



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

File, Nabr.

Okd. Wnky

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

OCT 28 1991 *Effective:*
Date: 28 Jan 92

Lewis D. Walker
Deputy Assistant Secretary
of the Army (ESOH)
Pentagon, Room 2E577
Washington, D.C. 20310-0110

Dear Mr. Walker:

Please find enclosed a copy of the signed SARA 120 Interagency Agreement (IAG) for the former Nebraska Ordnance Plant located near Mead, Nebraska. This is a three party Agreement between the Army, EPA and the Nebraska Department of Environmental Control. Should you need additional information regarding the IAG please contact Greg McCabe of my staff at (913) 551-7709.

Sincerely yours,

David A. Wagoner
David A. Wagoner, Director
Waste Management Division

enclosure

Attachment

RECYCLE ♻️

092691-2

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,
REGION VII,
AND THE
DEPARTMENT OF ENVIRONMENTAL CONTROL OF THE
STATE OF NEBRASKA,
AND THE
UNITED STATES DEPARTMENT OF THE ARMY



IN THE MATTER OF:)

The U.S. Department of the Army)
Former Nebraska Ordnance Plant)
Mead, Nebraska)

INTERAGENCY)
AGREEMENT UNDER)
CERCLA SECTION 120)

) Administrative
) Docket Number:
) VII-91-F-0028



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310-0110

3 NOV 1991



MEMORANDUM THRU THE DIRECTOR OF THE ARMY STAFF
FOR THE ASSISTANT CHIEF OF ENGINEERS

SUBJECT: Formerly Used Defense Site (FUDS) Program -
Nebraska Ordnance Plant Federal Facility
Agreement (FFA)

Reference is made to the attached letter of 28 Oct 91 from the U. S. Environmental Protection Agency, Region II on this subject. Request your action to transmit a copy of the signed FFA to representatives of the FUDS program for their implementation. This office should be periodically updated on the status of implementation of this agreement and any significant problems that may arise through your FUDS controversial projects reporting program.

Point of contact in this office is Mr. Rick Newsome at extension 614-9531.

Lewis D. Walker
Deputy Assistant Secretary of the Army
(Environment, Safety and Occupational Health)
OASA(I,L&E)

Attachment

cf:
ENVR-E
CEMP-R



DEPARTMENT OF THE ARMY

U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CEMP-RF (200-1a)

18 NOV 91

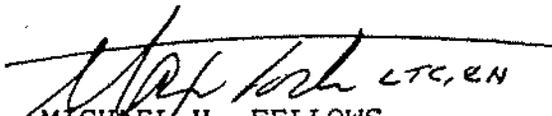
MEMORANDUM FOR COMMANDER, MISSOURI RIVER DIVISION,
ATTN: CEMRD-MD

SUBJECT: Defense Environmental Restoration Program for Formerly
Used Defense Sites (DERP-FUDS) - Former Nebraska Ordnance
Plant--Federal Facility Agreement

1. Reference memorandum, OASA(I,L&E), 6 Nov 91, SAB.
2. Enclosed for your transmittal to CEMRK is a copy the signed Interagency Agreement for the former Nebraska Ordnance Plant located near Mead, Nebraska. This is a three-party agreement between the Army, U.S. Environmental Protection Agency, and Nebraska Department of Environmental Control.
3. Request you provide us the updated project status sheet on the 5th of each month to satisfy the requirement of the referenced memorandum. Any significant problems should be brought to our attention as soon as practicable. We will in turn determine the need for discussions with the ACE and DASA(ESOH).
4. POC: T. Julian Chu, (202) 504-4695.

FOR THE DIRECTOR OF MILITARY PROGRAMS:

Encl

FOR 
MICHAEL H. FELLOWS
Colonel, Corps of Engineers
Chief, Environmental Restoration
Division
Directorate of Military Programs

CF:
CECC-C
CEMRK-ED

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PRELIMINARY STATEMENT

Based on the information available to the Parties on the effective date of this INTERAGENCY AGREEMENT (Agreement), and without trial or adjudication of any issues of fact or law, the Parties agree as follows:

I. JURISDICTION

Each Party is entering into this Agreement pursuant to the following authorities:

A. The U.S. Environmental Protection Agency (EPA), Region VII, enters into those portions of this Agreement that relate to the Remedial Investigation/Feasibility Study (RI/FS) pursuant to Section 120(e)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9620(e)(1), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. 99-499 (hereinafter jointly referred to as CERCLA/SARA or CERCLA), and Sections 6001, 3008(h) and 3004(u) and (v) of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Sections 6961, 6928(h), 6924(u) and (v), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA) (hereinafter jointly referred to as RCRA/HSWA or RCRA) and Executive Order 12580;

B. EPA, Region VII, enters into those portions of this Agreement that relate to operable unit remedial actions and final remedial actions pursuant to Section 120(e) (2) of CERCLA/SARA, Sections 6001, 3008(h) and 3004(u) and (v) of RCRA, and Executive Order 12580;

C. The Department of the Army (henceforth "Army," or "the Army") enters into those portions of this Agreement that relate to the RI/FS pursuant to Section 120(e)(1) of CERCLA, Sections 6001, 3008(h) and 3004(u) and (v) of RCRA, Executive Order 12580, the National Environmental Policy Act, 42 U.S.C. § 4321, and the Defense Environmental Restoration Program (DERP), 10 U.S.C. § 2701 et seq.;

D. The Army enters into those portions of this Agreement that relate to operable unit remedial actions and final remedial actions pursuant to Section 120(e)(2) of CERCLA/SARA, Sections 6001, 3008(h), 3004(u) and (v) of RCRA, Executive Order 12580 and the DERP.

E. The Nebraska Department of Environmental Control (NDEC), enters into this Agreement pursuant to Sections 120(f) and 121(f) of CERCLA/SARA, 42 U.S.C. §§ 9620(f) and 9621(f), Sections 6001 and 3006 of RCRA, 42 U.S.C. §§ 6961 and 6926, and the Nebraska Environmental Protection Act, Nebraska Revised Statutes §§ 81-1501 et seq.

II. SCOPE OF AGREEMENT

A. This Agreement covers the response actions including removal and remedial actions as these terms are defined by

CERCLA, to be undertaken by the Army at the Site. This Agreement specifically excludes response actions by the Army related to asbestos or PCBs at the Site.

B. The response actions to be undertaken by the Army at the Site pursuant to this Agreement are divided into the following three Operable Units:

1. Operable Unit 1 (OU 1), which will cover all soils contaminated by explosives at NOP, including but not limited to the soils at the Burning Grounds area.

2. Operable Unit 2 (OU 2), which will cover all remaining identified contaminated media and contaminated areas of the site not addressed in OU 1 or OU 3, consistent with the Defense Environmental Restoration Program (DERP), 10 U.S.C. § 2701 et seq and its implementing regulations. As such, OU 2 will include, but is not limited to, the following specific trichloroethylene-contaminated areas if not addressed as part of OU 1: the Atlas Missile site, Nike Maintenance Area, Bomb Load Lines, and Administrative Area. Contaminated groundwater will be investigated and remediated as part of OU 2. In addition, groundwater monitoring wells will be installed at the perimeter of the Landfill during the OU 2 Remedial Investigation.

3. Operable Unit 3 (OU 3), which will cover the landfill located near the former sewage treatment plant at NOP (the "Landfill"), as well as any other currently unidentified waste disposal areas, consistent with the Army's responsibilities under DERP.

C. All response actions conducted by the Army at the Site shall be conducted in accordance with this Agreement.

III. PARTIES

The Parties to this Agreement are EPA, Region VII; NDEC; and the Army. The terms of this Agreement shall apply to and be binding upon the signatories to this Agreement and upon their successors and assigns, and upon their authorized representatives performing work pursuant to this Agreement. The undersigned representative of each party to this Agreement certifies that he or she is fully authorized to enter into the terms and conditions of this Agreement and to bind legally that party to it. Each party shall provide a copy of this Agreement to all primary contractors retained to perform work pursuant to this Agreement. The Army will notify EPA and NDEC of the identity of each proposed contractor as soon as possible; such notification shall indicate in a general manner the work to be performed by each. The Army shall provide a copy of this Agreement to the present owner and any subsequent owners of any property upon which any work under this Agreement is performed, if not owned by the Department of the Army or the United States.

IV. DEFINITIONS

Except as otherwise explicitly stated herein, terms used in this Agreement which are defined in CERCLA shall have the meaning given in CERCLA. The following definitions shall apply for purposes of this Agreement:

A. "Agreement" means this Interagency Agreement, and any

attachments and appendices hereto which are referenced and adopted herein, as well as all reports, work plans, notices, and other documents developed and approved pursuant to this Agreement.

B. "ARAR" or "Applicable or Relevant and Appropriate Requirement" means legally applicable or relevant and appropriate standards, requirements, criteria, or limitations as those terms are used in Section 121(d)(2)(A) of CERCLA, 42 U.S.C. § 9621(d)(2)(A).

C. "Army" means the United States Department of the Army and its authorized representatives.

D. "Authorized representative" means a person designated to act on behalf of a Party to this Agreement for a specific purpose.

E. "CERCLA" or "CERCLA/SARA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. §§ 9601-9675. "SARA" means the Superfund Amendments and Reauthorization Act of 1986, Public Law 99-499.

F. "Conceptual Program Plan" means the scoping document which describes the overall project management plan for the Site, including all major Site activities (e.g., operable unit designation, anticipated removal actions, generalized field efforts, etc.) and an approximate timeline for their accomplishment.

G. "Days" means calendar days, unless business days are

specified. The term "business day" means all calendar days except Saturdays, Sundays, and federal holidays. Any submission, including any written notice of position or Written Statement of Dispute, pursuant to this Agreement which under the terms of this Agreement would be due on a Saturday, Sunday or federal holiday, shall be due on the next business day.

H. "EPA" or "U.S. EPA" means the United States Environmental Protection Agency and its authorized representatives.

I. "Feasibility Study" or "FS" has the meaning given in 40 C.F.R. § 300.5. The FS is that study which fully evaluates and develops remedial action alternatives to prevent or mitigate the migration or the release of hazardous substances, pollutants or contaminants at and from the Site.

J. "NOP" means the former Nebraska Ordnance Plant.

K. "NDEC" means the Nebraska Department of Environmental Control and its authorized representatives.

L. "National Contingency Plan" or "NCP" means the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300.

M. "Operable Unit" as defined in 40 C.F.R. 300.5 means a discrete action that comprises an incremental step toward comprehensively addressing site problems. This discrete portion of a remedial response manages migration, or eliminates or mitigates a release, threat of a release, or pathway of exposure.

N. "Parties" means the EPA, the Army, and the NDEC.

O. "Proposed Plan" means that document in which a proposed

remedy for the Site, or for a particular operable unit of the Site, is put before the public, in accordance with Section 117 of CERCLA and in compliance with 40 C.F.R. § 300.430(f)(2).

P. "Remedy" or "Remedial Action" (RA) has the meaning given in CERCLA and in 40 C.F.R. § 300.5.

Q. "Remedial Design" or "RD" has the meaning given in 40 C.F.R. § 300.5. Remedial Design normally begins with preliminary design and ends with the completion of the final detailed set of engineering plans and specifications.

R. "Record of Decision" means that document in which a remedy for the Site, or for a particular operable unit of the Site, is selected, and the selection documented, in accordance with the NCP, including particularly the NCP requirements for remedy selection, which are set forth in 40 C.F.R. § 300.430.

S. "Remedial Investigation" or "RI" has the meaning given in 40 C.F.R. § 300.5. The RI is that investigation conducted to determine the nature and extent of release or threat of release of hazardous substances, pollutants or contaminants and to gather necessary data to support the Feasibility Study and the Baseline Risk Assessment.

T. "Removal" has the meaning given in CERCLA and in 40 C.F.R. § 300.5.

U. "Site" means the former Nebraska Ordnance Plant and any additional areas contaminated by the migration of hazardous substances from the former Nebraska Ordnance Plant.

V. "Timetables and Deadlines" mean schedules or the time

limitations contained therein, that are applicable to certain documents denoted by the Parties as Primary Documents pursuant to this Agreement and certain action completion dates during the implementation of this Agreement as established by the Parties.

W. "Written Statement of Dispute" means a written statement by a Party of its position with respect to a matter about which dispute resolution has been invoked pursuant to Part XI (Resolution of Disputes) of this Agreement.

V. PURPOSE

A. The general purposes of this Agreement are to:

1. Examine environmental impacts associated with the Site to insure that they are thoroughly investigated and to insure that appropriate remedial action is taken as necessary to protect the public health, welfare and the environment;

2. Establish a procedural framework and schedule for developing, implementing and monitoring appropriate response actions at the Site in accordance with CERCLA/SARA, the NCP, Superfund guidance and policy, applicable State law; and

3. Facilitate cooperation, exchange of information and participation of the Parties in such actions.

B. Specifically, the purposes of this Agreement are to:

1. Establish requirements for the performance of a RI to determine fully the nature and extent of the threat to the public health or welfare or the environment caused by the release or threatened release of hazardous substances, pollutants or contaminants at the Site in accordance with CERCLA/SARA and

applicable State law.

2. Establish requirements for the performance of a FS for the Site to identify, evaluate, and select alternatives for the appropriate remedial action(s) to prevent, mitigate, or abate the release and threatened release of hazardous substances, pollutants or contaminants at the Site in accordance with CERCLA/SARA and applicable State law.

3. Identify the nature, objective and schedule of response actions to be taken at the Site. Response actions at the Site shall attain that degree of cleanup of hazardous substances, pollutants or contaminants mandated by CERCLA/SARA and applicable State law.

4. Identify Operable Unit remedial action alternatives which are appropriate at the Site prior to the implementation of final remedial action(s) for the Site. These alternatives shall be identified and proposed to the Parties as early as possible prior to formal proposal of Operable Unit remedial actions by the Army to the EPA and NDEC pursuant to CERCLA/SARA and applicable State law. This process is designed to promote cooperation among the Parties in identifying Operable Unit remedial action alternatives prior to selection of final Operable Unit remedial actions.

5. Implement the selected Operable Unit and final remedial action(s) in accordance with CERCLA and applicable State law and meet the requirements of Section 120(e)(2) of CERCLA for an interagency agreement among the parties.

6. Assure compliance, through this Agreement, with RCRA and other federal and State hazardous waste laws and regulations for matters covered herein.

7. Expedite the cleanup process to the extent consistent with protection of human health and the environment.

8. Provide NDEC involvement in the initiation, development, selection and enforcement of remedial actions to be undertaken at NOP, including the review of all applicable data as it becomes available and the development of studies, reports, and action plans; and to identify and integrate State ARARs into the remedial action process.

9. Provide for operation and maintenance of any remedial action selected and implemented pursuant to this Agreement.

VI. STATUTORY COMPLIANCE/RCRA-CERCLA INTEGRATION

A. The Parties intend to integrate the Army's CERCLA response obligations, and RCRA corrective action obligations if any, which relate to the release of hazardous substances, hazardous wastes, pollutants or contaminants covered by this Agreement into this comprehensive Agreement. Therefore, the Parties intend that activities covered by this Agreement will achieve compliance with CERCLA, 42 U.S.C. § 9601 et seq.; satisfy any corrective action requirements of Sections 3004(u) and (v) of RCRA, 42 U.S.C. § 6924(u) and (v) and Section 3008(h), 42 U.S.C. § 6928(h), which apply to the Army at this Site; and meet or exceed all applicable or relevant and appropriate Federal and

State laws and regulations, to the extent required by Section 121 of CERCLA, 42 U.S.C. § 9621 and applicable State law.

B. Based upon the foregoing, the Parties intend that any remedial action selected, implemented and completed under this Agreement will be protective of human health and the environment such that remediation of releases covered by this Agreement shall obviate the need for further corrective action by the Army under RCRA at the Site. The Parties agree that with respect to releases of hazardous waste covered by this Agreement, RCRA shall be considered an applicable or relevant and appropriate requirement pursuant to Section 121 of CERCLA.

C. The Parties recognize that the requirement to obtain permits for response actions undertaken pursuant to this Agreement shall be as provided for in CERCLA and the NCP. The Parties further recognize that ongoing hazardous waste management activities, if any, at the Site (for example, handling of currently generated hazardous waste by the property owners) may require the issuance of permits and/or adherence with other regulatory requirements under Federal and State laws. This Agreement does not affect the requirements, if any, for the owner and/or operator to obtain such permits and/or adhere to such requirements.

VII. FINDINGS OF FACT

This paragraph contains findings of fact determined by the EPA, NDEC and the Army as the basis for this Agreement. None of these findings are admissions by the Army for any purpose, nor

are they in any other way legally binding on any Party.

A. The former Nebraska Ordnance Plant (NOP) consists of the 17,258 acres in Saunders County that the facility originally covered near Mead, Nebraska, 30 miles west of Omaha, Nebraska and 35 miles northeast of Lincoln, Nebraska.

B. The former NOP is underlain by sand and gravel deposits, which are in turn underlain by a sandstone formation. The sand and gravel deposits and the sandstone formation are hydraulically connected and comprise the primary aquifer in the area. The combined thickness of these deposits ranges from about 80 to about 140 feet in most areas. Groundwater flow direction in this aquifer is toward the southeast from this site.

C. The principal operations at the NOP site were bomb and booster assembly, ammonium nitrate production, explosives and ammunitions testing and storage, and burning and demolition of waste explosives at burning grounds and demolition areas. Ammonium nitrate was manufactured on-site. Support operations included vehicle and equipment maintenance, chemical storage, sewage treatment, an analytical laboratory, a hospital, laundry, rail yard, locomotive maintenance shop, electrical distribution system, and fuel oil storage.

D. The first industrial operations activated at NOP were four bomb loading lines, beginning with Line 1 in October 1942. Production records show that 2,839,778 bombs were produced at NOP between startup in 1942 and August 1945. The bomb booster assembly area and the ammonium nitrate crystallization plant became operational in early 1943. The ammonium nitrate plant was

operational between March and May 1943. The ammonium nitrate plant was reactivated in 1945 and was used until 1949 for fertilizer production. Bomb Load Lines 1 and 4 were periodically de-activated to gear operations to the production of larger or smaller bombs. Bomb Load Line 1 was inactivated in 1944.

E. Production operations on-site included the melt loading and assembly of bombs, shells, warheads, demolition blocks and practice rockets. Bombs were loaded with TNT (trinitrotoluene), Amatol (mixture of trinitrotoluene and ammonium nitrate), Tritonal (80% TNT and 20% aluminum dust), and Composition B (60% hexahydro-1,3,5-trinitro-1,3,5-triazine, also known as "RDX," and 40% TNT). Teteryl boosters were manufactured in the bomb booster assembly area. Boosters were added to bombs after the bombs were shipped off-site.

F. World War II operations were terminated at NOP in 1945. Between 1946 and 1949, NOP was used for explosives storage. In 1952 NOP was reactivated for use during the Korean conflict, although the bomb booster assembly area was not reactivated. In 1956 NOP was again placed on standby status.

G. The original NOP covered 17,258 acres. Between 1958 and 1971, various portions of the property were "excessed", i.e. disposed of or sold to others as excess to the needs of the Army. The property distribution at the present time is as follows:

| | |
|---|------------|
| University of Nebraska | 9518 acres |
| private or corporate ownership | 5543 acres |
| U.S. Military Reserva- tion Weekend Train- ing Facility | 960 acres |

| | |
|--|------------|
| Department of Commerce | 40 acres |
| Nebraska National Guard (including 1185 acres which were part of Offutt Air Force Base Atlas Missile Site S-1 launch area and 12 acres north of load line 1) | 1197 acres |

H. Trichloroethylene (TCE) was used to degrease and clean pipelines used to carry liquid oxygen fuel for missiles. Former missile site workers estimate that approximately 1,000 gallons per month of TCE were used over an 18 month period. The missile silos were built by the U.S. Air Force in 1959-1960 on property located north of former Bomb Load Line number 4. These silos were abandoned in 1964.

I. Additional operations occurring at the former NOP included Nike missile maintenance activities at the north end of Load Line number 1. TCE was used in these activities.

J. One electrical substation and four load centers were located at each bomb load line. Between 1962 and 1975 the University of Nebraska phased out the electrical transmission system of the former NOP and in 1976 power to the University was completely supplied by the Omaha Public Power District. Between 1975 and 1977 some serviceable transformers, switches and regulators were removed and placed into storage. University employees noted oil leaks on concrete pads during the removal and storage of the equipment; salvage activities resulted in 36 drums of liquid polychlorinated biphenyls (henceforth abbreviated "PCBs" or "PCB"). Disposal activities for all remaining

serviceable and unserviceable electrical transmission equipment occurred in 1982. All solids and liquids were disposed in January 1984. Between spring 1984 and June 1985 the University sampled soil adjacent to concrete transformer pads, cleaned the pads, and removed 788 drums of contaminated material. Samples prior to soil removal contained up to 19,300 parts per million (ppm); samples taken by the University upon the completion of clean-up efforts contained up to 6000 ppm PCB.

K. During 1988, an EPA contractor performed sampling at the PCB excavations, but at different locations from the sampling performed by the University. The results of EPA's sampling indicated PCBs at concentrations as high as 260 ppm.

L. As a former federal facility, the NOP is eligible for environmental restoration under the Defense Environmental Restoration Program (DERP). Under the DERP program, the Army Corps of Engineers (COE), Kansas City District conducted a Confirmation Study on selected portions of property currently owned by the University of Nebraska.

M. As a result of the COE study, the following contaminants have been identified in concentrations up to the maximum shown in the table below (the four bomb loading lines are abbreviated LL 1 through LL 4):

| <u>Contaminant</u> | <u>Maximum Concentration</u> | <u>Media</u> | <u>Area</u> |
|--------------------------------|------------------------------|--------------|-----------------------------|
| TNT | 9663 µg/g | Soil | LL 1 |
| RDX | 3100 µg/g | Soil | LL 2 |
| HMX | 200 µg/g | Soil | LL 2 |
| 1,1,2,2-tetra- chloroethane | 26 µg/kg | Soil | LL 1 |
| trichloro- ethylene (TCE) | 12 µg/kg | Soil | LL 1 |
| 1,1,2-trichloro- ethane | 11 µg/kg | Soil | LL 1 |
| RDX | 898 µg/L | Water | LL 2 |
| TNT | 48.8 µg/L | Water | LL 2 |
| HMX | 60.1 µg/L | Water | LL 2 |
| TCE | 742 µg/L | Water | LL 4 |
| chloroform | 120 µg/L | Water | LL 4 |
| 1,1,2,2-tetra- chloroethane | 12 µg/kg | Sediment | Burning Grounds Drainage |

In addition, other sampling activities at the site have detected PCBs (see Paragraph J. above) and 1,2-dichloroethylene (DCE). DCE was detected by Army sampling in March 1989.

N. After the confirmation study, the University of Nebraska sampled five of their own water wells and found TCE in a well supplying the Agronomy building at NOP. The Army Corps of Engineers initiated periodic sampling of water supply wells on the University property as well as beyond the boundaries of the former NOP. TCE was detected in several University wells and in two domestic wells downgradient of NOP. The Army Corps of Engineers found 89 micrograms per liter (µg/L) of TCE in a private well on property adjacent to the eastern boundary of the former NOP; confirmatory sampling by EPA identified TCE at a concentration of 100 µg/L. Small amounts of DCE were also found. At the Army Corps of Engineers' request, EPA supplied bottled

water to the affected residence, from March 1989 to August 1989. In August 1989, the Corps of Engineers assumed the responsibility for supplying bottled water and in March 1991 installed a carbon treatment unit. A second residence has had levels of TCE varying from 2.9 $\mu\text{g/L}$ to 7.3 $\mu\text{g/L}$. The Army is providing alternate water to this residence as well. Periodic sampling has also found RDX in University and domestic off-site wells.

O. Several contaminants measured at the Site can be further characterized chemically as follows:

1. RDX, chemical name hexahydro-1,3,5-trinitro-1,3,5-triazine, an explosive compound with applications in military ordnance, which is chemically classified as a nitramine.

2. HMX, chemical name 1,3,5,7-tetranitro-1,3,5,7-tetrazine, an explosive nitramine compound with application in military ordnance. HMX is present as a contaminant in Type B RDX. Type B RDX typically has 8 to 12 percent HMX.

3. TCE (trichloroethylene), DCE (1,2-dichloroethylene), chloroform, 1,1,2-trichloroethane, and 1,1,2,2-tetrachloroethane are chlorinated aliphatic hydrocarbons.

P. TCE, DCE, chloroform, 1,1,2-trichloroethane, 1,1,2,2-tetrachloroethane and PCBs are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

Q. HMX, RDX, and TNT are pollutants and contaminants within the meaning of Section 101(33) of CERCLA, 42 U.S.C. § 9601(33).

R. Exposure to each of the foregoing substances may have adverse consequences to human health and the environment.

S. The former NOP was included on the National Priorities List pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, on August 30, 1990; see Federal Register, Vol. 55, No. 169.

VIII. DETERMINATIONS OF LAW

This paragraph contains determinations of law made solely by the EPA and NDEC. As with the Findings of Fact, supra, they are not admissions by the Army for any purpose.

A. The Site and every portion thereof where a hazardous substance has been deposited, stored, disposed of, placed or has otherwise come to be located, constitutes a facility within the meaning of Sections 101(9) and 120 of CERCLA, 42 U.S.C. §§ 9601(9) and 9620.

B. The Army, as an agency of the United States government, is a person as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

C. Hazardous substances and pollutants or contaminants within the meaning of Sections 101(14) and 101(33) of CERCLA, 42 U.S.C. §§ 9601(14) and (33), have been released and disposed of at NOP, or there is a release or threat of release of hazardous substances and pollutants and contaminants at the Site as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

D. The Site is a formerly federally-owned facility governed by Section 120 of CERCLA, 42 U.S.C. § 9620. Environmental restoration of this facility is authorized under the Defense Environmental Restoration Program pursuant to Section 211 of SARA, 10 U.S.C. § 2701, et seq.

E. The actions required pursuant to this Agreement are necessary to protect the public health and welfare and the environment and are consistent with the NCP.

F. The schedule for completing the actions required by this Agreement shall comply with the requirements of Section 120(e) of CERCLA, 42 U.S.C. § 9620(e).

IX. WORK TO BE PERFORMED

It is hereby agreed by the Parties that the Army shall conduct each of the following activities in accordance with the schedules set forth below and the deadlines established pursuant to Part XXIX (Deadlines) of this Agreement:

A. Remedial Investigation and Feasibility Study

1. The Army shall conduct, for each Operable Unit, in compliance with the deadlines established pursuant to Part XXIX (Deadlines) of this Agreement, a Remedial Investigation and Feasibility Study in accordance with the guidelines set forth in the document entitled "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA", EPA Office of Solid Waste and Emergency Response (OSWER) Directive 9355.3-01 (October 1988) or such more recent version thereof as EPA shall make available, unless adhering to such more recent version would cause modification or redoing of a significant portion of the work which is already completed. (At the commencement of each Remedial Investigation and each Feasibility Study, the project managers shall mutually confirm the applicability of any new guidance.) The Remedial Investigation shall include, inter alia,

the design and implementation of a plan to define the extent and nature of soil contamination, surface water contamination, groundwater contamination, and air contamination at the Site and the extent and nature of releases of hazardous substances and pollutants and contaminants at or from the Site.

2. In accordance with Parts X (Consultation with EPA and NDEC) and XXIX (Deadlines) of this Agreement, the Army shall submit to the EPA and NDEC for review and approval all RI and FS work plans and reports.

3. The Army shall implement the RI and FS in accordance with the schedule established pursuant to Part XXIX (Deadlines) of this Agreement.

4. The Parties agree that final Site cleanup level criteria will only be determined following completion of Risk Assessments to be prepared by the Army as part of the RI. Such Risk Assessments shall be in accordance with the guidelines set forth in the documents entitled "Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual" (December 1989) and "Risk Assessment Guidance for Superfund, Volume II, Environmental Evaluation Manual" (March 1989), or such more recent version(s) thereof as EPA shall make available, unless adhering to such more recent version would cause modification or redoing of a significant portion of the work which is already completed. (At the time of commencement of the Risk Assessment, the project managers shall mutually confirm the applicability of any new guidance.) The RI shall be coordinated with the FS such

that both activities are completed in a timely and cost effective manner.

B. Operable Unit Remedial Actions

1. In accordance with Part XXIX (Deadlines) of this Agreement, the Army shall propose deadlines for the completion of Operable Unit Work Plans for any Operable Unit remedial actions. These work plans shall be reviewed in accordance with Part X (Consultation with EPA and NDEC) of this Agreement.

2. All Operable Unit remedial actions undertaken pursuant to this Agreement shall comply with all NCP requirements and EPA guidance governing such actions and with applicable State laws.

3. All requirements for remedial action selection and implementation pursuant to this Agreement shall apply to the selection and implementation of Operable Unit remedial actions.

C. Remedial Action Selection

1. Upon approval of a FS Report by the EPA and NDEC, the Army shall, after consultation with the EPA and NDEC pursuant to Part X (Consultation with EPA and NDEC) of this Agreement, publish the Proposed Plan for public review and comment in accordance with the public participation requirements of Part XXVII (Public Participation) of this Agreement.

2. Within sixty (60) days of the completion of the public comment period on the Proposed Plan, the Army shall submit its proposed Record of Decision (ROD), including its response to all significant comments received from the public during the

public comment period (Responsiveness Summary), to the EPA and NDEC. The proposed ROD and Responsiveness Summary shall be written in accordance with the guidance document entitled, "Interim Final Guidance on Preparing Superfund Decision Documents", OSWER Directive No. 9355.3-02 (June 1989) or a more recent revision thereof which is in effect and made available by EPA at the time the ROD and Responsiveness Summary are begun. EPA will make any such revision available upon request. (At the time of commencement of the ROD, the project managers shall mutually confirm the applicability of any new guidance.)

3. As specified in Section 120(e)(2) of CERCLA, the Army shall commence substantial and continuous physical onsite remedial action at the Site within fifteen (15) months of receipt of written notice of final approval of the ROD by the EPA.

4. The Army shall implement the selected response actions for the Site in accordance with the provisions, time schedule, standards and specifications set forth in the approved Remedial Action Work Plans.

5. Prior to commencement of any remedial action, the Army shall provide for public participation in accordance with Part XXVII (Public Participation) of this Agreement.

D. Removal Actions

1. All removal actions conducted at the Site shall be conducted in a manner consistent with this Agreement, applicable EPA guidance, CERCLA, and the NCP, including all documents required by the NCP.

2. Any party which discovers or becomes aware of an emergency or other situation which may present an immediate and serious danger to human health or welfare or the environment at the Site shall immediately orally notify all other Parties.

3. If EPA, after consultation with NDEC, determines that there may be an endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance, pollutant or contaminant at or from the Site, EPA may request that the Army take such response actions as may be necessary to abate such danger or threat and to protect the public health or welfare or the environment. If the Army fails to take such response actions, EPA or NDEC may undertake such response actions and, to the extent permitted by law, seek reimbursement from the Army for all costs incurred in so responding.

4. For all removal actions where delay would pose a serious danger to human health or welfare or the environment, the Army shall immediately undertake response actions to abate such endangerment.

5. Prior to undertaking any removal action, the Army shall provide as much notice of its intention to undertake such actions as the circumstances leading to the actions allow. Such notice shall include the basis for the action, a description of the proposed action, the expected time period during which the action will be implemented, and the impact, if any, on any remedial action contemplated at the Site.

6. Upon completion of all removal actions, the Army shall provide to the EPA and NDEC, in writing, notification of the completion of the removal action and a detailed description of all actions taken.

7. Nothing in this Agreement shall alter the Army's authority with respect to removal actions conducted pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604.

X. CONSULTATION WITH EPA and NDEC

A. Applicability: •

1. The provisions of this Part establish the procedures that shall be used by the Parties to provide each other with appropriate notice, review, comment, and response to comments regarding RI/FS and RD/RA documents specified herein as either primary or secondary documents. In accordance with Section 120 of CERCLA and 10 U.S.C. § 2705, the Army will normally be responsible for issuing primary and secondary documents to the EPA and NDEC. As of the effective date of this Agreement, all draft and final reports for any deliverable document identified herein shall be prepared, distributed and subject to dispute in accordance with Paragraphs B through J below.

2. The designation of a document as "draft" or "final" is solely for purposes of consultation with EPA and NDEC in accordance with this Part. Such designation does not affect the obligation of the Parties to issue documents, which may be referred to herein as "final", to the public for review and

comment as appropriate and as required by law.

B. General Process for RI/FS and RD/RA Documents:

1. Primary documents include those reports that are major, discrete portions of RI/FS or RD/RA activities. Primary documents are initially issued by the Army in draft subject to review and comment by EPA and NDEC. Following receipt of comments on a particular draft primary document, the Army will respond in writing to the comments received and issue a draft final primary document subject to dispute resolution. The draft final primary document will become the final primary document sixty (60) days after issuance, if dispute resolution is not invoked, or as modified by decision of the dispute resolution process.

2. Secondary documents include those reports that are discrete portions of the primary documents and are typically input or feeder documents. Secondary documents are issued by the Army in draft subject to review and comment by the EPA and NDEC. Although the Army will respond to comments received, the draft secondary documents may be finalized in the context of the corresponding draft final primary documents. A secondary document may be disputed at the time the corresponding draft final primary document is issued.

C. Primary Documents:

1. The Army shall complete and transmit draft reports for the following primary documents to EPA and NDEC for review and comment in accordance with the provisions of this Part:

- a. Conceptual Program Plan
- b. Remedial Investigation Work Plans, including Sampling and Analysis Plans, and Quality Assurance Project Plans (QAPPs) or Chemical Data Acquisition Plans (CDAPs)
- c. Remedial Investigation Reports
- d. Baseline Risk Assessments
- e. Feasibility Study Work Plans
- f. Feasibility Study Reports
- g. Proposed Plans
- h. Records of Decision, including Responsiveness Summaries
- i. Operable Unit Work Plans and Reports
- j. Remedial Design Work Plans
- k. Final Remedial Designs 35
- l. Remedial Action Work Plans 05
- m. Remedial Action Reports, and FS
- n. Community Relations Plans 102

2. Only the draft final reports for the primary documents identified above shall be subject to dispute resolution. The Army shall complete and transmit draft primary documents in accordance with the timetable and deadlines established in Part XXIX (Deadlines) of this Agreement.

D. Secondary Documents:

1. The Army shall complete and transmit draft reports for the following secondary documents to EPA and NDEC for review and comment in accordance with the provisions of this Part:

- a. All data collected and all reports prepared up to the date of signature of this Agreement, as more fully described in Paragraph D.2. of this Part
- b. Operable Unit Remedial Action Objectives/Data Quality Objectives
- c. Health and Safety Plan for RI/FS Activities
- d. Initial Screening of Alternatives
- e. Pre-design Technical Summary
- f. Preliminary Designs (35% completion)
- g. Intermediate Designs (65% completion)
- h. Pre-final Designs (95% completion)
- i. Health and Safety Plans for Field Construction Activities
- j. Contingency Plans
- k. Operation and Maintenance Plans
- l. Treatability Studies
- m. EE/CAs and associated removal work plans
- n. Landfill archive search

2. Item D.1.a. of this Part is more fully described as follows: all data collected (or a complete summary thereof) and all reports prepared up to the date of signature of this Agreement unless such data and/or such report(s) have already been included in an RI report submitted to EPA and NDEC prior to the Target Date which is applicable to item D.1.a. In that case, only the data and reports not previously provided need be included.

3. Although the EPA and NDEC may comment on the draft reports for the secondary documents listed above, such documents

shall not be subject to dispute resolution except as provided by Paragraph B hereof. Target dates shall be established for the completion and transmission of draft secondary reports pursuant to Part XXX (Target Dates) of this Agreement.

E. Meetings of the Project Managers

The Project Managers shall meet approximately every thirty (30) days, except as otherwise agreed by the Parties, to review and discuss the progress of work being performed at the site on the primary and secondary documents. Prior to preparing any draft report specified in Paragraphs C and D above, the Project Managers shall meet to discuss the report results in an effort to reach a common understanding, to the maximum extent practicable, with respect to the results to be presented in the draft report.

F. Identification and Determination of Potential ARARs:

1. For those primary reports or secondary documents that consist of or include ARAR determinations, prior to the issuance of a draft report, the Project Managers shall meet to identify and propose, to the best of their ability, all potential ARARs pertinent to the report being addressed. NDEC shall identify all potential state ARARs as early in the remedial process as possible consistent with the requirements of CERCLA Section 121 and the NCP. The Army shall consider any written interpretations of ARARs provided by the State. Draft ARAR determinations shall be prepared by the Army in accordance with Section 121(d)(2) of CERCLA, the NCP and pertinent guidance issued by the EPA, that is consistent with CERCLA and the NCP.

2. In identifying potential ARARs, the Parties recognize that actual ARARs can be identified only on a site-specific basis and that ARARs depend on the specific hazardous substances, pollutants and contaminants at a site, the particular actions proposed as a remedy and the characteristics of a site. The Parties recognize that ARAR identification is necessarily an iterative process and that potential ARARs must be re-examined throughout the RI/FS process until a ROD is issued.

G. Review and Comment on Draft Reports:

1. The Army shall complete and transmit each draft primary report to EPA and NDEC on or before the corresponding deadline established for the issuance of the report. The Army shall complete and transmit all draft secondary documents in accordance with the target dates established for the issuance of such reports established pursuant to Part XXX (Target Dates) of this Agreement.

2. Unless the Parties mutually agree to another time period, all draft reports shall be subject to a thirty (30) day period for review and comment. Review of any document by the EPA and NDEC may concern all aspects of the report (including completeness) and should include, but is not limited to, technical evaluation of any aspect of the document, and consistency with CERCLA, the NCP and any pertinent guidance or policy issued by the EPA and with applicable State law. Comments by the EPA and NDEC shall be provided with adequate specificity so that the Army may respond to the comments and, if appropriate,

make changes to the draft report. Comments shall refer to any pertinent sources of authority or references upon which the comments are based, and, upon request of the Army, the EPA shall provide a copy of the cited authority or reference. In cases involving complex or unusually lengthy reports, EPA or NDEC may extend the thirty day comment period for an additional 20 days by written notice to the Army prior to the end of the thirty (30) day period. On or before the close of the comment period, EPA and NDEC shall transmit their written comments by next-day mail to the Army.

3. Representatives of the Army shall make themselves readily available to EPA and NDEC during the comment period for purposes of informally responding to questions and comments on draft reports. Oral comments made during such discussions need not be the subject of a written response by the Army on the close of the comment period.

4. In commenting on a draft report which contains a proposed ARAR determination, EPA and NDEC shall include a reasoned statement of whether they object to any portion of the proposed ARAR determination. To the extent that EPA or NDEC does object, EPA or NDEC shall explain the basis for its objection in detail and shall identify any ARARs which it believes were not properly addressed in the proposed ARAR determination.

5. Following the close of the comment period for a draft report, the Army shall give full consideration to all written comments on the draft report submitted by EPA and NDEC

during the comment period. Within thirty (30) days of the close of the comment period, in the case of a draft secondary report, the Army shall transmit to EPA and NDEC its written response to comments received within the comment period. Within twenty (20) days of the close of the comment period, in the case of a draft primary report, the Army shall submit a written response to EPA's and NDEC's comments. Within 10 days of receipt of the Army's written response, the project managers will confer in order to discuss and resolve informally the issues raised by EPA and NDEC comments. Within forty-five (45) days of the close of the comment period on a draft primary report, the Army shall transmit to EPA and NDEC a draft final primary report, which shall be the product of consensus to the maximum extent possible.

6. The Army may extend the period for either responding to comments on a draft report or for issuing the draft final primary report for an additional twenty (20) days by providing notice to the EPA and NDEC. In appropriate circumstances, this time period may be further extended in accordance with Part XII (Extensions) hereof.

H. Availability of Dispute Resolution for Draft Final Primary Documents:

1. Dispute resolution shall be available to the Parties for draft final primary reports as set forth in Part XI (Resolution of Disputes).

2. When dispute resolution is invoked on a draft final primary report, work may be stopped in accordance with the

procedures set forth in Part XI (Resolution of Disputes).

I. Finalization of Reports:

The draft final primary report shall serve as the final primary report if no party invokes dispute resolution regarding the document or, if invoked, at completion of the dispute resolution process should the Army's position be sustained. If the Army's determination is not sustained in the dispute resolution process, the Army shall prepare, within not more than thirty five (35) days, a revision of the draft final report which conforms to the results of dispute resolution. In appropriate circumstances, the time period for this revision period may be extended in accordance with Part XII (Extensions) hereof.

J. Subsequent Modifications of Final Reports:

Following finalization of any primary report pursuant to Paragraph I. above, any Party to this Agreement may seek to modify the report, including seeking additional field work, pilot studies, computer modeling or other supporting technical work, only as provided in Paragraphs J.1. and J.2. below.

1. A Party may seek to modify a report, after finalization, if it determines, based on new information (i.e., information that became available, or conditions that became known after the report was finalized) that the requested modification is necessary. A Party may seek such a modification by submitting a concise written request to the Project Manager of the other Parties. The request shall specify the nature of the requested modification and how the request is based on new

information.

2. In the event that a consensus is not reached by the Project Managers on the need for a modification, any Party may invoke dispute resolution to determine if such modification shall be conducted. Modification of a report shall be required only upon a showing that: (1) the requested modification is based on significant new information, and (2) the requested modification could be of significant assistance in evaluating impacts on the public health or the environment, in evaluating the selection of remedial alternatives, or in protecting human health and the environment.

3. Nothing in this Subpart shall alter the EPA's or NDEC's ability to request the performance of additional work which was not contemplated by this Agreement. The Army's obligation to perform such work must be established by either a modification of a report or document or by amendment to this Agreement.

XI. RESOLUTION OF DISPUTES

Except as specifically set forth elsewhere in this Agreement, if a dispute arises under this Agreement, the procedures of this Part shall apply.

All Parties to this Agreement shall make reasonable efforts to informally resolve disputes at the Project Manager or immediate supervisor level. If resolution cannot be achieved informally, the procedures of this Part shall be implemented to resolve a dispute.

A. Within sixty (60) days after: (1) issuance of a draft final primary document pursuant to Part X (Consultation with EPA and NDEC) of this Agreement, or (2) any action which leads to or generates a dispute, the disputing Party shall submit to the other Parties a written statement of dispute setting forth the nature of the dispute, the work affected by the dispute, the disputing Party's position with respect to the dispute and the information the disputing Party is relying upon to support its position.

B. Prior to any Party's issuance of a written statement of dispute, the disputing Party shall engage the other Parties in informal dispute resolution among the Project Managers and/or their immediate supervisors. During this informal dispute resolution period the Parties shall meet as many times as are necessary to discuss and attempt resolution of the dispute.

C. The Dispute Resolution Committee (DRC) will serve as a forum for resolution of disputes for which agreement has not been reached through informal dispute resolution. Each Party shall designate one individual and an alternate to serve on the DRC. The individuals designated to serve on the DRC shall be employed at the policy level (Senior Executive Service (SES) or equivalent) or be delegated the authority to participate on the DRC for the purposes of dispute resolution under this Agreement. The EPA representative on the DRC is the Waste Management Division Director of EPA's Region 7. The Army's designated member is the District Engineer, U.S. Army Corps of Engineers,

Kansas City District. The NDEC designated representative is the Land Quality Division Chief. Written notice of any delegation of authority from a Party's designated representative on the DRC shall be provided to all other Parties pursuant to the procedures of Part XVIII (Project Managers).

D. Following elevation of a dispute to the DRC, the DRC shall have twenty-one (21) days to unanimously resolve the dispute and issue a written decision signed by all Parties. If the DRC is unable to unanimously resolve the dispute within this twenty-one (21) day period the written statement of dispute shall be forwarded to the Senior Executive Committee (SEC) for resolution, within seven (7) days after the close of the twenty-one (21) day resolution period.

E. The SEC will serve as the forum for resolution of disputes for which agreement has not been reached by the DRC. The EPA representative on the SEC is the Regional Administrator of EPA Region VII. The NDEC representative on the SEC is the Director of NDEC. The Army's representative on the SEC is the Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health), Office of the Assistant Secretary of the Army for Installation, Logistics and Environment. The SEC members shall, as appropriate, confer, meet and exert their best efforts to resolve the dispute and issue a written decision signed by all Parties. If unanimous resolution of the dispute is not reached within twenty-one (21) days, EPA's Regional Administrator shall issue a written position on the dispute. The

Army or NDEC may, within twenty-one (21) days of the Regional Administrator's issuance of EPA's position, issue a written notice elevating the dispute to the Administrator of EPA for resolution in accordance with all applicable laws and procedures. In the event that a Party elects not to elevate the dispute to the Administrator within the designated twenty-one (21) day escalation period, the Party shall be deemed to have agreed with the Regional Administrator's written position with respect to the dispute.

F. Upon escalation of a dispute to the Administrator of EPA pursuant to Subpart E, the Administrator will review and resolve the dispute within twenty-one (21) days. Upon request, and prior to resolving the dispute, the EPA Administrator shall meet and confer with the NDEC Director and the Army Secretariat Representative to discuss the issue(s) under dispute. Upon resolution, the Administrator shall provide the other Parties with a written final decision setting forth resolution of the dispute. The duties of the Administrator set forth in this Part shall not be delegated.

G. The State reserves its right to maintain an action under Section 121(f)(3)(B) of CERCLA, 42 U.S.C. § 9621(f)(3)(B) to challenge the selection of a remedial action that does not attain a legally applicable or relevant and appropriate standard, requirement, criteria or limitation.

H. The pendency of any dispute under this Part shall not affect the Army's responsibility for timely performance of the

work required by this Agreement, except that the time period for completion of work affected by such dispute shall be extended for a period of time usually not to exceed the actual time taken to resolve any good faith dispute in accordance with the procedures specified herein. All elements of the work required by this Agreement which are not affected by the dispute shall continue and be completed in accordance with the applicable schedule.

I. When dispute resolution is in progress, work affected by the dispute will immediately be discontinued if the Hazardous Waste Division Director for EPA's Region VII requests in writing, that work related to the dispute be stopped because, in EPA's opinion, such work is inadequate or defective, and such inadequacy or defect is likely to yield an adverse effect on human health or the environment, or is likely to have a substantial adverse effect on the remedy selection or implementation process. The State may request the EPA's Region VII Division Director to order work stopped for the reasons set out above. To the extent possible, the Party seeking work stoppage shall consult with the other Parties prior to initiating a work stoppage request. After stoppage of work, if a Party believes that the work stoppage is inappropriate or may have potential significant adverse impacts, the Party may meet with the Party ordering work stoppage to discuss the work stoppage. Following this meeting, and further consideration of the issues, the EPA Division Director will issue, in writing, a final decision with respect to the work stoppage. The final written

decision of the EPA Division Director may immediately be subjected to formal dispute resolution. Such dispute may be brought directly to either the DRC or the SEC, at the discretion of the Party requesting dispute resolution.

J. Within twenty-one (21) days of resolution of a dispute, pursuant to the procedures specified in this Part, the Army shall incorporate the resolution and final determination into the appropriate plan, schedule or procedures and proceed to implement this Agreement according to the amended plan, schedule or procedures.

K. Resolution of a dispute pursuant to this Part of the Agreement constitutes a final resolution of a dispute arising under this Agreement. All Parties shall abide by all terms and conditions of any final resolution of dispute obtained pursuant to this Part of this Agreement.

XII. EXTENSIONS

A. Either a timetable and deadline or a schedule shall be extended upon receipt of a timely request for extension and when good cause exists for the requested extension. Any request for extension by the Army shall be submitted in writing and shall specify:

1. The timetable and deadline or the schedule that is sought to be extended;
2. The length of the extension sought;
3. The good cause(s) for the extension; and

4. Any related timetable and deadline or schedule that would be affected if the extension were granted.

B. Good cause exists for an extension when sought in regard to:

1. An event of Force Majeure, as defined in Part XXXVIII (Force Majeure) of this Agreement;

②. A delay caused by another Party's failure to meet any requirement of this Agreement; *Review extensions*

3. A delay caused by the good faith invocation of dispute resolution or the initiation of judicial action;

4. A delay caused, or which is likely to be caused, by the grant of an extension in regard to another timetable and deadline or schedule; and

5. Any other event or series of events mutually agreed to by the Parties as constituting good cause.

C. Absent agreement of the Parties with respect to the existence of good cause, the Army may seek and obtain a determination through the dispute resolution process that good cause exists.

D. Within seven (7) days of (receipt) of a request for an extension of a timetable and deadline or a schedule, the EPA and NDEC shall advise the Army in writing of their respective positions on the request. Any failure by the EPA and NDEC to respond within the seven day period shall be deemed to constitute concurrence in the request for extension. If either the EPA or NDEC do not concur in the requested extension, EPA or NDEC shall include in its statement of nonconcurrence an explanation of the

basis for its position.

E. If there is consensus among the Parties that the requested extension is warranted, the Army shall extend the affected timetable and deadline or schedule accordingly. If there is no consensus among the Parties as to whether all or part of the requested extension is warranted, the timetable and deadline or schedule shall not be extended except in accordance with a determination resulting from the dispute resolution process.

F. Within seven (7) days of receipt of a statement of nonconcurrence with the requested extension, the Army may invoke dispute resolution.

G. A timely and good faith request for an extension shall toll any assessment of stipulated penalties or application for judicial enforcement of the affected timetable and deadline or schedule until a decision is reached on approval of the requested extension. If dispute resolution is invoked and the requested extension is denied, stipulated penalties may be assessed and may accrue from the date of the original timetable, deadline or schedule. Following the grant of an extension, an assessment of stipulated penalties or an application for judicial enforcement may be sought only to compel compliance with the timetable and deadline or schedule as most recently extended.

XIII. CREATION OF DANGER

A. In the event the EPA determines that activities conducted pursuant to this Agreement, or any other circumstance

or activity within the Army's control, may present an imminent and substantial endangerment to the health or welfare of the people on- or off-Site or to the environment, the EPA may direct, by written notice, or the NDEC Director may request the EPA to direct, the Army to cease further implementation of work at the Site for such period of time as necessary to abate the endangerment.

B. The EPA within 24 hours of directing the Army to cease work pursuant to this provision shall provide a written statement of the basis for its directing the cessation of work.

C. Within three (3) business days from the date of receipt of this written statement the Army may request a review of the work cessation. This request shall include a statement as to the Army's basis for recommending that work be resumed and as to possible measures to abate or mitigate the endangerment. Within seventy two (72) hours of an Army request for review, the EPA Division Director shall determine in writing whether continued work cessation is necessary. This final decision shall be subject to Dispute Resolution as set forth in Part XI.

D. Any such work ceased as directed by the EPA under this Part may be a basis for modifying the schedule of activities affected by such work cessation.

XIV. REPORTING

A. Throughout the course of the activities required by this Agreement, the Army shall submit to the EPA and NDEC written quarterly progress reports, which shall be submitted by the

thirtieth (30th) day after the end of each calendar quarter following the effective date of this Agreement. Progress reports shall include:

1. A description of the actions completed during the calendar quarter towards compliance with this Agreement;
2. A description of all actions scheduled for completion during the calendar quarter which were not completed, along with a statement indicating why such actions were not completed and an anticipated completion date;
3. Copies of all data and sampling and test results and all other laboratory deliverables received or produced by the Army and completed pursuant to this Agreement during the quarter, if not previously provided, including all analytical data which has passed through quality assurance/quality control (QA/QC) procedures; and
4. A description of the actions which are scheduled for the following quarter.

B. The Parties recognize that data from sampling and analysis which has not yet received quality assurance/quality control review may not be reliable. Accordingly, provision of unreviewed data under this Agreement is limited as set forth in Part XVI (Sampling and Data/Document Availability) below.

XV. MONITORING AND QUALITY ASSURANCE

A. In accordance with Part X (Consultation with EPA and NDEC) of this Agreement, the Army shall develop a Quality Assurance Project Plan (QAPP) or Chemical Data Acquisition Plan

(CDAP), for each Remedial Investigation, including investigations conducted for an Operable Unit, for review and comment by the EPA and NDEC. Each QAPP or CDAP shall be a primary document, and shall be prepared in accordance with the EPA Document QAMS-005/80, or, in the alternative, Engineer Regulation (ER) 1110-1-263 may be followed subject to the comments set out in Appendix A of this Agreement; and each shall include sampling methodology, sample storage and shipping methods, documentation, sampling and chain-of-custody procedures, calibration procedures, and laboratory quality control/quality assurance procedures and frequency as well as any other items covered by the selected guidance. The Army shall use the quality assurance/quality control and chain of custody procedures specified in the QAPPs or CDAPs throughout all field investigation, sample collection and laboratory analysis activities. The Army shall inform and obtain the concurrence of the EPA and NDEC in planning all sampling and analysis.

B. The Army shall submit all methods and protocols used for sampling and analysis to the EPA and NDEC for review and concurrence. The Army shall ensure that the laboratory(s) utilized for sample analysis participate in the U.S. Army Corps of Engineers quality assurance/quality control (QA/QC) program outlined in ER 1110-1-263 or a QA/QC program equivalent to that specified in the documents entitled "U.S. EPA Contract Laboratory Program Statement of Work for Organic Analysis" (October 1986) and "U.S. EPA Contract Laboratory Program Statement of Work for

Inorganic Analysis" (July 1985). Upon request by EPA and NDEC, all laboratories analyzing samples pursuant to this Agreement shall analyze performance evaluation samples provided by the EPA and NDEC to demonstrate the quality of analytical data from each laboratory used by the Army. Upon request by EPA and NDEC, the Army shall provide the items of supporting laboratory documentation for review by EPA and NDEC which are set forth in Appendix B.

C. The Army shall allow the EPA and NDEC and their authorized representatives access to the laboratory(s) and personnel utilized by the Army for sample collection and analysis and other field work.

XVI. SAMPLING AND DATA/DOCUMENT AVAILABILITY

A. The Army shall transmit to EPA and NDEC within 20 days of the Army's receipt or generation thereof, all results of sampling, tests and other data collection activities. For data resulting from sampling and analysis, subject to the qualifications set forth below, this shall include all data which has been verified by quality assurance/quality control (QA/QC) procedures established in accordance with the previous section, along with all QA/QC documentation. Data to be provided shall include, but not be limited to, results of sampling all areas known or suspected to have been contaminated by hazardous substances, and any water supply wells and systems, included in the remedial investigation.

B. Notwithstanding the previous paragraph, all results of

sampling, tests and other data collection activities shall be transmitted to EPA no later than one hundred and twenty (120) days after the original field sampling activity. In the event that, because of QA/QC delays, QA/QC review for a particular sample or analysis is not completed within one hundred and twenty (120) days of the original field sampling, the unreviewed data corresponding to each such sample will be immediately transmitted to EPA pending completion of the QA/QC review, with the corresponding QA/QC-reviewed data transmitted to EPA and NDEC within twenty (20) days of its becoming available to the Army, along with all QA/QC documentation.

C. At the request of the EPA or NDEC, the Army shall allow the Party making the request to collect split or duplicate samples of all samples collected pursuant to this Agreement. The Army shall notify the EPA and NDEC at least fourteen (14) days prior to any field work including but not limited to sample collection, well drilling, installation, or testing. The EPA and NDEC will make the quality assured results of all sampling, tests, or other data available to each other and to the Army within twenty (20) days of receipt of such results.

XVII. CONFIDENTIAL BUSINESS INFORMATION

A. If applicable, the Army may assert a business confidentiality claim covering any confidential business information submitted pursuant to this Agreement. Except as provided otherwise in Section 104(e)(7) of CERCLA, the information covered by such a claim will be disclosed by the EPA

only to the extent and by the procedures specified in 40 C.F.R. Part 2, Subpart B. A claim of business confidentiality concerning information submitted to EPA may be made by placing on or attaching to the information, at the time it is submitted to the EPA, a cover sheet, stamped or typed legend or other suitable form of notice employing language such as "trade secret", "proprietary", or "company confidential". Allegedly confidential portions of otherwise non-confidential documents should be clearly identified and may be submitted separately to facilitate identification and handling by the EPA. If confidential treatment is sought only until a certain date or occurrence of a certain event, the notice should so state. If no such claim accompanies the information when it is received by the EPA, the information may be made available to the public without further notice to the Army. Results of environmental analysis shall not be claimed as confidential by the Army.

B. Information determined to be confidential by the EPA pursuant to 40 C.F.R. Part 2 shall be afforded the protection specified therein. A copy of the request for confidentiality shall be provided to NDEC without the accompanying attachments. At such time as a claim for confidentiality is denied by EPA, the information will be transmitted to NDEC.

XVIII. PROJECT MANAGERS

A. The following individuals are designated as Project Manager for the respective parties:

For the EPA:

Greg McCabe
Waste Management Division
U.S. Environmental Protection Agency
Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101
Telephone Number 913/551-7709

For the Army:

Steve Birchmeier
Toxic and Hazardous Waste Management Branch
U.S. Army Corps of Engineers,
Kansas City District
601 E. 12th Street
Kansas City, Missouri 64106-2896
Telephone Number 816/426-2845

For NDEC:

Richard Schlenker
Superfund Unit
Hazardous Waste Section
Land Quality Division
Nebraska Department of Environmental Control
301 Centennial Mall South
Lincoln, NE 68509-8922
Telephone Number 402/471-3388

B. All verbal notices and written documents, including, but not limited to, written notices, reports, plans, and schedules, requested or required to be submitted pursuant to this Agreement shall be directed to the designated Project Managers. To the maximum extent possible, all communications between the Parties concerning the terms and conditions of this Agreement shall be directed through the Project Managers. Each Project Manager shall be responsible for assuring that all communications from the other Project Managers are appropriately disseminated and processed by the entities which the Project Managers represent.

C. The EPA and NDEC Project Managers shall have the authority to:

1. Take samples, including split samples of the Army samples and ensure that work is performed properly, pursuant to the EPA protocols as well as pursuant to the Attachments and plans incorporated into this Agreement;

2. Observe all activities performed pursuant to this Agreement, take photographs or have photographs taken, and make such other reports on the progress of the work as the Project Manager deems appropriate;

3. Review all records, files and documents relevant to this Agreement.

D. Any Project Manager may seek, in cooperation with the other Project Managers, minor field modifications to the work to be performed pursuant to this Agreement, or in techniques, procedures or designs utilized in carrying out this Agreement, which are necessary to the completion of the final remedial action.

E. Any field modifications proposed under this Part by any Party must be approved by all three (3) Project Managers to be effective. If agreement cannot be reached on the proposed additional work or modification to work, dispute resolution as set forth in Part XI (Resolution of Disputes) may be used in addition to this Part.

F. Within five (5) business days following a minor field modification made pursuant to this Part, the Project Manager who

requested the modification shall: (1) prepare a memorandum detailing the modification and the reasons therefor, and (2) provide the memorandum to the other Project Managers. The Parties recognize that modifications and corresponding changes to remedial investigation and response action contracts may necessitate extensions of timetables and deadlines.

G. The Project Manager for the Army, or an authorized designated representative, shall be physically present on the site, or reasonably available, to supervise site work performed pursuant to this Agreement and shall be available to the EPA and NDEC for the pendency of this Agreement. The EPA and NDEC Project Managers need not be present at the Site and their absence from the Site shall not be cause for work cessation.

H. Any party may change its designated Project Manager by notifying the other Parties, in writing, at least five (5) days prior to the change.

XIX. ACCESS

A. The parties agree that EPA and NDEC shall have access to all property upon which any activities are being conducted or have been conducted pursuant to this Agreement. The EPA and NDEC and their authorized representatives shall be able to enter and move freely about such property at all reasonable times for the purposes related to activities conducted pursuant to this Agreement, including, inter alia, the following:

1. Inspecting and copying records, files, photographs, operating logs, contracts and other documents relative to the

implementation of this Agreement;

2. Reviewing the status of activities being conducted pursuant to this Agreement;
3. Collecting such samples or conducting such tests as the EPA or NDEC determines are necessary or desirable to monitor compliance with the terms of this Agreement or to protect the public health, welfare, or the environment;
4. Using sound, optical or other types of recording equipment to record activities which have been or are being conducted pursuant to this Agreement; and
5. Verifying data and other information submitted by the Army pursuant to this Agreement.

B. For any property at the Site owned by the Army or the U.S. Department of Defense or an agency thereof, the Army agrees to provide access to the property to carry out all work under this Agreement and for EPA and NDEC to carry out all of the activities described in Paragraph A. above. For property at the Site not owned by the Army or the U.S. Department of Defense or an agency thereof, the Army shall use its best efforts to obtain access agreements from the property owners, and any lessees. Such access shall provide the right to carry out all work under this Agreement for the Army, and for EPA, NDEC and their representatives to carry out all of the activities described in Paragraph A. above. In the event that the Army is unable to obtain such access agreements in a timely manner, the Army shall promptly notify the EPA and NDEC.

C. All Parties with access to NOP pursuant to this section shall comply with all applicable health and safety plans.

XX. RECORD PRESERVATION

The Army shall, without regard to any document retention policy to the contrary, preserve during the pendency of this Agreement and for a minimum of seven (7) years after its termination, all records and documents in its possession, custody or control which relate in any way to hazardous substances generated, stored, treated or disposed of on the Site, the release or threatened release of hazardous substances from the Site or work performed pursuant to this Agreement. After this seven year period has lapsed, the Army shall notify the EPA at least sixty (60) days prior to the destruction of any such document. The Army upon request by EPA or NDEC shall make available documents or copies of such documents unless withholding is authorized as determined by law.

XXI. RESERVATION OF RIGHTS

A. Notwithstanding compliance with the terms of this Agreement, the Army is not released from liability, if any, for any actions beyond the terms of this Agreement taken by the EPA or NDEC with respect to the Site.

B. Nothing in this Agreement shall preclude the EPA and NDEC from exercising any administrative, legal, or equitable remedies available to it in the event that:

1. Either conditions previously unknown or undetected by the EPA arise or are discovered at the Site or the EPA

receives information not previously available concerning the premises it employed in reaching this Agreement; and

2. The implementation of the requirements of this Agreement are no longer protective of public health and the environment.

C. EPA and NDEC reserve their respective rights to undertake any response action(s), whether on-site or off-site, to address any release or threat of release of hazardous substances or pollutants and contaminants as may be authorized by law, and, to the extent permitted by law, to seek reimbursement from the Army and/or any other liable person for costs incurred. Furthermore, except as specifically provided in this Agreement, nothing in this Agreement shall restrict EPA and NDEC from pursuing any enforcement or other legal or equitable action against any person or entity under CERCLA or any other applicable law. EPA and NDEC specifically reserve such rights to actions against the Army related to PCBs and asbestos, including an interagency agreement pursuant to Section 120 of CERCLA.

D. The Army reserves the right to raise or assert any defense, whether procedural or substantive, in law or equity, or to raise any issue as to jurisdiction, or standing of any Party, or any other matter in any proceeding related or not related to this Agreement, which the Army might otherwise be entitled to raise or assert.

XXII. OTHER APPLICABLE LAWS

A. Except as otherwise provided in Part XXIII (Permits),

all actions required to be taken pursuant to this Agreement shall be undertaken in accordance with the requirements of all applicable federal, State and local laws and regulations, including, but not limited to, any permitting or licensing requirements.

B. All reports, plans, specifications, and schedules submitted pursuant to this Agreement are, upon approval by the EPA and NDEC, incorporated into this Agreement. Any noncompliance with such approved reports, plans, specifications or schedules shall be considered a failure to achieve compliance with the requirements of this Agreement.

XXIII. PERMITS

A. As provided in Section 121(e)(1) of CERCLA, 42 U.S.C. § 9621(e)(1), no Federal, State, or local permit shall be required for those portions of the response actions undertaken pursuant to this Agreement which are conducted entirely on-site. Such on-site response actions must satisfy all applicable or relevant and appropriate Federal and State standards, requirements, criteria, or limitations which would have been included in any such permit. For each response action proposed by the Army which in the absence of § 121(e)(1) of CERCLA would require a permit, the Army shall include the following information in the Feasibility Study report:

1. The identity of each permit which would otherwise be required;
2. The standards, requirements, criteria, or

limitations which have to be met to obtain each such permit, including input received from NDEC in accordance with Section 121(d)(2)(A)(ii) of CERCLA; and

3. A description of how the proposed response action will meet the standards, requirements, criteria or limitations which would be included in each such permit.

B. The Army shall make timely and complete application or request for all permits, licenses or other authorizations necessary to implement those portions of any response actions required by this Agreement which are not conducted entirely on-site. Each work plan shall identify each such permit, license or authorization addressed therein by providing the following information:

1. The agency or instrumentality from whom the permit, license or authorization must be sought and the agency or instrumentality which would grant or issue the permit, license or authorization, if not the same as the one from which it must be sought;

2. The activity which would be the subject of the permit, license or authorization; and

3. A description of the procedure to be followed in securing such permit, license or authorization, including the date by which an application must be filed and the anticipated duration of the permit, license or authorization.

C. If a permit which is necessary for implementation of this Agreement is not issued, or is issued or renewed in a manner

which is materially inconsistent with the requirements of this Agreement, the Army shall notify the EPA and NDEC in writing of its intention to propose modifications to primary documents thereby affected in accordance with Paragraph X.J. (Subsequent Modification of Reports) of this Agreement. Notification by the Army of its intention to propose modifications shall be transmitted within fifteen (15) calendar days after receipt by the Army of notification that: (1) a permit will not be issued; (2) a permit has been issued or reissued in a manner which is materially inconsistent with a remedy selected pursuant to this Agreement; or (3) a final determination with respect to any appeal related to the issuance or reissuance of such a permit has been entered, whichever is later. Whenever such an appeal is filed, the Army shall notify the EPA and NDEC of such appeal within fifteen (15) calendar days. Within thirty (30) days from the date the Army submits its notice of intention to propose modifications, the Army shall submit to the EPA and NDEC its proposed modifications with an explanation of its reasons in support thereof. Such proposed modifications will be reviewed in accordance with Part X (Consultation with EPA and NDEC) of this Agreement.

D. If Army submits proposed modifications prior to a final determination of any appeal taken on a permit needed to implement this Agreement, the EPA and NDEC may elect to delay review of the proposed modifications until after such final determination is entered.

E. During appeal of any permit required to implement this Agreement or during review of proposed modifications as provided in Subpart D above, the Army shall continue to implement those portions of this Agreement which can be reasonably implemented pending final resolution of the permit issue(s).

F. The Army will comply with all applicable, relevant and appropriate Federal and State hazardous waste management requirements at the Site, except as otherwise provided in this Agreement.

XXIV. FIVE YEAR REVIEW

If a remedy is selected for the Site which results in any hazardous substances, pollutants or contaminants remaining at the Site, the EPA shall, consistent with Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), review the remedial action no less than every five years after the initiation of the final remedial action to assure that human health and the environment are being protected by the remedial action being implemented. If upon such review it is the judgement of the EPA that additional action or modification of the remedial action is appropriate in accordance with Section 104 or 106 of CERCLA, 42 U.S.C. §§ 9604 and 9606, the EPA shall require the Army to implement such additional or modified action.

XXV. OTHER CLAIMS

A. Nothing in this Agreement shall constitute or be construed as a bar or release from any claim, cause of action or demand in law or equity by or against any person, firm,

partnership or corporation for any liability arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Site.

B. The EPA and NDEC shall not be held out as a party to any contract entered into by the Army to implement the requirements of this Agreement.

XXVI. AMENDMENT OF THE AGREEMENT

This Agreement may be amended by the written agreement of all Parties hereto. No such amendment shall be final until signed by the Parties. Each such amendment shall be effective on the last date such written agreement is signed by all Parties.

XXVII. PUBLIC PARTICIPATION

A. In accordance with Section 117 of CERCLA, 42 U.S.C. § 9617, before adoption of any plan for remedial action pursuant to this Agreement, the Army shall:

1. Publish in a local newspaper, or newspapers of general circulation, a notice and brief analysis of the Proposed Plan, including an explanation of the Proposed Plan and alternatives considered;
2. Make such plan available to the public; and
3. Provide a reasonable opportunity for submission of written and oral comments and an opportunity for a public meeting at or near the facility regarding the Proposed Plan and any proposed findings under Section 121(d)(4) of CERCLA, 42 U.S.C. § 9621(d)(4).

B. Before commencement of any remedial action, the Army shall publish a notice of the Record of Decision adopted and shall make available to the public, the plan, a discussion of any significant changes and the reasons for the changes in the Proposed Plan, a response to each significant comment, criticism, and new data submitted during the public comment on the Proposed Plan.

C. The Army shall develop and implement a Community Relations Plan (CRP) which responds to the need for an interactive relationship with all interested community elements, regarding activities and elements of work undertaken by the Army. The CRP shall recognize and address the need for public information meetings to be held during RI/FS and RD/RA activities. The Army agrees to develop and implement a CRP in a manner consistent with Section 117 of CERCLA, the NCP, EPA guidelines set forth in EPA's Community Relations Handbook entitled "Community Relations in Superfund: A Handbook", OSWER Directive 92930.0-3B (June 1988), or a subsequent version of this manual which is in effect at the time the CRP is prepared, which EPA will make available upon request. (The project managers shall mutually confirm the applicability of any new guidance at the time the CRP is prepared.)

D. As part of its Community Relations activities, the Army shall maintain a mailing list of interested and affected individuals. In the event of any request for information from the public concerning NOP, the EPA and NDEC will submit the name of the requester and the specific request to the Army. The Army

shall add the name of the requester to the mailing list and respond to the request. The Army shall provide the EPA and NDEC with annual updates of the mailing list.

E. Any Party planning to issue a press release to the media regarding any of the work required by this Agreement shall advise the other Parties of such press release and the contents thereof.

F. Within thirty (30) days of the effective date of this Agreement, the Army shall establish and maintain the Administrative Record File, which will include an index of all documents contained therein. The Administrative Record File shall be maintained at or near the Site in accordance with Section 113(k) of CERCLA, 42 U.S.C § 9613(k). The Administrative Record File shall be established and maintained and routinely updated in accordance with current and future EPA policy and guidelines. A copy of each document placed in the Administrative Record File will be provided to EPA and NDEC, along with an updated index, on at least a quarterly basis beginning with the first calendar quarter following the effective date of this Agreement. The EPA, after consultation with NDEC, shall have the ability to add documents to the Administrative Record File.

include in Quarterly Report

G. The Army shall follow the public participation requirements of Section 113(k) of CERCLA.

XXVIII. PUBLIC COMMENT ON AGREEMENT

A. Within fifteen (15) days of the date the EPA receives a fully executed copy of this Agreement, the EPA shall announce the availability of the Agreement to the public for review and

comment and shall accept comments from the public for a period of forty-five (45) days after such announcement. Upon completion of the public comment period, the EPA shall provide copies of all comments received to the Army and NDEC within seven (7) days.

B. Upon completion of the public comment period, each of the Parties shall review the comments and shall determine either that:

1. The Agreement should be made effective in its present form; or

2. Modification of the Agreement is necessary based upon public comments received.

C. Any Party that determines modification of the Agreement is necessary based upon public comments received shall provide a written request for modification to each of the other Parties. This request for modification shall be made within thirty (30) days of the date that Party received copies of the comments from the EPA, or, in the event the EPA requests modification, within thirty (30) days of the date copies of the comments were provided to the other Parties. The request for modification shall include:

1. A statement of the basis for determining the modification is necessary; and

2. Proposed revisions to the Agreement addressing the modification.

D. If no request for modification is made within the time period specified above, this Agreement shall be made effective in its present form in accordance with Part XXXVII (Effective Date)

hereof.

E. If any Party requests modification of the Agreement as provided in this Part based upon public comments received, the Parties shall meet to discuss the proposed modification. If the Parties agree on the modification, the Agreement shall be revised, in writing, in accordance with the agreed upon modification. The revised Agreement shall be signed by representatives of each Party and shall be made effective in accordance with Part XXXVII (Effective Date) hereof. If the Parties are unable to agree upon such modification, any Party reserves the right to withdraw from the Agreement within 60 days of receipt of the written request for modification. Before any Party exercises its right to withdraw from the Agreement by written notice, it shall make its SEC representative, as identified in Paragraph XI.E. hereof, available to meet with the other Parties' SEC representatives to discuss the withdrawal.

F. In the event of a significant modification to the Agreement after public comment, notice procedures of Sections 117 of CERCLA and 211 of SARA shall be followed and a responsiveness summary published by EPA.

XXIX. DEADLINES

A. The following deadlines have been established, by EPA and the Army after coordination with the State, for the submittal of draft primary documents pursuant to this Agreement for Operable Units 1 and 2:

| <u>Primary Document</u> | <u>Deadline</u> | |
|---|---|--|
| | <u>Operable Unit 1</u> | <u>Operable Unit 2</u> |
| Community Relations Plan | October 29, 1991 or 1 week following the effective date of the Agreement (effective date), whichever is later | |
| RI Work Plan, including SAP, and QAPP or CDAP | Oct. 1, 1991 or 1 week after the effective date, whichever is later | Feb. 4, 1992 or 5 weeks after the effective date, whichever is later |
| FS Work Plan | Oct. 1, 1991 or 1 week after the effective date, whichever is later | May 22, 1992 |
| Conceptual Program Plan | October 1, 1991 or 1 week after the effective date, whichever is later | |
| RI Report | May 15, 1992 | 259 days after the draft FS Workplan deadline <i>5 Feb 93</i> |
| Baseline Risk Assessment | January 15, 1992 or 3 weeks after the effective date, whichever is later <i>15 May 92</i> | 291 days after the draft FS Workplan deadline <i>9 Mar 93</i> |
| FS Report | 115 days after the draft RI Report deadline <i>7 Apr 92</i> | 388 days after the draft FS Workplan deadline <i>19 Jun 93</i> |
| Proposed Plan | 153 days after the draft RI Report deadline <i>15 Oct 92</i> | 388 days after the draft FS Workplan deadline <i>19 Jun 93</i> |
| ROD, including Responsiveness Summary | 290 days after the draft RI Report deadline <i>11 Mar 93</i> | 529 days after the draft FS Workplan deadline <i>18 Nov 93</i> |

B. With respect to Operable Unit 3, including the Landfill located near the former sewage treatment plant, in which containers of chemical surety material (CSM) are suspected to have been disposed, within six months of the effective date of

this Agreement, the Army shall submit to EPA and NDEC proposed deadlines for the completion of the following draft primary documents for Operable Unit 3:

- a. Remedial Investigation/Feasibility Study Work Plan, including Sampling and Analysis Plans, and QAPPs or CDAPs
- b. Remedial Investigation Report
- c. Baseline Risk Assessment
- d. Feasibility Study Report
- e. Proposed Plan
- f. Record of Decision, including Responsiveness Summary

The RI/FS for OU 3 shall include evaluation of the landfill for possible presence of CSM.

Within 15 days of receipt of these proposed deadlines, the EPA, in conjunction with NDEC, shall review and provide comments to the Army regarding the proposed deadlines. Within fifteen (15) days following receipt of the comments the Army shall, as appropriate, make revisions and reissue the proposal. The Parties shall meet as necessary to discuss and finalize the proposed deadlines. If the Parties agree on proposed deadlines, the finalized deadlines shall be incorporated into the appropriate Work Plans. If the Parties fail to agree on the proposed deadlines within forty-five (45) days of the Army's receipt of the comments, the matter shall immediately be submitted for dispute resolution pursuant to part XI (Resolution of Disputes) of this Agreement.

C. Within twenty-one (21) days of issuance of the Record of Decision, the Army shall propose deadlines for completion of the

following draft primary documents:

1. Remedial Design Work Plans
2. Final Remedial Designs
3. Remedial Action Work Plans, and
4. Remedial Action Reports

Within 15 days of receipt of these proposed deadlines, the EPA, in conjunction with NDEC, shall review and provide comments to the Army regarding the proposed deadlines. Within fifteen (15) days following receipt of the comments the Army shall, as appropriate, make revisions and reissue the proposal. The Parties shall meet as necessary to discuss and finalize the proposed deadlines. If the Parties agree on proposed deadlines, the finalized deadlines shall be incorporated into the appropriate Work Plans. If the Parties fail to agree on the proposed deadlines within forty-five (45) days of the Army's receipt of the comments, the matter shall immediately be submitted for dispute resolution pursuant to part XI (Resolution of Disputes) of this Agreement.

D. The deadlines set forth in this Part, or to be established as set forth in this Part, may be extended pursuant to Part XII (Extensions) of this Agreement. The Parties recognize that one possible basis for extension of the deadlines for completion of the Remedial Investigation and Feasibility Study Reports is the identification of significant new Site conditions during the performance of the Remedial Investigation.

XXX. TARGET DATES

A. Within twenty-one (21) days after the effective date of

this Agreement, the Army shall provide target completion dates for secondary documents required pursuant to Part X.D. (Secondary Documents) during the RI and FS process. Target dates for secondary documents are not subject to Parts XI (Resolution of Disputes), XII (Extensions), XXXI (Enforceability) and XXXII (Stipulated Penalties) of this Agreement, and may be adjusted by the Army after consultation with the EPA and NDEC.

XXXI. ENFORCEABILITY

A. The Parties agree that:

1. Upon the effective date of this Agreement, any standard, regulation, condition, requirement or order which has become effective under CERCLA and is incorporated into this Agreement is enforceable by any person pursuant to Section 310 of CERCLA, and any violation of such standard, regulation, condition, requirement or order will be subject to civil penalties under Sections 310(c) and 109 of CERCLA; and,

2. All timetables or deadlines associated with the RI/FS shall be enforceable by any person pursuant to Section 310 of CERCLA, and any violation of such timetables or deadlines will be subject to civil penalties under Sections 310(c) and 109 of CERCLA;

3. All terms and conditions of this Agreement which relate to operable units or final remedial actions, including corresponding timetables, deadlines or schedules, and all work associated with the operable units or final remedial actions, shall be enforceable by any person pursuant to Section 310(c) of

CERCLA, and any violation of such terms or conditions will be subject to civil penalties under Sections 310(c) and 109 of CERCLA; and

4. Any final resolution of a dispute pursuant to Part XI of this Agreement which establishes a term, condition, timetable, deadline or schedule shall be enforceable by any person pursuant to Section 310(c) of CERCLA, and any violation of such term, condition, timetable, deadline or schedule will be subject to civil penalties under Sections 310(c) and 109 of CERCLA.

B. Nothing in this Agreement shall be construed as authorizing any person to seek judicial review of any action or work where review is barred by any provision of CERCLA, including Section 113(h) of CERCLA.

C. Nothing in this Agreement shall be construed as a restriction or waiver of any rights the EPA or the NDEC may have under CERCLA, including but not limited to any rights under Sections 113 and 310, 42 U.S.C. § 9613 and 9659. The Army does not waive any rights it may have under CERCLA Section 120, SARA Section 211 and Executive Order 12580.

D. For disputes arising under this Agreement, the Parties agree to exhaust their rights under Part XI (Resolution of Disputes) prior to exercising any rights to judicial review that they may have.

E. The Parties agree that all Parties shall have the right to enforce the terms of this Agreement.

XXXII. STIPULATED PENALTIES

A. In the event that the Army fails to submit one of the primary documents listed in Section XXIX, Paragraphs A, B, and C to either the EPA or NDEC pursuant to the appropriate timetable or deadline in accordance with the requirements of this Agreement, or fails to comply with a term or condition of this Agreement which relates to an operable unit or final remedial action, the EPA may assess a stipulated penalty against the Army, unless such failure is a result of Force Majeure as defined in Section XXXIII (Force Majeure) of this Agreement. A stipulated penalty may be assessed in an amount not to exceed \$5,000 for the first week (or part thereof), and \$10,000 for each additional week (or part thereof) for which a failure set forth in this Paragraph occurs.

B. Upon determining that the Army has failed in a manner set forth in paragraph A, the EPA shall so notify the Army in writing. If the failure in question is not already subject to dispute resolution at the time such notice is received, the Army shall have fifteen (15) days after receipt of the notice to invoke dispute resolution on the question of whether the failure did in fact occur. The Army shall not be liable for the stipulated penalty assessed by EPA if the failure is determined, through the dispute resolution process, not to have occurred. No assessment of a stipulated penalty shall be final until the conclusion of dispute resolution procedures related to the assessment of the stipulated penalty.

C. The annual reports required by Section 120(e)(5) of

CERCLA shall include, with respect to each final assessment of a stipulated penalty against the Army under this Agreement, each of the following:

1. The facility responsible for the failure;
2. A statement of the facts and circumstances giving rise to the failure;
3. A statement of any administrative or other corrective action taken at the relevant facility, or a statement of why such measures were determined to be inappropriate;
4. A statement of any additional action taken by or at the facility to prevent recurrence of the same type of failure; and
5. The total dollar amount of the stipulated penalty assessed for the particular failure.

D. Stipulated penalties assessed pursuant to this Part shall be payable to the Hazardous Substance Superfund only in the manner and to the extent expressly provided for in Acts authorizing funds for, and appropriations to, the U.S. Department of Defense (DOD).

E. In no event shall this Part give rise to a stipulated penalty in excess of the amount set forth in Section 109 of CERCLA, 42 U.S.C. § 9609.

F. This Part shall not affect the Army's ability to obtain an extension of a timetable, deadline or schedule pursuant to Part XII (Extensions) of this Agreement.

G. Nothing in this Agreement shall be construed to render any officer or employee of the Army personally liable for the

payment of any stipulated penalty assessed pursuant to this Part.

XXXIII. FORCE MAJEURE

A Force Majeure shall mean any event arising from causes beyond the control of a Party that causes a delay in or prevents the performance of any obligation under this Agreement, including, but not limited to, acts of God; fire; war; insurrection; civil disturbance; explosion; unanticipated breakage or accident to machinery, equipment or lines of pipe despite reasonably diligent maintenance; adverse weather conditions that could not be reasonably anticipated; unusual delay in transportation; restraint by court order or order of public authority; inability to obtain, at reasonable cost and after exercise of reasonable diligence, any necessary authorizations, approvals, permits or licenses due to action or inaction of any governmental agency or authority other than the Army; delays caused by compliance with applicable statutes or regulations governing contracting, procurement or acquisition procedures, despite the exercise of reasonable diligence; and insufficient availability of appropriated funds, if the Army shall have made timely request for such funds as part of the budgetary process as set forth in Part XXXIV (Funding) of this Agreement. A Force Majeure shall also include any strike or other labor dispute, whether or not within the control of the Parties affected thereby. Force Majeure shall not include increased costs or expenses of Response Actions, whether or not anticipated at the time such Response Actions were initiated.

XXXIV. FUNDING

A. It is the expectation of the Parties to this Agreement that all obligations of the Army arising under this Agreement will be fully funded. The Army agrees to seek sufficient funding through the DOD budgetary process to fulfill its obligations under this Agreement.

B. In accordance with Section 120(e)(5)(B) of CERCLA, 42 U.S.C. § 9620(e)(5)(B), the DOD shall include in its annual report to Congress the specific cost estimates and budgetary proposals associated with the implementation of this Agreement.

C. Any requirement for the payment or obligation of funds, including stipulated penalties, by the Army established by the terms of this Agreement shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. § 1341. In cases where payment or obligation of funds would constitute a violation of the Anti-Deficiency Act, the dates established requiring the payment or obligation of such funds shall be appropriately adjusted.

D. If appropriated funds are not available to fulfill the Army's obligations under this Agreement, EPA and NDEC reserve the right to initiate an action against any other person, or to take any response action, which would be appropriate absent this Agreement.

E. Funds authorized and appropriated annually by Congress under the "Environmental Restoration, Defense" appropriation in the Department of Defense Appropriation Act and allocated by the

Deputy Assistant Secretary of Defense (Environment) to the Army will be the source of funds for activities required by this Agreement consistent with Section 211 of SARA, 10 U.S.C. Chapter 160. However, should the Environmental Restoration, Defense appropriation be inadequate in any year to meet the total Army CERCLA implementation requirements, the DOD shall employ and the Army shall follow a standardized DOD prioritization process which allocates that year's appropriations in a manner which maximizes the protection of human health and the environment. A standardized DOD prioritization model shall be developed and utilized with the assistance of EPA and the states.

XXXV. REIMBURSEMENT OF STATE EXPENSES

A. The parties agree that the terms and conditions of this Part shall apply until such time as these terms are superseded by an effective Department of Defense/State Memorandum of Agreement (DSMOA) and a site-specific cooperative agreement for state cost reimbursement at formerly owned federal facilities.

B. The NDEC may request management assistance funds from EPA sufficient to reimburse the NDEC for all reasonable costs it incurs in implementing this Agreement which are not inconsistent with the National Contingency Plan. EPA agrees that this site is eligible for management assistance funds from EPA, subject to 40 C.F.R. Part 35, Subpart O, until such time as the Army agrees to provide state reimbursement.

C. The NDEC reserves the right to withdraw from this Agreement should adequate funding for reimbursement of state costs not be provided. The NDEC further retains all of its legal

and equitable rights and remedies to recover its costs.

XXXVI. TERMINATION

The provisions of this Agreement shall be deemed satisfied and terminated upon receipt by the Army of written notice from the EPA and the NDEC Director that the Army has demonstrated, to the satisfaction of the EPA and NDEC, that all the terms of this Agreement have been completed.

XXXVII. EFFECTIVE DATE

This Agreement is effective upon issuance of a notice to the Parties by the EPA following implementation of Part XXVIII (Public Comment on Agreement) of this Agreement.

XXXVIII. EXECUTION OF THIS DOCUMENT

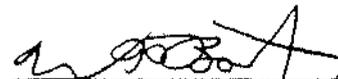
Each Party to this Agreement (EPA, NDEC, and the Army) shall furnish its authorized signature on a separate signature page and such signature page shall then be returned to EPA. Each signature page to this Agreement shall be deemed as an original; all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the Army, EPA, and NDEC have affixed their authorized signatures hereto:

SIGNATURE PAGE
INTERAGENCY AGREEMENT, FORMER NEBRASKA ORDNANCE PLANT SITE
MEAD, NEBRASKA
DOCKET NO. VII-91-F-0028

For the United States Department of the Army:

26 Sep 91
Date



Wilbur H. Boutin, Jr.
Colonel, U.S. Army
District Engineer,
U.S. Army Corps of Engineers,
Kansas City District

Date

Lewis D. Walker
Deputy Assistant Secretary of the Army
(Environment, Safety and Occupational
Health) Office of the Assistant
Secretary of the Army for Installations,
Logistics and Environment

SIGNATURE PAGE
INTERAGENCY AGREEMENT, FORMER NEBRASKA ORDNANCE PLANT SITE
MEAD, NEBRASKA
DOCKET NO. VII-91-F-0028

For the United States Department of the Army:

Date

Wilbur H. Boutin
Colonel, U.S. Army
District Engineer,
U.S. Army Corps of Engineers,
Kansas City District

9/27/91
Date

Lewis D. Walker
Lewis D. Walker
Deputy Assistant Secretary of the Army
(Environment, Safety and Occupational
Health) Office of the Assistant
Secretary of the Army for Installations,
Logistics and Environment

SIGNATURE PAGE
INTERAGENCY AGREEMENT, FORMER NEBRASKA ORDNANCE PLANT SITE
MEAD, NEBRASKA
DOCKET NO. VII-91-F-0028

For the U.S. Environmental Protection Agency:

9/26/91
Date

Morris Kay
Morris Kay
Regional Administrator
EPA, Region VII

•
Former Nebraska Ordnance Plant
Interagency Agreement

Appendix A



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
25 FUNSTON ROAD
KANSAS CITY, KANSAS 66115

RECEIVED

FEB 15 1990

PREP SECTION

February 12, 1990

MEMORANDUM

SUBJECT: RQAO Document Number 90070:
Engineering and Design Chemical Data Quality Management
For Hazardous Waste Remedial Activities
Fort Leonardwood-Weldon Spring Training

FROM: *Douglas J. Brune*
Douglas J. Brune
Environmental Engineer, QADE/EDSB/ENSV

TO: Greg McCabe
SPFD/WSTM

THRU: Charles P. Hensley *CPH*
Acting Regional Quality Assurance Officer, ENSV

The subject document, prepared by the U.S. Army Corps of Engineers (ACE) and dated December 15, 1989, has been reviewed as requested. I understand this plan to be the USACE's generic Quality Assurance (QA) Plan. This plan appears to adequately document responsibilities and procedures to ensure quality environmental data. However, a few deficiencies were noted during the review and are enumerated below for your use and consideration.

1. I suggest a summary of all acronyms be provided.
2. Appendix B, Implementations Procedures, Section B.4.b(1), page B-2. I suggest more information be provided detailing the performance audit samples provided by CEMRD (acronym undefined), i.e. what matrices and contaminant levels are involved, which laboratories are used and how many analyses are used in calculating the true value and standard deviation, what confidence interval is being used for acceptance limits, etc.

Appendix C.

3. USACE Chemical Quality Data Management, Section C.3, page C-1. If I understand USACE's definition of QC vs. QA samples, it appears 10% of the field samples will be QC samples (used by the prime contractor (PC) to assess sampling and analytical error) and 10% of the field samples will be QA samples (sent to an USACE lab for comparison with the PC's QC samples). Section D-3, Page D-1, defines QC (or QA) samples as "duplicates or splits of field samples or field blanks . . ." A duplicate (or collocated) sample allows one to assess total methodology error, i.e. sampling and analytical, whereas a split sample allows one to assess only ana-

lytical error. Hence, the acceptance windows, used in comparing QA samples with QC samples, will be wider for duplicate samples than for split samples. I suggest USACE explain/detail which error, i.e. total, sampling, or analytical, they are most interested in assessing with the use of QA samples.

4. General Information, Section C.12, pg. C-5 - C-6. I recommend the same deionized water be used to prepare the trip blank and field blanks, as well as for the decontamination of sampling equipment, in order to maintain integrity of the information obtained from these QC samples.

5. Groundwater Sampling Procedures, Section C.14.b, page C-7. Purging a well of at least three well volumes does not necessarily guarantee collection of representative groundwater. I recommend the groundwater field parameters, i.e. pH, temperature, specific conductivity, stabilize (+/-) 10% between successive well volumes prior to sample collection.

6. Table C-1.

a) Page C-11. The preservative for VOCs in water should be Na_2SO_3 , not NaHSO_4 , with the following footnote: to be used only if residual chlorine is present.

b) Page C-12, footnote 3. The last sentence states samples collected for VOCs determination will be preserved after filtration. I do not recommend this practice. Also, the second sentence is misleading and should be clarified, e.g. if preservative is added to the sample bottle prior to sample collection, care should be taken not to overfill, thereby losing preservative.

7. Table C-2.

a) Page C-13. The hydride method for arsenic-in-surface-water-matrix determination should reference the extraction method, 206.5. Method 215.2, calcium-in-surface-water-matrix determination, is titrimetric/EDTA, not graphite furnace atomic absorption.

b) Page C-14. The ICP method for copper-in-surface-water-matrix determination should be 200.7, not 220.7.

8. Appendix D, Definitions, Section D.3, page D-1. I recommend definitions of field blanks and composite samples be provided.

9. Appendix E, Chain of Custody Record, page E-14. I recommend the type of matrix collected, e.g. soil, water, etc., and the type of sample container, e.g. 1-liter cubitainer, 80-ounce amber glass bottle, etc., be specified.

If you have any questions, please contact me at 236-3900 x506.

Attachment

Activity Number: oq0bc

U.S. ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL SERVICES ASSISTANCE TEAM -- Zone II

| | |
|-------------------------------|-------------------------|
| ICF Technology, Inc. | ESAT Region VII |
| NSI Technology Services Corp. | NSI Technology Services |
| The Bionetics Corp. | 25 Funston Road |
| | Kansas City, KS 66115 |
| | (913) 236-3881 |

TO: Charles Hensley
Deputy Division Director, Acting RQAO, EPA

THRU: Harold Brown, Ph.D.
ESAT Deputy Project Officer, EPA

FROM: Rao V.R. Angara *AA*
ESAT Senior Engineer

THRU: Ronald Ross
ESAT Team Manager

DATE: January 29, 1989

SUBJECT: Engineering and Design - Chemical Data Quality Management
for Hazardous Waste Remedial Activities
TID # 07-8909-311
EPA Activity # 00032
RQAO Doc. # 90070

The above referenced document also includes five appendices (A, B, C, D, and E). This document represents the QA/QC program to be followed by the Army Corps of Engineers for conducting RI/FS and RD/RA activities at the former Weldon Spring Ordnance Works Site. Although this document provides a good discussion of all aspects of QA/QC, a few deficiencies have been noted and are listed below.

1. Page 3, Technology selection should also be added to the list as a separate item. It is assumed that this item is covered under engineering decisions in the document.
2. Page A-1, A Health and Safety Plan must be incorporated in the Chemical Data Acquisition Plan (CDAP). The safety plan should be approved before any site activities are conducted.
3. Page C-1, Page C-5, A 10 % duplication of field samples has been selected for QA/QC purposes. For any tasks (assignments) of this nature the duplication requirements should be at least 15 %.
4. Page C-2, line 10, The analytical results obtained by the contract lab and the USACE QA lab must be compared based on split samples and not duplicate results (unless it is a VOA sample).

received

5. Appendix C must also discuss action levels at the site. This issue has not been addressed in this document.

7. Decontamination procedures have not been addressed in this document. This can either be included in the CDAP or the Health and Safety plan.

8. Appendix E, The chain of custody document does not indicate if the samples have been preserved. A column must be added to document this activity.

GENERAL

Data validation procedures have not been addressed thoroughly. It is unclear if data will be reviewed according to the CLP protocol or the laboratory will validate the data according to its own guidelines. Is the independent QA team responsible for data validation? These questions must be addressed for determining a set procedure for reviewing all data generated.

Also as discussed earlier, it is important a site specific Health and Safety Plan is developed. Approval of this document is necessary before any field activities are conducted.

During field activities a decontamination procedure for equipment and field personnel must be prepared. This has not been discussed in the referenced document.

ATTACHMENT NUMBER 2

QA Document Review Checklist

Project/Plan Name: Engineering and Design - Chemical Data Quality Management for Hazardous Waste Remedial Activities

Activity Number: 0003T RQAO Document Number: 90070

Deficiencies were found in the elements checked below:
(See the attached review report for comments)

1. Project Objectives

- Objective or scope of the data collection activity
- Intended use of the data
- Action level, reqd. detection limits, data quality objectives

2. Sampling Procedures

- Sampling network and rationale
- Sampling schedule, locations, frequency, duration
- Sample matrices, target analyte
- Sampling/Decontamination procedures
- Sample containers, preservatives, holding time
- Sample shipment/transportation, coord. with the laboratory

3. Analytical methods

- Quality of written procedure or choice of reference
- Method detection limit, precision, accuracy, comparability
- Laboratory documentation

4. Field and laboratory QC samples

- Field QC elements
- Laboratory QC elements
- Frequency of QC checks
- Frequency of QC checks
- Control limits and corrective actions

5. Data review, validation and reporting

- Review process
- Acceptance/rejection criteria for validation
- Data deliverables

CONCLUSION

- Approval Recommended
- Approval Recommended with comments
- Resubmission recommended

QA Reviewer: Rao Angara

Completion Date: 1/29/90

Former Nebraska Ordnance Plant
Interagency Agreement

Appendix B

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JUN 05 1991

SAFE SECTION

GENERAL DELIVERABLES

Please note that some elements are method, technique, or parameter specific and, therefore, additional deliverables may be required. Additional deliverables will be outlined on method/parameter specific attachments to this document.

I. PACKAGE NARRATIVE

1. Method(s) used (citations acceptable if commonly available)
2. Summary of problems and/or decision tree processes utilized to complete the analyses.

II. QUALITY CONTROL

1. Listing of the in-house control limits used as a basis for corrective action for each of the QC elements.
2. Summary of QC results for reagent blanks, field blanks, matrix spikes, duplicates, and laboratory control standards analyzed.
 - a. Matrix Spike: Tabulated results of % recovery
 - b. Duplicates: Tabulated results for %RSD or %RPD
 - c. Lab Control Standard: Tabulated results and true values
 - d. Method Blank: Tabulated result or non-detect value
3. Raw QC data chromatograms, quantitation reports, instrument readout records, ICP/AA printouts, strip chart recordings, ~~or~~ RICS or logbook entries of meter readings. All raw data must be clearly labeled with the sample ID number and the parameter.

III. SAMPLE DATA PACKAGE

1. Holding time information (date/time sampled and analyzed)
2. Sample results summary
3. Raw sample data chromatograms, instrument readout records, RICS, ICP/AA printouts, strip chart recordings, or logbook entries of meter readings. All raw data must be clearly labeled with the sample ID number and the parameter.
4. Quantitation reports
 - a. Amount of sample aliquots
 - b. Dilution factors used
 - c. Calculations used to determine sample results
5. Percent solids determination for soil data

IV. STANDARDS DATA PACKAGE

1. Listing of laboratory detection limits
2. Initial calibration data
3. Continuing calibration check data
4. Raw standards' data chromatograms, quantitation reports, Rics, instrument readout records, ICP/AA printouts, strip chart recordings, or meter readings. All standards' raw data must be clearly labeled as to parameter and concentration they represent.

ADDITIONAL
GC Method Deliverables

I. QUALITY CONTROL

1. Summary of QC results for surrogate compounds
 - a. Tabulated % recovery for each surrogate used.

II. SAMPLE & STANDARD DATA PACKAGE

1. Summary of instrument operating conditions, temperature programs, and column type or packing.
2. Second or confirmatory column chromatograms and integration printouts for all samples having positive hits for compounds of interest including all standard runs.
3. All chromatograms must be clearly labelled with the sample number and any peaks representing compounds of interest must be labelled with the compound name. A corresponding integration printout must be submitted for each sample which also contains the sample number, retention time of all peaks, and peak area response. Each retention time representing a peak corresponding to a compound of interest must be so labelled on the integration printout.

ADDITIONAL
GC/MS Method Deliverables

I. QUALITY CONTROL

1. Summary of QC results for surrogate compounds.
 - a. Tabulated % recovery for each surrogate used.
2. Summary of internal standard responses.
 - a. Listing of area response for each internal standard compound in the daily calibration solution as well as area responses for the internal standard compounds in each associated sample analysis.
3. Summary of ion abundances for tuning compounds.
 - a. Tabulated ion abundance results for BFB (volatiles) and/or DFTPP (semi-volatiles).
 - b. Raw data mass listing of ion abundances.

II. SAMPLE DATA PACKAGE

1. Mass spectra for all positive hits including reference spectrum.

III. STANDARDS DATA PACKAGE

Initial Calibration:

1. Tabulated RRFs for each compound plus average RRF and %RSD for multiple point initial calibration.

Continuing Calibration:

1. Tabulated RRF for each compound plus % Difference between initial calibration RRF and daily calibration RRF.