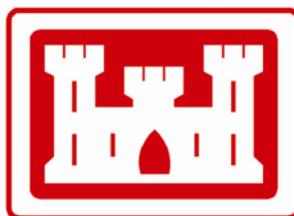




QUALITY CONTROL SUMMARY REPORT

**Fourth Quarter 2007
Surface Water Sampling Event
Former Nebraska Ordnance Plant
Mead, Nebraska**

**Prepared for
U.S. Army Corps of Engineers
Kansas City Districts**



March 2008

1746 Cole Boulevard, Building 21, Suite 350
Lakewood, Colorado 8401
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TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE <i>(Read instructions on the reverse side prior to initiating this form)</i>				DATE: February 19, 2008		TRANSMITTAL NO. 2007-19		
SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by contractor)								
Attn: Jerry Montgomery USACE, Kansas City District 601 E. 12th St. Kansas City, MO 64106-2896		FROM: John Ryder ECC 1746 Cole Blvd, Bldg 21, Lakewood, CO 80401		CONTRACT NO. W912DQ-04-D-0017, Task Order 0001		CHECK ONE: <input checked="" type="checkbox"/> THIS IS A NEW TRANSMITTAL <input type="checkbox"/> THIS IS A RESUBMITTAL OF TRANSMITTAL _____		
SPECIFICATION SECTION NO. (cover only one section with each transmittal)		PROJECT TITLE AND LOCATION: Groundwater Monitoring Program, Former Nebraska Ordnance Plant, Mead, Nebraska				CHECK ONE: <input type="checkbox"/> FIO <input checked="" type="checkbox"/> For Govt. Approval		
ITEM NO. a.	DESCRIPTION OF ITEM SUBMITTED <i>(Type, size, model number, etc.)</i> b.	MFG. OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. <i>(See instruction No. 8)</i> c.	NO. OF COPIES d.	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE g.	VARIATION <i>(See instruc. no. 6)</i> h.	FOR C E USE CODE i.
				SPEC. PARA. NO. e.	DRAWING SHEET NO. f.			
1	Quality Control Summary Report		1					
	Fourth Quarter 2007 Surface Water Sampling Event							
REMARKS Sandeep Mehta (USACE) Garth Anderson (USACE) David Nelson (USACE)				I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated. Catherine Drumheller, Denver Science & Engineering Group _____ NAME AND SIGNATURE OF CONTRACTOR				
SECTION II - APPROVAL ACTION								
ENCLOSURES RETURNED (List by Item No.)			NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY			DATE		



February 19, 2008

U.S. Army Corps of Engineers, Kansas City District
Attn: Jerry Montgomery
601 East 12th Street
Kansas City, MO 64106-2896

Regional Office

1746 Cole Boulevard
Building 21, Suite 350
Lakewood, CO 80401

Phone: 303.298.7607
Fax: 303.298.7837

Re: Transmittal of Quality Control Summary Report
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska
Contract No. W912DQ-04-D-0017, Task Order No. 0001

Dear Mr. Montgomery:

ECC is hereby transmitting one electronic copy of the Quality Control Summary Report for the Fourth Quarter 2007 Surface Water Sampling Event at the former Nebraska Ordnance Plant, Mead, Nebraska.

Please contact Mr. Brady Bigelow or me if you require additional information.

Sincerely,

John Ryder
Project Chemist
ECC

Enclosures

Cc: Mr. Sandeep Mehta (USACE)
Mr. Garth Anderson (USACE)
Mr. David Nelson (USACE)

Corporate Office

1240 Bayshore Highway
Burlingame, CA 94010

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Quality Control Summary Report Fourth Quarter 2007 Surface Water Sampling Event Former Nebraska Ordnance Plant Mead, Nebraska

1.0 INTRODUCTION

ECC was contracted by the United States Army Corps of Engineers (USACE), Kansas City District to conduct quarterly surface water sampling events at the former Nebraska Ordnance Plant (NOP) near Mead, Nebraska. For the fourth quarter (December) 2007 sampling event, surface water samples were collected and analyzed for contaminants of concern and additional compounds. The work was performed in accordance with the *Surface Water Sampling Work Plan* (ECC, 2006a). The surface water Work Plan is Appendix A to the groundwater monitoring well Work Plan (ECC, 2006b) which contains the Field Sampling Plan and Quality Assurance Project Plan (QAPP) applicable to both monitoring well and surface water sampling. This QCSR is a summary of the chemical data quality review for the fourth quarter 2007 surface water sampling event.

Samples were analyzed for one or both of the following constituents:

- Volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260B
- Explosives by EPA Method 8330.

All analyses were performed by TestAmerica of South Burlington, Vermont.

Table 1-1 presents the sampled surface water locations, corresponding sample identifications (IDs), and required analyses for the fourth quarter 2007 surface water sampling event. The Chain of Custody record (COC) and field notes are included as Appendices A and B, respectively. Appendix C presents an explanation of data validation qualifiers. Appendix D contains a CD with analytical data, including summary forms and raw data.

2.0 FIELD SAMPLING ACTIVITIES

During the fourth quarter 2007 surface water sampling event, 15 surface water locations were sampled. In addition, two QC samples (field sample duplicates) and one matrix spike (MS) / matrix spike duplicate (MSD) sample were collected. One trip blank was also collected for volatile analysis.

Table 2-1 provides the following sample collection information listed by date sampled and laboratory sample ID for ease of comparison to laboratory data packages and field notes:

- QC split sample information;
- MS/MSD sample information;
- A cross-reference between laboratory sample IDs and field sample IDs;
- Sample delivery group (SDG) numbers;
- Dates of sample collection and sample receipt by the laboratory;
- COC number; and
- Requested analyses.

3.0 ANALYTICAL RESULTS

A summary of the analytical results is presented in Table 3-1 (VOCs) and Table 3-2 (explosives). Detections are presented in Table 3-3 (VOCs) and Table 3-4 (explosives). Field duplicate results are presented in Tables 3-5 (VOCs) and 3-6 (explosives). Trip blank results for sample TRB-204-122007 are presented in Table 3-7.

4.0 DATA QUALITY EVALUATION PROCEDURES

The following subsections present results of the data quality evaluation. This evaluation was performed in accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003) and the *Data Quality Evaluation Guidance, USACE CENWK-EC-EF* (USACE, 2001). Qualifiers were assigned based on laboratory QC criteria. The data quality evaluation results are presented in Table 4-1 according to field sample ID. Table 4-2 presents QC outliers for the VOC analyses and Table 4-3 presents QC outliers for explosives.

4.1 Sample Receipt at the Laboratory

The samples were properly preserved and the sample coolers were received within the recommended temperature range of 4 ± 2 °C. There were no problems with sample receipt at the laboratory.

4.2 Holding Times

All samples were extracted and analyzed within method-specific holding times.

4.3 Tuning and Calibration

According to the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), assessment of tune and calibration information is not required at validation. No deviations from method or Laboratory Quality Management Plan (LQMP) specifications for the calibration and

tuning of pertinent instrumentation were reported by the laboratory in the project-specific case narrative.

4.4 Laboratory Method Blanks

A laboratory method blank is an analyte-free matrix that is carried through the entire preparation and analysis sequence for the purpose of identifying potential contamination. In accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), detections are qualified as non-detect (U) if the concentration in the sample is less than five times the concentration in the associated blank. For common laboratory contaminants, results are qualified as described above if the concentration in the sample is less than ten times the concentration in the associated blank. Sample results that are either non-detect (U), or greater than five times the blank result do not require qualification.

Method blanks were analyzed with each sample batch for all analyses. No target analytes were detected in the method blanks.

4.5 Trip Blanks

A trip blank is an analyte-free matrix that accompanies samples through the sample collection and transportation process to identify potential VOC contamination. In accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), detections are qualified as non-detect (U) if the concentration in the sample is less than five times the concentration in the associated blank (ten time for common laboratory contaminants). Sample results that are either non-detect (U), or greater than five times the blank result do not require qualification.

A trip blank accompanied samples submitted for analysis of VOCs. No analytes were detected in the trip blank. Trip blank results for TRB-204-122007 are presented in Table 3-7.

4.6 Surrogates

Surrogates are compounds not normally found in the environment that are added (spiked) into samples prior to extraction (for extractable methods) and prior to analysis (for non-extractable methods). The percent recovery (% REC) of each surrogate is used to assess the success of the sample preparation process for each sample.

All samples were spiked with appropriate surrogate compounds. All surrogate results were within the respective % REC limits.

4.7 Laboratory Control Sample / Laboratory Control Sample Duplicate

A laboratory control sample (LCS) consists of a matrix similar to that of the field sample. The LCS is spiked with known concentrations of analytes. The LCS % REC is a measure of the method accuracy.

In accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), results for non-contaminants of concern are J-coded if % RECs are outside laboratory criteria, but within the limits of 40-160% for VOCs or 60-140% for explosives. Results are R-coded if % RECs are outside these ranges, unless a corrective action is performed or additional batch QC is available which demonstrates recoveries within the specified range.

All LCS and/or LCSD % RECs were within laboratory QC limits and all RPDs were less than 30%.

4.8 Matrix Spike / Matrix Spike Duplicate

MS/MSD analyses measure method accuracy and precision for a project-specific matrix. A field sample is split into three portions (original, MS, and MSD) and known amounts of analytes are added (spiked) into the MS and MSD portions of the sample. The analytical results of these two portions are compared to each other for reproducibility using the RPD. These results are also compared against the unspiked portion of the sample for % REC of the spiked analytes.

One set of MS/MSD samples were collected for sample SW-012-122007 and analyzed for the volatile and explosive analyses. All MS/MSD % RECs and RPDs were within laboratory QC limits.

4.9 Field Duplicate Results

Field duplicate results provide information on the reproducibility of field sample results and account for error introduced from handling, shipping, storage, preparation, and analysis of field samples. Two field duplicate pairs were collected during the fourth quarter 2007 surface water sampling event. Field duplicate pairs are listed below.

- SW-008-122007 / SW-208-122007 (VOCs and Explosives)
- SW-010-122007 / SW-210-122007 (VOCs and Explosives)

In accordance with the *Data Quality Evaluation Guidance, USACE CENWK-EC-EF* (USACE, 2001), data are not qualified based solely on field duplicate sample results. Results within a factor of two of each other are considered to be in agreement. Results between a factor of two to three of each other are considered a minor discrepancy, and results greater than a factor of three are considered a major discrepancy.

All field duplicate results were within a factor of two of each other. Field duplicate results are presented in Tables 3-5 (VOCs) and 3-6 (explosives).

4.10 Dilutions and Reanalyses

Qualifiers assigned as a result of calibration range exceedance are not used in the calculation of analytical data completeness percentages if there are acceptable results from diluted sample analyses.

The following sample required a diluted analysis (2.9x) due to analyte concentrations above the calibration range:

- OART-092007 for Trichloroethene (TCE)

The original sample result for TCE was qualified as estimated (J). The diluted reanalysis concentration should be used for this compound and the original analysis should be used for all other sample results. At the request of the USACE project chemist, all other results from the dilution for the VOC analyses were qualified as estimated (J/UJ) because the results from the initial analysis are appropriate for use. These qualifiers were not used to determine analytical completeness or project completeness.

4.11 Other QC Parameters

A column comparison between the detected explosive results was made using explosive identification summary forms. The validator confirmed all reported explosives detections and column RPDs. The following results had RPDs greater than 40% and the results were qualified as estimated (J):

- 4-Amino-2,6-dinitrotoluene in samples OART-122007, SW-010-122007, SW-210-122007, and SW-016-122007
- RDX in sample SW-012-122007

All other column RPDs for explosives results were less than or equal to 40%. Table 4-3 presents the explosives QC outliers and associated samples.

These qualifiers were not used to determine analytical completeness or project completeness (Section 5.0).

4.12 Laboratory Qualifiers

Analytes detected below the quantitation limit or reporting limit but above the lowest level of detection were quantified and results were assigned an estimated (J) qualifier by the laboratory. These qualifiers were carried over by the validator and were not used to determine analytical completeness or project completeness (Section 5.0).

5.0 OVERALL ASSESSMENT

The following subsections present the field completeness, analytical completeness, and project completeness determinations for the fourth quarter 2007 surface water sampling event. All completeness goals are established in the QAPP (ECC, 2006b).

5.1 Field Completeness

Field completeness for sample collection is assessed by comparing the number of samples collected to the number of samples planned for collection. Field completeness for explosives is 100%. Field completeness for VOCs is 100%. The overall field completeness percentage is therefore 100%. All field completeness percentages exceed the field completeness goal of 95%. Section 2.0 presents the field sampling activities, including any deviations from planned sampling. Table 5-1 presents field completeness values.

5.2 Analytical Completeness

Acceptable data is a measure of laboratory contract compliance. Acceptable data includes data that has not been rejected or qualified as estimated (J). Qualified data is considered acceptable if appropriate corrective actions were taken by the laboratory. The acceptable data completeness percentage for VOCs was 100% and for explosives was 100%. Both analyses exceed the acceptable data completeness goal of 90%. The overall acceptable data completeness is 100%, which exceeds the overall acceptable data completeness goal of 95%.

Quality data is a measure of the percentage of usable data. Quality data includes all data except rejected data points, and does not include analyses for which replacement data points are available. Quality data completeness percentage for explosives is 100%, which exceeds the quality data completeness goals of 80% for each analytical method. Quality data completeness percentage for VOCs is 100%, which exceeds the quality data completeness goals of 80% for each analytical method. Overall quality data completeness is 100%, which exceeds the overall quality data completeness goal of 80%.

Table 5-2 presents acceptable and quality data completeness.

5.3 Project Completeness

Project completeness combines sampling and analytical completeness percentages to assess the success in achieving the expectations of the project as a whole. Project completeness is determined by comparing the percentage of usable samples/measurements to the percentage of planned or observed samples/measurements. For the field completeness portion, this involves comparison of the number of samples properly collected to the number of samples planned for collection. For the analytical data completeness portion, this involves comparison of the number of usable data points to the number of observed data points. The field completeness and analytical completeness (quality data) completeness percentages are used to calculate the project completeness percentage. Project completeness is 100%, which is above the project completeness goal of 90%.

Table 5-3 presents project completeness.

6.0 CONCLUSIONS

Data are valid for use as qualified. Overall field completeness is 100%, acceptable data completeness is 100%, quality data completeness is 100%, and project completeness is 100%. Detected VOC and explosive results less than the reporting limit and five detected explosive results with intercolumn RPDs exceeding 40% were qualified as estimated. These qualifiers did not effect analytical or project completeness.

7.0 REFERENCES

ECC, 2006a, *Surface Water Sampling Work Plan*, June.

ECC, 2006b, *Work Plan and Sampling and Analysis Plan for Groundwater Monitoring Well Sampling*.

USACE, 2003, *Kansas City District Data Quality Evaluation Guidance*, August.

USACE, 2001, *Data Quality Evaluation Guidance, USACE CENWK-EC-EF*, July.

Tables

Table 1-1
Sample Locations, Sample IDs, and Analyses
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Surface Water Locations	Sample IDs	Analyses¹
ARTESIAN	0ART-122007	Explosives, Volatiles
SCW-04	SCW-004-122007	Explosives, Volatiles
SCW-05	SCW-005-122007	Explosives, Volatiles
SCW-06	SCW-006-122007	Explosives, Volatiles
SKI-01 ²	SKI-001-122007	Explosives, Volatiles
SW-05	SW-005-122007	Explosives, Volatiles
SW-06	SW-006-122007	Explosives, Volatiles
SW-08	SW-008-122007	Explosives, Volatiles
SW-09	SW-009-122007	Explosives, Volatiles
SW-10	SW-010-122007	Explosives, Volatiles
SW-11	SW-011-122007	Explosives, Volatiles
SW-12	SW-012-122007	Explosives, Volatiles
SW-13	SW-013-122007	Explosives, Volatiles
SW-15	SW-015-122007	Explosives, Volatiles
SW-16	SW-016-122007	Explosives, Volatiles

Notes:

¹ = VOCs by Environmental Protection Agency (EPA) SW-846 Method 8260B and Explosives by EPA SW-846 Method 8330.

² = SKI-01 was not included on the sample schedule for December 2007

IDs = Identifications

Table 2-1
Sample Collection Summary
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field ID	Quality Control Samples	MS/MSD Samples	Date Sampled	Date Received by Lab	COC Record Number	Lab ID	SDG	Analyses	
								VOCs	Explosives
Field Samples									
0ART-122007			12/3/2007	12/5/2007	None	734031	123271	●	●
SCW-004-122007			12/3/2007	12/5/2007	None	734024	123271	●	●
SCW-005-122007			12/3/2007	12/5/2007	None	734026	123271	●	●
SCW-006-122007			12/3/2007	12/5/2007	None	734027	123271	●	●
SKI-001-122007			12/3/2007	12/5/2007	None	734033	123271	●	●
SW-005-122007			12/3/2007	12/5/2007	None	734032	123271	●	●
SW-006-122007			12/4/2007	12/5/2007	None	734039	123271	●	●
SW-008-122007			12/4/2007	12/5/2007	None	734040	123271	●	●
	SW-208-122007		12/4/2007	12/5/2007	None	734041	123271	●	●
SW-009-122007			12/3/2007	12/5/2007	None	734030	123271	●	●
SW-010-122007			12/4/2007	12/5/2007	None	734035	123271	●	●
	SW-210-122007		12/4/2007	12/5/2007	None	734036	123271	●	●
SW-011-122007			12/3/2007	12/5/2007	None	734028	123271	●	●
SW-012-122007			12/4/2007	12/5/2007	None	734034	123271	●	●
		SW-012-122007MS	12/4/2007	12/5/2007	None	734034	123271	●	●
		SW-012-122007MSD	12/4/2007	12/5/2007	None	734034	123271	●	●
SW-013-122007			12/3/2007	12/5/2007	None	734029	123271	●	●
SW-015-122007			12/4/2007	12/5/2007	None	734038	123271	●	●
SW-016-122007			12/4/2007	12/5/2007	None	734037	123271	●	●
Trip Blanks									
TRB-204-092007			12/3/2007	12/5/2007	None	722855	123271	●	

Notes:

- = Requested for the indicated analyses.
- COC = Chain of Custody Record
- ID = Identification
- Lab = Laboratory
- MS/MSD = Matrix Spike / Matrix Spike Duplicate
- SDG = Sample Delivery Group
- VOCs = Volatile Organic Compounds

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	ARTESIAN	ARTESIAN	SCW-004	SCW-005	SCW-006	SKI-001
Field Sample ID:	0ART-122007	0ART-122007	SCW-004-122007	SCW-005-122007	SCW-006-122007	SKI-001-122007
Lab Sample ID:	734031	734031D1	734024	734026	734027	734033
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/3/2007	12/3/2007	12/3/2007	12/3/2007	12/3/2007	12/3/2007
Field QC:	Original Sample					
Analysis Information:	I 1	DL 2.9	I 1	I 1	I 1	I 1

VOCs	Units						
1,1-Dichloroethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,1-Dichloropropene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,1,1,2-Tetrachloroethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,2-Dibromoethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,2-Dichloroethene	ug/l	0.36 J	2.9 UJ	1 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,3-Dichloropropane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
2-Butanone	ug/l	5 U	15 UJ	5 U	5 U	5 U	5 U
2-Chlorotoluene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
2-Hexanone	ug/l	5 U	15 UJ	5 U	5 U	5 U	5 U
4-Chlorotoluene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
4-Isopropyltoluene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	ARTESIAN	ARTESIAN	SCW-004	SCW-005	SCW-006	SKI-001
Field Sample ID:	0ART-122007	0ART-122007	SCW-004-122007	SCW-005-122007	SCW-006-122007	SKI-001-122007
Lab Sample ID:	734031	734031D1	734024	734026	734027	734033
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/3/2007	12/3/2007	12/3/2007	12/3/2007	12/3/2007	12/3/2007
Field QC:	Original Sample					
Analysis Information:	I 1	DL 2.9	I 1	I 1	I 1	I 1

VOCs	Units						
4-Methyl-2-pentanone	ug/l	5 U	15 UJ	5 U	5 U	5 U	5 U
Acetone	ug/l	5 U	15 UJ	2.6 J	2.3 J	2.8 J	5 U
Benzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Bromobenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Bromochloromethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Bromoform	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Bromomethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Carbon disulfide	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Carbon tetrachloride	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Chlorobenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Chloroethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Chloroform	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Chloromethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/l	0.36 J	2.9 UJ	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Dibromochloromethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Dibromomethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Ethylbenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Hexachlorobutadiene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Isopropylbenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Methyl tert butyl ether	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Methylene chloride	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
m,p-Xylene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Naphthalene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	ARTESIAN	ARTESIAN	SCW-004	SCW-005	SCW-006	SKI-001
Field Sample ID:	0ART-122007	0ART-122007	SCW-004-122007	SCW-005-122007	SCW-006-122007	SKI-001-122007
Lab Sample ID:	734031	734031D1	734024	734026	734027	734033
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/3/2007	12/3/2007	12/3/2007	12/3/2007	12/3/2007	12/3/2007
Field QC:	Original Sample					
Analysis Information:	I 1	DL 2.9	I 1	I 1	I 1	I 1

VOCs	Units						
n-Butylbenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
n-Propylbenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
o-Xylene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
sec-Butylbenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Styrene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
tert-Butylbenzene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Tetrachloroethene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Toluene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Trichloroethene	ug/l	75 J	71	1 U	1 U	1 U	1 U
Trichlorofluoromethane	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Vinyl chloride	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U
Xylene (Total)	ug/l	1 U	2.9 UJ	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-05	SW-06	SW-08	SW-08	SW-09	SW-10
Field Sample ID:	SW-005-122007	SW-006-122007	SW-008-122007	SW-208-122007	SW-009-122007	SW-010-122007
Lab Sample ID:	734032	734039	734040	734041	734030	734035
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/3/2007	12/4/2007	12/4/2007	12/4/2007	12/3/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Original Sample	Field Duplicate	Original Sample	Original Sample
Analysis Information:	1 1	1 1	1 1	1 1	1 1	1 1

VOCs	Units						
1,1-Dichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1,2-Tetrachloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene	ug/l	1 U	1 U	0.44 J	0.45 J	1 U	0.39 J
1,2-Dichloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorotoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
4-Chlorotoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
4-Isopropyltoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-05	SW-06	SW-08	SW-08	SW-09	SW-10
Field Sample ID:	SW-005-122007	SW-006-122007	SW-008-122007	SW-208-122007	SW-009-122007	SW-010-122007
Lab Sample ID:	734032	734039	734040	734041	734030	734035
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/3/2007	12/4/2007	12/4/2007	12/4/2007	12/3/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Original Sample	Field Duplicate	Original Sample	Original Sample
Analysis Information:	1 1	1 1	1 1	1 1	1 1	1 1

VOCs	Units						
4-Methyl-2-pentanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	ug/l	2.6 J	2.9 J	5 U	5 U	5 U	5 U
Benzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Carbon disulfide	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/l	1 U	1 U	0.44 J	0.45 J	1 U	0.39 J
cis-1,3-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorobutadiene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert butyl ether	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-05	SW-06	SW-08	SW-08	SW-09	SW-10
Field Sample ID:	SW-005-122007	SW-006-122007	SW-008-122007	SW-208-122007	SW-009-122007	SW-010-122007
Lab Sample ID:	734032	734039	734040	734041	734030	734035
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/3/2007	12/4/2007	12/4/2007	12/4/2007	12/3/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Original Sample	Field Duplicate	Original Sample	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

VOCs	Units						
n-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
o-Xylene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
sec-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/l	1 U	0.24 J	25	25	1 U	18
Trichlorofluoromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Xylene (Total)	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16
Field Sample ID:	SW-210-122007	SW-011-122007	SW-012-122007	SW-013-122007	SW-015-122007	SW-016-122007
Lab Sample ID:	734036	734028	734034	734029	734038	734037
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/4/2007	12/3/2007	12/4/2007	12/3/2007	12/4/2007	12/4/2007
Field QC:	Field Duplicate	Original Sample				
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

VOCs	Units	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16
1,1-Dichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1,2-Tetrachloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene	ug/l	0.34 J	1 U	1 U	1 U	1 U	0.38 J
1,2-Dichloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorotoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
4-Chlorotoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
4-Isopropyltoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16
Field Sample ID:	SW-210-122007	SW-011-122007	SW-012-122007	SW-013-122007	SW-015-122007	SW-016-122007
Lab Sample ID:	734036	734028	734034	734029	734038	734037
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/4/2007	12/3/2007	12/4/2007	12/3/2007	12/4/2007	12/4/2007
Field QC:	Field Duplicate	Original Sample				
Analysis Information:	1 1	1 1	1 1	1 1	1 1	1 1

VOCs	Units						
4-Methyl-2-pentanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	ug/l	3 J	5 U	2.5 J	5 U	5 U	5 U
Benzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Carbon disulfide	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/l	0.34 J	1 U	1 U	1 U	1 U	0.38 J
cis-1,3-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorobutadiene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert butyl ether	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-10	SW-11	SW-12	SW-13	SW-15	SW-16
Field Sample ID:	SW-210-122007	SW-011-122007	SW-012-122007	SW-013-122007	SW-015-122007	SW-016-122007
Lab Sample ID:	734036	734028	734034	734029	734038	734037
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/4/2007	12/3/2007	12/4/2007	12/3/2007	12/4/2007	12/4/2007
Field QC:	Field Duplicate	Original Sample				
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

VOCs	Units						
n-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
o-Xylene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
sec-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/l	17	1 U	1.8	1.6	0.25 J	20
Trichlorofluoromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Xylene (Total)	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

UJ = Not Detected, Estimated: A result followed by a "UJ" qualifier means that the analyte was not detected, but the associated quantitation limit is not certain (or estimated) because one or more laboratory quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

TALVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

VOCs = Volatile Organic Compounds

I = Initial analysis

"1" = Dilution factor

Table 3 - 2
Results - Explosive Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	ARTESIAN	SCW-004	SCW-005	SCW-006	SKI-001	SW-05
Field Sample ID:	0ART-122007	SCW-004-122007	SCW-005-122007	SCW-006-122007	SKI-001-122007	SW-005-122007
Lab Sample ID:	734031R1	734024R1	734026R1	734027R1	734033R1	734032R1
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/3/2007	12/3/2007	12/3/2007	12/3/2007	12/3/2007	12/3/2007
Field QC:	Original Sample					
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

Explosives	Units						
1,3-Dinitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3,5-Trinitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-Amino-4,6-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4,6-Trinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,6-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
3-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Amino-2,6-Dinitrotoluene	ug/l	0.037 J	0.25 U				
4-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
HMX	ug/l	0.26	0.25 U				
Nitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
RDX	ug/l	3.8	0.25 U				
Tetryl	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

Table 3 - 2
Results - Explosive Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-06	SW-08	SW-08	SW-09	SW-10	SW-10
Field Sample ID:	SW-006-122007	SW-008-122007	SW-208-122007	SW-009-122007	SW-010-122007	SW-210-122007
Lab Sample ID:	734039R1	734040R1	734041R1	734030R1	734035R1	734036R1
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/4/2007	12/4/2007	12/4/2007	12/3/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Field Duplicate	Original Sample	Original Sample	Field Duplicate
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

Explosives	Units						
1,3-Dinitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3,5-Trinitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-Amino-4,6-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,4,6-Trinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,6-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
3-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Amino-2,6-Dinitrotoluene	ug/l	0.25 U	0.077 J	0.063 J	0.25 U	0.11 J	0.11 J
4-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
HMX	ug/l	0.25 U	0.13 J	0.16 J	0.25 U	0.13 J	0.12 J
Nitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
RDX	ug/l	0.25 U	1.2	1.3	0.25 U	1.2	1.2
Tetryl	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

Table 3 - 2
Results - Explosive Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-11	SW-12	SW-13	SW-15	SW-16
Field Sample ID:	SW-011-122007	SW-012-122007	SW-013-122007	SW-015-122007	SW-016-122007
Lab Sample ID:	734028R1	734034R1	734029R1	734038R1	734037R1
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/3/2007	12/4/2007	12/3/2007	12/4/2007	12/4/2007
Field QC:	Original Sample				
Analysis Information:	I 1	I 1	I 1	I 1	I 1

Explosives	Units					
1,3-Dinitrobenzene	ug/l	0.25 U				
1,3,5-Trinitrobenzene	ug/l	0.25 U				
2-Amino-4,6-Dinitrotoluene	ug/l	0.25 U				
2-Nitrotoluene	ug/l	0.25 U				
2,4-Dinitrotoluene	ug/l	0.25 U				
2,4,6-Trinitrotoluene	ug/l	0.25 U				
2,6-Dinitrotoluene	ug/l	0.25 U				
3-Nitrotoluene	ug/l	0.25 U				
4-Amino-2,6-Dinitrotoluene	ug/l	0.25 U	0.25 J	0.25 U	0.25 U	0.082 J
4-Nitrotoluene	ug/l	0.25 U				
HMX	ug/l	0.25 U	0.25 U	0.25 U	0.25 U	0.12 J
Nitrobenzene	ug/l	0.25 U				
RDX	ug/l	0.25 U	0.11 J	0.14 J	0.25 U	1.2
Tetryl	ug/l	0.25 U				

Table 3 - 2
Results - Explosive Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

TALVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine

Tetryl = Methyl-2,4,6-trinitrophenylnitramine

I = Initial analysis

"1" = Dilution factor

Table 3 - 3
Detections - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	ARTESIAN	ARTESIAN	SCW-004	SCW-005	SCW-006	SW-05
Field Sample ID:	0ART-122007	0ART-122007	SCW-004-122007	SCW-005-122007	SCW-006-122007	SW-005-122007
Lab Sample ID:	734031	734031D1	734024	734026	734027	734032
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/3/2007	12/3/2007	12/3/2007	12/3/2007	12/3/2007	12/3/2007
Field QC:	Original Sample					
Analysis Information:	I 1	DL 2.9	I 1	I 1	I 1	I 1

VOCs	Units					
1,2-Dichloroethene	ug/l	0.36 J				
Acetone	ug/l		2.6 J	2.3 J	2.8 J	2.6 J
cis-1,2-Dichloroethene	ug/l	0.36 J				
Trichloroethene	ug/l	75 J	71			

Table 3 - 3
Detections - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-06	SW-08	SW-08	SW-10	SW-10	SW-12
Field Sample ID:	SW-006-122007	SW-008-122007	SW-208-122007	SW-010-122007	SW-210-122007	SW-012-122007
Lab Sample ID:	734039	734040	734041	734035	734036	734034
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/4/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Field Duplicate	Original Sample	Field Duplicate	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

VOCs	Units					
1,2-Dichloroethene	ug/l		0.44 J	0.45 J	0.39 J	0.34 J
Acetone	ug/l	2.9 J				3 J
cis-1,2-Dichloroethene	ug/l		0.44 J	0.45 J	0.39 J	0.34 J
Trichloroethene	ug/l	0.24 J	25	25	18	17

Table 3 - 3
Detections - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-13	SW-15	SW-16
Field Sample ID:	SW-013-122007	SW-015-122007	SW-016-122007
Lab Sample ID:	734029	734038	734037
Lab Name:	TALVT	TALVT	TALVT
Sample Date:	12/3/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Original Sample
Analysis Information:	I 1	I 1	I 1

VOCs	Units			
1,2-Dichloroethene	ug/l			0.38 J
Acetone	ug/l			
cis-1,2-Dichloroethene	ug/l			0.38 J
Trichloroethene	ug/l	1.6	0.25 J	20

Table 3 - 3
Detections - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter
TALVT = Test America Laboratories, Vermont
ID = Identification
QC = Quality Control
VOCs = Volatile Organic Compounds

I = Initial analysis
"1" = Dilution factor

Table 3 - 4
Detections - Explosive Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	ARTESIAN	SW-08	SW-08	SW-10	SW-10	SW-12
Field Sample ID:	0ART-122007	SW-008-122007	SW-208-122007	SW-010-122007	SW-210-122007	SW-012-122007
Lab Sample ID:	734031R1	734040R1	734041R1	734035R1	734036R1	734034R1
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/3/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Field Duplicate	Original Sample	Field Duplicate	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

Explosives	Units						
4-Amino-2,6-Dinitrotoluene	ug/l	0.037 J	0.077 J	0.063 J	0.11 J	0.11 J	0.25 J
HMX	ug/l	0.26	0.13 J	0.16 J	0.13 J	0.12 J	
RDX	ug/l	3.8	1.2	1.3	1.2	1.2	0.11 J

Table 3 - 4
Detections - Explosive Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-13	SW-16
Field Sample ID:	SW-013-122007	SW-016-122007
Lab Sample ID:	734029R1	734037R1
Lab Name:	TALVT	TALVT
Sample Date:	12/3/2007	12/4/2007
Field QC:	Original Sample	Original Sample
Analysis Information:	I 1	I 1

Explosives	Units		
4-Amino-2,6-Dinitrotoluene	ug/l		0.082 J
HMX	ug/l		0.12 J
RDX	ug/l	0.14 J	1.2

Table 3 - 4
Detections - Explosive Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

TALVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine

Tetryl = Methyl-2,4,6-trinitrophenylnitramine

I = Initial analysis

"1" = Dilution factor

Table 3 - 5
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-08	SW-08	SW-10	SW-10
Field Sample ID:	SW-008-122007	SW-208-122007	SW-010-122007	SW-210-122007
Lab Sample ID:	734040	734041	734035	734036
Lab Name:	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/4/2007	12/4/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Field Duplicate
Analysis Information:	I 1	I 1	I 1	I 1

VOCs	Units				
1,1-Dichloroethane	ug/l	1 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/l	1 U	1 U	1 U	1 U
1,1-Dichloropropene	ug/l	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	ug/l	1 U	1 U	1 U	1 U
1,1,1,2-Tetrachloroethane	ug/l	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/l	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/l	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/l	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	ug/l	1 U	1 U	1 U	1 U
1,2-Dibromoethane	ug/l	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/l	1 U	1 U	1 U	1 U
1,2-Dichloroethene	ug/l	0.44 J	0.45 J	0.39 J	0.34 J
1,2-Dichloropropane	ug/l	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	ug/l	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/l	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene	ug/l	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U
1,3-Dichloropropane	ug/l	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/l	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U
2-Butanone	ug/l	5 U	5 U	5 U	5 U
2-Chlorotoluene	ug/l	1 U	1 U	1 U	1 U
2-Hexanone	ug/l	5 U	5 U	5 U	5 U
4-Chlorotoluene	ug/l	1 U	1 U	1 U	1 U
4-Isopropyltoluene	ug/l	1 U	1 U	1 U	1 U

Table 3 - 5
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-08	SW-08	SW-10	SW-10
Field Sample ID:	SW-008-122007	SW-208-122007	SW-010-122007	SW-210-122007
Lab Sample ID:	734040	734041	734035	734036
Lab Name:	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/4/2007	12/4/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Field Duplicate
Analysis Information:	1 1	1 1	1 1	1 1

VOCs	Units				
4-Methyl-2-pentanone	ug/l	5 U	5 U	5 U	5 U
Acetone	ug/l	5 U	5 U	5 U	3 J
Benzene	ug/l	1 U	1 U	1 U	1 U
Bromobenzene	ug/l	1 U	1 U	1 U	1 U
Bromochloromethane	ug/l	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/l	1 U	1 U	1 U	1 U
Bromoform	ug/l	1 U	1 U	1 U	1 U
Bromomethane	ug/l	1 U	1 U	1 U	1 U
Carbon disulfide	ug/l	1 U	1 U	1 U	1 U
Carbon tetrachloride	ug/l	1 U	1 U	1 U	1 U
Chlorobenzene	ug/l	1 U	1 U	1 U	1 U
Chloroethane	ug/l	1 U	1 U	1 U	1 U
Chloroform	ug/l	1 U	1 U	1 U	1 U
Chloromethane	ug/l	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/l	0.44 J	0.45 J	0.39 J	0.34 J
cis-1,3-Dichloropropene	ug/l	1 U	1 U	1 U	1 U
Dibromochloromethane	ug/l	1 U	1 U	1 U	1 U
Dibromomethane	ug/l	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	ug/l	1 U	1 U	1 U	1 U
Ethylbenzene	ug/l	1 U	1 U	1 U	1 U
Hexachlorobutadiene	ug/l	1 U	1 U	1 U	1 U
Isopropylbenzene	ug/l	1 U	1 U	1 U	1 U
Methyl tert butyl ether	ug/l	1 U	1 U	1 U	1 U
Methylene chloride	ug/l	1 U	1 U	1 U	1 U
m,p-Xylene	ug/l	1 U	1 U	1 U	1 U
Naphthalene	ug/l	1 U	1 U	1 U	1 U

Table 3 - 5
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-08	SW-08	SW-10	SW-10
Field Sample ID:	SW-008-122007	SW-208-122007	SW-010-122007	SW-210-122007
Lab Sample ID:	734040	734041	734035	734036
Lab Name:	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/4/2007	12/4/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Field Duplicate
Analysis Information:	1 1	1 1	1 1	1 1

VOCs	Units				
n-Butylbenzene	ug/l	1 U	1 U	1 U	1 U
n-Propylbenzene	ug/l	1 U	1 U	1 U	1 U
o-Xylene	ug/l	1 U	1 U	1 U	1 U
sec-Butylbenzene	ug/l	1 U	1 U	1 U	1 U
Styrene	ug/l	1 U	1 U	1 U	1 U
tert-Butylbenzene	ug/l	1 U	1 U	1 U	1 U
Tetrachloroethene	ug/l	1 U	1 U	1 U	1 U
Toluene	ug/l	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/l	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/l	1 U	1 U	1 U	1 U
Trichloroethene	ug/l	25	25	18	17
Trichlorofluoromethane	ug/l	1 U	1 U	1 U	1 U
Vinyl chloride	ug/l	1 U	1 U	1 U	1 U
Xylene (Total)	ug/l	1 U	1 U	1 U	1 U

Table 3 - 5
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

TALVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

VOCs = Volatile Organic Compounds

I = Initial analysis

"1" = Dilution factor

Table 3 - 6
Field Duplicate Results - Explosive Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	SW-08	SW-08	SW-10	SW-10
Field Sample ID:	SW-008-122007	SW-208-122007	SW-010-122007	SW-210-122007
Lab Sample ID:	734040R1	734041R1	734035R1	734036R1
Lab Name:	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/4/2007	12/4/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Field Duplicate
Analysis Information:	I 1	I 1	I 1	I 1

Explosives	Units				
1,3-Dinitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
1,3,5-Trinitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
2-Amino-4,6-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
2-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
2,4-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
2,4,6-Trinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
2,6-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
3-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
4-Amino-2,6-Dinitrotoluene	ug/l	0.077 J	0.063 J	0.11 J	0.11 J
4-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
HMX	ug/l	0.13 J	0.16 J	0.13 J	0.12 J
Nitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
RDX	ug/l	1.2	1.3	1.2	1.2
Tetryl	ug/l	0.25 U	0.25 U	0.25 U	0.25 U

Table 3 - 6
Field Duplicate Results - Explosive Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

TALVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine

Tetryl = Methyl-2,4,6-trinitrophenylnitramine

I = Initial analysis

"1" = Dilution factor

Table 3 - 7
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	Trip Blank
Field Sample ID:	TRB-204-122007
Lab Sample ID:	734025
Lab Name:	TALVT
Sample Date:	12/3/2007
Field QC:	Trip Blank
Analysis Information:	I 1

VOCs	Units	
1,1-Dichloroethane	ug/l	1 U
1,1-Dichloroethene	ug/l	1 U
1,1-Dichloropropene	ug/l	1 U
1,1,1-Trichloroethane	ug/l	1 U
1,1,1,2-Tetrachloroethane	ug/l	1 U
1,1,2,2-Tetrachloroethane	ug/l	1 U
1,1,2-Trichloroethane	ug/l	1 U
1,1,2-Trichlorotrifluoroethane	ug/l	1 U
1,2-Dibromo-3-chloropropane	ug/l	1 U
1,2-Dibromoethane	ug/l	1 U
1,2-Dichlorobenzene	ug/l	1 U
1,2-Dichloroethane	ug/l	1 U
1,2-Dichloroethene	ug/l	1 U
1,2-Dichloropropane	ug/l	1 U
1,2,3-Trichlorobenzene	ug/l	1 U
1,2,4-Trichlorobenzene	ug/l	1 U
1,2,4-Trimethylbenzene	ug/l	1 U
1,3-Dichlorobenzene	ug/l	1 U
1,3-Dichloropropane	ug/l	1 U
1,3,5-Trimethylbenzene	ug/l	1 U
1,4-Dichlorobenzene	ug/l	1 U
2-Butanone	ug/l	5 U
2-Chlorotoluene	ug/l	1 U
2-Hexanone	ug/l	5 U
4-Chlorotoluene	ug/l	1 U
4-Isopropyltoluene	ug/l	1 U

Table 3 - 7
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID:	Trip Blank
Field Sample ID:	TRB-204-122007
Lab Sample ID:	734025
Lab Name:	TALVT
Sample Date:	12/3/2007
Field QC:	Trip Blank
Analysis Information:	I 1

VOCs	Units	
4-Methyl-2-pentanone	ug/l	5 U
Acetone	ug/l	5 U
Benzene	ug/l	1 U
Bromobenzene	ug/l	1 U
Bromochloromethane	ug/l	1 U
Bromodichloromethane	ug/l	1 U
Bromoform	ug/l	1 U
Bromomethane	ug/l	1 U
Carbon disulfide	ug/l	1 U
Carbon tetrachloride	ug/l	1 U
Chlorobenzene	ug/l	1 U
Chloroethane	ug/l	1 U
Chloroform	ug/l	1 U
Chloromethane	ug/l	1 U
cis-1,2-Dichloroethene	ug/l	1 U
cis-1,3-Dichloropropene	ug/l	1 U
Dibromochloromethane	ug/l	1 U
Dibromomethane	ug/l	1 U
Dichlorodifluoromethane	ug/l	1 U
Ethylbenzene	ug/l	1 U
Hexachlorobutadiene	ug/l	1 U
Isopropylbenzene	ug/l	1 U
Methyl tert butyl ether	ug/l	1 U
Methylene chloride	ug/l	1 U
m,p-Xylene	ug/l	1 U
Naphthalene	ug/l	1 U

Table 3 - 7
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Surface Water

Station ID: Trip Blank
Field Sample ID: TRB-204-122007
Lab Sample ID: 734025
Lab Name: TALVT
Sample Date: 12/3/2007
Field QC: Trip Blank
Analysis Information: I 1

VOCs	Units	
n-Butylbenzene	ug/l	1 U
n-Propylbenzene	ug/l	1 U
o-Xylene	ug/l	1 U
sec-Butylbenzene	ug/l	1 U
Styrene	ug/l	1 U
tert-Butylbenzene	ug/l	1 U
Tetrachloroethene	ug/l	1 U
Toluene	ug/l	1 U
trans-1,2-Dichloroethene	ug/l	1 U
trans-1,3-Dichloropropene	ug/l	1 U
Trichloroethene	ug/l	1 U
Trichlorofluoromethane	ug/l	1 U
Vinyl chloride	ug/l	1 U
Xylene (Total)	ug/l	1 U

Table 3 - 7
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

ug/l = micrograms per liter
TALVT = Test America Laboratories, Vermont
ID = Identification
QC = Quality Control
VOCs = Volatile Organic Compounds

I = Initial analysis
"1" = Dilution factor

Table 4-1
Data Evaluation Results
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample Identification	Date Sampled	SDG	Lab Number	Analysis	Parameter	Units	Laboratory Result		Data Review Qualifier	Reason for Qualification		Comments	Final Result
										RPD	CR		
0ART-122007	12/3/2007	123271	734031	VOCs	Trichloroethene	µg/L	75	E	J		x	Calibration Range Exceeded Report TCE from Dilution	75 J
				Explosives	4-Amino-2,6-dinitrotoluene		0.037	J	J	x		RPD between column results exceeded 40%	0.037 J
0ART-122007DL	12/3/2007		73401	VOCs	All Results Except TCE		Various	Various	J/UJ		x	Only Report TCE from this Analysis	J/UJ
SW-010-122007	12/4/2007		734035	Explosives	4-Amino-2,6-dinitrotoluene		0.11	J	J	x		RPD between column results exceeded 40%	0.11 J
SW-210-122007	12/4/2007		734036	Explosives	4-Amino-2,6-dinitrotoluene		0.11	J	J	x		RPD between column results exceeded 40%	0.11 J
SW-012-122007	12/4/2007		734034	Explosives	RDX		0.11	J	J	x		RPD between column results exceeded 40%	0.11 J
SW-016-122007	12/4/2007		734037	Explosives	4-Amino-2,6-dinitrotoluene		0.082	J	J	x		RPD between column results exceeded 40%	0.082 J

Notes:

CR = Calibration Range

DL = Dilution

E = Laboratory qualifier indicating a calibration range exceedance

J = Estimated

µg/L = micrograms per liter

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine

RPD = Relative Percent Difference

SDG = Sample Delivery Group

TCE = Trichloroethene

U = Non Detect

VOCs = Volatile Organic Compound

Table 4-2
VOC Quality Control Outliers
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample ID(s) Requiring Qualification	SDG	Compound(s)	QC Parameter	Laboratory QC Parameter Control Limit	QC Result
Dilutions and Reanalyses (E flags not used in completeness percentage when dilution available)					
0ART-122007	123271	TCE	Calibration Range Exceedance	Linear Calibration Range	E

Note: The sample above was diluted and the result for TCE was within the calibration range. Recommend using the TCE result from dilution.

Notes:

DL = Dilution

E = Exceeds Calibration Range

ID = Identification

QC = Quality Control

SDG = Sample Delivery Group

TCE = Trichloroethene

Table 4-3
Explosives Quality Control Outliers
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample ID(s) Requiring Qualification	SDG	Compound(s)	QC Parameter	Laboratory QC Parameter Control Limit	QC Result
Other QC (These outliers were not used in completeness percentage)					
SW-012-122007	123271	RDX	RPD Between Column Results	40%	47%
OART-122007		4-Amino-2,6-dinitrotoluene			43%
SW-010-122007					78%
SW-210-122007					100%
SW-016-122007			56%		

Notes:

ID = Identification
RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine
QC = Quality Control

SDG = Sample Delivery Group
RPD = Relative percent differences

Table 5-1
Field Completeness
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Number of Samples Planned ¹	Number of Samples Collected	Field Completeness
Volatile Organic Compounds	17	17	100%
Explosives	17	17	100%
Totals =	34	34	100%
Goal =			95%

Notes:

¹ = Number of samples includes field samples and duplicate samples.

Table 5-2
Analytical Completeness
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Total Number of Parameters ¹	Acceptable Data ²	Acceptable Data Completeness	Acceptable Data Completeness Goals	Quality Data ³	Quality Data Completeness	Quality Data Completeness Goals
Volatile Organic Compounds	1122	1122	100%	90%	1122	100%	80%
Explosives	238	238	100%	90%	238	100%	80%
Totals =	1360	1360	100.0%	95%	1360	100%	80%

Notes:

- ¹ = Total number of parameters includes field samples (including data points from dilutions and/or reanalyses to be used in place of original data) and field duplicates.
- ² = Acceptable data is defined as data that passed all quality control (QC) criteria, or data that did not pass QC criteria but had appropriate corrective actions taken. Acceptable data completeness is a measure of laboratory contract compliance. R qualified data with acceptable replacement data are not counted.
- ³ = Quality data is a measure of the percentage of usable data points. Quality data includes all data except rejected data points.

Table 5-3
Project Completeness
Fourth Quarter 2007 Surface Water Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field	Analytical ¹	Project Completeness ²
100%	100%	100%
Project Completeness Goal =		90%

Notes:

¹ = Analytical completeness is the percentage of usable data (i.e. quality data completeness).

² = Project completeness combines sampling and analytical protocols to assess the expectations of the project as a whole. Project completeness is determined by comparing the percentage of samples / measurements that are determined to be usable to the total number of samples / measurements planned. Project completeness is calculated using field completeness and analytical completeness percentages.

Appendix A
Chain of Custody Records

4th Quarter SW Sampling Event
Mead Frop

CHAIN OF CUSTODY RECORD

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

Report to: Company: ECC
 Address: 1746 COLE BLVD, BLDG 21 SUITE 350
LAKEWOOD, CO 80461
 Contact: DAVID BANDER 3044 RYDER
 Phone: (303) 298-7607
 Fax: (303) 298-7837
 Contract/Quote:

Invoice to: Company: _____
 Address: _____
 Contact: _____
 Phone: _____
 Fax: _____

Sampler's Name: Ralph West Sampler's Signature: [Signature]
 Project Name: Mead - Frop
 No./Type of Containers:
 HCL 250 ml P/O
 TCE A/G 1 Lt.

Matrix	Date	Time	Identifying Marks of Sample(s)	HCL	TCE	A/G	250 ml	P/O	ANALYSIS REQUESTED	Lab/ Sample ID (Lab Use Only)
W	12-3-2007	08:50	X SCW-004-122007	3	2				8860 B - (HCL)	
W	12-3-2007	08:50	X TRB-204-122007	2					8330 EXPLOSIVES (TCE)	
W	12-3-2007	09:10	X SCW-005-122007	3	2					
W	12-3-2007	09:35	X SCW-006-122007	3	2					
W	12-3-2007	10:45	X SW-011-122007	3	2					
W	12-3-2007	10:50	X SW-013-122007	3	2					
W	12-3-2007	11:40	X SW-009-122007	3	2					
W	12-3-2007	11:55	X OART-122007	3	2					
W	12-3-2007	12:10	X SW-005-122007	3	2					
W	12-3-2007	12:50	X SK1-001-122007	3	2					

Received by: (Signature) [Signature] Date: 12/5/07 Time: 08:35
 Received by: (Signature) [Signature] Date: 12/5/07 Time: 08:35
 Received by: (Signature) [Signature] Date: _____ Time: _____

Remarks: Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

*Matrix WW - Wastewater A/G - Amber / Or Glass 1 Liter
 *Container VOA - 40 ml Vial W - Water S - Soil L - Liquid 250 ml - Glass wide mouth
 A - Air bag C - Charcoal Tube P/O - Plastic or other
 SL - Sludge O - Oil

Appendix B
Field Notes

December 3rd 2007 4th Quarter SW Sampling Event
(ASW DENNIS KRUE, RALPH WEST, ERIK WAISS)

35

SCW-004-122007 ^{DK}/RV Project 5403.001 FNOP

Surface Water Sample Time 08:50

SAMPLES TAKEN: 3 VOC 2 EXP Depth: 3 FT

TRB-204-122007 Time = 0850

SCW-005-122007 ^{DK}/RV Project 5403.001

Surface Water Sample Time: 09:10

Samples Taken: 3 VOC 2 EXP DEPTH: 1.5 FT

SCW-006-122007 ^{DK}/RV Project 5403.001

Surface Water Sample Times 09:30

Samples Taken: 3 VOC 2 EXP DEPTH: 1.5 FT

SCW SW-011-122007 ^{DK}/RV Project 5403.001

Surface Water Sample Times 10:45

Samples Taken: 3 VOC 2 EXP DEPTH: 1 FT

SW-013-122007 ^{DK}/RV Project 5403.001

Surface Water Sample Times 10:50

Samples Taken: 3 VOC 2 EXP DEPTH: 1 FT

SW-009-122007 ^{DK}/RV Project 5403.001

Surface Water Sample Time: 11:40

Samples Taken: 3 VOC 2 EXP DEPTH: 1 FT

GART-122007 ^{DK}/RV Project 5403.001

Surface Water Sample Time: 11:55

Samples Taken: 3 VOC 2 EXP DEPTH: 1000 mL/min

SK1-001-122007 ^{DK}/RV Project 5403.001

Surface Water Sample Time 12:30

SW-005-122007
Sample Time 12:10
^{DK}/RV
P.# 5403.001
Samples Taken 3 VOC 2 EXP



Dec 4th 2007 4th Quarter Surface Water Sampling

SW-012-122007 Time 0840 R/DK

MS/MSA Project 5403.001 Samples Taken 2EXP 3VOA
3VOA 2EXP MS 3VOA 2EXP MSD Depth of water
16"

SW-010-122007 Time 0935 R/DK

QC Project 5403.001 Sample Taken 3VOA 2EXP
SW-210-122007 3VOA 2EXP Depth of water
6"

SW-016-122007 Time 1000 R/DK

Samples Taken 3VOA 2EXP
Depth of water 8" Project 5403.001

SW-015-122007 Time 1100 R/DK

Sample Taken 3VOA 2EXP Project 5403.001
Depth of water

SW-006-122007 Time 1115 R/DK

Project 5403.001 3VOA 2EXP
Depth of water

SW-008-122007 3VOA 2EXP Project 5403.001

SW-208-122007 3VOA 2EXP

SW-408-122007 3VOA 2EXP Depth of water

Time 1145 R/DK

TRB-408-122007 2VOA Project 5403.001
1145

12-04-07

Ralph Vint (ASW)

Appendix C
Reference Sheet
Data Validation Qualifiers
Drinking Water Standards

Data Qualifiers and Drinking Water Standards Reference Sheet Former Nebraska Ordnance Plant, Mead, Nebraska

Any qualifiers (i.e. U, J, or R) listed after a result are assigned during the data validation process. Data validation is a procedure which involves the review of quality control data provided by the laboratory. This review is followed by the assignment of data qualifiers (if necessary) which indicate the reliability of a result to the reader. Data validation is performed by a chemist employed outside of the laboratory or associated government installations to ensure accuracy in data reporting. A description of qualifiers is provided below.

No qualifier

- If a result has no assigned qualifier, the contaminant was detected, and the reader can be confident that the concentration is exact.

“U”

- A result followed by a “U” qualifier means that the contaminant was undetected, or not detected by the instrument.

“UJ”

- A result followed by a “UJ” qualifier means that the contaminant was not detected, but the associated detection level is not certain (estimated). For example, if a value is followed by a “UJ”, the contaminant was not detected, but the associated detection level is in question. The detection level is in question because one or more of the laboratory quality control indicators do not meet acceptance criteria. The amount that the indicator fell outside of the criteria may be used as a rough estimate of how much the actual detection level differs from the stated one. Typically, this is a 10-30% difference.

“UR”

- A result followed by a “UR” qualifier means that the contaminant was not detected, but there is strong doubt that the associated detection level is accurate. For example, if a value is followed by a “UR”, the contaminant was not detected, but the associated detection level is in strong doubt. The detection level is in doubt because results are unacceptable for a quality control indicator. In this case, the detection level cannot be estimated.

“J”

- A result followed by only a “J” qualifier means that the contaminant was detected, but there is some question that the stated concentration is exact. For example, if a result is “0.5 J”, the contaminant was detected, but there is some question that the concentration is exactly 0.5. A “J” qualifier may be applied for two reasons: (1) the contaminant was detected below the reporting limit; or (2) the contaminant was detected, but one or more quality control indicators did not meet acceptance criteria. The reporting limit is equal to the concentration of the lowest standard used by the laboratory to calibrate the instrument. The reporting limit is the minimum concentration that can be stated with complete confidence.

“R”

- A result followed by only an “R” qualifier means that the contaminant was detected, but there is strong doubt that the concentration is exact. For example, if a result is “0.5 R”, the contaminant was detected, but there is strong doubt that the concentration is exactly 0.5. The concentration is in doubt because results are unacceptable for a quality control indicator. In this case, the detected concentration cannot be estimated. For comparison purposes, detected results are reported in the results letters with available Environmental Protection Agency drinking water standards. These standards include the maximum contaminant level (MCL) and various health advisories (HA). A description of the drinking water standards is provided below.

“MCL”

- The maximum contaminant level is the highest concentration of a contaminant that is allowed in drinking water. Maximum contaminant levels are enforceable Federal standards.

“HA”

- Health advisories provide estimates of acceptable drinking water concentrations for a chemical substance based on health effects information. Health advisories are not enforceable Federal standards, but serve as a technical guidance to assist Federal, State, and local officials.

Appendix D
Analytical Results on Compact Disc
Summary Forms and Raw Data

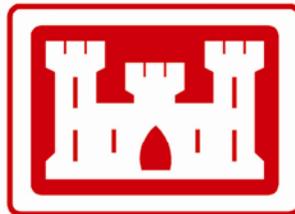


QUALITY CONTROL SUMMARY REPORT

**Fourth Quarter 2007
Drain Tile and Seep Sampling Event
Former Nebraska Ordnance Plant
Mead, Nebraska**

Prepared for

**U.S. Army Corps of Engineers
Kansas City Districts**



March 2008

1746 Cole Boulevard, Building 21, Suite 350
Lakewood, Colorado 8401
Telephone: (303) 298-7607
Facsimile: (303) 298-7837

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE <i>(Read instructions on the reverse side prior to initiating this form)</i>				DATE: February 19, 2008		TRANSMITTAL NO. 2007-20		
SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by contractor)								
Attn: Jerry Montgomery USACE, Kansas City District 601 E. 12th St. Kansas City, MO 64106-2896		FROM: John Ryder ECC 1746 Cole Blvd, Bldg 21, Lakewood, CO 80401		CONTRACT NO. W912DQ-04-D-0017, Task Order 0001		CHECK ONE: <input checked="" type="checkbox"/> THIS IS A NEW TRANSMITTAL <input type="checkbox"/> THIS IS A RESUBMITTAL OF TRANSMITTAL _____		
SPECIFICATION SECTION NO. (cover only one section with each transmittal)		PROJECT TITLE AND LOCATION: Groundwater Monitoring Program, Former Nebraska Ordnance Plant, Mead, Nebraska				CHECK ONE: <input type="checkbox"/> FIO <input checked="" type="checkbox"/> For Govt. Approval		
ITEM NO. a.	DESCRIPTION OF ITEM SUBMITTED <i>(Type, size, model number, etc.)</i> b.	MFG. OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. <i>(See instruction No. 8)</i> c.	NO. OF COPIES d.	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE g.	VARIATION <i>(See instruc. no. 6)</i> h.	FOR C E USE CODE i.
				SPEC. PARA. NO. e.	DRAWING SHEET NO. f.			
1	Quality Control Summary Report		1					
	Fourth Quarter 2007 Drain Tile and Seep Sampling Event							
REMARKS Sandeep Mehta (USACE) Garth Anderson (USACE) David Nelson (USACE)				I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated. Catherine Drumheller, Denver Science & Engineering Group _____ NAME AND SIGNATURE OF CONTRACTOR				
SECTION II - APPROVAL ACTION								
ENCLOSURES RETURNED (List by Item No.)			NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY			DATE		



February 19, 2008

U.S. Army Corps of Engineers, Kansas City District
Attn: Jerry Montgomery
601 East 12th Street
Kansas City, MO 64106-2896

Regional Office

1746 Cole Boulevard
Building 21, Suite 350
Lakewood, CO 80401

Phone: 303.298.7607
Fax: 303.298.7837

Re: Transmittal of Quality Control Summary Report
Fourth Quarter 2007 Drain Tile and Seep Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska
Contract No. W912DQ-04-D-0017, Task Order No. 0001

Dear Mr. Montgomery:

ECC is hereby transmitting one electronic copy of the Quality Control Summary Report for the Fourth Quarter 2007 Drain Tile and Seep Sampling Event at the former Nebraska Ordnance Plant, Mead, Nebraska.

Please contact Mr. Brady Bigelow or me if you require additional information.

Sincerely,

John Ryder
Project Chemist
ECC

Enclosures

Cc: Mr. Sandeep Mehta (USACE)
Mr. Garth Anderson (USACE)
Mr. David Nelson (USACE)

Corporate Office

1240 Bayshore Highway
Burlingame, CA 94010

Phone: 650.347.1555
Fax: 650.347.8789
www.ecc.net

Quality Control Summary Report Fourth Quarter 2007 Drain Tile and Seep Sampling Event Former Nebraska Ordnance Plant Mead, Nebraska

1.0 INTRODUCTION

The flowing Seep and Drain Tile (Johnson Creek) sampling was conducted by ECC as contracted by the United States Army Corps of Engineers (USACE), Kansas City District on December 4 and December 5, 2007 at the former Nebraska Ordnance Plant, near Mead, Nebraska. ECC performed all sampling activities in accordance with the Field Sampling Plan and Quality Assurance Project Plan (QAPP) of the *Work Plan and Sampling and Analysis Plan for Groundwater Monitoring Well Sampling* (ECC, 2006). This Quality Control Summary Report presents a summary of the chemical data quality review for the fourth quarter 2007 Drain Tile sampling event.

Samples were analyzed for the following constituents:

- Volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260B

All analyses were performed by TestAmerica of South Burlington, Vermont.

Table 1-1 presents the seeps and drain tiles planned for sample collection, the corresponding sample identifications (IDs) for the locations that were flowing and could be sampled, and the required analyses for the fourth quarter 2007 drain tile sampling event. After sample collection the naming convention of the seeps and drain tiles was changed. These changes are summarized in Table 1-1. The Chain of Custody Records (COCs) and field notes are included as Appendices A and B, respectively. Appendix C presents an explanation of data validation qualifiers and drinking water standards. Appendix D contains a compact disc (CD) with all analytical data, including summary forms and raw data, for the fourth quarter 2007 drain tile sampling event.

2.0 FIELD SAMPLING ACTIVITIES

Samples from 11 drain tiles and 4 seeps were collected during the fourth quarter 2007 drain tile sampling even for VOCs. Two field duplicate samples, one matrix spike (MS)/matrix spike duplicate (MSD) pair (SP-003-122007 MS/MSD), and trip blank (TRB-213-122007) were collected.

Table 2-1 provides the following sample collection information:

- QC split sample information;
- MS/MSD sample information;
- A cross-reference between laboratory sample IDs and field sample IDs;
- Sample delivery group (SDG) numbers;
- COC numbers;
- Dates of sample collection and sample receipt by the laboratory; and
- Requested analyses.

3.0 ANALYTICAL RESULTS

Summaries of the analytical results are presented in Table 3-1. VOC detections are presented in Table 3-2. Trip blank results are presented in Table 3-3 and field duplicate results are presented in Table 3-4.

4.0 DATA QUALITY EVALUATION PROCEDURES

The following subsections present results of the data quality evaluation. This evaluation was performed in accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003) and the *CENWK-EC-EF Data Quality Evaluation Guidance* (USACE, 2001). Qualifiers were assigned based on laboratory QC criteria.

Data quality evaluation results are presented in Table 4-1 according to field sample ID. QC outliers for the VOC analyses are presented in Table 4-2.

4.1 Sample Receipt at the Laboratory

All sample transfer requirements were met for samples received at the laboratory with the exception discussed below. The samples were received at the laboratory properly preserved, on ice and within the range of 4 ± 2 °C.

According to the laboratory Sample Receipt and Log in Sheet, the date or time listed on the labels for various sample containers for samples DT-006-122007, DT-015-122007, and SP-003-122007 did not match the Chain of Custody (COC) record. The sample collection information listed on the COC was used for these samples.

4.2 Holding Times

The preserved VOC water samples were analyzed within 14 days of sample collection.

4.3 Tuning and Calibration

According to the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), assessment of tune and calibration information is not required at validation. Tuning and calibration outliers are to be detailed by the laboratory in the laboratory case-narrative, which is reviewed at validation. No deviations from method or Laboratory Quality Management Plan (LQMP) specifications for the calibration and tuning of pertinent instrumentation were reported by the laboratory. The tuning and calibration procedures outlined in the LQMP met the specifications of the Mead QAPP (ECC, 2006).

4.4 Laboratory Method Blanks

A laboratory method blank is an analyte-free matrix that is carried through the entire preparation and analysis sequence to identify potential contamination. In accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), detections are qualified as non-detect (U) if the concentration in the sample is less than 5 times the concentration in the associated blank. For common laboratory contaminants, detections are qualified as non-detect (U) if the concentration in the sample is less than 10 times the concentration in the associated blank. Sample results that are either non-detect (U), or greater than 5 times or 10 times (for common laboratory contaminants) the blank result do not require qualification.

Method blanks were analyzed with each analytical batch. No target analytes were detected in the VOC method blanks.

4.5 Trip Blanks

A trip blank is an analyte-free matrix that accompanies samples through the sample collection and transportation process to identify potential VOC contamination. In accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), detections are qualified as non-detect (U) if the concentration in the sample is less than 5 times the concentration in the associated blank. Sample results that are either non-detect (U), or greater than 5 times the blank result do not require qualification.

Target compounds were not detected in the volatile trip blank, TRB-213-122007.

Trip blank results are summarized in Table 3-3.

4.6 Surrogates

Surrogates are compounds not normally found in the environment that are added (spiked) into samples prior to extraction (for extractable methods) and prior to analysis (for non-extractable methods). The percent recovery (% REC) of each surrogate is used to assess the success of the sample preparation process for each sample.

All samples were spiked with appropriate surrogate compounds. All surrogate results were within the respective laboratory % REC limits.

4.7 Laboratory Control Sample / Laboratory Control Sample Duplicate

A laboratory control sample (LCS) consists of a matrix similar to that of the field sample. The LCS is spiked with known concentrations of analytes. The LCS % REC is a measure of the method accuracy.

In accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), results for non-contaminants of concern are J-coded if % RECs are outside laboratory criteria, but within the limits of 40-160% for VOCs. Results are R-coded if % RECs are outside these ranges, unless a corrective action is performed or additional batch QC is available which demonstrates recoveries within the specified range.

All LCS and/or LCSD % RECs were within laboratory QC limits and all RPDs were less than 30%.

4.8 Matrix Spike / Matrix Spike Duplicate

MS/MSD analyses measure method accuracy and precision for a project-specific matrix. A field sample is split into three portions (original, MS, and MSD) and known amounts of analytes are added (spiked) into the MS and MSD portions of the sample. The analytical results of these two portions are compared to each other for reproducibility using the RPD. These results are also compared against the unspiked portion of the sample for % REC of the spiked analytes.

One set of MS/MSD samples were collected for sample SP-003-122007 and analyzed for VOCs. All MS/MSD % RECs and RPDs were within laboratory QC limits.

4.9 Field Duplicates

Field duplicates provide information regarding the reproducibility of analytical results and account for error introduced from handling, shipping, preparing, and analyzing field samples.

The following field duplicate pairs were collected during the fourth quarter 2007 drain tile sampling event:

- DT-015-122007 / DT-215-122007 (VOCs)
- SP-003-122007 / SP-203-122007 (VOCs)

In accordance with the *Data Quality Evaluation Guidance, USACE CENWK-EC-EF* (USACE, 2001), data are not qualified based solely on field duplicate results. Results within a factor of two of each other are considered to be in agreement. Results between a factor of two to three of each other are considered a minor discrepancy, and results greater than a factor of three

are considered a major discrepancy.

All field duplicate results were within a factor of two of each other. It should be noted that the detected results for trichloroethene for DT-015-122007 / DT-215-122007 were 55 ug/L and 57 ug/L, respectively. These values were flagged for exceeding the linear calibration of the instrument. Upon dilution, the results were 82 ug/L and 53 ug/L, respectively.

Field duplicate results are summarized in Table 3-4.

4.10 Dilutions and Re-analyses

Qualifiers assigned as a result of calibration range exceedance are not used in the calculation of analytical data completeness percentages if there are acceptable results from diluted sample analyses.

The following samples required a diluted analysis due to analyte concentrations above the calibration range:

- DT-015-122007 – Trichloroethene (TCE)
- DT-215-122007 – Trichloroethene (TCE)

The original sample result for TCE was flagged “E” by the laboratory and is qualified as estimated (J). The diluted concentration should be used for TCE and the original analysis should be used for all other sample results. At the request of the USACE project chemist, all other results from the dilutions are qualified as estimated (J/UJ) because the results from the initial analyses are appropriate for use.

4.11 Other QC Parameter

Explosives are not a "QC Parameter".

Not applicable as explosive analyses were not requested for these samples.

4.12 Laboratory Qualifiers

Analytes detected below the quantitation limit or reporting limit, but above the lowest level of detection were quantified and results were assigned an estimated (J) qualifier by the laboratory. These qualifiers were carried over by the validator and were not used to determine analytical completeness or project completeness (Section 5.0).

5.0 OVERALL ASSESSMENT

The following subsections present the field completeness, analytical completeness, and project completeness determinations for the fourth quarter 2007 drain tile sampling event. All completeness goals were established in the QAPP (ECC, 2006).

5.1 Field Completeness

Field completeness for sample collection is assessed by comparing the number of samples collected to the number of samples planned for collection. Although several additional drain tiles and sweeps were identified along Johnson Creek, only those flowing during the fourth quarter sampling event were to be sampled. Therefore field completeness for the VOCs is considered to be 100% and the overall field completeness percentage is 100% as only VOCs were requested. The field completeness percentage exceeds the field completeness goal of 95%. Section 2.0 presents the field sampling activities, including any deviations from planned sampling if applicable. Table 5-1 presents field completeness values.

5.2 Analytical Completeness

Analytical completeness is calculated as both acceptable data completeness and quality data completeness.

Acceptable data is a measure of laboratory contract compliance. Acceptable data includes data that have not been rejected or qualified as estimated (J). Qualified data are considered acceptable if appropriate corrective actions were taken by the laboratory. Acceptable data completeness percentages for VOCs at 100% exceeded the acceptable data completeness goal for each analytical method of 90%. The overall acceptable data completeness (100%) meets the overall acceptable data completeness goal of 95%. The qualifiers assigned as a result of calibration range exceedance were not used in the calculation of analytical data completeness percentages.

Quality data is a measure of the percentage of usable data points. Usable data points include all non-rejected data. Rejected data points with replacement data do not count against quality data completeness. The quality data completeness percentage for VOCs and the overall quality data completeness percentage are 100%, which exceeds the quality data completeness goal of 80%. Table 5-2 presents analytical data completeness values.

5.3 Project Completeness

Project completeness combines sampling and analytical protocols to assess the project as a whole. Project completeness is assessed by comparing the percentage of samples/measurements that are determined to be usable to the total number of samples/measurements planned. Project completeness is calculated using field completeness and analytical completeness (quality data) percentages. Analytical completeness for the sampling event was 100% and field completeness was 100%. The project completeness was calculated as 100%. Table 5-3 presents project completeness values.

6.0 CONCLUSIONS

Data are valid for use, as qualified. Overall field completeness is 100%, acceptable data completeness is 100%, quality data completeness is 100%, and project completeness is 100%. Two samples required dilutions due to elevated analyte concentrations. Qualifiers assigned due to calibration range exceedance did not effect analytical or project completeness.

7.0 REFERENCES

ECC, 2006, *Work Plan and Sampling and Analysis Plan for Groundwater Monitoring Well Sampling*, Part I - Work Plan, Part II - Field Sampling Plan, Part III - Quality Assurance Project Plan, June.

USACE, 2003, *Kansas City District Data Quality Evaluation Guidance*, August.

USACE, 2001, *CENWK-EC-EF Data Quality Evaluation Guidance*, July.

Tables

Table 1-1
Sample Collection Summary
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample Location	New Name	Sample Identifications ²	Analyses ¹
CK-11A	DT-13	DT-013-122007	Volatiles
CK-11B	DT-14		Volatiles
CK-13A	DT-15	DT-015-122007	Volatiles
CK-13B	DT-16	DT-016-122007	Volatiles
CK-14A	SP-01	SP-001-122007	Volatiles
CK-17A	DT-17	DT-017-122007	Volatiles
CK-18A	DT-18	DT-018-122007	Volatiles
CK-19	DT-19		Volatiles
CK-1A	DT-02	DT-002-122007	Volatiles
CK-1B	DT-01	DT-001-122007	Volatiles
CK-20	DT-20		Volatiles
CK-25A	SP-03	SP-003-122007	Volatiles
CK-3	DT-03	DT-003-122007	Volatiles
CK-33A	DT-21		Volatiles
CK-4	DT-04		Volatiles
CK-6	DT-05		Volatiles
CK-7	DT-06	DT-006-122007	Volatiles
CK-9	DT-12	DT-012-122007	Volatiles
CK-9X	DT-11	DT-011-122007	Volatiles
UNKSEEP-1	SP-02	SP-002-122007	Volatiles
UNKSEEP-2	SP-04	SP-004-122007	Volatiles
UNKSEEP-3	SP-05		Volatiles
UNKTILE-1	DT-10		Volatiles
UNKTILE-2	DT-09		Volatiles
UNKTILE-3	DT-07		Volatiles
UNKTILE-4	DT-08		Volatiles

Notes:

¹ = Volatiles by EPA Method 8260

² = Only Seeps and Drain tiles flowing at time of collection were sampled as requested.

Table 2-1
Sample Collection Summary
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample Number	Quality Control Samples	MS/MSD Samples	Date Sampled	Date Received by Laboratory	COC ID	Laboratory ID	SDG	Analyses
								VOCs
Field Samples								
DT-001-122007			12/5/2007	12/6/2007	None	734224	123296	●
DT-002-122007			12/5/2007	12/6/2007	None	734223	123296	●
DT-003-122007			12/5/2007	12/6/2007	None	734222	123296	●
DT-006-122007			12/5/2007	12/6/2007	None	734221	123296	●
DT-011-122007			12/5/2007	12/6/2007	None	734220	123296	●
DT-012-122007			12/5/2007	12/6/2007	None	734219	123296	●
DT-013-122007			12/4/2007	12/6/2007	None	734209	123296	●
DT-015-122007			12/5/2007	12/6/2007	None	734225	123296	●
	DT-215-122007		12/5/2007	12/6/2007	None	734226	123296	●
DT-016-122007			12/4/2007	12/6/2007	None	734211	123296	●
DT-017-122007			12/4/2007	12/6/2007	None	734214	123296	●
DT-018-122007			12/4/2007	12/6/2007	None	734215	123296	●
SP-001-122007			12/4/2007	12/6/2007	None	734212	123296	●
SP-002-122007			12/4/2007	12/6/2007	None	734213	123296	●
SP-003-122007			12/4/2007	12/6/2007	None	734216	123296	●
		SP-003-122007MS	12/4/2007	12/6/2007	None	734216	123296	●
		SP-003-122007MSD	12/4/2007	12/6/2007	None	734216	123296	●
	SP-203-122007		12/4/2007	12/6/2007	None	734217	123296	●
SP-004-122007			12/4/2007	12/6/2007	None	734218	123296	●
Trip Blanks								
TRB-213-122007			12/4/2007	12/6/2007	None	734210	123296	●

Notes:

- = Sample was collected for the indicated analysis
- COC = Chain of Custody Record
- ID = Identification
- MS/MSD Matrix Spike/Matrix Spike Duplicate
- SDG = Sample Delivery Group
- VOCs = Volatile Organic Compounds

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-001	DT-002	DT-003	DT-006	DT-011	DT-012
Field Sample ID:	DT-001-122007	DT-002-122007	DT-003-122007	DT-006-122007	DT-011-122007	DT-012-122007
Lab Sample ID:	734224	734223	734222	734221	734220	734219
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007
Field QC:	Original Sample					
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

VOCs	Units						
1,1-Dichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1,2-Tetrachloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene	ug/l	1 U	1 U	1 U	1 U	0.34 J	1 U
1,2-Dichloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorotoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
4-Chlorotoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
4-Isopropyltoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-001	DT-002	DT-003	DT-006	DT-011	DT-012
Field Sample ID:	DT-001-122007	DT-002-122007	DT-003-122007	DT-006-122007	DT-011-122007	DT-012-122007
Lab Sample ID:	734224	734223	734222	734221	734220	734219
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007
Field QC:	Original Sample					
Analysis Information:	11	11	11	11	11	11

VOCs	Units						
4-Methyl-2-pentanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Carbon disulfide	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/l	1 U	1 U	1 U	1 U	0.34 J	1 U
cis-1,3-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorobutadiene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert butyl ether	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-001	DT-002	DT-003	DT-006	DT-011	DT-012
Field Sample ID:	DT-001-122007	DT-002-122007	DT-003-122007	DT-006-122007	DT-011-122007	DT-012-122007
Lab Sample ID:	734224	734223	734222	734221	734220	734219
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007
Field QC:	Original Sample					
Analysis Information:	11	11	11	11	11	11

VOCs	Units						
n-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
o-Xylene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
sec-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/l	1 U	1 U	1 U	6.3	18	7.2
Trichlorofluoromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Xylene (Total)	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-013	DT-015	DT-015	DT-015	DT-015	DT-016
Field Sample ID:	DT-013-122007	DT-015-122007	DT-015-122007	DT-215-122007	DT-215-122007	DT-016-122007
Lab Sample ID:	734209	734225	734225D1	734226	734226D1	734211
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/4/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Original Sample	Field Duplicate	Field Duplicate	Original Sample
Analysis Information:	I 1	I 1	DL 2.13	I 1	DL 2	I 1

VOCs	Units						
1,1-Dichloroethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,1-Dichloroethene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,1-Dichloropropene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,1,1-Trichloroethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,1,1,2-Tetrachloroethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,1,2,2-Tetrachloroethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,1,2-Trichloroethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,1,2-Trichlorotrifluoroethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,2-Dibromo-3-chloropropane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,2-Dibromoethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,2-Dichlorobenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,2-Dichloroethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,2-Dichloroethene	ug/l	0.33 J	0.79 J	1.2 J	0.84 J	0.76 J	1 U
1,2-Dichloropropane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,2,3-Trichlorobenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,2,4-Trichlorobenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,2,4-Trimethylbenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,3-Dichlorobenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,3-Dichloropropane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,3,5-Trimethylbenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
1,4-Dichlorobenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
2-Butanone	ug/l	5 U	5 U	11 UJ	5 U	10 UJ	5 U
2-Chlorotoluene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
2-Hexanone	ug/l	5 U	5 U	11 UJ	5 U	10 UJ	5 U
4-Chlorotoluene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
4-Isopropyltoluene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U

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Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-013	DT-015	DT-015	DT-015	DT-015	DT-016
Field Sample ID:	DT-013-122007	DT-015-122007	DT-015-122007	DT-215-122007	DT-215-122007	DT-016-122007
Lab Sample ID:	734209	734225	734225D1	734226	734226D1	734211
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/4/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Original Sample	Field Duplicate	Field Duplicate	Original Sample
Analysis Information:	1 1	1 1	DL 2.13	1 1	DL 2	1 1

VOCs	Units						
4-Methyl-2-pentanone	ug/l	5 U	5 U	11 UJ	5 U	10 UJ	5 U
Acetone	ug/l	5 U	5 U	11 UJ	5 U	10 UJ	5 U
Benzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Bromobenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Bromochloromethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Bromodichloromethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Bromoform	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Bromomethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Carbon disulfide	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Carbon tetrachloride	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Chlorobenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Chloroethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Chloroform	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Chloromethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
cis-1,2-Dichloroethene	ug/l	0.33 J	0.79 J	1.2 J	0.84 J	0.76 J	1 U
cis-1,3-Dichloropropene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Dibromochloromethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Dibromomethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Dichlorodifluoromethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Ethylbenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Hexachlorobutadiene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Isopropylbenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Methyl tert butyl ether	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Methylene chloride	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
m,p-Xylene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Naphthalene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-013	DT-015	DT-015	DT-015	DT-015	DT-016
Field Sample ID:	DT-013-122007	DT-015-122007	DT-015-122007	DT-215-122007	DT-215-122007	DT-016-122007
Lab Sample ID:	734209	734225	734225D1	734226	734226D1	734211
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/4/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Original Sample	Field Duplicate	Field Duplicate	Original Sample
Analysis Information:	I 1	I 1	DL 2.13	I 1	DL 2	I 1

VOCs	Units						
n-Butylbenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
n-Propylbenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
o-Xylene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
sec-Butylbenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Styrene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
tert-Butylbenzene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Tetrachloroethene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Toluene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
trans-1,2-Dichloroethene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
trans-1,3-Dichloropropene	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Trichloroethene	ug/l	12	55 J	82	57 J	53	1 U
Trichlorofluoromethane	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Vinyl chloride	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U
Xylene (Total)	ug/l	1 U	1 U	2.1 UJ	1 U	2 UJ	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-017	DT-018	SP-001	SP-002	SP-003	SP-003
Field Sample ID:	DT-017-122007	DT-018-122007	SP-001-122007	SP-002-122007	SP-003-122007	SP-203-122007
Lab Sample ID:	734214	734215	734212	734213	734216	734217
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/4/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Field Duplicate				
Analysis Information:	1 1	1 1	1 1	1 1	1 1	1 1

VOCs	Units						
1,1-Dichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	ug/l	1 U	1 U	0.26 J	1 U	1 U	1 U
1,1,1,2-Tetrachloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene	ug/l	0.46 J	0.33 J	0.94 J	0.75 J	0.3 J	0.32 J
1,2-Dichloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorotoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
2-Hexanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
4-Chlorotoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
4-Isopropyltoluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-017	DT-018	SP-001	SP-002	SP-003	SP-003
Field Sample ID:	DT-017-122007	DT-018-122007	SP-001-122007	SP-002-122007	SP-003-122007	SP-203-122007
Lab Sample ID:	734214	734215	734212	734213	734216	734217
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/4/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Field Duplicate				
Analysis Information:	11	11	11	11	11	11

VOCs	Units						
4-Methyl-2-pentanone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	ug/l	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Carbon disulfide	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	ug/l	1 U	1 U	0.36 J	0.78 J	1.9	1.8
Chloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	ug/l	0.46 J	0.33 J	0.94 J	0.75 J	0.3 J	0.32 J
cis-1,3-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dibromomethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorobutadiene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert butyl ether	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-017	DT-018	SP-001	SP-002	SP-003	SP-003
Field Sample ID:	DT-017-122007	DT-018-122007	SP-001-122007	SP-002-122007	SP-003-122007	SP-203-122007
Lab Sample ID:	734214	734215	734212	734213	734216	734217
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/4/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Field Duplicate				
Analysis Information:	11	11	11	11	11	11

VOCs	Units						
n-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
o-Xylene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
sec-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/l	5.6	3.6	16	13	12	11
Trichlorofluoromethane	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
Xylene (Total)	ug/l	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	SP-004
Field Sample ID:	SP-004-122007
Lab Sample ID:	734218
Lab Name:	STLVT
Sample Date:	12/4/2007
Field QC:	Original Sample
Analysis Information:	I 1

VOCs	Units	
1,1-Dichloroethane	ug/l	1 U
1,1-Dichloroethene	ug/l	1 U
1,1-Dichloropropene	ug/l	1 U
1,1,1-Trichloroethane	ug/l	1 U
1,1,1,2-Tetrachloroethane	ug/l	1 U
1,1,2,2-Tetrachloroethane	ug/l	1 U
1,1,2-Trichloroethane	ug/l	1 U
1,1,2-Trichlorotrifluoroethane	ug/l	1 U
1,2-Dibromo-3-chloropropane	ug/l	1 U
1,2-Dibromoethane	ug/l	1 U
1,2-Dichlorobenzene	ug/l	1 U
1,2-Dichloroethane	ug/l	1 U
1,2-Dichloroethene	ug/l	0.23 J
1,2-Dichloropropane	ug/l	1 U
1,2,3-Trichlorobenzene	ug/l	1 U
1,2,4-Trichlorobenzene	ug/l	1 U
1,2,4-Trimethylbenzene	ug/l	1 U
1,3-Dichlorobenzene	ug/l	1 U
1,3-Dichloropropane	ug/l	1 U
1,3,5-Trimethylbenzene	ug/l	1 U
1,4-Dichlorobenzene	ug/l	1 U
2-Butanone	ug/l	5 U
2-Chlorotoluene	ug/l	1 U
2-Hexanone	ug/l	5 U
4-Chlorotoluene	ug/l	1 U
4-Isopropyltoluene	ug/l	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	SP-004
Field Sample ID:	SP-004-122007
Lab Sample ID:	734218
Lab Name:	STLVT
Sample Date:	12/4/2007
Field QC:	Original Sample
Analysis Information:	I 1

VOCs	Units	
4-Methyl-2-pentanone	ug/l	5 U
Acetone	ug/l	5 U
Benzene	ug/l	1 U
Bromobenzene	ug/l	1 U
Bromochloromethane	ug/l	1 U
Bromodichloromethane	ug/l	1 U
Bromoform	ug/l	1 U
Bromomethane	ug/l	1 U
Carbon disulfide	ug/l	1 U
Carbon tetrachloride	ug/l	1 U
Chlorobenzene	ug/l	1 U
Chloroethane	ug/l	1 U
Chloroform	ug/l	1.3
Chloromethane	ug/l	1 U
cis-1,2-Dichloroethene	ug/l	0.23 J
cis-1,3-Dichloropropene	ug/l	1 U
Dibromochloromethane	ug/l	1 U
Dibromomethane	ug/l	1 U
Dichlorodifluoromethane	ug/l	1 U
Ethylbenzene	ug/l	1 U
Hexachlorobutadiene	ug/l	1 U
Isopropylbenzene	ug/l	1 U
Methyl tert butyl ether	ug/l	1 U
Methylene chloride	ug/l	1 U
m,p-Xylene	ug/l	1 U
Naphthalene	ug/l	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID: SP-004
Field Sample ID: SP-004-122007
Lab Sample ID: 734218
Lab Name: STLVT
Sample Date: 12/4/2007
Field QC: Original Sample
Analysis Information: I 1

VOCs	Units	
n-Butylbenzene	ug/l	1 U
n-Propylbenzene	ug/l	1 U
o-Xylene	ug/l	1 U
sec-Butylbenzene	ug/l	1 U
Styrene	ug/l	1 U
tert-Butylbenzene	ug/l	1 U
Tetrachloroethene	ug/l	1 U
Toluene	ug/l	1 U
trans-1,2-Dichloroethene	ug/l	1 U
trans-1,3-Dichloropropene	ug/l	1 U
Trichloroethene	ug/l	9
Trichlorofluoromethane	ug/l	1 U
Vinyl chloride	ug/l	1 U
Xylene (Total)	ug/l	1 U

Table 3 - 1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

UJ = Not Detected, Estimated: A result followed by a "UJ" qualifier means that the analyte was not detected, but the associated quantitation limit is not certain (or estimated) because one or more laboratory quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

STLVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

VOCs = Volatile Organic Compounds

I = Initial analysis

DL = Diluted analysis

"1" = Dilution factor

Table 3 - 2
Detections - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-006	DT-011	DT-012	DT-013	DT-015	DT-015
Field Sample ID:	DT-006-122007	DT-011-122007	DT-012-122007	DT-013-122007	DT-015-122007	DT-015-122007
Lab Sample ID:	734221	734220	734219	734209	734225	734225D1
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/5/2007	12/5/2007	12/5/2007	12/4/2007	12/5/2007	12/5/2007
Field QC:	Original Sample					
Analysis Information:	I 1	I 1	I 1	I 1	I 1	DL 2.13

VOCs	Units					
1,1,1-Trichloroethane	ug/l					
1,2-Dichloroethene	ug/l		0.34 J		0.33 J	0.79 J
Chloroform	ug/l					
cis-1,2-Dichloroethene	ug/l		0.34 J		0.33 J	0.79 J
Trichloroethene	ug/l	6.3	18	7.2	12	55 J

Table 3 - 2
Detections - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-015	DT-015	DT-017	DT-018	SP-001	SP-002
Field Sample ID:	DT-215-122007	DT-215-122007	DT-017-122007	DT-018-122007	SP-001-122007	SP-002-122007
Lab Sample ID:	734226	734226D1	734214	734215	734212	734213
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/5/2007	12/5/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007
Field QC:	Field Duplicate	Field Duplicate	Original Sample	Original Sample	Original Sample	Original Sample
Analysis Information:	I 1	DL 2	I 1	I 1	I 1	I 1

VOCs	Units						
1,1,1-Trichloroethane	ug/l					0.26 J	
1,2-Dichloroethene	ug/l	0.84 J	0.76 J	0.46 J	0.33 J	0.94 J	0.75 J
Chloroform	ug/l					0.36 J	0.78 J
cis-1,2-Dichloroethene	ug/l	0.84 J	0.76 J	0.46 J	0.33 J	0.94 J	0.75 J
Trichloroethene	ug/l	57 J	53	5.6	3.6	16	13

Table 3 - 2
Detections - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	SP-003	SP-003	SP-004
Field Sample ID:	SP-003-122007	SP-203-122007	SP-004-122007
Lab Sample ID:	734216	734217	734218
Lab Name:	STLVT	STLVT	STLVT
Sample Date:	12/4/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Field Duplicate	Original Sample
Analysis Information:	I 1	I 1	I 1

VOCs	Units			
1,1,1-Trichloroethane	ug/l			
1,2-Dichloroethene	ug/l	0.3 J	0.32 J	0.23 J
Chloroform	ug/l	1.9	1.8	1.3
cis-1,2-Dichloroethene	ug/l	0.3 J	0.32 J	0.23 J
Trichloroethene	ug/l	12	11	9

Table 3 - 2
Detections - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter
STLVT = Test America Laboratories, Vermont
ID = Identification
QC = Quality Control
VOCs = Volatile Organic Compounds

I = Initial analysis
DL = Diluted analysis
"1" = Dilution factor

Table 3 - 3
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-015	DT-015	DT-015	DT-015	SP-003	SP-003
Field Sample ID:	DT-015-122007	DT-015-122007	DT-215-122007	DT-215-122007	SP-003-122007	SP-203-122007
Lab Sample ID:	734225	734225D1	734226	734226D1	734216	734217
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Field Duplicate	Field Duplicate	Original Sample	Field Duplicate
Analysis Information:	I 1	DL 2.13	I 1	DL 2	I 1	I 1

VOCs	Units						
1,1-Dichloroethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,1-Dichloroethene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,1-Dichloropropene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,1,1-Trichloroethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,1,1,2-Tetrachloroethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,1,2-Trichloroethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,2-Dibromo-3-chloropropane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,2-Dibromoethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,2-Dichlorobenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,2-Dichloroethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,2-Dichloroethene	ug/l	0.79 J	1.2 J	0.84 J	0.76 J	0.3 J	0.32 J
1,2-Dichloropropane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,2,3-Trichlorobenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,2,4-Trichlorobenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,2,4-Trimethylbenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,3-Dichlorobenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,3-Dichloropropane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,3,5-Trimethylbenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
1,4-Dichlorobenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
2-Butanone	ug/l	5 U	11 UJ	5 U	10 UJ	5 U	5 U
2-Chlorotoluene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
2-Hexanone	ug/l	5 U	11 UJ	5 U	10 UJ	5 U	5 U
4-Chlorotoluene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
4-Isopropyltoluene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U

Table 3 - 3
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-015	DT-015	DT-015	DT-015	SP-003	SP-003
Field Sample ID:	DT-015-122007	DT-015-122007	DT-215-122007	DT-215-122007	SP-003-122007	SP-203-122007
Lab Sample ID:	734225	734225D1	734226	734226D1	734216	734217
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Field Duplicate	Field Duplicate	Original Sample	Field Duplicate
Analysis Information:	I 1	DL 2.13	I 1	DL 2	I 1	I 1

VOCs	Units						
4-Methyl-2-pentanone	ug/l	5 U	11 UJ	5 U	10 UJ	5 U	5 U
Acetone	ug/l	5 U	11 UJ	5 U	10 UJ	5 U	5 U
Benzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Bromobenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Bromochloromethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Bromodichloromethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Bromoform	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Bromomethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Carbon disulfide	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Carbon tetrachloride	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Chlorobenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Chloroethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Chloroform	ug/l	1 U	2.1 UJ	1 U	2 UJ	1.9	1.8
Chloromethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
cis-1,2-Dichloroethene	ug/l	0.79 J	1.2 J	0.84 J	0.76 J	0.3 J	0.32 J
cis-1,3-Dichloropropene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Dibromochloromethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Dibromomethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Dichlorodifluoromethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Ethylbenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Hexachlorobutadiene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Isopropylbenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Methyl tert butyl ether	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Methylene chloride	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
m,p-Xylene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Naphthalene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U

Table 3 - 3
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	DT-015	DT-015	DT-015	DT-015	SP-003	SP-003
Field Sample ID:	DT-015-122007	DT-015-122007	DT-215-122007	DT-215-122007	SP-003-122007	SP-203-122007
Lab Sample ID:	734225	734225D1	734226	734226D1	734216	734217
Lab Name:	STLVT	STLVT	STLVT	STLVT	STLVT	STLVT
Sample Date:	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/4/2007	12/4/2007
Field QC:	Original Sample	Original Sample	Field Duplicate	Field Duplicate	Original Sample	Field Duplicate
Analysis Information:	I 1	DL 2.13	I 1	DL 2	I 1	I 1

VOCs	Units						
n-Butylbenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
n-Propylbenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
o-Xylene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
sec-Butylbenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Styrene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
tert-Butylbenzene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Tetrachloroethene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Toluene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
trans-1,2-Dichloroethene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
trans-1,3-Dichloropropene	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Trichloroethene	ug/l	55 J	82	57 J	53	12	11
Trichlorofluoromethane	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Vinyl chloride	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U
Xylene (Total)	ug/l	1 U	2.1 UJ	1 U	2 UJ	1 U	1 U

Table 3 - 3
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

UJ = Not Detected, Estimated: A result followed by a "UJ" qualifier means that the analyte was not detected, but the associated quantitation limit is not certain (or estimated) because one or more laboratory quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

STLVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

VOCs = Volatile Organic Compounds

I = Initial analysis

DL = Diluted analysis

"1" = Dilution factor

Table 3 - 4
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	Trip Blank
Field Sample ID:	TRB-213-122007
Lab Sample ID:	734210
Lab Name:	STLVT
Sample Date:	12/4/2007
Field QC:	Trip Blank
Analysis Information:	I 1

VOCs	Units	
1,1-Dichloroethane	ug/l	1 U
1,1-Dichloroethene	ug/l	1 U
1,1-Dichloropropene	ug/l	1 U
1,1,1-Trichloroethane	ug/l	1 U
1,1,1,2-Tetrachloroethane	ug/l	1 U
1,1,2,2-Tetrachloroethane	ug/l	1 U
1,1,2-Trichloroethane	ug/l	1 U
1,1,2-Trichlorotrifluoroethane	ug/l	1 U
1,2-Dibromo-3-chloropropane	ug/l	1 U
1,2-Dibromoethane	ug/l	1 U
1,2-Dichlorobenzene	ug/l	1 U
1,2-Dichloroethane	ug/l	1 U
1,2-Dichloroethene	ug/l	1 U
1,2-Dichloropropane	ug/l	1 U
1,2,3-Trichlorobenzene	ug/l	1 U
1,2,4-Trichlorobenzene	ug/l	1 U
1,2,4-Trimethylbenzene	ug/l	1 U
1,3-Dichlorobenzene	ug/l	1 U
1,3-Dichloropropane	ug/l	1 U
1,3,5-Trimethylbenzene	ug/l	1 U
1,4-Dichlorobenzene	ug/l	1 U
2-Butanone	ug/l	5 U
2-Chlorotoluene	ug/l	1 U
2-Hexanone	ug/l	5 U
4-Chlorotoluene	ug/l	1 U
4-Isopropyltoluene	ug/l	1 U

Table 3 - 4
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID: Trip Blank
Field Sample ID: TRB-213-122007
Lab Sample ID: 734210
Lab Name: STLVT
Sample Date: 12/4/2007
Field QC: Trip Blank
Analysis Information: I 1

VOCs	Units	
4-Methyl-2-pentanone	ug/l	5 U
Acetone	ug/l	5 U
Benzene	ug/l	1 U
Bromobenzene	ug/l	1 U
Bromochloromethane	ug/l	1 U
Bromodichloromethane	ug/l	1 U
Bromoform	ug/l	1 U
Bromomethane	ug/l	1 U
Carbon disulfide	ug/l	1 U
Carbon tetrachloride	ug/l	1 U
Chlorobenzene	ug/l	1 U
Chloroethane	ug/l	1 U
Chloroform	ug/l	1 U
Chloromethane	ug/l	1 U
cis-1,2-Dichloroethene	ug/l	1 U
cis-1,3-Dichloropropene	ug/l	1 U
Dibromochloromethane	ug/l	1 U
Dibromomethane	ug/l	1 U
Dichlorodifluoromethane	ug/l	1 U
Ethylbenzene	ug/l	1 U
Hexachlorobutadiene	ug/l	1 U
Isopropylbenzene	ug/l	1 U
Methyl tert butyl ether	ug/l	1 U
Methylene chloride	ug/l	1 U
m,p-Xylene	ug/l	1 U
Naphthalene	ug/l	1 U

Table 3 - 4
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Drain Tile Samples

Station ID:	Trip Blank
Field Sample ID:	TRB-213-122007
Lab Sample ID:	734210
Lab Name:	STLVT
Sample Date:	12/4/2007
Field QC:	Trip Blank
Analysis Information:	I 1

VOCs	Units	
n-Butylbenzene	ug/l	1 U
n-Propylbenzene	ug/l	1 U
o-Xylene	ug/l	1 U
sec-Butylbenzene	ug/l	1 U
Styrene	ug/l	1 U
tert-Butylbenzene	ug/l	1 U
Tetrachloroethene	ug/l	1 U
Toluene	ug/l	1 U
trans-1,2-Dichloroethene	ug/l	1 U
trans-1,3-Dichloropropene	ug/l	1 U
Trichloroethene	ug/l	1 U
Trichlorofluoromethane	ug/l	1 U
Vinyl chloride	ug/l	1 U
Xylene (Total)	ug/l	1 U

Table 3 - 4
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

ug/l = micrograms per liter
STLVT = Test America Laboratories, Vermont
ID = Identification
QC = Quality Control
VOCs = Volatile Organic Compounds

I = Initial analysis
DL = Diluted analysis
"1" = Dilution factor

Table 4-1
Data Quality Evaluation Results
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample Identification	Date Sampled	SDG	Lab Number	Analysis	Parameter	Units	Laboratory Result		Data Review Qualifier	Reason for Qualification	Comments	Final Result
										CR		
DT-015-122007	12/5/2007	123296	734225	VOC	TCE	µg/L	55	E	J	x	Calibration Range Exceeded Report TCE from Dilution	55 J
DT-015-122007DL	12/5/2007	123296	734225	VOC	All Results Except TCE	µg/L	Various	Various	J/UJ	x	Only Report TCE from this Analysis	J/UJ
DT-215-122007	12/5/2007	123296	734226	VOC	TCE	µg/L	57	E	J	x	Calibration Range Exceeded Report TCE from Dilution	57 J
DT-215-122007DL	12/5/2007	123296	734226	VOC	All Results Except TCE	µg/L	Various	Various	J/UJ	x	Only Report TCE from this Analysis	J/UJ

Notes:

CR = Calibration Range

DL = Dilution

E = Laboratory qualifier indicating a calibration range exceedance

J = Qualified as estimated

UJ = Qualified as estimated and not detected

SDG = Sample Delivery Group

TCE = Trichloroethene

µg/L = micrograms per liter

VOCs = Volatile organic compounds

Table 4-2
VOCs Quality Control Outliers
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field Sample ID(s) Requiring Qualification	SDG	Compound	QC Outlier	QC Parameter Control Limit	QC Result
Dilutions and Reanalyses (E flags not used in completeness percentage when dilution available)					
DT-015-122007 DT-215-122007	123296	TCE	Calibration Range Exceedance	Linear Calibration Range	E

Note: The samples above were reanalyzed diluted and the results for TCE were within calibration range. Recommend using TCE result from dilution.

Notes:

DL = Dilution

E = Exceeds Calibration Range

ID = Identification

QC = Quality Control

TCE = Trichloroethene

SDG = Sample Delivery Group

Table 5-1
Field Completeness
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Number of Samples Planned ¹	Number of Samples Collected	Field Completeness
Volatile Organic Compounds	17	17	100%
Totals =	17	17	100.0%
Goal =			95%

Notes:

¹ = Number of samples includes field samples and field duplicate samples.

Only the Seeps and Drain tiles flowing at the time of collection were sampled as requested.

Table 5-2
Analytical Completeness
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Total Number of Parameters ¹	Acceptable Data ²	Acceptable Data Completeness	Acceptable Data Completeness Goals	Quality Data ³	Quality Data Completeness	Quality Data Completeness Goals
Volatile Organic Compounds	1122	1122	100.0%	90%	1122	100%	80%
Totals =	1122	1122	100.0%	95%	1122	100.0%	80%

Notes:

¹ = Total number of parameters includes field samples and field duplicates.

² = Acceptable data is defined as data that passed all quality control (QC) criteria, or data that did not pass QC criteria but had appropriate corrective actions taken. Acceptable data completeness is a measure of laboratory contract compliance. R qualified data with acceptable replacement data are not counted.

³ = Quality data is a measure of the percentage of usable data points (all non-rejected data).

Table 5-3
Project Completeness
Fourth Quarter 2007 Drain Tile Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field	Analytical¹	Project Completeness²
100%	100%	100%
Project Completeness Goal =		90%

Notes:

¹ = Analytical completeness is the percentage of usable data (i.e. quality data completeness).

² = Project completeness combines sampling and analytical protocols to assess the expectations of the project as a whole. Project completeness is determined by comparing the percentage of samples / measurements that are determined to be usable to the total number of samples / measurements planned.

Appendix A
Chain of Custody Records

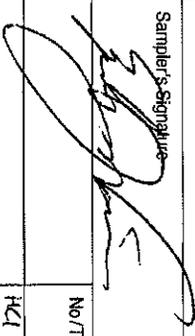
TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Burlington
 30 Community Drive, Suite 11
 South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to: Company: <u>ECC</u> Address: <u>1746 CALE BLVD, BLDG 21 Suite 350</u> <u>LAKEWOOD, CO 80401</u> Contact: <u>DDAWDER J. RYDER</u> Phone: <u>(303) 298-7607</u> Fax: <u>(303) 298-7837</u> Contract/ Quote:		Invoice to: Company: Address: Contact: Phone: Fax:		ANALYSIS REQUESTED 8260 B (HCl)	Lab Use Only Due Date: Temp. of coolers when received (C°): 1 2 3 4 5 Custody Seal N/Y Intact N/Y Screened For Radioactivity <input type="checkbox"/>
---	--	--	--	---	---

Sampler's Name: ERIK WAISS Sampler's Signature: 

Proj. No: 5403.001 Project Name: _____

Matrix	Date	Time	C o m p	G r a b	Identifying Marks of Sample(s)	HCl VOA	A/G 1 Lt	250 ml	P/O	ANALYSIS REQUESTED	Remarks
W	12-4-2007	11:15	X		DT-013-122007	3				✓	
W	12-4-2007	11:15	X		TRB-213-122007	2				✓	
W	12-4-2007	11:40	X		DT-016-122007	3				✓	
W	12-4-2007	11:40	X		DT-016-122007	3				✓	
W	12-4-2007	12:05	X		SP-001-122007	3				✓	
W	12-4-2007	12:35	X		SP-002-122007	3				✓	
W	12-4-2007	12:40	X		DT-017-122007	3				✓	
W	12-4-2007	12:50	X		DT-018-122007	3				✓	
W	12-4-2007	13:40	X		SP-003-122007	3				✓	
W	12-4-2007	13:40	X		SP-203-122007	3				✓	

Relinquished by: (Signature) [Signature] Date: 12-5-07 Time: 16:35 Received by: (Signature) Sara L Ratti Date: 12/6/07 Time: 0945

Relinquished by: (Signature) _____ Date: _____ Time: _____ Received by: (Signature) _____ Date: _____ Time: _____

Relinquished by: (Signature) _____ Date: _____ Time: _____ Received by: (Signature) _____ Date: _____ Time: _____

Matrix: WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil

Container: VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other _____

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

<p>Company: <u>ECC</u></p> <p>Address: <u>1746 COLE BLVD, BLDG 21 SU 250</u> <u>LAKEWOOD, CO 80401</u></p> <p>Contact: <u>DINAUER, J. RYDER</u></p> <p>Phone: <u>(303) 298-7667</u></p> <p>Fax: <u>(303) 298-7837</u></p> <p>Contract/Quote: _____</p>	<p>Company: _____</p> <p>Address: _____</p> <p>Contact: _____</p> <p>Phone: _____</p> <p>Fax: _____</p>										
<p>Report to: _____</p> <p>Invoice to: _____</p>											
<p>ANALYSIS REQUESTED</p> <p style="font-size: 2em; text-align: center;">8260B (HCl)</p>											
<p>Lab Use Only</p> <p>Temp. of coolers when received (C°):</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> <p>Custody Seal: N / Y</p> <p>Intact: N / Y</p> <p>Screened For Radioactivity: <input type="checkbox"/></p>		1	2	3	4	5					
1	2	3	4	5							

Sampler's Name: ERIK WAISS

Sampler's Signature:

Project Name: _____

Prof. No.: 5703001

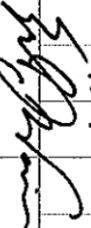
Matrix	Date	Time	Identifying Marks of Sample(s)			No./Type of Containers ²			Remarks
			C	T	G	H ₂	A/G	250	
			o	r	g	VOA	1LL	ml	
W	12-4-2007	13:40	X			3			✓
W	12-4-2007	13:40	X			3			✓
W	12-4-2007	14:05	X			3			✓
W	12-5-2007	09:00	X			3			✓
W	12-5-2007	09:25	X			3			✓
W	12-5-2007	10:25	X			3			✓
W	12-5-2007	10:55	X			3			✓
W	12-5-2007	11:15	X			3			✓
W	12-5-2007	12:35	X			3			✓
W	12-5-2007	14:20	X			3			✓

<p>Relinquished by: (Signature) </p> <p>Date: <u>12-5-07</u></p> <p>Time: <u>16:35</u></p>	<p>Received by: (Signature) <u>Van Latze</u></p> <p>Date: <u>12/6/07</u></p> <p>Time: <u>0945</u></p>	<p>Remarks: _____</p>
<p>Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.</p>		
<p>TestAmerica cannot accept verbal changes. Please Fax written changes to (802) 660-1919</p>		

Appendix B
Field Notes

Project / Client USACE ECCTile-Line Sampling & Stream Flow

- 11:11 - UNDER BRIDGE AT COUNTY RD 6, JOHNSON CREEK. PREPARING TO MEASURE & SAMPLE STREAM FLOW ON TILE LINES
- 11:20 - CK-11A + B APPROX 20FT SOUTH OF BRIDGES.
CK-11A APPROX $\frac{1}{2}$ GAL/5 SEC FLOW
- 11:25 - CK-11B -> NO FLOW, NO SAMPLE.
- 11:30 - CK-13A - WEST SIDE, 15' NORTH OF BRIDGE, RAPID FLOW. SAMPLES TAKEN. CK-13B OPP. SIDE (EAST) TRICKLE FLOW.
- CK-13A - 5 GAL. PER SEC.
- 11:45 - SAMPLED CK-13B, TRICKLE - EST. FLOW 4 SEC / 40ml
- 12:05 - SAMPLING CK-14A. COLLAPSED SEEP ON WEST SIDE OF JOHNSON CREEK. (GROUND FLOW, CANNOT ACCURATELY MEASURE FLOW. EST. (EVERBALL) 20 GAL/MINUTE.
~ 100 YARDS NORTH OF BRIDGE
- 12:25 - APPROX 800' N. OF BRIDGE, FOUND A SEEP IN Eastern Bank of Johnson Creek. Flow approx. 10-15 GPM. Toby up stream to look for more Tile line outlets. Sampling Seep. "UNK-SEEP 1"
- 12:40 - FOUND + SAMPLING CK-17A ON WEST SIDE OF JOHNSON CREEK. MEASURED FLOW -> 5 GAL/BUCKET IN 11 Sec.
- 12:50 - CK-18A. 12" TILE LINE ON WEST SIDE OF CREEK. MEASURED + SAMPLED. GRADUATED BUCKET 2.5 GAL IN 7 SEC



Location Johnson Creek N. of Rd. G Date 12.4.2007Project / Client USACE ECCMEASURING + SAMPLING TILE LINES

13:05 - FOUND CK-19 + CK-20. BOTH NON-FLOWING

NO SAMPLES TAKEN. GPS SHOT ANYWAY

CK-19 - 3' PIPE - WEST SIDE / CK-20 - 18" PIPE - EAST SIDE

13:40 - CK-25 - WEST BANK - 2 SEEPS. 390 mL / 6 Sec.

DUPE + MS-MSD

13:45 - COLLECTING SAMPLES. BRAD TOOK PHOTO OF CK-25A

SUN CAME OUT.

↳ photos #7, 8, 9 in his camera.

14:00 - UNK-SEEP-2, ABOUT 40' UPSTREAM FROM

CK-25.

SAMPLED: 3 VOA's, 130 mL / 5 sec FLOW.

PHOTOS #10-11 ON BRAD-O-VISION

14:10 - UNK-SEEP-3 GPS'd TRICKLE-SEEP, UNABLE TO

SAMPLE

14:35 - CK-33A - WEST SIDE 24" NOT FLOWING

2 DEAD DEER + 2 DEAD BEAVER IN JOHNSON CREEK UNDER

BRIDGE

15:00 - BACK TO CK-19/20 TO PIC UP GATOR.

BRAD = PHOTO 14 → CK-33, 1 + 2 CK-11A, 3 + 5 CK-13A,

6 - CK-13B.

15:33 - USED RALPH'S CAMERA TO SNAP PHOTOS OF

CK-18, CK-17, UNK-SEEP-1. BACK AT PLANT.

Location Johnson Creek S. of Rd. 6

Date 12-5-2007

5

Project / Client USACE ECC

MEASUREMENT & SAMPLING TILE LINE S

- 09:00 - CK-9A, small OUTLET TILE LINE ON WEST SIDE OF CREEK. 1100 mL / 10 Sec. SAMPLING -
- 09:35 - FOUND ANOTHER OUTLET-9" - COULD BE CK-9? ALREADY SAMPLED CK-9, HAVE LABELED THIS WELL
- CK-009X-18A007, CK-9X IN GPS. FLOWING AT 5 GAL / 12 SEC. WEST SIDE OF CREEK HEAVY PUC
- 09:33 - UNKNOWN 15" TILE LINE, NO FLOW ON EAST SIDE OF CREEK GPS= UNK TILE-1
- 09:45 - ANOTHER 15" OUTLET, EAST SIDE, NO FLOW. GPS= UNK TILE-2
- 10:13 - SWITCHED SIDES OF CREEK W/ GATOR. AT SITE CK-6 + CK 7 4 OUTLETS FROM S → N CK-6, CK-7, UNK TILE-3, UNK TILE 4 UNK TILE-3 IS A RAISED PIPE CONNECTED TO PUMP ENGINE ON WEST SIDE OF DIKE AT HOLDING POND, NOT FLOWING. UNKNOWN IS ALSO NOT FLOWING, 9" OUTLET ON WEST SIDE OF CREEK CK-6 IS OUTLET ON WEST SIDE FROM DRAINAGE DITCH ON WEST SIDE OF DIKE, ONLY CK-7 IS FLOWING, DRAINAGE FROM HOLDING POND TO WEST OF DIKE SHOOTING GPS FOR ALL 4. SAMPLING CK-7 FLOW RATE > 5 GAL / SEC
- 10:45 - CK-4, NO FLOW, 9" MINT GREEN PVC PIPE FROM HOLDING POND. NO SAMPLE
- 10:55 - CK-3 - 18" CORRUGATED CEMENT PIPE w/ COVER. 3 Sec TO FILL 5 GAL BUCKET. TAKING SAMPLES.
- 11:15 - CK-1A. WEST SIDE, DITCH DRAINAGE FLOWS NORTH

SGP

Location ~~Shannon~~ Clear Creek N. of Road F Date 12.5.2007

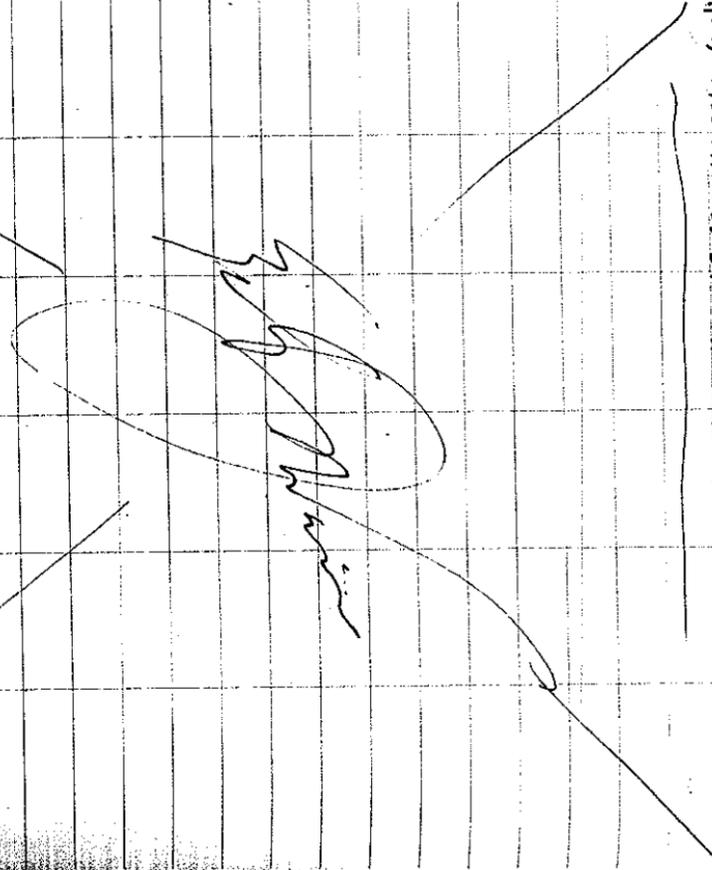
Project / Client USACE ECC

TRIE LANE SAMPLING

OF BRIDGE ON ROAD F. EST 10 GAL / SEC. TAKING SAMPLES.

11:25 - MOVED TO EAST SIDE OF BRIDGE TO SAMPLE CK-1B, EST,

3 GAL / SEC. FLOW.

11:45 - ALL PARTIES BACK AT TREATMENT PLANT

S. H. Davis

Appendix C
Reference Sheet
Data Validation Qualifiers
Drinking Water Standards

Data Qualifiers and Drinking Water Standards Reference Sheet Former Nebraska Ordnance Plant, Mead, Nebraska

Any qualifiers (i.e. U, J, or R) listed after a result are assigned during the data validation process. Data validation is a procedure which involves the review of quality control data provided by the laboratory. This review is followed by the assignment of data qualifiers (if necessary) which indicate the reliability of a result to the reader. Data validation is performed by a chemist employed outside of the laboratory or associated government installations to ensure accuracy in data reporting. A description of qualifiers is provided below.

No qualifier

- If a result has no assigned qualifier, the contaminant was detected, and the reader can be confident that the concentration is exact.

“U”

- A result followed by a “U” qualifier means that the contaminant was undetected, or not detected by the instrument.

“UJ”

- A result followed by a “UJ” qualifier means that the contaminant was not detected, but the associated detection level is not certain (estimated). For example, if a value is followed by a “UJ”, the contaminant was not detected, but the associated detection level is in question. The detection level is in question because one or more of the laboratory quality control indicators do not meet acceptance criteria. The amount that the indicator fell outside of the criteria may be used as a rough estimate of how much the actual detection level differs from the stated one. Typically, this is a 10-30% difference.

“UR”

- A result followed by a “UR” qualifier means that the contaminant was not detected, but there is strong doubt that the associated detection level is accurate. For example, if a value is followed by a “UR”, the contaminant was not detected, but the associated detection level is in strong doubt. The detection level is in doubt because results are unacceptable for a quality control indicator. In this case, the detection level cannot be estimated.

“J”

- A result followed by only a “J” qualifier means that the contaminant was detected, but there is some question that the stated concentration is exact. For example, if a result is “0.5 J”, the contaminant was detected, but there is some question that the concentration is exactly 0.5. A “J” qualifier may be applied for two reasons: (1) the contaminant was detected below the reporting limit; or (2) the contaminant was detected, but one or more quality control indicators did not meet acceptance criteria. The reporting limit is equal to the concentration of the lowest standard used by the laboratory to calibrate the instrument. The reporting limit is the minimum concentration that can be stated with complete confidence.

“R”

- A result followed by only an “R” qualifier means that the contaminant was detected, but there is strong doubt that the concentration is exact. For example, if a result is “0.5 R”, the contaminant was detected, but there is strong doubt that the concentration is exactly 0.5. The concentration is in doubt because results are unacceptable for a quality control indicator. In this case, the detected concentration cannot be estimated. For comparison purposes, detected results are reported in the results letters with available Environmental Protection Agency drinking water standards. These standards include the maximum contaminant level (MCL) and various health advisories (HA). A description of the drinking water standards is provided below.

“MCL”

- The maximum contaminant level is the highest concentration of a contaminant that is allowed in drinking water. Maximum contaminant levels are enforceable Federal standards.

“HA”

- Health advisories provide estimates of acceptable drinking water concentrations for a chemical substance based on health effects information. Health advisories are not enforceable Federal standards, but serve as a technical guidance to assist Federal, State, and local officials.

Appendix D
Analytical Results on Compact Disc
Summary Forms and Raw Data

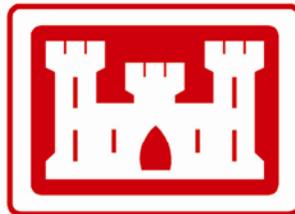


QUALITY CONTROL SUMMARY REPORT

**Fourth Quarter 2007
Water Supply Well Sampling Event
Former Nebraska Ordnance Plant
Mead, Nebraska**

Prepared for

**U.S. Army Corps of Engineers
Kansas City Districts**



March 2008

1746 Cole Boulevard, Building 21, Suite 350
Lakewood, Colorado 8401
Telephone: (303) 298-7607
Facsimile: (303) 298-7837

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE <i>(Read instructions on the reverse side prior to initiating this form)</i>				DATE: February 19, 2008		TRANSMITTAL NO. 2007-18		
SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by contractor)								
Attn: Jerry Montgomery USACE, Kansas City District 601 E. 12th St. Kansas City, MO 64106-2896		FROM: John Ryder ECC 1746 Cole Blvd, Bldg 21, Lakewood, CO 80401		CONTRACT NO. W912DQ-04-D-0017, Task Order 0001		CHECK ONE: <input checked="" type="checkbox"/> THIS IS A NEW TRANSMITTAL <input type="checkbox"/> THIS IS A RESUBMITTAL OF TRANSMITTAL _____		
SPECIFICATION SECTION NO. (cover only one section with each transmittal)		PROJECT TITLE AND LOCATION: Groundwater Monitoring Program, Former Nebraska Ordnance Plant, Mead, Nebraska				CHECK ONE: <input type="checkbox"/> FIO <input checked="" type="checkbox"/> For Govt. Approval		
ITEM NO. a.	DESCRIPTION OF ITEM SUBMITTED <i>(Type, size, model number, etc.)</i> b.	MFG. OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. <i>(See instruction No. 8)</i> c.	NO. OF COPIES d.	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE g.	VARIATION <i>(See instruc. no. 6)</i> h.	FOR C E USE CODE i.
				SPEC. PARA. NO. e.	DRAWING SHEET NO. f.			
1	Quality Control Summary Report		1					
	Fourth Quarter 2007 Water Supply Well Sampling Event							
REMARKS Sandeep Mehta (USACE) Garth Anderson (USACE) David Nelson (USACE)				I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated. Catherine Drumheller, Denver Science & Engineering Group _____ NAME AND SIGNATURE OF CONTRACTOR				
SECTION II - APPROVAL ACTION								
ENCLOSURES RETURNED (List by Item No.)			NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY			DATE		



February 19, 2008

U.S. Army Corps of Engineers, Kansas City District
Attn: Jerry Montgomery
601 East 12th Street
Kansas City, MO 64106-2896

Regional Office

1746 Cole Boulevard
Building 21, Suite 350
Lakewood, CO 80401

Phone: 303.298.7607
Fax: 303.298.7837

Re: Transmittal of Quality Control Summary Report
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska
Contract No. W912DQ-04-D-0017, Task Order No. 0001

Dear Mr. Montgomery:

ECC is hereby transmitting one electronic copy of the Quality Control Summary Report for the Fourth Quarter 2007 Water Supply Well Sampling Event at the former Nebraska Ordnance Plant, Mead, Nebraska.

Please contact Mr. Brady Bigelow or me if you require additional information.

Sincerely,

John Ryder
Project Chemist
ECC

Enclosures

Cc: Mr. Sandeep Mehta (USACE)
Mr. Garth Anderson (USACE)
Mr. David Nelson (USACE)

Corporate Office

1240 Bayshore Highway
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Quality Control Summary Report Fourth Quarter 2007 Water Supply Well Sampling Event Former Nebraska Ordnance Plant Mead, Nebraska

1.0 INTRODUCTION

Water supply well (WSW) sampling was conducted by ECC as contracted by the U.S. Army Corps of Engineers (USACE), Kansas City District on December 5, 2007 and December 6, 2007 at the former Nebraska Ordnance Plant, Mead, Nebraska. ECC performed all sampling activities in accordance with the Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP) of the *Work Plan and Sampling and Analysis Plan for Water Supply Wells* (ECC, 2006). This QCSR presents a summary of the chemical data quality review for the fourth quarter 2007 WSW sampling event.

The samples for the fourth quarter 2007 WSW sampling event were analyzed for the following constituents:

- Volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Drinking Water Method 524.2
- Explosives by EPA Method 8330

All analyses were performed by TestAmerica of South Burlington, Vermont.

A complete list of the water supply wells planned for sample collection, the corresponding sample identification (ID) numbers, and the requested analyses for each sampled well are presented in Table 1-1. Associated Chain of Custody (COC) Records are included as Appendices A. Appendix B presents an explanation of data validation qualifiers and drinking water standards and Appendix C contains a CD with all analytical data, including summary forms and raw data, for the fourth quarter 2007 WSW sampling event.

2.0 SAMPLING ACTIVITIES

Fifteen locations were sampled for chemical analyses during the fourth quarter 2007 WSW sampling event. In addition, two field duplicate samples, one matrix spike (MS) / matrix spike duplicate (MSD) sample pair, and two trip blanks were collected.

Three other sample locations were scheduled for sampling this quarter but could not be sampled. WSW-76 was from a vacant home, WSW-97 was frozen at the time of sampling, and the field team was unable to obtain access from the owner of location WSW-99. See Section 5.1 Field Completeness.

Table 2-1 provides the following information listed by date sampled and laboratory sample ID for ease of comparison to laboratory data packages and field notes:

- A cross-reference between laboratory sample IDs and field sample IDs;
- QC (Quality Control) split sample information;
- MS/MSD sample information;
- Dates of sample collection and sample receipt by the laboratory;
- COC numbers;
- Sample delivery group (SDG) numbers; and
- Requested analyses

3.0 ANALYTICAL RESULTS

Summaries of the analytical results are presented in Table 3-1 (VOCs) and Table 3-2 (explosives). VOC detections are presented in Table 3-3. Trip blank results are presented in Table 3-4. The field duplicate results are presented in Table 3-5 (VOCs) and Table 3-6 (explosives).

4.0 DATA QUALITY EVALUATION PROCEDURES

The following subsections present the data quality evaluation procedures performed in accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003) and the *Data Quality Evaluation Guidance, USACE CENWK-EC-EF* (USACE, 2001). Laboratory control limits were used to assess data quality.

Table 4-1 presents all qualifications. QC outliers for VOCs are presented in Tables 4-2 and QC outliers for explosives are presented in Table 4-3.

4.1 Sample Receipt at the Laboratory

All sample transfer requirements were met for samples received at the laboratory. There were no problems noted with sample receipt at the laboratory. No data required qualification based on sample condition. According to the Sample Receipt and Log In Checklist, the sample coolers were received within the recommended temperature range of 4 ± 2 °C.

4.2 Holding Times

All extractions and analyses were performed within method-specific holding times.

4.3 Tuning and Calibration

According to the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), assessment of tune and calibration information is not required at validation. No deviations from method or Laboratory Quality Management Plan (LQMP) specifications for the calibration and

tuning of pertinent instrumentation were reported by the laboratory in the project-specific case narrative with the exception noted below.

The laboratory noted in the case narrative that the response for acetone in the initial calibration identified as MQA524 was outside the quality control criteria. No action was taken in accordance to the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003). This compound was only detected in trip blank TRB-255-122007.

4.4 Laboratory Method Blanks

A laboratory method blank is an analyte-free matrix that is carried through the entire preparation and analysis sequence for the purpose of identifying potential contamination introduced during preparation and analysis. Method blanks were analyzed for each sample batch for all analyses.

In accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), detections are qualified as non-detect (U) if the concentration in the sample is less than 5 times the concentration in the associated blank. For common laboratory contaminants, detections are qualified as non-detect (U) if the concentration in the sample is less than 10 times the concentration in the associated blank. Sample results that are either non-detect (U), or greater than 5 or 10 times the blank result do not require qualification.

There were no detections of target analytes in the volatile and explosive method blanks.

4.5 Trip Blanks

A trip blank is an analyte-free matrix that accompanies samples through the sample collection and transportation process to identify potential VOC contamination. In accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), detections are qualified as non-detect (U) if the concentration in the sample is less than 5 times the concentration in the associated blank. Sample results that are either non-detect (U), or greater than 5 times the blank result do not require qualification. Trip blank results are presented in Table 3-4.

Acetone was detected in the volatile trip blank, TRB-255-122007; however, the associated samples did not report detected results for this compound. No qualification was necessary. There were no other detections of target analytes in the trip blanks.

4.6 Surrogates

Surrogates are compounds not normally found in the environment that are added (spiked) into samples prior to extraction (for extractable methods) or prior to analysis (for non-extractable methods). The percent recovery (% REC) of each surrogate is used to assess the success of the sample preparation process for an individual sample. Surrogates were analyzed for each sample batch for VOCs and explosives.

All VOC and explosive samples were spiked with appropriate surrogate compounds. All surrogate results were within laboratory QC limits.

Volatile analyses were quantitated using the Internal Standard method. The internal standard area counts did not vary by more than a factor of two from the associated 12-hour calibration standard.

4.7 Laboratory Control Samples and Laboratory Control Sample Duplicates

A laboratory control sample (LCS) consists of a matrix, similar to that of the field sample, which is spiked with known concentrations of analytes. The LCS % REC is a measure of the accuracy of the preparation and analytical methods. The laboratory control sample duplicate (LCSD) is a duplicate preparation and analysis of the LCS. The differences between the LCS and LCSD recoveries are used to calculate the relative percent difference (RPD), which is a measure of the precision of the preparation and analytical methods. LCS samples were analyzed for each sample batch for all analyses.

In accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), results for non-contaminants of concern are J-coded if %RECs are outside laboratory criteria, but within the limits of 40-160% for VOCs or 60-140% for explosives. Results are R-coded if %RECs are outside these ranges.

The LCS % REC for 4-amino-2,6-dinitrotoluene at 80% was less than the laboratory QC limits of 85-130% but was within the USACE criteria of 60-140%. As a result of the low recovery, the following non-detected results were estimated (UJ):

- 4-Amino-2,6-dinitrotoluene in all explosive samples (055-122007, 255-122007, 073-122007, 074-122007, 075-122007, 077-122007, 079-122007, 086-122007, 087-122007, 095-122007, 096-122007, 0103-122007, 0104-122007, 2104-122007, 0105-122007, 0109-122007, and 0110-122007)

All other LCS/LCSD %RECs were within laboratory QC limits and all RPDs were less than 30%. Table 4-3 present the explosive QC outliers and associated samples for all assigned qualifiers.

4.8 Matrix Spikes and Matrix Spike Duplicates

MS/MSD analyses measure method accuracy and precision for a project-specific matrix. A field sample is split into three portions (original, MS, and MSD) and known amounts of analytes are added (spiked) into the MS and MSD portions of the sample. The analytical results of these two portions are compared to each other for reproducibility using the RPD. These results are also compared against the unspiked portion of the sample for % REC of the spiked analytes. MS/MSD samples were analyzed for each SDG for all analyses. As requested on the COC, MS/MSD analyses were performed on sample 055-122007 for this sampling event for VOCs and explosives.

In accordance with the *Kansas City District Data Quality Evaluation Guidance* (USACE, 2003), results for non-contaminants of concern are J-coded due to MS/MSD % REC or RPD outliers. Results for contaminants of concern are R-coded for selected circumstances in which sample results are within the ranges outlined in the guidance (“MatrixSpikes/Matrix Spike Duplicates”, page 3).

The % RECs for acetone, carbon disulfide, 2-butanone, 2-hexanone, n-butyl benzene, cis-1,3-dichloropropene, and styrene were less than the laboratory QC limits in the VOC MS and/or MSD analyses of sample 055-122007. As a result of these outliers, the following results were qualified as estimated (J/UJ):

- Acetone, carbon disulfide, 2-butanone, 2-hexanone, n-butyl benzene, cis-1,3-dichloropropene, and styrene in samples 055-122007, 255-122007, 073-122007, 074-122007, 075-122007, 077-122007, 079-122007, 086-122007, 087-122007, 095-122007, 096-122007, 0103-122007, 0104-122007, 2104-122007, 0105-122007, 0109-122007, 0110-122007, TRB-255-122007, and TRB-2104-122007

All other MS/MSD % RECs and RPDs were within QC limits. Table 4-2 presents the VOC QC outliers and associated samples for all assigned qualifiers.

4.9 Field Duplicates

Field duplicate analytical results provide information on the ability to reproduce field results and account for error introduced from handling, shipping, preparing, and analyzing field samples. Field duplicate pairs are listed below:

- 055-122007 / 255-122007 (VOCs and Explosives)
- 0104-122007 / 2104-122007 (VOCs and Explosives)

In accordance with the *Data Quality Evaluation Guidance, USACE CENWK-EC-EF* (USACE, 2001), data are not qualified based solely on field duplicate sample results. Results within a factor of two of each other are considered to be in agreement. Results between a factor of two to three of each other are considered a minor discrepancy, and results greater than a factor of three are considered a major discrepancy.

All field duplicate results were within a factor of two of each other.

Field duplicate results are presented in Table 3-5 (VOCs) and 3-6 (explosives).

4.10 Dilutions and Reanalyses

Dilutions and reanalyses were not required for this SDG.

4.11 Other QC Parameters

A column comparison between the detected explosive results was made using explosive identification summary forms. All explosive results were non-detects and no additional qualifiers were added to the data.

4.12 Laboratory Qualifiers

Analytes detected below the quantitation limit or reporting limit but above the lowest level of detection were quantified and results were assigned an estimated (J) qualifier by the laboratory. These qualifiers were carried over by the validator and were not used to determine analytical completeness or project completeness (Section 5.0).

5.0 OVERALL ASSESSMENT

The following subsections present the field completeness, analytical completeness, and project completeness determinations for the fourth quarter 2007 WSW sampling event. All completeness goals are established in the Mead WSW QAPP (ECC, 2006).

5.1 Field Completeness

Field completeness for sample collection was assessed by comparing the number of samples properly collected to the number of samples planned for collection. Three sample locations scheduled for sampling this quarter could not be sampled. WSW-76 was from a vacant home, WSW-97 was frozen at the time of sampling, and the field team was unable to obtain access from the owner of location WSW-99. The field completeness for the VOCs and explosives were each 85%. Therefore, the overall field completeness percentage is 85%, which did not meet the field completeness goal of 95%.

Section 2.0 presents the field sampling activities. Table 5-1 presents the field completeness.

5.2 Analytical Completeness

Acceptable data is a measure of laboratory contract compliance. Acceptable data includes data that has not been rejected or qualified as estimated (J). Qualified data is considered acceptable if appropriate corrective actions were taken by the laboratory. The acceptable data completeness percentage for VOCs was 89% and for explosives was 93%. The VOC analysis did not meet the acceptable data completeness goals of 90% for each analytical method as seven compounds were qualified due to low matrix spike %RECs. Additionally, the overall acceptable data completeness at 90%, did not meet the overall acceptable data completeness goal of 95%. However, none of the qualified compounds were contaminants of concern.

Quality data is a measure of the percentage of usable data. Quality data includes all data except rejected data points, and does not include analyses for which replacement data points are available. Quality data completeness percentages for VOCs and explosives are 100%, which

exceeds the quality data completeness goals of 80% for each analytical method. Overall quality data completeness is 100%, which exceeds the overall quality data completeness goal of 80%.

Table 5-2 presents acceptable and quality data completeness.

5.3 Project Completeness

Project completeness combines sampling and analytical protocols to assess the expectations of the project as a whole. Project completeness is determined by comparing the percentage of samples/measurements that are determined to be usable to the total number of samples/measurements planned. Project completeness is calculated using the field completeness and analytical completeness (quality data) completeness percentages. Overall project completeness is 93%. The overall project completeness exceeds the project completeness goal of 90% established in the Mead WSW QAPP (ECC, 2006).

Table 5-3 presents the project completeness percentages.

6.0 CONCLUSIONS

No data points were qualified as rejected (R). Overall quality data completeness is 100%. Overall acceptable data completeness is 90% and over all field completeness is 85%, both of which did not meet project goals. However, the overall project completeness at 93% meets the project goal of 90%. Data are valid for use as qualified and none of the qualified compounds were contaminants of concern.

7.0 REFERENCES

Environmental Chemical Corporation (ECC), 2006, *Work Plan and Sampling and Analysis Plan for Water Supply Wells*.

United States Army Corps of Engineers (USACE), 2003, *Kansas City District Data Quality Evaluation Guidance*, August.

USACE, 2001, *Data Quality Evaluation Guidance*, USACE CENWK-EC-EF, July.

Tables

Table 1-1
Sample Locations, Sample IDs, and Analyses
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Well IDs	Sample IDs	Analyses¹
WSW-055	055-122007	Volatiles, Explosives
WSW-073	073-122007	Volatiles, Explosives
WSW-074	074-122007	Volatiles, Explosives
WSW-075	075-122007	Volatiles, Explosives
WSW-076 ²	076-122007	Volatiles, Explosives
WSW-077	077-122007	Volatiles, Explosives
WSW-079	079-122007	Volatiles, Explosives
WSW-086	086-122007	Volatiles, Explosives
WSW-087	087-122007	Volatiles, Explosives
WSW-095	095-122007	Volatiles, Explosives
WSW-096	096-122007	Volatiles, Explosives
WSW-097 ²	097-122007	Volatiles, Explosives
WSW-099 ²	099-122007	Volatiles, Explosives
WSW-103	0103-122007	Volatiles, Explosives
WSW-104	0104-122007	Volatiles, Explosives
WSW-105	0105-122007	Volatiles, Explosives
WSW-109	0109-122007	Volatiles, Explosives
WSW-110	0110-122007	Volatiles, Explosives

Notes:

IDs = Identifications

¹ = VOCs by Environmental Protection Agency (EPA) Drinking Water Method 524.2, and Explosives by EPA SW-846 Method 8330.

² = These three sample locations scheduled for sampling this quarter could not be sampled. WSW-76 was from a vacant home, WSW-97 was frozen at the time of sampling, and the field team was unable to obtain access from the owner of location WSW-99.

Table 2-1
Sample Collection Summary
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field ID	Quality Control Samples	MS/MSD Samples	Date Sampled	Date Received by Lab	COC Record Number	Lab ID	SDG	Analyses	
								VOCs	Explosives
Field Samples									
055-122007			12/5/2007	12/7/2007	None	734344	123305	•	•
		055-122007MS	12/5/2007	12/7/2007	None	734344MS	123305	•	•
		055-122007MSD	12/5/2007	12/7/2007	None	734344MSD	123305	•	•
	255-122007		12/5/2007	12/7/2007	None	734345	123305	•	•
073-122007			12/6/2007	12/7/2007	None	734357	123305	•	•
074-122007			12/6/2007	12/7/2007	None	734356	123305	•	•
075-122007			12/6/2007	12/7/2007	None	734362	123305	•	•
077-122007			12/6/2007	12/7/2007	None	734354	123305	•	•
079-122007			12/6/2007	12/7/2007	None	734355	123305	•	•
086-122007			12/6/2007	12/7/2007	None	734358	123305	•	•
087-122007			12/6/2007	12/7/2007	None	734360	123305	•	•
095-122007			12/6/2007	12/7/2007	None	734361	123305	•	•
096-122007			12/6/2007	12/7/2007	None	734351	123305	•	•
0103-122007			12/6/2007	12/7/2007	None	734350	123305	•	•
0104-122007			12/6/2007	12/7/2007	None	734348	123305	•	•
	2104-122007		12/6/2007	12/7/2007	None	734349	123305	•	•
0105-122007			12/6/2007	12/7/2007	None	734359	123305	•	•
0109-122007			12/6/2007	12/7/2007	None	734352	123305	•	•
0110-122007			12/6/2007	12/7/2007	None	734353	123305	•	•
Trip Blanks									
TRB-255-122007			12/5/2007	12/7/2007	None	734346	123305	•	
TRB-2104-122007			12/6/2007	12/7/2007	None	734347	123305	•	

Notes:

- = Requested for the indicated analyses.
- COC = Chain of Custody Record
- ID = Identification
- Lab = Laboratory

- MS/MSD = Matrix Spike / Matrix Spike Duplicate
- SDG = Sample Delivery Group
- VOCs = Volatile Organic Compounds

Table 3-1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-055	WSW-055	WSW-073	WSW-074	WSW-075	WSW-077
Field Sample ID:	055-122007	255-122007	073-122007	074-122007	075-122007	077-122007
Lab Sample ID:	734344	734345	734357	734356	734362	734354
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/5/2007	12/5/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Original Sample	Original Sample	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

VOCs	Units						
1,1-Dichloroethane	ug/l	0.5 U					
1,1-Dichloroethene	ug/l	0.5 U					
1,1-Dichloropropene	ug/l	0.5 U					
1,1,1-Trichloroethane	ug/l	0.5 U					
1,1,1,2-Tetrachloroethane	ug/l	0.5 U					
1,1,2,2-Tetrachloroethane	ug/l	0.5 U					
1,1,2-Trichloroethane	ug/l	0.5 U					
1,2-Dibromo-3-chloropropane	ug/l	0.5 U					
1,2-Dibromoethane	ug/l	0.5 U					
1,2-Dichlorobenzene	ug/l	0.5 U					
1,2-Dichloroethane	ug/l	0.5 U					
1,2-Dichloropropane	ug/l	0.5 U					
1,2,3-Trichlorobenzene	ug/l	0.5 U					
1,2,3-Trichloropropane	ug/l	0.5 U					
1,2,4-Trichlorobenzene	ug/l	0.5 U					
1,3-Dichlorobenzene	ug/l	0.5 U					
1,3-Dichloropropane	ug/l	0.5 U					
1,3,5-Trimethylbenzene	ug/l	0.5 U					
1,4-Dichlorobenzene	ug/l	0.5 U					
2-Butanone	ug/l	5 UJ					
2-Chlorotoluene	ug/l	0.5 U					
2-Hexanone	ug/l	2.5 UJ					
2,2-Dichloropropane	ug/l	0.5 U					
4-Chlorotoluene	ug/l	0.5 U					
Acetone	ug/l	5 UJ					
Benzene	ug/l	0.5 U					

Table 3-1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-055	WSW-055	WSW-073	WSW-074	WSW-075	WSW-077
Field Sample ID:	055-122007	255-122007	073-122007	074-122007	075-122007	077-122007
Lab Sample ID:	734344	734345	734357	734356	734362	734354
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/5/2007	12/5/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Original Sample	Original Sample	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

VOCs	Units						
Bromobenzene	ug/l	0.5 U					
Bromochloromethane	ug/l	0.5 U					
Bromodichloromethane	ug/l	0.5 U					
Bromoform	ug/l	0.5 U					
Bromomethane	ug/l	0.5 U					
Carbon disulfide	ug/l	0.5 UJ					
Carbon tetrachloride	ug/l	0.5 U					
Chlorobenzene	ug/l	0.5 U					
Chloroethane	ug/l	0.5 U					
Chloroform	ug/l	0.5 U					
Chloromethane	ug/l	0.5 U					
cis-1,2-Dichloroethene	ug/l	0.5 U					
cis-1,3-Dichloropropene	ug/l	0.5 UJ					
Dibromochloromethane	ug/l	0.5 U					
Dibromomethane	ug/l	0.5 U					
Dichlorodifluoromethane	ug/l	0.5 U					
Ethylbenzene	ug/l	0.5 U					
Hexachlorobutadiene	ug/l	0.5 U					
Isopropylbenzene	ug/l	0.5 U					
Methyl tert butyl ether	ug/l	0.5 U					
Methylene chloride	ug/l	0.5 U					
m,p-Xylene	ug/l	0.5 U					
Naphthalene	ug/l	0.5 U					
n-Butylbenzene	ug/l	0.5 UJ					
n-Propylbenzene	ug/l	0.5 U					
o-Xylene	ug/l	0.5 U					

Table 3-1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-055	WSW-055	WSW-073	WSW-074	WSW-075	WSW-077
Field Sample ID:	055-122007	255-122007	073-122007	074-122007	075-122007	077-122007
Lab Sample ID:	734344	734345	734357	734356	734362	734354
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/5/2007	12/5/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Original Sample	Original Sample	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

VOCs	Units						
p-Isopropyltoluene	ug/l	0.5 U					
Styrene	ug/l	0.5 UJ					
tert-Butylbenzene	ug/l	0.5 U					
Tetrachloroethene	ug/l	0.5 U					
Toluene	ug/l	0.5 U					
trans-1,2-Dichloroethene	ug/l	0.5 U					
trans-1,3-Dichloropropene	ug/l	0.5 U					
Trichloroethene	ug/l	0.5 U					
Trichlorofluoromethane	ug/l	0.5 U					
Vinyl chloride	ug/l	0.5 U					
Xylene (Total)	ug/l	0.5 U					

Table 3-1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-079	WSW-086	WSW-087	WSW-095	WSW-096	WSW-103
Field Sample ID:	079-122007	086-122007	087-122007	095-122007	096-122007	0103-122007
Lab Sample ID:	734355	734358	734360	734361	734351	734350
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample					
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

VOCs	Units						
1,1-Dichloroethane	ug/l	0.5 U					
1,1-Dichloroethene	ug/l	0.5 U					
1,1-Dichloropropene	ug/l	0.5 U					
1,1,1-Trichloroethane	ug/l	0.5 U					
1,1,1,2-Tetrachloroethane	ug/l	0.5 U					
1,1,2,2-Tetrachloroethane	ug/l	0.5 U					
1,1,2-Trichloroethane	ug/l	0.5 U					
1,2-Dibromo-3-chloropropane	ug/l	0.5 U					
1,2-Dibromoethane	ug/l	0.5 U					
1,2-Dichlorobenzene	ug/l	0.5 U					
1,2-Dichloroethane	ug/l	0.5 U					
1,2-Dichloropropane	ug/l	0.5 U					
1,2,3-Trichlorobenzene	ug/l	0.5 U					
1,2,3-Trichloropropane	ug/l	0.5 U					
1,2,4-Trichlorobenzene	ug/l	0.5 U					
1,3-Dichlorobenzene	ug/l	0.5 U					
1,3-Dichloropropane	ug/l	0.5 U					
1,3,5-Trimethylbenzene	ug/l	0.5 U	0.5 U	0.58	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	ug/l	0.5 U					
2-Butanone	ug/l	5 UJ					
2-Chlorotoluene	ug/l	0.5 U					
2-Hexanone	ug/l	2.5 UJ					
2,2-Dichloropropane	ug/l	0.5 U					
4-Chlorotoluene	ug/l	0.5 U					
Acetone	ug/l	5 UJ					
Benzene	ug/l	0.5 U					

Table 3-1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-079	WSW-086	WSW-087	WSW-095	WSW-096	WSW-103
Field Sample ID:	079-122007	086-122007	087-122007	095-122007	096-122007	0103-122007
Lab Sample ID:	734355	734358	734360	734361	734351	734350
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample					
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

VOCs	Units						
Bromobenzene	ug/l	0.5 U					
Bromochloromethane	ug/l	0.5 U					
Bromodichloromethane	ug/l	0.5 U					
Bromoform	ug/l	0.5 U					
Bromomethane	ug/l	0.5 U					
Carbon disulfide	ug/l	0.5 UJ					
Carbon tetrachloride	ug/l	0.5 U					
Chlorobenzene	ug/l	0.5 U					
Chloroethane	ug/l	0.5 U					
Chloroform	ug/l	0.5 U					
Chloromethane	ug/l	0.5 U					
cis-1,2-Dichloroethene	ug/l	0.5 U					
cis-1,3-Dichloropropene	ug/l	0.5 UJ					
Dibromochloromethane	ug/l	0.5 U					
Dibromomethane	ug/l	0.5 U					
Dichlorodifluoromethane	ug/l	0.5 U					
Ethylbenzene	ug/l	0.5 U	0.5 U	0.57	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	ug/l	0.5 U					
Isopropylbenzene	ug/l	0.5 U					
Methyl tert butyl ether	ug/l	0.5 U					
Methylene chloride	ug/l	0.5 U					
m,p-Xylene	ug/l	0.5 U	0.5 U	2.4	0.5 U	0.5 U	0.5 U
Naphthalene	ug/l	0.5 U					
n-Butylbenzene	ug/l	0.5 UJ					
n-Propylbenzene	ug/l	0.5 U					
o-Xylene	ug/l	0.5 U	0.5 U	0.63	0.5 U	0.5 U	0.5 U

Table 3-1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-079	WSW-086	WSW-087	WSW-095	WSW-096	WSW-103
Field Sample ID:	079-122007	086-122007	087-122007	095-122007	096-122007	0103-122007
Lab Sample ID:	734355	734358	734360	734361	734351	734350
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample					
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

VOCs	Units						
p-Isopropyltoluene	ug/l	0.5 U					
Styrene	ug/l	0.5 UJ					
tert-Butylbenzene	ug/l	0.5 U					
Tetrachloroethene	ug/l	0.5 U					
Toluene	ug/l	0.5 U					
trans-1,2-Dichloroethene	ug/l	0.5 U					
trans-1,3-Dichloropropene	ug/l	0.5 U					
Trichloroethene	ug/l	0.5 U					
Trichlorofluoromethane	ug/l	0.5 U					
Vinyl chloride	ug/l	0.5 U					
Xylene (Total)	ug/l	0.5 U	0.5 U	3.2	0.5 U	0.5 U	0.5 U

Table 3-1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-104	WSW-104	WSW-105	WSW-109	WSW-110
Field Sample ID:	0104-122007	2104-122007	0105-122007	0109-122007	0110-122007
Lab Sample ID:	734348	734349	734359	734352	734353
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Original Sample	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1	I 1

VOCs	Units					
1,1-Dichloroethane	ug/l	0.5 U				
1,1-Dichloroethene	ug/l	0.5 U				
1,1-Dichloropropene	ug/l	0.5 U				
1,1,1-Trichloroethane	ug/l	0.5 U				
1,1,1,2-Tetrachloroethane	ug/l	0.5 U				
1,1,2,2-Tetrachloroethane	ug/l	0.5 U				
1,1,2-Trichloroethane	ug/l	0.5 U				
1,2-Dibromo-3-chloropropane	ug/l	0.5 U				
1,2-Dibromoethane	ug/l	0.5 U				
1,2-Dichlorobenzene	ug/l	0.5 U				
1,2-Dichloroethane	ug/l	0.5 U				
1,2-Dichloropropane	ug/l	0.5 U				
1,2,3-Trichlorobenzene	ug/l	0.5 U				
1,2,3-Trichloropropane	ug/l	0.5 U				
1,2,4-Trichlorobenzene	ug/l	0.5 U				
1,3-Dichlorobenzene	ug/l	0.5 U				
1,3-Dichloropropane	ug/l	0.5 U				
1,3,5-Trimethylbenzene	ug/l	0.5 U				
1,4-Dichlorobenzene	ug/l	0.5 U				
2-Butanone	ug/l	5 UJ				
2-Chlorotoluene	ug/l	0.5 U				
2-Hexanone	ug/l	2.5 UJ				
2,2-Dichloropropane	ug/l	0.5 U				
4-Chlorotoluene	ug/l	0.5 U				
Acetone	ug/l	5 UJ				
Benzene	ug/l	0.5 U				

Table 3-1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-104	WSW-104	WSW-105	WSW-109	WSW-110
Field Sample ID:	0104-122007	2104-122007	0105-122007	0109-122007	0110-122007
Lab Sample ID:	734348	734349	734359	734352	734353
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Original Sample	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1	I 1

VOCs	Units					
Bromobenzene	ug/l	0.5 U				
Bromochloromethane	ug/l	0.5 U				
Bromodichloromethane	ug/l	0.5 U				
Bromoform	ug/l	0.5 U				
Bromomethane	ug/l	0.5 U				
Carbon disulfide	ug/l	0.5 UJ				
Carbon tetrachloride	ug/l	0.5 U				
Chlorobenzene	ug/l	0.5 U				
Chloroethane	ug/l	0.5 U				
Chloroform	ug/l	0.24 J	0.23 J	0.5 U	0.5 U	0.5 U
Chloromethane	ug/l	0.5 U				
cis-1,2-Dichloroethene	ug/l	0.5 U				
cis-1,3-Dichloropropene	ug/l	0.5 UJ				
Dibromochloromethane	ug/l	0.5 U				
Dibromomethane	ug/l	0.5 U				
Dichlorodifluoromethane	ug/l	0.5 U				
Ethylbenzene	ug/l	0.5 U				
Hexachlorobutadiene	ug/l	0.5 U				
Isopropylbenzene	ug/l	0.5 U				
Methyl tert butyl ether	ug/l	0.5 U				
Methylene chloride	ug/l	0.5 U				
m,p-Xylene	ug/l	0.5 U				
Naphthalene	ug/l	0.5 U				
n-Butylbenzene	ug/l	0.5 UJ				
n-Propylbenzene	ug/l	0.5 U				
o-Xylene	ug/l	0.5 U				

Table 3-1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-104	WSW-104	WSW-105	WSW-109	WSW-110
Field Sample ID:	0104-122007	2104-122007	0105-122007	0109-122007	0110-122007
Lab Sample ID:	734348	734349	734359	734352	734353
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Original Sample	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1	I 1

VOCs	Units					
p-Isopropyltoluene	ug/l	0.5 U				
Styrene	ug/l	0.5 UJ	0.5 UJ	0.30 J	0.5 UJ	0.5 UJ
tert-Butylbenzene	ug/l	0.5 U				
Tetrachloroethene	ug/l	0.5 U				
Toluene	ug/l	0.5 U				
trans-1,2-Dichloroethene	ug/l	0.5 U				
trans-1,3-Dichloropropene	ug/l	0.5 U				
Trichloroethene	ug/l	0.5 U				
Trichlorofluoromethane	ug/l	0.5 U				
Vinyl chloride	ug/l	0.5 U				
Xylene (Total)	ug/l	0.5 U				

Table 3-1
Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

UJ = Not Detected, Estimated: A result followed by a "UJ" qualifier means that the analyte was not detected, but the associated quantitation limit is not certain (or estimated) because one or more laboratory quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

TALVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

VOCs = Volatile Organic Compounds

I = Initial analysis

"1" = Dilution factor

Table 3 - 2
Results - Explosives
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-055	WSW-055	WSW-073	WSW-074	WSW-075	WSW-077
Field Sample ID:	055-122007	255-122007	073-122007	074-122007	075-122007	077-122007
Lab Sample ID:	734344	734345	734357	734356	734362	734354
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/5/2007	12/5/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Original Sample	Original Sample	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

Explosives	Units						
1,3-Dinitrobenzene	ug/l	0.25 U					
1,3,5-Trinitrobenzene	ug/l	0.25 U					
2-Amino-4,6-Dinitrotoluene	ug/l	0.25 U					
2-Nitrotoluene	ug/l	0.25 U					
2,4-Dinitrotoluene	ug/l	0.25 U					
2,4,6-Trinitrotoluene	ug/l	0.25 U					
2,6-Dinitrotoluene	ug/l	0.25 U					
3-Nitrotoluene	ug/l	0.25 U					
4-Amino-2,6-Dinitrotoluene	ug/l	0.25 UJ					
4-Nitrotoluene	ug/l	0.25 U					
HMX	ug/l	0.25 U					
Nitrobenzene	ug/l	0.25 U					
RDX	ug/l	0.25 U					
Tetryl	ug/l	0.25 U					

Table 3 - 2
Results - Explosives
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-079	WSW-086	WSW-087	WSW-095	WSW-096	WSW-103
Field Sample ID:	079-122007	086-122007	087-122007	095-122007	096-122007	0103-122007
Lab Sample ID:	734355	734358	734360	734361	734351	734350
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample					
Analysis Information:	I 1	I 1	I 1	I 1	I 1	I 1

Explosives	Units						
1,3-Dinitrobenzene	ug/l	0.25 U					
1,3,5-Trinitrobenzene	ug/l	0.25 U					
2-Amino-4,6-Dinitrotoluene	ug/l	0.25 U					
2-Nitrotoluene	ug/l	0.25 U					
2,4-Dinitrotoluene	ug/l	0.25 U					
2,4,6-Trinitrotoluene	ug/l	0.25 U					
2,6-Dinitrotoluene	ug/l	0.25 U					
3-Nitrotoluene	ug/l	0.25 U					
4-Amino-2,6-Dinitrotoluene	ug/l	0.25 UJ					
4-Nitrotoluene	ug/l	0.25 U					
HMX	ug/l	0.25 U					
Nitrobenzene	ug/l	0.25 U					
RDX	ug/l	0.25 U					
Tetryl	ug/l	0.25 U					

Table 3 - 2
Results - Explosives
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-104	WSW-104	WSW-105	WSW-109	WSW-110
Field Sample ID:	0104-122007	2104-122007	0105-122007	0109-122007	0110-122007
Lab Sample ID:	734348	734349	734359	734352	734353
Lab Name:	TALVT	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/6/2007	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Original Sample	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1	I 1

Explosives	Units					
1,3-Dinitrobenzene	ug/l	0.25 U				
1,3,5-Trinitrobenzene	ug/l	0.25 U				
2-Amino-4,6-Dinitrotoluene	ug/l	0.25 U				
2-Nitrotoluene	ug/l	0.25 U				
2,4-Dinitrotoluene	ug/l	0.25 U				
2,4,6-Trinitrotoluene	ug/l	0.25 U				
2,6-Dinitrotoluene	ug/l	0.25 U				
3-Nitrotoluene	ug/l	0.25 U				
4-Amino-2,6-Dinitrotoluene	ug/l	0.25 UJ				
4-Nitrotoluene	ug/l	0.25 U				
HMX	ug/l	0.25 U				
Nitrobenzene	ug/l	0.25 U				
RDX	ug/l	0.25 U				
Tetryl	ug/l	0.25 U				

Table 3 - 2
Results - Explosives
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

UJ = Not Detected, Estimated: A result followed by a "UJ" qualifier means that the analyte was not detected, but the associated quantitation limit is not certain (or estimated) because one or more laboratory quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

TALVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine

Tetryl = Methyl-2,4,6-trinitrophenylnitramine

I = Initial analysis

"1" = Dilution factor

Table 3 - 3
Detections - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-087	WSW-104	WSW-104	WSW-105
Field Sample ID:	087-122007	0104-122007	2104-122007	0105-122007
Lab Sample ID:	734360	734348	734349	734359
Lab Name:	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/6/2007	12/6/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Original Sample	Field Duplicate	Original Sample
Analysis Information:	I 1	I 1	I 1	I 1

VOCs	Units			
1,3,5-Trimethylbenzene	ug/l	0.58		
Chloroform	ug/l		0.24 J	0.23 J
Ethylbenzene	ug/l	0.57		
m,p-Xylene	ug/l	2.4		
o-Xylene	ug/l	0.63		
Styrene	ug/l			0.30 J
Xylene (Total)	ug/l	3.2		

Table 3 - 3
Detections - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter
TALVT = Test America Laboratories, Vermont
ID = Identification
QC = Quality Control
VOCs = Volatile Organic Compounds

I = Initial analysis
"1" = Dilution factor

Table 3 - 4
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	Trip Blank	Trip Blank
Field Sample ID:	TRB-255-122007	TRB-2104-122007
Lab Sample ID:	734346	734347
Lab Name:	TALVT	TALVT
Sample Date:	12/5/2007	12/6/2007
Field QC:	Trip Blank	Trip Blank
Analysis Information:	I 1	I 1

VOCs	Units		
1,1-Dichloroethane	ug/l	0.5 U	0.5 U
1,1-Dichloroethene	ug/l	0.5 U	0.5 U
1,1-Dichloropropene	ug/l	0.5 U	0.5 U
1,1,1-Trichloroethane	ug/l	0.5 U	0.5 U
1,1,1,2-Tetrachloroethane	ug/l	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	ug/l	0.5 U	0.5 U
1,1,2-Trichloroethane	ug/l	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	ug/l	0.5 U	0.5 U
1,2-Dibromoethane	ug/l	0.5 U	0.5 U
1,2-Dichlorobenzene	ug/l	0.5 U	0.5 U
1,2-Dichloroethane	ug/l	0.5 U	0.5 U
1,2-Dichloropropane	ug/l	0.5 U	0.5 U
1,2,3-Trichlorobenzene	ug/l	0.5 U	0.5 U
1,2,3-Trichloropropane	ug/l	0.5 U	0.5 U
1,2,4-Trichlorobenzene	ug/l	0.5 U	0.5 U
1,3-Dichlorobenzene	ug/l	0.5 U	0.5 U
1,3-Dichloropropane	ug/l	0.5 U	0.5 U
1,3,5-Trimethylbenzene	ug/l	0.5 U	0.5 U
1,4-Dichlorobenzene	ug/l	0.5 U	0.5 U
2-Butanone	ug/l	5 UJ	5 UJ
2-Chlorotoluene	ug/l	0.5 U	0.5 U
2-Hexanone	ug/l	2.5 UJ	2.5 UJ
2,2-Dichloropropane	ug/l	0.5 U	0.5 U
4-Chlorotoluene	ug/l	0.5 U	0.5 U
Acetone	ug/l	1.1 J	5 UJ
Benzene	ug/l	0.5 U	0.5 U

Table 3 - 4
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	Trip Blank	Trip Blank
Field Sample ID:	TRB-255-122007	TRB-2104-122007
Lab Sample ID:	734346	734347
Lab Name:	TALVT	TALVT
Sample Date:	12/5/2007	12/6/2007
Field QC:	Trip Blank	Trip Blank
Analysis Information:	I 1	I 1

VOCs	Units		
Bromobenzene	ug/l	0.5 U	0.5 U
Bromochloromethane	ug/l	0.5 U	0.5 U
Bromodichloromethane	ug/l	0.5 U	0.5 U
Bromoform	ug/l	0.5 U	0.5 U
Bromomethane	ug/l	0.5 U	0.5 U
Carbon disulfide	ug/l	0.5 UJ	0.5 UJ
Carbon tetrachloride	ug/l	0.5 U	0.5 U
Chlorobenzene	ug/l	0.5 U	0.5 U
Chloroethane	ug/l	0.5 U	0.5 U
Chloroform	ug/l	0.5 U	0.5 U
Chloromethane	ug/l	0.5 U	0.5 U
cis-1,2-Dichloroethene	ug/l	0.5 U	0.5 U
cis-1,3-Dichloropropene	ug/l	0.5 UJ	0.5 UJ
Dibromochloromethane	ug/l	0.5 U	0.5 U
Dibromomethane	ug/l	0.5 U	0.5 U
Dichlorodifluoromethane	ug/l	0.5 U	0.5 U
Ethylbenzene	ug/l	0.5 U	0.5 U
Hexachlorobutadiene	ug/l	0.5 U	0.5 U
Isopropylbenzene	ug/l	0.5 U	0.5 U
Methyl tert butyl ether	ug/l	0.5 U	0.5 U
Methylene chloride	ug/l	0.5 U	0.5 U
m,p-Xylene	ug/l	0.5 U	0.5 U
Naphthalene	ug/l	0.5 U	0.5 U
n-Butylbenzene	ug/l	0.5 UJ	0.5 UJ
n-Propylbenzene	ug/l	0.5 U	0.5 U
o-Xylene	ug/l	0.5 U	0.5 U

Table 3 - 4
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	Trip Blank	Trip Blank
Field Sample ID:	TRB-255-122007	TRB-2104-122007
Lab Sample ID:	734346	734347
Lab Name:	TALVT	TALVT
Sample Date:	12/5/2007	12/6/2007
Field QC:	Trip Blank	Trip Blank
Analysis Information:	I 1	I 1

VOCs	Units		
p-Isopropyltoluene	ug/l	0.5 U	0.5 U
Styrene	ug/l	0.5 UJ	0.5 UJ
tert-Butylbenzene	ug/l	0.5 U	0.5 U
Tetrachloroethene	ug/l	0.5 U	0.5 U
Toluene	ug/l	0.5 U	0.5 U
trans-1,2-Dichloroethene	ug/l	0.5 U	0.5 U
trans-1,3-Dichloropropene	ug/l	0.5 U	0.5 U
Trichloroethene	ug/l	0.5 U	0.5 U
Trichlorofluoromethane	ug/l	0.5 U	0.5 U
Vinyl chloride	ug/l	0.5 U	0.5 U
Xylene (Total)	ug/l	0.5 U	0.5 U

Table 3 - 4
Trip Blank Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

UJ = Not Detected, Estimated: A result followed by a "UJ" qualifier means that the analyte was not detected, but the associated quantitation limit is not certain (or estimated) because one or more laboratory quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

TALVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

VOCs = Volatile Organic Compounds

I = Initial analysis

"1" = Dilution factor

Table 3 - 5
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-055	WSW-055	WSW-104	WSW-104
Field Sample ID:	055-122007	255-122007	0104-122007	2104-122007
Lab Sample ID:	734344	734345	734348	734349
Lab Name:	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/5/2007	12/5/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Field Duplicate
Analysis Information:	I 1	I 1	I 1	I 1

VOCs	Units				
1,1-Dichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloropropene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1,2-Tetrachloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	ug/l	5 UJ	5 UJ	5 UJ	5 UJ
2-Chlorotoluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
2-Hexanone	ug/l	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ
2,2-Dichloropropane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Acetone	ug/l	5 UJ	5 UJ	5 UJ	5 UJ
Benzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U

Table 3 - 5
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-055	WSW-055	WSW-104	WSW-104
Field Sample ID:	055-122007	255-122007	0104-122007	2104-122007
Lab Sample ID:	734344	734345	734348	734349
Lab Name:	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/5/2007	12/5/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Field Duplicate
Analysis Information:	I 1	I 1	I 1	I 1

VOCs	Units				
Bromobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	ug/l	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Carbon tetrachloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	ug/l	0.5 U	0.5 U	0.24 J	0.23 J
Chloromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	ug/l	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
Dibromochloromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Dibromomethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert butyl ether	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
m,p-Xylene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
n-Butylbenzene	ug/l	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
n-Propylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U

Table 3 - 5
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-055	WSW-055	WSW-104	WSW-104
Field Sample ID:	055-122007	255-122007	0104-122007	2104-122007
Lab Sample ID:	734344	734345	734348	734349
Lab Name:	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/5/2007	12/5/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Field Duplicate
Analysis Information:	I 1	I 1	I 1	I 1

VOCs	Units				
p-Isopropyltoluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	ug/l	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
tert-Butylbenzene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	ug/l	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (Total)	ug/l	0.5 U	0.5 U	0.5 U	0.5 U

Table 3 - 5
Field Duplicate Results - Volatile Organic Compounds
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

J = Detected, Estimated: A result followed by a "J" qualifier means that the analyte was detected, but there is some question that the reported concentration is accurate. This may be because the analyte was detected below the quantitation limit, or because one or more quality control indicators did not meet acceptance criteria.

UJ = Not Detected, Estimated: A result followed by a "UJ" qualifier means that the analyte was not detected, but the associated quantitation limit is not certain (or estimated) because one or more laboratory quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

TALVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

VOCs = Volatile Organic Compounds

I = Initial analysis

"1" = Dilution factor

Table 3 - 6
Field Duplicate Results - Explosives
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Site Name: Mead Water Supply Wells

Station ID:	WSW-055	WSW-055	WSW-104	WSW-104
Field Sample ID:	055-122007	255-122007	0104-122007	2104-122007
Lab Sample ID:	734344	734345	734348	734349
Lab Name:	TALVT	TALVT	TALVT	TALVT
Sample Date:	12/5/2007	12/5/2007	12/6/2007	12/6/2007
Field QC:	Original Sample	Field Duplicate	Original Sample	Field Duplicate
Analysis Information:	I 1	I 1	I 1	I 1

Explosives	Units				
1,3-Dinitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
1,3,5-Trinitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
2-Amino-4,6-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
2-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
2,4-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
2,4,6-Trinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
2,6-Dinitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
3-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
4-Amino-2,6-Dinitrotoluene	ug/l	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ
4-Nitrotoluene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
HMX	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
Nitrobenzene	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
RDX	ug/l	0.25 U	0.25 U	0.25 U	0.25 U
Tetryl	ug/l	0.25 U	0.25 U	0.25 U	0.25 U

Table 3 - 6
Field Duplicate Results - Explosives
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Notes:

U = Not Detected: A result followed by a "U" qualifier means that the analyte was not detected at the given quantitation limit by the laboratory instrument.

UJ = Not Detected, Estimated: A result followed by a "UJ" qualifier means that the analyte was not detected, but the associated quantitation limit is not certain (or estimated) because one or more laboratory quality control indicators did not meet acceptance criteria.

ug/l = micrograms per liter

TALVT = Test America Laboratories, Vermont

ID = Identification

QC = Quality Control

HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine

Tetryl = Methyl-2,4,6-trinitrophenylnitramine

I = Initial analysis

"1" = Dilution factor

**Table 4-1
Data Evaluation Results
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska**

Sample Identification	Date Sampled	SDG	Lab Number	Analysis	Parameter	Units	Laboratory Result		Data Review Qualifier	Reason for Qualification		Comments	Final Result
										MS	LCS		
055-122007	12/5/2007	123305	734344	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					
255-122007	12/5/2007	123305	734345	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					
073-122007	12/6/2007	123305	734357	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					
074-122007	12/6/2007	123305	734356	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					

**Table 4-1
Data Evaluation Results
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska**

Sample Identification	Date Sampled	SDG	Lab Number	Analysis	Parameter	Units	Laboratory Result		Data Review Qualifier	Reason for Qualification		Comments	Final Result
										MS	LCS		
075-122007	12/6/2007	123305	734362	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					
077-122007	12/6/2007	123305	734354	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					
079-122007	12/6/2007	123305	734355	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					
086-122007	12/6/2007	123305	734358	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					

**Table 4-1
Data Evaluation Results
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska**

Sample Identification	Date Sampled	SDG	Lab Number	Analysis	Parameter	Units	Laboratory Result		Data Review Qualifier	Reason for Qualification		Comments	Final Result
										MS	LCS		
087-122007	12/6/2007	123305	734360	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					
095-122007	12/6/2007	123305	734361	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					
096-122007	12/6/2007	123305	734351	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					
0103-122007	12/6/2007	123305	734350	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					

**Table 4-1
Data Evaluation Results
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska**

Sample Identification	Date Sampled	SDG	Lab Number	Analysis	Parameter	Units	Laboratory Result		Data Review Qualifier	Reason for Qualification		Comments	Final Result
										MS	LCS		
0104-122007	12/6/2007	123305	734348	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					
2104-122007	12/6/2007	123305	734349	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					
0105-122007	12/6/2007	123305	734359	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.3	J	J	x		Low MSD % REC	0.3 J					
0109-122007	12/6/2007	123305	734352	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ
				VOC	Acetone	µg/L	5.0	U	UJ	x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ	x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ	x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ	x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ	x		Low MSD % REC	0.5 UJ					

**Table 4-1
Data Evaluation Results
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska**

Sample Identification	Date Sampled	SDG	Lab Number	Analysis	Parameter	Units	Laboratory Result		Data Review Qualifier	Reason for Qualification		Comments	Final Result	
										MS	LCS			
0110-122007	12/6/2007	123305	734353	Explosives	4-Amino-2,6-dinitrotoluene	µg/L	0.25	U	UJ		x	LCS %REC low	0.25 UJ	
				VOC	Acetone	µg/L	5.0	U	UJ		x		Low MS/MSD % RECs	5 UJ
					Carbon disulfide	µg/L	0.5	U	UJ		x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ		x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ		x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ		x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ		x		Low MSD % REC	0.5 UJ
Styrene	µg/L	0.5	U	UJ		x		Low MSD % REC	0.5 UJ					
TRB-255-122007	12/5/2007	123305	734346	VOC	Acetone	µg/L	1.1	J	J		x	Low MS/MSD % RECs	1.1 J	
					Carbon disulfide	µg/L	0.5	U	UJ		x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ		x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ		x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ		x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ		x		Low MSD % REC	0.5 UJ
					Styrene	µg/L	0.5	U	UJ		x		Low MSD % REC	0.5 UJ
TRB-2104-122007	12/6/2007	123305	734347	VOC	Acetone	µg/L	5.0	U	UJ		x	Low MS/MSD % RECs	5 UJ	
					Carbon disulfide	µg/L	0.5	U	UJ		x		Low MS/MSD % RECs	0.5 UJ
					2-Butanone	µg/L	5.0	U	UJ		x		Low MSD % REC	5 UJ
					2-Hexanone	µg/L	2.5	U	UJ		x		Low MS/MSD % RECs	2.5 UJ
					n-Butyl benzene	µg/L	0.5	U	UJ		x		Low MS/MSD % RECs	0.5 UJ
					cis-1,3-Dichloropropene	µg/L	0.5	U	UJ		x		Low MSD % REC	0.5 UJ
					Styrene	µg/L	0.5	U	UJ		x		Low MSD % REC	0.5 UJ

Notes:

J = Estimated
MS/MSD = Matrix Spike/Matrix Spike Duplicate
µg/L = micrograms per liter
%REC = Percent Recovery
LCS = Laboratory Control Sample

SDG = Sample Delivery Group
U = Non Detect
VOCs = Volatile Organic Compound

Table 4-2
VOCs Quality Control Outliers
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample ID(s) Requiring Qualification	SDG	Compound(s)	QC Parameter	Laboratory QC Parameter Control Limit	QC Result
Matrix Spike / Matrix Spike Duplicate					
All Samples	123305	Acetone	MS/MSD % REC	70-130%	67%
					66%
		Carbon disulfide	MS/MSD % REC		65%
					65%
		2-Hexanone	MS/MSD % REC		68%
					67%
		n-Butyl benzene	MS/MSD % REC		65%
		65%			
		2-Butanone	MSD % REC		69%
		cis-1,3-Dichloropropene	MSD % REC		65%
		Styrene	MSD % REC		65%

Notes:

- ID = Identification
- MS/MSD = Matrix Spike/Matrix Spike Duplicate
- QC = Quality Control
- % REC = Percent Recovery
- SDG = Sample Delivery Group

Table 4-3
Explosives Quality Control Outliers
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample ID(s) Requiring Qualification	SDG	Compound(s)	QC Parameter	Laboratory QC Parameter Control Limit	QC Result
Laboratory Control Sample / Laboratory Control Sample Duplicate					
055-122007	123305	4-Amino-2,6-dinitrotoluene	LSC %REC	85-130%	80.0%
255-122007					
073-122007					
074-122007					
075-122007					
077-122007					
079-122007					
086-122007					
087-122007					
095-122007					
096-122007					
0103-122007					
0104-122007					
2104-122007					
0105-122007					
0109-122007					
0110-122007					

Notes:

- ID = Identification
- LCS = Laboratory Control Sample
- LCSD = Laboratory Control Sample Duplicate
- % REC = Percent Recovery
- QC = Quality Control
- SDG = Sample Delivery Group

Table 5-1
Field Completeness
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Number of Samples Planned ¹	Number of Samples Collected	Field Completeness
Volatile Organic Compounds	20	17	85%
Explosives	20	17	85%
Totals =	40	34	85%
Goal =			95%

Notes:

¹ = Number of samples includes field samples and duplicate samples.

Note: Three wells, WSW-76, WSW-97, and WSW-99 could not be sampled.

WSW-76 was from a vacant home, WSW-97 was frozen at the time of sampling, and the field team was unable to obtain access from the owner of location WSW-99.

Table 5-2
Analytical Completeness
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Total Number of Parameters ¹	Acceptable Data ²	Acceptable Data Completeness	Acceptable Data Completeness Goals	Quality Data ³	Quality Data Completeness	Quality Data Completeness Goals
Volatile Organic Compounds (63)	1071	952	89%	90%	1071	100%	80%
Explosives (14)	238	221	93%	90%	238	100%	80%
Totals =	1309	1173	89.6%	95%	1309	100%	80%

Notes:

- ¹ = Total number of parameters includes field samples (including data points from dilutions and/or reanalyses to be used in place of original data) and field duplicates.
- ² = Acceptable data is defined as data that passed all quality control (QC) criteria, or data that did not pass QC criteria but had appropriate corrective actions taken. Acceptable data completeness is a measure of laboratory contract compliance. R qualified data with acceptable replacement data are not counted.
- ³ = Quality data is a measure of the percentage of usable data points. Quality data includes all data except rejected data points.

Table 5-3
Project Completeness
Fourth Quarter 2007 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field ¹	Analytical ²	Project Completeness ³
85%	100%	93%
Project Completeness Goal =		90%

Notes:

¹ = Field completeness for sample collection was assessed by comparing the number of samples properly collected to the number of samples planned for collection.

Three sample locations scheduled for sampling this quarter could not be sampled. WSW-76 was from a vacant homes, WSW-97 was frozen at the time of sampling, and the field team was unable to obtain access from the owner of location WSW-99.

² = Analytical completeness is the percentage of usable data (i.e. quality data completeness).

³ = Project completeness combines sampling and analytical protocols to assess the expectations of the project as a whole. Project completeness is determined by comparing the percentage of samples / measurements that are determined to be usable to the total number of samples / measurements planned.

Appendix A
Chain of Custody Records

4th Qtr 2007 WSW
SAMPLING EVENT

CHAIN OF CUSTODY RECORD

Report to: Company: <u>ECC</u> Address: <u>1746 COLE BLVD. BURLINGTON 05401</u> Contact: <u>JOHN RYDER</u> Phone: <u>(303) 590-1157</u> Fax: <u>(303) 298-7837</u> Contract/Quote: _____		Invoice to: Company: <u>SAME</u> Address: _____ Contact: _____ Phone: _____ Fax: _____		Lab Use Only Due Date: _____ Temp. of coolers when received (C°): 1 2 3 4 5 Custody Seal N/Y Intact N/Y Screened For Radioactivity <input type="checkbox"/>	
Sampler's Name: <u>John Ryder</u> Sampler's Signature:		Project Name: <u>MEAD FNOP</u>		AnalYSIS REQUESTED: <u>594.2 VOC</u> <u>8330 EXPLOSIVES</u>	
Contract/Quote: <u>5403.001</u>		No./Type of Containers: HCl / 4 C		Lab/Sample ID (Lab Use Only)	
Matrix: <u>W</u>	Date: <u>12-6-2007</u>	C o m p	G r a b	Identifying Marks of Sample(s): <u>075-122007</u>	No./Type of Containers: VOA: <u>3</u> A/G: <u>2</u> 250 ml P/O: _____
Relinquished by: (Signature)		Received by: (Signature)		Date: <u>12-7-07</u>	
Relinquished by: (Signature) _____		Received by: (Signature) _____		Date: _____	
Relinquished by: (Signature) _____		Received by: (Signature) _____		Date: _____	
Matrix: <u>WW</u> - Wastewater Container: <u>VOA</u> - 40 ml vial		L - Liquid 250 ml - Glass wide mouth		C - Charcoal Tube P/O - Plastic or other _____	
W - Water A/G - Amber / Or Glass 1 Liter		S - Soil		SL - Sludge	
Remarks: <u>12/6/07</u> <u>12/6/07</u> <u>12/6/07</u> Fed Ex 3 of 3 Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.					

Appendix B
Reference Sheet
Data Validation Qualifiers
Drinking Water Standards

Data Qualifiers and Drinking Water Standards Reference Sheet Former Nebraska Ordnance Plant, Mead, Nebraska

Any qualifiers (i.e. U, J, or R) listed after a result are assigned during the data validation process. Data validation is a procedure which involves the review of quality control data provided by the laboratory. This review is followed by the assignment of data qualifiers (if necessary) which indicate the reliability of a result to the reader. Data validation is performed by a chemist employed outside of the laboratory or associated government installations to ensure accuracy in data reporting. A description of qualifiers is provided below.

No qualifier

- If a result has no assigned qualifier, the contaminant was detected, and the reader can be confident that the concentration is exact.

“U”

- A result followed by a “U” qualifier means that the contaminant was undetected, or not detected by the instrument.

“UJ”

- A result followed by a “UJ” qualifier means that the contaminant was not detected, but the associated detection level is not certain (estimated). For example, if a value is followed by a “UJ”, the contaminant was not detected, but the associated detection level is in question. The detection level is in question because one or more of the laboratory quality control indicators do not meet acceptance criteria. The amount that the indicator fell outside of the criteria may be used as a rough estimate of how much the actual detection level differs from the stated one. Typically, this is a 10-30% difference.

“UR”

- A result followed by a “UR” qualifier means that the contaminant was not detected, but there is strong doubt that the associated detection level is accurate. For example, if a value is followed by a “UR”, the contaminant was not detected, but the associated detection level is in strong doubt. The detection level is in doubt because results are unacceptable for a quality control indicator. In this case, the detection level cannot be estimated.

“J”

- A result followed by only a “J” qualifier means that the contaminant was detected, but there is some question that the stated concentration is exact. For example, if a result is “0.5 J”, the contaminant was detected, but there is some question that the concentration is exactly 0.5. A “J” qualifier may be applied for two reasons: (1) the contaminant was detected below the reporting limit; or (2) the contaminant was detected, but one or more quality control indicators did not meet acceptance criteria. The reporting limit is equal to the concentration of the lowest standard used by the laboratory to calibrate the instrument. The reporting limit is the minimum concentration that can be stated with complete confidence.

“R”

- A result followed by only an “R” qualifier means that the contaminant was detected, but there is strong doubt that the concentration is exact. For example, if a result is “0.5 R”, the contaminant was detected, but there is strong doubt that the concentration is exactly 0.5. The concentration is in doubt because results are unacceptable for a quality control indicator. In this case, the detected concentration cannot be estimated. For comparison purposes, detected results are reported in the results letters with available Environmental Protection Agency drinking water standards. These standards include the maximum contaminant level (MCL) and various health advisories (HA). A description of the drinking water standards is provided below.

“MCL”

- The maximum contaminant level is the highest concentration of a contaminant that is allowed in drinking water. Maximum contaminant levels are enforceable Federal standards.

“HA”

- Health advisories provide estimates of acceptable drinking water concentrations for a chemical substance based on health effects information. Health advisories are not enforceable Federal standards, but serve as a technical guidance to assist Federal, State, and local officials.

Appendix C
Analytical Results on Compact Disc
Summary Forms and Raw Data