.6)		U	(1.6)		U	(1.6)		U	(1.6)
Magnesium	GRAS	14600			14900			16000			16200			11900			21200			11700		
Manganese	180	***463***			***461***			***403***			***395***			***259***				U	(0.4)	***281***		
Nickel	100		U	(1.5)	1.8	B			U	(1.5)		U	(1.5)		U	(1.5)	2.4	B			U	(1.5)
Potassium	GRAS	14500			12800	E		14000			12500	E		14700			14800			12800		
Selenium	50	16.8			8.2			14.4			4.5	B		11.3			30.6			9		
Sodium	GRAS	29600			30300			21400			22100			18700			16700			20200		
Thallium	2		U	(5.5)		U	(5.5)		U	(5.5)		U	(5.5)	7	B			U	(5.5)		U	(5.5)
Vanadium	260		U	(0.5)	0.88	B			U	(0.5)		U	(0.5)		U	(0.5)	10.8	B			U	(0.5)
Zinc	2000	1.1	B		4.6	B		1.3	B		5.2	B		0.84	B		1.1	B		1.1	B	
TOTAL METALS (UG/L)																						
Aluminum	37000	104	B		70.8	B		89.9	B		71.5	B		123	B		131	B		146	B	
Arsenic	50	18.1			21.2			17			18.9			10.8			11.7			22.3		
Barium	2000	157	B		129	B		149	B		147	B		119	B		285			129	B	
Calcium	GRAS	87500			81400			85400			85400			76400			77700			74800		
Cobalt	2200		U	(0.5)		U	(0.6)		U	(0.5)		U	(0.6)		U	(0.5)		U	(0.5)	1.4	B	
Iron	GRAS	1830			1720			1870			1800			309				U	(27.2)	1480		
Magnesium	GRAS	15400			14100			15700			15700			11600			20300			11600		
Manganese	180	***481***			***437***			***393***			***383***			***264***				U	(0.4)	***294***		
Nickel	100		U	(1.5)	1.7	B			U	(1.5)		U	(1.4)		U	(1.5)	2.9	B			U	(1.5)
Potassium	GRAS	11900	E		10700	E		10600	E		10800	E		11900			11800			10400		
Selenium	50		U	(4.4)		U	(4.4)		U	(4.4)		U	(4.4)		U	(4.4)	22.8				U	(4.4)
Silver	100		U	(0.6)		U	(0.5)		U	(0.6)		U	(0.5)		U	(0.6)		U	(0.6)		U	(0.6)
Sodium	GRAS	30700	E		27500			20800	E		20400			17400			15400			18800		
Vanadium	260		U	(0.5)		U	(0.4)		U	(0.5)		U	(0.4)	0.6	B		11.1	B		0.96	B	
Zinc	2000	5.3	B*		4.7	B		0.86	B*		3.9	B		1.4	B		1	B		1.2	B	
VOLATILES (UG/L)																						
Chloromethane	3		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Methylene chloride	5	4	B		0.8	JB		3	B		1	JB		3	B		0.6	J		1	J	
WATER QUALITY (mg/L)																						
Nitrite	1		U	(0.05)		NA			U	(0.05)		NA		0.042			***5.7***				U	(0.05)
Nitrate	10		U	(0.05)		NA			U	(0.05)		NA		0.4			***59***				U	(0.05)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-20
Analytical Data for Igloo Storage Area Confirmation and Additional Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	IGS-031			IGS-032			IGS-036			IGS-039													IGS-040		
		IGN-031-000 (0-0.5 ft)			IGN-032-000 (0-0.5 ft)			IGN-036-000 (0-0.5 ft)			IGN-039-000 (0-0.5 ft)			IGN-039-001 (1-2 ft)			IGN-039-004 (4-5 ft)			IGN-039-00A (0-0.5 ft)			IGN-039-01A (1-2 ft)			IGN-040-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																												
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.18	J		1.4				U	(0.75)	0.055	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.087	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-20
Analytical Data for Igloo Storage Area Confirmation and Additional Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	IGS-056			IGS-060			IGS-073												IGS-080			IGS-081		
		IGN-056-000 (0-1 ft)			IGN-060-000 (0-1 ft)			IGN-073-000 (0-0.5 ft)			IGN-073-001 (1-2 ft)			IGN-073-004 (4-5 ft)			IGN-073-00A (0-0.5 ft)			IGN-073-01A (1-2 ft)			IGN-080-000 (0-1 ft)			IGN-081-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																												
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)	0.72	J		0.67	J			U	(0.75)		U	(0.75)		U	(0.75)	0.11	J		0.16	J	
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)	0.27	J		0.1	J	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)			U (0.5)			U (0.5)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-20
Analytical Data for Igloo Storage Area Confirmation and Additional Soil Sampling
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	IGS-084			IGS-106			IGS-107			IGS-109		
		IGN-084-000 (0-1 ft)			IGN-106-000 (0-1 ft)			IGN-107-000 (0-1 ft)			IGN-109-000 (0-1 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL.
EXPLOSIVES (MG/KG)													
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8	0.17	J			U	(0.5)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.097	J			R			U	(0.75)		R	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.093	J			U	(0.5)		U	(0.5)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-21
Analytical Data for Surface Wipe Sampling at Igloo Storage Areas Raw Product Storage Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

	IGW-001			IGW-002			IGW-003			IGW-004			IGW-005			IGW-006			IGW-007		
	IGW-001-FLR			IGW-002-FLR			IGW-003-FLR			IGW-004-FLR			IGW-005-FLR			IGW-006-FLR			IGW-007-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
2,4,6-Trinitrotoluene (2,4,6-TNT)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00039	J			U	(0.0005)		U	(0.0005)
3-Nitrotoluene (3-NT)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		UJ	(0.001)		U	(0.001)	0.00056	J			U	(0.001)		U	(0.001)		U	(0.001)		U	(0.001)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		UJ	(0.0039)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.0011)		U	(0.0026)		U	(0.0042)
Nitrobenzene (NB)		UJ	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00043	J			U	(0.0005)		U	(0.0005)	0.000063	J		0.00015	J		0.00027	J		0.00055		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-21
Analytical Data for Surface Wipe Sampling at Igloo Storage Areas Raw Product Storage Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

	IGW-008			IGW-009			IGW-010			IGW-011			IGW-012			IGW-013			IGW-014		
	IGW-008-FLR			IGW-009-FLR			IGW-010-FLR			IGW-011-FLR			IGW-012-FLR			IGW-013-FLR			IGW-014-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.00093	J			UJ	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)
3-Nitrotoluene (3-NT)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.00075)		UJ	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		U	(0.001)		U	(0.001)		U	(0.001)	0.0005	J			U	(0.001)		UJ	(0.001)		UJ	(0.001)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		U	(0.0013)	0.019			0.012				U	(0.00075)		U	(0.0019)	0.0062	J			UJ	(0.0027)
Nitrobenzene (NB)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		UJ	(0.002)		UJ	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00021	J		0.00047	J		0.003				U	(0.0005)	0.00052				UJ	(0.0005)		UJ	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-21
Analytical Data for Surface Wipe Sampling at Igloo Storage Areas Raw Product Storage Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

	IGW-015			IGW-016			IGW-017			IGW-018			IGW-019			IGW-020			IGW-021		
	IGW-015-FLR			IGW-016-FLR			IGW-017-FLR			IGW-018-FLR			IGW-019-FLR			IGW-020-FLR			IGW-021-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00021	J			UJ	(0.0005)	0.00062				U	(0.0005)	0.0008	J			U	(0.0005)		UJ	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)	0.00074				UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)
3-Nitrotoluene (3-NT)		UJ	(0.00075)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.0008)		U	(0.00075)		UJ	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		UJ	(0.001)		UJ	(0.001)	0.00045	U	(0.001)		U	(0.001)		UJ	(0.001)		U	(0.001)		UJ	(0.001)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		UJ	(0.00075)		UJ	(0.0022)	0.0006	J			U	(0.0042)	0.0064	J			U	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		UJ	(0.002)		UJ	(0.002)		U	(0.002)		U	(0.002)		UJ	(0.002)		U	(0.002)	0.006	J	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		UJ	(0.0005)	0.00019	J			U	(0.0005)	0.0003	J			UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-21
Analytical Data for Surface Wipe Sampling at Igloo Storage Areas Raw Product Storage Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

	IGW-022			IGW-023			IGW-024			IGW-025			IGW-026			IGW-027			IGW-028		
	IGW-022-FLR			IGW-023-FLR			IGW-024-FLR			IGW-025-FLR			IGW-026-FLR			IGW-027-FLR			IGW-028-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
2,4,6-Trinitrotoluene (2,4,6-TNT)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)	0.00071	J			UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)
3-Nitrotoluene (3-NT)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		UJ	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		UJ	(0.001)		UJ	(0.001)		UJ	(0.001)		UJ	(0.001)		UJ	(0.001)		UJ	(0.001)		UJ	(0.001)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00062	J		0.00062	J		0.00069	J		0.004	J		0.003	J			UJ	(0.00075)	0.0024	J	
Nitrobenzene (NB)	0.0062	J			UJ	(0.002)		UJ	(0.002)		UJ	(0.002)		UJ	(0.002)		UJ	(0.002)		UJ	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-21
Analytical Data for Surface Wipe Sampling at Igloo Storage Areas Raw Product Storage Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

	IGW-029			IGW-030			IGW-031			IGW-032			IGW-033			IGW-034			IGW-035		
	IGW-029-FLR			IGW-030-FLR			IGW-031-FLR			IGW-032-FLR			IGW-033-FLR			IGW-034-FLR			IGW-035-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
2,4,6-Trinitrotoluene (2,4,6-TNT)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)	0.00026	J			U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		U	(0.0005)	0.0021	J			UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)	0.00077				U	(0.0005)
3-Nitrotoluene (3-NT)		U	(0.00075)		UJ	(0.00075)		UJ	(0.00075)		U	(0.00075)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	0.00059	J			UJ	(0.001)		UJ	(0.001)		U	(0.001)		UJ	(0.001)		U	(0.001)	0.00057	J	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		UJ	(0.0016)	0.0019	J			UJ	(0.00075)		U	(0.00075)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)
Nitrobenzene (NB)		U	(0.002)		UJ	(0.002)		UJ	(0.002)		U	(0.002)		UJ	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)	0.00026	J			UJ	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-21
Analytical Data for Surface Wipe Sampling at Igloo Storage Areas Raw Product Storage Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

	IGW-036			IGW-037			IGW-038			IGW-039			IGW-040			IGW-041			IGW-042		
	IGW-036-FLR			IGW-037-FLR			IGW-038-FLR			IGW-039-FLR			IGW-040-FLR			IGW-041-FLR			IGW-042-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																					
2,4,6-Trinitrotoluene (2,4,6-TNT)	0.00038	J			U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)
3-Nitrotoluene (3-NT)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.00075)		U	(0.00075)		UJ	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		UJ	(0.001)	0.00094	J			U	(0.001)		U	(0.001)		UJ	(0.001)		U	(0.001)		UJ	(0.001)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.0025	J			U	(0.00075)		U	(0.00075)	0.0002	J			UJ	(0.00075)		U	(0.00075)		UJ	(0.00075)
Nitrobenzene (NB)		UJ	(0.002)		U	(0.002)		U	(0.002)		U	(0.002)		UJ	(0.002)		U	(0.002)		UJ	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		U	(0.0005)	0.000098	J			U	(0.0005)	0.00014	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-21
Analytical Data for Surface Wipe Sampling at Igloo Storage Areas Raw Product Storage Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

	IGW-043			IGW-044			IGW-045			IGW-046			IGW-047			IGW-048			IGW-049			IGW-050			IGW-051		
	IGW-043-FLR			IGW-044-FLR			IGW-045-FLR			IGW-046-FLR			IGW-047-FLR			IGW-048-FLR			IGW-049-FLR			IGW-050-FLR			IGW-051-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)																											
2,4,6-Trinitrotoluene (2,4,6-TNT)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)
3-Nitrotoluene (3-NT)		UJ	(0.00075)		U	(0.00075)		U	(0.00075)		UJ	(0.00075)		UJ	(0.00075)	0.00067	J			UJ	(0.00075)		U	(0.00075)		U	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		UJ	(0.001)		U	(0.001)		U	(0.001)		UJ	(0.001)		UJ	(0.001)		U	(0.001)		UJ	(0.001)		U	(0.001)		U	(0.001)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)		UJ	(0.00075)		U	(0.00075)		UJ	(0.0028)		UJ	(0.0016)		UJ	(0.00075)		U	(0.00075)		UJ	(0.00075)		UJ	(0.0018)		U	(0.0075)
Nitrobenzene (NB)		UJ	(0.002)		U	(0.002)		U	(0.002)		UJ	(0.002)		UJ	(0.002)		U	(0.002)		UJ	(0.002)		U	(0.002)		U	(0.002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)		U	(0.0005)		U	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-21
Analytical Data for Surface Wipe Sampling at Igloo Storage Areas Raw Product Storage Buildings
Former Nebraska Ordnance Plant, Mead, Nebraska

	IGW-052			IGW-053			IGW-054			IGW-055			IGW-056		
	IGW-052-FLR			IGW-053-FLR			IGW-054-FLR			IGW-055-FLR			IGW-056-FLR		
	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/WIPE)															
2,4,6-Trinitrotoluene (2,4,6-TNT)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)
2,4-Dinitrotoluene (2,4-DNT)		UJ	(0.0005)		UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)
3-Nitrotoluene (3-NT)	0.0014	J			UJ	(0.00075)		UJ	(0.00075)		U	(0.00075)		UJ	(0.00075)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)		UJ	(0.001)		UJ	(0.001)		UJ	(0.001)		U	(0.001)		UJ	(0.001)
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.00073	J			UJ	(0.00075)		UJ	(0.00075)	0.001	J			UJ	(0.00075)
Nitrobenzene (NB)		UJ	(0.002)		UJ	(0.002)		UJ	(0.002)		U	(0.002)		UJ	(0.0002)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.00058	J			UJ	(0.0005)		UJ	(0.0005)		U	(0.0005)		UJ	(0.0005)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-22
Analytical Data for Shallow Soil Sampling at Tetryl Pelleting Building
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	TP-001									TP-002								
		TPA-001-000 (0-0.5 ft)			TPA-001-R00 (0-0.5 ft)			TPA-001-001 (1-2 ft)			TPA-002-000 (0-0.5 ft)			TPA-002-R00 (0-0.5 ft)			TPA-002-001 (1-2 ft)			TPA-002-R01 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)	0.00003				U	(0.5)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R		0.000093				U	(0.75)		R			U	(0.00075)		R			U	(0.00075)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.0005)		U	(0.5)	0.22	J			U	(0.0005)	0.47	J			U	(0.0005)
METALS (MG/KG)																						
Aluminum	33852	9000	J			NA		18200	J		9690	J			NA		13700	J			NA	
Antimony	31	9.3	J			NA			R		4	J			NA		0.57	J			NA	
Arsenic	13.5	13				NA		6.7	J		6.5	J			NA		5.6	J			NA	
Barium	440	242				NA		216	J		***520***				NA		225	J			NA	
Beryllium	1.52	0.54				NA		0.78			0.55				NA		0.65				NA	
Cadmium	0.4	0.13	J			NA			U	(0.13)	***1.4***				NA			U	(0.12)		NA	
Calcium	GRAS	3820				NA		3430	J		7030				NA		3390	J			NA	
Chromium	37	11.5				NA		18.5			18.4				NA		14.7				NA	
Cobalt	17.2	7.3				NA		8.7			11.4				NA		7.7				NA	
Copper	33.9	***34.6***				NA		15.3	J		25.2				NA		13.8	J			NA	
Iron	GRAS	13300				NA		18400	J		13400				NA		15400	J			NA	
Lead	400	46.4				NA		13.9			163				NA		22.1				NA	
Magnesium	GRAS	2220				NA		3160			2390				NA		2550				NA	
Manganese	1083	440	J			NA		500	J		476	J			NA		435	J			NA	
Mercury	23	0.6				NA			U	(0.13)		U	(0.14)		NA			U	(0.12)		NA	
Nickel	39.3	15.9				NA		18.4			16.2				NA		16.3				NA	
Potassium	GRAS	2700				NA		3540			3030				NA		3270				NA	
Selenium	1.33		UJ	(1.1)		NA			U	(1.1)		UJ	(1.2)		NA			U	(1)		NA	
Sodium	GRAS		U	(340)		NA		166	J			U	(363)		NA		146	J			NA	
Vanadium	72.5	22				NA		37.2			23.1				NA		29.2				NA	
Zinc	119.5	110				NA		59.6			***275***				NA		56.2				NA	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-22
Analytical Data for Shallow Soil Sampling at Tetryl Pelleting Building
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	TP-003									TP-004								
		TPA-003-000 (0-0.5 ft)			TPA-003-R00 (0-0.5 ft)			TPA-003-001 (1-2 ft)			TPA-004-000 (0-0.5 ft)			TPA-004-R00 (0-0.5 ft)			TPA-004-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.5)		U	(0.0005)		U	(0.5)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		R		0.000046				U	(0.75)		U	(0.75)	0.000081				R	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.37	J			U	(0.0005)		U	(0.5)	0.28	J			U	(0.0005)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	10000	J			NA		17800	J		14600	J			NA		16300		
Antimony	31	0.73	J			NA			R			R			NA			UJ	(0.46)
Arsenic	13.5	6.4	J			NA		6.5	J		6.5	J			NA		8.9		
Barium	440	183				NA		187	J		191	J			NA		252		
Beryllium	1.52	0.57				NA		0.72			0.67				NA		0.78		
Cadmium	0.4	0.13	J			NA			U	(0.13)	0.36	J			NA			U	(1.2)
Calcium	GRAS	10400				NA		3630	J		5390	J			NA		9750		
Chromium	37	13.8				NA		18.3			20.5				NA		18.5	J	
Cobalt	17.2	7.6				NA		8.3			8				NA		9.8		
Copper	33.9	17.3				NA		13.8	J		20.9	J			NA		20.1		
Iron	GRAS	13900				NA		17200	J		16500	J			NA		19400		
Lead	400	61.7				NA		13.7			239				NA		37.1		
Magnesium	GRAS	2440				NA		2970			2940				NA		3430		
Manganese	1083	465	J			NA		483	J		477	J			NA		575		
Mercury	23		U	(0.13)		NA			U	(0.13)		U	(0.13)		NA			U	(0.13)
Nickel	39.3	17.3				NA		17			22.5				NA		29.3	J	
Potassium	GRAS	2750				NA		3450			3170				NA		3340		
Selenium	1.33	***1.9***	J			NA		***1.4***	J			U	(1.1)		NA			U	(1.1)
Sodium	GRAS		U	(333)		NA		162	J		169	J			NA			U	(326)
Vanadium	72.5	23.7				NA		37.2			32.2				NA		35.5		
Zinc	119.5	62.1				NA		48.2			***135***				NA		65.2		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-22
Analytical Data for Shallow Soil Sampling at Tetryl Pelleting Building
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	TP-005									TP-006								
		TPA-005-000 (0-0.5 ft)			TPA-005-001 (1-2 ft)			TPA-005-R01 (1-2 ft)			TPA-006-000 (0-0.5 ft)			TPA-006-R00 (0-0.5 ft)			TPA-006-001 (1-2 ft)			TPA-006-R01 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		R		0.000048				R			U	(0.00075)		R		0.000036		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.1	J			U	(0.0005)		U	(0.5)		U	(0.0005)		U	(0.5)		U	(0.0005)
METALS (MG/KG)																						
Aluminum	33852	13800	J		14800	J			NA		11100	J			NA		11200	J			NA	
Antimony	31		R			R			NA			R			NA			R			NA	
Arsenic	13.5	6.3	J		6.6	J			NA		6.9	J			NA		6.7	J			NA	
Barium	440	179	J		189				NA		187				NA		179				NA	
Beryllium	1.52	0.66			0.73				NA		0.63				NA		0.65				NA	
Cadmium	0.4		U	(0.13)		U	(0.12)		NA			U	(0.13)		NA			U	(0.12)		NA	
Calcium	GRAS	3610	J		3650				NA		3440				NA		3190				NA	
Chromium	37	18.8			15.8				NA		12.8				NA		12.7				NA	
Cobalt	17.2	7.9			9.4				NA		8.6				NA		8.5				NA	
Copper	33.9	17.1	J		15.9				NA		16.8				NA		15.5				NA	
Iron	GRAS	16400	J		17400				NA		15300				NA		15100				NA	
Lead	400	248			18				NA		25				NA		16.3				NA	
Magnesium	GRAS	2970			3070				NA		2700				NA		2570				NA	
Manganese	1083	468	J		553	J			NA		523	J			NA		494	J			NA	
Mercury	23		U	(0.13)		U	(0.13)		NA			U	(0.13)		NA			U	(0.13)		NA	
Nickel	39.3	18.3			19.3				NA		19.8				NA		18.3				NA	
Potassium	GRAS	3020			2680				NA		2580				NA		2300				NA	
Selenium	1.33	*1.6*	J			UJ	(1.1)		NA			UJ	(1.1)		NA			UJ	(1.1)		NA	
Sodium	GRAS	158	J			U	(337)		NA			U	(340)		NA			U	(332)		NA	
Vanadium	72.5	32			31.3				NA		26.1				NA		25.9				NA	
Zinc	119.5	83.2			46.9				NA		50.8				NA		44.6				NA	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-23
Analytical Data for Shallow and Deep Soil Sampling at North Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NG-001						NG-002						NG-003						NG-004					
		NGA-001-000 (0-0.5 ft)			NGA-001-001 (1-2 ft)			NGA-002-000 (0-0.5 ft)			NGA-002-001 (1-2 ft)			NGA-003-000 (0-0.5 ft)			NGA-003-001 (1-2 ft)			NGA-004-000 (0-0.5 ft)			NGA-004-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	15800			15100			12400			11000			9050			16900	J		12300			16200	J	
Antimony	31	2	J			R			R			R			R			UJ	(0.45)		R			UJ	(0.48)
Arsenic	13.5	7	J		5.3	J		6.7	J		13.4			4.2	J		7.2	J		5.7	J		6	J	
Barium	440	220			187			202			237			146			188			202			188		
Beryllium	1.52	0.71			0.67			0.65			***3.1***			0.46			0.76			0.66			0.74		
Cadmium	0.4	***0.65***	J			U	(0.08)	***0.47***	J		***3.1***			***0.47***	J		***0.51***	J		***0.65***	J		***0.54***	J	
Calcium	GRAS	6280			3260			3780			3480			48600			2920			15700			3060		
Chromium	37	18.9			15.2			14.7			19.6			11			17			14.9			16.8		
Cobalt	17.2	9			8.9			9.5			***37.7***			6.6			9.7			8.6			9.2		
Copper	33.9	20.6			14.3			***44.9***			***34.2***			17.7			16.8			28.6			14 3		
Iron	GRAS	17800			16400			15900			18000			11500			19000			15800			17900		
Lead	400	21.9			13.2	J		22.6			14.9			14.8			13			33.4			13.6		
Magnesium	GRAS	3570			3010			2720			3410			2850			3710			3310			3430		
Manganese	1083	513	J		521			564	J		596	J		408	J		556			486	J		517		
Nickel	39.3	20.2			17.5			18.2			***42.7***			13.7			20.6			17.9			18.4		
Potassium	GRAS	3440	J		2360			2760	J		2030	J		2600	J		2600			2850	J		2450		
Selenium	1.33	***1.5***	J		***1.4***	J		***1.6***	J		***3.7***	J			U	(1.1)	***1.8***	J		***2.2***	J		***1.8***	J	
Silver	380		UJ	(0.16)		UJ	(0.13)		UJ	(0.16)	1.2	J			UJ	(0.16)		U	(0.14)	1.8	J			U	(0.15)
Sodium	GRAS		U	(366)		U	(517)		U	(354)		U	(324)		U	(349)		U	(319)		U	(370)		U	(340)
Thallium	1.72		U	(1.5)		U	(1.2)		U	(1.4)	***4.4***	J			U	(1.4)		U	(1.3)		U	(1.5)		U	(1.4)
Vanadium	72.5	35.2			26.5			26.7			52.2			18.5			30.9			25.4			29.4		
Zinc	119.5	75.8			54.5			81.8			73.8			52.6			58.8			101			55.8		
SEMIVOLATILES (UG/KG)																									
Butylbenzylphthalate	13000000		U	(440)		U	(413)		U	(660)		U	(407)		U	(440)		U	(423)		U	(418)	57	J	
Di-n-butylphthalate	6500000		U	(440)		U	(412)		U	(660)		U	(407)		U	(440)		U	(423)		U	(418)	2055	J	
Diethylphthalate	52000000		U	(440)		U	(413)		U	(660)	31	J			U	(440)		U	(423)	27	J			UJ	(423)
Pyrene	2000000		U	(440)		U	(413)		U	(660)		U	(407)		U	(440)		U	(423)		U	(418)		UJ	(423)
bis(2-Ethylhexyl)phthalate	32000		U	(440)		U	(412)		U	(660)		U	(407)		U	(440)		U	(423)		U	(418)		UJ	(423)
VOLATILES (UG/KG)																									
Trichloroethene (TCE)	7100		NA			U	(13)		NA			U	(12)		NA			U	(13)		NA			U	(13)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-23
Analytical Data for Shallow and Deep Soil Sampling at North Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NG-005															NG-006					
		NGA-005-000 (0-0.5 ft)			NGA-005-001 (1-2 ft)			NGA-005-004 (4-5 ft)			NGA-005-009 (9-10 ft)			NGA-005-019 (19-20 ft)			NGA-006-000 (0-0.5 ft)			NGA-006-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																						
Aluminum	33852	11600			13400			17300			10800			589			13500			15700	J	
Antimony	31		R			R			UJ	(0.45)		UJ	(0.47)		UJ	(0.39)		R		0.92	J	
Arsenic	13.5	6	J		5.6	J		8.2	J		7.4	J			U	(0.72)	6.6	J		5.7	J	
Barium	440	223			244			161			191			7.5			214			205		
Beryllium	1.52	0.59			0.61			0.79			0.62			0.03	J		0.72			0.65		
Cadmium	0.4	***0.43***	J		***0.58***	J		0.31	J		***0.41***	J			U	(0.1)	***0.43***	J		***0.63***	J	
Calcium	GRAS	3040			2720			3660			3310			232			4130			2990		
Chromium	37	13.5			14.2			17.7			14			1.5	J		15.8			18.8		
Cobalt	17.2	7.5			8.5			9.2			8.4			0.24	J		8.2			9.5		
Copper	33.9	16.2			14.5			14.9			18			0.63	J		17.4			***57.9***		
Iron	GRAS	14900			15900			20500			17400			808			16700			18500		
Lead	400	23.7			12.6			14			10.9			1.1	J		15.5			16		
Magnesium	GRAS	2550			2760			4040			3520			184			3300			2840		
Manganese	1083	444			718			544			422			8			351	J		600		
Nickel	39.3	16.7			19.4			20.1			21.4			0.62	J		18.8			22.5		
Potassium	GRAS	2540			2200			2420			2270			179			2620	J		2970		
Selenium	1.33	1.3	J		***1.8***	J		***1.8***	J			U	(1.1)		U	(0.9)		U	(1.1)	***1.4***	J	
Silver	380		UJ	(0.15)		UJ	(0.15)		U	(0.14)		U	(0.15)		U	(0.12)		UJ	(0.15)		U	(0.15)
Sodium	GRAS		U	(345)		U	(338)		U	(322)		U	(330)		U	(277)		U	(345)		U	(342)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.1)		U	(1.4)		U	(1 4)
Vanadium	72.5	24.9			28.3			34.5			28.8			1.6			28.1			31		
Zinc	119.5	64.6	J		59.1	J		67.4	J		64	J		3.5	J		65.8			60.5		
SEMIVOLATILES (UG/KG)																						
Butylbenzylphthalate	13000000		U	(418)		U	(413)		U	(407)		U	(429)		U	(337)		U	(429)		U	(402)
Di-n-butylphthalate	6500000		UJ	(2700)		UJ	(413)		UJ	(407)		UJ	(429)		UJ	(337)	2252			1368		
Diethylphthalate	52000000		U	(418)		U	(413)		U	(407)		U	(429)		U	(337)		U	(429)		U	(402)
Pyrene	2000000		U	(418)		U	(413)		U	(407)		U	(429)		U	(337)		U	(429)		U	(402)
bis(2-Ethylhexyl)phthalate	32000		U	(418)		U	(413)		U	(407)		U	(429)		U	(337)	35	J			U	(402)
VOLATILES (UG/KG)																						
Trichloroethene (TCE)	7100		NA			U	(13)		U	(12)		U	(13)		U	(10)		NA		2	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-23
Analytical Data for Shallow and Deep Soil Sampling at North Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NG-007															NG-008					
		NGA-007-000 (0-0.5 ft)			NGA-007-001 (1-2 ft)			NGA-007-004 (4-5 ft)			NGA-007-009 (9-10 ft)			NGA-007-019 (19-20 ft)			NGA-008-000 (0-0.5 ft)			NGA-008-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																						
Aluminum	33852	15100			13600			14000			10300			681	J		15800	J		15900	J	
Antimony	31		R			R			R			R			UJ	(0.39)		UJ	(0.48)		UJ	(0.48)
Arsenic	13.5	5.5	J		5.3	J		7.5	J		8.1	J			U	(0.72)	5.5	J		4.5	J	
Barium	440	195			185			200			231			9.3			196			204		
Beryllium	1.52	0.65			0.66			0.71			0.63			0.04	J		0.67			0.69		
Cadmium	0.4	0.12	J		0.32	J		0.35	J		***0.48***	J			U	(0.1)	***0.6***	J		***0.47***	J	
Calcium	GRAS	2710			2630			3460			3760			266			5620			2840		
Chromium	37	16.1			14.3			15			13.8			2.7	J		17.5			16.2		
Cobalt	17.2	7.9			8.6			10.5			10.1			0.53	J		8.7			8.5		
Copper	33.9	22.5	J		13.7			16.4			19			1.1	J		24.8			12.8		
Iron	GRAS	16400			15900			18900			17600			778			17800			16300		
Lead	400	17.1			12.3			13.8			12.7			1.3	J		18.8			12		
Magnesium	GRAS	2960			2830			3600			3550			204			3200			2950		
Manganese	1083	461	J		517			656			611			21.5			491			459		
Nickel	39.3	16.6			16.5			22.3			21.8			1.1	J		25.5			16.2		
Potassium	GRAS	2530	J		2080			1920			2070			194			3090			2600		
Selenium	1.33	***1.6***	J		1.3	J		1.1	J			UJ	(1.1)		U	(0.9)	***1.5***	J		1.3	J	
Silver	380		UJ	(0.13)		UJ	(0.15)		UJ	(0.15)		UJ	(0.15)		U	(0.12)		U	(0.15)		U	(0.15)
Sodium	GRAS	266	J			U	(342)		U	(334)		U	(336)		U	(276)		U	(341)		U	(339)
Thallium	1.72		U	(1.1)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.1)		U	(1.4)		U	(1.4)
Vanadium	72.5	28.8			26.2			25			24.6			1.5			30.4			29.6		
Zinc	119.5	67.5	J		54.3	J		62.6	J		64.3	J			U	(3)	71.6			60.7		
SEMIVOLATILES (UG/KG)																						
Butylbenzylphthalate	13000000		U	(446)		U	(423)		U	(407)		U	(423)		U	(337)		U	(423)		U	(413)
Di-n-butylphthalate	6500000		U	(446)		U	(423)		U	(407)		U	(423)		U	(337)		U	(423)	3518		
Diethylphthalate	52000000		U	(446)		U	(423)		U	(407)		U	(423)		U	(337)		U	(423)		U	(413)
Pyrene	2000000		U	(446)		U	(423)		U	(407)		U	(423)		U	(337)	54	J			U	(413)
bis(2-Ethylhexyl)phthalate	32000	1222				U	(423)		U	(407)		U	(423)	378				U	(423)		U	(413)
VOLATILES (UG/KG)																						
Trichloroethene (TCE)	7100		NA			U	(13)		U	(12)		U	(13)		U	(10)		NA			U	(13)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-23
Analytical Data for Shallow and Deep Soil Sampling at North Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NG-009						NG-010						NG-011					
		NGA-009-000 (0-0.5 ft)			NGA-009-001 (1-2 ft)			NGA-010-000 (0-0.5 ft)			NGA-010-001 (1-2 ft)			NGA-011-000 (0-0.5 ft)			NGA-011-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																			
Aluminum	33852	6730	J		12800	J		13900	J		14400	J		13400	J		13800	J	
Antimony	31		UJ	(0.44)		UJ	(0.45)		UJ	(4.4)		UJ	(0.46)		UJ	(0.47)		UJ	(0.47)
Arsenic	13.5	1.2	J		4	J		5.7	J		6.5	J		5.2	J		4.8	J	
Barium	440	70.7			209			184			199			197			212		
Beryllium	1.52	0.26			0.62			0.62			0.7			0.64			0.65		
Cadmium	0.4	0.35	J		***0.53***	J		***0.74***	J		***0.48***	J		***0.55***	J		***0.44***	J	
Calcium	GRAS	104000			5500			6400			3340			3620			2780		
Chromium	37	7.9			13.9			16.6			15.1			14.5			15.4		
Cobalt	17.2	3.4			8.3			7.9			9.6			9.1			7.8		
Copper	33.9	6.2			12.1			22.8			15.2			***206***			13.2		
Iron	GRAS	6340			14200			15200			17700			15600			15000		
Lead	400	8			12.9			43			13.4			19.5			13.5		
Magnesium	GRAS	3080			2540			3060			3430			2760			2660		
Manganese	1083	251			563			472			566			590			504		
Nickel	39.3	7.1			15.7			17.3			18.9			17.2			15.9		
Potassium	GRAS	1860			2700			2840			2030			2770			2770		
Selenium	1.33	1.1	J			U	(1.1)	1.1	J		***2.1***	J		***1.4***	J		1.2	J	
Silver	380		U	(0.14)		U	(0.14)	17.1				U	(0.15)		U	(0.15)		U	(0.15)
Sodium	GRAS		U	(313)		U	(323)		U	(316)		U	(327)		U	(334)		U	(333)
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)
Vanadium	72.5	12.1			25.4			27.6			26.5			26.7			28.3		
Zinc	119.5	27.8			52.9			94.6			55.9			57.8			54.6		
SEMIVOLATILES (UG/KG)																			
Butylbenzylphthalate	13000000		U	(398)		U	(402)		U	(423)		U	(407)		U	(418)		U	(413)
Di-n-butylphthalate	6500000		U	(398)		U	(402)		U	(423)		U	(407)		U	(418)		U	(412)
Diethylphthalate	52000000		U	(398)		U	(402)		U	(423)		U	(407)		U	(418)		U	(413)
Pyrene	2000000	50	J			U	(402)		U	(423)		U	(407)		U	(418)		U	(413)
bis(2-Ethylhexyl)phthalate	32000		U	(398)		U	(402)		U	(423)		U	(407)		U	(418)		U	(413)
VOLATILES (UG/KG)																			
Trichloroethene (TCE)	7100		NA			U	(12)		NA			U	(12)		NA			UJ	(13)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-23
Analytical Data for Shallow and Deep Soil Sampling at North Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NG-012					
		NGA-012-000 (0-0.5 ft)			NGA-012-001 (1-2 ft)		
		R	Q	QL	R	Q	QL
METALS (MG/KG)							
Aluminum	33852	4360	J		13900	J	
Antimony	31	0.7	J			UJ	(0.45)
Arsenic	13.5	1.3	J		4.2	J	
Barium	440	54.1			169		
Beryllium	1.52	0.19	J		0.66		
Cadmium	0.4	0.22	J		***0.5***	J	
Calcium	GRAS	14200			2790		
Chromium	37	6.1			14.5		
Cobalt	17.2	2.8			8.4		
Copper	33.9	8.7			11.2		
Iron	GRAS	5470			15600		
Lead	400	15.7			11.7		
Magnesium	GRAS	1820			2700		
Manganese	1083	169			519		
Nickel	39.3	6			16.4		
Potassium	GRAS	1050			2160		
Selenium	1.33		U	(0.94)	***1.4***	J	
Silver	380		U	(0.13)		U	(0.14)
Sodium	GRAS		U	(289)		U	(316)
Thallium	1.72		U	(1.2)		U	(1.3)
Vanadium	72.5	9.3			26.1		
Zinc	119.5	31.7			53.5		
SEMIVOLATILES (UG/KG)							
Butylbenzylphthalate	13000000		U	(359)		U	(384)
Di-n-butylphthalate	6500000	2989			2367		
Diethylphthalate	52000000		U	(359)		U	(384)
Pyrene	2000000		U	(359)		U	(384)
bis(2-Ethylhexyl)phthalate	32000		U	(359)		U	(384)
VOLATILES (UG/KG)							
Trichloroethene (TCE)	7100		NA			UJ	(12)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-24
Analytical Data for Shallow Soil Sampling at South Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	SGA-001									SGA-002									SGA-003								
		SGA-001-000 (0-0.5 ft)			SGA-001-001 (1-2 ft)			SGA-001-002 (2-3 ft)			SGA-002-000 (0-0.5 ft)			SGA-002-001 (1-2 ft)			SGA-002-002 (2-3 ft)			SGA-003-000 (0-0.5 ft)			SGA-003-001 (1-2 ft)			SGA-003-002 (2-3 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																												
Aluminum	33852	14300			18600			15900			13000			13700			13900			11800			18600			10500		
Antimony	31		R			R			R			R			R			R			R			R			R	
Arsenic	13.5	5.6	J		6.3	J		5	J		7	J		8.3	J		8.6	J		6.2	J		9.8			9		
Barium	440	180			179			175			189			222			240			177			195			241		
Beryllium	1.52	0.61			0.71			0.67			0.61			0.7			0.7			0.62			0.8			0.63		
Cadmium	0.4	***0.66***	J		***0.6***	J		***0.59***	J		***0.77***	J		***0.59***	J		***0.79***	J		***0.75***	J		***0.76***	J		***0.89***	J	
Calcium	GRAS	3290			2710			2670			3380			3620			3680			3520			3660			3680		
Chromium	37	15.7			18.5			16.6			14.2			14.6			16.4			13.2			20.7			12.2		
Cobalt	17.2	8.4			8.6			8.5			8.6			10.4			10.5			8.1			10			10.4		
Copper	33.9	13.7			14.2			13.8			16.8			20.2			19.5			17			21.6			21.1		
Iron	GRAS	15300			17200			16600			16100			19000			19300			15100			22700			17500		
Lead	400	14.2			12.2			12.1			14.1			13.9			14.2			14.7			14.3			13.9		
Magnesium	GRAS	2700			3130	J		2980			2960			3750			4160			2730	J		4660			3620		
Manganese	1083	515	J		464	J		483	J		514	J		625	J		659	J		420			538	J		604		
Nickel	39.3	16.4			18.5			18.2			19.6			24.3			25.7			18.3			26.3			25.9		
Potassium	GRAS	3230			3080			2630			3070			1990			2270			2760			2890			1660		
Selenium	1.33	***1.6***	J		***1.7***	J		***1.4***	J			UJ	(1.1)	***1.5***	J		***1.6***	J			UJ	(1.1)	1.1	J		1.3	J	
Sodium	GRAS		U	(346)		U	(349)		U	(344)		U	(339)		U	(344)		U	(342)		U	(346)		U	(343)		U	(343)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	34			40.3			35			31.5			31			35.3			28.9			46.6			25.9		
Zinc	119.5	59.8			58.4			56.6			60.3			61.8			63.7			60.4			69.1			62.4	J	
SEMIVOLATILES (UG/KG)																												
1,2-Dichlorobenzene	2300000		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
2,4-Dimethylphenol	1300000		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
2,4-Dinitrotoluene (2,4-DNT)	900		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
2,6-Dinitrotoluene (2,6-DNT)	900		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
2-Methylphenol	3300000		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
4-Methylphenol	330000		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
Butylbenzylphthalate	13000000		U	(423)	486				U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
Di-n-butylphthalate	6500000		U	(423)	1978			2426				U	(429)		U	(412)		U	(412)		U	(423)	3298				U	(412)
Diethylphthalate	52000000		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
N-Nitroso-di-n-propylamine	63		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		UJ	(413)
N-Nitrosodiphenylamine (1)	91000		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
Naphthalene	800000		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
Phenol	39000000		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
Pyrene	2000000		U	(423)		U	(423)		U	(413)		U	(429)		U	(413)		U	(413)		U	(423)		U	(413)		U	(413)
VOLATILES (UG/KG)																												
Acetone	2000000		NA			UJ	(13)		U	(13)		NA			U	(13)		U	(13)		NA			U	(13)		UJ	(13)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(13)		NA			U	(13)		U	(13)		NA		42				U	(13)
Vinyl Chloride	5.2		NA			U	(13)		UJ	(13)		NA			UJ	(13)		UJ	(13)		NA			UJ	(13)		R	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-24
Analytical Data for Shallow Soil Sampling at South Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	SGA-004									SGA-005									SGA-006								
		SGA-004-000 (0-0.5 ft)			SGA-004-001 (1-2 ft)			SGA-004-002 (2-3 ft)			SGA-005-000 (0-0.5 ft)			SGA-005-001 (1-2 ft)			SGA-005-002 (2-3 ft)			SGA-006-000 (0-0.5 ft)			SGA-006-001 (1-2 ft)			SGA-006-002 (2-3 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																												
Aluminum	33852	13900			17100			11800			9990			17400			18300			13300			10800			13500		
Antimony	31		R			R			R			R			R			R			R			R			R	
Arsenic	13.5	6.4	J		5.9	J		5.1	J		5.8	J		8.1	J		8.8			8.6	J		8.4			7.7	J	
Barium	440	178			184			211			156			183			200			191			212			277		
Beryllium	1.52	0.55			0.69			0.61			0.51			0.73			0.81			0.68			0.66			0.67		
Cadmium	0.4	***0.72***	J		***0.63***	J		***0.51***	J		***0.72***	J		***0.87***	J		***0.88***	J		***1***	J		***1.1***	J		***1***	J	
Calcium	GRAS	4020			2970			2710			3610			3060			3370			4060			3930			9570		
Chromium	37	11.9			17.2			12.7			10.1			16			17.7			14.9			13.3			16.6		
Cobalt	17.2	7.7			8.3			8.3			7.8			9.4			10.9			9.7			9.9			10.5		
Copper	33.9	19			14.7			14.3			14.5			14.8			18.6			19.1			20.2			19.2		
Iron	GRAS	13700			16700			14600			11900			18700			21000			17900			17800			18700		
Lead	400	15.8			12.4			11.8			13.8			13.8			15.9			14.7			13.6			13.8		
Magnesium	GRAS	2580			3020			2610			2210			3450			4260			3600			4130			6180		
Manganese	1083	490	J		460	J		483	J		471			539			650			571			608			533		
Nickel	39.3	17.3			17.8			17.8			15			19.7			24.2			23.1			27.1			22.2		
Potassium	GRAS	2750			2920			2110			2470			2440			2480			2850			1730			2410		
Selenium	1.33		UJ	(1.1)	1.3	J		***1.8***	J			U	(1.1)	***1.5***	J		***1.4***	J		***1.6***	J		***1.5***	J			U	(1.1)
Sodium	GRAS		U	(350)		U	(331)		U	(331)		U	(335)		U	(332)		U	(325)		U	(343)		U	(325)		U	(328)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)
Vanadium	72.5	25.6			36.1			26.6			23.1			30.6			35.1			31.9			27.9			35.9		
Zinc	119.5	62.9			59.6			52.5			52.1	J		61.2	J		66.5	J		66.9	J		61.6	J		66.5	J	
SEMIVOLATILES (UG/KG)																												
1,2-Dichlorobenzene	2300000		U	(835)		U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)		U	(407)
2,4-Dimethylphenol	1300000		U	(835)		U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)		U	(407)
2,4-Dinitrotoluene (2,4-DNT)	900	***48771***				U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)		U	(407)
2,6-Dinitrotoluene (2,6-DNT)	900	***4534***				U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)		U	(407)
2-Methylphenol	3300000		U	(835)		U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)		U	(407)
4-Methylphenol	330000		U	(835)		U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)		U	(407)
Butylbenzylphthalate	13000000		U	(835)		U	(418)		U	(413)		U	(418)		U	(413)	192	J			U	(413)		U	(413)		U	(407)
Di-n-butylphthalate	6500000	17826				U	(418)		U	(412)	1075			3104			1905				U	(412)	647			2202		
Diethylphthalate	52000000		U	(835)		U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)		U	(407)
N-Nitroso-di-n-propylamine	63		U	(835)		U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)		U	(407)
N-Nitrosodiphenylamine (1)	91000	4633				U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)		U	(407)
Naphthalene	800000		U	(835)		U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)		U	(407)
Phenol	39000000		U	(835)		U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)		U	(407)
Pyrene	2000000		U	(835)		U	(418)		U	(413)		U	(418)		U	(413)		U	(413)		U	(413)		U	(413)	89	J	
VOLATILES (UG/KG)																												
Acetone	2000000		NA			U	(13)		U	(13)		NA			U	(13)		U	(13)		NA			U	(13)		U	(12)
Trichloroethene (TCE)	7100		NA			U	(13)	38				NA			U	(13)		U	(13)		NA			U	(13)		U	(12)
Vinyl Chloride	5.2		NA			UJ	(13)		UJ	(13)		NA			U	(13)		U	(13)		NA			U	(13)		U	(12)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-24
Analytical Data for Shallow Soil Sampling at South Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	SGA-007									SGA-008									SGA-009								
		SGA-007-000 (0-0.5 ft)			SGA-007-001 (1-2 ft)			SGA-007-002 (2-3 ft)			SGA-008-000 (0-0.5 ft)			SGA-008-001 (1-2 ft)			SGA-008-002 (2-3 ft)			SGA-009-000 (0-0.5 ft)			SGA-009-001 (1-2 ft)			SGA-009-002 (2-3 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																												
Aluminum	33852	13900			10000			13400			11100			21300			16800			11600			11500			14500		
Antimony	31		R			R			R			R			R			R			R			R			R	
Arsenic	13.5	7.1	J		7	J		5.3	J		5.5	J		7.7	J		8.3			6.9	J		5.1	J		5.7	J	
Barium	440	195			239			200			190			207			209			194			188			200		
Beryllium	1.52	0.69			0.6			0.72			0.6			0.85			0.78			0.62			0.61			0.69		
Cadmium	0.4	***0.54***	J		0.26	J		0.37	J		***0.47***	J		***0.45***	J		0.15	J		***0.47***	J		0.36	J		0.33	J	
Calcium	GRAS	4680			3850			2240			3510			3250			3340			3930			3190			2930		
Chromium	37	16			13.1			15			13.1			21.9			16.9			13.3			13.2			15.2		
Cobalt	17.2	9.3			9.1			10.2			8.9			9.5			9.7			8.8			7.9			9.1		
Copper	33.9	18.2			18.3			15.3			16			15.5			20.1			18.4			12.1			13.3		
Iron	GRAS	17400			16900			15800			14600			20300			20000			15800			14200			16700		
Lead	400	14.2			12.4	J		12.8			14.1			12.9			13.9	J		16	J		11.3			12.5		
Magnesium	GRAS	3230			3550			2640			2560			3770			3960			3080			2270			2840		
Manganese	1083	531	J		467	J		617	J		529	J		506	J		566			526	J		453	J		513	J	
Nickel	39.3	21.1			22.6			17.5			18.4			21.6			23.8			20.4			15.7			17.4		
Potassium	GRAS	2880	J		1610	J		2580	J		2670	J		3130	J		2260			2620	J		1910	J		2090	J	
Selenium	1.33	***1.5***	J		1.2	J		***1.6***	J		***2.2***	J		***2.2***	J		1.2	J			UJ	(1.2)	***1.6***	J			U	(1.1)
Sodium	GRAS		U	(351)		U	(516)		U	(336)		U	(355)		U	(365)		U	(500)		U	(529)		U	(326)		U	(331)
Thallium	1.72		U	(1.4)	1.3	J			U	(1.3)		U	(1.4)		U	(1.5)	1.4	J			U	(1.2)		U	(1.3)		U	(1.3)
Vanadium	72.5	30.6			19.4			27.2			25.3			42.9			30			24			25.7			26.9		
Zinc	119.5	63.5			60			59.6			56.3			61			62.1			62.6			47.6			56		
SEMIVOLATILES (UG/KG)																												
1,2-Dichlorobenzene	2300000		U	(434)		U	(407)		U	(413)		U	(452)		U	(423)		U	(407)		U	(434)		U	(413)		U	(423)
2,4-Dimethylphenol	1300000		U	(434)		U	(407)		U	(413)		U	(452)		U	(423)		U	(407)		U	(434)		U	(413)		U	(423)
2,4-Dinitrotoluene (2,4-DNT)	900		UJ	(434)		U	(407)		U	(413)		U	(452)		U	(423)		U	(407)		U	(434)		U	(413)		U	(423)
2,6-Dinitrotoluene (2,6-DNT)	900		U	(434)		U	(407)		U	(413)		U	(452)		U	(423)		U	(407)		UJ	(434)		U	(413)		U	(423)
2-Methylphenol	3300000		U	(434)		U	(407)		U	(413)		U	(452)		U	(423)		U	(407)		U	(434)		U	(413)		U	(423)
4-Methylphenol	330000		U	(434)		U	(407)		U	(413)		U	(452)		U	(423)		U	(407)		U	(434)		U	(413)		U	(423)
Butylbenzylphthalate	13000000		U	(434)		U	(407)		U	(413)		U	(452)		U	(423)	44	J			U	(434)		U	(413)		U	(423)
Di-n-butylphthalate	6500000		U	(434)		UJ	(407)		U	(412)		UJ	(452)		UJ	(423)		UJ	(407)		U	(434)		UJ	(412)		UJ	(423)
Diethylphthalate	52000000		U	(434)		U	(407)		U	(413)	53	J			U	(423)		U	(407)		U	(434)		U	(413)	871		
N-Nitroso-di-n-propylamine	63		U	(434)		U	(407)		U	(413)		U	(452)		U	(423)		U	(407)		UJ	(434)		U	(413)		U	(423)
N-Nitrosodiphenylamine (1)	91000		U	(434)		U	(407)		U	(413)		U	(452)		U	(423)		U	(407)		U	(434)		U	(413)		U	(423)
Naphthalene	800000		U	(434)		U	(407)		U	(413)		U	(452)		U	(423)		U	(407)		U	(434)		U	(413)		U	(423)
Phenol	39000000		U	(434)		U	(407)		U	(413)		U	(452)		U	(423)		U	(407)		U	(434)		U	(413)		U	(423)
Pyrene	2000000		U	(434)		U	(407)		U	(413)		U	(452)		U	(423)		U	(407)		U	(434)		U	(413)		U	(423)
VOLATILES (UG/KG)																												
Acetone	2000000		NA			U	(12)		U	(13)		NA			U	(13)		U	(12)		NA		17				U	(13)
Trichloroethene (TCE)	7100		NA			U	(12)		U	(13)		NA			U	(13)		U	(12)		NA			U	(13)		U	(13)
Vinyl Chloride	5.2		NA			U	(12)		U	(13)		NA			U	(13)		U	(12)		NA			U	(13)		U	(13)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-24
Analytical Data for Shallow Soil Sampling at South Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	SGA-010									SGA-011									SGA-012								
		SGA-010-000 (0-0.5 ft)			SGA-010-001 (1-2 ft)			SGA-010-002 (2-3 ft)			SGA-011-000 (0-0.5 ft)			SGA-011-001 (1-2 ft)			SGA-011-002 (2-3 ft)			SGA-012-000 (0-0.5 ft)			SGA-012-001 (1-2 ft)			SGA-012-002 (2-3 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																												
Aluminum	33852	12900			16400			14400			17800			15800			15300			17900			18700			15800		
Antimony	31		R			R			R			UJ	(0.48)		UJ	(0.45)		UJ	(0.45)		UJ	(0.5)		UJ	(0.46)		UJ	(0.45)
Arsenic	13.5	6	J		9.5			5.6	J		8.3	J		9.5			8.6			8.3	J		9.1			10.1		
Barium	440	190			290			162			209			224			246			231			217			253		
Beryllium	1.52	0.66			0.8			0.62			0.78			0.81			0.76			0.79			0.85			0.79		
Cadmium	0.4	0.32	J		***0.64***	J		***0.45***	J		***0.61***	J		***0.43***	J		***0.6***	J		***0.61***	J		***0.46***	J		***0.58***	J	
Calcium	GRAS	4090			4250			11000			3940			3990			3930			3900			3610			3780		
Chromium	37	14.7			21.5			16.6			19.9			17.9			19.2			19.8			19.7			17.9		
Cobalt	17.2	8.5			10.6			7.9			10.2			10.4			10.9			10.3			10.4			10.2		
Copper	33.9	18.4			22.5			14.3			16.9			21.8			20.2			18.6			20.7			19.8		
Iron	GRAS	16700			21400			15300			19600			21400			20500			20300			21700			21300		
Lead	400	15.2	J		13.7			13.5			15.4			14.5			15.3			16			14.7			14.7		
Magnesium	GRAS	3100			4630			3470			3680			4240			4580			3690			4230			4280		
Manganese	1083	490			599	J		441	J		612			599			678			613			603			672		
Nickel	39.3	20.3			25.6			16.5			22.6			26.9			28.7			23.4			26.5			26.8		
Potassium	GRAS	2880			2740	J		2990	J		3490			2100			2350			3400			2480			2300		
Selenium	1.33	1.2	J		***1.5***	J		***1.7***	J			U	(1.1)	1.2	J		1.1	J		***1.7***	J		1.2	J		***2.1***	J	
Sodium	GRAS		U	(538)		U	(333)		U	(323)	197	J		237	J		246	J		191	J		228	J		251	J	
Thallium	1.72		U	(1.2)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.3)		U	(1.3)
Vanadium	72.5	27			42.6			29.5			43			34.2			39.7			43			40.5			38.1		
Zinc	119.5	65.3			74.1			60.6			67.3	J		65.5	J		66.9	J		70.8	J		67.2	J		69.6	J	
SEMIVOLATILES (UG/KG)																												
1,2-Dichlorobenzene	2300000		U	(440)		U	(418)		U	(418)		U	(429)		U	(407)		U	(407)		U	(440)		U	(418)	47	J	
2,4-Dimethylphenol	1300000		U	(440)		U	(418)		U	(418)	45	J			U	(407)		U	(407)		U	(440)		U	(418)	48	J	
2,4-Dinitrotoluene (2,4-DNT)	900		U	(440)		U	(418)		U	(418)		U	(429)		U	(407)		U	(407)		U	(440)		U	(418)		U	(418)
2,6-Dinitrotoluene (2,6-DNT)	900		U	(440)		U	(418)		U	(418)		U	(429)		U	(407)		U	(407)		U	(440)		U	(418)		U	(418)
2-Methylphenol	3300000		U	(440)		U	(418)		U	(418)	198	J			U	(407)		U	(407)		U	(440)		U	(418)	421		
4-Methylphenol	330000		U	(440)		U	(418)		U	(418)	306	J			U	(407)		U	(407)		U	(440)		U	(418)	597		
Butylbenzylphthalate	13000000		U	(440)		U	(418)		U	(418)		U	(429)		U	(407)		U	(407)		U	(440)		U	(418)		U	(418)
Di-n-butylphthalate	6500000		UJ	(440)	2363				UJ	(418)		U	(429)	2763				U	(407)		U	(440)		U	(418)		U	(418)
Diethylphthalate	52000000		U	(440)		U	(418)		U	(418)		U	(429)		U	(407)		U	(407)		U	(440)		U	(418)		U	(418)
N-Nitroso-di-n-propylamine	63		U	(440)		U	(418)		U	(418)		U	(429)		U	(407)		U	(407)		U	(440)		U	(418)		U	(418)
N-Nitrosodiphenylamine (1)	91000		U	(440)		U	(418)		U	(418)		U	(429)		U	(407)		U	(407)		U	(440)	29	J			U	(418)
Naphthalene	800000		U	(440)		U	(418)		U	(418)	16	J			U	(407)		U	(407)		U	(440)		U	(418)	21	J	
Phenol	39000000		U	(440)		U	(418)		U	(418)	230	J			U	(407)		U	(407)		U	(440)		U	(418)	477		
Pyrene	2000000					U	(418)		U	(418)		U	(429)		U	(407)		U	(407)		U	(440)		U	(418)		U	(418)
VOLATILES (UG/KG)																												
Acetone	2000000		NA			U	(13)		U	(13)		NA			UJ	(12)		UJ	(12)		NA			U	(13)		U	(13)
Trichloroethene (TCE)	7100		NA			U	(13)	2	J			NA			UJ	(12)		U	(12)		NA			U	(13)		U	(13)
Vinyl Chloride	5.2		NA			U	(13)		U	(13)		NA			UJ	(12)		U	(12)		NA			U	(13)		U	(13)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-24
Analytical Data for Shallow Soil Sampling at South Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	SGA-013									SGA-014									SGA-015								
		SGA-013-000 (0-0.5 ft)			SGA-013-001 (1-2 ft)			SGA-013-002 (2-3 ft)			SGA-014-000 (0-0.5 ft)			SGA-014-001 (1-2 ft)			SGA-014-002 (2-3 ft)			SGA-015-000 (0-0.5 ft)			SGA-015-001 (1-2 ft)			SGA-015-002 (2-3 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																												
Aluminum	33852	15000			13700			12100			14500			13600			21300			16200	J		13000	J		10600	J	
Antimony	31		UJ	(0.48)		UJ	(0.47)		R			UJ	(0.47)		R			UJ	(0.47)		U	(0.46)		U	(0.47)		U	(0.47)
Arsenic	13.5	6.4	J		6	J		4.1	J		6.8	J		5.5	J		7.6	J		8	J		8.9			8.6	J	
Barium	440	181			197			210			177			162			211			204			219			218		
Beryllium	1.52	0.63			0.66			0.58			0.62			0.66			0.85			0.78			0.73			0.66		
Cadmium	0.4	***0.51***	J		0.39	J		0.12	J		***0.52***	J		0.29	J		***0.55***	J		***0.49***	J		***0.42***	J		***0.51***	J	
Calcium	GRAS	3680			2960			2650			3370			2690			3040			3490			3830			3750		
Chromium	37	16			15.5			13.2			16.8			13.6			21.8			16.9			14.5			13.5		
Cobalt	17.2	8.4			8.8			7.7			8.8			8.6			10.6			10.6			10.6			9.9		
Copper	33.9	15.1			12.9			12.1			13.7			15.4			17.4			16.7			20.6			19.5		
Iron	GRAS	15700			16100			13800			15700			15200			20500			18900			19200			17800		
Lead	400	14.9			12.3			18	J		14.4			11.4			14.5	J		15.7	J		14.1	J		13.3	J	
Magnesium	GRAS	2740			2700			2440			2750			2590			3780			3290			3970			3770		
Manganese	1083	523			534			457			542			471			580	J		604	J		648	J		567	J	
Nickel	39.3	17.6			17.3			14.9			17.3			17.9			22.3			20.6			25.5			24.7		
Potassium	GRAS	3250			2390			2120			3040			1900			3110			2820			1760			1640		
Selenium	1.33		U	(1.1)		U	(1.1)	1.3	J			U	(1.1)	1.3	J		***1.6***	J		***2***	J		1.2	J		***1.4***	J	
Sodium	GRAS		U	(340)	139	J			U	(461)	182	J			U	(341)		U	(336)		U	(329)		U	(335)		U	(336)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.3)		U	(1.4)		U	(1.4)
Vanadium	72.5	33.7			32.1			23.4			36.2			26.3			47.7			30.8			20.8			19.5		
Zinc	119.5	62.8	J		58.4	J		50.4			58.1	J		47.4	J		67.1			64.6			64.5			60.4		
SEMIVOLATILES (UG/KG)																												
1,2-Dichlorobenzene	2300000		U	(446)		U	(423)		U	(429)		U	(429)		UJ	(418)		U	(541)		U	(423)		U	(418)		U	(418)
2,4-Dimethylphenol	1300000		U	(446)		U	(423)		U	(429)		U	(429)		U	(418)		U	(541)		U	(423)		U	(418)		U	(418)
2,4-Dinitrotoluene (2,4-DNT)	900		U	(446)		U	(423)		U	(429)		U	(429)		U	(418)		U	(541)		U	(423)		U	(418)		U	(418)
2,6-Dinitrotoluene (2,6-DNT)	900		U	(446)		U	(423)		U	(429)		U	(429)		U	(418)		U	(541)		U	(423)		U	(418)		U	(418)
2-Methylphenol	3300000		U	(446)		U	(423)		U	(429)	118	J			U	(418)		U	(541)		U	(423)		U	(418)		U	(418)
4-Methylphenol	330000		U	(446)		U	(423)		U	(429)	161	J			U	(418)		U	(541)		U	(423)		U	(418)		U	(418)
Butylbenzylphthalate	13000000		U	(446)		U	(423)		U	(429)		U	(429)		U	(418)		U	(541)		U	(423)	284	J			U	(418)
Di-n-butylphthalate	6500000		U	(446)		U	(423)		U	(429)		U	(429)		UJ	(418)		UJ	(541)	592	J		3044	J		1041	J	
Diethylphthalate	52000000		U	(446)		U	(423)		U	(429)		U	(429)		U	(418)		U	(541)		U	(423)		U	(418)		U	(418)
N-Nitroso-di-n-propylamine	63		U	(446)		U	(423)		UJ	(429)		U	(429)		R			U	(541)		U	(423)		U	(418)		U	(418)
N-Nitrosodiphenylamine (1)	91000		U	(446)		U	(423)		U	(429)		U	(429)		U	(418)		U	(541)		U	(423)		U	(418)		U	(418)
Naphthalene	800000		U	(446)		U	(423)		U	(429)		U	(429)		U	(418)		U	(541)		U	(423)		U	(418)		U	(418)
Phenol	39000000		U	(446)		U	(423)		U	(429)	168	J			U	(418)		U	(541)		U	(423)		U	(418)		U	(418)
Pyrene	2000000		U	(446)		U	(423)		U	(429)		U	(429)		U	(418)		U	(541)		U	(423)		U	(418)		U	(418)
VOLATILES (UG/KG)																												
Acetone	2000000		NA			U	(13)		U	(13)		NA			UJ	(13)		UJ	(16)		NA			UJ	(13)		UJ	(13)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(13)		NA			U	(13)		U	(16)		NA			U	(13)		U	(13)
Vinyl Chloride	5.2		NA			U	(13)		U	(13)		NA			U	(13)		U	(16)		NA			U	(13)		U	(13)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-24
Analytical Data for Shallow Soil Sampling at South Burning Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	SGA-016									SGA-017								
		SGA-016-000 (0-0.5 ft)			SGA-016-001 (1-2 ft)			SGA-016-002 (2-3 ft)			SGA-017-000 (0-0.5 ft)			SGA-017-001 (1-2 ft)			SGA-017-002 (2-3 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																			
Aluminum	33852	19800			12200	J		14200	J		16000			17400			22500		
Antimony	31		UJ	(0.48)		U	(0.48)		U	(0.47)	0.56	J			UJ	(0.49)	0.51	J	
Arsenic	13.5	6.6	J		5.3	J		5.7	J		6.7	J		6.3	J		7.3	J	
Barium	440	199			181			183			195			212			231		
Beryllium	1.52	0.74			0.64			0.7			0.67			0.75			0.86		
Cadmium	0.4	***0.71***	J		0.15	J		0.29	J		***0.68***	J		***0.43***	J		***0.58***	J	
Calcium	GRAS	3060			2770			2600			3260			3350			3080		
Chromium	37	22.1			13.1			14.6			18.6			19.2			24		
Cobalt	17.2	10.3			8			9			9.1			9.2			10.5		
Copper	33.9	15.3			10.8			12.3			15.4			15.5			17.2		
Iron	GRAS	17900			14400			16300			16900			17900			20500		
Lead	400	17.1	J		11	J		12.4	J		16.2	J		13.4	J		14	J	
Magnesium	GRAS	3140			2390			2800			2860			3070			3820		
Manganese	1083	588	J		455	J		494	J		548	J		537	J		570	J	
Nickel	39.3	18.3			15			16.3			18			19.9			22.8		
Potassium	GRAS	3840			1930			2090			3190			2850			3620		
Selenium	1.33		UJ	(1.1)		U	(1.1)	1.3	J		***1.7***	J		***2.2***	J		1.3	J	
Sodium	GRAS		U	(340)		U	(342)		U	(336)		U	(338)		U	(347)		U	(343)
Thallium	1.72		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)		U	(1.4)
Vanadium	72.5	47.2			24.8			26.3			40.3			41.4			52.7		
Zinc	119.5	89.7			48			53.6			67.9			62.1			69.9		
SEMIVOLATILES (UG/KG)																			
1,2-Dichlorobenzene	2300000		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
2,4-Dimethylphenol	1300000		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
2,4-Dinitrotoluene (2,4-DNT)	900		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
2,6-Dinitrotoluene (2,6-DNT)	900		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
2-Methylphenol	3300000		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
4-Methylphenol	330000		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
Butylbenzylphthalate	13000000		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
Di-n-butylphthalate	6500000		UJ	(412)		UJ	(423)		UJ	(418)		UJ	(402)	2239	J		1095	J	
Diethylphthalate	52000000		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
N-Nitroso-di-n-propylamine	63		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
N-Nitrosodiphenylamine (1)	91000		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
Naphthalene	800000		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
Phenol	39000000		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
Pyrene	2000000		U	(413)		U	(423)		U	(418)		U	(402)		U	(337)		U	(413)
VOLATILES (UG/KG)																			
Acetone	2000000		NA			UJ	(13)		UJ	(13)		NA			UJ	(10)		UJ	(13)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(13)		NA			UJ	(10)		U	(13)
Vinyl Chloride	5.2		NA			U	(13)		U	(13)		NA			UJ	(10)		U	(13)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-25
Analytical Data for Shallow and Deep Soil Sampling at Proving Grounds
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	PG-001												PG-002						PG-003					
		PGA-001-000 (0-0.5 ft)			PGA-001-001 (1-2 ft)			PGA-001-004 (4-5 ft)			PGA-001-009 (9-10 ft)			PGA-002-000 (0-0.5 ft)			PGA-002-001 (1-2 ft)			PGA-003-000 (0-0.5 ft)			PGA-003-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	13000	J		13800			9090			10600			10700			10900			8840			12000		
Antimony	31		UJ	(0.46)		R			R			R		0.79	J			R			R			R	
Arsenic	13.5	5.4	J		7.4	J		8.7	J		7.8	J		6	J		6.6	J		5.6	J		7.8	J	
Barium	440	147			203			253			231			173			179			193			260		
Beryllium	1.52	0.53			0.7			0.57			0.61			0.55	J		0.62	J		0.54	J		0.65		
Cadmium	0.4	***0.43***	J		***0.81***	J		***0.95***	J		***0.99***	J		***0.92***			***0.78***			0.32	J		0.12	J	
Calcium	GRAS	4050	J		3370			3800			4270			4820			5600			3730			3280		
Chromium	37	14.3	J		13.8			11.4			13.8			13.5	J		12.7	J		10.7			13.3		
Cobalt	17.2	6.8			9.6			10.4			9.8			8			9			7.7			9.4		
Copper	33.9	13.4			15.1			20			19.6			21.7			20.8			15.9			19.4		
Iron	GRAS	13900			17200			16500			17700			14700			15900			12600			17600		
Lead	400	14.1			13.8			13			13.3			30			20.3			19.8	J		12.9	J	
Magnesium	GRAS	2650			3220			3560			4010			2650			2770			2350			3330		
Manganese	1083	384			542			791			555			502			562			507			542		
Nickel	39.3	14.6			19.6			28.3			22.7			17.8			21.5			15.8			22.8		
Potassium	GRAS	2570			2070			1690			2300			2760	J		2150	J		2330			2030		
Selenium	1.33	***1.4***	J		***1.8***	J			U	(1.1)	***1.4***	J			UJ	(1.2)	***1.5***	J			UJ	(1.2)	***1.9***	J	
Sodium	GRAS		U	(330)		U	(330)		U	(343)		U	(347)	120	J		191	J			U	(560)		U	(514)
Thallium	1.72		U	(1.3)		U	(1.3)		U	(1.4)		U	(1.4)		U	(1.2)		U	(1.1)		U	(1.2)		U	(1.1)
Vanadium	72.5	30.5			27.7			20.8			28.5			21.8	J		18.1	J		19.4			22.9		
Zinc	119.5	53.1			57.9	J		61.5	J		68.2	J		***127***			88.8			62.1			58.2		
SEMIVOLATILES (UG/KG)																									
4-Chloro-3-methylphenol	NA		U	(418)		UJ	(413)		U	(413)		U	(423)		U	(446)		U	(418)		U	(446)		U	(418)
Butylbenzylphthalate	13000000		U	(418)		U	(413)		U	(413)		U	(423)	344	J			UJ	(418)		UJ	(446)	120	J	
Di-n-butylphthalate	6500000	3542			175	J		50	J		56	J		2769	J		2384	J			UJ	(446)	3196		
Pentachlorophenol	2500		U	(1013)		U	(1000)		U	(1000)		U	(1026)		U	(1081)		U	(1013)		U	(1081)		U	(1013)
Pyrene	2000000	145	J		128	J			U	(413)		U	(423)		U	(446)		U	(418)		U	(446)		U	(418)
bis(2-Ethylhexyl)phthalate	32000		U	(418)		U	(413)		U	(413)		U	(423)	46	J		45	J			UJ	(446)	35	J	
VOLATILES (UG/KG)																									
Acetone	2000000		NA			U	(13)	11	J		18	J			NA		14	J			NA			UJ	(13)
Toluene	1900000		NA			U	(13)		U	(13)		U	(13)		NA			U	(13)		NA			U	(13)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(13)	1	J			NA			U	(13)		NA			U	(13)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-25
Analytical Data for Shallow and Deep Soil Sampling at Proving Grounds
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	PG-004						PG-005												PG-006					
		PGA-004-000 (0-0.5 ft)			PGA-004-001 (1-2 ft)			PGA-005-000 (0-0.5 ft)			PGA-005-001 (1-2 ft)			PGA-005-004 (4-5 ft)			PGA-005-009 (9-10 ft)			PGA-006-000 (0-0.5 ft)			PGA-006-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)																									
Aluminum	33852	10200			9560			13100			11300			11100			1360			10400			12500		
Antimony	31		UJ	(0.47)	4.1	J		0.47	J			R			R			R		1.4	J		1.8	J	
Arsenic	13.5	4.5	J		5.4	J		6	J		6.5	J		6.9	J			U	(0.68)	4.8	J		4.9	J	
Barium	440	168			175			202			185			232			12.5			152			176		
Beryllium	1.52	0.5	J		0.53	J		0.6			0.59			0.6			0.06	J		0.51	J		0.54		
Cadmium	0.4	***0.55***	J		***0.7***	J		***0.82***	J		***0.76***	J		***0.91***	J			U	(0.1)	***0.55***	J		0.21	J	
Calcium	GRAS	2920			2840			3400			2870			3510			342			3570			2450		
Chromium	37	12.3	J		13	J		14.8			12			13.9			1.9	J		13.4	J		15.2		
Cobalt	17.2	7.4			8.6			8.8			8.6			9.6			0.52	J		6.6			7		
Copper	33.9	22.6			14.9			19.8			14.6			19			1.3	J		16.6			12.8	J	
Iron	GRAS	13200			14000			15600			14700			16500			1590			12800			13500		
Lead	400	15.3			21			20.4			14.8			13.1			3.4			24.7			17.1		
Magnesium	GRAS	2500			2530			2980			2680			3580			339			2260			2450		
Manganese	1083	461			538			524			556			509			15			401			374	J	
Nickel	39.3	15.5			18.2			18.6			18.6			23.8			0.96	J		14.3			14.5		
Potassium	GRAS	2310	J		1580	J		2790			2070			1950			323			2360	J		2460	J	
Selenium	1.33	***1.6***	J		1.3	J		1.2	J		***1.8***	J			U	(1)		U	(0.86)	***1.7***	J		***1.5***	J	
Sodium	GRAS	92.1	J		59.1	J			U	(334)		U	(336)		U	(317)		U	(264)		U	(505)	243	J	
Thallium	1.72		U	(1.1)		U	(1.1)		U	(1.4)		U	(1.4)	1.3	J			U	(1.1)		U	(1.1)		U	(1.1)
Vanadium	72.5	22.6	J		19.7	J		31			25.2			20.9			3.4			20.9	J		27		
Zinc	119.5	95.7			57			67.5	J		53.6	J		56.7	J		5.7	J		61.4			49.8	J	
SEMIVOLATILES (UG/KG)																									
4-Chloro-3-methylphenol	NA		U	(407)		U	(388)		U	(407)		U	(398)	93	J			U	(337)		U	(413)		U	(388)
Butylbenzylphthalate	13000000		UJ	(407)		UJ	(388)		U	(407)		U	(398)		U	(407)		U	(337)		U	(413)		UJ	(388)
Di-n-butylphthalate	6500000	2363	J			U	(388)	181	J		201	J		199	J		187	J			U	(413)		UJ	(388)
Pentachlorophenol	2500		U	(988)		U	(941)		U	(988)		U	(964)	14	J			U	(816)		U	(1000)		U	(941)
Pyrene	2000000		U	(407)		U	(388)		UJ	(407)		UJ	(398)	243	J			UJ	(337)		U	(413)		U	(388)
bis(2-Ethylhexyl)phthalate	32000		UJ	(407)	33	J			U	(407)		U	(398)		U	(407)		U	(337)	36	J		49	J	
VOLATILES (UG/KG)																									
Acetone	2000000		NA			UJ	(12)		NA			U	(12)	9	J			U	(10)		NA			UJ	(12)
Toluene	1900000		NA			U	(12)		NA			U	(12)	0.5	J			U	(10)		NA			U	(12)
Trichloroethene (TCE)	7100		NA			U	(12)		NA		1	J			U	(12)		U	(10)		NA			U	(12)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-26
Analytical Data for Groundwater Sampling of Newly Installed Monitoring Well at Proving Grounds
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-64B		
		BMW-064-065		
		R	Q	QL
DISSOLVED METALS (UG/L)				
Aluminum	37000	66.6	B	
Barium	2000	320	E	
Calcium	GRAS	51600		
Copper	1300	1.1	B	
Magnesium	GRAS	14100		
Manganese	180	54		
Nickel	100	5.1	B	
Potassium	GRAS	8770	E	
Sodium	GRAS	22500		
Zinc	2000	5.5	B	
TOTAL METALS (UG/L)				
Aluminum	37000	352		
Antimony	6	2.8	B	
Barium	2000	238		
Cadmium	5	0.4	B	
Calcium	GRAS	50300		
Copper	1300	4.5	B	
Iron	GRAS	212		
Magnesium	GRAS	13500		
Manganese	180	69.2		
Nickel	100	6.8	B	
Potassium	GRAS	7350	E	
Sodium	GRAS	22000		
Vanadium	260	0.67	B	
Zinc	2000	7.3	B	
VOLATILES (UG/L)				
Acetone	610	10	B	
Methylene chloride	5	1	J	
SEMIVOLATILES (UG/L)				
bis(2-Ethylhexyl)phthalate	6	2	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-27
Analytical Data for Shallow and Deep Soil Sampling at the Potential Landfill Area North of Proving Grounds
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	PL-001						PL-002												PL-003					
		PLA-001-000 (0-0.5 ft)			PLA-001-001 (1-2 ft)			PLA-002-000 (0-0.5 ft)			PLA-002-001 (1-2 ft)			PLA-002-004 (4-5 ft)			PLA-002-009 (9-10 ft)			PLA-003-000 (0-0.5 ft)			PLA-003-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.047	J	
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.18	J	
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)	0.11	J			U	(1)		U	(1)		U	(1)		U	(1)		U	(1)	0.13	J	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.068	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.047	J			U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	6240			14500			11600	J		17900			14800	J		924	J		8520			12900		
Antimony	31	0.5	J		***81.8***	J		0.5	J			UJ	(0.46)		UJ	(0.43)		UJ	(0.45)	9.1	J		11.6	J	
Arsenic	13.5	2.3	J		8.4			5.3	J		9.1			6.1	J			U	(0.82)	5.4	J		7.5	J	
Barium	440	74.4			347			152			272			190			19.8			147			191		
Beryllium	1.52	0.29	J		0.69			0.59			0.82			0.6			0.06	J		0.45	J		0.65	J	
Cadmium	0.4	***0.85***			***1.2***			***0.64***	J		***0.46***	J		***0.62***	J			U	(0.12)	***1.3***			***0.84***		
Calcium	GRAS	136000			3900			3240	J		3930			2570	J		287	J		15700			6010		
Chromium	37	8.5	J		***688***			12.8	J		21.1			17.1	J		1.3	J		13.1	J		17	J	
Cobalt	17.2	4.7			***18.7***			6.1			12.6			8			0.45	J		7.3			9.7		
Copper	33.9	11.7			***47.9***	J		18.8			20.1			14.1			0.91	J		30.4			25.4		
Iron	GRAS	9540			20400			14600			21800			15400			1160			23200			17700		
Lead	400	15.3			***2910***			17.8			15.7	J		12.5			1.8	J		325			61.9		
Magnesium	GRAS	16700			3450			2560			4700			3100			245			3090			3040		
Manganese	1083	385			523	J		303			898	J		449			27.9			385			565		
Nickel	39.3	11.4			26.9			17.3			26.6			18.4			0.63	J		20.4			19.6		
Potassium	GRAS	2630	J		2450	J		2500			2960			2560			257			2440	J		2400	J	
Selenium	1.33	***1.4***	J			UJ	(1.1)	***1.5***	J			UJ	(1.1)		U	(1)		U	(1)		UJ	(1.1)	***1.9***	J	
Sodium	GRAS	270	J		311	J			U	(353)		U	(327)		U	(306)		U	(316)	291	J		75.5	J	
Thallium	1.72		U	(1.1)	1.4	J			U	(1.4)		U	(1.3)		U	(1.2)		U	(1.3)		U	(1.1)		U	(1.1)
Vanadium	72.5	12.7	J		30.6			26.2			42.5			35.3			2.3			14.9	J		24.3	J	
Zinc	119.5	42			***150***	J		70.4			71.8			51.7			4.7			***728***			93.3		
SEMIVOLATILES (UG/KG)																									
Benzo(b)fluoranthene	610	77	J			U	(398)		U	(423)		U	(402)		U	(388)		U	(398)		U	(398)		U	(402)
Butylbenzylphthalate	13000000		U	(388)		U	(398)		U	(423)		U	(402)		U	(388)	769				UJ	(398)		U	(402)
Chrysene	24000	27	J			U	(398)		U	(423)		U	(402)		U	(388)		U	(398)		U	(398)		U	(402)
Di-n-butylphthalate	6500000		U	(388)	2674				U	(423)	441				U	(388)	2823			2789	J			U	(402)
Diethylphthalate	52000000		U	(388)		U	(398)		U	(423)		U	(402)		U	(388)		U	(398)		U	(398)	72	J	
Phenol	39000000		U	(388)		U	(398)		U	(423)		U	(402)		U	(388)		U	(398)		U	(398)		U	(402)
Pyrene	2000000		U	(388)		U	(398)		U	(423)		U	(402)		U	(388)		U	(398)		U	(398)		U	(402)
bis(2-Ethylhexyl)phthalate	32000		U	(388)		U	(398)		U	(423)		U	(402)		U	(388)	91	J			U	(398)	701		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-27
Analytical Data for Shallow and Deep Soil Sampling at the Potential Landfill Area North of Proving Grounds
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	PL-004						PL-005						PL-006											
		PLA-004-000 (0-0.5 ft)			PLA-004-001 (1-2 ft)			PLA-005-000 (0-0.5 ft)			PLA-005-001 (1-2 ft)			PLA-006-000 (0-0.5 ft)			PLA-006-001 (1-2 ft)			PLA-006-004 (4-5 ft)			PLA-006-009 (9-10 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																									
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2	0.068	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.26	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.022	J			U	(0.5)	0.014	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																									
Aluminum	33852	10200			4120			13300			10500			12900	J		13100	J		907			636		
Antimony	31	1.1	J			R		3.2	J			R		2.1	J			UJ	(0.46)		R			R	
Arsenic	13.5	5.6	J		1.6	J		8.2	J		7	J		6.8	J		6.5	J			U	(0.73)		U	(0.71)
Barium	440	149			60.9			207			181			195			213			14.7			12.3		
Beryllium	1.52	0.5	J		0.23	J		0.64	J		0.6	J		0.6			0.61			0.04	J		0.04	J	
Cadmium	0.4	***0.51***	J		0.15	J		***1***			***0.61***	J		***0.59***	J		***0.65***	J			U	(0.1)		U	(0.1)
Calcium	GRAS	2820			1080			4430			3040			3030	J		2940	J		305			281		
Chromium	37	11	J		4.7	J		18.1	J		12	J		14.3	J		13.8	J		1.3	J		1.2	J	
Cobalt	17.2	7.4			2.9			10			9.1			8.1			8.2			0.36	J		0.36	J	
Copper	33.9	14.2			4.7			22.1			16.5			17.8			17				U	(1.7)		U	(1.6)
Iron	GRAS	12900			5290			23600			15000			15700			15700			1100			845		
Lead	400	18.2			5.1			25.9			12.2			23.9			11.5				U	(3.3)		U	(3.3)
Magnesium	GRAS	2240			1010			3210			2980			2900			3380			253			207		
Manganese	1083	456			205			644			527			488			624			35.4	J		26.7	J	
Nickel	39.3	15.9			6.6			21.7			19.9			18.5			21			0.75	J		0.65	J	
Potassium	GRAS	1910	J		735	J		3310	J		1700	J		2520			1940			247			206		
Selenium	1.33	1.3	J			UJ	(0.96)	***3.1***	J		***1.7***	J			U	(1.1)	***1.8***	J			UJ	(0.92)		UJ	(0.9)
Sodium	GRAS	114	J		173	J		66	J		126	J			U	(338)		U	(327)		U	(281)		U	(276)
Thallium	1.72		U	(1.1)		U	(0.98)		U	(1.2)		U	(1.1)		U	(1.4)		U	(1.3)		U	(1.1)		U	(1.1)
Vanadium	72.5	20.1	J		8.6	J		27.4	J		21.8	J		28.4			29.3			2.4			1.8		
Zinc	119.5	54.6			20.5			77.1			56.3			63.8			47.3				U	(4.8)		U	(5.4)
SEMIVOLATILES (UG/KG)																									
Benzo(b)fluoranthene	610		U	(413)		U	(375)		U	(440)		U	(418)		U	(418)		U	(402)		U	(347)		U	(344)
Butylbenzylphthalate	13000000		UJ	(413)	1204	J			UJ	(440)		U	(418)		U	(418)		U	(402)		U	(347)		U	(344)
Chrysene	24000		U	(413)		U	(375)		U	(440)		U	(418)		U	(418)		U	(402)		U	(347)		U	(344)
Di-n-butylphthalate	6500000		U	(413)	2700	J			U	(440)		U	(582)		U	(418)		U	(402)		U	(347)		U	(344)
Diethylphthalate	52000000		U	(413)		U	(375)		U	(440)		U	(418)		U	(418)		U	(402)		U	(347)		U	(344)
Phenol	39000000		U	(413)		U	(375)		U	(440)		U	(418)	48	J			U	(402)		U	(347)		U	(344)
Pyrene	2000000	89	J			U	(375)		U	(440)		U	(418)		U	(418)		U	(402)		U	(347)		U	(344)
bis(2-Ethylhexyl)phthalate	32000		U	(413)		U	(375)		U	(440)		U	(418)		U	(418)		U	(402)		U	(347)		U	(344)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-28

Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area North of the Former Nike Maintenance Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NM-001																	
		NMA-001-000 (0-0.5 ft)			NMA-001-001 (1-2 ft)			NMA-001-002 (2-3 ft)			NMA-001-004 (4-5 ft)			NMA-001-009 (9-10 ft)			NMA-001-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	11100			8530			8590			7440			6890			743		
Antimony	31		R			R			R			R			R			R	
Arsenic	13.5	6.8	J		6	J		8.7			8.5	J		6.3	J			U	(0.72)
Barium	440	226	J		207	J		260	J		223	J		189	J		15.1	J	
Beryllium	1.52	0.65			0.55			0.62			0.56			0.51			0.05	J	
Cadmium	0.4	***0.75***	J		***0.56***	J		***0.74***	J		***0.51***	J		***0.64***	J			U	(0.1)
Calcium	GRAS	4780			5200			4430			4560			4270			439		
Chromium	37	14.2			11.3			12.7			10.4			11.2			2.3	J	
Cobalt	17.2	9.2			8.2			10.3			7.7			6.8			0.62	J	
Copper	33.9	17.9	J		16.4	J		19.9	J		18.5	J		16.8	J		0.46	J	
Iron	GRAS	15700			13600			16600			15500			13800			1100		
Lead	400	18.4			20.3			14.5			14.8			12.3			2	J	
Magnesium	GRAS	2860			2700			3440			3510			3270			310		
Manganese	1083	549	J		489	J		722	J		489	J		498	J		32.9	J	
Nickel	39.3	20.4	J		18.3	J		27.7	J		22.5	J		22	J		1.2	J	
Potassium	GRAS	3010			2420			2080			1750			1740			238		
Selenium	1.33	1.3	J		1.2	J		***1.5***	J			U	(1.2)		U	(1.1)		U	(0.91)
Sodium	GRAS		U	(353)		U	(337)		U	(330)		U	(359)		U	(350)		U	(279)
Vanadium	72.5	27.3			22.5			22.9			23.2			19.2			2.1		
Zinc	119.5	72.5			64.2			63.6			63.8			61.8			4.6		
SEMIVOLATILES (UG/KG)																			
Butylbenzylphthalate	13000000		U	(446)	740			223	J		68	J			U	(429)		U	(347)
Di-n-butylphthalate	6500000		U	(446)	3150			3356			3593			3406			2204		
Pyrene	2000000	60	J			U	(413)		U	(418)		U	(434)		U	(429)		U	(347)
VOLATILES (UG/KG)																			
M/P-Xylenes	NA		NA			U	(13)		U	(13)		U	(13)		U	(13)		U	(11)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-28
Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area North of the Former Nike Maintenance Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NM-002																	
		NMA-002-000 (0-0.5 ft)			NMA-002-001 (1-2 ft)			NMA-002-002 (2-3 ft)			NMA-002-004 (4-5 ft)			NMA-002-009 (9-10 ft)			NMA-002-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)	0.033	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	*8400*			*9150*			*9180*			*7940*			*5930*			*1180*		
Antimony	31		R			R		0.65	J			R			R			UJ	(0.38)
Arsenic	13.5	8.2	J		9.3			8.7	J		9.1			6	J			U	(0.71)
Barium	440	155	J		206	J		296	J		221	J		164	J		16.8		
Beryllium	1.52	0.65			0.61			0.62			0.63			0.46			0.05	J	
Cadmium	0.4	***0.55***	J		***0.69***	J		***0.66***	J		***0.72***	J		***0.49***	J			U	(0.1)
Calcium	GRAS	4000			11300			5300			3570			3000			349		
Chromium	37	12			12.6			13.3			11.2			9			3.4	J	
Cobalt	17.2	10.7			9.2			9.5			9.8			7.4			0.57	J	
Copper	33.9	18.1	J		20.4	J		20	J		22.5	J		15.2	J		1.8		
Iron	GRAS	16300			17300			17600			16100			12000			1400		
Lead	400	16			13.8			14.2			13.4			10.7			1.9	J	
Magnesium	GRAS	4380			4690			4370			3710			2730			382		
Manganese	1083	700	J		614	J		491	J		727	J		489	J		36.3		
Nickel	39.3	28	J		25.1	J		24.7	J		24.5	J		19.1	J		1.8	J	
Potassium	GRAS	1520			1870			1930			1730			1400			280		
Selenium	1.33	***1.5***	J		1.1	J		1.2	J		1.1	J		***1.4***	J			U	(0.89)
Sodium	GRAS		U	(354)	732			962			1090			590				U	(273)
Vanadium	72.5	22.4			26.7			25.8			25.2			17.6			2.9		
Zinc	119.5	62.9			61.3			66			64.5			44.3			6.3	J	
SEMIVOLATILES (UG/KG)																			
Butylbenzylphthalate	13000000		U	(423)		U	(423)		U	(413)		U	(418)		U	(355)		U	(340)
Di-n-butylphthalate	6500000		U	(1449)		U	(42)		U	(22)		U	(2828)		U	(388)		U	(1056)
Pyrene	2000000		U	(423)	164	J			U	(413)		U	(418)		U	(355)		U	(340)
VOLATILES (UG/KG)																			
M/P-Xylenes	NA		NA			U	(13)		U	(13)		U	(13)		U	(11)		U	(10)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-28
Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area North of the Former Nike Maintenance Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NM-003																	
		NMA-003-000 (0-0.5 ft)			NMA-003-001 (1-2 ft)			NMA-003-002 (2-3 ft)			NMA-003-004 (4-5 ft)			NMA-003-009 (9-10 ft)			NMA-003-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)	0.32	J			U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.058	J		0.05	J			U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	9560			10100			10300			7920			6820			1580		
Antimony	31		R			R			R			R			R			UJ	(0.39)
Arsenic	13.5	4.4	J		5	J		6.6	J		9.8			8.1	J			U	(0.72)
Barium	440	206	J		222	J		216	J		326	J		185	J		17		
Beryllium	1.52	0.61			0.6			0.65			0.61			0.55			0.06	J	
Cadmium	0.4	***0.55***	J		***0.48***	J		***0.54***	J		***0.6***	J		***0.71***	J			U	(0.1)
Calcium	GRAS	3120			3040			3380			4310			4410			479		
Chromium	37	11.6			11.7			11.8			11.1			10.2			2.2	J	
Cobalt	17.2	8.8			9.5			11.1			10.7			10.3			0.88	J	
Copper	33.9	13.3	J		11.2	J		12.2	J		21.3	J		19	J		2		
Iron	GRAS	12900			13600			15700			16300			15100			1820		
Lead	400	14.3			13.8			15.1			15.3			13.5			2.2	J	
Magnesium	GRAS	2200			2380			3030			3400			3220			453		
Manganese	1083	537	J		563	J		713	J		753	J		690	J		49.3		
Nickel	39.3	15.6	J		16	J		19.6	J		25.9	J		24.1	J		2.1	J	
Potassium	GRAS	3080			2180			1600			1620			1650			379		
Selenium	1.33	***2.1***	J		1.1	J		***2***	J			U	(1.1)		U	(1.1)		U	(0.91)
Sodium	GRAS		U	(344)		U	(339)		U	(339)		U	(345)		U	(352)		U	(279)
Vanadium	72.5	24			22.7			23.1			23.7			21.7			3.8		
Zinc	119.5	65.7			53.1			52.8			60.3			62.5			6.7	J	
SEMIVOLATILES (UG/KG)																			
Butylbenzylphthalate	13000000		U	(429)		U	(418)		U	(418)		U	(434)		U	(429)		U	(344)
Di-n-butylphthalate	6500000		U	(36)		U	(2041)		U	(102)		U	(39)		U	(60)		U	(1501)
Pyrene	2000000		U	(429)		U	(418)		U	(418)		U	(434)		U	(429)		U	(344)
VOLATILES (UG/KG)																			
M/P-Xylenes	NA		NA			U	(13)		U	(13)		U	(13)		U	(13)		U	(10)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-28
Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area North of the Former Nike Maintenance Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NM-004																	
		NMA-004-000 (0-0.5 ft)			NMA-004-001 (1-2 ft)			NMA-004-002 (2-3 ft)			NMA-004-004 (4-5 ft)			NMA-004-009 (9-10 ft)			NMA-004-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.46	J	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.22	J		0.041	J		0.13	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	6310			4110			1770			2470			1540			1850		
Antimony	31		R			R		0.57	J			R			UJ	(0.39)		UJ	(0.4)
Arsenic	13.5	4.2	J		3.3	J			U	(0.76)	1.1	J			U	(0.71)		U	(0.73)
Barium	440	234	J		154	J		44.5	J		77.7	J		19.2			23.7		
Beryllium	1.52	0.48			0.3			0.12	J		0.18	J		0.07	J		0.07	J	
Cadmium	0.4	***0.63***	J		0.25	J			U	(0.11)	0.14	J			U	(0.1)		U	(0.1)
Calcium	GRAS	10500			4480			1370			2320			786			1150		
Chromium	37	9.5			6			3	J		3.8	J		3.1	J		3	J	
Cobalt	17.2	8.7			4.6			1.6			2.8			0.85	J		1		
Copper	33.9	20.8	J		10.2	J			U	(2.6)	5.7	J		2.2			1.9		
Iron	GRAS	10600			7480			2810			4450			1770			2290		
Lead	400	14.7			8.5			3.4			5.7			2.1	J		2.5	J	
Magnesium	GRAS	2830			1840			815			1170			534			602		
Manganese	1083	505	J		262	J		111	J		201	J		46.7			62.9		
Nickel	39.3	16.4	J		10.5	J		4	J		7.1	J		1.7	J		2.1	J	
Potassium	GRAS	3470			1860			773			907			465			452		
Selenium	1.33	***1.7***	J			U	(1)		U	(0.95)		U	(1)		U	(0.9)		U	(0.92)
Sodium	GRAS		U	(358)		U	(319)		U	(292)		U	(312)		U	(275)		U	(281)
Vanadium	72.5	17.8			12.3			5.2			7.4			4			5.5		
Zinc	119.5	94.7			40.2			12.3			20			7.1	J		9.5	J	
SEMIVOLATILES (UG/KG)																			
Butylbenzylphthalate	13000000		U	(440)		U	(407)		U	(359)		U	(398)		U	(347)		U	(347)
Di-n-butylphthalate	6500000		U	(209)		U	(374)		U	(25)		U	(2462)		U	(845)		U	(562)
Pyrene	2000000		U	(440)		U	(407)		U	(359)		U	(398)		U	(347)		U	(347)
VOLATILES (UG/KG)																			
M/P-Xylenes	NA		NA			U	(12)		U	(11)	1	J			U	(11)		U	(11)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-28
Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area North of the Former Nike Maintenance Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NM-005																	
		NMA-005-000 (0-0.5 ft)			NMA-005-001 (1-2 ft)			NMA-005-002 (2-3 ft)			NMA-005-004 (4-5 ft)			NMA-005-009 (9-10 ft)			NMA-005-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	13600			20400			14000			15800			12500			798		
Antimony	31		UJ	(0.47)		UJ	(0.46)		UJ	(0.46)		UJ	(0.48)		UJ	(0.49)		UJ	(0.4)
Arsenic	13.5	5.7	J		6	J		7.4	J		8.9			10.7				U	(0.73)
Barium	440	230			368			211			227			248			12.3		
Beryllium	1.52	0.63			0.84			0.67			0.72			0.69			0.04	J	
Cadmium	0.4	***0.99***	J		***1.3***			***1.1***	J		***1.1***	J		***0.87***	J			U	(0.1)
Calcium	GRAS	4480			3940			3850			3930			4290			349		
Chromium	37	16.1			21			15.1			18.3			19.1			3.1	J	
Cobalt	17.2	8.8			11.1			11.2			10.3			6.3			0.46	J	
Copper	33.9	18.8			16.5			18.9			22.4			23.5			1	J	
Iron	GRAS	16600			20900			18500			20900			21700			1120		
Lead	400	16.7			17			15.3			14.8			16.2			1.9	J	
Magnesium	GRAS	3370			3990			3910			4370			4280			268		
Manganese	1083	504			647			780			703			285			27.8		
Nickel	39.3	20.1			21.7			27.1			27.4			20.1			1.3	J	
Potassium	GRAS	3780			3760			1960			2660			2620			251		
Selenium	1.33		U	(1.1)	1.3	J		1.3	J			U	(1.1)		U	(1.1)		U	(0.92)
Sodium	GRAS		U	(337)		U	(328)	552				U	(340)		U	(351)		U	(282)
Vanadium	72.5	31.7			39.9			23.5			35.1			32.5			2.5		
Zinc	119.5	75.7	J		86.4	J		65.6	J		73.4	J		75.9	J		4.1	J	
SEMIVOLATILES (UG/KG)																			
Butylbenzylphthalate	13000000		U	(402)		U	(402)		U	(407)		U	(418)		U	(429)		U	(347)
Di-n-butylphthalate	6500000		U	(402)		U	(402)		U	(407)		U	(418)		U	(429)	2264		
Pyrene	2000000		U	(402)		U	(402)		U	(407)		U	(418)		U	(429)		U	(347)
VOLATILES (UG/KG)																			
M/P-Xylenes	NA		NA			U	(12)		U	(12)		U	(13)		U	(13)		U	(11)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-28
Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area North of the Former Nike Maintenance Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NM-006																	
		NMA-006-000 (0-0.5 ft)			NMA-006-001 (1-2 ft)			NMA-006-002 (2-3 ft)			NMA-006-004 (4-5 ft)			NMA-006-009 (9-10 ft)			NMA-006-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.018	J			U	(0.5)	0.94			0.79			0.21	J		0.067	J	
METALS (MG/KG)																			
Aluminum	33852	9370			14800			9050			13900			9350			1120		
Antimony	31		R			R			R			R			R			R	
Arsenic	13.5	8.1	J		7.9	J		11.3			9.4			7	J			U	(0.74)
Barium	440	254			170			184			149			198			13.3		
Beryllium	1.52	0.63			0.73			0.63			0.79			0.59			0.07	J	
Cadmium	0.4	***0.77***	J		***0.66***	J		0.31	J		0.34	J		0.32	J			U	(0.11)
Calcium	GRAS	4820			3200			2850			4060			3450			402		
Chromium	37	13.5			14.8			10.8			13.5			11.2			2.6	J	
Cobalt	17.2	10.9			9.9			13.2			11.4			8.6			0.39	J	
Copper	33.9	19.3			17.3			11.4			19.2			17.8			2.6		
Iron	GRAS	16600			18300			15100			18300			14900			1450		
Lead	400	13.4			14			13.6			14.1			11.9			1.5	J	
Magnesium	GRAS	3420			3230			2280			3170			3090			284		
Manganese	1083	785	J		392	J		730	J		583	J		533	J		13.9	J	
Nickel	39.3	26.3			20.4			15.4			17.3			19			1.5	J	
Potassium	GRAS	1680			2190			1750			1860			1600			258		
Selenium	1.33	1.3	J		***1.6***	J		***1.6***	J		***1.6***	J		1.3	J			UJ	(0.94)
Sodium	GRAS		U	(331)		U	(329)		U	(349)		U	(354)		U	(320)		U	(287)
Vanadium	72.5	24.9			29.9			30.4			19.5			15.2			1.9		
Zinc	119.5	63.2			55.6			34.5			44.1			51.4			6.8		
SEMIVOLATILES (UG/KG)																			
Butylbenzylphthalate	13000000		U	(413)		U	(407)		U	(429)		U	(429)		U	(418)		U	(344)
Di-n-butylphthalate	6500000		U	(413)		U	(407)		U	(429)		U	(429)		U	(418)		U	(344)
Pyrene	2000000	56	J			U	(407)		U	(429)		U	(429)		U	(418)		U	(344)
VOLATILES (UG/KG)																			
M/P-Xylenes	NA		NA			U	(12)		U	(13)		U	(13)		U	(13)		U	(10)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-28
Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area North of the Former Nike Maintenance Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	NM-007																	
		NMA-007-000 (0-0.5 ft)			NMA-007-001 (1-2 ft)			NMA-007-002 (2-3 ft)			NMA-007-004 (4-5 ft)			NMA-007-009 (9-10 ft)			NMA-007-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.8		U	(0.75)		U	(0.75)		U	(0.75)		U	(1)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	12000			9930			8700			10300			8130			882		
Antimony	31		R			R			R			R			R			R	
Arsenic	13.5	8.7			8.9			4.7	J		2.6	J		9.1				U	(0.74)
Barium	440	187			265			199			141			327			14.3		
Beryllium	1.52	0.65			0.62			0.54			0.64			0.6			0.11	J	
Cadmium	0.4	***0.6***	J		***0.64***	J		0.34	J		0.24	J		***0.49***	J			U	(0.11)
Calcium	GRAS	4840			4080			2950			3810			4170			357		
Chromium	37	12.6			12.4			10.7			11.3			10.6			2.8	J	
Cobalt	17.2	8.8			9.8			6.2			4.8			15.8			0.61	J	
Copper	33.9	18.4			20.9			12			13.5			18.6			1	J	
Iron	GRAS	17700			17500			11200			10600			16700			1650		
Lead	400	14.1			14.2			12.1			12.9			14.3			1.4	J	
Magnesium	GRAS	2970			3600			2040			2620			3080			229		
Manganese	1083	488	J		782	J		497	J		119	J		392	J		18	J	
Nickel	39.3	20.9			26.4			12.5			10.9			20.6			1.5	J	
Potassium	GRAS	2020			1700			1770			1270			1500			241		
Selenium	1.33	***1.5***	J		***1.5***	J		***1.8***	J			UJ	(1.1)	***1.4***	J			UJ	(0.93)
Sodium	GRAS		U	(321)		U	(323)		U	(353)		U	(331)		U	(338)		U	(285)
Vanadium	72.5	26.2			24.3			23.9			16.3			21			2.3		
Zinc	119.5	57.2			62.1			41.7			43.7			58.1			4.5		
SEMIVOLATILES (UG/KG)																			
Butylbenzylphthalate	13000000		U	(407)		U	(402)		U	(418)		U	(407)		U	(418)		U	(347)
Di-n-butylphthalate	6500000	802				U	(402)		U	(418)		U	(407)	1947			877		
Pyrene	2000000		U	(407)		U	(402)		U	(418)		U	(407)		U	(418)		U	(347)
VOLATILES (UG/KG)																			
M/P-Xylenes	NA		NA			U	(12)		U	(13)		U	(12)		U	(13)		U	(11)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-29

Analytical Data for Groundwater Sampling of Existing Monitoring Wells, Waste Disposal Area North of Nike Maintenance Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-22A			MW-22B		
		AMW-022-114			BMW-022-114		
		R	Q	QL	R	Q	QL
DISSOLVED METALS (UG/L)							
Aluminum	37000	73.2	B		96.1	B	
Arsenic	50	5.9	B			U	(3.5)
Barium	2000	202			264		
Calcium	GRAS	86500			77900		
Cobalt	2200	1.2	B		0.79	B	
Copper	1300	1.3	B			U	(0.8)
Magnesium	GRAS	12200			15100		
Manganese	180	180			178		
Nickel	100		U	(1.5)	2.1	B	
Potassium	GRAS	17900			16300		
Selenium	50	12.2			23.6		
Sodium	GRAS	22400			18600		
Vanadium	260	1.3	B		2.2	B	
Zinc	2000	1.3	B		1	B	
EXPLOSIVES (UG/L)							
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2		U	(0.1)	1.3		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	400		U	(0.1)	0.12		
TOTAL METALS (UG/L)							
Aluminum	37000	133	B		113	B	
Arsenic	50	5.2	B		4.1	B	
Barium	2000	192	B		253		
Calcium	GRAS	84800			82000		
Cobalt	2200		U	(0.5)	0.75	B	
Magnesium	GRAS	11800			15100		
Manganese	180	178			***185***		
Nickel	100		U	(1.5)	3.2	B	
Potassium	GRAS	14800			13400		
Selenium	50		U	(4.4)	10.4		
Sodium	GRAS	21000			17600		
Vanadium	260	1.1	B		2.9	B	
Zinc	2000	1.2	B		1.2	B	
VOLATILES (UG/L)							
Methylene chloride	5	3	B		0.7	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-30
Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area Southeast of the Bomb Booster Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	BB-001																	
		BBA-001-000 (0-0.5 ft)			BBA-001-001 (1-2 ft)			BBA-001-002 (2-3 ft)			BBA-001-004 (4-5 ft)			BBA-001-009 (9-10 ft)			BBA-001-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.026	J		0.015	J		0.019	J			UJ	(0.5)	0.39	J	
METALS (MG/KG)																			
Aluminum	33852	12100			10900			11500			12300			9790			2130		
Antimony	31		R			R			R			R			R			R	
Arsenic	13.5	5.7	J		6	J		5.7	J		7.1	J		8.3	J			U	(0.76)
Barium	440	233			256			360			250			238			37.9		
Beryllium	1.52	0.62			0.67			0.71			0.62			0.53			0.11	J	
Cadmium	0.4	***0.69***	J		***0.77***	J		***1.4***			***0.65***	J		***0.43***	J			U	(0.11)
Calcium	GRAS	3790			3660			2980			2930			4000			689		
Chromium	37	13.9			13.2			14			13.7			13.5			4.6	J	
Cobalt	17.2	8.6			9.9			10.1			9.7			10.4			1.1		
Copper	33.9	17.7			18.1			16.5			16.1			18.6			2.8		
Iron	GRAS	14400			14300			17000			17400			17800			2570		
Lead	400	18.2			18.5			14.2			12.9			11.6			2.5	J	
Magnesium	GRAS	2610			2640			3190			3350			3580			631		
Manganese	1083	535	J		659	J		818	J		530	J		412	J		65.8	J	
Nickel	39.3	15.9			18.1			20.5			18.5			18.7			2.9	J	
Potassium	GRAS	3960			3870			4480			3680			2320			525		
Selenium	1.33	1.2	J		***1.4***	J		***1.7***	J		***1.7***	J		***1.7***	J			UJ	(0.95)
Vanadium	72.5	27.8			27.1			26.3			25.2			25.2			5		
Zinc	119.5	83.5			78.1			92.2			56.9			61.2			8.8		
PCBs (UG/KG)																			
Aroclor-1260	NA		U	(42.86)		U	(42.31)		U	(41.25)		U	(41.25)		U	(41.77)		U	(35.48)
SEMIVOLATILES (UG/KG)																			
2,4-Dimethylphenol	1300000		U	(429)		U	(423)		U	(413)		U	(413)		U	(418)		U	(355)
2-Methylphenol	3300000		U	(429)		U	(423)		U	(413)		U	(413)		U	(418)		U	(355)
4-Methylphenol	330000		U	(429)		U	(423)		U	(413)		U	(413)		U	(418)		U	(355)
Butylbenzylphthalate	13000000		U	(429)		U	(423)		U	(413)		U	(413)	401	J			U	(355)
Di-n-butylphthalate	6500000	1911				U	(423)	2459				U	(412)	3089				U	(355)
Phenol	39000000		U	(429)		U	(423)		U	(413)		U	(413)		U	(418)		U	(355)
Pyrene	2000000	123	J			U	(423)		U	(413)		U	(413)		U	(418)		U	(355)
VOLATILES (UG/KG)																			
Acetone	2000000		NA			UJ	(13)		UJ	(13)		UJ	(13)		UJ	(13)		U	(11)
Tetrachloroethene	7000		NA			U	(13)		U	(13)		U	(13)		U	(13)		U	(11)
Toluene	1900000		NA			U	(13)		U	(13)		U	(13)		U	(13)		U	(11)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(13)		U	(13)		U	(13)		U	(11)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-30

Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area Southeast of the Bomb Booster Area

Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	BB-002									BB-003								
		BBA-002-000 (0-0.5 ft)			BBA-002-001 (1-2 ft)			BBA-002-002 (2-3 ft)			BBA-003-000 (0-0.5 ft)			BBA-003-001 (1-2 ft)			BBA-003-002 (2-3 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.015	J		0.027	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	12600	J		20700	J		15300	J		9210	J		17200	J		15000	J	
Antimony	31		UJ	(0.5)		UJ	(0.49)		UJ	(0.49)		U	(0.47)		U	(0.47)		U	(0.46)
Arsenic	13.5	4.5	J		5.5	J		6.8	J		5.1	J		7.9	J		8.2	J	
Barium	440	204			220			208			182			190			233		
Beryllium	1.52	0.59			0.79			0.74			0.55			0.85			0.79		
Cadmium	0.4	***0.49***	J		***0.63***	J		***0.56***	J		0.36	J		0.36	J		***0.66***	J	
Calcium	GRAS	5280			3170			4150			4460			3590			3790		
Chromium	37	14.4			20.7			16.2			11.3			17			16.2		
Cobalt	17.2	7.8			9.3			9.5			7.8			10.4			11		
Copper	33.9	16.2			13.7			15.4			15			21.1			22		
Iron	GRAS	14200			19100			17500			12300			21000			20000		
Lead	400	25.9			13.5			19.3			20	J		14.5	J		15.4	J	
Magnesium	GRAS	2500			3470			3230			2090			3690			3880		
Manganese	1083	440			491			534			471	J		565	J		648	J	
Nickel	39.3	14.5			17.1			16.7			14.2			23.8			30		
Potassium	GRAS	3750			4280			3300			3120			3160			2430		
Selenium	1.33	***1.8***	J		***1.4***	J		***2.1***	J		***2.1***	J		***2***	J		***1.9***	J	
Vanadium	72.5	25.3			38.8			28.4			21.1			29.8			26.9		
Zinc	119.5	84.9			68.7			70.8			64.1			62.8			64.6		
PCBs (UG/KG)																			
Aroclor-1260	NA		U	(42.84)		U	(41.21)		UJ	(41.25)		U	(40.71)		U	(40.74)		U	(39.75)
SEMIVOLATILES (UG/KG)																			
2,4-Dimethylphenol	1300000		U	(429)		UJ	(413)		U	(413)	63	J			UJ	(407)		UJ	(398)
2-Methylphenol	3300000		U	(429)		UJ	(413)		U	(413)	111	J			UJ	(407)		UJ	(398)
4-Methylphenol	330000		U	(429)		UJ	(413)		U	(413)	148	J			UJ	(407)		UJ	(398)
Butylbenzylphthalate	13000000		U	(429)		UJ	(413)		U	(413)		U	(407)		UJ	(407)		UJ	(398)
Di-n-butylphthalate	6500000		U	(429)		U	(412)		U	(412)		U	(407)		U	(3628)		U	(398)
Phenol	39000000		U	(429)		UJ	(413)		U	(413)	139	J			UJ	(407)		UJ	(398)
Pyrene	2000000		U	(429)		UJ	(413)		U	(413)		U	(407)		UJ	(407)		UJ	(398)
VOLATILES (UG/KG)																			
Acetone	2000000		NA			UJ	(13)		U	(13)		NA			U	(12)		U	(12)
Tetrachloroethene	7000		NA			U	(13)		U	(13)		NA			U	(12)		U	(12)
Toluene	1900000		NA			U	(13)		U	(13)		NA			U	(12)		U	(12)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(13)		NA			U	(12)		U	(12)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-30
Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area Southeast of the Bomb Booster Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	BB-004									BB-005								
		BBA-004-000 (0-0.5 ft)			BBA-004-001 (1-2 ft)			BBA-004-002 (2-3 ft)			BBA-005-000 (0-0.5 ft)			BBA-005-001 (1-2 ft)			BBA-005-002 (2-3 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.22	J	
METALS (MG/KG)																			
Aluminum	33852	9660			17200			14700			8330			11300	J		17000	J	
Antimony	31		R			R			R			R			U	(0.46)		U	(0.48)
Arsenic	13.5	5	J		7.6	J		7.6	J		4.4	J		7.3	J		6.7	J	
Barium	440	167			172			217			205			253			192		
Beryllium	1.52	0.54			0.84			0.78			0.58			0.65			0.74		
Cadmium	0.4	0.27	J		0.27	J		0.23	J		***0.58***	J		***0.48***	J		0.34	J	
Calcium	GRAS	3580			3350			3500			22400			6880			3080		
Chromium	37	11.5			17.2			15.8			11.1			13.7			16.9		
Cobalt	17.2	7.5			9.3			9.5			7.6			9.7			9.2		
Copper	33.9	14.2			17.9			19.7			19.7			20			13.1		
Iron	GRAS	12500			20100			19500			12700			17000			18000		
Lead	400	12.7			13.9			13.7			20.3			17.4	J		12.4	J	
Magnesium	GRAS	2190			3490			3730			3780			3550			3070		
Manganese	1083	464			519			599			472			526	J		491	J	
Nickel	39.3	13.6			20.6			23.4			15.4			22.2			17.3		
Potassium	GRAS	2850			2980			2090			3090			3350			3510		
Selenium	1.33	***1.6***	J		***1.8***	J		***1.5***	J		***1.9***	J		***1.5***	J		***2.1***	J	
Vanadium	72.5	21.8			30.4			26.3			18.3			23.6			31.3		
Zinc	119.5	56.2	J		59.1	J		60.4	J		103	J		75.1			59		
PCBs (UG/KG)																			
Aroclor-1260	NA		U	(43.93)		U	(42.27)		U	(40.18)	1105.7	J		311.16	J			U	(41.69)
SEMIVOLATILES (UG/KG)																			
2,4-Dimethylphenol	1300000		U	(440)		U	(423)		UJ	(402)		U	(423)		U	(407)		UJ	(418)
2-Methylphenol	3300000		U	(440)		U	(423)		UJ	(402)		U	(423)		U	(407)		UJ	(418)
4-Methylphenol	330000		U	(440)		U	(423)		UJ	(402)		U	(423)		U	(407)		UJ	(418)
Butylbenzylphthalate	13000000		U	(440)		U	(423)	19	J			U	(423)	95	J			UJ	(418)
Di-n-butylphthalate	6500000		U	(440)		U	(423)	2767	J			U	(4258)		U	(3805)		U	(418)
Phenol	39000000		U	(440)		U	(423)		UJ	(402)		U	(423)		U	(407)		UJ	(418)
Pyrene	2000000		U	(440)		U	(423)		UJ	(402)		UJ	(423)		U	(407)		UJ	(418)
VOLATILES (UG/KG)																			
Acetone	2000000		NA			U	(13)		U	(12)		NA			U	(12)		UJ	(13)
Tetrachloroethene	7000		NA			U	(13)		U	(12)		NA			U	(12)		U	(13)
Toluene	1900000		NA			U	(13)		U	(12)		NA			U	(12)		U	(13)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(12)		NA			U	(12)		U	(13)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-30

Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area Southeast of the Bomb Booster Area

Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	BB-006																	
		BBA-006-000 (0-0.5 ft)			BBA-006-001 (1-2 ft)			BBA-006-002 (2-3 ft)			BBA-006-004 (4-5 ft)			BBA-006-009 (9-10 ft)			BBA-006-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)	0.0019	J	
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		UJ	(0.5)		UJ	(0.5)		UJ	(0.5)		UJ	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	8190			10700			19700			10900			16800	J		1110	J	
Antimony	31		R			R			R			R			UJ	(0.49)		UJ	(0.39)
Arsenic	13.5	5.5	J		6.3	J		9.4			8.7	J		9.8				U	(0.72)
Barium	440	178			186			223			271			284			16.1		
Beryllium	1.52	0.52			0.59			0.85			0.65			0.72			0.07	J	
Cadmium	0.4	***0.63***	J		***0.69***	J		***0.97***	J		***1***	J		***1***	J			U	(0.1)
Calcium	GRAS	3440			5080			3480			4370			4570	J		732	J	
Chromium	37	9.8			11.5			19			13.9			21.4	J		2.3	J	
Cobalt	17.2	7.3			7.9			9.9			9.4			9.8			0.63	J	
Copper	33.9	15.6			16.5			20.8			22.2			21			1.2	J	
Iron	GRAS	11800			13900			21800			18300			21300			1420		
Lead	400	12.9			14.1			15.1			13.6			13			1.7	J	
Magnesium	GRAS	2060			2560			4120			4090			4900			463		
Manganese	1083	446			477			554			568			661			37.7		
Nickel	39.3	14.5			16.8			23.9			24.6			26.4			1.2	J	
Potassium	GRAS	3220			3190			3590			2060			3450			338		
Selenium	1.33		U	(1.1)	***2.2***	J		***1.8***	J			U	(1.1)	***1.7***	J			U	(0.91)
Vanadium	72.5	21.7			24.6			39			29.6			48.4			2.9		
Zinc	119.5	61.2	J		60.6	J		69.5	J		71.3	J		75.5			6.1		
PCBs (UG/KG)																			
Aroclor-1260	NA		U	(42.31)		U	(41.77)		U	(41.25)		U	(41.77)		U	(42.86)		U	(34.38)
SEMIVOLATILES (UG/KG)																			
2,4-Dimethylphenol	1300000		U	(423)		U	(418)		U	(413)		U	(418)		U	(429)		U	(344)
2-Methylphenol	3300000		U	(423)		U	(418)		U	(413)		U	(418)		U	(429)		U	(344)
4-Methylphenol	330000		U	(423)		U	(418)		U	(413)		U	(418)		U	(429)		U	(344)
Butylbenzylphthalate	13000000		U	(423)		U	(418)		U	(413)		U	(418)		U	(429)		U	(344)
Di-n-butylphthalate	6500000	1822			1828			1132			2140				U	(429)		U	(344)
Phenol	39000000	59	J			U	(418)		U	(413)		U	(418)		U	(429)		U	(344)
Pyrene	2000000		U	(423)		U	(418)		U	(413)		U	(418)		U	(429)		U	(344)
VOLATILES (UG/KG)																			
Acetone	2000000		NA			U	(13)		U	(13)		U	(13)		U	(13)		U	(10)
Tetrachloroethene	7000		NA			U	(13)		U	(13)		U	(13)	1	J			U	(10)
Toluene	1900000		NA			U	(13)		U	(13)		U	(13)		U	(13)		U	(10)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(13)		U	(13)		U	(13)		U	(10)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-30
Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area Southeast of the Bomb Booster Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	BB-007																	
		BBA-007-000 (0-0.5 ft)			BBA-007-001 (1-2 ft)			BBA-007-002 (2-3 ft)			BBA-007-004 (4-5 ft)			BBA-007-009 (9-10 ft)			BBA-007-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)	0.0014	J			U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)	0.0025	J			U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.0004	J			U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)	0.0014	J			U	(1)
4-Nitrotoluene (4-NT)	NA		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)	0.0004	J			U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		UJ	(0.75)	0.00026	J			U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		UJ	(0.5)		UJ	(0.5)		UJ	(0.5)
METALS (MG/KG)																			
Aluminum	33852	9780	J		8410			3070	J		7550	J		13700	J		2080	J	
Antimony	31		UJ	(0.48)		R			UJ	(0.38)		UJ	(0.43)		UJ	(0.47)		UJ	(0.37)
Arsenic	13.5	5.4	J		7	J		2.2	J		5.5	J		7.7	J			U	(0.69)
Barium	440	185			315	J		65.2			193			242			20.5		
Beryllium	1.52	0.52			0.55			0.19	J		0.48			0.69			0.1	J	
Cadmium	0.4	***0.63***	J		0.31	J			U	(0.1)	***0.83***	J		***0.65***	J			U	(0.1)
Calcium	GRAS	5210	J		4600			2590	J		4110	J		3140	J		505	J	
Chromium	37	11.7	J		12.4			4.4	J		9.3	J		15.2	J		4.3	J	
Cobalt	17.2	7.3			8.6			2.8			12.7			11.5			1.1		
Copper	33.9	15.1			17.5			5.5			13.5			20			2.7		
Iron	GRAS	13100			14300			5070			11600			18600			2650		
Lead	400	14.6			13			4.6			13.1			28			3.2		
Magnesium	GRAS	2650			3220			1610			2310			4230			562		
Manganese	1083	444			562			165			761			686			48.7		
Nickel	39.3	15.2			19.1			6.9			23.6			23.1			2.4	J	
Potassium	GRAS	3080			2620			984			1610			2870			505		
Selenium	1.33	***1.5***	J			U	(1.1)		U	(0.89)	***1.7***	J		***1.9***	J			U	(0.86)
Vanadium	72.5	23.6			24.7			9.1			19.3			29			5.7		
Zinc	119.5	64			56			19.3			55.1			92.8			12		
PCBs (UG/KG)																			
Aroclor-1260	NA		U	(39.76)		U	(40.74)		U	(35.48)		U	(39.76)		U	(41.25)		U	(34.74)
SEMIVOLATILES (UG/KG)																			
2,4-Dimethylphenol	1300000		U	(398)		U	(407)		U	(355)		U	(398)		U	(413)		U	(347)
2-Methylphenol	3300000		U	(398)		U	(407)		U	(355)		U	(398)		U	(413)		U	(347)
4-Methylphenol	330000		U	(398)		U	(407)		U	(355)		U	(398)		U	(413)		U	(347)
Butylbenzylphthalate	13000000		U	(398)		U	(407)		U	(355)		U	(398)		U	(413)		U	(347)
Di-n-butylphthalate	6500000	2952				U	(407)		U	(355)		U	(398)		U	(412)		U	(347)
Phenol	39000000	44	J			U	(407)		U	(355)		U	(398)		U	(413)		U	(347)
Pyrene	2000000	39	J			U	(407)		U	(355)		U	(398)		U	(413)		U	(347)
VOLATILES (UG/KG)																			
Acetone	2000000		NA		17				U	(11)		U	(12)		U	(12)		U	(11)
Tetrachloroethene	7000		NA			U	(12)		U	(11)		U	(12)		U	(13)		U	(11)
Toluene	1900000		NA			U	(12)	0.4	J		0.6	J			U	(13)		U	(11)
Trichloroethene (TCE)	7100		NA			U	(12)		U	(11)	2	J			U	(13)		U	(11)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-30

Analytical Data for Shallow and Deep Soil Sampling at Waste Disposal Area Southeast of the Bomb Booster Area

Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening	BB-008																	
		BBA-008-000 (0-0.5 ft)			BBA-008-001 (1-2 ft)			BBA-008-002 (2-3 ft)			BBA-008-004 (4-5 ft)			BBA-008-009 (9-10 ft)			BBA-008-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2,6-Dinitrotoluene (2,6-DNT)	0.9	0.0025	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.002	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Nitrotoluene (2-NT)	NA	0.0024	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)		U	(1)
4-Nitrotoluene (4-NT)	NA	0.0024	J			U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		UJ	(0.5)		U	(0.5)		UJ	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	20400	J		15400	J		19300	J		8950	J		9510	J		1060	J	
Antimony	31		UJ	(0.48)		UJ	(0.48)	0.54	J			UJ	(0.48)		UJ	(0.48)		UJ	(0.39)
Arsenic	13.5	7.8	J		8.4	J		9.5			8.6	J		8.1	J			U	(0.72)
Barium	440	294			263			264			287			221			15		
Beryllium	1.52	0.96			0.75			0.83			0.58			0.58			0.07	J	
Cadmium	0.4	***0.93***	J		***0.65***	J		***0.9***	J		***0.7***	J		***0.68***	J			U	(0.1)
Calcium	GRAS	10200	J		3900	J		3990	J		4180	J		4210	J		474	J	
Chromium	37	20.7	J		15.7	J		21.4	J		11.9	J		13.5	J		2.4	J	
Cobalt	17.2	9.6			9.6			10.4			11.2			9.2			0.57	J	
Copper	33.9	25.8			19.1			22.4			20.3			19.2			1.1	J	
Iron	GRAS	21200			19400			22000			17100			17400			1400		
Lead	400	17.2			14.2			15.9			13.1			12.6			1.7	J	
Magnesium	GRAS	3770			3460			4680			3710			3720			393		
Manganese	1083	544			566			595			678			489			29.8		
Nickel	39.3	21			22.1			24.9			23.9			20.6			1.1	J	
Potassium	GRAS	4790			3120			3400			1880			2150			336		
Selenium	1.33	***1.8***	J		***1.9***	J		***1.8***	J		***1.4***	J		1.2	J			U	(0.91)
Vanadium	72.5	44.7			29.1			46.7			24.3			27.7			3.1		
Zinc	119.5	83.3			65.6			69.4			64			61.3			5.5		
PCBs (UG/KG)																			
Aroclor-1260	NA		U	(41.77)		U	(41.25)		U	(40.24)		U	(42.31)		U	(41.77)		U	(34.38)
SEMIVOLATILES (UG/KG)																			
2,4-Dimethylphenol	1300000		U	(418)		U	(413)		U	(402)		U	(423)		U	(418)		U	(344)
2-Methylphenol	3300000		U	(418)		U	(413)		U	(402)		U	(423)		U	(418)		U	(344)
4-Methylphenol	330000		U	(418)		U	(413)		U	(402)		U	(423)		U	(418)		U	(344)
Butylbenzylphthalate	13000000		U	(418)		U	(413)		U	(402)		U	(423)		U	(418)		U	(344)
Di-n-butylphthalate	6500000		U	(418)		U	(412)	1614				U	(423)		U	(418)	682		
Phenol	39000000		U	(418)		U	(413)		U	(402)		U	(423)		U	(418)		U	(344)
Pyrene	2000000		U	(418)		U	(413)		U	(402)		U	(423)		U	(418)		U	(344)
VOLATILES (UG/KG)																			
Acetone	2000000		NA			U	(13)		U	(12)		U	(13)		U	(13)		U	(10)
Tetrachloroethene	7000		NA			U	(13)		U	(12)		U	(13)		U	(13)		U	(10)
Toluene	1900000		NA			U	(13)		U	(12)		U	(13)		U	(13)		U	(10)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(12)		U	(13)		U	(13)		U	(10)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-31

Analytical Data for Groundwater Sampling of Existing Monitoring Well, Waste Disposal Area Southeast of the Bomb Booster Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-57B		
		BMW-057-114		
		R	Q	QL
DISSOLVED METALS (UG/L)				
Aluminum	37000	105	B	
Arsenic	50	5.9	B	
Barium	2000	722		
Calcium	GRAS	81400		
Chromium	100	2.5	B	
Magnesium	GRAS	26000		
Nickel	100	1.9	B	
Potassium	GRAS	17600		
Selenium	50	7.1		
Sodium	GRAS	16600		
Vanadium	260	1.7	B	
Zinc	2000	1.9	B	
TOTAL METALS (UG/L)				
Aluminum	37000	157	B	
Arsenic	50	3.6	B	
Barium	2000	662		
Calcium	GRAS	81500		
Chromium	100	2.6	B	
Magnesium	GRAS	25200		
Manganese	180	0.82	B	
Nickel	100	1.6	B	
Potassium	GRAS	14400		
Selenium	50	6.8		
Sodium	GRAS	15300		
Vanadium	260	2.4	B	
Zinc	2000	0.67	B	
VOLATILES (UG/L)				
Methylene chloride	5	0.8	JB	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-32
Analytical Data for Shallow and Deep Soil Sampling at Potential Waste Disposal Area at the Atlas Missile Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	AM-001														
		AMA-001-000 (0-0.5 ft)			AMA-001-001 (1-2 ft)			AMA-001-004 (4-5 ft)			AMA-001-009 (9-10 ft)			AMA-001-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.057	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.042	J		0.044	J			U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.079	J		0.081	J		0.089	J		0.027	J		0.07	J	
METALS (MG/KG)																
Aluminum	33852	18600			21000			18600			16300			1700		
Antimony	31		UJ	(0.49)		UJ	(0.47)		UJ	(4.8)		UJ	(0.48)		UJ	(0.4)
Arsenic	13.5	7	J		9.2			10			7	J			U	(0.73)
Barium	440	216			236			341			253			19.3		
Beryllium	1.52	0.77			0.92			0.87			0.77			0.09	J	
Cadmium	0.4	***0.51***	J		***0.44***	J		***0.69***	J		***0.6***	J			U	(0.1)
Calcium	GRAS	3400			3430			4550			4610			573		
Chromium	37	21			22			23.4			21.8			3.5	J	
Cobalt	17.2	9.7			11.3			11.8			7.9			0.89	J	
Copper	33.9	15.1			17.8			25.1			20.4			1.4	J	
Iron	GRAS	18700			22600			23300			20100			1990		
Lead	400	17.6	J		16.1	J		15.1	J		13.1	J		1.8	J	
Magnesium	GRAS	3360			4310			5210			4910			512		
Manganese	1083	574	J		656	J		706	J		384	J		43		
Nickel	39.3	19			24.8			29.5			24			1.8	J	
Potassium	GRAS	3720			2800			3120			3130			404		
Selenium	1.33	1.3	J		***2.6***	J		1.1	J		***1.5***	J			U	(0.92)
Sodium	GRAS		U	(348)		U	(336)		U	(344)		U	(344)		U	(281)
Vanadium	72.5	43.6			44.1			53			45.5			4.2		
Zinc	119.5	72.6			71.9			82.5			82.8			7.6	J	
SEMIVOLATILES (UG/KG)																
Butylbenzylphthalate	13000000		UJ	(429)	96	J			UJ	(418)		UJ	(423)		U	(344)
Di-n-butylphthalate	6500000		U	(429)	4247	J			UJ	(418)	3215	J			U	(344)
Diethylphthalate	52000000		UJ	(429)		UJ	(413)		UJ	(418)		UJ	(423)		U	(344)
Pyrene	2000000		UJ	(429)		UJ	(413)		UJ	(418)		UJ	(423)	54	J	
bis(2-Ethylhexyl)phthalate	32000		U	(429)		U	(412)		UJ	(418)		U	(423)		U	(344)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-32
Analytical Data for Shallow and Deep Soil Sampling at Potential Waste Disposal Area at the Atlas Missile Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	AM-002														
		AMA-002-000 (0-0.5 ft)			AMA-002-001 (1-2 ft)			AMA-002-004 (4-5 ft)			AMA-002-009 (9-10 ft)			AMA-002-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.0037	J			U	(0.5)	0.039	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																
Aluminum	33852	14700			12500			12800			10200			1230		
Antimony	31		R			R			R			R			R	
Arsenic	13.5	5.1	J		4.2	J		7.4	J		6.8	J			U	(0.73)
Barium	440	209			220			237			194			11.7		
Beryllium	1.52	0.73			0.68			0.69			0.59			0.08	J	
Cadmium	0.4	0.26	J		0.31	J		***0.73***	J		0.31	J			U	(0.1)
Calcium	GRAS	2800			3420			3660			3830			384		
Chromium	37	15.5			14.6			13.3			12.9			3.1	J	
Cobalt	17.2	8.6			9.2			14.3			9.1			0.37	J	
Copper	33.9	13.3			14.6			18.6			17.6			1.2	J	
Iron	GRAS	16400			14600			17800			16700			1350		
Lead	400	12.5			12.2			15.7			11.8			1.5	J	
Magnesium	GRAS	2870			2570			3380			3460			344		
Manganese	1083	496			672			***1150***			253			25.6		
Nickel	39.3	16.2			14.3			35.1			19.4			1.6	J	
Potassium	GRAS	2580			2220			1720			2000			298		
Selenium	1.33	***1.8***	J		***1.7***	J		1.1	J			UJ	(1.1)		UJ	(0.91)
Sodium	GRAS		U	(357)		U	(354)		U	(331)		U	(339)		U	(280)
Vanadium	72.5	28.2			25.7			21.3			22			2.3		
Zinc	119.5	62.1	J		55.9	J		58.9	J		62.6	J		4.4	J	
SEMIVOLATILES (UG/KG)																
Butylbenzylphthalate	13000000		U	(429)		U	(429)		U	(407)		U	(423)		U	(344)
Di-n-butylphthalate	6500000	1006			2755				U	(407)	3108				U	(344)
Diethylphthalate	52000000		U	(429)		U	(429)		U	(407)		U	(423)	18	J	
Pyrene	2000000		U	(429)		U	(429)		U	(407)		U	(423)		U	(344)
bis(2-Ethylhexyl)phthalate	32000		U	(429)		U	(429)		U	(407)		U	(423)		U	(344)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-32
Analytical Data for Shallow and Deep Soil Sampling at Potential Waste Disposal Area at the Atlas Missile Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	AM-003															AM-004					
		AMA-003-000 (0-0.5 ft)			AMA-003-001 (1-2 ft)			AMA-003-004 (4-5 ft)			AMA-003-009 (9-10 ft)			AMA-003-019 (19-20 ft)			AMA-004-000 (0-0.5 ft)			AMA-004-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)	0.063	J			U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		UJ	(0.75)		U	(0.75)	0.098	J			U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.063	J		0.024	J		0.14	J			U	(0.5)	0.14	J		0.026	J	
METALS (MG/KG)																						
Aluminum	33852	13800	J		11400			10800	J		1280	J		999	J		15700	J		14600		
Antimony	31		U	(0.48)		R			U	(0.43)		U	(0.38)		U	(0.38)		UJ	(0.47)		R	
Arsenic	13.5	7.2	J		8.2	J		6.6	J			U	(0.7)		U	(0.7)	6.2	J		7.7	J	
Barium	440	220			242			209			16.7			17.6			221			228		
Beryllium	1.52	0.7			0.7			0.62			0.1	J		0.06	J		0.71			0.7	J	
Cadmium	0.4	***0.43***	J		***0.6***	J		0.31	J			U	(0.1)		U	(0.1)	***0.63***	J		***0.85***		
Calcium	GRAS	3730			3660			4040			400			319			3390			3760		
Chromium	37	15.9			15.3			15			1.6	J		3.8	J		17.1			17	J	
Cobalt	17.2	9.6			12.5			7.7			0.94	J		0.88	J		9.9			9.9		
Copper	33.9	18.6			20			19.1			1.7			1.2	J		17.4			18.7		
Iron	GRAS	18400			18800			17900			1510			1240			18300			19400		
Lead	400	13.9	J		13.9			12.6	J		1.9	J		1.7	J		14.6			14.4		
Magnesium	GRAS	3690			3580			3800			381			283			3670			3900		
Manganese	1083	571	J		613	J		166	J		71.5	J		53	J		596			563		
Nickel	39.3	22.5			22.7			17.7			2.9	J		1.4	J		22.3			22.8		
Potassium	GRAS	2690			2080	J		2210			335			265			2810			2330	J	
Selenium	1.33	***2.4***	J		***1.5***	J		***1.7***	J			U	(0.88)		U	(0.89)	1.1	J		***1.6***	J	
Sodium	GRAS		U	(340)		U	(335)		U	(308)		U	(268)		U	(272)		U	(333)	122	J	
Vanadium	72.5	29.5			27.2			26.2			2.5			2.5			31.3			28	J	
Zinc	119.5	59.8			66.1			62.1			4.5			3.5			58.9			72.6		
SEMIVOLATILES (UG/KG)																						
Butylbenzylphthalate	13000000		U	(423)	311	J			U	(371)	22	J		265	J			U	(423)		U	(402)
Di-n-butylphthalate	6500000	2488				U	(4198)		U	(371)	2723			2425			2999			1633		
Diethylphthalate	52000000		U	(423)		U	(398)		U	(371)	16	J			U	(344)		U	(423)		U	(402)
Pyrene	2000000		U	(423)	125	J			U	(371)		U	(340)		U	(344)		U	(423)		U	(402)
bis(2-Ethylhexyl)phthalate	32000	1107				U	(398)		U	(62)		U	(31)		U	(40)		U	(423)		U	(402)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-32
Analytical Data for Shallow and Deep Soil Sampling at Potential Waste Disposal Area at the Atlas Missile Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	AM-005						AM-006														
		AMA-005-000 (0-0.5 ft)			AMA-005-001 (1-2 ft)			AMA-006-000 (0-0.5 ft)			AMA-006-001 (1-2 ft)			AMA-006-004 (4-5 ft)			AMA-006-009 (9-10 ft)			AMA-006-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)		UJ	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)	0.017	J		0.088	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																						
Aluminum	33852	12700			10400			7300	J		11600	J		990	J		1440			499		
Antimony	31		R			R			U	(0.46)		U	(0.49)		U	(0.38)		R			R	
Arsenic	13.5	6.5	J		6.6	J		4.8	J		9.3				U	(0.71)		U	(0.72)		U	(0.72)
Barium	440	186			221			169			221			14.3			21.3			8.6		
Beryllium	1.52	0.59	J		0.6	J		0.44			0.67			0.08	J		0.1	J		0.04	J	
Cadmium	0.4	***0.68***	J		***0.59***	J		0.35	J		***0.73***	J			U	(0.1)		U	(0.1)		U	(0.1)
Calcium	GRAS	3420			6980			3130			4840			667			845			265		
Chromium	37	15	J		13.9	J		10.6			15.8			1.5	J		2	J		2.4	J	
Cobalt	17.2	8.7			8.4			7.2			10.5			0.58	J		0.8	J		0.29	J	
Copper	33.9	17.2			18.9			12.5			20.9			1.2	J		1.5	J		0.64	J	
Iron	GRAS	16500			16500			11800			20400			1290			1960			671		
Lead	400	13.9			13.8			10.6	J		12.4	J		1.5	J		2	J		1	J	
Magnesium	GRAS	3280			3800			2720			4790			378			574			178		
Manganese	1083	499			217			596	J		496	J		29.7	J		41.9			13.9		
Nickel	39.3	21.1			20.2			17.2			23.9			1.2	J		1.4	J		0.43	J	
Potassium	GRAS	2260	J		1570	J		1810			2240			270			378			163		
Selenium	1.33	***1.4***	J			UJ	(1.1)		U	(1.1)	***1.6***	J			U	(0.89)		UJ	(0.9)		UJ	(0.91)
Sodium	GRAS	89.6	J		176	J			U	(329)		U	(345)		U	(272)		U	(277)		U	(279)
Vanadium	72.5	28.4	J		20.8	J		19.2			30.5			2.4			4			1.3		
Zinc	119.5	58.2			64.1			46.1			69.1			4.3			6.5	J		3.1	J	
SEMIVOLATILES (UG/KG)																						
Butylbenzylphthalate	13000000		U	(418)	97	J			U	(398)		U	(423)		U	(337)		U	(340)	403		
Di-n-butylphthalate	6500000		U	(418)	3412				U	(398)		U	(423)		U	(337)		U	(340)		U	(2838)
Diethylphthalate	52000000		U	(418)		U	(398)		U	(398)	30	J			U	(337)		U	(340)		U	(340)
Pyrene	2000000		U	(418)	154	J			U	(398)		U	(423)		U	(337)		U	(340)		U	(340)
bis(2-Ethylhexyl)phthalate	32000		U	(418)		U	(398)		U	(398)		U	(423)		U	(337)		U	(340)		U	(340)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-32
Analytical Data for Shallow and Deep Soil Sampling at Potential Waste Disposal Area at the Atlas Missile Area
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	AM-007						AM-008														
		AMA-007-000 (0-0.5 ft)			AMA-007-001 (1-2 ft)			AMA-008-000 (0-0.5 ft)			AMA-008-001 (1-2 ft)			AMA-008-004 (4-5 ft)			AMA-008-009 (9-10 ft)			AMA-008-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
2,4,6-Trinitrotoluene (2,4,6-TNT)	17.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.012	J		0.078	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																						
Aluminum	33852	9180			9850			19100			14200			25600			19300			1910		
Antimony	31		R			R			UJ	(0.51)	0.55	J		0.67	J			UJ	(0.45)		UJ	(0.43)
Arsenic	13.5	5.4	J		4.3	J		5.7	J		6.2	J		9.9			9.5				U	(0.8)
Barium	440	198			157			231			277			230			324			15.2		
Beryllium	1.52	0.54	J		0.46	J		0.75			0.73			1			0.84			0.1	J	
Cadmium	0.4	***0.61***	J		0.38	J		***0.67***	J		***0.5***	J		***0.55***	J		***1.1***	J			U	(0.11)
Calcium	GRAS	3850			2630			4510			3190			3440			4160			395		
Chromium	37	11.3	J		10.4	J		21.2			17.3			27.2			24.4			5		
Cobalt	17.2	8.3	J		6.6			9.3			9.1			12.1			13			0.63	J	
Copper	33.9	13.2			11.5			16.7			14.9			20.6			22.9			1.8		
Iron	GRAS	13100			11900			17900			16300			24800			22800			1960		
Lead	400	15.4			9			17.5	J		16.6	J		16.4	J		16.5	J		2	J	
Magnesium	GRAS	2330			2720			3420			2800			5120			5070			394		
Manganese	1083	557			393			563	J		680	J		684	J		983	J		27	J	
Nickel	39.3	15.6			15.5			18.1			17.7			26.2			37.6			1.8	J	
Potassium	GRAS	2020	J		1160	J		4290			3040			3830			3660			410		
Selenium	1.33	***1.6***	J			UJ	(1)	***1.7***	J		***1.7***	J		***1.7***	J		***1.4***	J			UJ	(1)
Sodium	GRAS		U	(49.1)	94.2	J			U	(360)		U	(337)		U	(324)		U	(320)		U	(308)
Vanadium	72.5	20.9	J		19.3	J		44			35.6			59.5			55.3			4.2		
Zinc	119.5	52.3			35.6			77.6			66.4			73.6			90.6			9.4		
SEMIVOLATILES (UG/KG)																						
Butylbenzylphthalate	13000000		U	(407)		U	(393)		U	(429)		U	(402)		U	(398)		U	(398)		U	(375)
Di-n-butylphthalate	6500000		U	(407)	3304				U	(429)		U	(402)		U	(398)		U	(398)		U	(375)
Diethylphthalate	52000000		U	(407)		U	(393)	161	J			U	(402)		U	(398)		U	(398)		U	(375)
Pyrene	2000000		U	(407)		U	(393)		U	(429)		U	(402)		U	(398)		U	(398)		U	(375)
bis(2-Ethylhexyl)phthalate	32000		U	(407)		U	(393)	2108				U	(402)		U	(398)		U	(398)		U	(375)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-33

Analytical Data for Groundwater Sampling of Existing Monitoring Wells, Waste Disposal Area at the Atlas Missile Area Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-58A			MW-58B			MW-59A			MW-59B			MW-59D		
		AMW-058-114			BMW-058-114			AMW-059-114			BMW-059-114			DMW-059-114		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
DISSOLVED METALS (UG/L)																
Aluminum	37000	63.7	B		81.2	B		159	B		156	B		159	B	
Arsenic	50	11.1			4.8	B		7.6	B		3.3	B		23.8		
Barium	2000	48.8	B		246			71.5	B		813			69.2	B	
Calcium	GRAS	91500			69200			80500			76200			71300		
Iron	GRAS	1020				U	(27.2)		U	(7)		U	(7)		U	(7)
Magnesium	GRAS	16200			18200			14700			20500			12800		
Manganese	180	***195***				U	(0.4)	***989***			25.4			***450***		
Nickel	100		U	(1.5)		U	(1.5)	1.1	B		6.3	B		1.4	B	
Potassium	GRAS	16600	E		16300	E		10500			15900			11500		
Selenium	50	9.4			17.3			19.8			8			13.7		
Sodium	GRAS	38700			20600			32900	E		15900	E		28400	E	
Vanadium	260		U	(0.5)	5.6	B		3.2	B		2.7	B		3	B	
Zinc	2000	1.2	B		1	B		0.2	B		0.46	B		1.4	B	
SEMIVOLATILES (UG/L)																
bis(2-Ethylhexyl)phthalate	6	2	J		4	J			U	(10)		U	(10)		U	(10)
TOTAL METALS (UG/L)																
Aluminum	37000	126	B		131	B		133	B		176	B		320		
Arsenic	50	8.4	B			U	(3.5)	6.2	B		2.3	B		23.3		
Barium	2000	50.6	B		252			65	B		749			64	B	
Calcium	GRAS	96800			71700			75100			70800			65300		
Iron	GRAS	1110				U	(27.2)	62.2	B*		77.7	B*		233	*	
Magnesium	GRAS	17000			18600			14300			19800			12400		
Manganese	180	***208***			0.61	B		***931***	E		24.4	E		***421***	E	
Potassium	GRAS	14800			14200			7970			12800			9220		
Selenium	50		U	(4.4)	12				UWN	(2.7)		UWN	(2.7)		UWN	(2.7)
Sodium	GRAS	39000			20400			31500	E		14500	E		27200	E	
Vanadium	260		U	(0.5)	6.2	B		4.9	B		3.2	B		4	B	
Zinc	2000	3.9	B			U	(0.6)	13.6	B		30.4			20.4		
VOLATILES (UG/L)																
Methylene chloride	5		U	(2)	4	JB		0.7	JB			U	(2)	0.6	J	
Trichloroethene (TCE)	5		U	(1)	***57***				U	(1)		U	(1)		U	(1)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-34
Analytical Data for Shallow and Deep Soil Sampling at Potential Waste Disposal Area North of the Ammonium Nitrate Plant
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	AN-001																	
		ANA-001-000 (0-0.5 ft)			ANA-001-001 (1-2 ft)			ANA-001-002 (2-3 ft)			ANA-001-004 (4-5 ft)			ANA-001-009 (9-10 ft)			ANA-001-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)	0.1	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	10200			6750			15700			11100			8890			504		
Antimony	31		UJ	(0.51)		UJ	(0.47)		UJ	(0.48)		R			R			R	
Arsenic	13.5	3.9	J		2.9	J		3.6	J		3.9	J		2.9	J			U	(0.74)
Barium	440	205			212			236			199			167			18		
Beryllium	1.52	0.52			0.43			0.81			0.59			0.61			0.05	J	
Cadmium	0.4	***0.72***	J		0.34	J		***0.81***	J		***0.44***	J		***0.5***	J			U	(0.11)
Calcium	GRAS	2790			2220			3640			3350			3370			289		
Chromium	37	12.9			10.1			18.6			12.5			11			1.8	J	
Cobalt	17.2	6.7			5.3			11.1			4.6			9.4			0.25	J	
Copper	33.9	13			9.9			20.3			11.8			21			0.69	J	
Iron	GRAS	11800			10300			16800			12200			12900			2250		
Lead	400	15.6			12.6			11.7			11.5			11.9			1.3	J	
Magnesium	GRAS	1990			1630			3200			2410			2830			192		
Manganese	1083	400			173			395			112	J		134	J		34.6	J	
Nickel	39.3	12.3			9.6			19.8			10.3			17.7			0.76	J	
Potassium	GRAS	2830			1840			3110			1870			1810			193		
Selenium	1.33		U	(1.2)		U	(1.1)		U	(1.1)		UJ	(1.1)	1.3	J			UJ	(0.93)
Vanadium	72.5	24.9			21.9			25.8			21.1			20.6			1.5		
Zinc	119.5	52.2	J		29.9	J		72.7	J		52.7			64.4			2.9		
SEMIVOLATILES (UG/KG)																			
Butylbenzylphthalate	13000000		U	(446)		U	(413)		U	(418)		U	(407)		U	(423)		U	(351)
Di-n-butylphthalate	6500000		U	(446)		U	(412)		U	(418)		U	(407)		U	(423)		U	(351)
Diethylphthalate	52000000	527				U	(413)		U	(418)		U	(407)		U	(423)		U	(351)
Pyrene	2000000	105	J			U	(413)		U	(418)		U	(407)		U	(423)		U	(351)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-34

Analytical Data for Shallow and Deep Soil Sampling at Potential Waste Disposal Area North of the Ammonium Nitrate Plant
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	AN-002																	
		ANA-002-000 (0-0.5 ft)			ANA-002-001 (1-2 ft)			ANA-002-002 (2-3 ft)			ANA-002-004 (4-5 ft)			ANA-002-009 (9-10 ft)			ANA-002-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																			
Aluminum	33852	18000			16200			13700			11300			16000			1650		
Antimony	31		UJ	(0.49)		UJ	(0.48)		UJ	(0.48)		UJ	(0.48)		UJ	(0.48)		UJ	(0.4)
Arsenic	13.5	6.7	J		8.2	J		8.8			10.1			8.2	J			U	(0.73)
Barium	440	246			213			303			302			283			19.5		
Beryllium	1.52	0.74			0.68			0.63			0.63			0.7			0.07	J	
Cadmium	0.4	***1.1***	J		***0.82***	J		***0.82***	J		***1.2***	J		***1.2***	J			U	(0.1)
Calcium	GRAS	2740			2610			3150			6910			16500			516		
Chromium	37	19.5			16.4			16.6			15.6			20.5			4.2	J	
Cobalt	17.2	9			9.1			9.4			12.1			9.2			0.74	J	
Copper	33.9	20.5			19.6			22.7			23.6			23			1.6	J	
Iron	GRAS	18900			19000			19200			19500			20100			1810		
Lead	400	30.2			14			14.3			15.4			15.6			2.1	J	
Magnesium	GRAS	3340			3610			4050			5560			9150			513		
Manganese	1083	499			500			582			708			499			40.4		
Nickel	39.3	20.3			21.9			25.3			30.2			23.5			1.7	J	
Potassium	GRAS	4200			3220			3330			2210			3290			410		
Selenium	1.33		U	(1.1)	1.2	J		1.1	J			U	(1.1)		U	(1.1)		U	(0.91)
Vanadium	72.5	41.3			33.7			34.2			30.7			43.8			4		
Zinc	119.5	87.4	J		62.8	J		67.2	J		75.5	J		78.8	J		7	J	
SEMIVOLATILES (UG/KG)																			
Butylbenzylphthalate	13000000		U	(429)		U	(429)		U	(418)		U	(423)		U	(429)	229	J	
Di-n-butylphthalate	6500000		U	(429)		U	(429)		U	(418)		U	(423)		U	(429)	2330		
Diethylphthalate	52000000		U	(429)		U	(429)		U	(418)		U	(423)		U	(429)		U	(344)
Pyrene	2000000		U	(429)		U	(429)		U	(418)		U	(423)		U	(429)		U	(344)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-35
Analytical Data for Shallow and Deep Soil Sampling at Demolition Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	DG-001														
		DGA-001-000 (0-0.5 ft)			DGA-001-001 (1-2 ft)			DGA-001-004 (4-5 ft)			DGA-001-009 (9-10 ft)			DGA-001-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																
Aluminum	33852	18100			16700			11100			8230			721		
Antimony	31		R			R			R			R			R	
Arsenic	13.5	7.2	J		7.7	J		9.4			6.4	J			U	(0.73)
Barium	440	221			207			258			171			9.6	J	
Beryllium	1.52	0.73			0.76			0.65			0.47			0.05	J	
Cadmium	0.4	***0.7***	J		***0.47***	J		***0.82***	J		***0.58***	J			U	(0.1)
Calcium	GRAS	3110			3180			3750			2890			244		
Chromium	37	18.5			16.6			13.4			10.1			2.1	J	
Cobalt	17.2	10.4			6.1			10.6			6.6			0.26	J	
Copper	33.9	15.1			14.8			21.3			15.6			0.67	J	
Iron	GRAS	19000			19900			18400			14100			820		
Lead	400	15.6			13.3			14.3			9.9			1.4	J	
Magnesium	GRAS	3380			3380			3620			2830			196		
Manganese	1083	653	J		253	J		715	J		407	J		22.2		
Mercury	23		U	(0.12)		U	(0.1)		U	(0.12)		U	(0.1)		U	(0.1)
Nickel	39.3	17.5			15.7			27.6			17.8			1.1	J	
Potassium	GRAS	3860			2500			2230			1860			200		
Selenium	1.33		UJ	(1.1)	***1.8***	J			UJ	(1.1)		UJ	(0.89)		U	(0.92)
Sodium	GRAS		U	(328)		U	(337)		U	(336)		U	(274)		U	(283)
Vanadium	72.5	40.1			27.9			27.8			22.2			1.6		
Zinc	119.5	68.4			64.4			66.4			56.2			3.1		
SEMIVOLATILES (UG/KG)																
Butylbenzylphthalate	13000000		U	(393)		U	(413)		U	(407)	337	J			U	(344)
Di-n-butylphthalate	6500000	2706				U	(413)		U	(407)	1491			1691		
Pyrene	2000000		U	(393)		U	(413)		U	(407)		U	(418)		U	(344)
VOLATILES (UG/KG)																
Toluene	1900000		NA			U	(13)		U	(12)		U	(13)		U	(10)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(12)		U	(13)		U	(10)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-35
Analytical Data for Shallow and Deep Soil Sampling at Demolition Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	DG-002														
		DGA-002-000 (0-0.5 ft)			DGA-002-001 (1-2 ft)			DGA-002-004 (4-5 ft)			DGA-002-009 (9-10 ft)			DGA-002-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.066	J	
METALS (MG/KG)																
Aluminum	33852	13400	R		13500			9850			8280			309	J	
Antimony	31		U	(0.48)		R			R			R			U	(0.39)
Arsenic	13.5	5.3	J		5.8	J		9.4			9				U	(0.71)
Barium	440	205	J		153	J		222	J		232	J		6		
Beryllium	1.52	0.62			0.65			0.62			0.59			0.03	J	
Cadmium	0.4	0.33	J		0.22	J		***0.4***	J		***0.71***	J			U	(0.1)
Calcium	GRAS	3140			2420			3890			3870			181		
Chromium	37	14.3			14.2			13			11.6			1.9	J	
Cobalt	17.2	7.9			8.7			9.2			11.4			0.21	J	
Copper	33.9	13.2			11.8			20.2			20.7			0.95	J	
Iron	GRAS	14400			16200			17600			16600			560		
Lead	400	11.8			12.5			13.3			14.2			6.2	J	
Magnesium	GRAS	2820			2940			3670			3350			123		
Manganese	1083	470			514			644			889			24.5	J	
Mercury	23		U	(0.13)		U	(0.12)		U	(0.13)	0.13	J			U	(0.1)
Nickel	39.3	15			16.1			27.5			30.1			0.6	J	
Potassium	GRAS	3250			2240			2120			2000			105		
Selenium	1.33	***1.5***	J		1.1	J			U	(1.1)	1.1	J			U	(0.89)
Sodium	GRAS		U	(344)		U	(327)		U	(346)		U	(341)		U	(274)
Vanadium	72.5	30.1			29.1			27.8			25			1		
Zinc	119.5	59.5			56.7			64			62.6			2.9		
SEMIVOLATILES (UG/KG)																
Butylbenzylphthalate	13000000		U	(429)		U	(413)		U	(429)		U	(423)		U	(337)
Di-n-butylphthalate	6500000		UJ	(429)		UJ	(412)		UJ	(429)		UJ	(423)		UJ	(337)
Pyrene	2000000	153	J			U	(413)		U	(429)		U	(423)		U	(337)
VOLATILES (UG/KG)																
Toluene	1900000		NA		0.4	J			U	(13)		U	(13)		U	(10)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(13)		U	(13)		U	(10)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-35
Analytical Data for Shallow and Deep Soil Sampling at Demolition Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	DG-003														
		DGA-003-000 (0-0.5 ft)			DGA-003-001 (1-2 ft)			DGA-003-004 (4-5 ft)			DGA-003-009 (9-10 ft)			DGA-003-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.02	J			U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																
Aluminum	33852	13500			12400			9380			9690			492		
Antimony	31		R			R			R			R			R	
Arsenic	13.5	8.1	J		8.8			8.5	J		8.5	J			U	(0.72)
Barium	440	250	J		434	J		244	J		227	J		10.2	J	
Beryllium	1.52	0.74			0.71			0.62			0.62			0.04	J	
Cadmium	0.4	0.34	J		0.35	J		***0.52***	J		***0.49***	J			U	(0.1)
Calcium	GRAS	3190			3000			4230			4150			237		
Chromium	37	14.4			13.9			12.2			14.5			2	J	
Cobalt	17.2	10.3			10.8			10.4			8.8			0.25	J	
Copper	33.9	18			20.5			19.1			19.4			0.66	J	
Iron	GRAS	17700			18500			16700			17200			632		
Lead	400	14.1			14.3			13.3			12			1.3	J	
Magnesium	GRAS	3530			3660			3650			3900			179		
Manganese	1083	567			621			726			488			14.2		
Mercury	23		U	(0.12)		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.1)
Nickel	39.3	21.2			25.1			25.4			20.7			0.53	J	
Potassium	GRAS	4460			3940			2340			2190			170		
Selenium	1.33		U	(1.1)		U	(1.1)	1.3	J			U	(1.1)		U	(0.91)
Sodium	GRAS		U	(340)		U	(335)		U	(350)		U	(352)		U	(280)
Vanadium	72.5	28.3			28.7			25.8			29.2			1.4		
Zinc	119.5	63.3			62.3			64.1			59.3			2.4		
SEMIVOLATILES (UG/KG)																
Butylbenzylphthalate	13000000		U	(413)		UJ	(413)		UJ	(429)		U	(429)		U	(359)
Di-n-butylphthalate	6500000	884	J			UJ	(413)	1287	J			UJ	(429)	430	J	
Pyrene	2000000		U	(413)		UJ	(413)		UJ	(429)		U	(429)		U	(359)
VOLATILES (UG/KG)																
Toluene	1900000		NA			U	(13)		U	(13)		U	(13)		U	(11)
Trichloroethene (TCE)	7100		NA			U	(13)		U	(13)		U	(13)		U	(11)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-35
Analytical Data for Shallow and Deep Soil Sampling at Demolition Ground
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	DG-004														
		DGA-004-000 (0-0.5 ft)			DGA-004-001 (1-2 ft)			DGA-004-004 (4-5 ft)			DGA-004-009 (9-10 ft)			DGA-004-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)
METALS (MG/KG)																
Aluminum	33852	10200			11100			11300			9510			843		
Antimony	31		R			R			R			R			R	
Arsenic	13.5	8.6			8.3	J		8.9			8.6				U	(0.73)
Barium	440	337	J		259	J		261	J		222	J		15.2	J	
Beryllium	1.52	0.61			0.65			0.67			0.62			0.06	J	
Cadmium	0.4	0.36	J		0.4	J		***0.53***	J		***0.57***	J			U	(0.1)
Calcium	GRAS	3740			3790			3850			3870			335		
Chromium	37	13.5			14.9			14.5			12.3			1.1	J	
Cobalt	17.2	10.2			9.4			9.6			9.9			0.52	J	
Copper	33.9	19.6			20.7			19.4			20.3			1.2	J	
Iron	GRAS	17800			18000			18000			16900			1000		
Lead	400	13.4			13.3			14.6			12.7			1.7	J	
Magnesium	GRAS	3580			3680			3970			3660			270		
Manganese	1083	556			549			625			600			51.2		
Mercury	23		U	(0.12)		U	(0.13)		U	(0.12)		U	(0.12)		U	(0.1)
Nickel	39.3	23.1			23.7			25.1			24			1.2	J	
Potassium	GRAS	2530			2560			2120			2090			241		
Selenium	1.33		U	(1.1)	1.2	J			U	(1.1)	1.3	J			U	(0.91)
Sodium	GRAS		U	(332)		U	(385)		U	(326)	750				U	(281)
Vanadium	72.5	26.8			26.1			30.5			27.9			2.1		
Zinc	119.5	67.4			65.7			59.2			64.9			4.5		
SEMIVOLATILES (UG/KG)																
Butylbenzylphthalate	13000000		UJ	(402)		U	(407)		U	(388)		U	(398)		U	(340)
Di-n-butylphthalate	6500000		UJ	(402)		U	(407)		UJ	(388)		UJ	(398)		UJ	(340)
Pyrene	2000000		UJ	(402)		U	(407)		U	(388)		U	(398)		U	(340)
VOLATILES (UG/KG)																
Toluene	1900000		NA			U	(12)	0.6	J			U	(12)		U	(10)
Trichloroethene (TCE)	7100		NA			U	(12)		U	(12)	2	J			U	(10)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-36
Analytical Data for Groundwater Sampling of Existing Monitoring Wells at Demolition Grounds
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-10A			MW-10B		
		AMW-010-114			BMW-010-114		
		R	Q	QL	R	Q	QL
DISSOLVED METALS (UG/L)							
Aluminum	37000	122	B		130	B	
Arsenic	50	5.4	B		4.6	B	
Barium	2000	167	B		182	B	
Calcium	GRAS	48800			27700		
Magnesium	GRAS	9080			7250		
Manganese	180		U	(0.2)	10.3	B	
Nickel	100	0.91	B		1.9	B	
Potassium	GRAS	10300			11000		
Selenium	50	14.1			7.5		
Sodium	GRAS	17300	E		13200	E	
Vanadium	260	2.3	B		2.3	B	
Zinc	2000		U	(0.2)	0.26	B	
EXPLOSIVES (UG/L)							
2,4,6-Trinitrotoluene (2,4,6-TNT)	2		U	(0.1)	0.32		
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NA	0.17			***0.43***		
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2	0.24			0.19		
TOTAL METALS (UG/L)							
Aluminum	37000	152	B		158	B	
Arsenic	50	3.8	B		2.9	B	
Barium	2000	159	B		171	B	
Calcium	GRAS	45100			25500		
Copper	1300		U	(2.5)	3.2	B	
Iron	GRAS	187	*		109	*	
Magnesium	GRAS	8980			7070		
Manganese	180	1.2	BE		10.9	BE	
Potassium	GRAS	8260			9650		
Sodium	GRAS	16900	E		12700	E	
Vanadium	260		U	(2.9)	4	B	
Zinc	2000	6	B		28.7		
VOLATILES (UG/L)							
Methylene chloride	5	0.5	JB			U	(2)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-37
Analytical Data for Shallow Soil Sampling at Detonation Craters West of the Demolition Grounds
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	DC-001						DC-002						DC-003								
		DCA-001-000 (0-0.5 ft)			DCA-001-001 (1-2 ft)			DCA-002-000 (0-0.5 ft)			DCA-002-001 (1-2 ft)			DCA-003-000 (0-0.5 ft)			DCA-003-001 (1-2 ft)			DCA-003-002 (2-3 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																						
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.059	J			U	(0.5)	0.026	J			U	(0.5)	0.071	J			U	(0.5)		U	(0.5)
METALS (MG/KG)																						
Aluminum	33852	9120			5910			12600			9220			6370			7190			6480		
Antimony	31		R			R			R			R			R			R			R	
Arsenic	13.5	4.1	J		4.1	J		5.1	J		3.4	J		1.4	J		2	J		1.8	J	
Barium	440	167			178			184			175			100			102			87.4		
Beryllium	1.52	0.5	J		0.38	J		0.59			0.46	J		0.32	J		0.33	J		0.28	J	
Cadmium	0.4	0.13	J			U	(0.08)	0.2	J		0.11	J		0.08	J			U	(0.07)	***2.2***		
Calcium	GRAS	3840			3240			3720			3640			1370			1290			1130		
Chromium	37	10.9			8.1			14.3			11.5			7.3			7.1			16.2		
Cobalt	17.2	6.2			7.2			6.7			7.2			4.6			3.7			3.7		
Copper	33.9	11.2			7.7			13.3			9.3			7			6.2			6.2		
Iron	GRAS	11900			9510			14800			12200			7670			7020			6400		
Lead	400	11.3	J		7.2	J		13	J		8.9	J		8.7	J		6	J		177	J	
Magnesium	GRAS	2280			1620			2720			2180			1310			1220			1120		
Manganese	1083	613			***1320***			645			1070			276			220			199		
Nickel	39.3	12.1			12.1			13.7			13.5			7.9			7.3			6.8		
Potassium	GRAS	2290			1190			2850			1650			1520			1200			1060		
Selenium	1.33	***1.5***	J		***2.1***	J		***2.1***	J			UJ	(1.2)	***1.5***	J			UJ	(1)	1	J	
Sodium	GRAS		U	(564)		U	(519)		U	(556)		U	(536)		U	(480)		U	(468)		U	(456)
Vanadium	72.5	18.3			11.6			25			18			13.7			12.6			11.7		
Zinc	119.5	45.7			30.6			55.3			38.9			31.2			25.7			30.1		
SEMIVOLATILES (UG/KG)																						
Butylbenzylphthalate	13000000		U	(440)		U	(434)		U	(458)		U	(440)		U	(393)		U	(384)		U	(379)
Di-n-butylphthalate	6500000		U	(440)		U	(434)		U	(458)	1194				U	(393)		U	(384)	1477		
Pyrene	2000000		U	(440)		U	(434)		U	(458)		U	(440)		U	(393)		U	(384)	67	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-37
Analytical Data for Shallow Soil Sampling at Detonation Craters West of the Demolition Grounds
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	DC-004						DC-005					
		DCA-004-000 (0-0.5 ft)			DCA-004-001 (1-2 ft)			DCA-005-000 (0-0.5 ft)			DCA-005-001 (1-2 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)													
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	343	0.074	J			U	(0.75)		U	(0.75)		U	(0.75)
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)	0.043	J		0.012	J	
METALS (MG/KG)													
Aluminum	33852	5230			9010			9220			10900		
Antimony	31		R			R			R			R	
Arsenic	13.5	2.1	J		3.4	J		4	J		3.4	J	
Barium	440	75.7			142			109			108		
Beryllium	1.52	0.26	J		0.44	J		0.43	J		0.46	J	
Cadmium	0.4		U	(0.07)		U	(0.07)		U	(0.07)	0.08	J	
Calcium	GRAS	1150			1750			1950			1640		
Chromium	37	6.2			10.1			9.6			11		
Cobalt	17.2	4.4			6.4			5.2			5.3		
Copper	33.9	6.2			8.8			8.5			8.8	J	
Iron	GRAS	6550			10400			9940			10800		
Lead	400	7.7	J		9.1	J		10.1	J		8.2		
Magnesium	GRAS	1120			1730			1810			1980		
Manganese	1083	245			388			264			268	J	
Nickel	39.3	6.9			11.3			10.7			11.9		
Potassium	GRAS	1290			1700			1800			1640	J	
Selenium	1.33	1.2	J		1.1	J		*1.7*	J		1.3	J	
Sodium	GRAS		U	(484)		U	(491)		U	(487)	258	J	
Vanadium	72.5	12			19.7			18.5			21.2		
Zinc	119.5	24.1			34.8			35.1			34.5	J	
SEMIVOLATILES (UG/KG)													
Butylbenzylphthalate	13000000		U	(393)	919				U	(393)		U	(384)
Di-n-butylphthalate	6500000		U	(393)	2776				U	(393)		U	(384)
Pyrene	2000000		U	(393)		U	(413)		U	(393)		U	(384)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-38
Analytical Data for Shallow Soil Sampling at Bermed Area Southwest of Load Line 1
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	BR-001									BR-002								
		BRA-001-000 (0-0.5 ft)			BRA-001-001 (1-2 ft)			BRA-001-002 (2-3 ft)			BRA-002-000 (0-0.5 ft)			BRA-002-001 (1-2 ft)			BRA-002-002 (2-3 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)		U	(0.5)	0.022	J	
METALS (MG/KG)																			
Aluminum	33852	11600			10100			19200			13100			9940			19700		
Antimony	31		R			R			UJ	(0.49)		R			R			UJ	(0.46)
Arsenic	13.5	6.9	J		4.9	J		6.7	J		7	J		5	J		7.2	J	
Barium	440	205	J		164			270			182	J		193	J		278		
Beryllium	1.52	0.63			0.57			0.82			0.66			0.59			0.85		
Cadmium	0.4	0.38	J		0.25	J		***0.48***	J		0.37	J		0.3	J		***0.56***	J	
Calcium	GRAS	3540			2760			3060			3490			2380			3320		
Chromium	37	13.3			11.7			20.5			14.8			11.9			21.5		
Cobalt	17.2	8.6			8			10.9			8.6			8.2			11.5		
Copper	33.9	16.1			11.5			14.1			16.6			11.6			15.5		
Iron	GRAS	15800			12900			20300			15900			12500			21300		
Lead	400	12.1			11.9			15.1	J		13			11.6			15.8	J	
Magnesium	GRAS	3270			2250			3780			3430			2130			4010		
Manganese	1083	507			548			612	J		504			540			674	J	
Nickel	39.3	19.5			14.3			19.6			20.3			14.7			21.2		
Potassium	GRAS	1960			1930			3030			2250			1920			3070		
Selenium	1.33	***1.5***	J		***1.6***	J		***1.9***	J			U	(1.1)	***1.5***	J		***1.6***	J	
Vanadium	72.5	27.7			22.1			41.2			30.1			24.1			42.9		
Zinc	119.5	52.9			46.5	J		77.5			54.6			49.3			78.7		
SEMIVOLATILES (UG/KG)																			
Di-n-butylphthalate	6500000	2331	J			U	(393)		U	(2399)		U	(402)		U	(407)		UJ	(688)
Diethylphthalate	52000000		UJ	(398)		U	(393)	22	J			U	(402)	18	J		18	J	
Pyrene	2000000		UJ	(398)		U	(393)		U	(423)		U	(402)		U	(407)		UJ	(393)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-38
Analytical Data for Shallow Soil Sampling at Bermed Area Southwest of Load Line 1
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	BR-003								
		BRA-003-000 (0-0.5 ft)			BRA-003-001 (1-2 ft)			BRA-003-002 (2-3 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)										
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.027	J			U	(0.5)	0.016	J	
METALS (MG/KG)										
Aluminum	33852	11400	J		5470			23100		
Antimony	31		U	(0.48)		R			UJ	(0.47)
Arsenic	13.5	4.5	J		1.8	J		7	J	
Barium	440	189			93.3			245		
Beryllium	1.52	0.58			0.28			0.88		
Cadmium	0.4	0.38	J		0.35	J		***0.53***	J	
Calcium	GRAS	2920			178000			2870		
Chromium	37	18.3			7.7			24.1		
Cobalt	17.2	7.7			3.9			10.3		
Copper	33.9	13.6			7.1			16.3		
Iron	GRAS	13900			6680			20600		
Lead	400	11.9	J		11			14.7	J	
Magnesium	GRAS	2740			2550			3810		
Manganese	1083	478	J		414			538	J	
Nickel	39.3	16.5			7.2			19		
Potassium	GRAS	2740			1950			3970		
Selenium	1.33	***1.4***	J			UJ	(1)	***2***	J	
Vanadium	72.5	24.3			11.9			49.8		
Zinc	119.5	54			31.6	J		82.4		
SEMIVOLATILES (UG/KG)										
Di-n-butylphthalate	6500000		U	(418)		UJ	(79)		U	(407)
Diethylphthalate	52000000		U	(418)		UJ	(407)		UJ	(407)
Pyrene	2000000		U	(418)		UJ	(407)	121	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-39
Analytical Data for Groundwater Sampling of Newly Installed Monitoring Well at Ammonium Nitrate Plant
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	MW-63B					
		BMW-063-035			BMW-063-065		
		R	Q	QL	R	Q	QL
DISSOLVED METALS (UG/L)							
Aluminum	37000		NA		150	B	
Arsenic	50		NA		4.3	B	
Barium	2000		NA		122	B	
Beryllium	4		NA		0.33	B	
Calcium	GRAS		NA		101000		
Chromium	100		NA		2.4	B	
Magnesium	GRAS		NA		23800		
Manganese	180		NA		7.7	B	
Potassium	GRAS		NA		7640	E	
Selenium	50		NA		8.5		
Sodium	GRAS		NA		19700	E	
Vanadium	260		NA		12.5	B	
Zinc	2000		NA		1.9	B	
TOTAL METALS (UG/L)							
Aluminum	37000		NA		534		
Arsenic	50		NA		4.5	B	
Barium	2000		NA		115	B	
Calcium	GRAS		NA		10300		
Chromium	100		NA		3.9	B	
Copper	1300		NA		1.7	B	
Iron	GRAS		NA		290		
Magnesium	GRAS		NA		23800		
Manganese	180		NA		15.6		
Potassium	GRAS		NA		6710	E	
Selenium	50		NA		4.5	B	
Sodium	GRAS		NA		19100	E	
Vanadium	260		NA		13.9	B	
Zinc	2000		NA		6.3	B	
WATER QUALITY (mg/L unless indicated)							
Nitrite	1	*5.8*				U	(0.02)
Nitrate	10	*40*			*41*		

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-40
Analytical Data for Surface Water Sampling at Johnson and Clear Creeks
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	JC-001			JC-002			JC-003			JC-004		
		JCW-001-035			JCW-002-035			JCW-003-035			JCW-004-035		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (UG/L)													
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2	1.1			1.3			1.8			1.2		
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	400		U	(0.5)	0.44	J		0.54				U	(2.5)
METALS (UG/L)													
Aluminum	37000	21000			2400			421			401		
Arsenic	50	11.2				U	(6)		U	(6)	6.4		
Barium	2000	280			187			108			107		
Calcium	GRAS	32300			53800			68500			86600		
Chromium	100	13.7				U	(10)		U	(10)		U	(10)
Cobalt	2200	10.1				U	(10)		U	(10)		U	(10)
Copper	1300	32.5			6.5				U	(5)		U	(5)
Iron	GRAS	18000			2690			528			438		
Lead	15	10.9				U	(2)		U	(2)		U	(2)
Magnesium	GRAS	11700			15000			16300			17900		
Manganese	180	***580***			***554***			171			109		
Mercury	2	0.28	J		0.22				U	(0.2)		U	(0.2)
Nickel	100	35.5				UJ	(15)		U	(15)	***129***	J	
Potassium	GRAS	30400			12400			10400			9060		
Sodium	GRAS	13700			27400			32100			44200		
Vanadium	260	41			6				U	(5)		U	(5)
Zinc	2000	442			46.6				U	(5)		U	(5)
VOLATILES (UG/L)													
Trichloroethene (TCE)	5		U	(1)		U	(1)	4.51			0.63	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-41
Analytical Data for Sediment Sampling at Johnson and Clear Creeks
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	JC-001			JC-002			JC-003			JC-004		
		JCS-001-035			JCS-002-035			JCS-003-035			JCS-004-035		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
METALS (MG/KG)													
Aluminum	33852	15900			11400			1830			3080		
Arsenic	13.5	8.3			5.5				U	(1.6)		U	(1.7)
Barium	440	245			180			33			59.3		
Beryllium	1.52	0.82			0.6				U	(0.53)		U	(0.55)
Calcium	GRAS	3690			3160			821			2020		
Chromium	37	16.8			13.8			4.1			5.3		
Cobalt	17.2	12.6			7.8			3.2			2.9		
Copper	33.9	17.8			13			2.2			3.4		
Iron	GRAS	17400			13700			2520			3790		
Lead	400	18.3			11.2			2.4			2.9		
Magnesium	GRAS	3310			2890			469			838		
Manganese	1083	706			577			136			327		
Nickel	39.3	19.6	J		15.9				UJ	(4)		U	(4.1)
Potassium	GRAS	3900			2330			511			1020		
Silver	380	2.3			2.1				U	(1.3)		U	(1.4)
Sodium	GRAS	275			250			53.5			84.7		
Vanadium	72.5	38.8			27.7			5			7.4		
Zinc	119.5	90.2			64.5			20.1			32.1		
VOLATILES (UG/KG)													
Acetone	2000000	48	J			UJ	(15)		UJ	(13)	46	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-42
Analytical Data for Surface Water Sampling at Silver Creek
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	SC-001			SC-002		
		SCW-001-045			SCW-002-045		
		R	Q	QL	R	Q	QL
EXPLOSIVES (UG/L)							
4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NA		U	(3)	0.39	J	
METALS (UG/L)							
Aluminum	37000	596			213		
Barium	2000	174			171		
Calcium	GRAS	79700	J		78400	J	
Iron	GRAS	803			365		
Magnesium	GRAS	19100			19700		
Manganese	180	***281***			***249***		
Potassium	GRAS	10600			10900		
Selenium	50	5				U	(5)
Sodium	GRAS	38400			40000		
Vanadium	260		U	(5)	6.8		
VOLATILES (UG/L)							
1,2-Dibromo-3-chloropropane	0.2		R			U	(1)
2-Butanone	1900		R			R	
2-Hexanone	NA		R			R	
4-Methyl-2-Pentanone	2900		U	(5)		R	
Acetone	610		R			R	
Chloroethane	710		R			R	
Toluene	1000		U	(1)	0.11	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-43
Analytical Data for Sediment Sampling at Silver Creek
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	SC-001			SC-002		
		SCS-001-045			SCS-002-045		
		R	Q	QL	R	Q	QL
METALS (MG/KG)							
Aluminum	33852	8080			10000		
Arsenic	13.5	5.4			6.9		
Barium	440	177			237		
Calcium	GRAS	3160			6400		
Chromium	37	9.7			12.8		
Cobalt	17.2	4.9	J		6.5		
Copper	33.9	10.9			14.1		
Iron	GRAS	12100			14500		
Lead	400	9.1			11.3		
Magnesium	GRAS	2130			3020		
Manganese	1083	506			896		
Nickel	39.3	11.6			16.1		
Potassium	GRAS	1730			2220		
Selenium	1.33	*2.2*			*2*		
Silver	380	2.2			2.3		
Sodium	GRAS	133			286		
Vanadium	72.5	18			23.2		
Zinc	119.5	45.8			58.5		
SEMIVOLATILES (UG/KG)							
4-Methylphenol	330000	2444				U	(589)
Di-n-butylphthalate	6500000	575				U	(589)
Pyrene	2000000		U	(516)	107	J	
VOLATILES (UG/KG)							
Acetone	2000000	43	J			U	(18)
Toluene	1900000	246	J			U	(18)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-44
Analytical Data for Shallow and Deep Soil Sampling Around Underground Storage Tank Locations
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	UA-001																	
		UAA-001-000 (0-0.5 ft)			UAA-001-001 (1-2 ft)			UAA-001-004 (4-5 ft)			UAA-001-009 (9-10 ft)			UAA-001-019 (19-20 ft)			UAA-001-028 (28-29 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
SEMIVOLATILES (UG/KG)																			
Benzo(b)fluoranthene	610	32	J			U	(388)		U	(347)		U	(337)		U	(344)		U	(344)
Butylbenzylphthalate	13000000		U	(379)		U	(388)	196	J			U	(337)		U	(344)		U	(344)
Di-n-butylphthalate	6500000		U	(379)	3022	J		3206				U	(337)		U	(344)		U	(344)
Fluoranthene	2600000	26	J			U	(388)		U	(347)		U	(337)		U	(344)		U	(344)
Pyrene	2000000	94	J			U	(388)		U	(347)		U	(337)		U	(344)		U	(344)
bis(2-Ethylhexyl)phthalate	32000		U	(379)		U	(388)		U	(347)		U	(337)		U	(344)		U	(344)
TPH (MG/KG)																			
TRPH	*10*	***21***				*U*	*(12)*		*U*	*(11)*		*U*	*(10)*		*U*	*(10)*		*U*	*(10)*

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-44
Analytical Data for Shallow and Deep Soil Sampling Around Underground Storage Tank Locations
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	UB-001																	
		UBA-001-000 (0-0.5 ft)			UBA-001-001 (1-2 ft)			UBA-001-004 (4-5 ft)			UBA-001-009 (9-10 ft)			UBA-001-019 (19-20 ft)			UBA-001-029 (29-30 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
SEMIVOLATILES (UG/KG)																			
Benzo(b)fluoranthene	610		U	(393)		U	(413)		U	(418)		U	(423)		U	(344)		U	(344)
Butylbenzylphthalate	13000000		U	(393)		U	(413)	633				U	(423)		U	(344)		U	(344)
Di-n-butylphthalate	6500000		U	(393)	1485			4222				U	(423)		U	(344)	3427		
Fluoranthene	2600000		U	(393)		U	(413)		U	(418)		U	(423)		U	(344)		U	(344)
Pyrene	2000000		U	(393)		U	(413)		U	(418)		U	(423)		U	(344)		U	(344)
bis(2-Ethylhexyl)phthalate	32000		U	(393)		U	(412)		U	(418)		U	(423)		U	(344)		U	(344)
TPH (MG/KG)																			
TRPH	10		U	(12)		U	(13)		U	(13)		U	(13)		U	(10)		U	(10)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-44
Analytical Data for Shallow and Deep Soil Sampling Around Underground Storage Tank Locations
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	UM-001																	
		UMA-001-001 (1-2 ft)			UMA-001-004 (4-5 ft)			UMA-001-009 (9-10 ft)			UMA-001-019 (19-20 ft)			UMA-001-029 (29-30 ft)			UMA-001-038 (38-39 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
SEMIVOLATILES (UG/KG)																			
Benzo(b)fluoranthene	610		U	(413)		U	(423)		U	(429)		U	(359)		U	(347)		U	(344)
Butylbenzylphthalate	13000000		U	(413)		U	(423)		U	(429)		U	(359)		U	(347)	1164		
Di-n-butylphthalate	6500000		U	(412)	599			1947				U	(359)		U	(347)	3327		
Fluoranthene	2600000		U	(413)		U	(423)		U	(429)		U	(359)		U	(347)		U	(344)
Pyrene	2000000		U	(413)		U	(423)		U	(429)		U	(359)		U	(347)		U	(344)
bis(2-Ethylhexyl)phthalate	32000		U	(412)		U	(423)		U	(429)		U	(359)		U	(347)	246	J	
TPH (MG/KG)																			
TRPH	10		U	(12)		U	(13)		U	(13)		U	(11)		U	(10)		U	(10)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-44
Analytical Data for Shallow and Deep Soil Sampling Around Underground Storage Tank Locations
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	UM-002																	
		UMA-002-000 (0-0.5 ft)			UMA-002-001 (1-2 ft)			UMA-002-004 (4-5 ft)			UMA-002-009 (9-10 ft)			UMA-002-019 (19-20 ft)			UMA-002-029 (29-30 ft)			UMA-002-038 (38-39 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
SEMIVOLATILES (UG/KG)																						
Benzo(b)fluoranthene	610		U	(413)		U	(388)		U	(398)		U	(388)		U	(388)		U	(344)		U	(344)
Butylbenzylphthalate	13000000		U	(413)		U	(388)		U	(398)		U	(388)		U	(388)		U	(344)		U	(344)
Di-n-butylphthalate	6500000		U	(412)		U	(388)		U	(398)		U	(388)		U	(388)		U	(344)		U	(344)
Fluoranthene	2600000		U	(413)		U	(388)		U	(398)		U	(388)		U	(388)		U	(344)		U	(344)
Pyrene	2000000	50	J			U	(388)		U	(398)		U	(388)		U	(388)		U	(344)		U	(344)
bis(2-Ethylhexyl)phthalate	32000		U	(412)		U	(388)		U	(398)		U	(388)		U	(388)	292	J			U	(344)
TPH (MG/KG)																						
TRPH	10	***21***				U	(12)		U	(12)		U	(12)		U	(12)		U	(10)		U	(10)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-45
Analytical Data for Hydropunch Groundwater Sampling Around Underground Storage Tank Locations
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	UA-001			UB-001			UM-001			UM-002		
		UAW-001-045			UBW-001-045			UMW-001-045			UMW-002-045		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
BTEX (UG/L)													
Toluene	1000		U	(1)		U	(1)	2.8				U	(1)
Total Xylenes	10000	4.3	J			U	(1)		U	(1)		U	(1)
SEMIVOLATILES (UG/L)													
Butylbenzylphthalate	7300		U	(10)		U	(10)	0.3	J		0.4	J	
Di-n-butylphthalate	3700	0.5	J			U	(10)	0.5	J		0.5	J	
Phenol	4000		U	(10)	1	J			U	(10)		U	(10)
bis(2-Ethylhexyl)phthalate	6		U	(10)	0.9	J		0.6	J		0.7	J	

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-46
Analytical Data for Shallow and Deep Soil Sampling at Geophysical Anomaly at Load Line 3
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	GA-001																	
		GAA-001-000 (0-0.5 ft)			GAA-001-001 (1-2 ft)			GAA-001-002 (2-3 ft)			GAA-001-004 (4-5 ft)			GAA-001-009 (9-10 ft)			GAA-001-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.019	J		0.032	J		0.048	J		0.023	J		0.062	J		0.016	J	
METALS (MG/KG)																			
Aluminum	33852	19100			10100			10400			8520			9490			1650		
Antimony	31		UJ	(0.48)		R			R			R			R			R	
Arsenic	13.5	7.3	J		3.5	J		8.8			9			7.8	J			U	(0.87)
Barium	440	215			137			343			257			231			24.1		
Beryllium	1.52	0.79			0.4			0.66			0.59			0.6			0.1	J	
Cadmium	0.4	***0.52***	J		0.21	J		***0.52***	J		***0.61***	J		***0.56***	J			U	(0.12)
Calcium	GRAS	3140			1580			8280			6260			10100			734		
Chromium	37	20.9			11.6			13.5			12.8			13.2			3.3	J	
Cobalt	17.2	9.6			4.7			10.3			10.3			9.7			1.2		
Copper	33.9	16.8			8.8			19.6			20.7			19.4			1.5	J	
Iron	GRAS	19800			10100			17900			16700			16700			1900		
Lead	400	15.6			5.8			12.8			12.9			12.5			2.1	J	
Magnesium	GRAS	3760			2340			4500			4120			6560			542		
Manganese	1083	561			230	J		645	J		724	J		623	J		66.1	J	
Nickel	39.3	22.4			10.9			24.6			25.8			23.1			1.8	J	
Potassium	GRAS	3190	J		1300	J		1820	J		1800	J		2150	J		430	J	
Selenium	1.33	***2***	J			U	(1.1)	***2.1***	J		1.2	J		1.3	J			U	(1.1)
Sodium	GRAS		U	(342)		U	(334)		U	(337)	705				U	(491)		U	(334)
Vanadium	72.5	45.5			25.7			25.2			23			25.1			3.7		
Zinc	119.5	64.9	J		31.4			67.5			61.2			65.2			7.2		
SEMIVOLATILES (UG/KG)																			
2-Methylphenol	3300000		U	(434)		U	(413)		U	(418)		U	(402)		U	(407)	69	J	
4-Methylphenol	330000		U	(434)		U	(413)		U	(418)		U	(402)		U	(407)	101	J	
Benzo(a)anthracene	610		U	(434)		U	(413)		U	(418)		U	(402)		U	(407)		U	(340)
Benzo(b)fluoranthene	610		U	(434)		U	(413)		U	(418)		U	(402)		U	(407)		U	(340)
Benzo(k)fluoranthene	6100		U	(434)		U	(413)		U	(418)		U	(402)		U	(407)		U	(340)
Chrysene	24000		U	(434)		U	(413)		U	(418)		U	(402)		U	(407)		U	(340)
Di-n-butylphthalate	6500000		U	(2936)		UJ	(413)		U	(418)	1425			2666				U	(340)
Fluoranthene	2600000		U	(434)		U	(413)		U	(418)		U	(402)		U	(407)		U	(340)
Phenol	39000000		U	(434)		U	(413)		U	(418)		U	(402)		U	(407)	86	J	
Pyrene	2000000		U	(434)		U	(413)	134	J			U	(402)		U	(407)		U	(340)
bis(2-Ethylhexyl)phthalate	32000		U	(434)		U	(413)		U	(418)		U	(402)		U	(407)		U	(340)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Table A-46
Analytical Data for Shallow and Deep Soil Sampling at Geophysical Anomaly at Load Line 3
Former Nebraska Ordnance Plant, Mead, Nebraska

	Screening Level	GA-002																	
		GAA-002-000 (0-0.5 ft)			GAA-002-001 (1-2 ft)			GAA-002-002 (2-3 ft)			GAA-002-004 (4-5 ft)			GAA-002-009 (9-10 ft)			GAA-002-019 (19-20 ft)		
		R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL	R	Q	QL
EXPLOSIVES (MG/KG)																			
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1715.2	0.027	J		0.023	J			U	(0.5)		U	(0.5)		U	(0.5)	0.017	J	
METALS (MG/KG)																			
Aluminum	33852	16200			17700				NA		15300			10000			1330		
Antimony	31		UJ	(0.48)		U	(0.47)		NA			R			R			U	(0.4)
Arsenic	13.5	8.5	J		8.7				NA		8			8.5	J			U	(0.73)
Barium	440	208			214				NA		235			222			17		
Beryllium	1.52	0.76			0.79				NA		0.73	J		0.58			0.08	J	
Cadmium	0.4	***0.43***	J		***0.6***	J			NA		***0.57***	J		***0.5***	J			U	(0.1)
Calcium	GRAS	3300			3550				NA		3860			8050			472		
Chromium	37	18.2			19.7				NA		17.1	J		13.9			2	J	
Cobalt	17.2	10			10.1				NA		10			8.9			0.69	J	
Copper	33.9	17.8			18				NA		19.6			18.1			0.99	J	
Iron	GRAS	19700			20400				NA		19500			17600			1730		
Lead	400	14.8			15.8				NA		15.8			11.5			1.7	J	
Magnesium	GRAS	3680			3940				NA		3920			6080			497		
Manganese	1083	604			607				NA		631			460			38.6		
Nickel	39.3	23.3			24.4				NA		23.5			19.8			1.4	J	
Potassium	GRAS	3000			2960				NA		2470	J		2070			350		
Selenium	1.33		U	(1.1)	2	J			NA			UJ	(1.1)		UJ	(1.1)		U	(0.91)
Sodium	GRAS		U	(338)	150	J			NA		223	J			U	(339)	208	J	
Vanadium	72.5	38.2			42.1				NA		29.4	J		26.9			3.7		
Zinc	119.5	64.1	J		67.7				NA		72.1			59.8	J		5.8		
SEMIVOLATILES (UG/KG)																			
2-Methylphenol	3300000		U	(423)		U	(423)		U	(388)		U	(407)		U	(418)		U	(344)
4-Methylphenol	330000		U	(423)		U	(423)		U	(388)		U	(407)		U	(418)		U	(344)
Benzo(a)anthracene	610		U	(423)		U	(423)	69	J			U	(407)		U	(418)		U	(344)
Benzo(b)fluoranthene	610		U	(423)		U	(423)	140	J		49	J			U	(418)		U	(344)
Benzo(k)fluoranthene	6100		U	(423)		U	(423)	148	J		52	J			U	(418)		U	(344)
Chrysene	24000		U	(423)		U	(423)	76	J			U	(407)		U	(418)		U	(344)
Di-n-butylphthalate	6500000		U	(423)		U	(423)		U	(388)		U	(407)		U	(418)		U	(344)
Fluoranthene	2600000		U	(423)		U	(423)	56	J			U	(407)		U	(418)		U	(344)
Phenol	39000000		U	(423)		U	(423)		U	(388)		U	(407)		U	(418)		U	(344)
Pyrene	2000000		U	(423)		U	(423)	60	J			U	(407)		U	(418)		U	(344)
bis(2-Ethylhexyl)phthalate	32000		U	(423)		U	(423)	1691				U	(407)	531				U	(344)

Note: 1) NA=screening level is not available. 2) R=result, Q=qualifier, QL=quantitation limit 3) Results above screening level are underlined and italicized.

Appendix B

B07NE003703-04004

APPENDIX B
UXB AVOIDANCE SURVEY REPORT

UXO AVOIDANCE SURVEY REPORT
PROVIDED BY
UXB INTERNATIONAL, INC.
14800 CONFERENCE CENTER DR.
SUITE 100
CHANTILLY, VA. 22021
(703) 803-8904

AT
THE FORMER NEBRASKA ORDNANCE PLANT (NOP)

FOR

WOODWARD-CLYDE
100975 El Monte, Suite 100
Overland Park, KS

UXB International, Inc.
Ordnance and Explosive
Waste Services

1.0 INTRODUCTION

This project report is submitted by UXB International, Inc. to Woodward-Clyde Federal Services, Inc. on completion of UXO Ordnance and Explosive Waste services provided at the former Nebraska Ordnance Plant (NOP), near Mead, Nebraska during the period of March 1, 1995 thru March 24, 1995.

1.1 APPENDICES

The scope of work is included as Appendix (A) and is summarized in section 2.0. Appendix (B) is a copy of the daily work log submitted by the UXB Project Leader.

2.0 SCOPE OF WORK

The Scope of Work is included in this report as Appendix (A) and is summarized here. OEW Survey will consist of preliminary Clearance surveys, shallow soil sampling, location clearance and monitoring surveys, deep soil boring location clearance and monitoring surveys.

3.0 PERFORMANCE OF FIELD WORK

All UXO Services have been completed at the former NOP with no job related accidents. No ordnance items or explosive materials were found during the field work, therefore no support requests were made to The Cognizant Active Duty Military EOD Unit for the former Nebraska Ordnance Plant.

T. Yancey
Tom Yancey
Project Manager

14800 Conference Center Drive • Suite 100 • Chantilly, Virginia 22021-3806
Phone: (703) 803-8904 • Fax: (703) 803-9355

APPENDIX A

SCOPE OF WORK

SCOPE OF SERVICES FOR UXB INTERNATIONAL, INC.
OEW SURVEY FOR REMEDIAL INVESTIGATION
FORMER NEBRASKA ORDNANCE PLANT
OPERABLE UNIT N0. 3
MEAD, NEBRASKA

SCOPE OF SERVICES

The Scope of Services shall include providing all labor, equipment, health and safety equipment, and field supplies for the following Ordnance and Explosive Waste (OEW) surveying services at the Former Nebraska Ordnance Plant (NOP) near Mead Nebraska (Site). The work is to be provided by UXB International, Inc. (Subcontractor) under the direction of Woodward-Clyde Consultants (WCC) field personnel.

Mobilization

The subcontractor shall mobilize all of the equipment, supplies and personnel necessary to complete the work outlined in this scope of services.

OEW Survey

The OEW Survey will consist of the following tasks:

- Preliminary Clearance Surveys
- Shallow Soil Sampling Location Clearance and Monitoring Surveys
- Deep Soil Boring Location Clearance and Monitoring Surveys
- The shallow soil and deep soil sampling investigations will require two separate OEW survey crews, working simultaneously with separate geophysical equipment and supplies.

The tasks are described in the following paragraphs.

1.0 Preliminary Survey

The purpose of the Preliminary Clearance Survey is to allow 1 team of WCC personnel to enter an area and to perform geophysical surveys. The Preliminary Clearance Survey will clear the area for entry into each site by light duty vehicles (i.e. pickup trucks and vans) and for driving wooden stakes up to 10 inches in depth at the WCC geophysical grid nodes. The subcontractor shall escort the WCC field team for the duration of the WCC geophysical survey. The WCC geophysical survey is anticipated to require approximately 20 days to complete and will be completed prior to the shallow and deep soil sampling.

2.0 Shallow Soil Sampling Location Clearance and Monitoring

The purpose of the Shallow Soil Sampling Location Clearance is to allow WCC to drill hand auger borings to depths of either 2 or 3 feet (depending on site specific sampling requirements). Shallow soil sampling locations will be selected by WCC. The subcontractor shall escort the WCC field team for the duration of the shallow soil sampling. The shallow soil sampling is anticipated to require approximately 15 days to complete.

3.0 Soil Boring Location Clearance and Monitoring

The purpose of the Soil Boring Location Clearance is to allow WCC to drill soil borings (hollow stem augers or continuous flight augers) to a depth of 20 feet below ground surface. Soil boring locations will be selected by WCC following the WCC Geophysical Survey.

Prior to mobilization of the drill rig, the boring location will have been cleared to a depth of 2 to 3 feet during the shallow soil sampling. The contractor shall perform "down-hole" monitoring at four foot intervals to the completion depth of 20 feet. The drilling contractor will remove the augers from the borehole for the monitoring. Sampling and logging of the borehole will be conducted by WCC. The subcontractor shall escort the WCC field team for the duration of the deep soil sampling. The deep soil sampling is anticipated to require approximately 15 days to complete and will be performed at the same time as the shallow soil sampling. Therefore, it will be necessary for the subcontractor to furnish two separate crews for the shallow and deep soil sampling.

Decontamination of the equipment will be performed by the subcontractor in accordance with the CDAP for the project.

4.0 General

The following list provides some general requirements to be followed by the subcontractor during the performance of the work described in this scope of services:

- The OEW subcontractor shall provide a work plan which meets the requirements of USACE - Huntsville for performing an OEW survey.

- If UXO (unexploded ordnance) is encountered, the OEW subcontractor shall notify the appropriate contact at the USACE - Kansas City.

- If UXO is encountered at a boring location or during downhole magnetometer surveys, the UXO subcontractor will mark the location of the UXO and assist in identification of safe areas for relocation of investigation points.

- Upon completion of the field activities, the UXO subcontractor will prepare a report summarizing the results of the investigation.

- All UXO subcontract work will be performed in accordance with all relevant guidance and directives issued by USACE - Huntsville.

Health and Safety

All Subcontractor personnel on-site shall be trained in accordance with 29 CFR 1910.120, 40-hour course for hazardous waste site operations. The subcontractor shall provide all health and safety equipment for its personnel (Modified Level D).

The subcontractor shall conduct all work activities in accordance with the provisions of the Safety, Health and Emergency Response Plan (SHERP) (WCC, 1994). The subcontractor may develop its own SHERP or Site Health and Safety Plan, or may choose to use the WCC SHERP. The subcontractor SHERP may exceed but cannot be less stringent than WCC's and shall, at a minimum, be consistent with the requirements of Occupational Safety and Health Administration (OSHA) Standards and Regulations contained in Title 29, Code of Federal Regulations, Parts 1910.120 ("Hazardous Waste Operations and Emergency Response: Final Rule") and USACE procedures and guidelines.

Schedule

The WCC field crew will be working in shifts consisting of 10 consecutive working days followed by a 4 day break. The subcontractor shall follow the same schedule until the work described in this scope of services is completed. Work is planned to begin in March 1995 and be completed in April 1995.

APPENDIX B

DAILY WORK LOG

Page 1

1 MAR 95

0730 ARRIVE Woodward Clyde Site Trailer
Met with Lisa Travaglin WCC Site
supervisor. We discussed the work Plan
and Realized that we are expected
to perform a 100% visual surface
clearance of all appropriate areas,
totalling 104 acres. After a little
discussion I sent the UXB crew to
Site 1, WDA No. 3 of former Nike
Maintenance area to perform a
100% clearance (surface) of approximately
1/2 acre. Schoenstdts were used
as the area ~~[illegible]~~ has tall grass
and some brush on it.
UXB safety brief completed (UXB only)
and crew is working. The only
other personnel on site is Lisa
of Woodward Clyde. However she
is not going to any site today. Therefore
no briefing for her.
I remained at the site trailer

TO STRAIGHTEN OUT THE DIFFERENCES
OF OPINION ABOUT THE WORK PLAN,
1030 AFTER SPENDING 3 HRS TRYING TO
GET A PLAN OF ATTACK FOR 104 ACRE
CLEARANCE MANY OPTIONS WERE
DISCUSSED TO NO AVAIL I RETURNED
TO CHECK ON MY CREW AT SITE 1.
WHEN I ARRIVED, THE AREA AROUND
THE PARKING PAD HAD JUST COMPLETED.
169 ANOMALIES WERE DISCOVERED IN
AN AREA SLIGHTLY LESS THAN 1/2 ACRE,
ALL BELOW SURFACE AND FLAGGED.
1045 AFTER A SHORT BREAK TO GET WARM
(-15 WIND CHILL) I HAD THE CREW
MOVE TO SITE 1, WDA IN (3.6 ACRES)
AND BEGIN A 100% VISUAL
CLEARANCE. I RETURNED TO THE
W.C.C. SITE TRAILER TO LEARN THAT
NO [redacted] DECISION HAD BEEN MADE.
AFTER SEVERAL CONVERSATION WITH
TOM YANCY (UXB PROJECT MANAGER) AND

1200

1230

1315

RICK NUEZ (W.C.C. Project MANAGER) OPTIONS OF Demobing 1 CREW WERE discussed. However This will make IT difficult To complete The Scope of work IN A Timely AND EFFICIENT MANNER.

1200 I Returned To SiTe 1 To have The crew BREAK FOR LUNCH AND discovered THAT The 3 MAN TEAM hAd completed APPROXIMATELY 3/4 of SiTe 1, WDA 1N. We All RETURNED To The SiTe TRAILER AND iNFORMED LISA OF The AMOUNT of ground COVERED iN The 1 hour 15 min Time period.

1230 We DEPARTED FOR LUNCH

1315 RETURN FROM LUNCH AND W.C.C. WANTED US TO hAVE 1 TEAM START ON SiTe 1, WDA 3N (APPROXIMATELY 13 ACRES) AS A TEST TO LEARN How MANY ACRES could be COVERED UNTIL The end of The day. The OTHER TEAM would FINISH SiTe 1 WDA 2N

1345 SITE 1 WDA 2N completed AND THIS TEAM IS MOVING TO SITE 6 FORMER NORTH BURNING GROUND TO LOCATE AND MARK 10 SHALLOW SOIL SAMPLE POINTS AND 2 DEEP SOIL SAMPLE POINTS.

1545 AFTER POLLING POINTS (TRIANGULATION) WITH ONLY 2 MEN (GUSTY WINDS) WE FINALLY LAID IN 5 POINTS AT SITE 6 - THIS IS DIFFICULT WITH ONLY 2 MEN HENSE THE DELAY. 1615

WE RETURNED TO SITE 1, WDA 3N TO MEASURE THE AREA SWEPT BY THE OTHER TEAM AS THEY WERE STAKING THEIR STOPPING POINT. THE TEAM CLEARED 481 FT OF THE SHORTER LEG (481' X 700') OR 7.7 ACRES. WITH ANY SNOW COVERING THE GROUND THIS CLEARANCE WILL TAKE MUCH LONGER AS SCHOPNSTEDTS WILL HAVE TO BE USED.

WE RETURNED TO THE SITE

TRAILER TO discuss with W.C.C. what The decission will be. We will possibly be dropping A TEAM ANY WAY - AS IT APPEARS 1 TEAM is covering ground very FAST. Hope IT doesn't SNOW OR THAW OUT.

1615 VxB DEPART FOR The DAY.

EQUIPMENT USED: 2 Vehicles, 2 Schonstedts Miscellaneous hand Tools.

4 Personnels - 32 mhours

2 MAR 95

0730 ARRIVE SITE TRAILER - SAFETY BRIEF completed. ONE TEAM DISPATCHED TO SITE 1, WDA #1N + WDA #2N TO USE SCHONSTEDTS TO CLEAR ALL AREAS WITH SNOW COVER. SECOND TEAM RETURNED TO SITE 6, FORMER NORTH BURNING GROUND TO FINISH PULLING POINTS AND SET UP AND CLEAR SAMPLE POINTS (BOTH SHALLOW AND DEEP).

1200 LUNCH BREAK

1245 RETURN FROM LUNCH - TEAMS RETURNED TO ORIGINAL ASSIGNMENTS.

1500 SITE 1 WDA #1 COMPLETED, - WDA #2 481'X700' COMPLETED AND TEAM IS SWEEPING REMAINING HALF OF WDA #2

1600 SITE 6 NORTH BURN AREA - ALL POINTS PULLED - ALL SAMPLE POINTS MARKED - BOTH ACCESS WAYS FOR THE DEEP SAMPLE POINTS ESTABLISHED AND CLEARED. SHALLOW SAMPLE POINTS ACCESS LANES CLEARED (5EA ONLY) ONE POINT HAD

1630

To be moved 4' west of original position ~~to~~ Due to anomalies on the site this sample point does not have a numerical designation at this time but is marked on the North Burning area map. A sixth point is in a highly contaminated area but, has not been moved as time ran out today. Personnel returned to the site trailer and I briefed Lisa on the days happenings.

1630 Depart for the day

Equipment used: 2 vehicles, 2 schonstedts, 2 MK 26's (Forresters), miscellaneous hand tools and flagging material.

4 ea personnel - 32 m. hours.

3 MAR 95

0730 ARRIVE SITE TRAILER - Pick up Radios - SAFETY BRIEF Completed. 1 TEAM TO SITE 1 WDA #2 (LARGE AREA) AND 1 TEAM TO FORMER NORTH BURNING GROUND (SITE 6).

0900 NORTH BURNING GROUND Completed with exception OF DOWN Hole CLEARANCE OF BOTH Deep SOIL SAMPLE LOCATIONS. 2nd TEAM moved TO SITE 1 WDA #2 LARGE AREA.

900 NORTH BURNING GROUND (SITE 6) MAP completed, AND WDA #3N (SITE 1) PARKING LOT GRID Completed. (169 ANOMALIES).

1200 SITE 1, WDA #2 (LARGE AREA) completed LUNCH BREAK

1230 RETURN FROM LUNCH - CREW moved TO SITE 2, WDA SE BOMB BOOSTER AREA. Due TO 1 vehicle HAVING ITS Keys Locked inside A THREE MAN CREW is working SITE 2. I'm TRYING TO FIND A LOCKSMITH.

1500 LOCKSMITH FINALLY ARRIVED + Vehicle + EQUIPMENT moved TO SITE 2.

1545 SITE 2 COMPLETED FOR THE DAY. ACRES CLEARED (572'X700')-9. RETURN TO SITE TRAILER TO BRIEF LISA.

1600 DEPART FOR THE DAY

EQUIPMENT USED: 2 VEHICLES, 2 SCHONSTEDTS MISCEL. HAND TOOLS.

4 PERSONNEL - 32 M HOURS.

4 MAR 95

0730 ARRIVE SITE TRAILER - Pick up Radios
SAFETY BRIEF complete - CREW clearing
SITE 2 (BOMB BOOSTER AREA) plowed FIELD.
900 SITE 2 completed (BOMB BOOSTER AREA)
SURFACE CLEARANCE ONLY. CREW moved
TO SITE 3 (AMMONIUM NITRATE PLANT)
1200 LUNCH
230 RETURN FROM LUNCH - Sweeping SITE 3
1430 SITE 3 completed - CREW moved TO SITE 7,
DEMO. GROUND
600 DEPART FOR THE DAY.
EQUIPMENT USED: 2 Vehicles, 2 Schonstedts
miscel. HAND TOOLS. 4 RADIOS.
4 personnel 32 m. HOURS

5 MAR 95

0730 ARRIVE SITE TRAILER - pickup RADIO - SAFETY BRIEF completed. CREW WORKING SITE 7, DEMO GROUND. AREA IS SNOW COVERED DUE TO LAST NIGHTS SNOW.

1200 LUNCH.

1230 RETURN FROM LUNCH - STILL WORKING SITE 7 DEMO. GROUND.

1500 SITE 7 DEMO GROUND completed. CREW moved ON TO DETONATION CRATER 1+2 - Slight Delay AS The CATTLE KNOCKED All The STAKES DOWN - HAD TO LOCATE AND REINSTALL Them.

1600 DEPART FOR The DAY.

EQUIPMENT USED: 2 Vehicles, 2 SCHONSTEDTS, 4 RADIOS, MISCEL. HAND TOOLS

4 PERSONNEL - 32 M.HOURS

6 MAR 95

0730 ARRIVE SITE TRAILER pickup RADIOS. -
SAFETY BRIEF Completed.
UXB CREW WORKING DETONATION
CRATERS 1+2 AT SITE 4
00 DETONATION CRATER 1+2 SITE 4 Completed.
CREW moved TO DET. CRATERS #3 AND
.030 Completed AT DET CRATER #3, SITE 4 AND
moved TO CRATERS 4+5.
1200 SITE 4 DET. CRATERS 4+5 completed.
LUNCH BREAK - HEAVY SNOW
230 RETURN FROM LUNCH - CREW HAS moved TO
SITE 5, WDA #1, FORMER ATLAS MISSILE AREA.
WOODWARD Clyde SITE MANAGER ARRIVED TODAY
CHRIS FITZGERALD. LISA TRAVAGLIN HAS
BOEN THE INTERUM SUPERVISOR.
1600 DEPART FOR THE DAY. 4 PERSONNEL 32 M HOURS
EQUIPMENT USED: 2 Vehicles, 2 schongteds,
MISCEL HAND TOOLS, 4 RADIOS

7 MAR 95

0730 ARRIVE SITE TRAILER - Pickup Radio - SAFETY BRIEF completed. SAFETY BRIEF given TO 5 WOODWARD Clyde Personnel AS Today is Their FIRST DAY ON SITE.
UXB CREW WORKING SITE 5, WDA #1 FORMER ATLAS Missile AREA.

Temp 5° - Wind 20-25 Gusting To 31 KTS. Wind chill -35°F. SAFETY BRIEF CONSISTED OF Clearance + Escort Procedures, AN ORDNANCE BRIEF AND Hyperthermia Clayered clothing, Frequent Breaks etc.

1200 Lunch Break

1230 Return From Lunch - Still working SITE 5 WDA #1. 8°F, WIND 25 KTS, ~~wt~~ WIND chill -31°F, clear + Sunny.

1600 Clearance Sweeps completed For The DAY CREW TAKING Time To Clear equipment/Vehicles.

1700 Depart For The DAY
Equipment used: 2 Vehicles, 2 Schonstedts, 4 Radios, miscel. HAND Tools.
4 Personnel - 36 m. Hours

8 MAR 95

0730 ARRIVE SITE TRAILER, pick up Radio—
Give SAFETY BRIEF AND CREW WORKING
SITE 5, WDA #1

0930 SITE 5, WDA #1 Completed, 100% Schonstedt
CLEARANCE. CREW MOVED TO SITE 5
? WDA #2.

1200 LUNCH BREAK

1230 RETURN FROM LUNCH STILL CLEARING SITE 5
WDA #2.

1600 SITE 5 CLEARING completed FOR THE DAY
CREW IS CLEANING Vehicles + EQUIP OF
ICE + SNOW

1700 DEPART FOR THE DAY.
EQUIPMENT USED: 2 Vehicles, 2 SCHONSTEDTS.
4 RADIOS, + MISCEL. HAND TOOLS.
4 PERSONNEL - 36 M-HOURS

9 MAR 95

0730 ARRIVE SITE TRAILER - pickup RADIO - SAFETY BRIEF Completed. CREW is BACK ON SITE 5 WDA #2. WIND Chill -18°F.

1200 LUNCH BREAK

1730 RETURN FROM LUNCH, CREW sweeping SITE 5, WDA #2 AGAIN.

1600 SITE 5 WDA #1 CLEARANCE Complete. However we must RETURN TO FLAG A LARGE DISPOSAL AREA ON THE EAST END OF THE SITE (old CAR PARTS Fence, WIRE etc).
CREW cleaning equip/vehicles 1 hour.

~~1700~~ DEPART FOR THE DAY

EQUIPMENT USED: 2 Vehicles, 2 SCHONSTEDTS 4 RADIOS + Miscel. HAND TOOLS.
4 Personnel - 36 m HOURS

10 MAR 95

0730 ARRIVE SITE TRAILER - pickup Radio - SAFETY BRIEF completed. CREW has RETURNED TO SITE 5, WDA #1 TO FLAG The Dump AREAS Called UXB OFFICE To make Flight ARRANGEMENTS FOR MARK HUGHES - iTENERARY will be FAXed To our MOTEL.

0900 SITE 5, WDA #1 Dump AREA Flagged - CREW moved TO The South Burning GROUND TO START CLEARANCE

0915 START CLEARANCE OF The South Burning GROUND SITE 6.

1200 SITE 6, South BURN AREA COMPLETED. LUNCH BREAK.

1230 RETURN FROM LUNCH - START CLEARANCE OF SITE 6 LANDFILL N. OF PROVING GROUNDS

1600 STOP WORK AT SITE 6 LANDFILL AREA. completed APPROXIMATELY 1/3 OF AREA AND ENCOUNTERED 288 ANOMALIES plus 2 LARGE AREAS OF Solid CONTACTS.

DEPART FOR 4 DAY BREAK - 2 personnel TO Demob. SATURDAY MORNING - Vehicle

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CLEAN UP FOR TURN IN AT [redacted] AVLS
AND COMPANY VAN FOR DEPARTURE
BACK TO CHANTILLY VA.
4 PERSONNEL - 40 M.HOURS
EQUIPMENT USED: 2 VEHICLES, 2 SCHONSTEDTS
4 RADIOS AND MISCELL HAND TOOLS.

15 MAR 95

WEATHER: FOG 41° CALM — SUNNY 65-70°F

0730 ARRIVE SITE TRAILER - SAFETY BRIEF completed
Personnel: Booker - Project Leader.
NORBERG - Supervisor.
RETURN TO SITE 6 LANDFILL AREA NORTH 1230
OF the PROVING GROUNDS - HEAVY GRASS AREA
0830 SITE 6 LANDFILL AREA IS SATURATED WITH
ANOMALIES. TO The point THAT IT IS
ALMOST impossible TO provide CLEAR LANES.
FOR vehicles. I'm going BACK TO The 1300
SITE TRAILER TO discuss THIS SITE WITH
LISA. The ANOMALIES ARE SPACED SO
close TOGETHER THAT ~~IS~~ IT'S NOT
FEASIBLE TO TRY TO FLAG Them ~~all~~, ALL.
0900 AFTER ~~[illegible]~~ A discussion WITH LISA (W.C.C)
We decided TO TRY AND LOCATE 9 CLEAR
POINTS TO TAKE SHALLOW SOIL SAMPLES.
1200 We MARKED 12 SHALLOW SOIL SAMPLE POINTS
AND TRIED TO PROVIDE ACCESS LANES
FOR Deep SOIL SAMPLE POINTS, BUT
COULD FIND NO CLEAR AREAS OF ACCESS

without intrusive work. Therefore on site 6, Landfill there remains 12 shallow soil sample points.

Lunch Break

1230 Return from lunch and flagged the 2 anomalies in site 6, South Burn Area. Last week the ground was frozen to hard to get pin flags in the earth. We painted the soil instead.

1300 Back at site 6 proving grounds area, trying to locate clear points for shallow soil sample points and possibly deep sample points. South Burn Area anomalies flagged + area completed.

1630 Completed shallow soil sample locations:

Site 6 - Landfill area - 12 shallow soil sample points. '0' deep sites; could not clear access lanes to any of the sample points

Site 6, Proving Ground - 3 shallow sample locations, "0" Deep - Again we could

NOT CLEAR ANY ACCESS LANES.

SITE 6; AREA immediately SOUTH of The PROVING GROUNDS - 6 SHALLOW SAMPLE POINTS AND AGAIN "0" Deep SAMPLE POINTS Due TO COUNTLESS ANOMALIES. 0730

DEPART WORK SITE FOR The SITE TRAILER TO BRIEF LISA TRAVAGLIN (W.C.C.) ON The days accomplishments

1700 DEPART FOR The DAY.

EQUIPMENT USED: 1 Vehicle, 1 MK26 FORRESTER ORDNANCE LOCATOR, 2 SCHONSTEDTS AND MISCEL. HAND TOOLS. 0900

2 PERSONNEL - 20 man hours

Jimmy J. Booker

1000

16 MAR 95

WEATHER: 41° Fog — 71° SUNNY-CLEAR

Personnel: Booker - Project Leader

[redacted] NORBERG - Supervison

0730 ARRIVE PATTS RENTAL CENTER TO PICK UP POWER AUGER BUT, IT WASN'T READY - WANTED US TO RETURN AT 0900 & should be ready. yesterday - LISA TRAVAGLIN WANTED US TO START USING THE AUGER THIS MORNING INSTEAD OF FRIDAY AS ORIGINALLY PLANNED.

0900 RETURNED TO PATTS RENTAL AND picked up THE POWER AUGER - AND DEPARTED FOR NOP MEAD - STOPPED TO FUEL AUGER AND FUEL CAN AND ARRIVED AT WCC SITE TRAILER.

1000 LISA TRAVAGLIN CAME OUT TO SITE 6 NORTH BURN AREA. TO check THE AREA WE (UXB) LAID OUT & CLEARED FOR THEM - 10 SHALLOW SOIL SAMPLE SITES & 2 DEEP SITES. AFTER SOME DISCUSSION she DECIDED THAT THE MAP PROVIDED TO US WAS NOT TO SCALE AS WE WERE TOLD.

1100 We Returned To The Site TRAILER AND checked AN AERIAL VIEW photo AGAINST A TOPOGRAPHICAL MAP (THAT we did NOT have) AND decided THAT almost All OF Site 6 NORTH BURN AREA WAS STAKED improperly.

AFTER LISA Called CHRIS AND Between Them decided To Remark The Topo map. AND CHRIS FAXED us A copy. Once we had This copy (FAX) yes.. The AREA WAS STAKED out improperly

1200 Depart For Lunch.

1230 Return From Lunch - Picked up 300' Surveyors Tapes AND Returned To Site 6 NORTH BURN AREA AND Began All over AGAIN except 4 shallow Sample Points on The EAST END OF The Site.

1640

1645

1700

1640 All Required Sample Points have been Relocated To The New Requirements AND each Point cleared To Depth of 3' except The 2 Deep Sample Site. Access Lanes have NOT been cleared as yet. Old Access Lanes have been Removed. New Lanes will be Restablished Tomorrow.

1645 Depart For Site Trailer To outbrief

1700 OUTBRIEF Completed. Depart For The Day

EQUIPMENT USED: 1 Vehicle, 1 MK26 Forrester ORD. Locator, 2 schonstedts, 1 power auger + miscel hand tools

2 Personnel - 20 mhours

Jimmy J. Geeker

17 MAR 95

WEATHER: Cloudy 65°

PERSONNEL: BOOKER - Project Leader

NORBERG - Supervisor

0730 ARRIVE SITE TRAILER - Pickup Radio - SAFETY BRIEF Completed.

Depart for site 6 NORTH BURN AREA.

0800 ARRIVE BURN AREA - RELOCATING ACCESS LANES

1030 All ACCESS LANES completed - START AUGER Hole FOR Down hole CLEARANCE OF Deep SAMPLE POINT A1

1230 SAMPLE POINT A1 10' Down hole CLEARANCE completed. BREAK FOR LUNCH

1300 RETURN FROM LUNCH AND MOVED TO SAMPLE POINT A2, SITE 6 NORTH BURN AREA.

1330 STOP WORK AT SITE 6 AND proceeding TO The Bomb BOOSTER AREA, SITE 2 TO LOCATE 3 DEEP Soil SAMPLE POINTS AT The direction OF LISA TRAVAGLIN

1430 SAMPLE POINTS LOCATED. RETURN TO SITE 6 TO FINISH Down hole CLEARANCE

1600

1700

OF SITE A2, NORTH BURN AREA.

1600 FINALLY COMPLETED SITE A2 N. BURN AREA
SITE A2 DOWNHOLE CLEARED TO 10' DEPTH.
BOTH SAMPLE POINTS (A1+A2 - SEE MAP)
WERE HEAVY CLAY - ROUGH AUGERING.
EQUIPMENT LOADED + MOVED TO
SITE 2.

1700 DEEP SOIL SAMPLE POINTS AT SITE 2
ACCESS LANES WILL BE FINISHED
TOMORROW. DEPART FOR THE DAY
EQUIPMENT USED: 1 VEHICLE, 1 MK26
ORDNANCE LOCATOR, 2 SCHONSTEDTS
1 POWER AUGER, 1 HAND AUGER
AND MISCEL HAND TOOLS.
2 PERSONNEL - 20 MAN HRS

18 MAR 95

WEATHER: Cloudy 41° 15-20 mph winds.
Personnel: Booker - Project Leader.
Norberg Supervison.

0730 Arrive site trailer - pick up Radio - Safety Brief completed. START Access Lane + Downhole clearances at site Bomb Booster Area. BB008

000 Deep Soil Sample BB008 Access Lane and Downhole clearances completed. Depart for Bank + Lunch at Fremont.

230 Return to site 2 START Deep Soil Sample BB007

1430 Sample Point BB007 completed - START BB006

1600 Sample Point BB006 Access Lane + Downhole clearances completed. Chris Fitzgerald arrived on site and wanted to clear the last Deep Soil Sample site (BB001) and 4ea Shallow Sample Points (BB002, 3, 4, + 5)

1630 Site 2 Bomb Booster Area completed

1700

EXCEPT FOR ACCESS LANE & DOWNHOLE
CLEARANCES FOR DEEP SAMPLE POINT
BB001 - WILL BE STARTED AND COMPLETED
TOMORROW.
RETURN TO SITE TRAILER FOR OUTBRIEF
1700 OUTBRIEF COMPLETED - DEPART FOR THE DAY
EQUIPMENT USED: 1 VEHICLE, 1 MK26 ORDNANCE
LOCATOR, 2 SCHONSTEDTS, 1 POWER AUGER, +
1 HAND AUGER + MISCEL HAND TOOLS.
2 PERSONNEL - 20 MHOURS

Jimmy J. Booker

18 MAR 95

WEATHER: 36°F 15-25 mph WINDS Cloudy

PERSONNEL: BOOKER - Project Leader

NORBERG - Supervison

0730 ARRIVE SITE TRAILER - pickup RADIO - SAFETY BRIEF COMPLETED. DEPART FOR SITE 2 BOMB BOOSTER AREA, Deep Soil Sample. BB001

0745 ARRIVE SAMPLE SITE - START CLEARANCE

0945 DOWNHOLE + ACCESS LANE CLEARANCES COMPLETED ON SAMPLE SITE BB001. BOMB BOOSTER AREA COMPLETED FOR UXB. RETURN TO SITE TRAILER.

1000 AWAITING LOCATION OF SOIL BORINGS AT SITE 1.

015 SITE 1 NOW HAS 3 SOIL BORINGS MARKED AND AM TRYING TO FIGURE AWAY TO THEM WITHOUT CARRYING ALL ~~OUR~~ OUR GEAR ALL THE WAY OUT. CHRIS FITZGERALD SAID THAT HE HAS A 4 wheel DRIVE DUALLY THAT WE COULD USE.

1100 ALL GEAR CHANGED OVER TO THE

1230

1300

1400

1500

1600

1700

4 wheel Drive AND we STARTed
Downhole clearance OF Site 1
AREA "B" (SEE MAP)

1230 Soil Boring Completed Site 1
Sample Point # NMA003 . DEPART For Lunch.

1300 Return From Lunch START Downhole
Clearance Site 1 AREA "A" Sample Point
NMA001

1400 Downhole clearance complete Sample Point
NMA001 . START Sample Point # NMA002.

1500 Downhole clearance complete Sample Point
NMA002. START Sample Point
Site 1 AREA "B" # NMA004

1600 Downhole clearance complete Site 1 AREA "B"
Sample Point # NMA004. START sample Point
NMA005, Site 1 AREA B.

1700 Downhole clearance completed. Site 1 AREA "B"
Sample Point # NMA005. - Site 1 AREA "A" + B.
NIKE MAINTENANCE AREA complete For U+B.
EQUIPMENT USED: 1 Vehicle, 1 MK26 ORDNANCE
LOCATOR, 2 SCHONSTEDTS. 1 Power Auger, 1 HAND

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AUGER, MISCEL. HAND TOOLS.
2 PERSONNEL - 20 M HRS.

0730

0900

20 MAR 95

WEATHER: 41° Cloudy WINDS Gusty 30mph.
Personnel: BOOKER - Project Leader
NORBERG - Supervison

0730 ARRIVE SITE TRAILER - SAFETY BRIEF Completed. with exception OF The DRill CREW. The DRill CREW doesn't ARRIVE UNTIL 1200.

Called Tom YANCEY TO REQUEST A NEW MK 26 LOCATOR CABLE FOR The DOWNHOLE/WATER mode. The CABLE we have has A SHORT AT The probe CONNECTOR END AND is UNUSABLE.

0900 SPENT The morning calling every REPAIR shop I could FIND IN The phone book. I FINALLY GOT A LEAD ON A PLACE IN Bellvue Ne. (Suburb OF OMAHA). AFTER describing The CABLE CONNECTOR TO THEM ON The phone - They thought They could FIX IT.

0930 I departed for Computer Cable Company of Bellevue.
1045 Finally found the cable company. After examination of the connector and its design (waterproofing) and apparent military makeup the cable company refused to repair it. 1530
200 Returned to mead. Lunch break
1730 Lunch break over - Returned to W.C.C. site trailer to discuss the situation with Chris Fitzgerald, and he isn't available so we are standing by.
430 Finally met with Chris and Lisa Traughin. Since they have not marked anymore sample sites and they are busy with the drill crew and utilities people, they won't have time to mark any

SAMPLE LOCATIONS AND THE MK26 CABLE WON'T ARRIVE UNTIL AROUND 1000 HRS. TOMORROW.

IT WAS decided THAT when The CABLE ARRIVES we will RETURN TO N.O.P. MEAD.

1530 DEPART FOR THE DAY

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21 MAR 95

WEATHER: 50° CLEAR SUNNY — 70° CLEAR WINDY

PERSONNEL: BOOKER - PROJECT LEADER

NORBERG: SUPERVISOR

1730

1030 RECEIVED MK26 LOCATOR CABLE FROM CORPORATE OFFICE - CHECKED OUT MK26 - FUNCTION TEST OKAY. DEPART FOR SITE TRAILER.

1130 FARLY LUNCH BREAK

1200 LUNCH BREAK COMPLETED. ARRIVE SITE TRAILER. LISA TRAVAGIN HAS MARKED THE AMMONIUM NITRATE SITE. DEPART FOR SITE 3.

1800

230 ARRIVE SITE 3 AMMONIUM NITRATE AREA. ACCESS LANE AND DOWNHOLE CLEARANCE START ON DEEP SAMPLE SITE #ANA002

415 DEEP SAMPLE SITE #ANA002 COMPLETED. MOVED TO SAMPLE SITE #ANA001 AND START ACCESS LANE + DOWNHOLE CLEARANCE

545 COMPLETED SAMPLE SITE ANA001 - AMMONIUM NITRATE SITE 2 COMPLETED FOR UXB. MOVED TO SITE 7 DEMOLITION GROUNDS. ARRIVE DEMOLITION GROUNDS SITE 7 START

ACCESS LANE AND DOWNHOLE CLEARANCES OF
DEEP SAMPLE POINT # DGA004

1730 DEEP SAMPLE POINT DGA004 COMPLETED
THIS WILL BE THE ONLY SAMPLE POINT
AT THIS SITE TO HAVE AN ACCESS LANE
AS THE REMAINDER OF THE SITE HAS
BEEN CLEARED WITH SCHONSTEDTS.
THE 3 REMAINING ~~used~~ SAMPLE POINTS
ARE IN THE CLEARED AREA.
RETURN TO SITE TRAILER FOR OUTBRIEF

1800 DEPART FOR THE DAY
EQUIPMENT USED: 1 VEHICLE, 1 MK2 LOCATOR,
2 SCHONSTEDTS, 1 POWER AUGER, 1 HAND AUGER
AND MISCEL. HAND TOOLS.
2 PERSONNEL: 16 MHRS.

22 MAR95

WEATHER: 40° cloudy 15-25 winds

Personnel: Booker - Project Leader

NORBERG - Supervison

0730 ARRIVE SITE TRAILER - pick up RADIO - SAFETY BRIEF COMPLETED. DEPART FOR DEMO AREA SITE 7

0800 ARRIVE SITE 7 DEMO AREA - START Deep Sample Point #DGA003 Downhole Clearance.

0930 Sample Point #DGA003 Completed - Cleared Through 10' Depth. START Sample Point #DGA002

1045 Sample Point #DGA002 Completed - Cleared Through 10' Depth. START Sample Point #DGA001

1200 Sample Point #DGA001 Cleared Through 10' Depth. Site 7 Demo. Area Downhole and Access Lane Clearances Completed for VXB. LUNCH BREAK

1230 Return from Lunch - AT THIS TIME We have no more sample locations marked so we are standing by. W.C.C. is awaiting interpretation of Geophysics from

1530

1600

Denver for placement of the remaining 7 sample points.

1530 I just received notification from Lisa Travaglin that there are no new sample point locations as yet, and therefore UXB is no longer required today.

1600 All equipment stowed - depart for the day

Equipment used: 1 vehicle, 1 MK26 locator, 2 schonstedts, 1 power auger, and 1 hand auger + miscel. hand tools.

2 personnel 16 m.hrs

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23 MAR 95

WEATHER: 34° Cloudy 10-15 winds

Personnel: Booker - Project Leader

Norberg - Supervisor.

0730 ARRIVE SITE TRAILER - Pickup Radio - SAFETY BRIEF Completed. Depart For Site 1 AREA C (Parking Lot). Cleared Deep Sample Point # NMA 006 + NMA 007. AND AM AWAITING ARRIVAL OF The Drill crew To perform The Down hole Clearance.

0815 START Downhole Clearance of Deep Sample Point # NMA 006

0915 Sample Point # NMA006 completed Downhole cleared Through 10'.

1000 START Downhole Clearance of Deep Sample Point NMA007 AT Site 1.

1045 Sample Point NMA007 completed. Downhole cleared THRU 10'. All Deep Sample Points on Site 1 were cleared with The MK26 Ferrous ORDNANCE Locator. Site 1 Completed For UXB.

1100

1130

1230

1300

1350

1500

1610

1100 Returned To Trailer To Find out if Sample Point Locations have been Faxed in For Site 5. They have AND we are returning To Site 5 with Chris Fitzgerald To Assist in Their Location.

1130 First Deep Sample Point Located AND UXB START Downhole Clearance of Sample Point AMA008

1230 Lunch Break.

1300 Return From Lunch - Resume work on Sample Point AMA008

1350 Deep Sample Point AMA008 Completed. Cleared Through 10' ~~Depth~~ Depth with MK26 Locator. Team moved To ~~AMA~~ Sample Site AMA006

1500 Sample site AMA006 completed. Cleared Through 10' Depth. with MK26 Locator. START Deep Sample site AMA003

1610 Sample Site AMA003 Completed To A 10' Depth with The MK26 Locator Site 5 O-WDA #2 Completed For UXB

Team moved to site 5 WDA #1 to locate Deep Sample Points AMA001 and AMA002.

1630 Located both sample points but, will start tomorrow.

1645 Return to site trailer - unload equipment and out brief.

1700 Depart for the day.

Equipment used: 1 Vehicle, 1 MK26 locator, 2 schonstedts, 1 power auger 1 hand auger, and miscel hand tools.

2 Personnel - 20 MHRS

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24 MAR 95

WEATHER:

PERSONNEL: Booker - Project Leader
Norberg - Supervison

0730 ARRIVE SITE TRAILER - Pickup Radio - Safety Brief Completed. ~~Do~~ Load Equipment, Depart for Site 5 WDA #1

0800 Arrive Site 1 Deep Sample Point #AMA001 START Downhole Clearance.

0900 Sample Point AMA001 completed - Cleared Through 10' Depth.

0915 Moved to Sample Point AMA002 and start Downhole Clearance.

1015 Sample Point AMA002 completed - Downhole Cleared Through 10' Depth.

1030 Return to Site Trailer - Awaiting sample crew for Site 6 Potential Land Fill area to hand auger to a 10' Depth in place of Drill Rig (20' Depth)

~~1115~~ 1100 Sample crew arrived - Depart for Site 6

1115 Cleared Sample Point #PGA001 and #PLA002 to a 5' Depth with MK26 ORD Locator.

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STANDING BY AT THIS TIME

1215 SAMPLE SITE PGA001 DOWNHOLE CLEARED AT 10' DEPTH. UXB COMPLETED THIS SAMPLE POINT.

1230 SAMPLE POINT PLA002 DOWNHOLE CLEARED AT 10' DEPTH UXB COMPLETED. THIS SAMPLE POINT.

1250 SAMPLE POINT PLA006 CLEARED TO 5' DEPTH.

1255 SAMPLE POINT PGA005 CLEARED TO 5' DEPTH

1315 SAMPLE POINT PLA006 CLEARED AT 5' DEPTH.

1340 SAMPLE POINT PGA005 CLEARED AT 5' DEPTH. UXB COMPLETED THIS SITE

UXB international, inc.

Job Site Inventory Record

Contractor Name: Jim Booker

Contract Number: 425 (Employee #) (16610-005)

Location: Denmark Maine

Description: Hand Auger w/ Hard Plastic Case

Model Number: _____ Serial Number: _____

Manufacturer: _____

Date Received: _____ Property Number: _____

Quantity: 1 ea Unit Price: _____

Remarks: Auger Container also has:

1- Adjustable jaw pliers - 1 ea (water pumps)
2- 8" cresent - 1 ea
3- 12" cresent - 1 ea
4- wire brush - 1 ea
5- can grease - 1 ea (small)
6- Auger Handle - 1 ea
7- " extensions - 4 ea x 4 ft
8- " Head, 2" - 1 ea
9- " " 3" - 1 ea

I also still have a 250 gal water tank (Pickup Bed Type)

B FORM 1.0042

UXB International, Inc.

Job Site Inventory Record

Contractor Name: Jim Booker

Contract Number: 425 Employee # (6610-005)

Location: Denmark Maine

Description: MK 26 ordnance locator

Model Number: 4.021-2111 Serial Number: 1392

Manufacturer: Foerster Instruments Inc

Date Received: 1 MAR 95 Property Number:

Quantity: 1 ea Unit Price:

Remarks: USED AT N.O.P. MEAD No. (6610-005)
1 MAR 95 THRU 24 MAR 95

1. Control unit - Probe connecting plug (6") insulation pulled from control unit and plug. unit is still operable.
2. Probe rattles excessively

unitit operable - but must use great care not to damage wiring on control unit probe connecting plug.

UXB FORM 1.0042

Appendix C

B07NE003703-04057

APPENDIX C
GEOPHYSICAL SURVEY RESULTS

APPENDIX C

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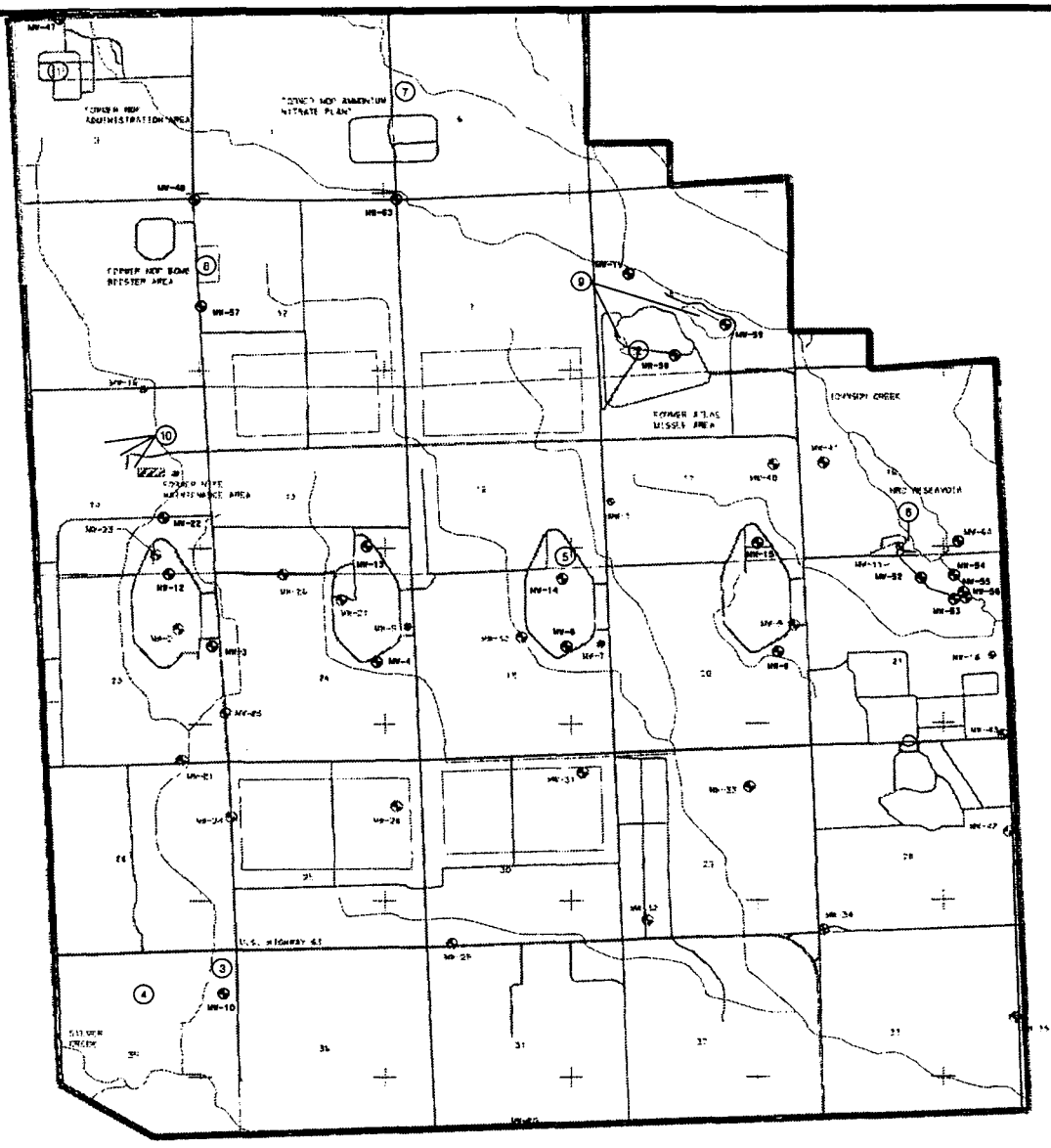
C-3B	WASTE DISPOSAL AREA NORTH OF NIKE MAINTENANCE-EAST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)
C-4A	WASTE DISPOSAL AREA NORTH OF NIKE MAINTENANCE-SOUTH DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE)
C-4B	WASTE DISPOSAL AREA NORTH OF NIKE MAINTENANCE-SOUTH DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)
C-5A	WASTE DISPOSAL AREA SOUTHEAST BOMB BOOSTER AREA ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE)
C-5B	WASTE DISPOSAL AREA SOUTHEAST BOMB BOOSTER AREA ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)
C-6A	WASTE DISPOSAL AREA AT THE ATLAS MISSILE AREA - SOUTHWEST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE)
C-6B	WASTE DISPOSAL AREA AT THE ATLAS MISSILE AREA - SOUTHWEST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)
C-7A	WASTE DISPOSAL AREA AT THE ATLAS MISSILE AREA - NORTHEAST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE

C-7A	WASTE DISPOSAL AREA AT THE ATLAS MISSILE AREA - NORTHEAST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE
C-8A	POTENTIAL WASTE DISPOSAL AREA NORTH OF THE AMMONIUM NITRATE PLANT ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE)
C-8B	POTENTIAL WASTE DISPOSAL AREA NORTH OF THE AMMONIUM NITRATE PLANT ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)
C-9A	DEMOLITION GROUNDS ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE)
C-9B	DEMOLITION GROUNDS ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)
C-10A	DETONATION CRATERS 1 AND 2 ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE)
C-10B	DETONATION CRATERS 1 AND 2 ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)
C-11A	DETONATION CRATER 3 ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE)
C-11B	DETONATION CRATER 3 ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)
C-12A	DETONATION CRATERS 4 AND 5 ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE)
C-12B	DETONATION CRATERS 4 AND 5 ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)
C-13A	ADMINISTRATION AREA UST ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE)
C-13B	ADMINISTRATION AREA UST ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)
C-14A	ATLAS MISSILE AREA UST (LAUNCH OPERATIONS BUILDING) ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE)
C-14B	ATLAS MISSILE AREA UST (LAUNCH OPERATIONS BUILDING) ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)
C-15A	ATLAS MISSILE AREA UST (LAUNCH OPERATIONS BUILDING) ELECTROMAGNETICS CONTOUR MAP (CHANNEL 2 RESPONSE)
C-15B	ATLAS MISSILE AREA UST (LAUNCH OPERATIONS BUILDING) ELECTROMAGNETICS CONTOUR MAP (CHANNEL 3 RESPONSE)
C-16A	GEOPHYSICAL ANOMALY AT LOAD LINE 3 ELECTROMAGNETICS CONTOUR MAP (QUADRATURE RESPONSE)

C-16B GEOPHYSICAL ANOMALY AT LOAD LINE 3
ELECTROMAGNETICS CONTOUR MAP (INPHASE RESPONSE)



GEOPHYSICAL SURVEY INVESTIGATION AREAS

1. Administration Area USTs
2. Atlas Missile Area UST (Launch Operations Building)
3. Demolition Ground
4. Detonation Craters
5. Geophysical Anomaly at Load Line 3
6. Potential Landfill Area
7. Waste Disposal Area North of the Ammonium Nitrate Plant
8. Waste Disposal Area Southeast of Former Bomb Booster Area
9. Waste Disposal Areas at Former Atlas Missile Area
10. Waste Disposal Areas North of Former Nike Maintenance Area

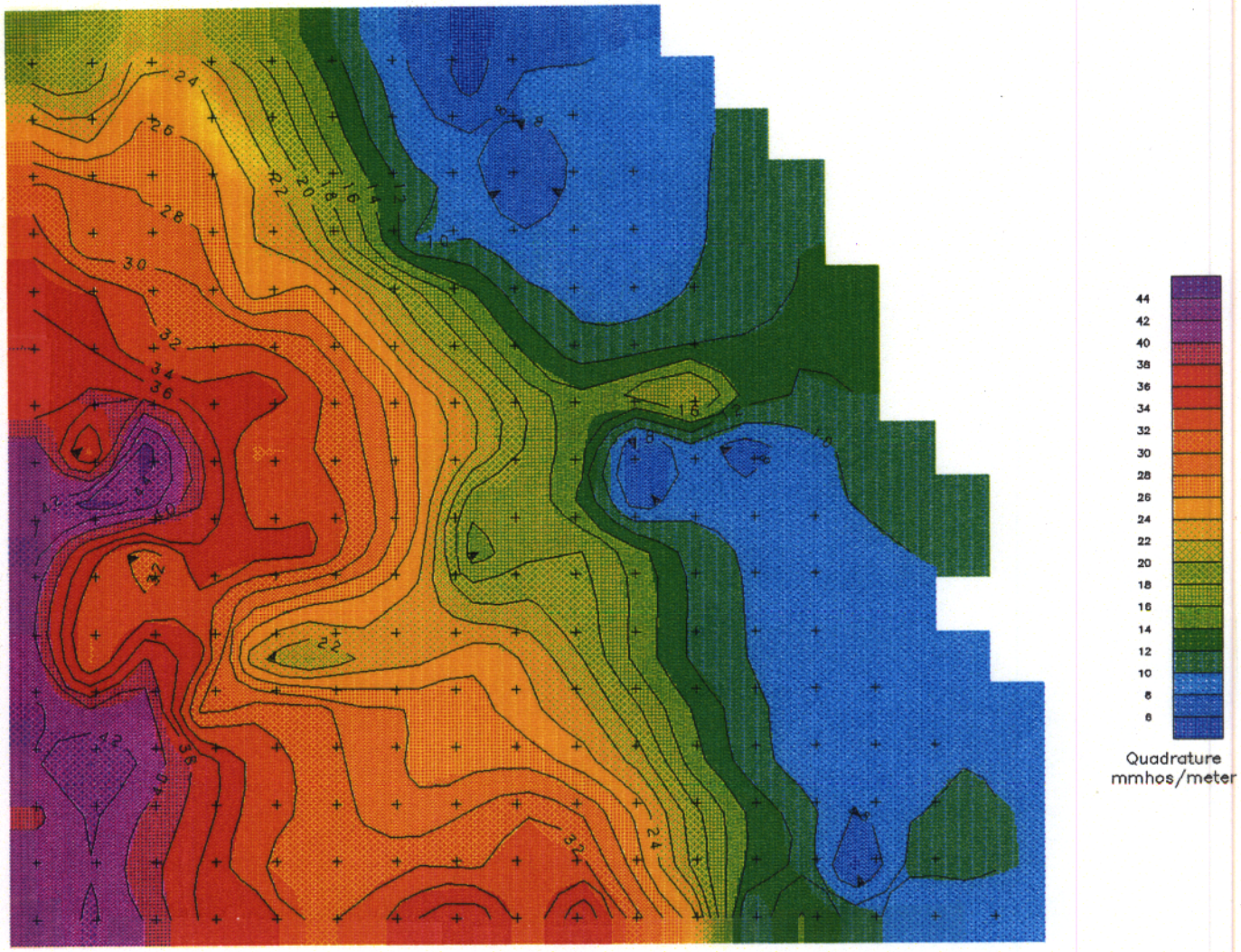
N

5000 0 5000 10000

SCALE FEET

DRAWING C

MORD FILE: 0LSPR27



EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 2mmhos/meter
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-20-95

NOTE: REFER TO **DRAWING 5-97** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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Revisions			
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Drawn by: C.J.F.
Checked by: B.C.O.
Submitted by: RAN

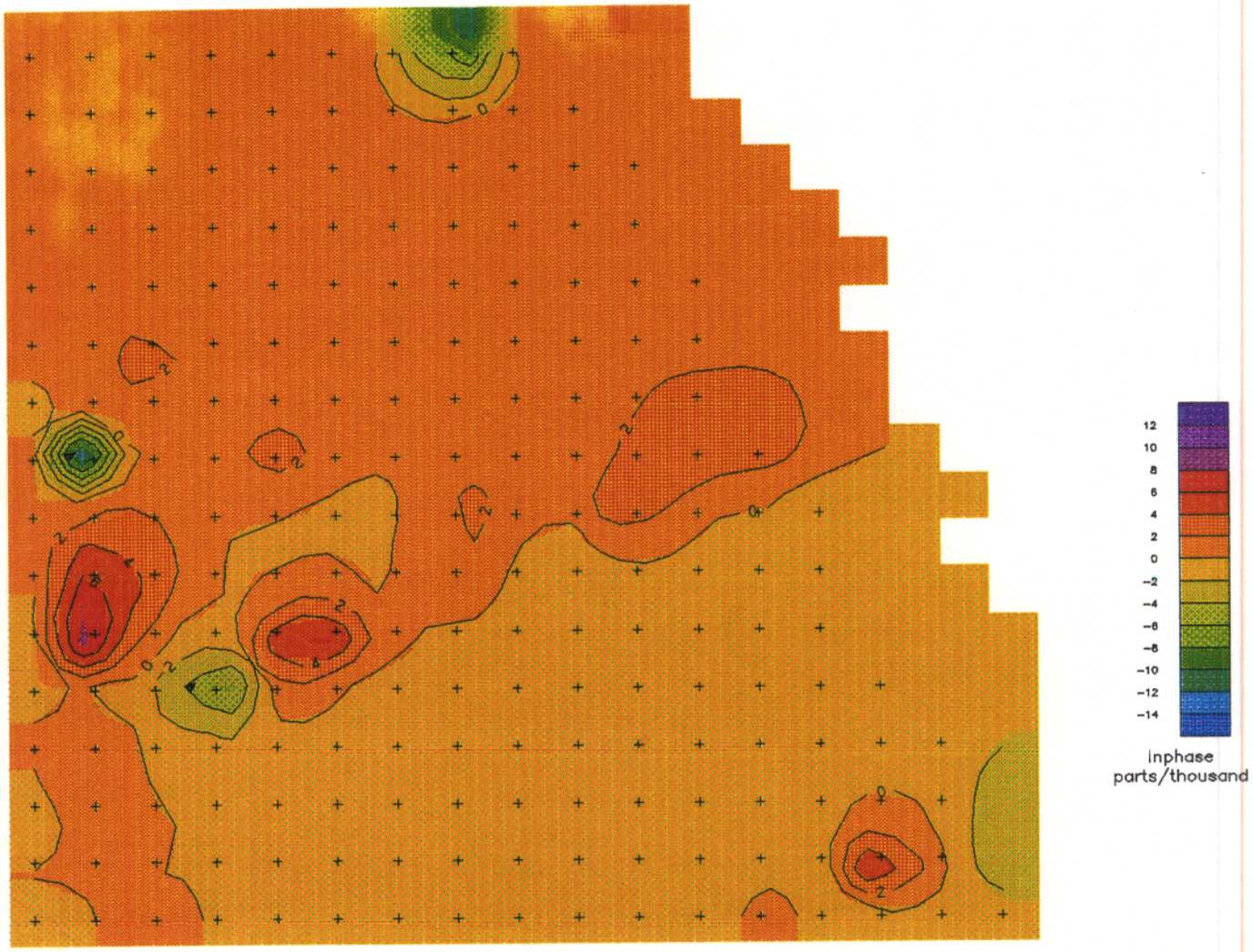
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

POTENTIAL LANDFILL NORTH OF THE PROVING GROUNDS ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-1A
Sheet number: 1

MCS FILE: BORD-1A



EM-31
INPHASE RESPONSE
CONTOUR INTERVAL = 2 parts/1000
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-20-95

NOTE: REFER TO **DRAWING 5-97** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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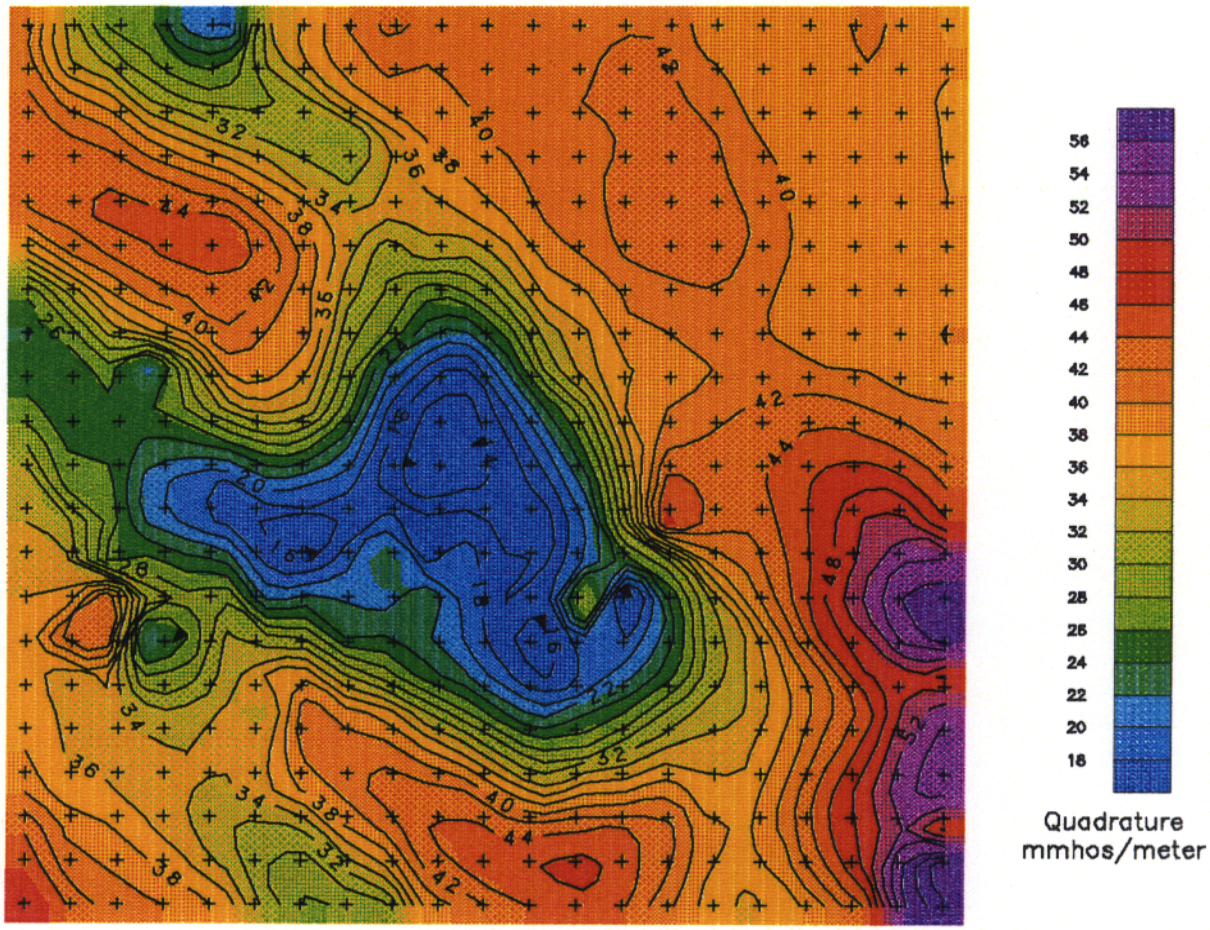
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

POTENTIAL LANDFILL NORTH OF THE PROVING GROUNDS ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-1B
Sheet number: 1

MCS FILE: BORD-1B



EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 2mmhos/meter
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-8-95 - 3-11-95

NOTE: REFER TO **DRAWING 5-99** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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MCS FILE: BORD-2A

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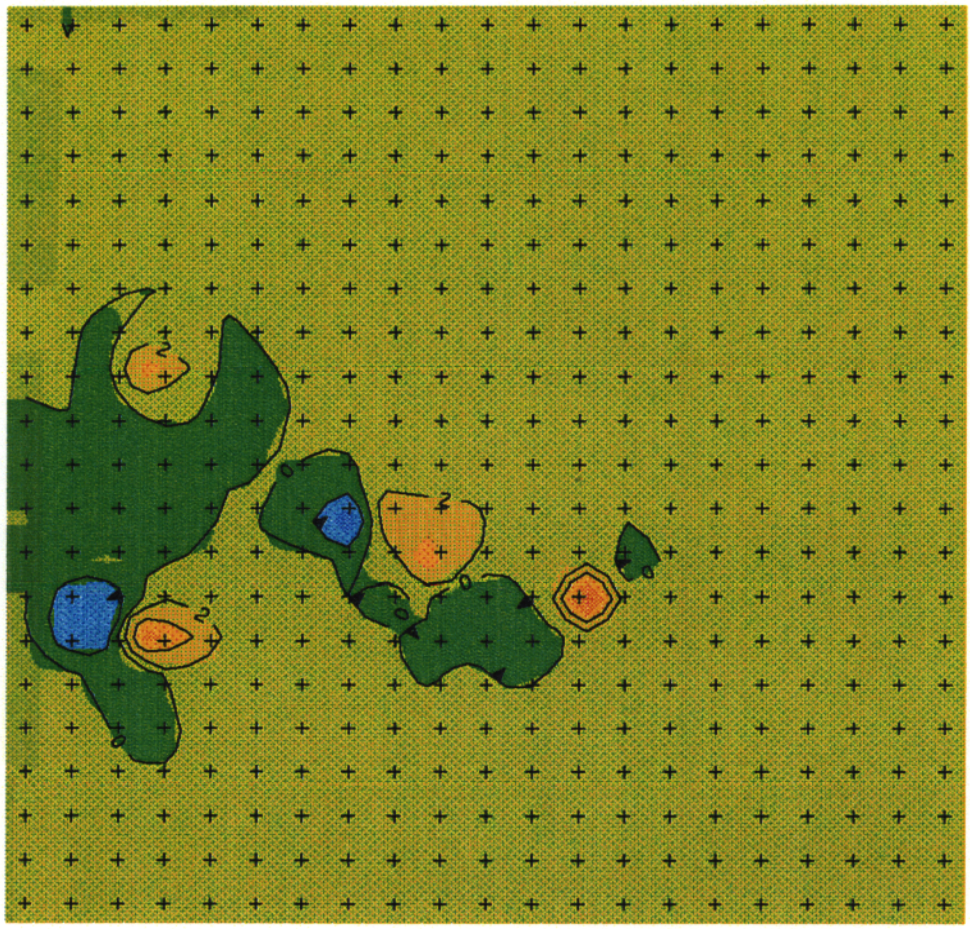
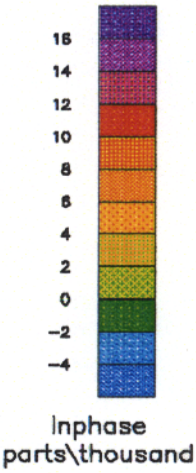
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA NORTH OF NIKE MAINTENANCE-WEST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-2A
Sheet number: 1





EM-31
INPHASE RESPONSE
CONTOUR INTERVAL = 2 parts/1000
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-8-95 - 3-11-95

NOTE: REFER TO **DRAWING 5-99** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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MCS FILE: BORD-2B

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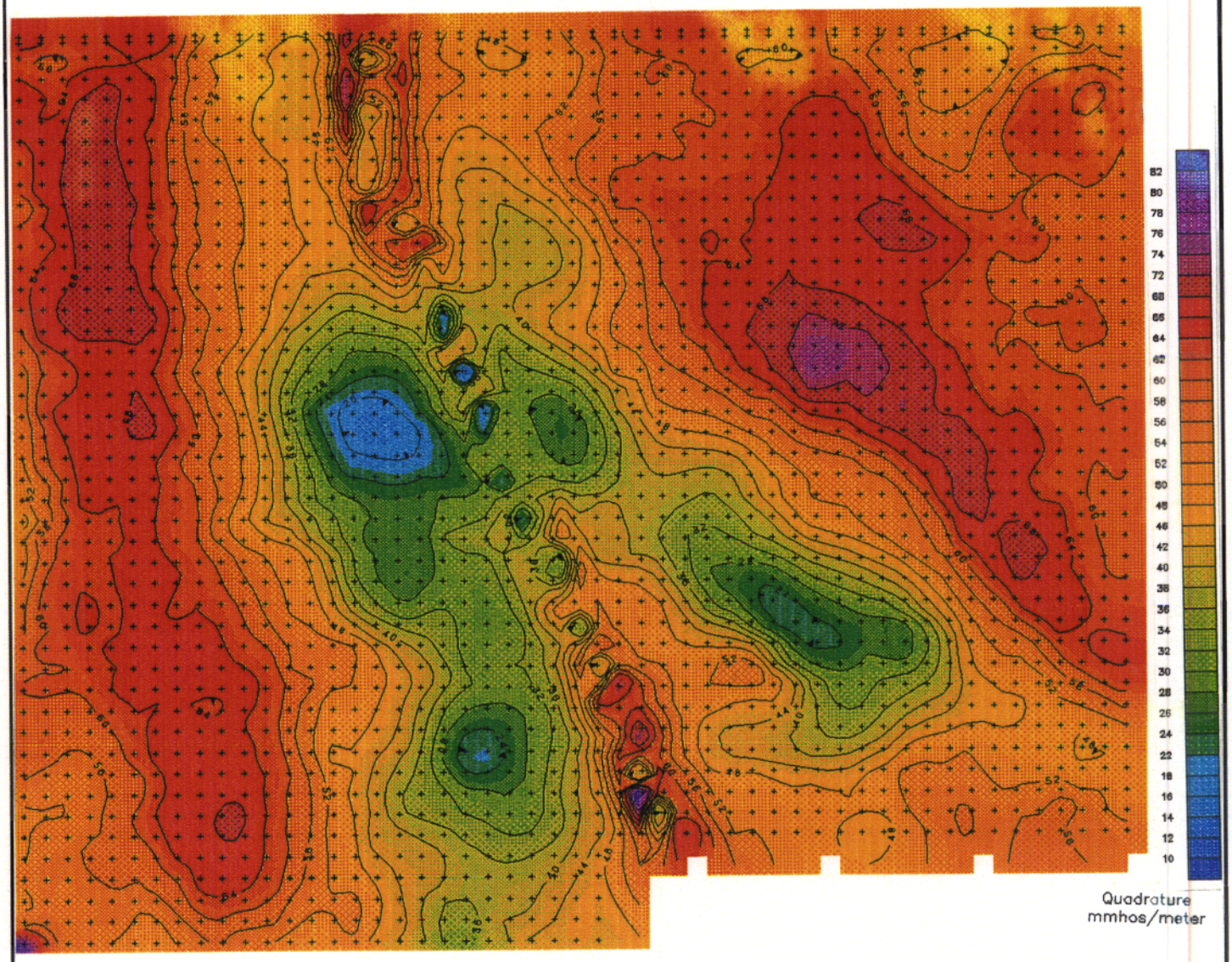
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA NORTH OF NIKE MAINTENANCE-WEST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-2B
Sheet number: 1



EM-31
QUADRATURE RESPONSE
CONTOUR INTERVAL = 4mmhos/meter
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-8-95 - 3-11-95

NOTE: REFER TO **DRAWING 5-99** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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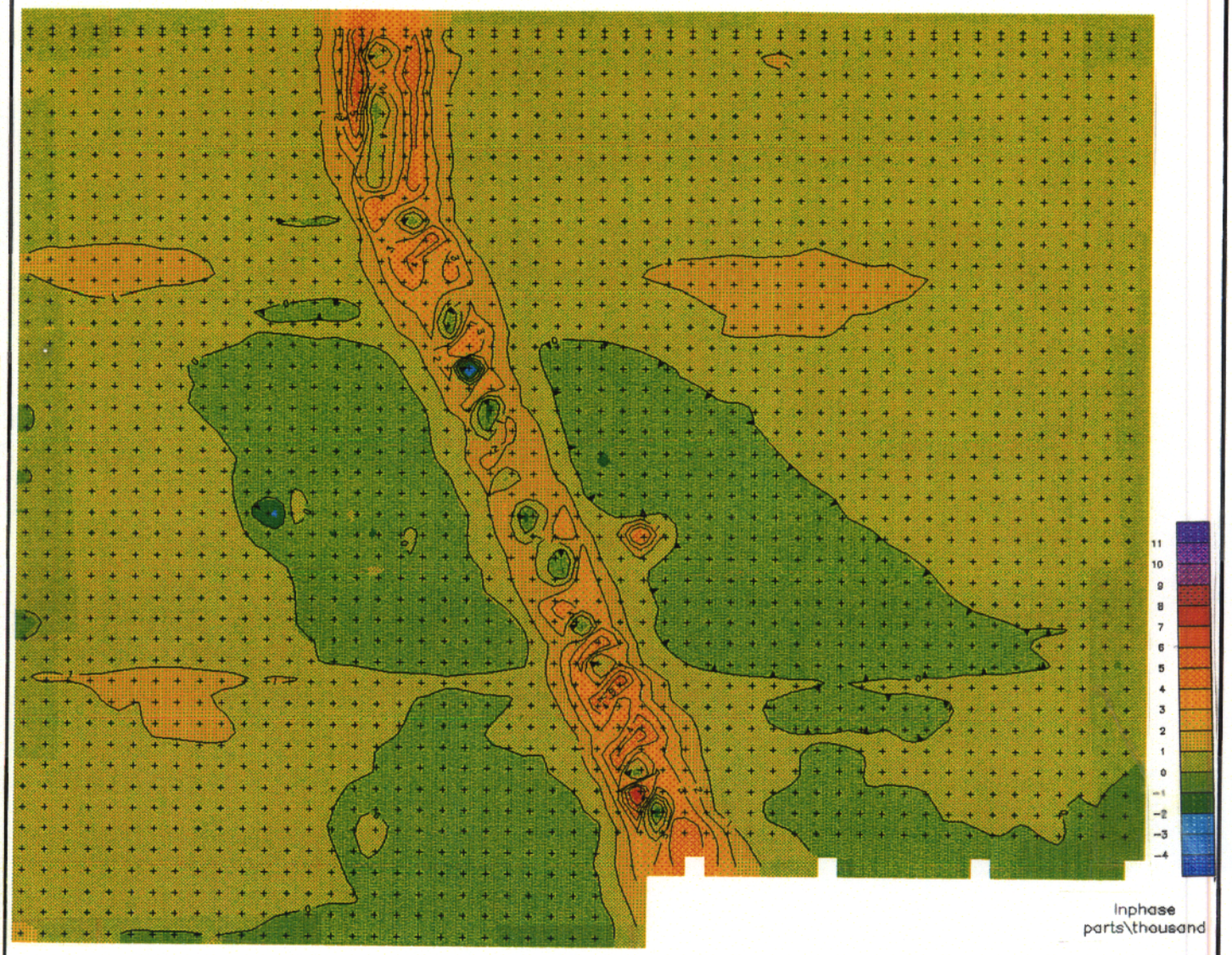
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA NORTH OF NIKE MAINTENANCE-EAST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-3A
Sheet number: 1

MCS FILE: BORD-3A



EM-31

INPHASE RESPONSE
CONTOUR INTERVAL = 1 parts/1000
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-8-95 - 3-11-95

NOTE: REFER TO **DRAWING 5-99** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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MCS FILE: BORD-3B

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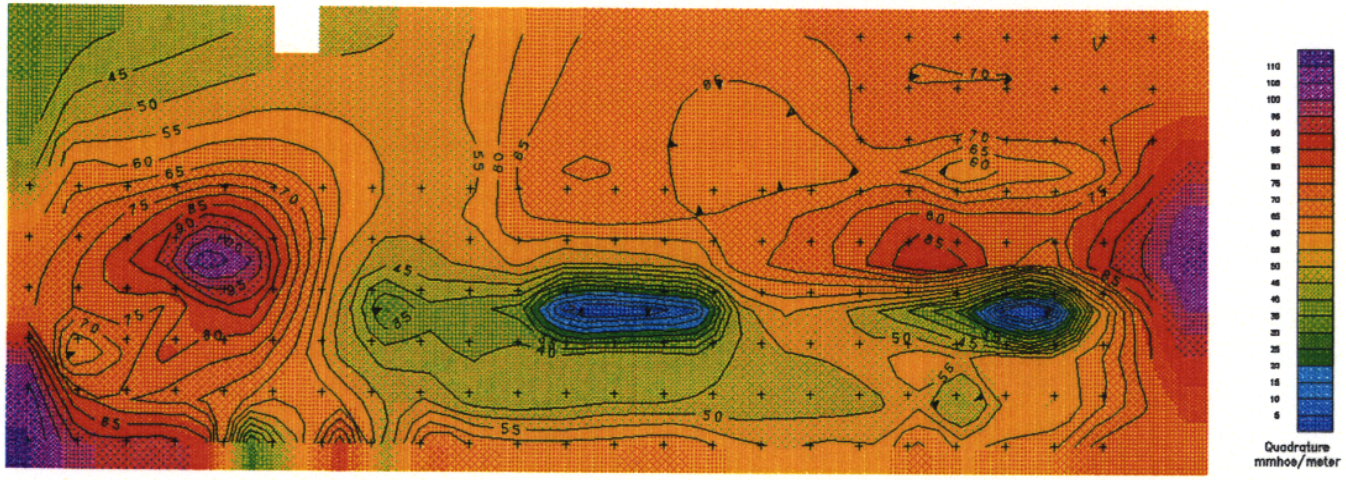
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA NORTH OF NIKE MAINTENANCE-EAST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-3B
Sheet number: 1



EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 5mmhos/meter
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-8-95 - 3-11-95

NOTE: REFER TO **DRAWING 5-99** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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MCS FILE: BORD-4A

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Drawn by: C.J.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA NORTH OF NIKE MAINTENANCE-SOUTH DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-4A
Sheet number: 1

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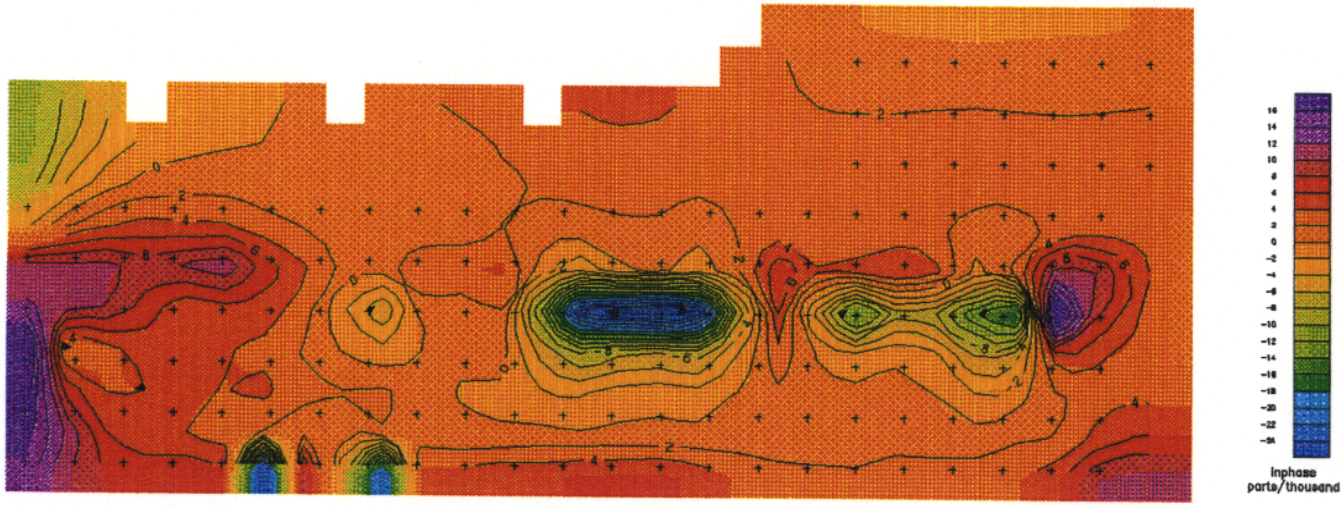

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EM-31

INPHASE RESPONSE
CONTOUR INTERVAL = 2 parts/1000
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-8-95 - 3-11-95

NOTE: REFER TO **DRAWING 5-99** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Drawn by: C.J.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA NORTH OF NIKE MAINTENANCE-SOUTH DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-4B
Sheet number: 1

MCS FILE: BORD-4B

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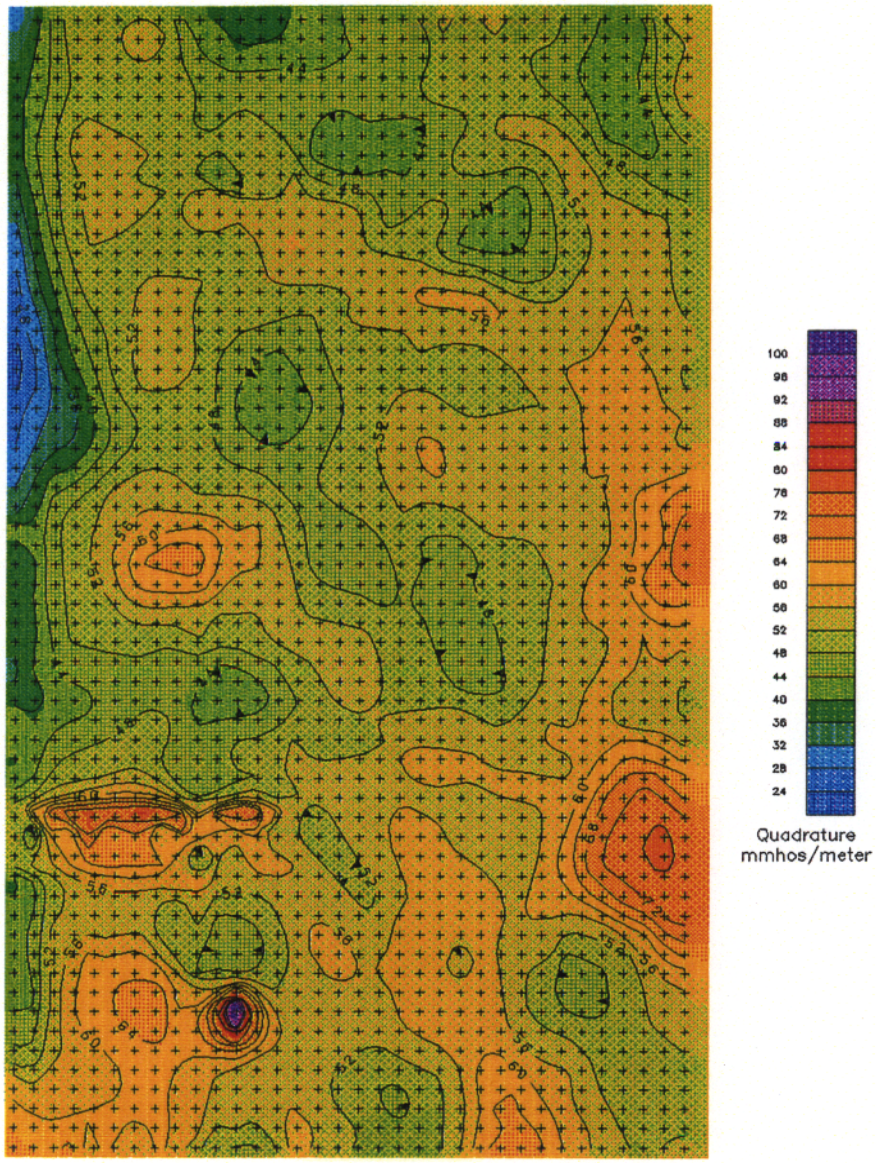

EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 4mmhos/meter
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-10-95 & 3-11-95

NOTE: REFER TO **DRAWING 5-100** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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MCS FILE: BORD-5A

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Checked by: B.C.O.
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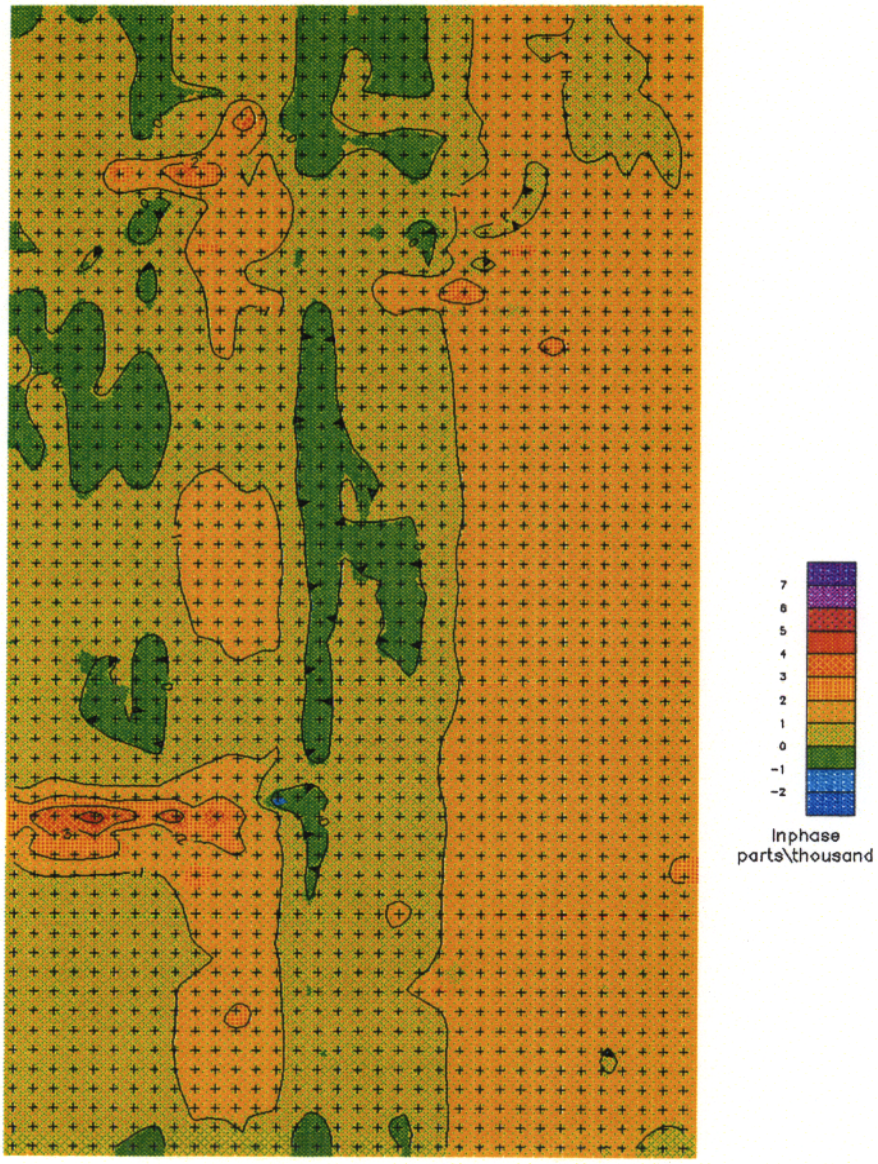
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA
SOUTHEAST OF BOMB BOOSTER AREA
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-5A
Sheet number: 1



EM-31
INPHASE RESPONSE
CONTOUR INTERVAL = 1 parts/1000
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-10-95 & 3-11-95

NOTE: REFER TO **DRAWING 5-100** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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MCS FILE: BORD-5B

Revisions			
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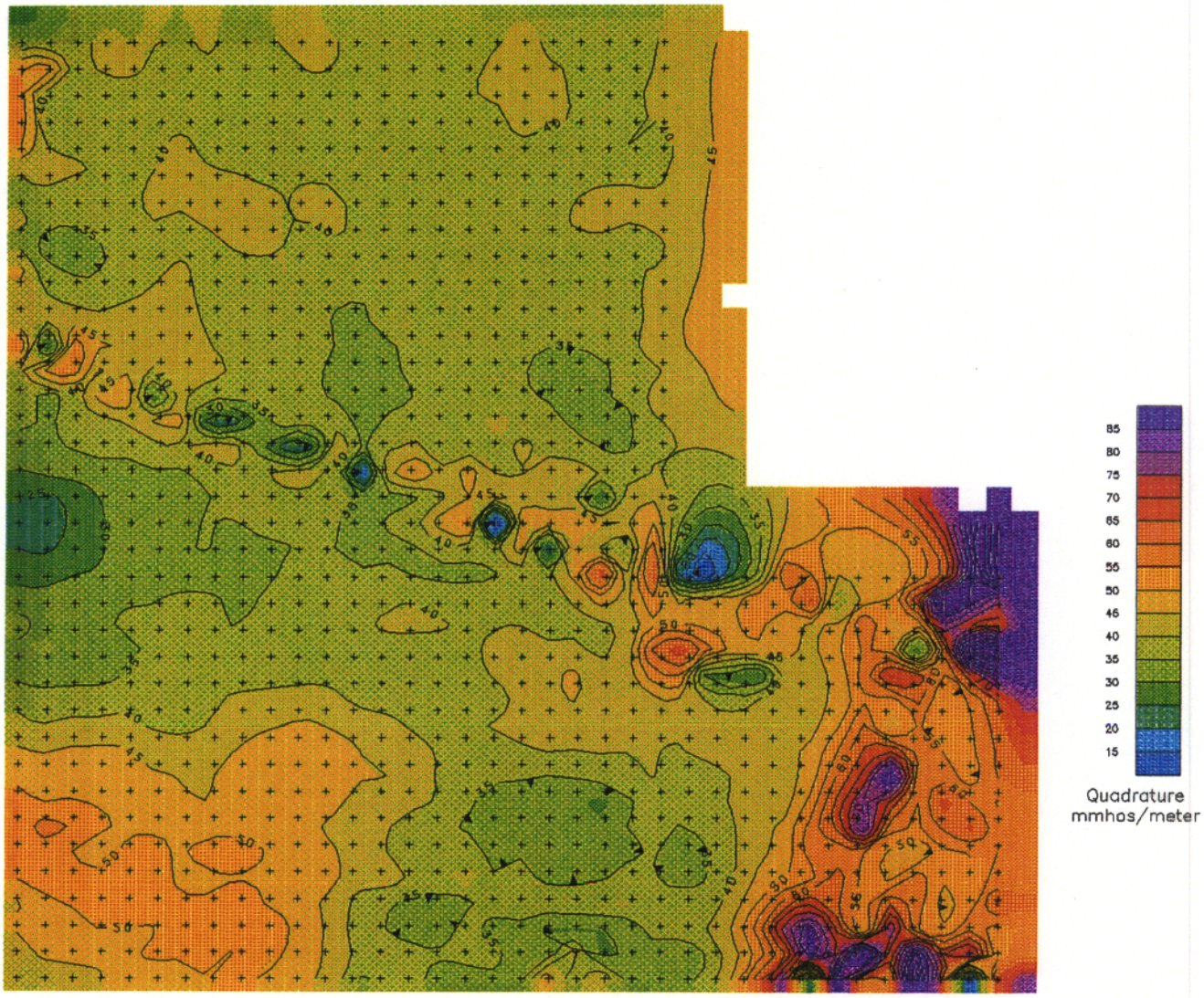
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA
SOUTHEAST OF BOMB
BOOSTER AREA
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-5B
Sheet number: 1



EM-31
QUADRATURE RESPONSE
CONTOUR INTERVAL = 5mmhos/meter
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-20-95 & 3-21-95

NOTE: REFER TO **DRAWING 5-101** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

N

MCS FILE: BORD-6A

Revisions			
Symbol	Descriptions	Date	Apprv'd

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Checked by: B.C.O.
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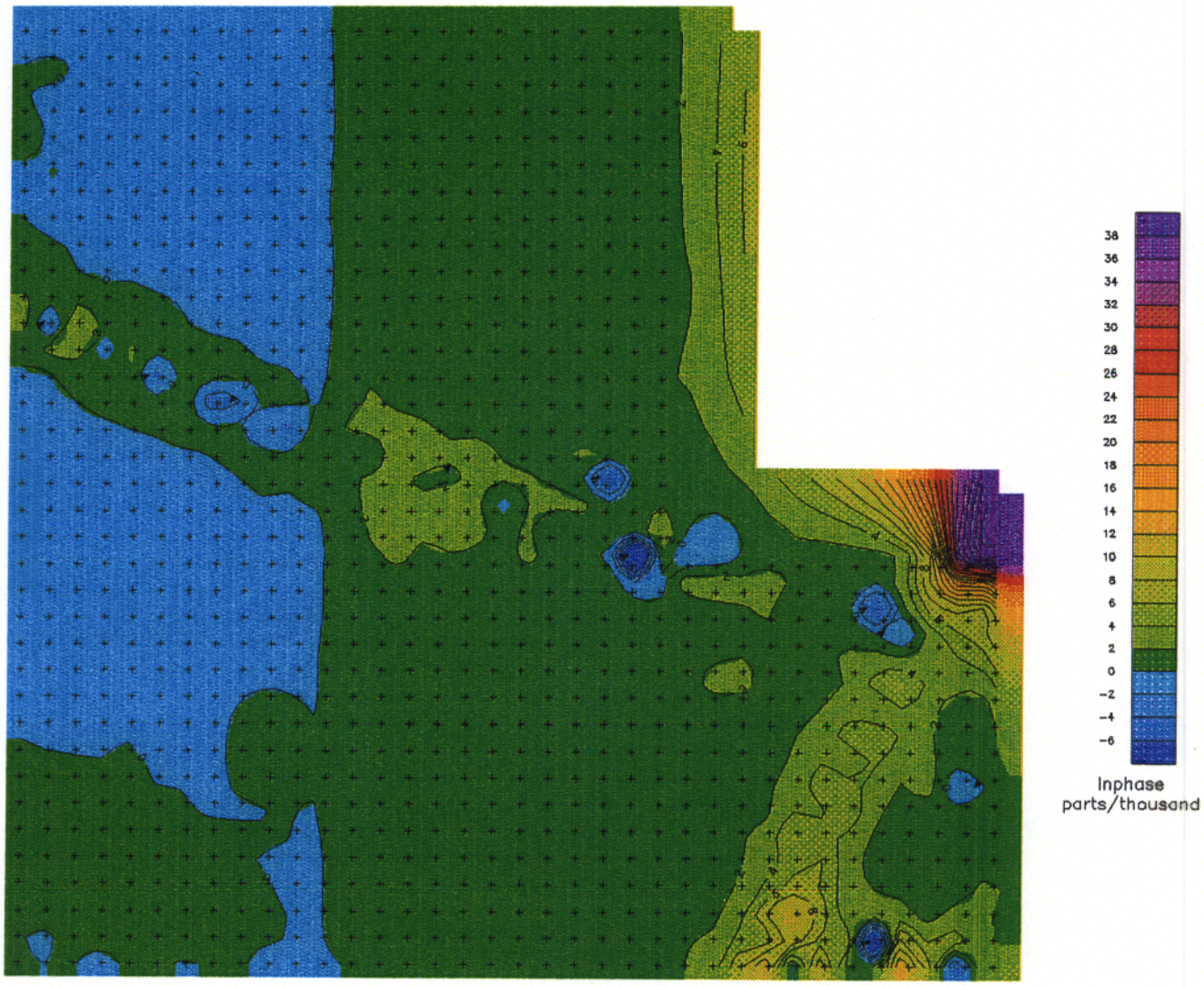
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA AT THE ATLAS MISSLE AREA-SOUTHWEST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-6A
Sheet number: 1



EM-31

INPHASE RESPONSE
CONTOUR INTERVAL = 2 parts/1000
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-20-95 & 3-21-95

NOTE: REFER TO **DRAWING 5-101** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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Revisions			
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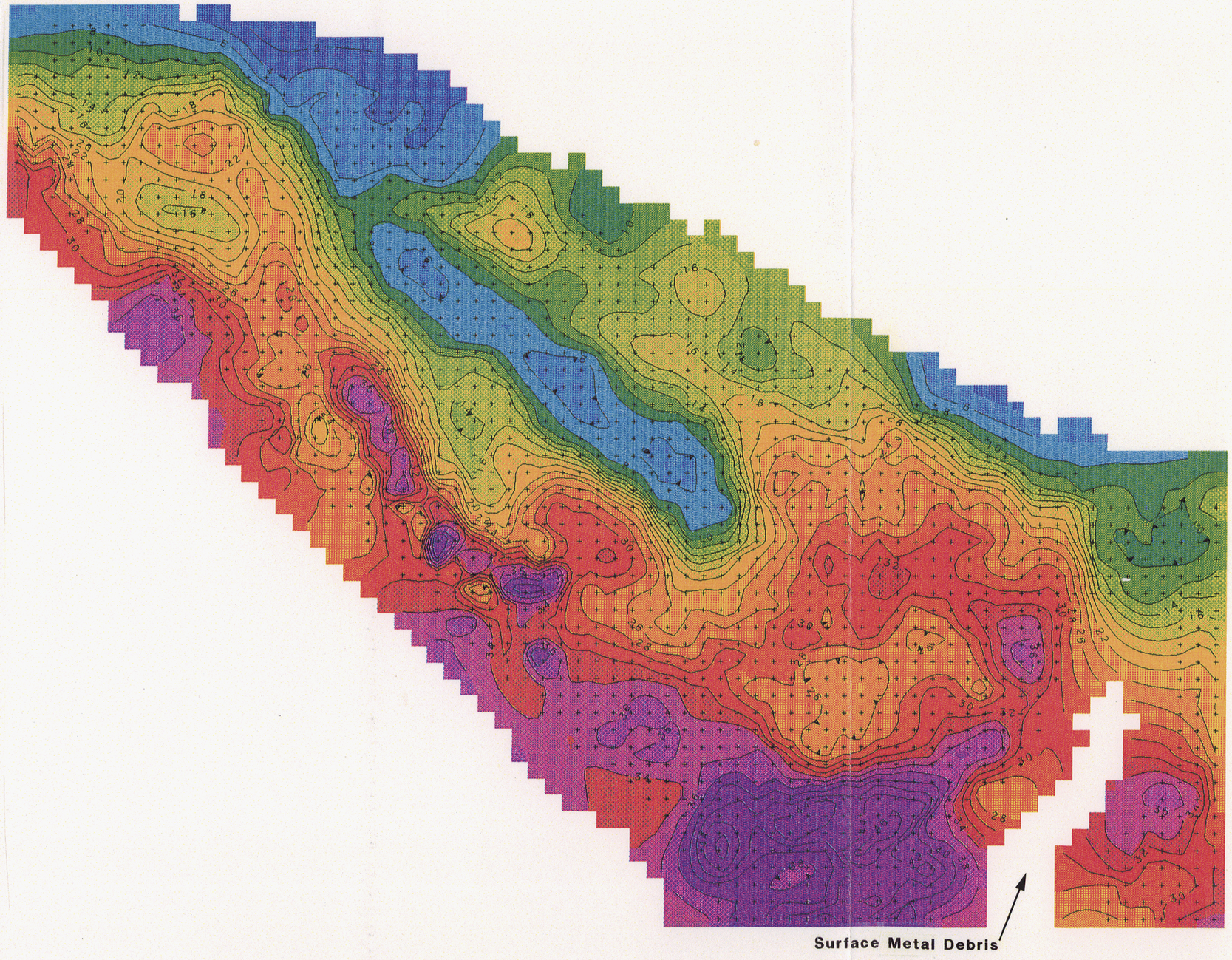
U.S. Army Corps of Engineers

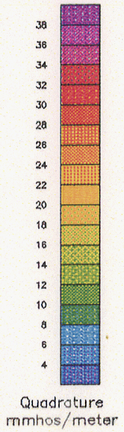
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA AT THE ATLAS MISSLE AREA-SOUTHWEST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-6B
Sheet number: 1

MCS FILE: BORD-6B





EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 2mmhos/meter
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-20-95 & 3-21-85

NOTE: REFER TO **DRAWING 5-102** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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Revisions			
Symbol	Descriptions	Date	Apprv'd

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U.S. Army Corps of Engineers

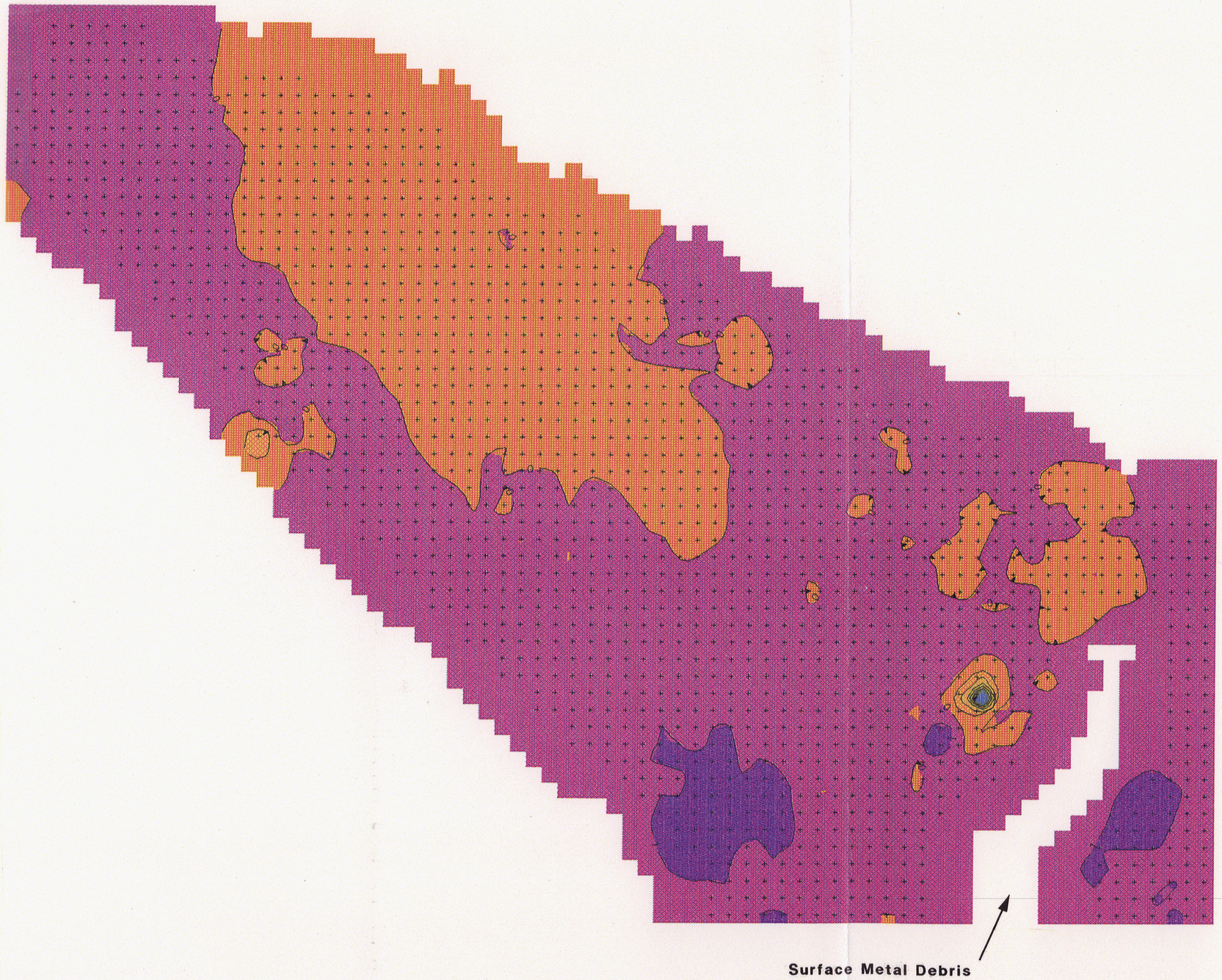
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

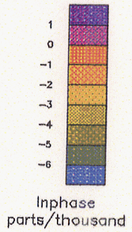
WASTE DISPOSAL AREA AT THE ATLAS MISSLE AREA-NORTHEAST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-7A
Sheet number: 1

MCS FILE: BORD-7A

B07NE003703-04075





EM-31
INPHASE RESPONSE
CONTOUR INTERVAL = 1 part/1000
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-20-95 & 3-21-85

NOTE: REFER TO **DRAWING 5-102** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

Designed by: C.J.F.
Drawn by: C.J.F.
Checked by: B.C.O.
Submitted by: RAN

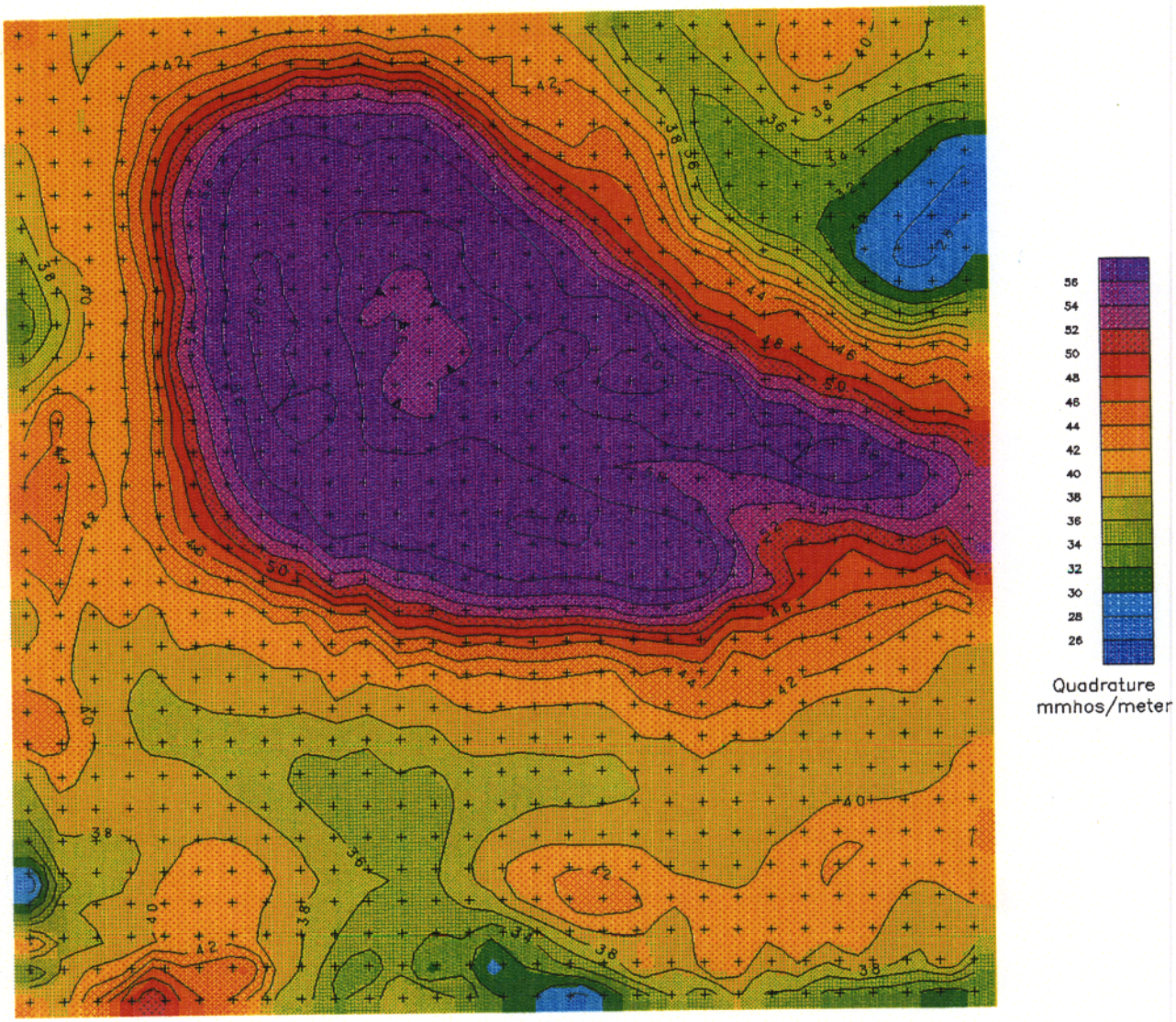
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA AT THE ATLAS MISSLE AREA-NORTHEAST DISPOSAL AREA ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-7B
Sheet number: 1

MCS FILE: BORD-7B



EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 2mmhos/meter
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-12-95

NOTE: REFER TO **DRAWING 5-103** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

N

MCS FILE: BORD-8A

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

Designed by: C.J.F.
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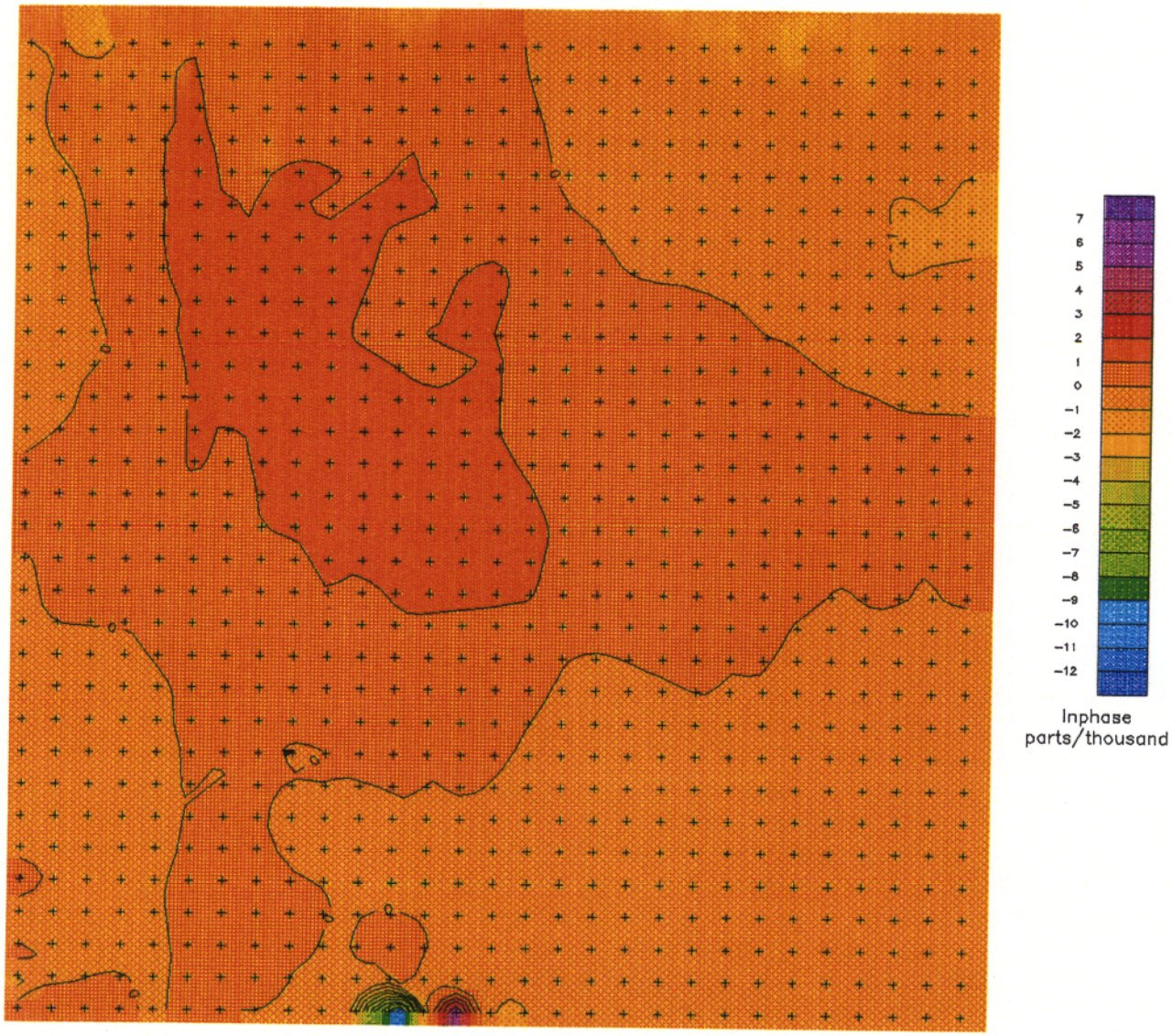
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA NORTH OF THE AMMONIUM NITRATE PLANT ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-8A
Sheet number: 1



EM-31

INPHASE RESPONSE
CONTOUR INTERVAL = 1 parts/1000
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-12-95

NOTE: REFER TO **DRAWING 5-103** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

N

Revisions			
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KANSAS CITY, MISSOURI

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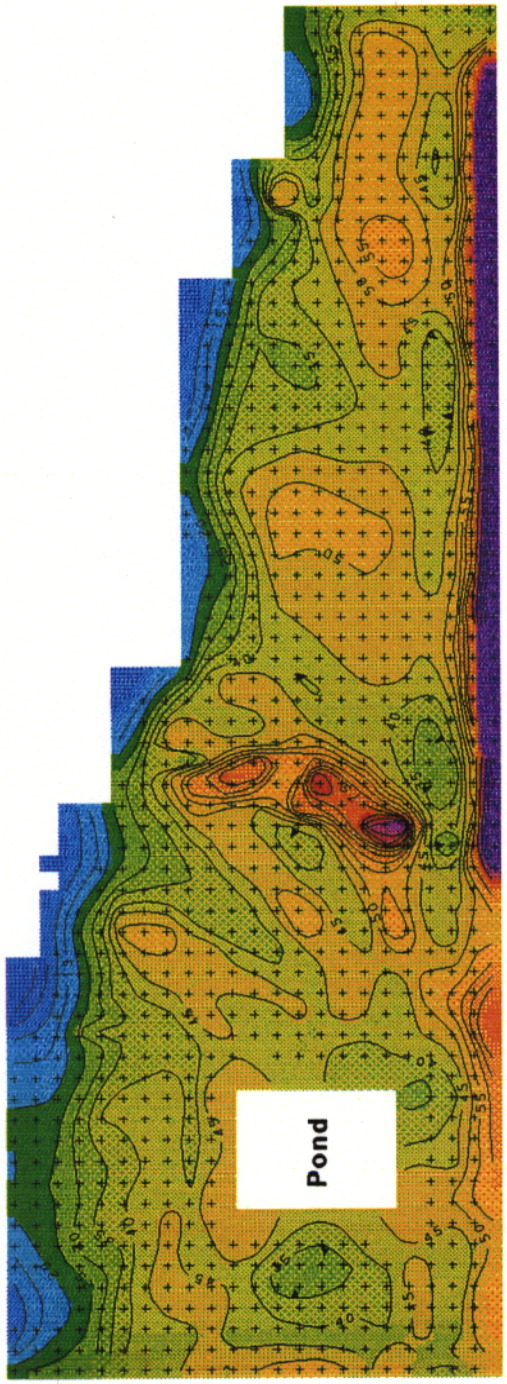
U.S. Army Corps of Engineers

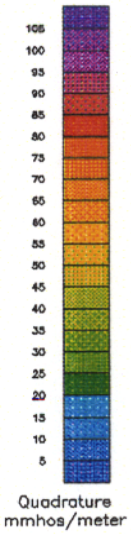
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

WASTE DISPOSAL AREA NORTH OF THE AMMONIUM NITRATE PLANT
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-8B
Sheet number: 1

MCS FILE: BORD-8B





N

EM-31
QUADRATURE RESPONSE
CONTOUR INTERVAL = 5mmhos/meter
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-12-95 & 3-13-95

NOTE: REFER TO **DRAWING 5-104** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

Designed by: C.J.F.
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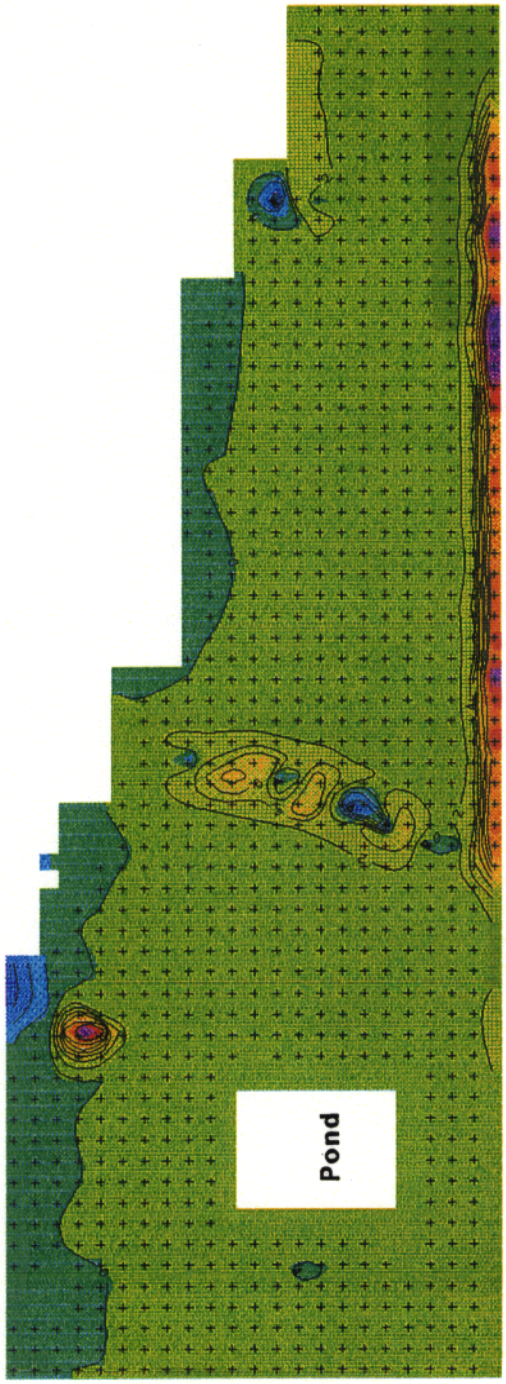
U.S. Army Corps of Engineers

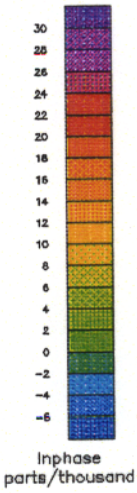
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

DEMOLITION GROUND ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-9A
Sheet number: 1

MCS FILE: BORD-9A





N

EM-31

INPHASE RESPONSE
CONTOUR INTERVAL = 2 parts/1000
GRID NODE SPACING = 20 FEET
SURVEY DATE = 3-12-95 & 3-13-95

NOTE: REFER TO **DRAWING 5-104** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

MCS FILE: BORD-9B

Revisions			
Symbol	Descriptions	Date	Apprv'd

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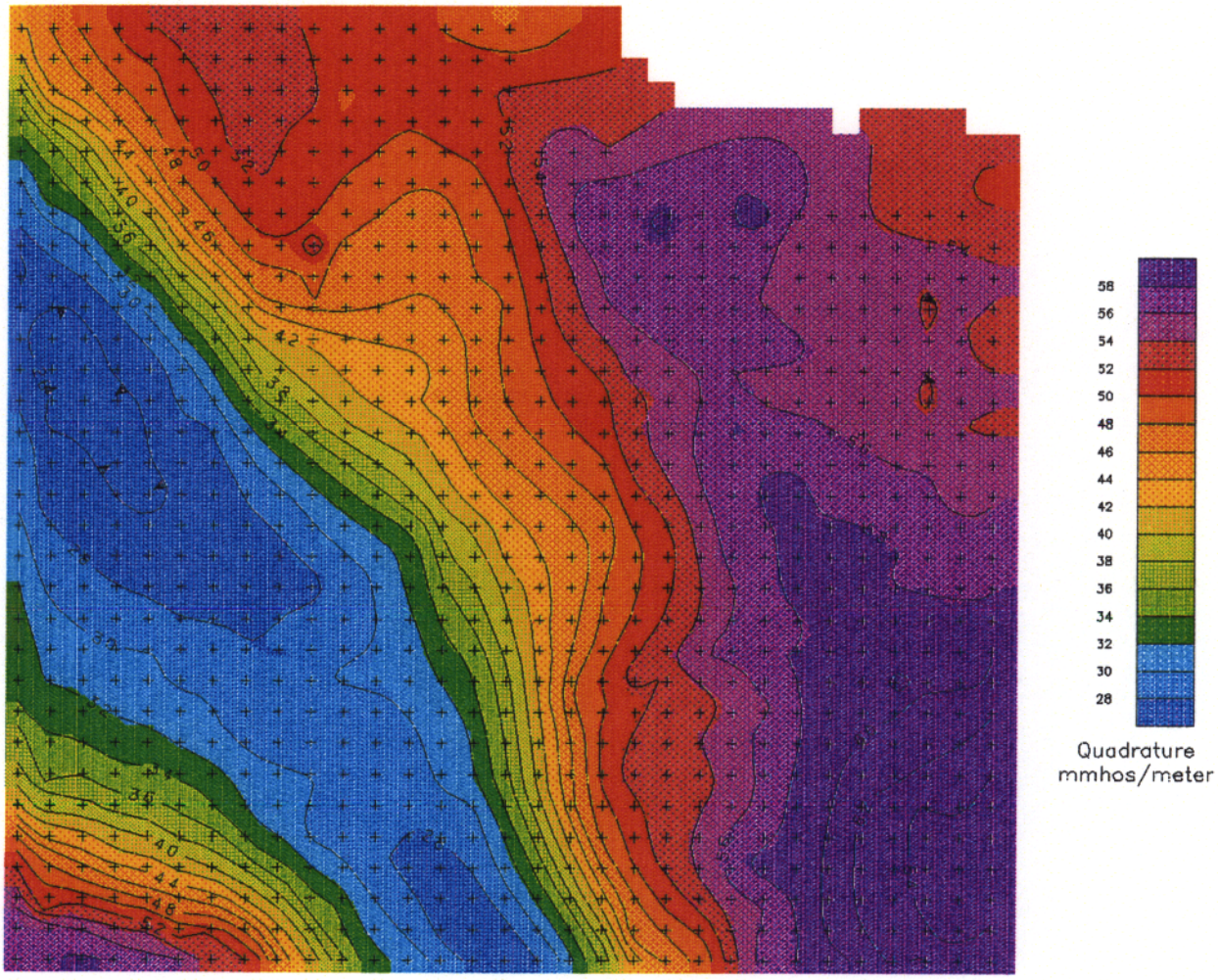
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

DEMOLITION GROUND ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-9B
Sheet number: 1



EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 2mmhos/meter
GRID NODE SPACING = 10 FEET
SURVEY DATE = 3-11-95 - 3-22-95

NOTE: REFER TO **DRAWING 5-105** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

N

MCS FILE: BORD-10A

Revisions			
Symbol	Descriptions	Date	Apprv'd

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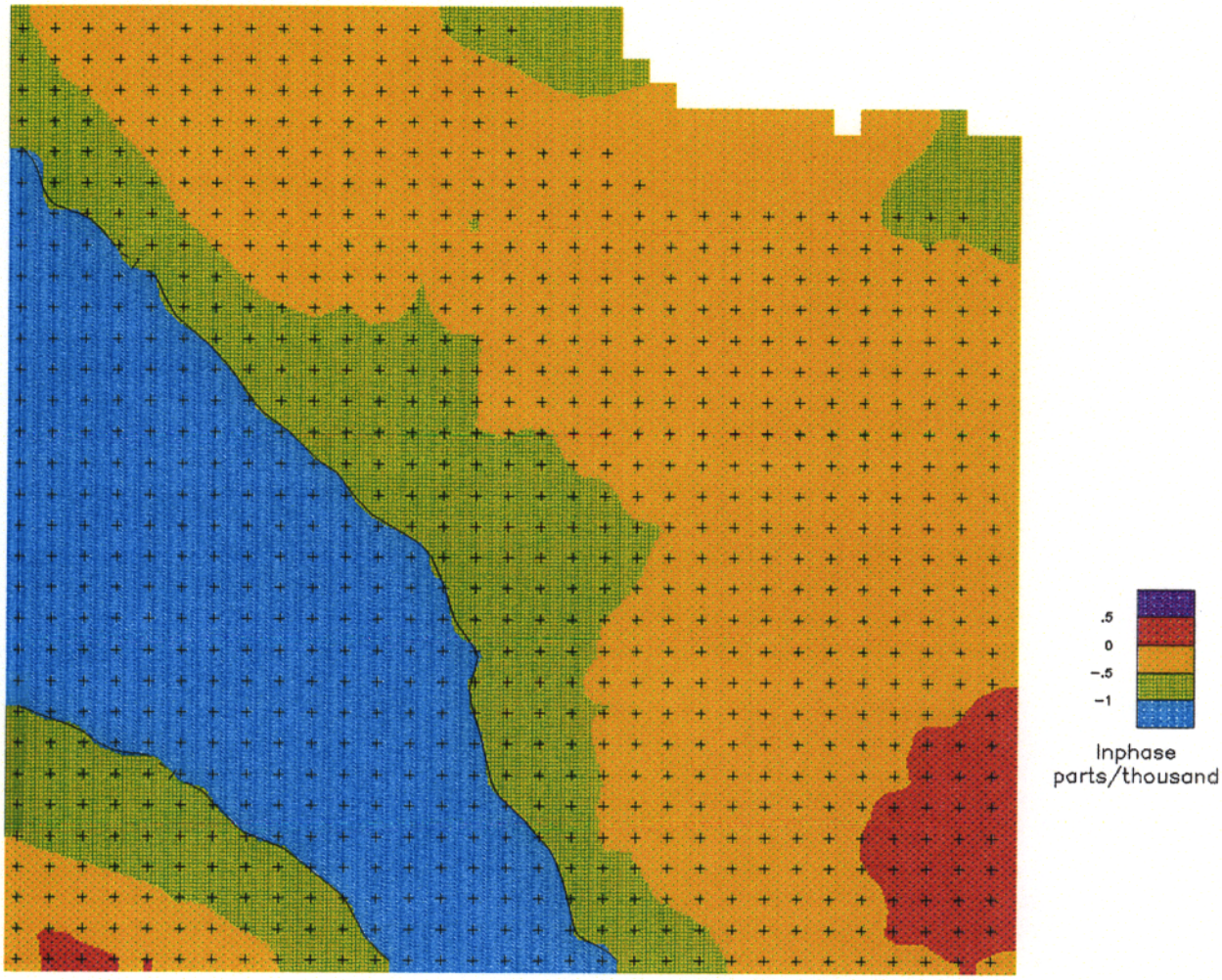
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

DETONATION CRATERS 1 AND 2
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-10A
Sheet number: 1



EM-31
INPHASE RESPONSE
CONTOUR INTERVAL = parts/1000
GRID NODE SPACING = 10 FEET
SURVEY DATE = 3-11-95 - 3-22-95

NOTE: REFER TO **DRAWING 5-105** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

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MCS FILE: BORD-10B

Revisions			
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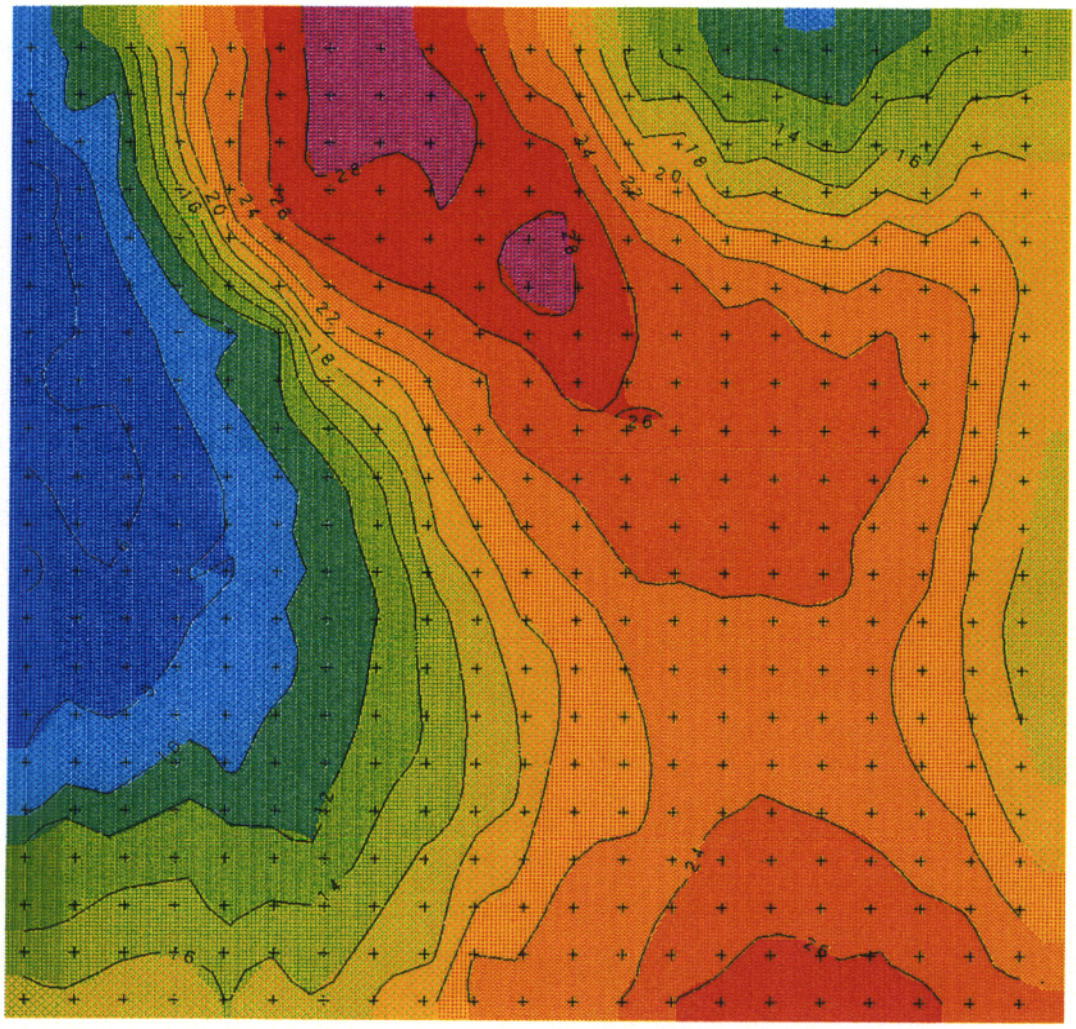
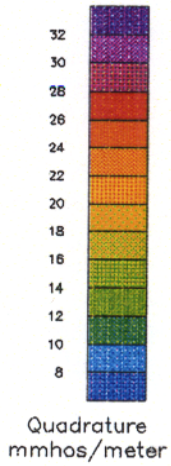
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

DETONATION CRATERS 1 AND 2
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-10B
Sheet number: 1





EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 2mmhos/meter
GRID NODE SPACING = 10 FEET
SURVEY DATE = 3-11-95 - 3-22-95

NOTE: REFER TO **DRAWING 5-105** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

N

MCS FILE: BORD-11A

Revisions			
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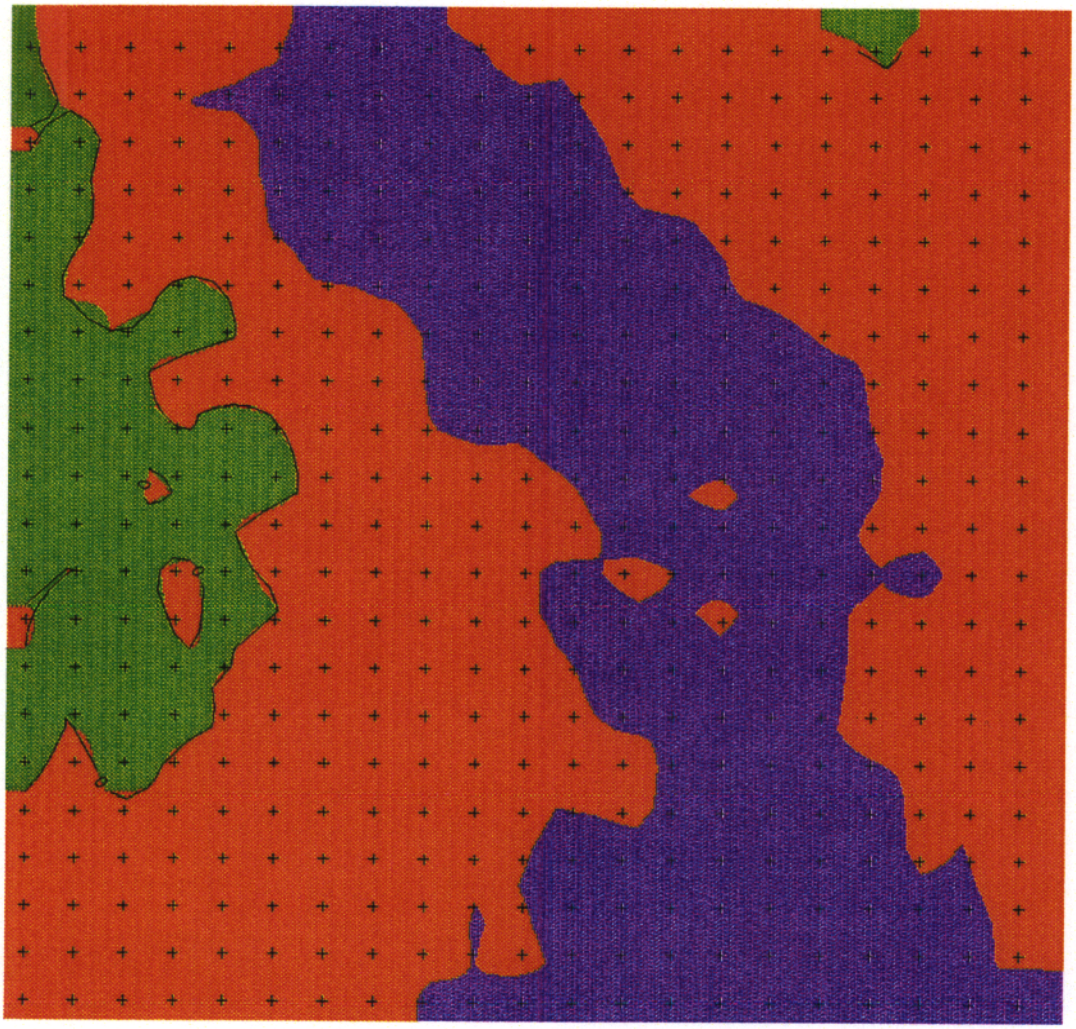
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

DETONATION CRATER 3
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-11A
Sheet number: 1



.5
0
Inphase
parts/thousand

EM-31
INPHASE RESPONSE
CONTOUR INTERVAL = parts/1000
GRID NODE SPACING = 10 FEET
SURVEY DATE = 3-11-95 - 3-22-95

NOTE: REFER TO **DRAWING 5-105** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

N

MCS FILE: BORD-11B

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KANSAS CITY, MISSOURI

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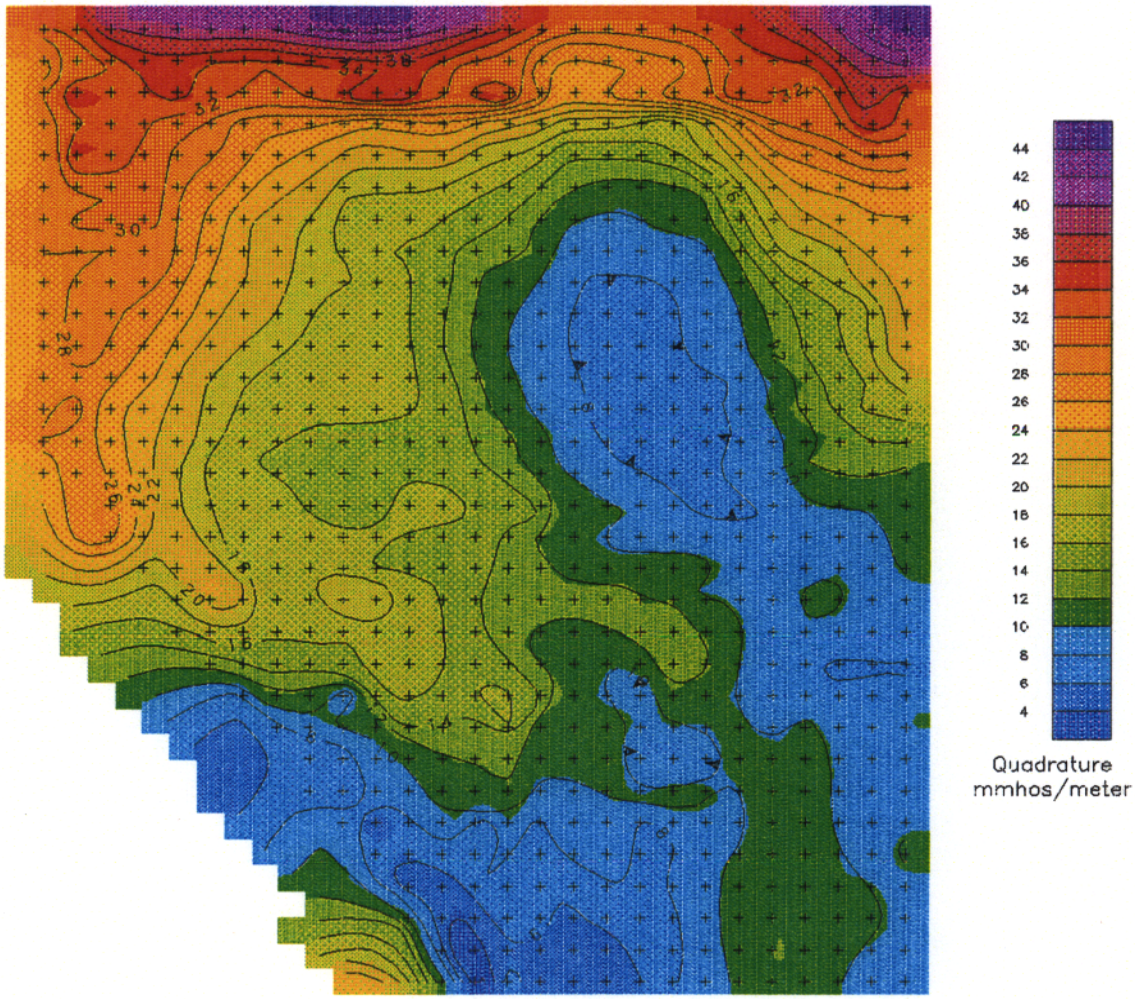
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

DETONATION CRATER 3
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-11B
Sheet number: 1



N

EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 2mmhos/meter
GRID NODE SPACING = 10 FEET
SURVEY DATE = 3-11-95 - 3-22-95

NOTE: REFER TO **DRAWING 5-105** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

Revisions			
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KANSAS CITY, MISSOURI

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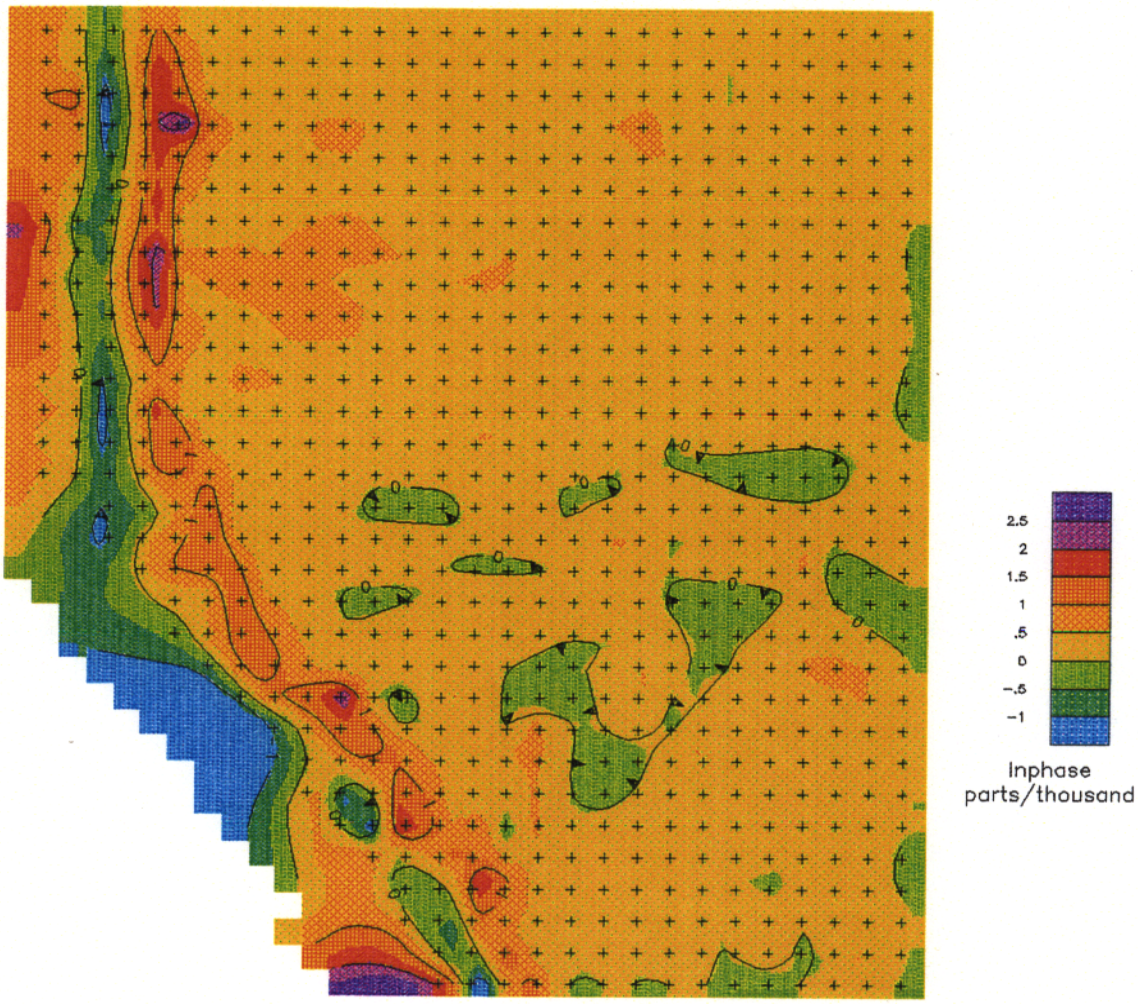
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

DETONATION CRATERS 4 AND 5
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-12A
Sheet number: 1

MCS FILE: BORD-12A



EM-31

INPHASE RESPONSE
CONTOUR INTERVAL = parts/1000
GRID NODE SPACING = 10 FEET
SURVEY DATE = 3-11-95 - 3-22-95

NOTE: REFER TO **DRAWING 5-105** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

N

MCS FILE: BORD-12B

Revisions			
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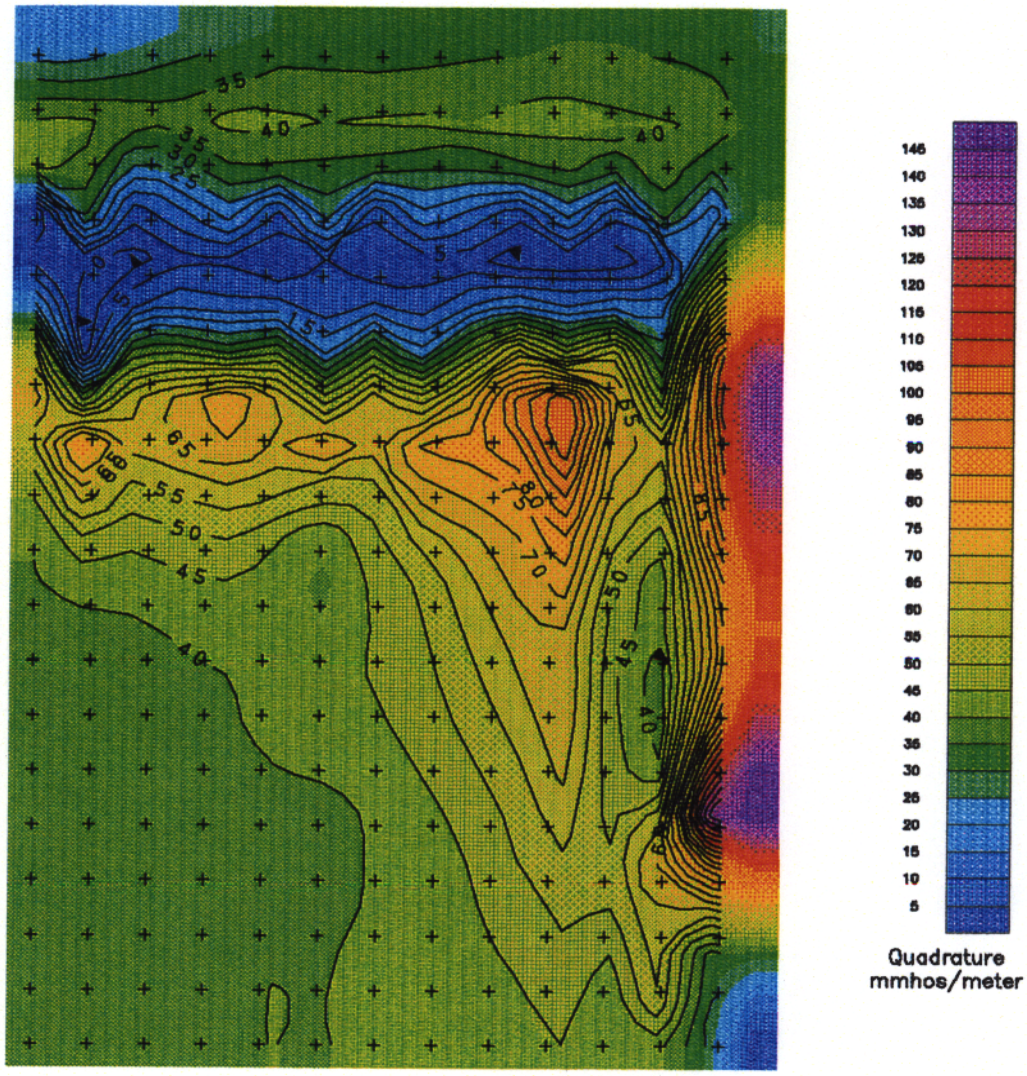
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

DETONATION CRATERS 4 AND 5
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-12B
Sheet number: 1



EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 5mmhos/meter
GRID NODE SPACING = 10 FEET
SURVEY DATE = 3-21-95

NOTE: REFER TO **DRAWING 5-110** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND THE UST SAMPLING LOCATION.

N

MCS FILE: BORD-13A

Revisions			
Symbol	Descriptions	Date	Apprv'd

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KANSAS CITY, MISSOURI

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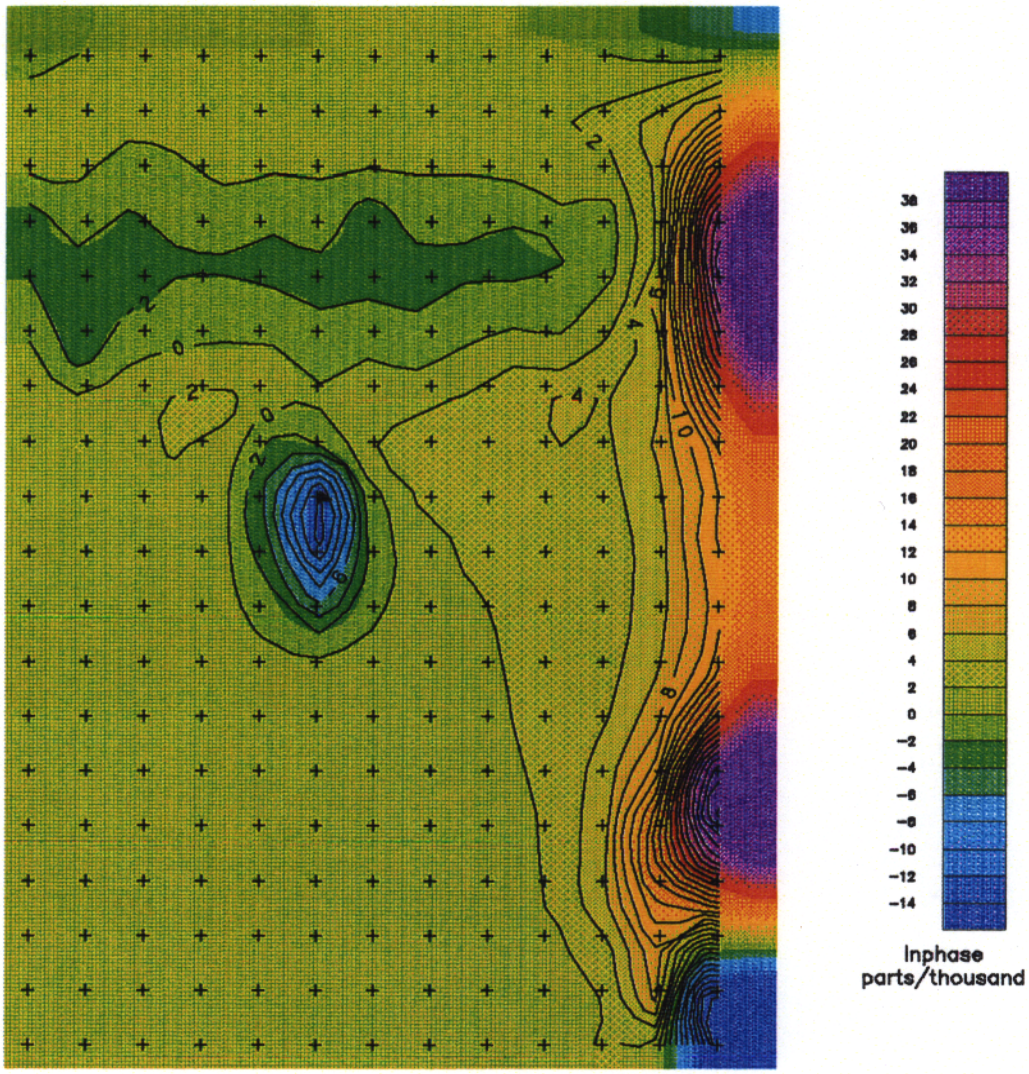
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

ADMINISTRATION AREA UST
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-13A
Sheet number: 1



EM-31

INPHASE RESPONSE
CONTOUR INTERVAL = 2 parts/1000
GRID NODE SPACING = 10 FEET
SURVEY DATE = 3-21-95

NOTE: REFER TO **DRAWING 5-110** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND THE UST SAMPLING LOCATION.

N

MCS FILE: BORD-13B

Revisions			
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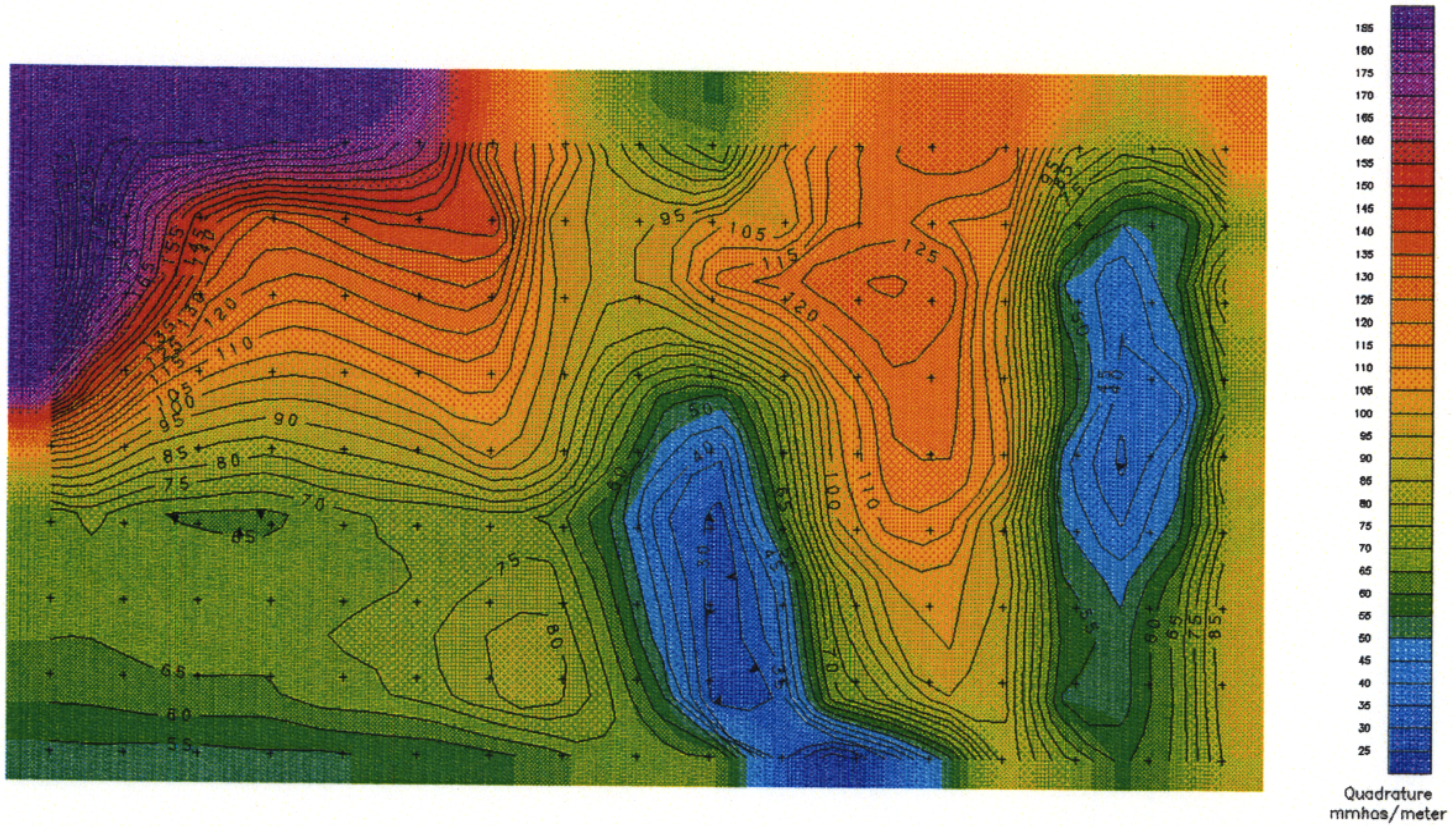
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

ADMINISTRATION AREA UST ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-13B
Sheet number: 1



N

EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 5mmhos/meter
GRID NODE SPACING = 5 FEET
SURVEY DATE = 3-9-95

NOTE: REFER TO **DRAWING 5-113** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND THE UST SAMPLING LOCATION.

MCS FILE: BORD-14A

Revisions			
Symbol	Descriptions	Date	Apprv'd

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

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Checked by: B.C.O.
Submitted by: RAN

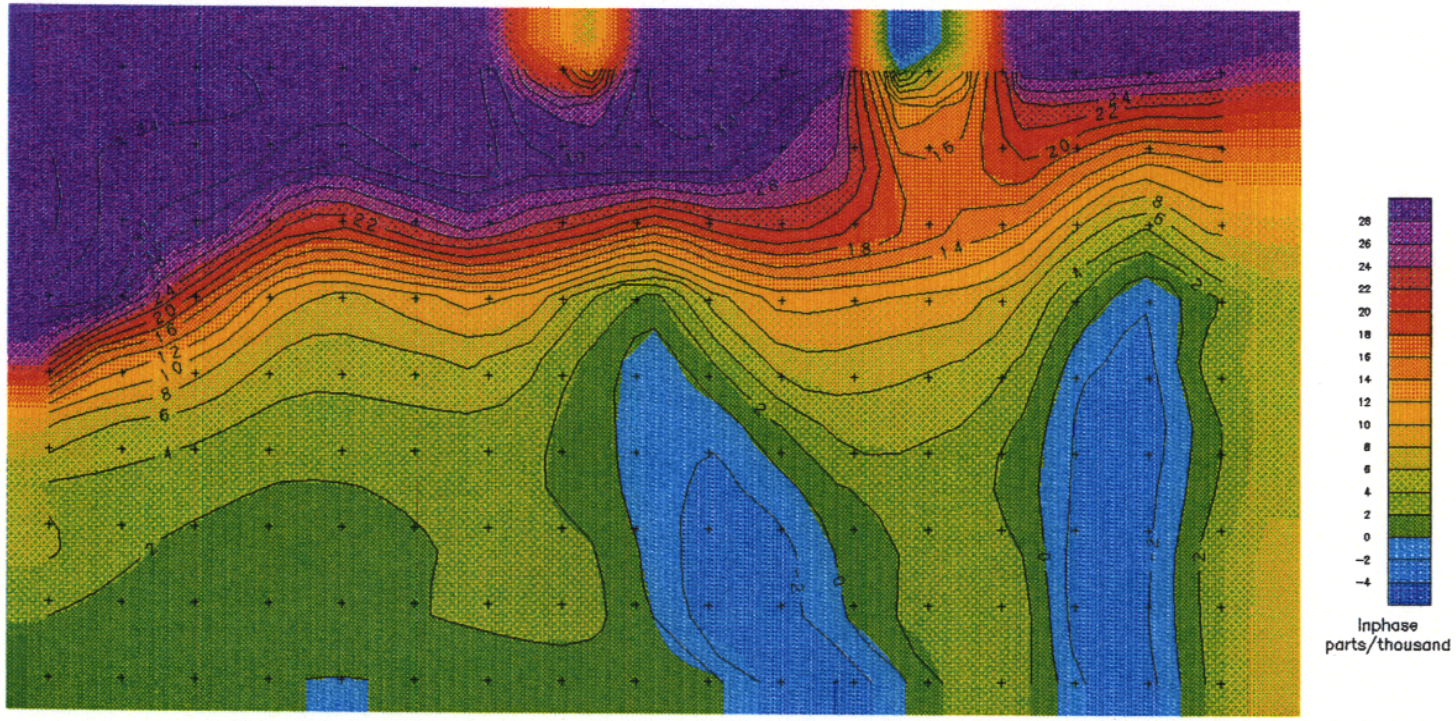
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

ATLAS MISSILE AREA UST
(LAUNCH OPERATIONS BUILDING)
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-14A
Sheet number: 1

B07NE003703-04089



EM-31

INPHASE RESPONSE
CONTOUR INTERVAL = 2 parts/1000
GRID NODE SPACING = 5 FEET
SURVEY DATE = 3-9-95

NOTE: REFER TO **DRAWING 5-113** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND THE UST SAMPLING LOCATION.

N

MCS FILE: BORD-14B

Revisions			
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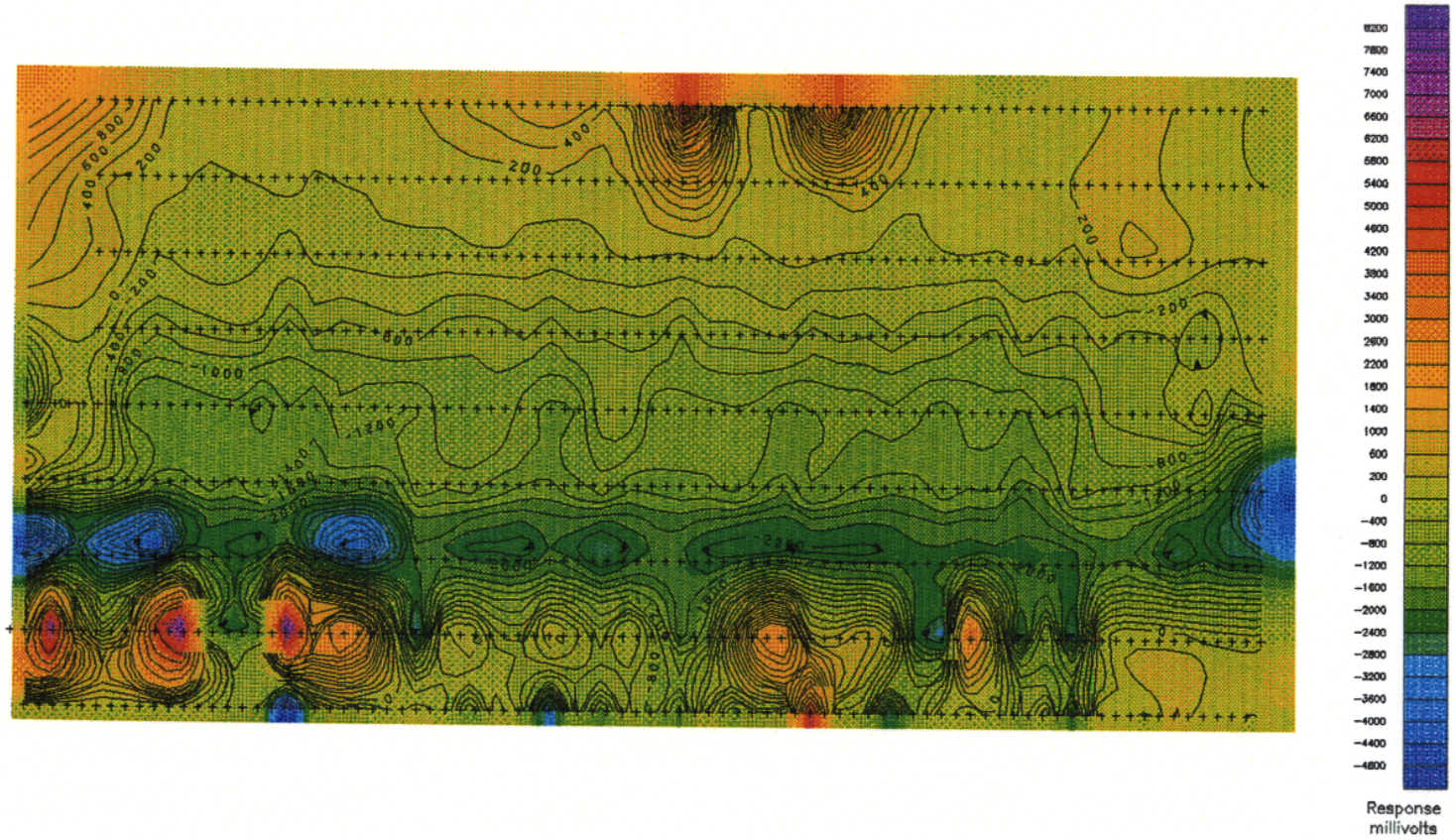
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

ATLAS MISSILE AREA UST
(LAUNCH OPERATIONS BUILDING)
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-14B
Sheet number: 1

B07NE003703-04090



EM-61

CHANNEL 2 RESPONSE
CONTOUR INTERVAL = 200 millivolts
LINE SPACING = 5 FEET
STATION SPACING = 1 FOOT
SURVEY DATE = 3-12-95

NOTE: REFER TO **DRAWING 5-113** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND THE UST SAMPLING LOCATION.

N

MCS FILE: BORD-15A

Revisions			
Symbol	Descriptions	Date	Apprv'd

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

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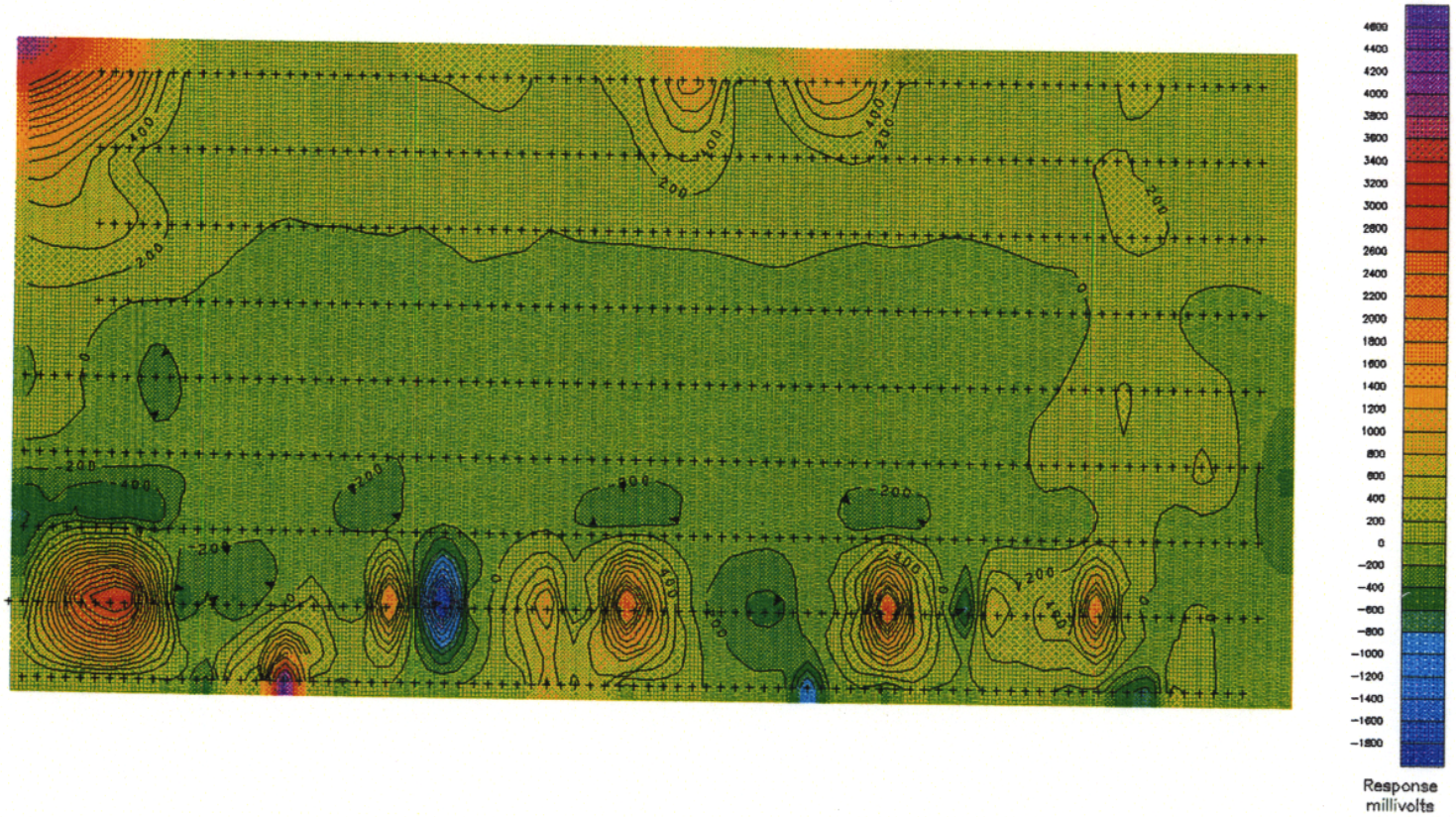
U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

ATLAS MISSILE AREA UST (LAUNCH OPERATIONS BUILDING) ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-15A
Sheet number: 1



EM-61

CHANNEL 3 RESPONSE
CONTOUR INTERVAL = 200 millivolts
LINE SPACING = 5 FEET
STATION SPACING = 1 FOOT
SURVEY DATE = 3-12-95

NOTE: REFER TO **DRAWING 5-113** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND THE UST SAMPLING LOCATION.

N

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

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CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

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Checked by: B.C.O.
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U.S. Army Corps of Engineers

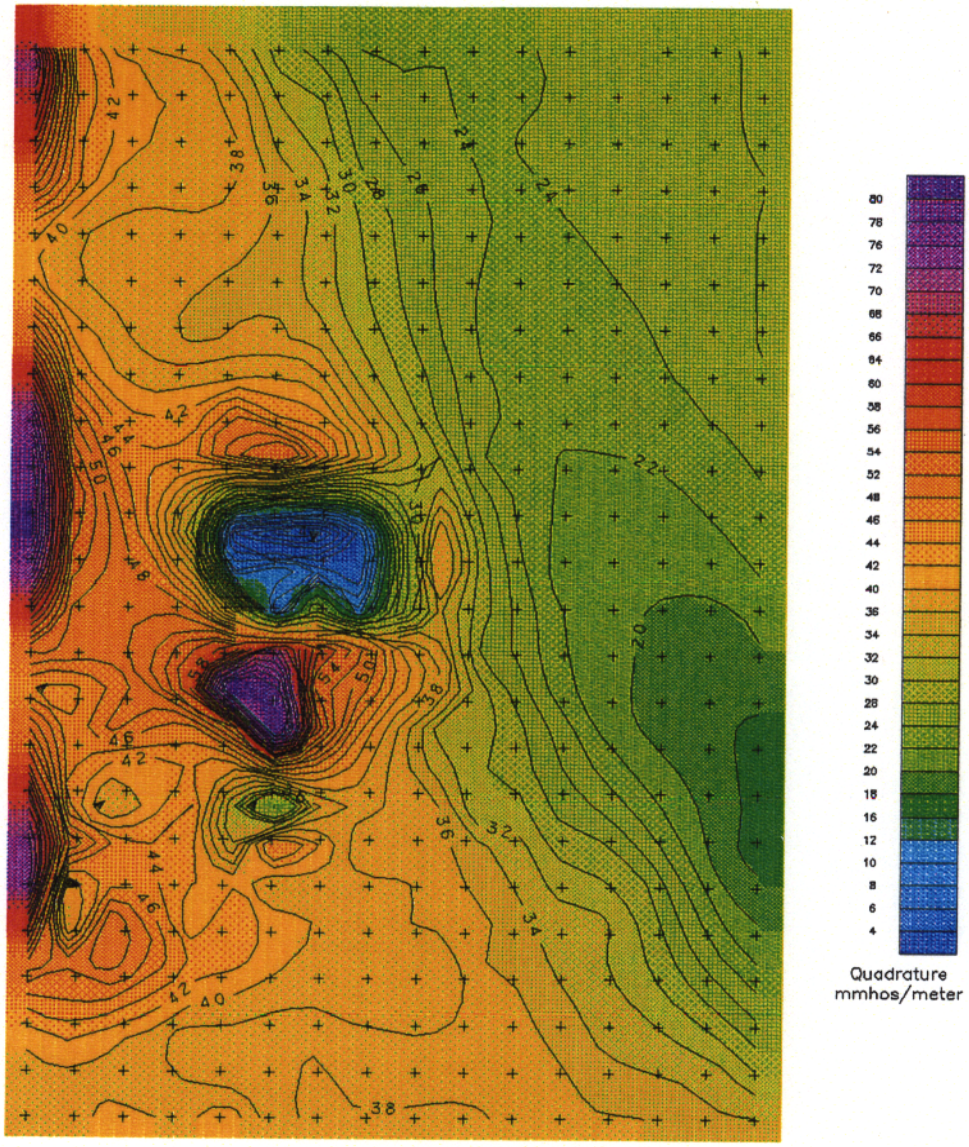
REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

ATLAS MISSILE AREA UST (LAUNCH OPERATIONS BUILDING) ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-15B
Sheet number: 1

MCS FILE: BORD-15B

B07NE003703-04092



EM-31

QUADRATURE RESPONSE
CONTOUR INTERVAL = 2mmhos/meter
GRID NODE SPACING = 10 FEET
SURVEY DATE = 3-11-95

NOTE: REFER TO **DRAWING 5-114** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

N

MCS FILE: BORD-16A

Revisions			
Symbol	Descriptions	Date	Apprv'd

Woodward-Clyde Consultants
Overland Park, Kansas

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
KANSAS CITY, MISSOURI

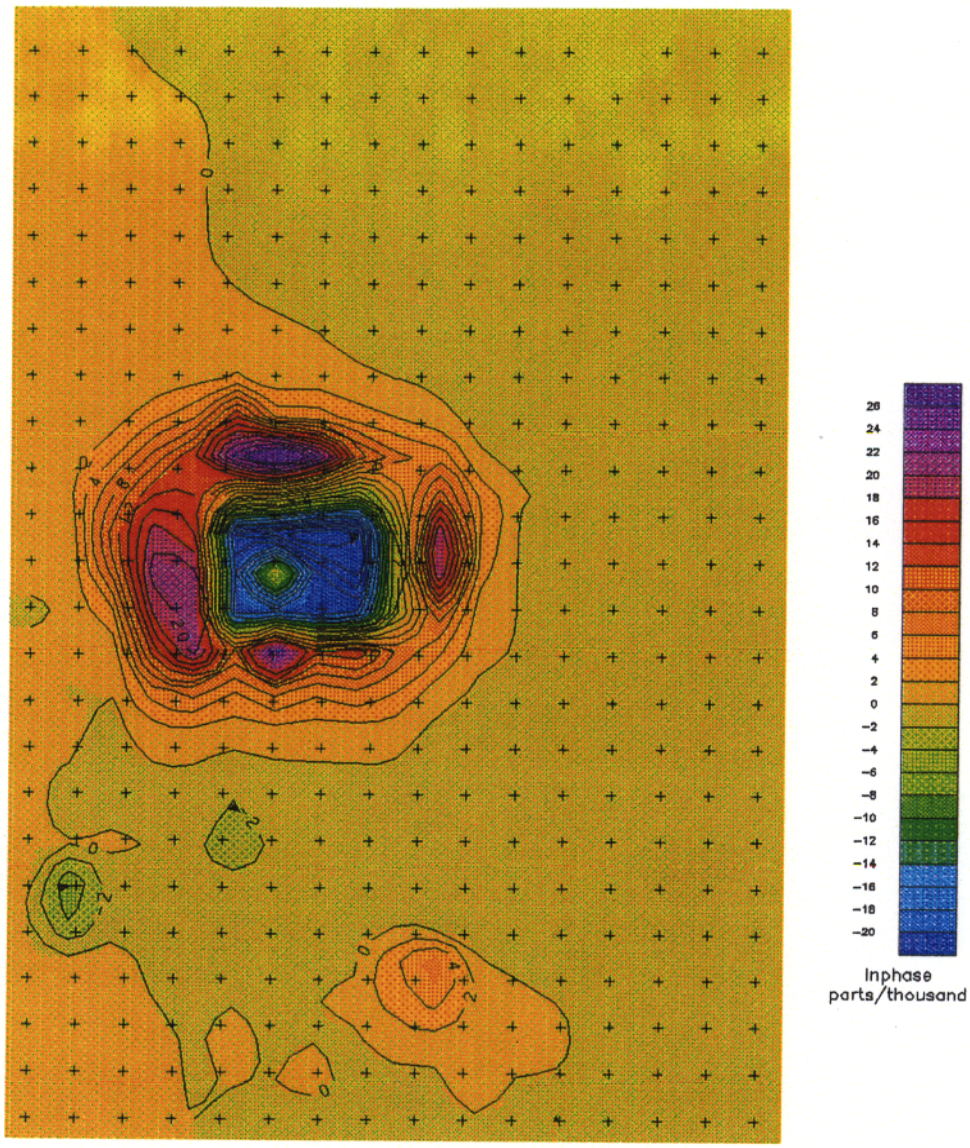
Designed by: C.J.F.
Drawn by: C.J.F.
Checked by: B.C.O.
Submitted by: RAN

U.S. Army Corps of Engineers

REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

GEOPHYSICAL ANOMALY AT LOAD LINE 3
ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
Dwg. No.: C-16A
Sheet number: 1



EM-31

INPHASE RESPONSE
CONTOUR INTERVAL = 2 parts/1000
GRID NODE SPACING = 10 FEET
SURVEY DATE = 3-11-95

NOTE: REFER TO **DRAWING 5-114** (VOL. II) FOR THE PHASE I STUDY AREA BOUNDARY AND SAMPLING LOCATIONS.

N

MCS FILE: BORD-16B

Revisions			
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Designed by: C.J.F.
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REMEDIAL INVESTIGATION
FOR OPERABLE UNIT 3
FMR. NEBRASKA ORDNANCE PLANT - MEAD, NE.

GEOPHYSICAL ANOMALY AT LOAD LINE 3 ELECTROMAGNETICS CONTOUR MAP

Scale: NOT TO SCALE
Date: OCT. 1995
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Appendix D

B07NE003703-04095

APPENDIX D
BORING LOGS

APPENDIX D

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APPENDIX D-1
NORTH BURNING GROUND BORING LOGS

HTW DRILLING LOG

HOLE NO. NGA-005

1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	John Coons
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3¾" ID 7⅝" OD HSA 2" OD Steel Split Spoon 3½" OD · 5' Core Split Barrel
8. HOLE LOCATION	North Burning Ground Area
9. SURFACE ELEVATION	
10. DATE STARTED	3.28.95
11. DATE COMPLETED	3.28.95
12. OVERBURDEN THICKNESS	ND
13. DEPTH DRILLED INTO ROCK	ND
14. TOTAL DEPTH OF HOLE	21'
15. DEPTH GROUNDWATER ENCOUNTERED	NA
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA
18. GEOTECHNICAL SAMPLES	5 (DISTURBED / UNDISTURBED)
19. TOTAL NUMBER OF CORE BOXES	NA
20. SAMPLES FOR CHEMICAL ANALYSIS	5 — VOC: CLP; METALS: CLP; OTHER (SPECIFY): CLP SVOC; OTHER (SPECIFY): —; OTHER (SPECIFY): —
21. TOTAL CORE REC.	NA %
22. DISPOSITION OF HOLE	Backfilled w/cuttings 3' to 21'; BACKFILLED: Bentonite Grout 0' to 3'; MONITORING WELL: —; OTHER (SPECIFY): —
23. SIGNATURE OF INSPECTOR	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark gray brown-gray, CL, silty, abundant roots & root hairs, soft, trace rust-brown oxidation staining, slightly moist	0 ppm		NGA-005-000 0.5' Recovery		Started drilling @1530 on 3-28-95
				0.5' Recovery			Collected a split barrel sample from 0' to 4' @1531
	1	Clay medium to dark gray-brown to yellow gray-brown, CL, silty, soft, crumbly, ocassional rust-brown oxidation staining, abundant cracks	0 ppm		NGA-005-001 1.0' Recovery		Collected sample @1535 from 0' to 0.5' Collected sample @1540 from 1' to 2'
	2		0 ppm	1.8' Recovery			
	3						
	4		0 ppm		NGA-005-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @1546 Collected sample @1550 from 4' to 5'
		Clay medium to dark yellow-brown with abundant rust-brown oxidation staining, leached, CL, black organic material, silty to very silty, trace mica, slightly moist					
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: NGA-005

HTW DRILLING LOG

HOLE NO. NGA-005

PROJECT: REMEDIAL INVESTIGATION MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown with abundant rust-brown oxidation staining, leached, CL, scattered black organic material, silty to very silty in part, trace mica, soft to stiff, crumbly in part, slightly moist	0 ppm	4.0' Recovery			
	6						
	7						
	8						
	9		0 ppm		NGA-005-009		Collected a split barrel sample from 9' to 14' @ Collected sample @ 1555 from 9' to 11'
	10				NGA-205-009 NGA-405-009 2.0' Recovery		Collected duplicate sample from 9' to 11' @ 1555 Collected MRD duplicate sample from 9' to 11' @ 1555
	11		0 ppm				
	12						
	13						
	14						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: NGA-005

ICORPS/4-15-92

HTW DRILLING LOG

HOLE NO. NGA-005

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Clay medium to dark yellow-brown with abundant rust-brown oxidation staining, CL, scattered black organic material, silty to very silty, soft, crumbly in part, trace mica, slightly moist	0 ppm	4.7' Recovery			Collected a split barrel sample from 14' to 19' @ 1557
	15						
	16						
	17	Silt medium to dark yellow-brown with scattered rust-brown oxidation staining, and thin clay streaks, very clayey, trace mica & sand, slightly moist ML					
	18	Sand light brown yellow-brown, gray-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, scattered rust-brown oxidation staining & banding, silty to very silty, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, medium dense, slightly moist					
	19		0 ppm		NGA-005-019 1.7' Recovery	12	Collected a split spoon sample from 19' to 21' @ 1600
	20					16	Collected a rinsate sample from the deconned split spoon mixing bowl & spoon from sample collected @ 19' to 21'
						12	
						16	RIN-NGA-005-035 RIN-NGA-005-035-QA for MRD @ 1620
	21	Bottom of borehole - 21'					Finished drilling @ 1604 on 3-28-95 Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

ICORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: NGA-005

HTW DRILLING LOG

HOLE NO. NGA-007

1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	John Coons
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3 7/4" ID 7 3/4" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD · 5' Core Split Barrel
8. HOLE LOCATION	North Burning Ground Area
9. SURFACE ELEVATION	
10. DATE STARTED	3·28·95
11. DATE COMPLETED	3·28·95
12. OVERBURDEN THICKNESS	ND
13. DEPTH DRILLED INTO ROCK	ND
14. TOTAL DEPTH OF HOLE	21'
15. DEPTH GROUNDWATER ENCOUNTERED	NA
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
5	CLP	CLP	CLP SVOC	—	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark gray-brown, CL, abundant roots & root hairs, silty, slightly sandy, slightly moist	0 ppm		NGA-007-000 0.5' Recovery		Started drilling @ 1410 on 3·28·95
				0.5' Recovery			Collected a split barrel sample from 0' to 4' @ 1412
	1		0 ppm		NGA-007-001 1.0' Recovery		Collected sample @ 1415 from 0' to 0.5'
		Clay very dark gray brown-gray to black, CL to CH, root hairs, silty to slightly silty, low to medium plastic, soft, trace mica, slightly moist					Collected sample @ 1420 from 1' to 2'
	2		0 ppm	1.4' Recovery			
	3						
		Clay medium to dark yellow-brown with scattered rust-brown oxidation staining, CL to CH, soft, low to medium plastic, silty to slightly silty, trace mica & black organic material, slightly moist					
	4		0 ppm		NGA-007-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @ 1422
							Collected sample @ 1425 from 4' to 5'
	5						

/CORPS/S-15-32

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: NGA-007

HTW DRILLING LOG

HOLE NO. NGA-007

PROJECT: REMEDIAL INVESTIGATION MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown with scattered rust-brown oxidation staining, CL, slightly silty to very silty in part, scattered black organic material, trace mica, slightly moist	0 ppm	1.7' Recovery			
	6						
	7						
	8						
	9		0 ppm		NGA-007-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1432 Collected sample @ 1435 from 9' to 10'
		Becoming very silty with very thin silt streaks					
	10		0 ppm	3.9' Recovery			
	11						
	12						
	13						
	14						

ICORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION MEAD OU3 4F11043A

HOLE NO.: NGA-007

HTW DRILLING LOG

HOLE NO. NGA-007

PROJECT: REMEDIAL INVESTIGATION MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 of 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Clay medium to dark yellow-brown with scattered rust-brown oxidation staining and ocassional gray-brown green-gray banding, CL, silty to very silty in part, scattered black organic material, soft, low plastic, trace mica, slightly moist	0 ppm	3.5' Recovery			Collected a split barrel sample from 14' to 19' @ 1437
	15						
	16	Increasing silt and rust-brown oxidation banding & staining					
	17	Sand light to medium yellow-brown to gray-brown tan-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, silty to very silty, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, ocassional rust-brown oxidation staining & banding, medium dense, slightly moist					
	18						
	19		0 ppm		NGA-007-019 1.8' Recovery	8	Collected a split spoon sample from 19' to 21' @ 1440
						21	
	20					28	
						15	
	21	Bottom of borehole - 21'					Finished drilling @ 1444 on 3-28-95. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

APPENDIX D-2

WASTE DISPOSAL AREA NORTH OF NIKE MAINTENANCE BORING LOGS

HTW DRILLING LOG

HOLE NO. NMA-001

1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	Scott Wheeler
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3¼" ID 7⅞" OD HSA; 2" OD Steel Split Spoon
8. HOLE LOCATION	WDA No. 3 North of Former Nike Maintenance Area
9. SURFACE ELEVATION	
10. DATE STARTED	3-20-95
11. DATE COMPLETED	3-20-95
12. OVERBURDEN THICKNESS	ND
15. DEPTH GROUNDWATER ENCOUNTERED	NA
13. DEPTH DRILLED INTO ROCK	ND
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
14. TOTAL DEPTH OF HOLE	21'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA
18. GEOTECHNICAL SAMPLES	NA
DISTURBED	—
UNDISTURBED	—
19. TOTAL NUMBER OF CORE BOXES	NA
20. SAMPLES FOR CHEMICAL ANALYSIS	6
VOC	CLP
METALS	CLP
OTHER (SPECIFY)	CLP-SVOC
OTHER (SPECIFY)	Explosives
OTHER (SPECIFY)	—
21. TOTAL CORE REC.	NA %
22. DISPOSITION OF HOLE	Backfilled w/cuttings 3' to 21'
BACKFILLED	Bentonite Grout 0' to 3'
MONITORING WELL	—
OTHER (SPECIFY)	—
23. SIGNATURE OF INSPECTOR	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay, medium to dark brown, CL to CH plastic, soft, trace silt, slightly moist	0 ppm		NMA-001-000 0.3' recovery		Started drilling @ 1433 on 3-20-95 Collected a split spoon sample from 0' to 1' @ 1435
	1		0 ppm		NMA-001-001 0.7' recovery		Collected a split spoon sample from 1' to 2' @ 1442
			Resample 0 ppm		0.8' recovery 0.7' recovery		Recollected a split spoon sample from 1' to 2' (i.e., two ss collected) @ 1614
	2		0 ppm		NMA-001-002 1.3' recovery	1	Collected a split spoon sample from 2' to 4' @ 1450
						4	
	3					4	
						3	
	4		0 ppm		NMA-001-004 2' recovery	4	Collected a split spoon sample from 4' to 6' @ 1522
		Clay, medium to dark yellow-brown, with occasional rust-brown oxidation CL to CH, medium plastic, soft, slightly moist, trace mica, rare black organic material				4	
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: NMA-001

HTW DRILLING LOG

HOLE NO. NMA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay, medium to dark yellow-brown with gray-brown mottling and occassional rust-brown to red-brown oxidation, CL to CH, low to medium plastic, soft, slightly moist, trace mica, rare black organic material	0 ppm		NMA-001-004	4	
						3	
	6						
	7						
	8						
	9		0 ppm		NMA-001-009 1.9' recovery	4	Collected a split spoon sample from 9' to 11' @ 1536
						5	
	10					6	
						5	
	11						
	12						
	13						
	14						

ICORPS/4-15-82

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: NMA-001

HTW DRILLING LOG

HOLE NO. NMA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Clay, medium to dark yellow-brown with gray-brown mottling and ocassional rust-brown to red-brown oxidation, CL to CH, low plastic, soft, slightly moist, trace mica silt, rare sand					
	15						
	16	Sand light to medium brown yellow-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, slightly silty, predominantly quartz grains with rare orange grains and black material, very thin darker bedding features, slightly moist, medium dense					Change in drilling rate indicating change in lithology
	17						Sand showing up it auger cuttings
	18						
	19		0 ppm		NMA-001-019 1.5' recovery	6	Collected a split spoon sample from 19' to 21' @ 1554
						13	
	20					15	
						18	
	21	Bottom of borehole = 21'					Finished drilling @ 1556 on 3-20-95. Moved over 1' and drilled to 1' to recollect sample at 1' to 2' due to poor recovery. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: NMA-001

CORPS/4-15-82

HTW DRILLING LOG

HOLE NO. NMA-002

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: Scott Wheeler	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3 7/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon	8. HOLE LOCATION: WDA No. 3 North of Former Nike Maintenance Area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3.21.95 / 11. DATE COMPLETED: 3.21.95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
1	—	1	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP-SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/ cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay, medium to dark brown gray-brown, CL to CH, medium plastic, soft, trace silt, abundant roots & root hairs, slightly moist	0 ppm		NMA-002-000 0.9' Recovery	2, 2	Started drilling @ 844 on 3.21.95 Collected a split spoon sample from 0' to 1' @ 845
	1	Clay, medium to dark yellow-brown with gray-brown mottling and rust-brown oxidation staining, medium plastic, soft, CL to CH, trace mica, rare black organic material, slightly moist	0 ppm		NMA-002-001 1.0' Recovery	2, 2	Collected a split spoon sample from 1' to 2' @ 855
	2		0 ppm		NMA-002-002 1.5' Recovery	2, 4, 5, 8	Collected a split spoon sample from 2' to 4' @ 912
	3						
	4		0 ppm		NMA-002-004 1.9' Recovery	3, 4	Collected a split spoon sample from 4' to 6' @ 922
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: NMA-002

HTW DRILLING LOG

HOLE NO. NMA-002

PROJECT: REMEDIAL INVESTIGATION MEAD NOP

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown with gray-brown mottling and rust-brown oxidation staining, CL to CH, medium plastic, soft, trace mica, rare black organic material, slightly moist			NMA-002-004	5	
						5	
	6						Collected a rinsate sample from the split spoon deconned after sample NMA-002-004 RIN-NMA-002-035 RIN-NMA-002-035-QA for MRD @ 945
	7						
	8						
	9		0 ppm		NMA-002-009 1.65' Recovery	1	Collected a split spoon sample from 9' to 11' @ 1010
						2	
	10					7	
		Silt, medium to dark yellow-brown, ML, clayey to very clayey, slightly sandy, predominantly quartz grains with rare orange grains and black specs, slightly moist, occasional banding of darker color, medium dense				9	
	11						
	12						
	13						
	14						

ICORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION MEAD OU3

HOLE NO.: NMA-002

HTW DRILLING LOG

HOLE NO. NMA-002

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Sand light to medium yellow-brown with tan-brown gray-brown mottling, SM, very fine- to fine-grained, well sorted, subrounded to subangular, slightly silty to silty, predominantly quartz with trace orange grains and black specs/material, very thin bedding features, medium dense, slightly moist	0 ppm	1.2' Recovery		3	Collected a split spoon sample from 14' to 19.5' @ 1017
	15					5	
						7	
	16						
	17						
	18						
	19		0 ppm		NMA-002-019 1.6' Recovery	3	Collected a split spoon sample from 19' to 21' @ 1030
	20					7	
						9	
						9	
	21	Bottom of borehole - 21'					Finished drilling @ 1034 on 5-21-95. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 | 4F11043A | HOLE NO.: NMA-002

ICORPS/4-15-92

HTW DRILLING LOG

HOLE NO.	NMA-003
1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	Scott Wheeler
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3 7/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon
8. HOLE LOCATION	WDA No. 2 North of Former Nike
9. SURFACE ELEVATION	
10. DATE STARTED	3-21-95
11. DATE COMPLETED	3-21-95
12. OVERBURDEN THICKNESS	ND
15. DEPTH GROUNDWATER ENCOUNTERED	NA
13. DEPTH DRILLED INTO ROCK	ND
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
14. TOTAL DEPTH OF HOLE	21'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
1	—	1	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP-SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark to very dark brown gray-brown, CL to CH, medium plastic, soft, trace silt, abundant roots, slightly moist	0 ppm		NMA-003-000 0.9' Recovery	1	Started drilling @ 1145 on 3-21-95 Collected a split spoon sample from 0' to 1' @ 1147
						2	
	1		0 ppm		NMA-003-001 0.9' Recovery	2	Collected a split spoon sample from 1' to 2' @ 1200
		Clay, medium to dark yellow-brown with gray-brown mottling and rust-brown to red-brown oxidation staining, medium plastic, soft, CL to CH, trace mica, rare black organic material, slightly moist				3	
	2		0 ppm		NMA-003-002 1.2' Recovery	2	Collected a split spoon sample from 2' to 4' @ 1207
						2	
	3					3	
						3	
	4		0 ppm		NMA-003-004	2	Collected a split spoon sample from 4' to 6' @ 1224
						3	
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: NMA-003

HTW DRILLING LOG

HOLE NO. NMA-003

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay, medium to dark yellow-brown with gray-brown mottling and rust-brown to red-brown oxidation staining, CL, medium to low plastic, soft, trace mica, rare black organic material, slightly moist			NMA-003-004	4	
						5	
	6						
	7						
	8						
	9	Increasing gray-brown mottling and rust-brown to red-brown oxidation staining	0 ppm		NMA-003-009 2.0' Recovery	2	Collected a split spoon sample from 9' to 11' @ 1243
						3	
	10					3	
						4	
	11						
	12						
	13						
	14						

/CORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: NMA-003

HTW DRILLING LOG

HOLE NO. NMA-003

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Silt, medium to dark yellow-brown with gray-brown mottling, clayey, sandy, predominantly quartz grains with rare orange grains and black specs, ML, slightly moist, medium dense	0 ppm	1.4 Recovery		6 13	Collected a split spoon sample from 14 to 15' @ 1250
	15	Sand, light to medium yellow-brown with tan-brown gray-brown, SM, well sorted, very fine- to fine-grained subrounded to subangular, predominantly quartz grains with scattered orange grains and black specs/grains, slightly silty to very silty in part, medium dense, slightly moist				19	
	16						
	17						
	18						
	19	Very thin bedding features and banding of darker color	0 ppm		NMA-003-019 1.3 Recovery	4 8	Collected a split spoon sample from 19' to 21' @ 1300
	20					12	
	21					12	
		Bottom of borehole - 21'					Finished drilling @ 1303 on 3-21-95 Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

(CORPS/4-15-82)

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: NMA-003

HTW DRILLING LOG

HOLE NO. NMA-004

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: Scott Wheeler	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3 1/4" ID 7 1/8" OD HSA; 2" OD Steel Split Spoon	8. HOLE LOCATION: WDA No. 2 North of Former Nike Maintenance Area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3-21-95 / 11. DATE COMPLETED: 3-21-95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
1	—	1	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP-SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/ cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark brown gray-brown, CL to CH, medium plastic, soft, trace silt, slightly moist	0 ppm		NMA-004-000 0.6' Recovery		Started drilling @ 1424 on 3-21-95 Collected a split spoon sample from 0' to 0.5' @ 1425
	1		0 ppm		NMA-004-001 1.0' Recovery	2, 1	Collected a split spoon sample from 1' to 2' @ 1435
	2		0 ppm		NMA-004-002 1.3' Recovery	2, 3, 2, 1	Collected a split spoon sample from 2' to 4' @ 1447
		Silt, medium to dark yellow-brown, clay, sandy, occasional medium to dark gray-brown clay streaks, predominantly quartz with rare orange grains and black specs, ML, slightly moist, soft					
	3						
	4		0 ppm		NMA-004-004 0.5' Recovery	6	Collected a split spoon sample from 4' to 6' @ 1500
			0 ppm		0.8' Recovery	8	Recollected sample from 4' to 5' @ 1608
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: NMA-004

HTW DRILLING LOG

HOLE NO. NMA-004

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Concrete and fill material					
	6						
	7	Sand, light to medium yellow-brown, tan-brown gray-brown, SM, very fine- to fine-grained, well sorted, subrounded to sub angular, predominantly quartz grains with scattered orange grains and black specs/grains, slightly silty to very silty in part, loose to medium dense, slightly moist					
	8						
	9		0 ppm		NMA-004-009 1.6' Recovery	4	Collected a split spoon sample from 9' to 11' @ 1516
	10					6	
	11					8	
	12					6	
	13						
	14						

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: NMA-004

ICORPS/4-15-92

HTW DRILLING LOG

HOLE NO. NMA-004

PROJECT: REMEDIAL INVESTIGATION MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Sand, light to medium yellow-brown gray-brown, SM, well sorted, very fine-grained to fine-grained, subrounded to subangular, predominantly quartz grains with 5 to 10% orange grains and trace black specs/grains, silty to very silty in part, medium dense, occassional bedding and banding features darker in color, slightly moist	0 ppm	1.2' Recovery		6	Collected a split spoon sample from 14' to 15.5' @ 1525
						10	
	15					14	
	16						
	17						
	18						
	19		0 ppm		NMA-004-019 1.7' Recovery	5	Collected a split spoon sample from 19' to 21' @ 1530
						10	
	20					20	
						18	
	21	Bottom of borehole - 21'					Finished drilling @ 1550 on 3-21-95. Moved over 1' and drilled to 4' to collect sample at 4' to 5' due to poor recovery. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION MEAD OU3 4F11043A

HOLE NO.: NMA-004

/CORPS/4-15-82

HTW DRILLING LOG

HOLE NO. NMA-005

1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	Scott Wheeler
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3¾" ID 7⅝" OD HSA 2" OD Steel Split Spoon 3½" OD 5' Core Split Barrel
8. HOLE LOCATION	WDA No. 3 North of Former Nike Maintenance Area
9. SURFACE ELEVATION	
10. DATE STARTED	3-22-95
11. DATE COMPLETED	3-22-95
12. OVERBURDEN THICKNESS	ND
13. DEPTH DRILLED INTO ROCK	ND
14. TOTAL DEPTH OF HOLE	21'
15. DEPTH GROUNDWATER ENCOUNTERED	NA
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
4	4	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP-SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay, medium to dark brown, gray-brown, CL, slightly silty & sandy with scattered pebbles, root hairs, medium to low plastic, soft, slightly moist	0 ppm		NMA-005-000 0.5' Recovery		Started drilling @ 828 on 3-22-95 Collected a split barrel sample from 0' to 4' @ 830 Collected sample @ 835 from 0' to 0.5'
				0.3' Recovery			
	1		0 ppm		NMA-005-001 1.0' Recovery		Collected sample @ 840 from 1' to 2'
	2	Clay, medium to dark yellow-brown, with rust-brown oxidation staining, CH to CL, medium to high plastic, soft, trace mica, rare black organic material, slightly moist	0 ppm		NMA-005-002 1.4' Recovery		Collected sample @ 845 from 2' to 4'
	3						
	4	Becoming mottled with gray-brown and gray-green with trace silt to very silty in part	0 ppm		NMA-005-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @ 850 Collected sample @ 855 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: NMA-005

HTW DRILLING LOG

HOLE NO. NMA-005

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay, medium to dark yellow-brown with abundant gray-brown to gray-green mottling and rust brown oxidation staining, CH to CL, medium plastic, soft, black organic material scattered throughout, silty to very silty in part, trace mica, slightly moist	0 ppm	4.0' Recovery			
	6						
	7						
	8						
	9	Increasing gray-brown gray-green mottling and rust brown oxidation staining	0 ppm		NMA-005-009 1.0' Recovery		Collected a split barrel Sample from 9' to 14' @ 858 Collected sample @ 903 from 9' to 10'
	10		0 ppm	4.0' Recovery			
	11						
	12						
	13						
	14						

ICORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: NMA-005

HTW DRILLING LOG

HOLE NO. NMA-005

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Silt, medium to dark yellow-brown with gray-brown mottling, clayey, sandy, ML, medium dense, predominantly quartz with trace orange, slightly moist	0 ppm	3.4' Recovery			Collected a split barrel sample from 14' to 19' @ 905
	15	Sand, medium to light yellow-brown to tan-brown, SM, well sorted, very fine- to fine-grained, subrounded to subangular, slightly silty to very silty in part, predominantly quartz grains with scattered orange grains and black specs/grains medium dense, slightly moist					
	16						
	17						
	18	Thin (2") yellow-brown silt stringer					
	19	Thin (2") gray-brown silt stringer	0 ppm		NMA-005-019 1.6' Recovery	3	Collected a split spoon sample from 19' to 21' @ 910
						11	
	20					19	
						15	
	21	Bottom of borehole - 21'					Finished drilling @ 915 on 3-22-95. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

ICORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: NMA-005

HTW DRILLING LOG

HOLE NO. NMA-006

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: Scott Wheeler	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3 7/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD 5' Core Split Barrel	8. HOLE LOCATION: WDA No. 1 North of Former Nike Maintenance Area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3-23-95 / 11. DATE COMPLETED: 3-23-95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP-SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Gravel, parking lot	0 ppm		NMA-006-000 0.5' Recovery		Started drilling @ 810 on 3-23-95
		Clay, very dark gray brown-gray, CL to CH, silty to very silty in part, slightly sandy, ocassional brown mottling, slightly moist to moist, low to medium plastic, soft		0.5' Recovery			Collected a split barrel sample from 0' to 4' @ 813
	1		0 ppm		NMA-006-001 1.0' Recovery		Collected sample @ 816 from 0' to 0.5' Collected sample @ 826 from 1' to 2'
	2		0 ppm		NMA-006-002 1.0' Recovery		Collected sample @ 830 from 2' to 3' Collected a rinsate sample from the decomed sample split barrel, mixing bowl & spoon
	3	Clay, medium to dark yellow-brown with rust-brown oxidation staining, CH to CL, medium to high plastic, soft, trace mica & silt, slightly moist to moist		0.2' Recovery			RIN-NMA-006-035 RIN-NMA-006-035-QA for MRD @ 900
	4	Becoming banded and mottled with gray-brown gray-green dark gray	0 ppm		NMA-006-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @ 910 Collected sample @ 915 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: NMA-006

HTW DRILLING LOG

HOLE NO. NMA-006

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay, medium to dark yellow-brown with thin (0.25" to 0.5") interbedded gray-green green-gray gray-brown layers, slightly silty, scattered rust-brown oxidation staining & black organic material, CH to CL, medium to low plastic, soft, slightly moist	0 ppm	3.3' Recovery			
	6						
	7						
	8						
	9	Increasing silt	0 ppm		NMA-006-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 921. Collected a sample @ 925 from 9' to 10'
	10		0 ppm	1.9' Recovery			
	11						
	12	Silt, medium to dark yellow-brown gray-brown with thin interbedded yellow-brown clay streaks, ML, clayey, sandy, predominantly quartz grains with 5-10% orange grains and trace black specs/grains, trace mica, slightly moist					
	13						
	14						

ICORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 — 4F11043A

HOLE NO.: NMA-006

HTW DRILLING LOG

HOLE NO. NMA-006

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Sand, light to medium yellow-brown tan-brown gray-brown, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 10% orange grains & 5% black specs/grains, silty to very silty in part, SM, slightly moist	0 ppm	2.1' Recovery			Collected a split barrel sample from 14' to 19' @ 930
	15						
	16	Occasional rust-brown oxidation staining (banding)					
	17						
	18						
	19		0 ppm		NMA-006-019 1.7' Recovery	.10	Collected a split spoon sample from 19' to 21' @ 935
						14	
	20					13	
						13	
	21	Bottom of borehole - 21'					Finished drilling @ 940 on 3-23-95. Backfilled borehole w/cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

/CORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: NMA-006

HTW DRILLING LOG

HOLE NO. NMA-007

1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	Scott Wheeler
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3 3/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD 5' Core Split Barrel
8. HOLE LOCATION	WDA No. 1 North of Former Nike Maintenance Area
9. SURFACE ELEVATION	
10. DATE STARTED	3-23-95
11. DATE COMPLETED	3-23-95
12. OVERBURDEN THICKNESS	ND
13. DEPTH DRILLED INTO ROCK	ND
14. TOTAL DEPTH OF HOLE	21'
15. DEPTH GROUNDWATER ENCOUNTERED	NA
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP-SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Gravel parking lot	0 ppm		NMA-007-000 0.5' Recovery		Started drilling @1030 on 3-23-95
		Clay, medium to dark yellow-brown, medium plastic, CH, soft, trace mica & silt, slightly moist		0.5' Recovery			Collected a split barrel sample from 0' to 4' @1033
	1		0 ppm		NMA-007-001 NMA-207-001 NMA-407-001 1.0' Recovery		Collected sample @1040 from 0' to 0.5' Collected sample @1045 from 1' to 2' Collected duplicate sample @1025 from 1' to 2'
	2		0 ppm		NMA-007-002 1.0' Recovery		Collected MRD duplicate sample @1045 from 1' to 2' Collected sample @1050 from 2' to 3'
	3	Clay very dark gray to black, CL, low plastic, silty to very silty, trace sand, soft, slightly moist		0.3' Recovery			
	4	Becoming gray-brown brown-gray with decreasing silt	0 ppm		NMA-007-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @1105 Collected sample @1110 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: NMA-007

HTW DRILLING LOG

HOLE NO. NMA-007

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown with gray-green gray-brown mottling & banding, rust-brown oxidation staining, CH to CL, soft slightly silty to silty in part, scattered black organic material, slightly moist	0 ppm	0.5' Recovery			
	6						
	7						
	8						
	9		0 ppm		MA-007-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1115 Collected sample @ 1118 from 9' to 10'
	10		0 ppm	3.8' Recovery			
	11						
	12	Becoming gray-green to gray-brown in color					
	13						
	14						

/CORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: NMA-007

HTW DRILLING LOG

HOLE NO. NMA-007

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kuberczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Clay gray-green green-gray with scattered rust-brown oxidation staining, CH to CL, trace silt & mica, medium to high plastic, soft to very soft, slightly moist to very moist	0 ppm	4.9' Recovery			Collected a split barrel sample from 14' to 19' @ 1120
	15						
	16						
	17						
	18	Highly oxidized layer, rust-brown					
	19	Sand medium to light yellow-brown tan-brown gray-brown, SM, very fine- to fine-grained, well sorted, subrounded and subangular, predominantly quartz grains with 5-10% orange grains and 5% black specs/grains, scattered rust-brown oxidation staining & banding, silty to very silty in part, medium dense, slightly moist	0 ppm		NMA-007-019 1.5' Recovery	4	Collected a split spoon sample from 19' to 21' @ 1125
	20					11	
						17	
						18	
	21	Bottom of borehole - 21'					Finished drilling @ 1128 on 3-23-95. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: NMA-007

ICORPS/4-15-92

APPENDIX D-3
WASTE DISPOSAL AREA SOUTHEAST OF BOMB BOOSTER BORING LOGS

HTW DRILLING LOG

HOLE NO. BBA-001

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Servicer, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: Scott Wheeler	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3 3/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD 5' Core Split Barrel	8. HOLE LOCATION: WDA Southeast of Bomb Booster Area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3-23-95 / 11. DATE COMPLETED: 3-23-95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5		NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP-SVOC	CLP-PCBs	Explosives	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Back filled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark to very dark gray to black to brown-gray, silty to very silty in part, CL to CH low to medium plastic, soft, scattered roots & root hairs, slightly moist	0 ppm		BBA-001-000 0.5' Recovery		Started drilling @ 1328 on 3-23-95
				0.5' Recovery			Collected a split barrel sample from 0' to 4' @ 1330
	1		0 ppm		BBA-001-001 1.0' Recovery		Collected sample @1330 from 0' to 0.5' / Collected sample @1335 from 1' to 2'
	2		0 ppm		BBA-001-002 1.0' Recovery		Collected sample @ 1340 from 2' to 3'
	3			0.8' Recovery			
	4	Clay medium to dark yellow-brown with scattered gray-green gray-brown banding, CL, silty to very silty in part, trace sand, low plastic, soft, scattered rust-brown oxidation staining, slightly moist			BBA-001-004 1.0' Recovery		Collected a split barrel sample from 4' to 8' @ 1342 / Collected sample @1350 from 4' to 5'
	5						

ICORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: BBA-001

HTW DRILLING LOG

HOLE NO. BBA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown with gray-green gray-brown banding and rust-brown oxidation staining, CL, silty to very silty in part, trace sand & black organic material, low plastic, soft,	0 ppm	4.0' Recovery			
	6						
	7						
	8						
	9		0 ppm		BBA-001-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1356 Collected sample @ 1400 from 9' to 10'
	10		0 ppm	1.4' Recovery			
	11						
	12						
	13						
	14						

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: BBA-001

ICORPS/4-15-92

HTW DRILLING LOG

HOLE NO. BBA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NCP

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Clay medium to dark yellow-brown with gray-brown to green-brown to gray-green banding, CL, scattered rust-brown oxidation staining, scattered black organic material, low plastic, soft, slightly moist	0 ppm	5' Recovery			Collected a split barrel sample from 14' to 19' @ 1403
	15						
	16						
	17						
	18						
	19	Sand light to medium yellow-brown tan-brown gray-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 5% orange grains and 5% black specs/grains, silty to very silty, slightly moist	0 ppm		BBA-001-019 1.7' Recovery	3	Collected a split spoon sample from 19' to 21' @ 1406
	20					12	
						16	
						18	
	21	Bottom of borehole - 21'					Finished drilling @ 14 on 3-23-95. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

ICORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD CU3 4F11043A

HOLE NO.: BBA-001

HTW DRILLING LOG

HOLE NO. BBA-006

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: Scott Wheeler	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3 3/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD 5' Core Split Barrel	8. HOLE LOCATION: WDA Southeast of Bomb Booster Area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3-24-95
	11. DATE COMPLETED: 3-24-95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP SVOC	CLP PCBs	Explosives	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark gray brown-gray to very dark gray, silty, slightly sandy in part, roots & root hairs, trace mica, slightly moist	0 ppm		BBA-006-000 0.5' Recovery		Started drilling @ 828 on 3-24-95 Collected a split barrel sample from 0' to 4' @ 829
				0.5' Recovery			Collected sample @ 830 from 0' to 0.5'
	1		0 ppm		BBA-006-001 1.0' Recovery		Collected sample @ 835 from 1' to 2'
	2	Clay medium to dark yellow-brown, with ocassional gray-brown mottling, CL, silty, low plastic, soft, scattered rust-brown oxidation staining, trace mica, slightly moist	0 ppm		BBA-006-002 0.8' Recovery		Collected sample @ 840 from 2' to 3'
	3			0' Recovery			
	4		0 ppm		BBA-006-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @ 850 Collected sample @ 855 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: BBA-006

HTW DRILLING LOG

HOLE NO. BBA-006

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay, medium to dark yellow-brown with occasional gray-brown mottling and scattered rust-brown oxidation staining, silty to very silty in part, low plastic, soft, CL, rare black organic material, trace mica, slightly moist	0 ppm	1.2' Recovery			Collected a rinsate sample from the decanned split barrel, mixing bowl & spoon used to collect sample BBA-006-004 RIN-BBA-006-035 RIN-BBA-006-035QA for MLD @ 915
	6						
	7						
	8						
	9	Scattered gray-brown green-gray banding and increased rust-brown oxidation staining & black organic material	0 ppm		BBA-006-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 942 Collected sample @ 945 from 9' to 10'
	10		0 ppm	1.4' Recovery			
	11	Becoming very silty					
	12	Sand, medium to light yellow-brown gray-brown tan-brown, very fine- to fine-grained, well sorted, sub-rounded to subangular, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, silty to very silty, slightly moist					
	13						
	14						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: BBA-006

/CORPS/4-15-82

HTW DRILLING LOG

HOLE NO. BBA-006

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kubeczko

SHEET 3 of 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Sand, medium to light gray-brown tan-brown, SM, very-fine- to fine-grained, well sorted, sub-rounded to subangular, predominantly quartz grains with 5-10% orange grains and 5% black specs/grains, silty to very silty in part, slightly moist	0 ppm	1.3' Recovery			Collected a split barrel sample from 14' to 16 @ 950
	15						
	16						
	17						
	18						
	19		0 ppm		BBA-006-019 1.7 Recovery	6	Collected a split spoon sample from 19' to 21' @ 1010
						8	
	20					10	
						12	
	21	Bottom of borehole - 21'					Finished drilling @ 1015 on 3-24-95 Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD CU3 4F11043A

HOLE NO.: BBA-006

CORPS/4-15-92

HTW DRILLING LOG

HOLE NO. BBA-007

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: Scott Wheeler	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3 3/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD 5'-Core Split Barrel	8. HOLE LOCATION: WDA Southeast of Bomb Booster Area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3-24-95 / 11. DATE COMPLETED: 3-24-95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP SVOC	CLP PCB	Explosives	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 2' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark to very dark gray, CL, silty to very silty, sandy, abundant root & root hairs, soft, trace mica, slightly moist	0 ppm		BBA-007-000 0.5' Recovery		Started drilling @ 1349 on 3-24-95 Collected a split barrel sample from 0' to 4' @ 1351
				0.5' Recovery			Collected sample @1355 from 0' to 0.5'
	1	Yellow-brown mottling	0 ppm		BBA-007-001 1.0' Recovery		Collected sample @1400 from 1' to 2'
	2	Sand medium to light gray-brown, SM, thin interbedded (<0.25") clay and silt streaks, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 5% orange grains and 5% black specs/grains, medium dense	0 ppm		BBA-007-002 0.8' Recovery		Collected sample @ 1405 from 2' to 3'
	3			0' Recovery			
	4	Clay medium to dark gray-brown to yellow-brown, CL, silty to very silty, slightly sandy, soft, slightly moist	0 ppm		BBA-007-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @1410 Collected sample @1415 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: BBA-007

HTW DRILLING LOG

HOLE NO. BBA-007

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark gray-brown to yellow-brown, CL, silty to very silty, slightly sandy, soft, slightly moist	0 ppm	1.6' Recovery			
	6	Fill material, predominantly clay rust-brown to black to dark yellow-brown, black friable material metal debris, steel cable, porcelain material					
	7						
	8						
	9		0 ppm		BBA-007-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @1421 Collected sample @1425 from 9' to 10'
	10		0 ppm	2.6' Recovery			
	11	Clay medium to dark yellow-brown with thin (<0.25") interbedded green-gray gray-brown banding and scattered mottling, scattered rust-brown oxidation staining and black organic material, silty to very silty in part, CL, soft, low to medium plastic, slightly moist					
	12						
	13						
	14						

ICORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: BBA-007

HTW DRILLING LOG

HOLE NO. BBA-007

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kubeczko

SHEET 3 of 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Clay medium to dark yellow-brown with green-gray mottling and scattered rust-brown oxidation staining, very silty, slightly sandy, CL, low plastic, soft, slightly moist	0 ppm	1.4' Recovery			Collected a split barrel sample from 14' to 19' @1430
	15	Sand medium to light yellow-brown gray-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz with 5-10% orange grains and 5% black specs/grains, silty to very silty with ocassional very thin (<0.10") silt streaks, medium dense, slightly moist					
	16						
	17						
	18						
	19		0 ppm		BBA-007-019 1.6' Recovery	8	Collected a split spoon sample from 19' to 21' @1435
						11	
	20					15	
						20	
	21	Bottom of borehole - 21'					Finished drilling @1440 on 3-24-95. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.:

(CORPS/4-15-92)

HTW DRILLING LOG

HOLE NO. BBA-008

1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	Scott Wheeler
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3 7/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD 5' Core Split Barrel
8. HOLE LOCATION	WDA Southeast of Bomb Booster Area
9. SURFACE ELEVATION	
10. DATE STARTED	3-24-95
11. DATE COMPLETED	3-24-95
12. OVERBURDEN THICKNESS	ND
13. DEPTH DRILLED INTO ROCK	ND
14. TOTAL DEPTH OF HOLE	21'
15. DEPTH GROUNDWATER ENCOUNTERED	NA
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP SVOC	CLP PCB	Explosives	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/ cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark gray to brown-gray, CL, soft, silty to very silty, sandy, trace mica, abundant roots & root hairs, slightly moist	0 ppm		BBA-008-000 0.5' Recovery		Started drilling @ 1106 on 3-24-95 Collected a split barrel sample from 0' to 4' @ 1108
				0.5' Recovery			Collected sample @ 1110 from 0' to 0.5'
	1	Clay medium to dark yellow-brown, CL, low plastic, soft, silty to very silty, slightly sandy, trace mica	0 ppm		BBA-008-001 1.0' Recovery		Collected sample @ 1115 from 1' to 2'
	2		0 ppm		BBA-008-002 1.0' Recovery		Collected sample @ 1120 from 2' to 3'
	3			0.7' Recovery			
	4		0 ppm		BBA-008-004 2.0' Recovery		Collected a split barrel sample from 4' to 9' @ 1125 Collected sample @ 1135 from 4' to 6'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 HOLE NO.: BBA-008

HTW DRILLING LOG

HOLE NO. BBA-008

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown with very thin (<0.25") interbedded gray-brown green-gray clay and thin banded rust-brown oxidation staining; CL, silty to very silty	0 ppm		BBA-208-004 BBA-408-004		Collected duplicate sample @ 1128 from 4' to 6' Collected MRD duplicate sample @ 1135 from 4' to 6'
	6		0 ppm	0.7' Recovery			
	7						
	8						
	9		0 ppm		BBA-008-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 11' Collected sample @ 1150 from 9' to 10'
	10		0 ppm	1.2' Recovery			
	11	Sand medium to light yellow-brown gray-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 10% orange grains and 5% black specs/grains, medium dense, silty to very silty in part, slightly moist					
	12						
	13						
	14						

ICORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: BBA-008

HTW DRILLING LOG

HOLE NO. BBA-008

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Sand, medium to light gray-brown tan-brown, SM, very fine to fine grained, well sorted, predominantly quartz grains with 10% orange grains & 5% black specs/grains, medium dense, silty to very silty in part, slightly moist	0 ppm	1.8' Recovery			Collected a split barrel sample from 14' to 19' @1157
	15						
	16						
	17						
	18						
	19		0 ppm		BBA-008-019 1.7' Recovery	6	Collected a split spoon sample from 19' to 21' @ 1202
						11	
	20					13	
						13	
	21	Bottom of borehole - 21'					Finished drilling @1205 on 3-24-95 Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD CU3 4F11043A

HOLE NO.: BBA-008

ICORPS/4-15-92

FILE 6.1.3

HTW DRILLING LOG

HOLE NO. AMA-001

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: John Coons	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3 3/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD 5' Core Split Barrel	8. HOLE LOCATION: WDA No. 1 at Former Atlas Missile Area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3-27-95 / 11. DATE COMPLETED: 3-27-95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
5	CLP	CLP	CLP SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/ cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark gray brown-gray, CL, soft, low plastic, silty to very silty, roots & root hairs, slightly sandy, slightly moist	0 ppm		AMA-001-000 0.5' Recovery		Started drilling @ 1008 on 3-27-95 Collected a split barrel sample from 0' to 4' @ 1011
				0.5' Recovery			Collected sample @ 1015 from 0' to 0.5'
	1		0 ppm		AMA-001-001 10' Recovery		Collected sample @ 1025 from 1' to 2'
		Clay medium to dark yellow-brown, CH to CL, soft, medium to low plastic, slightly silty to silty in part, scattered rust-brown oxidation staining, trace mica, slightly moist					
	2		0 ppm	1.5' Recovery			
	3						
	4		0 ppm		AMA-001-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @ 1027 Collect sample @ 1028 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: AMA-001

HTW DRILLING LOG

HOLE NO. AMA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown with abundant rust-brown oxidation staining & banding, scattered black organic material, occassional gray-brown gray-green mottling & banding CH to CL, medium to low plastic, soft, slightly silty to silty, trace mica, slightly moist	0 ppm	1.5' Recovery			
	6						
	7						
	8						
	9		0 ppm		AMA-001-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1030 Collected sample @ 1031 from 9' to 10'
	10		0 ppm	1.5' Recovery			
	11						
	12						
	13						
	14						

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: AMA-001

ICORPS/4-15-82

HTW DRILLING LOG

HOLE NO. AMA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	14	Clay medium to dark yellow-brown with occassional rust-brown oxidation staining, CH to CL, soft medium to low plastic, trace mica, slightly silty to very silty,	0 ppm	2.6' Recovery			Collected a split barrel sample from 14' to 19' @1035
	15	Sand light brown to tan-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, silty to very silty in part, medium dense, slightly moist					
	16						
	17						
	18						
	19		0 ppm		AMA-001-019 1.7' Recovery	6	Collected a split spoon sample from 19' to 21' @1040
						8	
	20					10	
						12	
	21	Bottom of borehole - 21'					Finished drilling @1043 on 3-27-95. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

HTW DRILLING LOG

HOLE NO. AMA-002

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: John Coons	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3 3/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD 5' Core Split Barrel	8. HOLE LOCATION: WDA No. 1 at Former Atlas Missile Area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3-27-95 / 11. DATE COMPLETED: 3-27-95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
5	CLP	CLP	CLP SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark to very dark gray to black, CL, soft, low plastic, silty to very silty, trace mica, roots & roothairs, slightly moist	0 ppm		AMA-002-000 0.5' Recovery		Started drilling @ 1128 on 3-27-95
				0.5' Recovery			Collected a split barrel sample from 0' to 4' @ 1130
	1						Collected sample @ 1133 from 0' to 0.5'
			0 ppm		AMA-002-001 1.0' Recovery		Collected sample @ 1145 from 1' to 2'
	2		0 ppm	1.7' Recovery			
	3	Becoming slightly mottled gray-brown					
		Clay medium to dark brown-gray, CL to CH, soft, low to medium plastic, slightly silty to very silty in part, trace mica, slightly moist					
	4		0 ppm		AMA-002-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @ 1147
							Collected sample @ 1150 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: AMA-002

HTW DRILLING LOG

HOLE NO. AMA-002

PROJECT: REMEDIAL INVESTIGATION MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown, CH to CL, soft, medium to high plastic, slightly silty to very silty in part, scattered rust-brown oxidation staining, trace black organic material, trace mica, slightly moist	0 ppm	4.0' Recovery			
	6	Becoming mottled gray-brown green-gray					
	7						
	8						
	9		0 ppm		AMA-002-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1152 Collect sample @ 1155 from 9' to 10'
	10		0 ppm	1.4' Recovery			
	11						
	12						
	13						
	14						

ICORPS/4-15-82

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: AMA-002

HTW DRILLING LOG

HOLE NO. AMA-002

SHEET 3 OF 3 SHEETS

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Clay medium to dark yellow-brown with rust-brown oxidation staining, and ocassional gray-green gray-brown mottling, CL to CH, low to medium plastic, soft, silty to very silty in part, trace mica, slightly moist	0 ppm	4.9' Recovery			Collected a split barrel sample from 14' to 19' @ 1157
	15						
	16						
	17						
	18	Sand light brown tan-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, silty to very silty, medium dense, slightly moist					
	19		0 ppm		AMA-002-019 1.8' Recovery	10	Collected a split spoon sample from 19' to 21' @ 1200
						28	
	20					24	
						28	
	21	Bottom of borehole - 21'					Finished drilling @ 1204 on 3-27-95 Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: AMA-002

ICORPS/4-15-82

APPENDIX D-4
POTENTIAL WASTE DISPOSAL AREA AT THE ATLAS MISSILE AREA
BORING LOGS

HTW DRILLING LOG

HOLE NO. AMA-003

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: John Coons	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3 3/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD 5' Core Split Barrel	8. HOLE LOCATION: WDA No. 2 at Former Atlas Missile Area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3-27-95 / 11. DATE COMPLETED: 3-27-95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
5	CLP	CLP	CLP-SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay yellow-brown, CL, slightly silty, roots & root hairs, occassional gray-brown mottling, trace sand, slightly moist	0 ppm		AMA-003-000 0.5' Recovery		Started drilling @1350 on 3-27-95
				0.5' Recovery			Collected a split barrel sample from 0' to 4' @1351
	1						Collected sample @1355 from 0' to 0.5'
			0 ppm		AMA-003-001 1.0' Recovery		Collected sample @1405 from 1' to 2'
		Clay medium to dark yellow-brown with gray-brown gray-green mottling and rust brown oxidation staining, CL, scattered dessication cracks, black staining and/or black organic material, silty to very silty, trace mica, slightly moist					
	2		0 ppm	1.9' Recovery			
	3						
	4				AMA-003-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @1407
							Collected sample @1410 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: AMA-003

HTW DRILLING LOG

HOLE NO. AMA-003

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Sand light to medium brown tan-brown gray-brown, SM, very fine to fine-grained, well sorted, subrounded to subangular, silty to very silty, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, medium dense, ocassional silt streaks, slightly moist	0 ppm	1.7' Recovery			Collected a rinsate sample from the decomed split barrel, mixing bowl & spoon used to collect sample from 4' to 5' RIN-AMA-003-035 RIN-AMA-003-035-QA for MRD @ 1445
	6						
	7						
	8						
	9		0 ppm		AMA-003-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1412 Collected sample @1415 from 9' to 10'
	10		0 ppm	1.4' Recovery			
	11						
	12						
	13						
	14						

ICORPS/6-15-82

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: AMA-003

HTW DRILLING LOG

HOLE NO. AMA-003

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Sand light brown, SM, very-fine- to fine-grain, well sorted, subrounded to subangular, predominantly quartz grains with 5% orange grains and 5% black specs/grains, very silty with orassional silt streaks, medium dense, slightly moist	0 ppm	2.4' Recovery			Collected a split barrel sample from 14' to 19' @ 1417
	15						
		Sand tan-brown, SP, fine-grained, well sorted, subrounded, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, trace frosted quartz grains & silt, medium dense, slightly moist					
	16						
		Sand light brown gray-brown tan-brown, SM, very fine- to fine-grained well sorted, subrounded to subangular, silty to very silty, predominantly quartz with 5-10% orange grains & 5% black specs/grains, orassional silt streaks, medium dense, slightly moist					
	17						
	18						
	19		0 ppm		AMA-003-019 1.8' Recovery	8	Collected a split spoon sample from 19' to 21' @ 1420
						12	
	20					16	
						16	
	21	Bottom of borehole - 21'					Finished drilling @ 1424 on 3-27-95. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

ICORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 — 4F11043A

HOLE NO.: AMA-003

HTW DRILLING LOG

HOLE NO.	AMA - 006
1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	John Coons
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3 1/4" ID 7 3/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD · 5' Core Split Barrel
8. HOLE LOCATION	WDA No. 2 at Former Atlas Missile Area
9. SURFACE ELEVATION	
10. DATE STARTED	3·27·95
11. DATE COMPLETED	3·27·95
12. OVERBURDEN THICKNESS	ND
13. DEPTH DRILLED INTO ROCK	ND
14. TOTAL DEPTH OF HOLE	21'
15. DEPTH GROUNDWATER ENCOUNTERED	NA
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
5	CLP	CLP	CLP SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay yellow-brown to gray-brown, CL, silty to very silty, abundant roots & root hairs, trace sand, slightly moist	0 ppm		AMA-006-000 (5' Recovery)		Started drilling @ 1515 on 3·27·95
				0.5' Recovery			Collected a split barrel sample from 0' to 4' @ 1517
	1						Collected sample @ 1520 from 0' to 0.5'
		Clay medium to dark yellow-brown with green-gray mottling & rust-brown oxidation staining, CL, silty to very silty, soft, low plastic, trace mica, slightly moist	0 ppm		AMA-006-001 (1.0' Recovery)		Collected sample @ 1525 from 1' to 2'
	2		0 ppm	1.7' Recovery			
	3						
	4	Sand light brown gray-brown tan brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, silty to very silty, medium dense, slightly moist	0 ppm		AMA-006-004 (2.0' Recovery)		Collected a split barrel sample from 4' to 9' @ 1527
							Collected sample @ 1530 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4E11043A

HOLE NO.: AMA-006

HTW DRILLING LOG

HOLE NO. AMA-006

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kibeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Sand light brown tan-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, silty to very silty, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, medium dense, slightly moist			AMA-206-004 AMA-406-004		Collected duplicate sample from 4' to 6' @ 1505 Collected MRD duplicate sample from 4' to 6' @ 1530
	6		0 ppm	0.8' Recovery			
	7						
	8						
	9		0 ppm		AMA-006-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1536 Collected sample @ 1540 from 9' to 10'
	10		0 ppm	3.0' Recovery			
	11						
	12						
	13						
	14						

HTW DRILLING LOG

HOLE NO. AMA-006

SHEET 3 OF 3 SHEETS

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kuberczko

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Sand light brown tan-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, silty to very silty, predominantly quartz grains with 5-10% orange grains? 5% black specs/grains, medium dense, slightly moist	0 ppm	3.3' Recovery			Collected a split barrel sample from 14' to 19' @ 1545
	15	Thin layer with medium to coarse sand grains scattered with trace frosted quartz grains					
	16						
	17						
	18						
	19		0 ppm		AMA-006-019 1.7' Recovery	6	Collected a split spoon sample from 19' to 21' @ 1550
						8	
	20					10	
						12	
	21	Bottom of borehole - 21'					Finished drilling @ 1554 on 3-27-95 Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: AMA-006

ICORPS/4-15-92

HTW DRILLING LOG

HOLE NO. AMA-008

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: John Coons	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3¾" ID 7⅞" OD HSA; 2" OD Steel Split Spoon; 3½" OD 5' Core Split Barrel	8. HOLE LOCATION: WDA No. 2 at Former Atlas Missile Area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3·27·95 / 11. DATE COMPLETED: 3·27·95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
5	CLP	CLP	CLP SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/ cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay very dark gray to black, CL, silty, soft, abundant roots & root hairs, trace sand, slightly moist	0 ppm		AMA-008-000 0.5' Recovery		Started drilling @1639 on 3·27·95
				0.5' Recovery			Collected a split barrel sample from 0' to 4' @1641
	1		0 ppm		AMA-008-001		Collected a sample @1645 from 0' to 0.5'
		Clay dark brown-gray gray with scattered rust-brown oxidation staining, CL, slightly silty to very silty, soft to brittle/crumbly, trace mica, slightly moist					Collected sample @1650 from 1' to 3'
					AMA-208-001		Collected duplicate sample from 1' to 3' @1625
	2				AMA-408-001 20' Recovery		Collected MRD duplicate sample from 1' to 3' @1650
	3		0 ppm	0.7' Recovery			
	4		0 ppm		AMA-008-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @1652
							Collected sample @1655 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: AMA-008

HTW DRILLING LOG

HOLE NO. AMA-008

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown, CL, silty to very silty, ocassional rust-brown oxidation staining & black organic material, soft, trace mica, slightly moist	0 ppm	2.7' Recovery			
	6						
	7						
	8						
	9	Silt medium to dark yellow-brown with interbedded yellow-brown clay, CL scattered rust-brown oxidation staining, clayey to very clayey, scattered black organic material, slightly moist	0 ppm		AMA-008-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1656 Collected sample @ 1700 from 9' to 10'
	10		0 ppm	2.7' Recovery			
	11						
	12	Clay medium to dark yellow-brown with ocassional rust-brown oxidation staining, CL, very silty with thin silt streaks, scattered black organic material, trace mica, slightly moist to moist					
	13						
	14						

ICORPS/4-15-82

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: AMA-008

HTW DRILLING LOG

HOLE NO. AMA-008

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Clay medium to dark yellow-brown, CL, silty to very silty, trace mica, slightly moist to moist	0 ppm	2.4' Recovery			Collected a split barrel sample from 14' to 19' @ 1702
	15						
	16	Sand light brown tan-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, silty to very silty, medium dense, moist					
	17						
	18						
	19		0 ppm		AMA-008-019 1.6' Recovery	12	Collected a split sample from 19' to 21' @ 1705
						20	
	20					20	
						24	
	21	Bottom of borehole - 21'					Finished drilling @ 1709 on 3-27-95 Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: AMA-008

/CORPS/4-15-92

APPENDIX D-5

WASTE DISPOSAL AREA NORTH OF THE AMMONIUM NITRATE PLANT BORING LOGS

HTW DRILLING LOG

HOLE NO. ANA-001

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Services, Inc
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: Scott Wheeler	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3¾" ID 7⅞" OD HSA; 2" OD Steel Split Spoon; 3½" OD 5' Core Split Barrel	8. HOLE LOCATION: WDA North of Ammonium Nitrate Plant
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3-22-95 / 11. DATE COMPLETED: 3-22-95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP-SCOV	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/ cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay, dark to very dark gray, CL, slightly silty & sandy, root hairs, occasional pebbles, medium to low plastic, soft, slightly moist	0 ppm		ANA-001-000 0.5' Recovery		Started drilling @1055 on 3-22-95 Collected a split barrel sample from 0' to 4' @1057 Collected sample @1100 from 0' to 0.5'
				0.5' Recovery			
	1		0 ppm		ANA-001-001 1' Recovery		Collected sample @1105 from 1' to 2'
		Clay, dark to very dark gray with scattered gray-brown to yellow-brown mottling, CH, medium to high plastic, soft, scattered rust-brown oxidation staining, slightly silty in part, trace mica, slightly moist					
	2		0 ppm		ANA-001-002 1.8' Recovery		Collected sample @1110 from 2' to 3'
	3			0' Recovery			
	4	Increasing gray-brown, yellow-brown and gray-green mottling	0 ppm				Collected a split barrel sample from 4' to 9' @1115 Collected sample @1120 from 4' to 5'
	5						

/CORPS/5-15-32

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: ANA-001

HTW DRILLING LOG

HOLE NO. ANA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay, medium to dark gray-brown gray-green with occassional very dark gray mottling and yellow-brown mottling, CL to CH, medium plastic, soft, slightly to some silt in part, scattered black organic material, trace mica, slightly moist		3.7' Recovery			Collected a rinsate sample from the deconned split barrel after sampling ANA-001-004 @ 1140 RIN-ANA-004-035 RIN-ANA-004-035-QA for MRD
	6						
	7						
	8	Clay, gray-green green-gray with scattered yellow-brown mottling and abundant rust-brown oxidation staining & pockets, scatter black organic material, CL to CH, medium plastic, soft, slightly silty to very silty in part, trace mica, slightly moist					
	9		0 ppm		ANA-001-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1150 Collected sample @ 1200 from 9' to 10'
	10		0 ppm	3.85' Recovery			
	11						
	12						
	13						
	14						

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: ANA-001

ICORPS/4-15-92

HTW DRILLING LOG

HOLE NO. ANA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Clay, gray-green green-gray with yellow-brown mottling and abundant rust-brown oxidation staining and pockets, scattered black organic material, CL, silty to very silty in part, trace mica, slightly moist	0 ppm	4.8 Recovery			Collected a split spoon sample from 14' to 19' @ 1204
	15						
	16						
	17						
	18						
	19	Sand, orange to yellow-brown with abundant rust-brown oxidation staining in bands, very fine- to fine-grained, well sorted, subrounded to subangular, silty to very silty in part, predominantly quartz grains with 5 to 10% orange grains and scattered black specs/grains, slightly moist, SM	0 ppm		ANA-001-019 1.6' Recovery	15	Collected a split spoon sample from 19' to 21' @ 1210
	20					25	
						23	
		Decreasing oxidation banding, becoming tan-brown in color				18	
	21	Bottom of borehole - 21'					Finished drilling @1215 on 3-22-95 Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

ICORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: ANA-001

HTW DRILLING LOG

HOLE NO. ANA-002

1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	Scott Wheeler
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3¾" ID 7⅞" OD HSA; 2" OD Steel Split Spoon; 3½" OD 5' Core Split Barrel
8. HOLE LOCATION	WDA North of Ammonium Nitrate Plant
9. SURFACE ELEVATION	
10. DATE STARTED	3-22-95
11. DATE COMPLETED	3-22-95
12. OVERBURDEN THICKNESS	ND
13. DEPTH DRILLED INTO ROCK	ND
14. TOTAL DEPTH OF HOLE	21'
15. DEPTH GROUNDWATER ENCOUNTERED	NA
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP-SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay, dark to very dark gray, CL to CH, low to medium plastic, slightly silty, soft, root hairs, scattered sand grains, ocassional brown mottling, slightly moist	0 ppm		ANA-002-000 0.5' Recovery		Started drilling @ 1435 on 3-22-95 Collected a split barrel sample from 0' to 4' @ 1438
				0.5' Recovery			Collected sample @ 1440 from 0' to 0.5'
	1	Clay, medium to dark yellow-brown, CH to CL, medium to high plastic, soft, trace mica & silt, slightly moist			ANA-002-001 1.0' Recovery		Collected sample @ 1445 from 1' to 2'
	2				ANA-002-002 0.8' Recovery		Collected sample @ 1450 from 2' to 3'
	3			0' Recovery			
	4	Becoming partly mottled gray-green to gray-brown with rust-brown oxidation staining	0 ppm		ANA-002-004 2.0' Recovery		Collected a split barrel sample from 4' to 9' @ 1455 Collected sample @ 1500 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: ANA-002

HTW DRILLING LOG

HOLE NO. ANA-002

PROJECT: REMEDIAL INVESTIGATION, MEAD NCP

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay, medium to dark yellow-brown with gray-green to gray-brown mottling and rust-brown oxidation staining, CH to CL, medium plastic, slightly silty, soft, trace mica, slightly moist			ANA-202-004 ANA-402-004 2.0' Recovery		Collected duplicate sample @ 1505 from 4' to 5' Collected MRD duplicate sample @ 1500 from 4' to 5'
	6			0.2' Recovery			
	7						
	8						
	9	Clay, medium to dark yellow-brown with abundant rust-brown oxidation staining in bands and pockets and occassional gray-green bands, scattered black organic material, slightly silty, very silty in part with very thin (<0.25") silt streaks, medium to low plastic, soft, CL to CH, trace mica, slightly moist	0 ppm		ANA-002-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1520 Collected sample @ 1525 from 9' to 10'
	10			1.9' Recovery			
	11						
	12						
	13						
	14						

ICORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: ANA-002

HTW DRILLING LOG

HOLE NO. ANA-002

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Silt, medium yellow-brown with rust-brown oxidation staining, clayey to very clayey, sandy, predominantly quartz with 5% orange grains and trace black specs/grains, thin yellow-brown clay streaks, slightly moist, ML	0 ppm	1.2' Recovery			Collected a split barrel sample from 14' to 19' @ 1528
	15						
		Sand, medium to light gray-brown to tan-brown to yellow-brown, SM, scattered rust-brown oxidation banding, very fine- to fine-grained, well sorted, subrounded to sub-angular, predominantly quartz with 5-10% orange grains and 5% black specs/grains, silty to very silty in part, slightly moist					
	16						
	17						
	18						
	19		0 ppm		ANA-002-019 1.6' Recovery	9	Collected a split spoon sample from 19' to 21' @ 1535
						19	
	20					19	
						24	
	21	Bottom of borehole - 21'					Finished drilling @ 1540 on 3-22-95. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: ANA-002

ICORPS/4-15-92

APPENDIX D-6
DEMOLITION GROUNDS BORING LOGS

HTW DRILLING LOG

HOLE NO.	DGA-001
1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	Scott Wheeler
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3 1/4" ID 7 5/8" OD HSA 2" OD Steel Split Spoon 3 1/2" OD 5' Core Split Barrel
8. HOLE LOCATION	Demolition Ground
9. SURFACE ELEVATION	
10. DATE STARTED	3-24-95
11. DATE COMPLETED	3-24-95
12. OVERBURDEN THICKNESS	ND
15. DEPTH GROUNDWATER ENCOUNTERED	NA
13. DEPTH DRILLED INTO ROCK	ND
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
14. TOTAL DEPTH OF HOLE	21'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
5	CLP	CLP	CLP SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay gray-brown, CL, silty, sandy, soft, low plastic, trace mica, slightly moist	0 ppm		DGA-001-000 0.5' Recovery		Started drilling @ 1532 on 3-24-95
				0.5' Recovery			Collected a split barrel sample from 0' to 4' @ 1535
		Clay medium to dark yellow-brown, CH to CL, medium to high plastic, soft, slightly mottled with gray-brown, slightly silty, trace mica and black organic material or grains, slightly moist					Collected sample @ 1535 from 0' to 0.5'
	1		0 ppm		DGA-001-001 1.0' Recovery		Collected sample @ 1540 from 1' to 2'
	2		0 ppm	2.0' Recovery			Collected sample @ 1545 from 2' to 3'
	3						
	4		0 ppm		DGA-001-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @ 1555 Collected sample @ 1600 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: DGA-001

HTW DRILLING LOG

HOLE NO. DGA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown with rust-brown oxidation staining and ocassional thin gray-brown green-brown banding & mottling,	0 ppm	24' Recovery			
	6						
	7						
	8						
	9		0 ppm		DGA-001-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1606 Collected sample @ 1610 from 9' to 10'
	10		0 ppm	27' Recovery			
	11						
	12	Sand medium to light brown tan-brown, SM, fine-grained, wellsorted, subrounded, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, slightly silty, medium dense, slightly moist					
	13						
	14						

ICORPS/4-15-82

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: DGA-001

HTW DRILLING LOG

HOLE NO. DGA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kubeczko

SHEET 3 of 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Sand light brown tan-brown, SM, very fine-grained, well sorted, subrounded to subangular, very silty, predominantly quartz grains with 5-10% orange grains & 5-10% black specs/grains, medium dense, slightly moist	0 ppm	2.1' Recovery			Collected a split barrel sample from 14' to 19' @ 1614
	15						
		Sand light to very light brown tan-brown, SP, fine-grained, well sorted, subrounded, predominantly quartz with 10% orange grains & 5% black specs/grains, trace silt, medium dense, slightly moist					
	16						
	17						
	18						
	19	Sand light brown tan-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, silty to very silty, slightly moist	0 ppm		DGA-001-019 1.9' Recovery	3	Collected a split spoon sample from 19' to 21' @ 1620
	20					11	
						14	
						18	
	21	Bottom of borehole - 21'					Finished drilling @ 1625 on 3-24-95. Backfilled borehole w/cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: DGA-001

(CORPS/4-15-82)

HTW DRILLING LOG

HOLE NO. DGA-002

1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	Scott Wheeler
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3 1/4" ID 7 7/8" OD HSA 2" OD Steel Split Spoon 3 1/2" OD 5' Core Split Barrel
8. HOLE LOCATION	Demolition Ground
9. SURFACE ELEVATION	
10. DATE STARTED	3-25-95
11. DATE COMPLETED	3-25-95
12. OVERBURDEN THICKNESS	ND
13. DEPTH DRILLED INTO ROCK	ND
14. TOTAL DEPTH OF HOLE	21'
15. DEPTH GROUNDWATER ENCOUNTERED	NA
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
5	CLP	CLP	CLP SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings	Bentonite Grout	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark gray to dark brown-gray, CL, low plastic, soft, silty, sandy, abundant roots & root hairs, slightly moist	0 ppm		DGA-002-000 0.5' Recovery		Started drilling @ 835 on 3-25-95
				0.5' Recovery			Collected a split spoon sample from 0' to 4' @ 837
	1		0 ppm		DGA-002-001 1.0' Recovery		Collected sample @ 840 from 0' to 0.5'
							Collected sample @ 845 from 1' to 2'
	2		0 ppm	1.2' Recovery			
	3	Clay medium to dark yellow-brown, CL, low plastic, soft, silty to very silty with occasional thin (<0.25") silt streaks, trace mica, scattered black organic material, slightly moist					
	4		0 ppm		DGA-002-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @ 851
							Collected sample @ 855 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: DGA-002

HTW DRILLING LOG

HOLE NO. DGA-002

PROJECT: REMEDIAL INVESTIGATION MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown, CL to CH, ocassional gray-brown to green-gray mottling and scattered rust-brown oxidation staining, scattered black organic material, very silty to slightly silty, low to medium plastic, soft, trace mica, slightly moist to moist in part	0 ppm	1.6' Recovery			
	6						
	7						
	8						
	9		0 ppm		DGA-002-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 906 Collected a sample @ 910 from 9' to 10'
	10		0 ppm	1.9' Recovery			
	11						
	12						
	13						
	14						

ICORPS/4-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION MEAD OU3

HOLE NO.: DGA-002

HTW DRILLING LOG

HOLE NO. DGA-002

SHEET 3 OF 3 SHEETS

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Silt, medium to dark yellow-brown to gray-brown, ML, thin yellow-brown clay streaks, very clayey, slightly sandy, predominantly quartz grains with trace orange grains, slightly moist	0 ppm	2.9' Recovery			Collected a split barrel sample from 14' to 19' @914
	15	Sand medium to dark yellow-brown to gray-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz with 5% orange & 5% black specs/grains, very silty, trace clay, slightly moist					
	16						
	17	Sand, very light brown tan-brown, SP, fine-grained, well sorted, subrounded, predominantly quartz with 5% orange grains & 5-10% black specs/grains, trace silt, medium dense, slightly moist					
	18	Sand light to medium brown gray-brown tan-brown, SM, very fine to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, silty to very silty, slightly moist, medium dense					
	19		0 ppm		DGA-002-019 1.7' Recovery	4	Collected a split sample from 19' to 21' @920
						8	
	20					13	
						18	
	21	Bottom of borehole - 21'					Finished drilling @925 on 3-25-95. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: DGA-002

ICORPS/4-15-82

HTW DRILLING LOG

HOLE NO. DGA-003

1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	Scott Wheeler
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3 3/4" ID 7 3/4" OD HSA 2" OD Steel Split Spoon 3 1/4" OD 5' Core Split Barrel
8. HOLE LOCATION	Demolition Ground
9. SURFACE ELEVATION	
10. DATE STARTED	3-25-95
11. DATE COMPLETED	3-25-95
12. OVERBURDEN THICKNESS	ND
13. DEPTH DRILLED INTO ROCK	ND
14. TOTAL DEPTH OF HOLE	21'
15. DEPTH GROUNDWATER ENCOUNTERED	NA
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
5	CLP	CLP	CLP SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay yellow-brown, CL, abundant roots & root hairs, slightly silty to silty, low plastic, soft, trace mica, slightly moist	0 ppm		DGA-003-000 0.5' Recovery		Started drilling @ 1030 on 3-25-95
				0.5' Recovery			Collected a split barrel sample from 0' to 4' @ 1032
	1	Clay medium to dark yellow-brown with ocassional rust-brown oxidation staining, CL to CH, low to medium plastic, soft, very silty to slightly silty, ocassional gray-brown gray-green mottling, trace mica, slightly moist	0 ppm		DGA-003-001 1.0' Recovery		Collected sample @ 1035 from 0' to 0.5'
							Collected sample @ 1040 from 1' to 2'
	2		0 ppm	1.95' Recovery			
	3						
	4		0 ppm		DGA-003-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @ 1048
							Collected sample @ 1055 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: DGA-003

HTW DRILLING LOG

HOLE NO. DGA-003

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: David A. Kuberczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown with occassional gray-brown green-gray mottling and rust-brown oxidation staining, scattered black organic material, CL to CH, low to medium plastic, soft, slightly silty to silty in part, trace mica, slightly moist	0 ppm	2.0' Recovery			Collected a rinsate sample from the decanned split barrel, mixing bowl & spoon from the 4' to 5' sample RIN-DGA-003-035 RIN-DGA-003-035-QA for MRD @ 1110
	6						
	7						
	8						
	9		0 ppm		DGA-003-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1131 Collected sample @ 1135 from 9' to 10'
	10		0 ppm	2.9' Recovery			
	11	Increasing silt and slightly sandy					
	12	Sand light brown yellow-brown gray-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, silty to very silty in part, rare frosted quartz grains, slightly moist, occassional dark banding					
	13						
	14						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: DGA-003

ICORPS/4-15-92

HTW DRILLING LOG

HOLE NO. DGA-003

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Sand light to medium brown gray-brown, SM, very-fine- to fine-grained well sorted, subrounded, predominantly quartz with orange grains & black specs/grains, silty to very silty, slightly moist	0 ppm	3.7' Recovery			Collected a split barrel sample from 14' to 17' @1137
	15						
	16	Sand light to very light brown tan-brown, SP, fine-grained, well sorted, subrounded, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, trace silty frosted quartz grains, medium dense, slightly moist					
	17						
	18	Sand light brown gray-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz with 5-10% Orange grains & 5% black specs/grains, silty to very silty, medium dense, slightly moist					
	19				DGA-003-019 1.7' Recovery	8	Collected a split spoon sample from 19' to 21' @1140
						12	
	20					10	
						10	
	21	Bottom of borehole - 21'					Finished drilling @1143 on 3-25-95. Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

ICORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: DGA-003

HTW DRILLING LOG

HOLE NO. DGA-004

1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	Scott Wheeler
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3 1/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD 5' Core Split Barrel
8. HOLE LOCATION	Demolition Ground
9. SURFACE ELEVATION	
10. DATE STARTED	3-25-95
11. DATE COMPLETED	3-25-95
12. OVERBURDEN THICKNESS	ND
15. DEPTH GROUNDWATER ENCOUNTERED	NA
13. DEPTH DRILLED INTO ROCK	ND
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
14. TOTAL DEPTH OF HOLE	21'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA
18. GEOTECHNICAL SAMPLES	5 (DISTURBED / UNDISTURBED)
19. TOTAL NUMBER OF CORE BOXES	NA
20. SAMPLES FOR CHEMICAL ANALYSIS	5
VOC	CLP
METALS	CLP
OTHER (SPECIFY)	CLP SVOC
OTHER (SPECIFY)	Explosives
OTHER (SPECIFY)	—
21. TOTAL CORE REC.	NA %
22. DISPOSITION OF HOLE	Backfilled w/cuttings
BACKFILLED	Bentonite Grout
MONITORING WELL	—
OTHER (SPECIFY)	—
23. SIGNATURE OF INSPECTOR	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay yellow-brown, CL, abundant roots & root hairs, slightly silty to silty, low plastic, soft, trace mica, slightly moist	0 ppm		DGA-004-000 0.5' Recovery		Started drilling @1250 on 3-25-95
				0.5' Recovery			Collected a split barrel sample from 0' to 4' @1251
	1		0 ppm		DGA-004-001 1.0' Recovery		Collected sample @1255 from 0' to 0.5'
							Collected sample @1300 from 1' to 2'
	2	Clay medium to dark yellow-brown with abundant rust-brown oxidation staining and scattered gray-brown mottling, slightly silty to very silty, CH to CL, medium to low plastic, soft, trace mica & black organic material, slightly moist	0 ppm	1.7' Recovery			
	3						
	4		0 ppm		DGA-004-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @1311
							Collected sample @1315 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: DGA-004

HTW DRILLING LOG

HOLE NO. DGA-004

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown with abundant rust-brown oxidation staining and scattered gray-brown green-gray mottling, CH to CL, medium to low plastic, soft, scatter black organic material, slightly silty to very silty in part, trace mica, slightly moist	0 ppm	2.7' Recovery			
	6						
	7						
	8						
	9		0 ppm		DGA-004-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @ 1320 Collected sample @ 1325 from 9' to 10'
	10			2.6' Recovery			
	11						
	12	Sand, light brown tan-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 5% orange grains & 5-10% black specs/grains, silty to very silty in part, occassional darker banding, medium dense, slightly moist					
	13						
	14						

ICORPS/4-15-82

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: DGA-004

HTW DRILLING LOG

HOLE NO. DGA-004

SHEET 3 OF 3 SHEETS

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Sand light brown, very fine-grained, SM, well sorted, subrounded to sub angular, predominantly quartz grains with 5% orange grains & 5% black specs/grains, very silty, medium dense, slightly moist	0 ppm	22' Recovery			Collected a split barrel sample from 14' to 19' @
	15						
	16	Sand light brown tan-brown, SP, fine-grained, well sorted, subrounded, predominantly quartz grains with 5% orange grains & 5% black specs/grains, rare frosted quartz grains silty, slightly moist					
	17	Sand light brown tan-brown, SM, very fine to fine-grained, well sorted, subrounded to subangular, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, slightly silty to very silty in part, medium dense, slightly moist					
	18						
	19		0 ppm		DGA-004-019		Collected a split barrel sample from 19' to 21' @ 1342 Collected sample @ 1345 from 19' to 21'
	20				DGA-204-019 DGA-404-019		Collected duplicate sample @ 1400 from 19' to 21' Collected MRD duplicate sample @ 1400 from 19' to 21'
	21	Bottom of borehole - 21'					Finished drilling @ 1348 on 3-25-95 Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: DGA-004

(CORPS/4-15-82)

APPENDIX D-7
UNDERGROUND STORAGE TANKS BORING LOGS

HTW DRILLING LOG

HOLE NO. UMA - 001

SHEET 1 OF 7 SHEETS

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: WCC - OVERLAND PARK, KS
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: Bob Bolin	6. MANUFACTURER'S DESIGNATION OF DRILL: CME -75 (TRUCK-MOUNTED)
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 4 1/4" ID HSA; 3" stainless split spoon; 2" split spoon; Hydropunch	8. HOLE LOCATION: NW 1/4, SEC 17, T14N, R9E NORTH SIDE OF GATE HOUSE - ATLAS MISSILE AREA
	9. SURFACE ELEVATION:
	10. DATE STARTED: 4-10-95 / 11. DATE COMPLETED: 4-11-95
12. OVERBURDEN THICKNESS: N.A.	15. DEPTH GROUNDWATER ENCOUNTERED: Approximately 48' bgs ATD
13. DEPTH DRILLED INTO ROCK: N.A.	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: Bot. of Auger hole = 49' bgs; HYDROPUNCH DRIVEN TO 52.4' bgs	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
None	N.A.	N.A.	N.A.

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	~~METALS~~	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC. %
	BTEX	N.A.	Semivolatiles	TPH (418.1)	N.A.	

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Boring grouted to 1' bgs, Concrete from 1-0' bgs	✓			Christopher J. Fitzgerald

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Concrete (10" thick)					
	1	Lean Clay (Fill), stiff, low plastic, moist, dark brown, with fine sand and trace fine gravel	BZ=BG	N.A.	UMA-001-001 (0955)	P	P = 0.75' R = 0.75'
	2						
	3	Lean Clay (CL), firm, low to medium plastic, moist, dark yellowish brown to yellowish brown, trace iron staining (Loess)					
	4		BZ=BG	N.A.	UMA-001-004 (1000)	P	P = 1.0 R = 1.0
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: UMA - 001

HTW DRILLING LOG

HOLE NO. UMA - 001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: CHRIS FITZGERALD

SHEET 2 OF 7 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		SAME: LEAN CLAY (CL), firm, Low to MEDIUM plastic, MOIST, DARK yellowish BROWN to yellowish BROWN, trace IRON staining (LOESS)					
	6						
	7						
	8						
	9		BZ=BG	N.A.	UMA-001-009 (1010)	P	P = 1.0 R = 1.0
	10						
	11						
	12						
	13						
	14						

ICORPS/4-15-82

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: UMA-001

HTW DRILLING LOG

HOLE NO. UMA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: CHRIS FITZGERALD

SHEET 3 OF 7 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	15	SAME: LEAN CLAY (CL), firm Low to MEDIUM PLASTIC, MOIST, DARK yellowish BROWN to yellowish Brown, trace iron STAINING (LOESS)					
	16						
	17						
	18	SAND (SM), LOOSE, SLIGHTLY MOIST, Light grayish Brown, with some SILT and TRACE iron staining					Driller Reports Sand at approximately 18 feet bgs.
	19		B2=B6	N A	UMA-001-019 (1025)	P	P=1.0 R=1.0
	20						
	21	Becoming Dense					
	22						
	23						

CORPS/4-15-82

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: UMA-001

B07NE003703-04179

HTW DRILLING LOG

HOLE NO. UMA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: CHRIS FITZGERALD

SHEET 4 OF 7 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	24	SAME: SAND (SM), DENSE, SLIGHTLY MOIST, LIGHT GRAYISH BROWN WITH SOME SILT AND TRACE IRON STAINING					
	25						
	26						
	27	BECOMING VERY DENSE					
	28						
	29		B2=BG	N.A.	UMA-001-029 (1055)	16 23	P=2.0 R=1.8
	30					25 30	CJF 4-10-95
	31						
	32						

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: UMA-001

CORPS/4-15-82

HTW DRILLING LOG

HOLE NO. UMA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: CHRIS FITZGERALD

SHEET 5 OF 7 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	33	SAME: SAND (SM), VERY DENSE, SLIGHTLY MOIST LIGHT GRAYISH BROWN WITH SOME SILT AND TRACE IRON STAINING					
	34						
	35						
	36		B2=BG	N.A.	N.A.	21 28 40 63	P=2.0 R=2.0
	37		B2=BG	N.A.	UMA-001-038	30 36 26 41	P=2.0 R=2.0 Analytical Sample from 38-39' bgs
	38						
	39		B2=BG	N.A.	N.A.	30 44 49 50	P=2.0 R=2.0
	40						
	41						

CORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: UMA-001

HTW DRILLING LOG

HOLE NO. UMA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: CHRIS FITZGERALD

SHEET 6 OF 7 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	42	SAME: Sand (SM), VERY DENSE, SLIGHTLY MOIST, Light grayish BROWN with SOME SILT and trace Iron staining	BZ=BG	N.A.	N.A.	16 23 29 17	P = 2.0 R = 2.0
	43 44		BZ=BG	N.A.	N.A.	40 45 57 77	P=2.0 R = 2.0
	45 46	Moisture content of Sand is increasing	BZ=BG	N.A.	N.A	33 47 49 61	
	47 48	Sand is SATURATED	BZ=BG	N.A.	N.A.	46 41 49 52	ATD
	49 50						AUGERS ADVANCED to 49' bgs. HYDRO-PUNCH DRIVEN below AUGERS to 52.4 feet bgs

CORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: UMA-001

HTW DRILLING LOG

HOLE NO. UMA-001

REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR

SHEET 7 OF 7 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	51	SAME: Sand (SM), VERY DENSE, SATURATED, Light grayish Brown with SOME SILT and trace iron staining					
	52						
	53						Bottom of Hydropunch Sampler = 52.4' bgs. Ground water Sample collected (called UMW-001-045) then the HYDROPUNCH SAMPLER and all AUGERS REMOVED. Boring BACKFILLED to 1' bgs with Enviroplug grout through a 1" tremie pipe on 4-11-95. UPPER 1' of Boring BACKFILLED with Concrete.
	54						
	55						
	56						
	57						
	58						

CORPS/4-15-82

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.:

HTW DRILLING LOG

HOLE NO. UMA-002

SHEET 1 OF 6 SHEETS

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: WCC
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: Bob Boin	6. MANUFACTURER'S DESIGNATION OF DRILL: CME-75
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 2" SS split spoon; 2" SS split spoon; Hydropunch; 4¼" ID HSA	8. HOLE LOCATION: Atlas Missile area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 4-4-95
	11. DATE COMPLETED: 4-6-95
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: 40.8'
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 41' ~~45'~~ 50.0' BTC w/Hydropunch	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
N.A.	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
	BTEX	None	TPH	SVOC		NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Boring Backfilled with Grout	X		Hydropunch	[signature]

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Lean Clay, Stiff, Dk Brn, moist (Topsoil)	BZ=ND	NA	UMA-002-000	P	P=0.5' R=0.5'
	1	Lean clay, Stiff, Lt Brn, moist Loess	BZ=ND	NA	UMA-002-001	P	P=1.0' R=0.8
	2						
	3	Leaning Dk Gray, V. Stiff, Blocky w/ abundant Iron oxide staining					
	4		BZ=ND	NA	UMA-002-004	P	P=1.0' R=0.7'
	5						

CORPS/5-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: UMA-002

HTW DRILLING LOG

HOLE NO. UMA-002

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR [illegible]

SHEET 2 OF 6 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Smc:					
	6						
	7						
	8	Becoming CT. Brn not blocky					
	9		BZ=ND	NA	UMA-002-009	P	P=10' R=10'
	10						
	11						
	12						
	13						
	14						

CORPS/4-15-82

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.:

HTW DRILLING LOG

HOLE NO. UMA-002

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: [illegible]

SHEET 3 OF 6 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Same:					
	15						
	16						
	17						
	18						
	19		BZ=ND	NA	UMA-002-019	P	P=1.0', R=0.8'
	20	Poorly Graded, Sand, Loose, Gray, fine grained, Dry					
	21						
	22	Becoming Dense					
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 — 4F11043A

HOLE NO.: UMA-002

CORPS/4-15-82

HTW DRILLING LOG

HOLE NO. UMA-002

REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR [illegible]

SHEET 4 OF 6 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Sm					
	24						
	25						
	26						
	27						
	28						
	29	1/4" lace of med grained Sand.	BZ=ND	NA	UMA-002-024	14/26	R=1.0' 3in. Spoon
	30			NA	NA	50/50	3in. Spoon R=1.0'
	31			NA	NA	17 16	2in. Spoon R=2.0'
	32						

CORPS/4-15-82

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: UMA-002

HTW DRILLING LOG

HOLE NO. UMA-002

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR: [illegible]

SHEET 5 OF 6 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Sand:				14 27	
	33		BZ=ND	NA		15 38 44 46	R=2.0' 3in Spoon
	34						
	35			NA		17 19 28 34	R=2.0' 2in Spoon
	36						
	37		BZ=ND		UMA-002-038	26 35 43 49	R=2.0' 3in Spoon
	38						
	39		BZ=ND			26 35 45 55	R=2.0' 3in. Spoon H2O encountered at 40.8' BGS
	40						
40.8'	41						

CORPS/4-15-82

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: UMA-002

HTW DRILLING LOG

DRILLING NO. UMA - 002

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR

SHEET 6 OF 6 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
							BOH - 41.0' Advanced Hydropunch to 45.5' BGS and Attempted To collect water sample. Then advanced Hydropunch to 50.0' BGS and attempted to Collected water sample. AFTER an unsucessful Attempt to collect the entire water sample, the boring was backfilled with grout. On 4-8-95 A new boring was DRILLED (w/ NO samples) Approximately 3 feet NORTH of the original boring. The Boring was Backfilled with Enviroplug grout through a 1" TREMIE pipe on 4-9-95.
	42						
	43						
	44						
	45						
	46						
	47						
	48						
	49						
	50						

CORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: UMA-002

HTW DRILLING LOG

HOLE NO. UAA-001

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: WCC
SHEET 1 OF 5 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: Bob Bolin	6. MANUFACTURER'S DESIGNATION OF DRILL: CME-75
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3" Split Spoon; 2" Split Spoon; 4¼" ID HSA; Hydropunch	8. HOLE LOCATION: ADMINISTRATION AREA T14N R8E SEC. 2 NW 1/4
	9. SURFACE ELEVATION:
	10. DATE STARTED: 4-7-95
	11. DATE COMPLETED: 4-8-95
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: ~~43.AOE~~ 34.7'
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 35.75' feet @ 1000 on 4-8-95 after sampling
14. TOTAL DEPTH OF HOLE: Bottom of Hydropunch = 41.5' bgs	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
N.A.	N.A.	N.A.	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
	BTEX	None	TPH	SVOC		NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Boring Backfilled with Grout.	X		Hydro punch	[signature]

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Lean clay, stiff, Dk Brn, moist, mottled Lt Brn (Fill)	NA	NA	UAA-001 000	P	R=0.5'
	1		BZ=ND	NA	UAA-001-001 UAA-201-001	P	R=1.0'
	2						
	3	Lean clay, stiff, Lt Brn, moist Loess					
	4	Poorly Graded, Sand, ~~Dense~~ Loose, Gray, fine grained, dry	BZ=ND	NA	UAA-001-004	P	R=1.0'
	5						

/CORPS/5-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: UAA-001

HTW DRILLING LOG

HOLE NO. UAA-001

REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR [signature]

SHEET 2 OF 5 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Same. Poorly Graded Sand, loose, gray, ~~dry~~ fine, dry					
	6						
	7						
	8						
	9		BZ=ND	NA	UAA-001-009	P	R=1.0'
	10						
	11						
	12						
	13						
	14						

CORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: UAA-001

HTW DRILLING LOG

HOLE NO. UAA-001

REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR [illegible]

SHEET 3 OF 5 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Sand - Poorly Graded Sand, Loose, Gray, fine grained, dry					
	15						
	16						
	17						
	18						
	19		BZ = ND	NA	UAA-001-019	P	R = 1.0'
	20						
	21						
	22						
	23						

CORPS/4-15-82

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: UAA-001

HTW DRILLING LOG

HAA-001

REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR

SHEET 4 OF 5 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Sand: Poorly Graded Sand, Loose, Gray, Fine grained, dry					
	24						
	25						
	26						
	27						
	28	Becoming dense					
	29		BZ = Nil	NR	HAA-001-029	19 35 39	R = 2.0' 3in. Spoon
	30					37	
	31			NR	NR	17 24	R = 2.0' 2in. spoon
	32						

CORPS/4-15-82

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: HAA-001

B07NE003703-04193

HTW DRILLING LOG

HOLE NO. HAA-001

REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR [signature]

SHEET 5 OF 5 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Sand: Poorly Graded Sand, dense, Gray, Fine grained, dry				29 43	
	33					30 31	R = 2.0'
	34		BZ = ND	NA	NA	34 50	3 in. Spoon
							Groundwater encountered at 34.7' BGS ATD
	35						BOH 35' Advanced to BGS for hydropunch sample
	36						
	37						
	38						
	39						HYDROPUNCH SAMPLER DRIVEN w/ 140lb HAMMER to 41.4' bgs. WATER SAMPLE collected on 4-8-95 Boring backfilled with Enviroplug GROUT through tremie pipe on 4-8-95
	40						
	41						

CORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: HAA-001

HTW DRILLING LOG

HOLE NO. UBA-001

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: WCC
SHEET 1 OF 5 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: Bob Bolin	6. MANUFACTURER'S DESIGNATION OF DRILL: CME-75
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3" SS Split Spoon; 2" SS Split Spoon; Hydropunch; 4¼" ID HSA	8. HOLE LOCATION: Bomb booster area
	9. SURFACE ELEVATION:
	10. DATE STARTED: 4-6-95 / 11. DATE COMPLETED: 4-7-95
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: ~~37.25~~ AFE 37.0'
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 39' / 43.2' HP	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES

20. SAMPLES FOR CHEMICAL ANALYSIS	BTEX ~~VOC~~	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
	X		TPH	SVOC		N/A%

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
	X		Hydropunch	[signature]

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Lean clay, stiff, Dk Brn, moist Topsoil	BZ=ND	NA	UBA-001-000	P	R=0.5'
	1	Lean clay, stiff, Brn, moist loess					
				NA	UBA-001-001	P	R=1.0'
	2	Becoming Lt Gray					
	3						
	4		BZ=ND	NA	UBA-001-004	P	R=1.0'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: UBA-001

HTW DRILLING LOG

HOLE NO. UBA-001

REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR [signature]

SHEET 2 OF 2 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		See					
	6						
	7						
	8						
	9		BZ=ND	NA	UBA-001-009	P	R=1.0'
	10						
	11						
	12						
	13						
	14						

CORPS/4-15-82

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: UBA-001

HTW DRILLING LOG

HOLE NO. HBA-001

REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR

SHEET 3 OF 5 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	15						
	16						
	17	Poorly Graded, Sand, Loose, Gray, Fine Grained, Dry.					
	18	Becoming dense					
	19		BZ=ND	NA	HBA-001-019	18 22	R=1.0' 3in Spoon
	20					~~20~~ RJG	
	21						
	22						
	23						

CORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4E11043A

HOLE NO.: HBA-001

HTW DRILLING LOG

HOLE NO. UBA-001

REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR

SHEET 4 OF 5 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH / SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Same					
	24						
	25						
	26						
	27						
	28						
	29				UMD-001 -029	24	
			BZ=2.0			31	R=2.0'
	30					44	
						41	3" Spoon
	31					20	
						27	R=2.0'
	32						

CORPS/4-15-82

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: UBA-001

HTW DRILLING LOG

HOLE NO. UBA-001

REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR

SHEET 5 OF 5 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Sand w/ trace of med. sand.	BZ=ND	NA	NA	46 50	2in spoon
	33						
	34		NA	NA	NA	29 61 69 65	R=2.0' 3in. spoon
	35						
	36		BZ=ND	NA	NA	18 25 30 42	R=2.0' 2in. spoon
	37						water encountered at 37' BGS ATD
	38		NA	NA	NA	17 28 46 50	R=2.0' 2in spoon
	39						BOH - 39' BGS Advanced to 43.2' BGS w/ hydropunch + collected Groundwater Sample UBW-001-045
	40						
	41						

CORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: UBA-001

APPENDIX D-8
GEOPHYSICAL ANOMALY AT LOAD LINE 3 BORING LOGS

HTW DRILLING LOG

HOLE NO.	GAA-001
1. COMPANY NAME	Woodward-Clyde Consultants
2. DRILLING SUBCONTRACTOR	J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT	Remedial Investigation, Mead NOP
4. LOCATION	Mead, Nebraska
5. NAME OF DRILLER	John Coons
6. MANUFACTURER'S DESIGNATION OF DRILL	CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT	3 3/4" ID 7 3/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD · 5' Core Split Barrel
8. HOLE LOCATION	Geophysical Anamoly at Load Line #3
9. SURFACE ELEVATION	
10. DATE STARTED	3·28·95
11. DATE COMPLETED	3·28·95
12. OVERBURDEN THICKNESS	ND
15. DEPTH GROUNDWATER ENCOUNTERED	NA
13. DEPTH DRILLED INTO ROCK	ND
16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	NA
14. TOTAL DEPTH OF HOLE	21'
17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)	NA
18. GEOTECHNICAL SAMPLES	DISTURBED: 5; UNDISTURBED: —
19. TOTAL NUMBER OF CORE BOXES	NA
20. SAMPLES FOR CHEMICAL ANALYSIS	6
VOC	CLP
METALS	CLP
OTHER (SPECIFY)	CLP-SVOC
OTHER (SPECIFY)	Explosives
OTHER (SPECIFY)	—
21. TOTAL CORE REC.	NA %
22. DISPOSITION OF HOLE	Backfilled w/cuttings 3' to 21'
BACKFILLED	Bentonite Grout 0' to 3'
MONITORING WELL	—
OTHER (SPECIFY)	—
23. SIGNATURE OF INSPECTOR	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay dark gray brown-gray, CL, silty to very silty, abundant roots & root hairs, soft, slightly moist	0 ppm		GAA-001-000 0.5' Recovery		Started drilling @ 932 on 3·28·95
				0.5' Recovery			Collected a split barrel sample from 0' to 4' @ 933
	1		0 ppm		GAA-001-001 1.0' Recovery		Collected sample @ 935 from 0' to 0.5'
		Clay medium to dark yellow-brown with rust-brown oxidation staining, CL, silty to very silty, crumbly brittle stiff, scattered black organic material, slightly moist					Collected sample @ 940 from 1' to 2'
	2		0 ppm		GAA-001-002 1.0' Recovery		Collected sample @ 945 from 2' to 3'
	3		0 ppm	0.7' Recovery			
	4		0 ppm		GAA-001-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @ 951
							Collected sample @ 955 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.: GAA-001

HTW DRILLING LOG

HOLE NO. GAA-001

SHEET 2 OF 3 SHEETS

PROJECT: REMEDIAL INVESTIGATION MEAD NOP.

INSPECTOR: David A. Kubeczko

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown with rust-brown oxidation staining & gray-green gray-brown mottling & banding, scattered black organic material, CL, silty to very silty, stiff, crumbly, trace mica, slightly moist, scattered cracks	0 ppm	0.6' Recovery			
	6						
	7						
	8						
	9		0 ppm		GAA-001-009 1.0' Recovery		Collected a split barrel sample from 9' to 14' @957 Collected sample @ 1000 from 9' to 10'
	10		0 ppm	1.8' Recovery			Collected a rinsate sample from the deconned split barrel mixing bowl & spoon from sample collected at 9' to 10' RIN-GAA-001-035 RIN-GAA-001-035-QA for MRD @ 1030
	11						
	12						
	13						
	14						

ICORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION MEAD OU3 4F11043A

HOLE NO.: GAA-001

HTW DRILLING LOG

HOLE NO. GAA-001

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 3 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Sand light to medium brown tan-brown gray-brown, SM, very fine- to fine-grained, well sorted, subrounded to subangular, silty to very silty, predominantly quartz grains with 5% orange grains & 5% black specs/grains, medium dense, slightly moist	0 ppm	2D Recovery			Collected a split barrel sample from 14' to 19' @ 1005
	15						
	16						
	17						
	18						
	19		0 ppm		GAA-001-019 1.7' Recovery	8	Collected a split spoon sample from 19' to 21' @ 1008
						12	
	20					12	
						16	
	21						
		Bottom of borehole - 21'					Finished drilling @ 1012 on 3-28-95 Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

/CORPS/4-15-92

PROJECT: 4F11043A REMEDIAL INVESTIGATION, MEAD OU3

HOLE NO.:

HTW DRILLING LOG

HOLE NO. GAA-002

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: J & R Drilling Services, Inc.
SHEET 1 OF 3 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: John Coons	6. MANUFACTURER'S DESIGNATION OF DRILL: CME 750
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 3 1/4" ID 7 7/8" OD HSA; 2" OD Steel Split Spoon; 3 1/2" OD · 5' Core Split Barrel	8. HOLE LOCATION: Geophysical Anomoly at Load Line #3
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3·28·95 / 11. DATE COMPLETED: 3·28·95
12. OVERBURDEN THICKNESS: ND	15. DEPTH GROUNDWATER ENCOUNTERED: NA
13. DEPTH DRILLED INTO ROCK: ND	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: NA
14. TOTAL DEPTH OF HOLE: 21'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
5	5	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
6	CLP	CLP	CLP SVOC	Explosives	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Backfilled w/cuttings 3' to 21'	Bentonite Grout 0' to 3'	—	—	

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Clay brown-gray to dark gray brown-gray, CL-FILL, silty to very silty, crumbly, stiff, trace mica, slightly moist	0 ppm		GAA-002-000 0.5' Recovery		Started drilling @ 1130 on 3·28·95 Collected a split barrel sample from 0' to 4' @ 1132
				0.5' Recovery			
	1		0 ppm		GAA-002-001 1.0' Recovery		Collected sample @ 1135 from 0' to 0.5' Collected sample @ 1140 from 1' to 2'
	2		0 ppm		GAA-002-002 1.0' Recovery		Collected sample @ 1145 from 2' to 3'
	3		0 ppm	0.7' Recovery			
	4	Scattered concrete & brick	0 ppm		GAA-002-004 1.0' Recovery		Collected a split barrel sample from 4' to 9' @ 1150 Collected sample @ 1200 from 4' to 5'
	5						

/CORPS/5-15-92

PROJECT: 4E11043A REMEDIAL INVESTIGATION, MEAD OU3 | HOLE NO.: GAA-002

HTW DRILLING LOG

HOLE NO. GAA-002

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5	Clay medium to dark yellow-brown, with rust-brown oxidation staining and abundant gray-brown brown-gray mottling, CL, silty to very silty, stiff, crumbly, scattered cracks, trace mica & black organic material, slightly moist	0 ppm	24" Recovery			
	6						
	7						
	8						
	9		0 ppm		GAA-002-009 LO' Recovery		Collected a split barrel sample from 9' to 14' @ 1206 Collected sample @ 1210 from 9' to 10'
	10		0 ppm	4.0' Recovery			
	11						
	12						
	13						
	14						

/CORPS/4-15-92

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.: GAA-002

HTW DRILLING LOG

HOLE NO. GAA-002

SHEET 3 OF 3 SHEETS

PROJECT: REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR: David A. Kubeczko

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	14	Clay medium to dark yellow-brown with abundant rust-brown oxidation staining & scattered green-gray gray-brown mottling & banding, CL, silty to very silty with thin silt streaks, stiff, crumbly, scattered black organic material, trace mica, slightly moist	0 ppm	3.2' Recovery			Collected a split barrel sample from 14 to 19' @ 1215
	15						
	16	Sand light brown gray-brown tan-brown, SM, very fine- to fine-grained, well sorted, subrounded to sub-angular, silty to very silty, predominantly quartz grains with 5-10% orange grains & 5% black specs/grains, medium dense, slightly moist					
	17						
	18						
	19		0 ppm		GAA-002-019 GAA-202-019 GAA-402-019 2.0' Recovery		Collected a split barrel sample from 19' to 21' @ 1220 Collected duplicate sample from 19' to 21' @ 1225 Collected MRD duplicate sample from 19' to 21' @ 1220
	20						
	21	Bottom of borehole - 21'					Finished drilling @ 1230 on 3-28-95 Backfilled borehole w/ cuttings from 3' to 21' and bentonite grout from 0' to 3'
	22						
	23						

PROJECT: REMEDIAL INVESTIGATION, MEAD OU3 4F11043A

HOLE NO.:

ICORPS/4-15-92

APPENDIX D-9
MONITORING WELLS MW-63B AND MW-64B BORING LOGS

HTW DRILLING LOG

HOLE NO. MW-63B

SHEET 1 OF SHEETS

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: WOODWARD Clyde - OMAHA
3. PROJECT: MEAD NOP OU-3	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: MATT Cooper	6. MANUFACTURER'S DESIGNATION OF DRILL: Failing 1500
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 6" Drag Bit; 3" Stainless Steel Split spoons	8. HOLE LOCATION: T14N, R 9E SEC 6 SW¼
	9. SURFACE ELEVATION: 2/20/95
	10. DATE STARTED: 2/20/95 — 11. DATE COMPLETED: 2/22/95
12. OVERBURDEN THICKNESS: UNKNOWN	15. DEPTH GROUNDWATER ENCOUNTERED: NONE ATD
13. DEPTH DRILLED INTO ROCK: none	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: 20.0'
14. TOTAL DEPTH OF HOLE: 31.4 Ft	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): 20.0' after development

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
SS collected to log only			

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC. %
none						

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
		MW-63B		CM Hecht

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		DARK Brown, very stiff, moist, low plastic silty CLAY w/ light brown (loess?) nodules (CL) Topsoil					Start 2/20/95 @1245. Direct Rotary Drilling w/ Pure water & 1 bag bentonite
	1						
	2						
	3						
	4						
	5						

/CORPS/5-15-92

PROJECT: MEAD NOP OU-3 HOLE NO.: MW-63B

HTW DRILLING LOG

MEAD NOP OU-3	INSPECTOR T. HECHT		HOLE NO. MW-63B
			SHEET 2 OF SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	6	Becoming gray w/ black and orange (iron) nodules Loess	None	3" SS NS retained	NS	10 12 11 13	D=1 P=2' R=1.75'
	7						
	8						
	9						
	10		None	3" SS NS retained	NS	2 4 3 4	D=2 P=2' R=1.6'
	11						
	12	HEAVY IRON STAINING					
	13	Tan to orange, very Dense, moist, fine to v. fine, Poorly sorted, SAND w/ some silt					Driller Reports sand @ 13'
	14						

PROJECT: MEAD NOP OU-3 HOLE NO.: MW-63B

/CORPS/4-15-92

HTW DRILLING LOG

OU 3	INSPECTOR T. Hecht	HOLE NO. MW-63B	SHEET 3 OF SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Same					
	15		NONE	NS	NS	11 20 32 40	D=3 P=2' R=1.4
	16						
	17						
	18						
	19						
	20	Same	NONE	NS	NS	18 35 50 50/3"	D=4 P=2' R=1.45
	21						
	22						
	23						

ICORPS/4-15-92

PROJECT: MEAD NOD OU-3

HOLE NO.: MW-63B

HTW DRILLING LOG

HOLE NO. MW-63B

SITE OU-3

INSPECTOR T. Hecht

SHEET 4 OF SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Same					
	24						
	25						
	26						
	27						
	28						
	29						
	30	Becoming w/ trace coarse sand					No appreciable water loss
	31						MW-63B installed upon completion
	32						BOH = 31.4

PROJECT: OU-3

HOLE NO.: MW-63B

/CORPS/4-15-92

HTW DRILLING LOG

HOLE NO. MW-64-B

1. COMPANY NAME: Woodward-Clyde Consultants	2. DRILLING SUBCONTRACTOR: WCC - OMAHA
SHEET 1 OF 4 SHEETS	
3. PROJECT: Remedial Investigation, Mead NOP	4. LOCATION: Mead, Nebraska
5. NAME OF DRILLER: TOM PATTON	6. MANUFACTURER'S DESIGNATION OF DRILL: FAILING 1500
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 7/8 TRICONE; 2" SPLIT SPOON; 4 3/4 DRAG BIT	8. HOLE LOCATION: T14N R9E SEC 16 SE 1/4
	9. SURFACE ELEVATION:
	10. DATE STARTED: 3/10/95 0900
	11. DATE COMPLETED: 3/10/95 1145
12. OVERBURDEN THICKNESS: —	15. DEPTH GROUNDWATER ENCOUNTERED: MASKED BY DRILLING FLUIDS
13. DEPTH DRILLED INTO ROCK: 0'	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: MASKED BY DRILLING FLUIDS
14. TOTAL DEPTH OF HOLE: 30.0'	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY):

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
NA - TC LOG ONLY	NA	NA	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE REC.
NA	NA	NA	NA	NA	NA	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
INSTALLED MONITORING WELL	NA	MW-64B	NA	[illegible]

ELEV. a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		LEAN CLAY; FIRM, DARK BROWN; MOIST. TRACE V. FINE SAND. LOESS					START DRILLING 3-10-95 WITH MUD ROTARY PURE WATER AND 1 BAG BENTONITE
	1		HNu= BG	—	—	P	w/2" SPOON D = 2.0' R = 2.0'
	2						
	3		HNu= BG	—	—	P	w/2" SPOON D = 2.0' R = 2.0'
	4						
	5						

/CORPS/5-15-92

PROJECT: 92KW030 Remedial Investigation, Mead NOP

HOLE NO.: B1 MW-64-B

HTW DRILLING LOG

HOLE NO. MW 64B

REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR L. TRAVAGLIO

SHEET 2 OF 4 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		(SAME) CLAY. Firm DARK BROWN, moist. TRACE V. FINE SAND LOESS	HNu= BG	—	—	P	w/2" SPOON D=2.0' R=1.8'
	6						
	7		HNu= BG	—	—	P	w/2" SPOON D=2.0' R=1.9'
	8	POORLY GRADED SAND (SP) LOOSE, TAN VERY FINE TO FINE SAND (ALLUVIUM)	HNu= BG			8 12 20 23	w/2" SPOON D=2.0' R=1.6'
	9						
	10		HNu= BG			12 20 23 23	w/2" SPOON D=2.0' R=1.7'
	11						
	12		HNu= BG			17 23 23 24	w/2" SPOON D=2.0' R=1.9'
	13						
	14						

CORPS/4-15-82

PROJECT: MEADQUARI

HOLE NO.: MW-64B

HTW DRILLING LOG

HOLE NO. MW-64B

REMEDIAL INVESTIGATION, MEAD NOP.

INSPECTOR L. TRAVAGLIN

SHEET 3 OF 4 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	15	(SAME) POORLY GRADED (SP) SAND, LOOSE, TAN V. FINE TO FINE GRAINED SAND. (ALLUVIUM)	HNu= BG	—	—	10 17 20 26	w/2" SPOON D=2.0' R=2.0'
	16						
	17		HNu= BG	—	—	8 15 19 24	w/2" SPOON D=2.0' R=1.9'
	18						
	19	BECOMING LT. BROWN	HNu= BG	—	—	10 14 17 20	w/2" SPOON D=2.0' R=1.9'
	20						
	21		HNu= BG	—	—	15 23 24 30	w/2" SPOON D=2.0' R=2.0'
	22						
	23		HNu= BG	—	—	17 21 29 32	w/2" SPOON D=2.0' R=1.5'

CORPS/4-15-82

PROJECT: MEAD. OUB RI

HOLE NO.: MW-64B

HTW DRILLING LOG

HOLE NO. MW-64B

REMEDIAL INVESTIGATION, MEAD NOP

INSPECTOR L. PRAVAGLIO

SHEET 4 OF SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		(SAME) POORLY GRADED (SP) SAND, LOOSE, TAN, V. FINE TO FINE GRAINED (ALLUVIUM)					~~WLAP~~
	24						W/ 2" SPOON D = 2.0' R =
	25		HNu= BG				
	26						W/ 2" SPOON D = 2.0' R =
	27		HNu= BG				
	28						W/ 2" SPOON D = 2.0' R =
	29	W/ SOME MED.	HNu= BG				
	30						B.O.B 30.0' BORING COMPLETED AS MONITORING WELL 3-10-95 NO H2O LOSS, 10 SCREENED INTERVAL

CORPS/4-15-92

PROJECT: MEAD OU3 RI

HOLE NO.: MW-64B

Appendix E

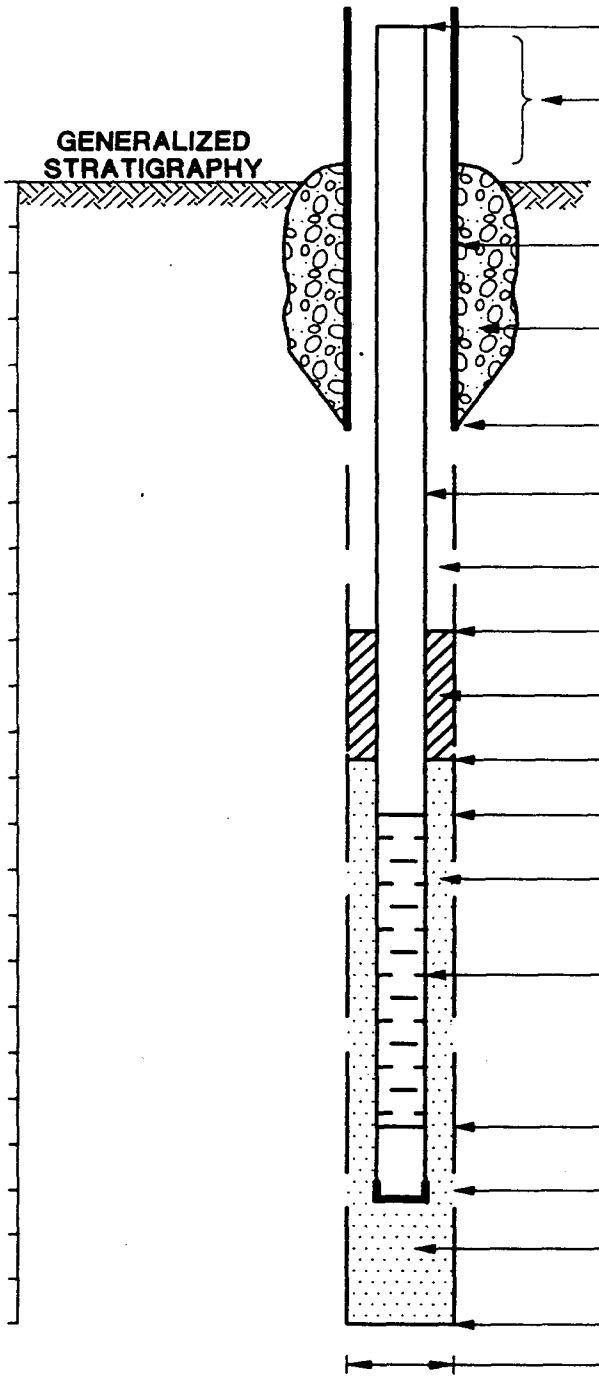
B07NE003703-04216

APPENDIX E
WELL COMPLETION DIAGRAMS

GROUND WATER MONITORING WELL REPORT

Project Name: MEAD NOD OU3
Location: MEAD, Nebraska
Installed by: WCC-Omaha MATT Cooper
Inspected by: WCC TERRI HECHT
Method of Installation: Direct Rotary
Remarks:

Monitor Well No. MW-63B
Project No. 4E11043A
Date 2/20/95
Time 4:00pm



Elevation of top of riser pipe _____

Height of riser above ground 1.9'

Ground Elevation _____

I.D./Type of surface casing 6" Rectangular Steel

Type of surface seal Cement

Depth of surface seal ≈ 5'

I.D./Type of riser pipe 2" Sch 40 PVC, Flush threaded

Type of backfill None

Depth of top of seal 5'

Type of seal Pure Gold Bentonite Grout

Depth of top of filter pack 13.0'

Depth of top of screen 18.5

Type of filter pack 10-20 Silica Sand

I.D./Type of screen 2" Sch 40 PVC, mill slotted, Flush thread

Screen slot size 0.010"

Depth of bottom of screen 28.5

Depth of bottom of plugged blank section 28.8

Type of backfill below monitoring well 10-20 Silica SAND

Depth of bottom of boring 31.4

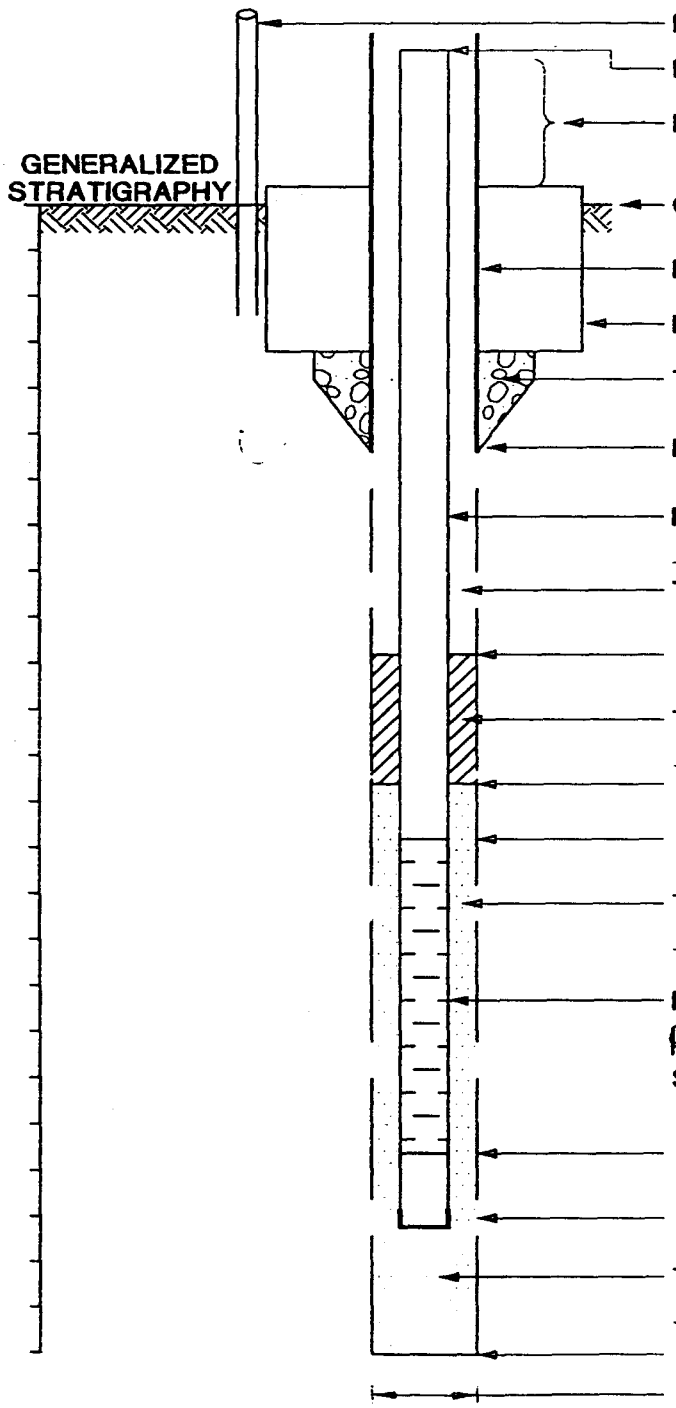
Diameter of boring 6"

Woodward-Clyde Consultants

GROUNDWATER MONITORING WELL INSTALLATION REPORT

Project Name: MEAD NOP - OU3
Location: MEAD, NE.
Installed by: W.C.C - OMAHA
Inspected by: WCFS - LISA TRAVAGLIN
Method of Installation: HYDRAULIC ROTARY
Remarks: FILTER PACK AND VOLCLAY GROUT TREMIED WITH 1" TREMIE PIPE. ONE CENTRALIZER PLACED AT . NO WATER LOST DURING DRILLING.

Monitor Well No. MW-64B
Project No. 4E11C43 A
Date MARCH 10, 1995
Time 1145



Number/Type of protective post: 2 (UP AGAINST FENCE)
Elevation of top of riser pipe:
Height of riser above ground:
Ground Elevation:
I.D./Type of surface casing: 4" x 4" x 7 FT STEEL
Dimen./Type of surface pad: 3' x 3' x 4 IN
Type of surface seal: CEMENT
Depth of surface seal: ~5.0'
I.D./Type of riser pipe: 2" SCH 40 PVC ~~MILL SLOT CEDAR~~ FLUSH THREADED
Type of backfill: NONE
Depth of top of seal:
Type of seal: PURE GOLD BENTONITE GROUT
Depth of top of filter pack: 16.0'
Depth of top of screen: 19.0'
Type of filter pack: 10-20 SILICA SAND
I.D./Type of screen: 2" SCH 40 PVC, MILL SLOTTED, FLUSH THREAD
Screen slot size: 0.010"
Depth of bottom of screen: 29.0'
Depth of bottom of plugged blank section: 29.5'
Type of backfill below monitoring well: ~~20-40 or 30~~ SILICA SAND
Depth of bottom of boring: 31'
Diameter of boring: 6"

D.F. CAD 1" 1x 04/08/94 14:33:57

ACAD FILE: WELLRPT2

Woodward-Clyde Consultants

Appendix F

B07NE003703-04220

APPENDIX F
WELL DEVELOPMENT FORMS

WELL DEVELOPMENT DATA SHEET

SITE NAME: MEAD NOP WELL NUMBER: MW-63B

PROJECT NUMBER: 4E11043A DATE/TIME: 2/22/95 1519

DATE WELL INSTALLATION WAS COMPLETED: 2/22/95

TOTAL DEPTH OF WELL: 28.5 bgs

WATER LEVEL (MEASURED FROM TOP OF CASING) PRIOR TO DEVELOPMENT: 19.98

WATER LEVEL FOLLOWING DEVELOPMENT: 20.0

NUMBER OF WELL VOLUMES TO BE REMOVED: 3

3 (# VOLUMES) X 17.5 (1 WELL VOL.) = 52.4 gal (TOTAL NUMBER OF GALLONS TO BE REMOVED)

METHOD OF WELL DEVELOPMENT: SURGE & pump

DATE	TIME	VOLUME REMOVED	COMMENTS
2/22	1400	15 gal	V. Turbid
2/22	1432	40 gal	Sl. turbid
2/22	1512	56 gal	V. Clear (5.0 NTU)

PHOTOGRAPH TAKEN (FRAME NO.):

ADDITIONAL COMMENTS:

All parameters stabalized @ 1512, WATER very clear 5.0 NTU. Recovered very quickly

QPH

D.H.I. ACAD 14_c10
1=1
04/08/94 08:06:41

ACAD FILE: WDOS1

WELL DEVELOPMENT LOG

Project: Mead - OU3 - RI
Project No: 4E11043A

Well No: MW-6BB
Date: 5-18-95

WELL MEASUREMENTS

Well inside diameter: 0.16 ft.
Depth of well casing: 31.3 ft.
Initial water level: 26.50 ft. below MP
Measuring point (MP): TOC
Fluid well casing volume: 0.768 gal.
Air temperature: Mid 50's To 60's
Weather conditions: Sunny, wind NW 5mph

SAMPLING MEASUREMENTS

DISCHARGE

	surged				surged						
Water level (ft. BMP)	26.50	—	—	—	—	—	—	—			
Time	1624	1639	1648	1708	1719	1735	1748	1803			
Discharge (Gal.)	5	10	15	20	25	30	35	40			

WATER QUALITY DATA

pH	7.16	7.06	6.85	6.81	6.83	7.35	7.20	7.23			
Conductivity (µMHOS/cm)	600	590	500	470	460	460	450	450			
Temperature (C)	13.6	12.3	11.9	11.4	11.1	10.8	11.7	11.3			
Color	Brown	lt. Brown	lt. Brown	lt. Brown	lt. Brown	cloudy	clear	clear			
Odor	None	None	None	None	None	None	None	None			
Turbidity	1776	577	122	71	665	52	28.4	15.3			

Total discharge: 40 gallons
Casing volumes removed: 52.1 gallons
Method of disposal of discharged water: discharge To The ground

QUALITY ASSURANCE

Sampling Method: Surge block, PVC bailer
Method to measure water level: slope Indicator
Bailer ropes new or cleaned? new
pH meter no: Orion 230A
Calibrated: 4.01 & 7.00 pH
Conductivity meter no. YSI 33
Calibrated:
Comments:

Collected by: A. Mallisee

M:\2195\2195WDL.xls /dd

WOODWARD-CLYDE