



September 22, 2015

Mr. Joe Davis
On-Scene Coordinator
U.S. Environmental Protection Agency – TLC
8600 NE Underground Drive, Pillar 253
Kansas City, Missouri 64161

Subject: Removal Action Report – Revision 2
Aurora Groundwater Site, Aurora, Hamilton County, Nebraska
CERCLIS EPA ID: IAN000706068
U.S. EPA Region 7 START, Contract No. EP-S7-13-06, Task Order No. 0035
Task Monitor: Joe Davis, EPA On-Scene Coordinator/Task Monitor

Dear Mr. Davis:

Tetra Tech, Inc. is submitting the attached Removal Action Report, Revision 2, regarding the Aurora Groundwater site in Aurora, Hamilton County, Nebraska. This removal action report has been revised based on additional sampling at the site under the START 4 contract in 2014 and 2015. This report supersedes Revision 1, submitted April 9, 2013 (START 3, Task 284). If you have any questions or comments, please contact the Project Manager at (816) 412-1771.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jenna Mead'.

Jenna Mead, RG
START Project Manager

A handwritten signature in blue ink, appearing to read 'Ted Faile'.

Ted Faile, PG, CHMM
START Program Manager

Enclosures

cc: Debra Dorsey, START Project Officer (cover letter only)

**REMOVAL ACTION REPORT – REVISION 2
AURORA GROUNDWATER SITE
AURORA, HAMILTON COUNTY, NEBRASKA**

Superfund Technical Assessment and Response Team (START) 4 Contract

Contract No. EP-S7-13-06, Task Order No. 0035

Prepared For:

U.S. Environmental Protection Agency
Region 7
11201 Renner Boulevard
Lenexa, Kansas 66219

September 22, 2015

Prepared By:

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1.0 INTRODUCTION

Tetra Tech, Inc. (Tetra Tech) was tasked by the U.S. Environmental Protection Agency (EPA) Region 7 Superfund Division, under Superfund Technical Assessment and Response Team (START) 3 Contract Number EP-S7-06-01, Task Order Number 0284, to support a removal action at the Aurora Groundwater site in the City of Aurora, Hamilton County, Nebraska (see Appendix A, Figure 1). A removal action report was submitted in February 2013, and revised in April 2013 (Tetra Tech 2013a). Additional work was performed at the site in 2014 and 2015 under the START 4 Contract Number EP-S7-13-06, Task Order Number 0035.

The Aurora Groundwater site was entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) on July 29, 2011, with Identification Number NEN000706271 (EPA 2012).

Investigations by EPA and the Nebraska Department of Environmental Quality (NDEQ) have focused on determining the extent of groundwater contamination, comprehensively characterizing potential receptors (domestic and municipal wells), and evaluating probable source areas. Volatile organic compounds (VOC) were found in seven domestic wells east of town, outside city limits, and in one municipal well in northern Aurora. Concentrations of carbon tetrachloride (CCl_4) were above federal maximum contaminant levels (MCL) in five domestic wells. A municipal well in northeast Aurora contained low levels of the chlorinated solvent tetrachloroethene (PCE). The PCE contamination was subsequently entered into CERCLIS as the Aurora Highway 34 North site (NEN000706524), and was determined to be unrelated to the Aurora Groundwater site (Tetra Tech 2013b).

Apparent Problem

In January 2012, CCl_4 was detected in three residential well samples; the samples were collected prior to any in-home water treatment systems. These wells are along East 12th Road between South R Road and South S Road, between 0.7 and 1.7 miles east of the Aurora city limits. All three of these wells contained CCl_4 at concentrations exceeding the EPA MCL of 5 micrograms per liter ($\mu\text{g/L}$).

In May 2012, samples were collected at two of the wells that had been sampled the previous January. This time the samples were collected following in-home water treatment systems installed by the homeowners, and CCl_4 was found below the MCL. The remaining previously sampled residential well (in January 2012) did not include a water treatment system, and the sample from this well again had levels of CCl_4 above the MCL. Four additional domestic wells were sampled within the same area for the

first time during the May 2012 event, and one of these wells contained CCl₄ at a concentration above the MCL.

A sampling event at the Aurora site in October 2012 detected CCl₄ in groundwater above MCLs via mobile laboratory analysis, but these results were not confirmed via fixed laboratory analysis.

1.1 SITE LOCATION AND DESCRIPTION

The former Aurora high-capacity grain storage facility was at the northeast corner of the 1st Street and East 12th Road intersection in Aurora, Nebraska (see Figure 1 in Appendix A). Global positioning system (GPS) coordinates of the approximate center of the former facility are 40.858305 degrees north latitude and 98.016265 degrees west longitude.

Most communities across Nebraska at one time had access to a high-capacity grain storage facility owned and operated by the U.S. Department of Agriculture (USDA) in which CCl₄ was used as a grain fumigant (Nebraska Department of Health and Human Services [NDHHS] 2000). These fumigation processes often resulted in a CCl₄ release to groundwater. CCl₄ and the products of its degradation (chloroform and dichloromethane) have been found to exert detrimental effects on human health and have been classified as potential carcinogens (Agency for Toxic Substances and Disease Registry [ATSDR] 2005).

Aurora has an annual temperature of 50.8 degrees Fahrenheit (°F) and an average annual precipitation of 27 inches (Weatherbase 2012). According to USDA, soils in the Aurora area primarily consist of Hastings silt loam (1- to 3-percent slopes) followed by Hastings silty clay loam (3- to 7-percent slopes, eroded), Hastings silt loam (1- to 3-percent slopes), Hord silt loam (rarely flooded), and Crete silt loam (0- to 1-percent slopes) (USDA 2012).

The contaminated residential drinking water wells associated with the Aurora Groundwater site are southeast of Aurora, Nebraska, with the identified contamination along East 12th Road southeast of the City (geographic coordinates of approximate center of contamination are 40.857836 degrees north latitude and 97.978215 degrees west longitude). VOC contamination in groundwater associated with the Aurora Groundwater site is in Sections 2, 3, 10, 11, and 12 of Township 10 North, Range 6 West.

1.2 BACKGROUND

EPA's Pre-CERCLIS Screening Report regarding the Aurora site (dated October 2011) identified a formerly owned or operated USDA grain storage facility in southwest Aurora. Based on this report, EPA

recommended sampling domestic and commercial use water supply wells in and around Aurora (EPA 2011).

Tetra Tech START conducted APA sampling in January 2012 and submitted an APA report on May 3, 2012—25 domestic wells had been sampled for VOCs (START Task Order 066). CCl₄, chloroform, 1,2-dichloroethane (DCA), 1,1-dichloroethene (DCE), and 1,1,1-trichloroethane (TCA) were detected in three wells. These wells are along East 12th Road between South R Road and South S Road, between 0.7 and 1.7 miles east of the Aurora city limits (Tetra Tech EM Inc. 2012a).

Tetra Tech START conducted removal site evaluation/site investigation (RSE/SI) field activities for EPA on May 8-9, 2012, and submitted an RSE/SI report on December 11, 2012 (START Task Order 0284). Tetra Tech START identified CCl₄, chloroform, DCE, PCE, 1,2,3-trichlorobenzene (TCB), or TCA in seven residential wells (including three previously sampled) and in one municipal well. During this investigation, property owners were asked whether they had installed any in-home water treatment systems, and if so, samples were collected before (pre-) and after (post-) the treatment system. Two of the three previously sampled domestic wells (in January 2012) contained CCl₄ in the post-treatment sample at concentrations below the EPA MCL of 5 µg/L, and further EPA action was not required at these two residences. The third domestic well previously sampled during January 2012 contained CCl₄ at a concentration above the MCL, and this residence did not have an owner-installed water treatment system. Four additional domestic wells were sampled for the first time during the RSE/SI, and one of these wells also contained CCl₄ at a concentration above the MCL.

EPA elected to install water treatment systems at two homes where CCl₄ had been reported above the MCL—one whose well had been initially sampled as part of the APA in January 2012 and that did not already have an owner-installed treatment system, and the second whose well had been sampled for the first time during the RSE/SI investigation. The remaining wells sampled either had not contained detectable levels of CCl₄ or had contained detected concentrations below the MCL (Tetra Tech EM Inc. 2012b).

2.0 SITE ACTIVITIES

On December 12, 2012, Fenster Plumbing, from Chapman, Nebraska, was contracted by Emergency and Rapid Response Services (ERRS) contractor Environmental Restoration (ER) to install whole house water treatment systems at two residences. START was not on site during these installations, which are described below.

2.1 WATER TREATMENT INSTALLATION JUSTIFICATION

During APA sampling by Tetra Tech START in January 2012, a drinking water sample collected from 1704 East 12th Road contained CCl₄ at 84 µg/L. The same well had been sampled during the RSE/SI May 2012 sampling event and had contained CCl₄ at 68 µg/L. Additionally, during the RSE/SI sampling event, a drinking water sample collected at 1605 East 12th Road had contained CCl₄ at 8.4 µg/L. After speaking with EPA, the homeowners of these two residences opted for installations of whole house water treatment systems (see Appendix A, Figure 1). At other properties with wells containing detectable levels of CCl₄, either those CCl₄ concentrations were not above the MCL or the residents already had privately-installed treatment systems, and post-treatment CCl₄ concentrations were below the MCL.

2.2 CARBON FILTRATION SYSTEMS

Each whole house water treatment system installed by EPA consists of an in-line housing containing one sediment filter and an additional in-line housing containing one carbon filter. The system is typically installed at a point close to where the main water service line enters the property structure. Shut-off valves are installed on either side of the system to allow shut-off of water while filters are changed. Changing the sediment filter every 3 months and the carbon filter every 6 months is recommended. The purpose of this system is to filter sediment and reduce dissolved organics in groundwater prior to consumption or other domestic use.

2.3 INSTALLATION ACTIVITIES

On December 12, 2012, Fenster Plumbing installed whole house water treatment systems at 1704 East 12th Road and 1605 East 12th Road. Installation of each system required 1 day. In early 2015, a second filtration unit was installed in-line with the first at 1605 East 12th Road.

2.4 GROUNDWATER SAMPLING

In March 2014, EPA On-scene Coordinator (OSC) Joe Davis and START member Danny O'Connor collected pre- and post-filtration samples at 1605 and 1704 East 12th Road. Table 1 summarizes the samples collected and the results obtained.

Because the post-filtration sample results from 1605 East 12th Street contained concentrations of CCl₄ exceeding the MCL (even after replacing the filter), a second filtration system was installed in-line with the previously installed system in early 2015. In May 2015, START member Jenna Mead collected additional pre- and post-filtration samples at 1605 East 12th Road. These results are also included in Table 1.

Under contract to NDEQ, Ms. Mead also collected samples from private wells at 1606, 1608, and 1908 East 12th Road. No VOCs were detected at 1606 or 1908 East 12th Road. CCl₄ was identified at 3.2 µg/L in the sample from 1608 E. 12 Road. This concentration is similar to the 3.8 µg/L detected in 2012 (Tetra Tech 2015).

A copy of the logbook for the March 2014 sampling event is included as Appendix B and photographs of the March 2014 sampling are in Appendix C. Field sheets for both the March 2014 and May 2015 sampling events are in Appendix D. Analytical results are in Appendix E.

TABLE 1

**2014-2015 PRIVATE WELL SAMPLE RESULTS AT EAST 12TH ROAD
AURORA GROUNDWATER SITE, AURORA, NEBRASKA**

Address	Sample Number	Sample Location	Sample Type	Sample Date	Sample Time	CCl ₄	CHCl ₃	1,1-DCE	1,1-TCA
						Concentration (µg/L)			
Federal Maximum Contaminant Level						5	80 ^a	7	200
1704 E. 12 th Rd.	6436-1	Kitchen Sink	Post-filtration	3/18/14	12:08	0.5 U	0.5 U	0.5 U	0.5 U
	6436-2	Hydrant	Pre-filtration	3/18/14	12:25	98	2.1	0.5 U	0.5 U
1605 E. 12 th Rd.	6436-4	Kitchen Sink	Post-filtration (old filter)	3/18/14	12:49	14	0.91	1.6	1.3
	6436-5	Kitchen Sink	Post-filtration (new filter)	3/18/14	13:14	14	0.90	1.5	1.3
	6436-6	Hydrant	Pre-filtration	3/18/14	13:15	14	0.96	1.5	1.3
	6823-1	Kitchen Sink – 10-minute purge	Post-filtration (two filters in-line)	5/21/15	07:10	0.5 U	0.5 U	0.5 U	0.5 U
	6823-2	Kitchen Sink – 20-minute purge	Post-filtration (two filters in-line)	5/21/15	07:20	0.5 U	0.5 U	0.5 U	0.5 U
	6823-3	Hydrant – 10-minute purge	Pre-filtration	5/21/15	06:45	8.3	1.1	1.0	0.74
	6823-4	Hydrant – 20-minute purge	Pre-filtration	5/21/15	06:55	7.2	1.0	1.1	0.5 U
QA/QC Samples									
NA	6436-3FB	NA	Trip blank	3/18/14	08:15	0.5 U	0.5 U	0.5 U	0.5 U
NA	6823-5FB	NA	Trip blank	5/20/15	12:00	0.5 U	0.5 U	0.5 U	0.5 U

Notes:

Bold value indicates a concentration that exceeds the federal MCL.

^a MCL is for total trihalomethanes.CCl₄ Carbon tetrachlorideCHCl₃ Chloroform

DCE Dichloroethene

FB Field blank

NA Not applicable

QA/QC Quality Assurance/Quality Control

TCA Trichloroethane

U The analyte was not detected at or above the reporting limit.

3.0 SUMMARY

This following sections discuss removal considerations and pre-remedial considerations.

3.1 REMOVAL CONSIDERATIONS

CCl₄ and its degradation product, chloroform, have been detected in private domestic wells within an area immediately southeast of Aurora. Other VOCs such as DCE, PCE, TCB, DCA, and TCA have also been detected in private domestic wells in the same area. Source-area investigations have concentrated on the former USDA grain storage facility or the current Aurora Coop facility. Following sampling activities, EPA contacted homeowners with wells containing elevated levels of CCl₄ regarding installation of whole house water treatment systems. Owners of two residences on East 12th Road opted for installations of these systems, while owners of all other residences already had a reverse osmosis treatment system in place or their wells contained contaminant concentrations below benchmark values.

Periodic follow-up sampling should be conducted to ensure that that CCl₄ concentrations do not exceed MCLs in drinking water samples.

3.2 PRE-REMEDIAL CONSIDERATIONS

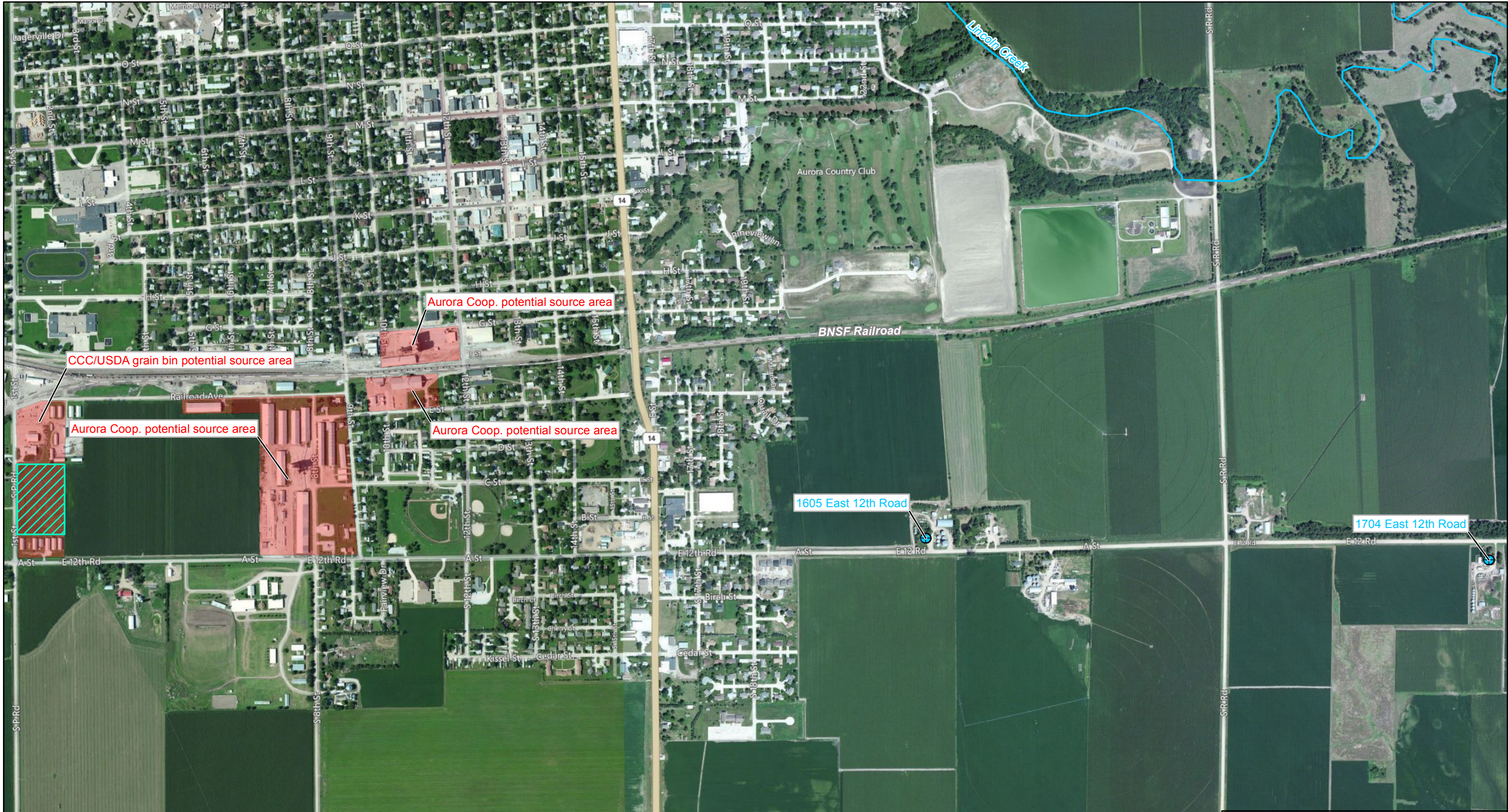
In 2012-2015, NDEQ investigated potential source areas and the extent of groundwater contamination at the Aurora Groundwater site. No VOCs were identified in soil samples collected near the former USDA grain storage facility or the Aurora Coop. In May 2015, CCl₄ and 1,1-DCE concentrations in groundwater samples exceeded their respective MCLs as far northwest as the intersection 6th and F Streets, about 1-3 miles upgradient of the contaminated private wells on East 12th Road. Further investigation upgradient of this intersection is recommended to investigate potential source areas.

4.0 REFERENCES

- Agency for Toxic Substances and Disease Registry (ATSDR). 2005. Toxicological Profile of Carbon Tetrachloride. Accessed October 24, 2012. On-line address: <http://www.atsdr.cdc.gov/ToxProfiles/tp30.pdf>
- Nebraska Department of Health and Human Services (NDHHS). 2000. Carbon Tetrachloride Survey at Nebraska Former USDA/CCC Grain Bin Sites. March.
- Tetra Tech, Inc. (Tetra Tech) 2013a. Removal Action Report, Revision 1. Aurora Groundwater Site, Aurora, Hamilton County, Nebraska. April 9.
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- Tetra Tech, Inc. 2015. Expanded Site Inspection 2 Report, Revision 1, Aurora Groundwater Site. July.
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- U.S. Environmental Protection Agency (EPA). 2011. Pre-Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Screening Report, Aurora Groundwater, CERCLIS ID No. NEN000706271. October 12.
- EPA. 2012. CERCLIS database. Accessed on October 23, 2012. On-line address: http://iaspub.epa.gov/enviro/efsystemquery.cerclis?fac_search=site_epa_id&fac_search_type=Beginning+With&postal_code=&location_address=&add_search_type=Beginning+With&city_name=&county_name=&state_code=&program_search=2&report=2&page_no=1&output_sql_switch=TRUE&database_type=CERCLIS&fac_value=NEN000706271. October.
- Weatherbase. 2012. Weather data summary. Accessed October 24, 2012. On-line address: <http://www.weatherbase.com/weather/weather.php3?s=544052&refer=&cityname=Aurora-Nebraska-United-States-of-America>

APPENDIX A

FIGURE



Legend

Residence with EPA-installed water treatment system

Stream/River

Former Aurora landfill

Potential source area

CCC

Commodity Credit Corporation

EPA

Environmental Protection Agency

USDA

United States Department of Agriculture

Aurora Groundwater Site
Aurora, Nebraska

Figure 1

EPA-Installed
Water Treatment System Location Map

TETRA TECH

Date: 1/24/2013

Drawn By: Nick Wiederholt

Project No: X9004.L12.0284.000

Source: ArcGIS Online, Bing Maps Hybrid, 2011; ESRI Data Maps, 2007

APPENDIX B

LOGBOOK

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www.RiteintheRain.com

Item No. 311
NSN: 7530-01-433-5654
ISBN: 978-1-932149-29-6

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6 3 2 2 8 1 3 1 1 2 6

KS1392



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ALL-WEATHER

LEVEL

Nº 311

Aurora GW

3/18/14 Aurora Groundwater

0700 STM Danny O'Connor arrives @ EPA

Caves. Meet with OSC Joe Davis

0730 Depart For site

1201 Arrive @ 1704 East 12th Road

1205 Begin purging water From Kitchen sink

1208 Collect sample, KS-1. Three VOA vials

From Kitchen sink - through Filtration

1225 Run 30 second purge of outside hydrant

Collect sample hydrant-1 (H-1)

Collect triple volume For MS/MSD

1244 Arrive @ 1605 East 12th Road

1245 Begin purging Kitchen sink

1249 Collect sample From Kitchen sink, KS-2

OSC Davis switches out expired filters

1307 Begin purging Kitchen sink

1314 Collect sample From Kitchen sink, KS-3

1315 Collect sample From outside hydrant (H-2)

Depart For Kansas City

1810 Arrive at EPA warehouse

1825 Drop off samples @ Tt office

1835 End day

~~Danny O.~~
~~3/18/14~~

APPENDIX C
PHOTOGRAPHIC LOG

**Aurora Groundwater Site
Aurora, Nebraska**

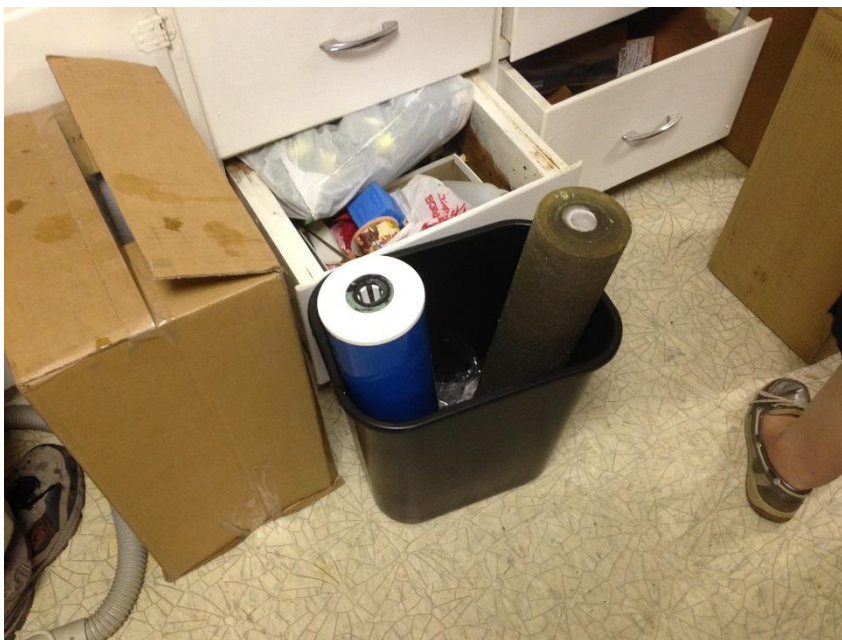


TETRA TECH PROJECT NO. X9025.14.0035.000 DIRECTION: --	DESCRIPTION	This photograph shows filtration system at 1704 East 12 th Road.	1
	CLIENT	Environmental Protection Agency - Region 7	DATE 3/18/14
	PHOTOGRAPHER	Danny O'Connor	



TETRA TECH PROJECT NO. X9025.14.0035.000 DIRECTION: --	DESCRIPTION	This photograph shows filtration system at 1704 East 12 th Road.	2
	CLIENT	Environmental Protection Agency - Region 7	DATE 3/14/14
	PHOTOGRAPHER	Danny O'Connor	

**Aurora Groundwater Site
Aurora, Nebraska**



TETRA TECH PROJECT NO. X9025.14.0035.000 DIRECTION: --	DESCRIPTION	This photograph shows carbon and sediment filters changed following change-out at 1605 East 12 th Road.	3
	CLIENT	Environmental Protection Agency - Region 7	DATE 3/18/14
	PHOTOGRAPHER	Danny O'Connor	



TETRA TECH PROJECT NO. X9025.14.0035.000 DIRECTION: --	DESCRIPTION	This photograph shows filtration system at 1605 East 12 th Road.	4
	CLIENT	Environmental Protection Agency - Region 7	DATE 3/14/14
	PHOTOGRAPHER	Danny O'Connor	

APPENDIX D

CHAIN-OF-CUSTODY FORMS AND FIELD SHEETS

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

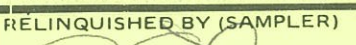
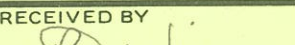
ACTIVITY LEADER(Print) Joe Davis	NAME OF SURVEY OR ACTIVITY Aurora Groundwater	DATE OF COLLECTION 18 / 3 / 14 DAY MONTH YEAR	SHEET 1 of 1
-------------------------------------	--	---	-----------------

CONTENTS OF SHIPMENT

SAMPLE NUMBER	TYPE OF CONTAINERS				VOA SET ^{2.0} 12 VIALS EA)	SAMPLED MEDIA					RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
	CUBITAINER	BOTTLE	BOTTLE	BOTTLE		water	soil	sediment	dust	other	
	NUMBERS OF CONTAINERS PER SAMPLE NUMBER										
6436-1					1	X					
-2					3						MS/MSD
-3FB					1						Trip Blank
-4					1						
-5					1						
-6					1	✓					
<p>None to Follow Danny O. 3-19-14</p>											

DESCRIPTION OF SHIPMENT	MODE OF SHIPMENT
_____ PIECE(S) CONSISTING OF _____ BOX(ES) _____ ICE CHEST(S); OTHER _____	_____ COMMERCIAL CARRIER: _____ _____ COURIER <input checked="" type="checkbox"/> SAMPLER CONVEYED _____ (SHIPPING DOCUMENT NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (SAMPLER) 	DATE 3/19/14	TIME 1000	RECEIVED BY 	REASON FOR CHANGE OF CUSTODY Rec'd at Lab
<input checked="" type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED			<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED			<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED			<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED	

Sample Collection Field Sheet

US EPA Region 7
Kansas City, KS

ASR Number: 6436 Sample Number: 1 QC Code: ___ Matrix: Water Tag ID: 6436-1-___

Project ID: JDB74200 Project Manager: Joe Davis
Project Desc: Aurora GW - Private well sampling
City: Aurora State: Nebraska
Program: Superfund
Site Name: Aurora Groundwater - Site Evaluation/Disposition Site ID: B742 Site OU: 00

Location Desc: KS-1

External Sample Number: _____

Expected Conc: (or Circle One: Low Medium High) Date Time(24 hr)

Latitude: 40.857504 Sample Collection: Start: 3/18/14 12:05
Longitude: -97.969983 End: 3/18/14 12:08

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Drinking Water by GC/MS

Sample Comments:

(N/A)

Sample collected from kitchen sink @
1704 East 12th Road
3 minute purge

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 6436 Sample Number: 2 QC Code: Matrix: Water Tag ID: 6436-2

Project ID: JDB74200 Project Manager: Joe Davis
Project Desc: Aurora GW - Private well sampling
City: Aurora State: Nebraska
Program: Superfund
Site Name: Aurora Groundwater - Site Evaluation/Disposition Site ID: B742 Site OU: 00

Location Desc: H-1

External Sample Number: _____

Expected Conc: (or Circle One: Low Medium High) Date Time(24 hr)
Latitude: 40.857374 Sample Collection: Start: 3/10/14 12:25
Longitude: -97.969972 End: / / :

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Drinking Water by GC/MS

Sample Comments:

(N/A)

Sample collected From outside hydrant @ 1704 East 12th Road
30 second purge

Sample Collected By: TT

Sample Collection Field Sheet

US EPA Region 7

Kansas City, KS

ASR Number: 6436 Sample Number: 3 QC Code: FB Matrix: Water Tag ID: 6436-3-FB

Project ID: JDB74200 Project Manager: Joe Davis
Project Desc: Aurora GW - Private well sampling
City: Aurora State: Nebraska
Program: Superfund
Site Name: Aurora Groundwater - Site Evaluation/Disposition Site ID: B742 Site OU: 00

Location Desc: DW VOA Trip Blank sample

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) Date: ¹³3/18/14 Time(24 hr): 0815
Latitude: _____ Sample Collection: Start: ~~13:30~~
Longitude: _____ End: ____/____/____ ____:____

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Drinking Water by GC/MS

Sample Comments:

(N/A) Trip Blank

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 6436 Sample Number: 4 QC Code: Matrix: Water Tag ID: 6436-4

Project ID: JDB74200 Project Manager: Joe Davis
Project Desc: Aurora GW - Private well sampling
City: Aurora State: Nebraska
Program: Superfund
Site Name: Aurora Groundwater - Site Evaluation/Disposition Site ID: B742 Site OU: 00

Location Desc: KS - 2

External Sample Number: _____

Expected Conc: (or Circle One: Low Medium High) Date Time(24 hr)

Latitude: 40.858182

Sample Collection: Start: 3/18/14 12:45

Longitude: -97.987901

End: 3/18/14 12:49

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Drinking Water by GC/MS

Sample Comments:

(N/A) Sample collected from kitchen sink after 4 minute purged @
1605 East 12th Road

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 6436 Sample Number: 5 QC Code: Matrix: Water Tag ID: 6436- 5

Project ID: JDB74200 Project Manager: Joe Davis
Project Desc: Aurora GW - Private well sampling
City: Aurora State: Nebraska
Program: Superfund
Site Name: Aurora Groundwater - Site Evaluation/Disposition Site ID: B742 Site OU: 00

Location Desc: KS - 3

External Sample Number: _____

Expected Conc:	(or Circle One: Low Medium High)	Date	Time(24 hr)
Latitude: <u>40.858182</u>		Sample Collection: Start: <u>3/18/14</u>	<u>13:07</u>
Longitude: <u>- 97.987901</u>		End: <u>3/18/14</u>	<u>13:14</u>

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Drinking Water by GC/MS

Sample Comments:

(N/A) Sample collected from kitchen sink after filter replacement @
1605 East 12th Road

7 minute purge

Sample Collected By: TT

Sample Collection Field Sheet

US EPA Region 7
Kansas City, KS

ASR Number: 6436 Sample Number: 6 QC Code: Matrix: Water Tag ID: 6436- 6

Project ID: JDB74200 Project Manager: Joe Davis
Project Desc: Aurora GW - Private well sampling
City: Aurora State: Nebraska
Program: Superfund
Site Name: Aurora Groundwater - Site Evaluation/Disposition Site ID: B742 Site OU: 00

Location Desc: H-2

External Sample Number: _____

Expected Conc: (or Circle One: Low Medium High) Date Time(24 hr)
Latitude: 40.858579 Sample Collection: Start: 3/18/14 13:15
Longitude: -92.987583 End: __/__/__ __:__

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Drinking Water by GC/MS

Sample Comments:

(N/A) Sample collected from outside hydrant @
1605 East 12th Road
30 second purge

Sample Collected By: TT

ACTIVITY LEADER(Print) <i>Joe Davis</i>		NAME OF SURVEY OR ACTIVITY <i>A100aGW-H. lat. u.s.</i>		DATE OF COLLECTION <i>21</i> <i>3</i> <i>15</i> DAY MONTH YEAR			SHEET <i>1</i> of <i>1</i>					
CONTENTS OF SHIPMENT												
SAMPLE NUMBER	TYPE OF CONTAINERS					SAMPLED MEDIA				RECEIVING LABORATORY REMARKS-OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)		
	CUBITAINER	BOTTLE	BOTTLE	<i>VOA SET</i> BOTTLE (2 VIALS EA)		water	soil	sediment	dust		other	
	NUMBERS OF CONTAINERS PER SAMPLE NUMBER											
<i>6823-1</i>					<i>1</i>	<i>X</i>						
<i>-2</i>					<i>1</i>							
<i>-3</i>					<i>1</i>							
<i>-4</i>					<i>1</i>							
<i>-5 FB</i>					<i>1</i>	<i>X</i>						
<i>ASR Completed</i>												
DESCRIPTION OF SHIPMENT						MODE OF SHIPMENT						
<i>1</i> PIECE(S) CONSISTING OF _____ BOX(ES)						____ COMMERCIAL CARRIER _____						
<i>X</i> ICE CHEST(S); OTHER _____						<i>X</i> SAMPLER CONVEYED _____ (SHIPPING DOCUMENT NUMBER) _____						
PERSONNEL CUSTODY RECORD												
RELINQUISHED BY (SAMPLER) <i>Jenna Mead</i>		DATE <i>5/21/15</i>		TIME <i>1200</i>		RECEIVED BY <i>RDW Jiggam</i>		REASON FOR CHANGE OF CUSTODY <i>Rec'd at lab</i>				
<input checked="" type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED						<input checked="" type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED						
RELINQUISHED BY <i>SPIC 5</i>		DATE		TIME		RECEIVED BY <i>SPIC 5</i>		REASON FOR CHANGE OF CUSTODY <i>SPIC 5</i>				
<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED						<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED						
RELINQUISHED BY		DATE		TIME		RECEIVED BY		REASON FOR CHANGE OF CUSTODY				
<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED						<input type="checkbox"/> SEALED <input type="checkbox"/> UNSEALED						

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 6823 Sample Number: 1 QC Code: ____ Matrix: Water Tag ID: 6823-1-____

Project ID: JDB74200 **Project Manager:** Joe Davis
Project Desc: Aurora GW - Private well sampling
City: Aurora **State:** Nebraska
Program: Superfund
Site Name: Aurora Groundwater - Site Evaluation/Disposition **Site ID:** B742 **Site OU:** 00

Location Desc: Kitchen Sink - 10 min

External Sample Number: K-10

Expected Conc: (or Circle One: Low Medium High) **Date** 5/21/15 **Time(24 hr)** 07:10
Latitude: ____ **Sample Collection: Start:** 5/21/15
Longitude: ____ **End:** 5/21/15

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Drinking Water by GC/MS

Sample Comments:

(N/A)

*Gail West
1605 E 12 Rd
Aurora NE 68818
402-694-1219*

Through Water Softener

Sample Collected By: TT

Sample Collection Field Sheet

US EPA Region 7
Kansas City, KS

ASR Number: 6823 Sample Number: 2 QC Code: ___ Matrix: Water Tag ID: 6823-2-___

Project ID: JDB74200 Project Manager: Joe Davis
Project Desc: Aurora GW - Private well sampling
City: Aurora State: Nebraska
Program: Superfund
Site Name: Aurora Groundwater - Site Evaluation/Disposition Site ID: B742 Site OU: 00

Location Desc: Kitchen sink 20 min

External Sample Number: K-20

Expected Conc: (or Circle One: Low Medium High) Date Time(24 hr)

Latitude: ___

Sample Collection: Start: 5/20/15

07:20

Longitude: ___

End: 1/1/

1:

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Drinking Water by GC/MS

Sample Comments:

(N/A)

*Gail West
1605 E 12 RD*

Sample Collected By: TT

Sample Collection Field Sheet

US EPA Region 7
Kansas City, KS

ASR Number: 6823 Sample Number: 3 QC Code: ___ Matrix: Water Tag ID: 6823-3-___

Project ID: JDB74200 Project Manager: Joe Davis
Project Desc: Aurora GW - Private well sampling
City: Aurora State: Nebraska
Program: Superfund
Site Name: Aurora Groundwater - Site Evaluation/Disposition Site ID: B742 Site OU: 00

Location Desc: Hydrant 10min

External Sample Number: H-10

Expected Conc: (or Circle One: Low Medium High) Date 5/21/15 Time(24 hr) 06:45
Latitude: ___ Sample Collection: Start: 5/21/15
Longitude: ___ End: 1/1/15

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
9/8 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Drinking Water by GC/MS

MS MSD
Sample Comments: (N/A) Start 0635 Gail West 1605E 12 RD @ well by barn NE of house

Sample Collected By: TT

Sample Collection Field Sheet

US EPA Region 7

Kansas City, KS

ASR Number: 6823 Sample Number: 4 QC Code: ___ Matrix: Water Tag ID: 6823-4-___

Project ID: JDB74200 Project Manager: Joe Davis
Project Desc: Aurora GW - Private well sampling
City: Aurora State: Nebraska
Program: Superfund
Site Name: Aurora Groundwater - Site Evaluation/Disposition Site ID: B742 Site OU: 00

Location Desc: Hydrant 20 min

External Sample Number: H-20

Expected Conc: (or Circle One: Low Medium High) Date Time(24 hr)

Latitude: ___

Sample Collection: Start: 5/20/15 06:55

Longitude: ___

End: ___ ___

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs In Drinking Water by GC/MS

Sample Comments:

(N/A)

*Gail West
1605 E 12 Rd*

Sample Collected By: TT

Sample Collection Field Sheet
US EPA Region 7
Kansas City, KS

ASR Number: 6823 **Sample Number:** 5 **QC Code:** FB **Matrix:** Water **Tag ID:** 6823-5-FB

Project ID: JDB74200 **Project Manager:** Joe Davis
Project Desc: Aurora GW - Private well sampling
City: Aurora **State:** Nebraska
Program: Superfund
Site Name: Aurora Groundwater - Site Evaluation/Disposition **Site ID:** B742 **Site OU:** 00

Location Desc: DW VOA Trip Blank sample

External Sample Number: _____

Expected Conc: _____ (or Circle One: Low Medium High) **Date** **Time(24 hr)**
Latitude: _____ **Sample Collection: Start:** 5/20/15 1200
Longitude: _____ **End:** 1/1/ :_

Laboratory Analyses:

Container	Preservative	Holding Time	Analysis
3 - 40mL VOA vial	4 Deg C, HCL to pH<2	14 Days	1 VOCs in Drinking Water by GC/MS

Sample Comments:

(N/A)

Lab prepared trip blank

Sample Collected By: TT

APPENDIX E

TRANSMITTAL OF SAMPLE ANALYTICAL RESULTS FOR ASRs 6436 AND 6823

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue
Kansas City, KS 66101

Date: 04/14/2014

Subject: Transmittal of Sample Analysis Results for ASR #: 6436

Project ID: JDB74200

Project Description: Aurora GW - Private well sampling

From: Michael F. Davis, Chief
Chemical Analysis and Response Branch, Environmental Services Division

To: Joe Davis
SUPR/ERNB

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the enclosed Customer Satisfaction Survey and Data Disposition/Sample Release memo for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Data Disposition/Sample Release memo.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

Enclosures

cc: Analytical Data File.

Project Manager: Joe Davis

Org: SUPR/ERNB

Phone: 913-551-7909

Project ID: JDB74200

Project Desc: Aurora GW - Private well sampling

Location: Aurora

State: Nebraska

Program: Superfund

Site Name: Aurora Groundwater - Site Evaluation/Disposition

Site ID: B742 Site OU: 00

Purpose: Site Characterization

GPRA PRC: 303DC6

Sampling private drinking water wells.

Explanation of Codes, Units and Qualifiers used on this report

Sample QC Codes: QC Codes identify the type of sample for quality control purpose.

Units: Specific units in which results are reported.

___ = Field Sample

ug/L = Micrograms per Liter

FB = Field Blank

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank) = Values have been reviewed and found acceptable for use.

U = The analyte was not detected at or above the reporting limit.

ASR Number: 6436

Sample Information Summary

04/14/2014

Project ID: JDB74200

Project Desc: Aurora GW - Private well sampling

Sample No	QC Code	Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1 - ___		Water	KS-1		03/18/2014	12:05	03/18/2014	12:08	03/19/2014
2 - ___		Water	H-1		03/18/2014	12:25			03/19/2014
3 - FB		Water	DW VOA Trip Blank sample		03/13/2014	08:15			03/19/2014
4 - ___		Water	KS-2		03/18/2014	12:45	03/18/2014	12:49	03/19/2014
5 - ___		Water	KS-3		03/18/2014	13:07	03/18/2014	13:14	03/19/2014
6 - ___		Water	H-2		03/18/2014	13:15			03/19/2014

ASR Number: 6436

RLAB Approved Analysis Comments

04/14/2014

Project ID: JDB74200

Project Desc Aurora GW - Private well sampling

Analysis	Comments About Results For This Analysis
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1 VOCs in Drinking Water by GC/MS

Lab: Region 7 ESAT Contract Lab (In-House)

Method: EPA Region 7 RLAB Method 3230.9E

Samples: 1-__ 2-__ 3-FB 4-__ 5-__ 6-__

Comments:

Analysis/ Analyte	Units	1-__	2-__	3-FB	4-__
1 VOCs in Drinking Water by GC/MS					
Acetone	ug/L	10 U	10 U	10 U	10 U
Benzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Bromobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Bromochloromethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Bromodichloromethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Bromomethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
n-Butylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
sec-Butylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
tert-Butylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Carbon Disulfide	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Carbon Tetrachloride	ug/L	0.50 U	98	0.50 U	14
Chlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Chloroethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Chloroform	ug/L	0.50 U	2.1	0.50 U	0.91
Chloromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
4-Chlorotoluene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dibromo-3-Chloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dibromoethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,3-Dichlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Dichlorodifluoromethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1-Dichloroethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichloroethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1-Dichloroethene	ug/L	0.50 U	0.50 U	0.50 U	1.6
cis-1,2-Dichloroethene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichloropropane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,3-Dichloropropane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
2,2-Dichloropropane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1-Dichloropropene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
cis-1,3-Dichloropropene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
trans-1,3-Dichloropropene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Ethyl Benzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Hexachlorobutadiene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
2-Hexanone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
Isopropylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
p-Isopropyltoluene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Methylene Chloride	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
4-Methyl-2-Pentanone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U

ASR Number: 6436
Project ID: JDB74200

RLAB Approved Sample Analysis Results
Project Desc: Aurora GW - Private well sampling

04/14/2014

Analysis/ Analyte	Units	1-__	2-__	3-FB	4-__
Naphthalene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
n-Propylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Styrene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Toluene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2,3-Trichlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1,1-Trichloroethane	ug/L	0.50 U	0.50 U	0.50 U	1.3
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Trichloroethene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Trichlorofluoromethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2,4-Trimethylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,3,5-Trimethylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Vinyl Chloride	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
m and/or p-Xylene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
o-Xylene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U

ASR Number: 6436
Project ID: JDB74200

RLAB Approved Sample Analysis Results
Project Desc: Aurora GW - Private well sampling

04/14/2014

Analysis/ Analyte	Units	5-__	6-__
1 VOCs in Drinking Water by GC/MS			
Acetone	ug/L	10 U	10 U
Benzene	ug/L	0.50 U	0.50 U
Bromobenzene	ug/L	0.50 U	0.50 U
Bromochloromethane	ug/L	0.50 U	0.50 U
Bromodichloromethane	ug/L	0.50 U	0.50 U
Bromoform	ug/L	0.50 U	0.50 U
Bromomethane	ug/L	1.0 U	1.0 U
2-Butanone	ug/L	5.0 U	5.0 U
n-Butylbenzene	ug/L	0.50 U	0.50 U
sec-Butylbenzene	ug/L	0.50 U	0.50 U
tert-Butylbenzene	ug/L	0.50 U	0.50 U
Carbon Disulfide	ug/L	0.50 U	0.50 U
Carbon Tetrachloride	ug/L	14	14
Chlorobenzene	ug/L	0.50 U	0.50 U
Chloroethane	ug/L	0.50 U	0.50 U
Chloroform	ug/L	0.90	0.96
Chloromethane	ug/L	1.0 U	1.0 U
2-Chlorotoluene	ug/L	0.50 U	0.50 U
4-Chlorotoluene	ug/L	0.50 U	0.50 U
1,2-Dibromo-3-Chloropropane	ug/L	1.0 U	1.0 U
Dibromochloromethane	ug/L	0.50 U	0.50 U
1,2-Dibromoethane	ug/L	0.50 U	0.50 U
Dibromomethane	ug/L	0.50 U	0.50 U
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U
1,3-Dichlorobenzene	ug/L	0.50 U	0.50 U
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U
Dichlorodifluoromethane	ug/L	0.50 U	0.50 U
1,1-Dichloroethane	ug/L	0.50 U	0.50 U
1,2-Dichloroethane	ug/L	0.50 U	0.50 U
1,1-Dichloroethene	ug/L	1.5	1.5
cis-1,2-Dichloroethene	ug/L	0.50 U	0.50 U
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U
1,2-Dichloropropane	ug/L	0.50 U	0.50 U
1,3-Dichloropropane	ug/L	1.0 U	1.0 U
2,2-Dichloropropane	ug/L	0.50 U	0.50 U
1,1-Dichloropropene	ug/L	0.50 U	0.50 U
cis-1,3-Dichloropropene	ug/L	0.50 U	0.50 U
trans-1,3-Dichloropropene	ug/L	0.50 U	0.50 U
Ethyl Benzene	ug/L	0.50 U	0.50 U
Hexachlorobutadiene	ug/L	0.50 U	0.50 U
2-Hexanone	ug/L	5.0 U	5.0 U
Isopropylbenzene	ug/L	0.50 U	0.50 U
p-Isopropyltoluene	ug/L	0.50 U	0.50 U
Methylene Chloride	ug/L	0.50 U	0.50 U
4-Methyl-2-Pentanone	ug/L	5.0 U	5.0 U

ASR Number: 6436
Project ID: JDB74200

RLAB Approved Sample Analysis Results
Project Desc: Aurora GW - Private well sampling

04/14/2014

Analysis/ Analyte	Units	5-__	6-__
Naphthalene	ug/L	1.0 U	1.0 U
n-Propylbenzene	ug/L	0.50 U	0.50 U
Styrene	ug/L	0.50 U	0.50 U
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U
Tetrachloroethene	ug/L	0.50 U	0.50
Toluene	ug/L	0.50 U	0.50 U
1,2,3-Trichlorobenzene	ug/L	0.50 U	0.50 U
1,2,4-Trichlorobenzene	ug/L	0.50 U	0.50 U
1,1,1-Trichloroethane	ug/L	1.3	1.3
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U
Trichloroethene	ug/L	0.50 U	0.50 U
Trichlorofluoromethane	ug/L	1.0 U	1.0 U
1,2,3-Trichloropropane	ug/L	0.50 U	0.50 U
1,2,4-Trimethylbenzene	ug/L	0.50 U	0.50 U
1,3,5-Trimethylbenzene	ug/L	0.50 U	0.50 U
Vinyl Chloride	ug/L	0.50 U	0.50 U
m and/or p-Xylene	ug/L	0.50 U	0.50 U
o-Xylene	ug/L	0.50 U	0.50 U

United States Environmental Protection Agency
Region VII
300 Minnesota Avenue
Kansas City, KS 66101

Date: __/__/____

Subject: Data Disposition/Sample Release for ASR #: 6436

Project ID: JDB74200

Project Description: Aurora GW - Private well sampling

From: Joe Davis
SUPR/ERNB

To: Alisha Claycamp
ENSV/CARB

I have received and reviewed the Transmittal of Sample Analysis Results for the above-referenced Analytical Services Request(ASR) and have indicated my findings below by checking one of the boxes for Data Disposition.

I understand all samples will be disposed upon receipt of this form, unless samples are requested to be held. If I do not return this form all samples will be disposed of on _____.

- ☐ "RELEASED" - Read-only to all Region 7 employees and contractors that have R7LIMS "Customer" account. All Samples may be disposed of upon receipt of this form if not requested to be held.
- ☐ "Project Manager Accessible" - Available on the LAN in R7LIMS for my use only. All Samples may be disposed of upon receipt of this form if not requested to be held.
- ☐ "Archived" - THIS DATA IS OF A SENSITIVE NATURE. Any future reports must be requested through the laboratory. All samples may be disposed of upon receipt of the form if not requested to be held.

-
- ☐ Hold Samples - I have determined that the samples need to be held until _____, after which time they will be disposed of in accordance with applicable regulations.
The reason for the hold is:

☐ Samples are associated with a legal proceeding.

☐ Question/Concern with data - possible reanalysis requested.

☐ Other: _____

United States Environmental Protection Agency
Region 7
300 Minnesota Avenue
Kansas City, KS 66101

Date: 06/17/2015

Subject: Transmittal of Sample Analysis Results for ASR #: 6823

Project ID: JDB74200

Project Description: Aurora GW - Private well sampling

From: Margaret E.W. St. Germain, Chief
Laboratory Technology & Analysis Branch, Environmental Sciences & Technology Division

To: Joe Davis
SUPR/ERNB

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the enclosed Customer Satisfaction Survey and Data Disposition/Sample Release memo for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Data Disposition/Sample Release memo.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

Enclosures

cc: Analytical Data File.

Project Manager: Joe Davis

Org: SUPR/ERNB

Phone: 913-551-7909

Project ID: JDB74200

Project Desc: Aurora GW - Private well sampling

Location: Aurora

State: Nebraska

Program: Superfund

Site Name: Aurora Groundwater - Site Evaluation/Disposition

Site ID: B742 Site OU: 00

Purpose: Site Characterization

GPRA PRC: 303DC6

Sampling private drinking water wells.

Explanation of Codes, Units and Qualifiers used on this report

Sample QC Codes: QC Codes identify the type of sample for quality control purpose.

Units: Specific units in which results are reported.

___ = Field Sample

ug/L = Micrograms per Liter

FB = Field Blank

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank) = Values have been reviewed and found acceptable for use.

U = The analyte was not detected at or above the reporting limit.

ASR Number: 6823

Sample Information Summary

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Project Desc: Aurora GW - Private well sampling

Sample No	QC Code	Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1 - ___		Water	K-10/Kitchen sink (10 minutes)	K-10	05/21/2015	07:10			05/21/2015
2 - ___		Water	K-20/Kitchen sink (20 minutes)	K-20	05/21/2015	07:20			05/21/2015
3 - ___		Water	H-10/Hydrant (10 minutes)	H-10	05/21/2015	06:45			05/21/2015
4 - ___		Water	H-20/Hydrant (20 minutes)	H-20	05/21/2015	06:55			05/21/2015
5 - FB		Water	DW VOA Trip Blank sample		05/20/2015	12:00			05/21/2015

ASR Number: 6823

RLAB Approved Analysis Comments

06/17/2015

Project ID: JDB74200

Project Desc Aurora GW - Private well sampling

Analysis	Comments About Results For This Analysis
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1 VOCs in Drinking Water by GC/MS

Lab: Contract Lab Program (Out-Source)

Method: CLP Statement of Work

Samples: 1-__ 2-__ 3-__ 4-__ 5-FB

Comments:

ASR Number: 6823
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RLAB Approved Sample Analysis Results
Project Desc: Aurora GW - Private well sampling

06/17/2015

Analysis/ Analyte	Units	1-__	2-__	3-__	4-__
1 VOCs in Drinking Water by GC/MS					
Acetone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Bromobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Bromochloromethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Bromodichloromethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Bromomethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
2-Butanone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
n-Butylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
sec-Butylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
tert-Butylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Carbon Disulfide	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Carbon Tetrachloride	ug/L	0.50 U	0.50 U	8.3	7.2
Chlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Chloroethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Chloroform	ug/L	0.50 U	0.50 U	1.1	1.0
Chloromethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
2-Chlorotoluene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
4-Chlorotoluene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dibromo-3-Chloropropane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Dibromochloromethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dibromoethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,3-Dichlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,4-Dichlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Dichlorodifluoromethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1-Dichloroethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichloroethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1-Dichloroethene	ug/L	0.50 U	0.50 U	1.0	1.1
cis-1,2-Dichloroethene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichloropropane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,3-Dichloropropane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
2,2-Dichloropropane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1-Dichloropropene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
cis-1,3-Dichloropropene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
trans-1,3-Dichloropropene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Ethyl Benzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Hexachlorobutadiene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
2-Hexanone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U
Isopropylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
p-Isopropyltoluene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Methylene Chloride	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
4-Methyl-2-Pentanone	ug/L	5.0 U	5.0 U	5.0 U	5.0 U

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RLAB Approved Sample Analysis Results
Project Desc: Aurora GW - Private well sampling

06/17/2015

Analysis/ Analyte	Units	1-__	2-__	3-__	4-__
Naphthalene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
n-Propylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Styrene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1,1,2-Tetrachloroethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Tetrachloroethene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Toluene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2,3-Trichlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,1,1-Trichloroethane	ug/L	0.50 U	0.50 U	0.74	0.50 U
1,1,2-Trichloroethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Trichloroethene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Trichlorofluoromethane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2,3-Trichloropropane	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,2,4-Trimethylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
1,3,5-Trimethylbenzene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
Vinyl Chloride	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
m and/or p-Xylene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U
o-Xylene	ug/L	0.50 U	0.50 U	0.50 U	0.50 U

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RLAB Approved Sample Analysis Results
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06/17/2015

Analysis/ Analyte	Units	5-FB
1 VOCs in Drinking Water by GC/MS		
Acetone	ug/L	5.0 U
Benzene	ug/L	0.50 U
Bromobenzene	ug/L	0.50 U
Bromochloromethane	ug/L	0.50 U
Bromodichloromethane	ug/L	0.50 U
Bromoform	ug/L	0.50 U
Bromomethane	ug/L	0.50 U
2-Butanone	ug/L	5.0 U
n-Butylbenzene	ug/L	0.50 U
sec-Butylbenzene	ug/L	0.50 U
tert-Butylbenzene	ug/L	0.50 U
Carbon Disulfide	ug/L	0.50 U
Carbon Tetrachloride	ug/L	0.50 U
Chlorobenzene	ug/L	0.50 U
Chloroethane	ug/L	0.50 U
Chloroform	ug/L	0.50 U
Chloromethane	ug/L	0.50 U
2-Chlorotoluene	ug/L	0.50 U
4-Chlorotoluene	ug/L	0.50 U
1,2-Dibromo-3-Chloropropane	ug/L	0.50 U
Dibromochloromethane	ug/L	0.50 U
1,2-Dibromoethane	ug/L	0.50 U
Dibromomethane	ug/L	0.50 U
1,2-Dichlorobenzene	ug/L	0.50 U
1,3-Dichlorobenzene	ug/L	0.50 U
1,4-Dichlorobenzene	ug/L	0.50 U
Dichlorodifluoromethane	ug/L	0.50 U
1,1-Dichloroethane	ug/L	0.50 U
1,2-Dichloroethane	ug/L	0.50 U
1,1-Dichloroethene	ug/L	0.50 U
cis-1,2-Dichloroethene	ug/L	0.50 U
trans-1,2-Dichloroethene	ug/L	0.50 U
1,2-Dichloropropane	ug/L	0.50 U
1,3-Dichloropropane	ug/L	0.50 U
2,2-Dichloropropane	ug/L	0.50 U
1,1-Dichloropropene	ug/L	0.50 U
cis-1,3-Dichloropropene	ug/L	0.50 U
trans-1,3-Dichloropropene	ug/L	0.50 U
Ethyl Benzene	ug/L	0.50 U
Hexachlorobutadiene	ug/L	0.50 U
2-Hexanone	ug/L	5.0 U
Isopropylbenzene	ug/L	0.50 U
p-Isopropyltoluene	ug/L	0.50 U
Methylene Chloride	ug/L	0.50 U
4-Methyl-2-Pentanone	ug/L	5.0 U

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Analysis/ Analyte	Units	5-FB
Naphthalene	ug/L	0.50 U
n-Propylbenzene	ug/L	0.50 U
Styrene	ug/L	0.50 U
1,1,1,2-Tetrachloroethane	ug/L	0.50 U
1,1,2,2-Tetrachloroethane	ug/L	0.50 U
Tetrachloroethene	ug/L	0.50 U
Toluene	ug/L	0.50 U
1,2,3-Trichlorobenzene	ug/L	0.50 U
1,2,4-Trichlorobenzene	ug/L	0.50 U
1,1,1-Trichloroethane	ug/L	0.50 U
1,1,2-Trichloroethane	ug/L	0.50 U
Trichloroethene	ug/L	0.50 U
Trichlorofluoromethane	ug/L	0.50 U
1,2,3-Trichloropropane	ug/L	0.50 U
1,2,4-Trimethylbenzene	ug/L	0.50 U
1,3,5-Trimethylbenzene	ug/L	0.50 U
Vinyl Chloride	ug/L	0.50 U
m and/or p-Xylene	ug/L	0.50 U
o-Xylene	ug/L	0.50 U

United States Environmental Protection Agency
Region VII
300 Minnesota Avenue
Kansas City, KS 66101

Date: __/__/____

Subject: Data Disposition/Sample Release for ASR #: 6823

Project ID: JDB74200

Project Description: Aurora GW - Private well sampling

From: Joe Davis
SUPR/ERNB

To: Alisha Claycamp
ENSV/CARB

I have received and reviewed the Transmittal of Sample Analysis Results for the above-referenced Analytical Services Request(ASR) and have indicated my findings below by checking one of the boxes for Data Disposition.

I understand all samples will be disposed upon receipt of this form, unless samples are requested to be held. If I do not return this form all samples will be disposed of on _____.

- ☐ "RELEASED" - Read-only to all Region 7 employees and contractors that have R7LIMS "Customer" account. All Samples may be disposed of upon receipt of this form if not requested to be held.
- ☐ "Project Manager Accessible" - Available on the LAN in R7LIMS for my use only. All Samples may be disposed of upon receipt of this form if not requested to be held.
- ☐ "Archived" - THIS DATA IS OF A SENSITIVE NATURE. Any future reports must be requested through the laboratory. All samples may be disposed of upon receipt of the form if not requested to be held.

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- ☐ Hold Samples - I have determined that the samples need to be held until _____, after which time they will be disposed of in accordance with applicable regulations.
The reason for the hold is:

☐ Samples are associated with a legal proceeding.

☐ Question/Concern with data - possible reanalysis requested.

☐ Other: _____