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The Complete Solution

CON 12-15
Doc #28832

January 6, 2014

Fred McElwee
Fairfield Community Schools
605-607 E. Broadway
Fairfield, IA 52556

Subject: Submittal of the 2013 Site Monitoring Report (SMR) for Fairfield Community Schools, 405 South 20th Street, Fairfield, Iowa Spill #032008-ahb-1021

Dear Mr. McElwee:

Please find the Site Monitoring Report (SMR) for the above referenced location. The SMR presents the results of sampling during the past year, and is required until exit conditions are met for a no action required risk rating.

Reclassification is not requested at this time. Groundwater concentrations remain high at BH2/MW, and are still above established SSTLs. The PWL receptor is still classified as high risk for benzene. Additional corrective action may be necessary in the future to met DNR target levels. Free product was not observed during the 2013 sampling event. Annual groundwater monitoring will continue until conditions have been met for a no action required risk rating. Again, reclassification is not requested at this time. This site will remain high risk.

One (1) copy of the reports is for your records. Please sign and date the additional report copy and forward to the address listed below.

Mr. Matt Culp
Contaminated Sites
Iowa Department of Natural Resources
502 E. 9th Street
Des Moines, Iowa 50319

Seneca Companies thanks you for the opportunity to serve you in this matter. If you have any questions regarding this report, please call me at 563-332-8000.

Sincerely,
Seneca Environmental Services

A handwritten signature in black ink, appearing to read "Todd Feiderman", written over a horizontal line.

Todd Feiderman
Project Manager, CGP# 2044

cc: JF# 6341403

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SITE IDENTIFICATION

LUST No.

Spill No. 032008-AHB-1021

UST Registration No.

Site Name: Fairfield Community Schools

Site Address: 405 South 20th Street

City: Fairfield

RESPONSIBLE PARTY IDENTIFICATION

Name: Fairfield Schools c/o Fred McElwee

Phone #: 641-472-5252

Street: 605-607 E Broadway

City: Fairfield

State: IA

Zip Code: 52556

Type of Monitoring: Low Risk High Risk: Interim Exempt Granular BedrockIs site reclassification recommended? Yes No If yes, what classification? NAR low risk high risk

STATEMENT OF CERTIFICATION

I, Todd Felderman, Groundwater Professional Certification No. 2044, am familiar with all applicable requirements of Iowa Code § 455B.474 and all rules and procedures adopted thereunder including, but not limited to, Chapter 567-135 and the Department of Natural Resources' Site Monitoring Report guidance. Based on my knowledge of those documents and information I have prepared and reviewed regarding this site, UST Registration No. _____, LUST No. Spill No. 032008-AHB-1021 that this document is complete and accurate as provided in 567 IAC 135.9(11)"c" and meets the applicable requirements of the Site Monitoring Report.

Print: Name/Address/Phone # of Certified Groundwater Professional

Todd FeldermanSignature: Todd FeldermanSeneca Environmental ServicesPhone #: 563-332-80007241 Gaines St CtDavenport, IA 52806Date: 01/06/2014

I certify that I have reviewed this document, appendices and attachments for submittal to the Iowa Department of Natural Resources.

Fairfield Schools c/o Fred McElwee

Print: Name of Responsible Party

Signature - Responsible Party

Official IDNR Use Only

Date Received:

Comment Letter Date:

Reviewer:

Approved:

Y / N

Site Monitoring Report Checklist

This checklist is for Site Monitoring Reports prepared using Tier 2 software-version 2.51 and later, and applies to the following types of monitoring: **Low risk or High risk: Interim at non-bedrock and exempt granular bedrock sites.** Indicate with "NA" those sections of the report which are not included because they do not apply to site-specific conditions.

REPORT BODY:	Page Number
<input checked="" type="checkbox"/> Cover sheet _____	1
<input checked="" type="checkbox"/> SMR checklist page _____	2
<input checked="" type="checkbox"/> Receptor summary tables _____	3,4,5
<input checked="" type="checkbox"/> Potential receptor summary _____	6
<input checked="" type="checkbox"/> Receptor status change _____	7
<input checked="" type="checkbox"/> Site reclassification _____	7
<input checked="" type="checkbox"/> Groundwater analytical data _____	8
<input type="checkbox"/> Soil analytical data _____	9
<input type="checkbox"/> Soil gas analytical data _____	10
<input checked="" type="checkbox"/> Soil SSTL tables _____	11
<input checked="" type="checkbox"/> Groundwater / Soil Leaching monitoring plan summary _____	12
<input checked="" type="checkbox"/> Soil gas monitoring plan summary _____	13
<input type="checkbox"/> Soil Gas Samples at Tier 2 Soil Sources _____	15
<input type="checkbox"/> Soil Gas Samples at Tier 2 Groundwater Sources _____	16
<input type="checkbox"/> Corrections to Tier 2 Deficiencies Included _____	17

APPENDICES:

- 1. Evaluation of analytical data
 - 2. Site plan map
 - 3. Site vicinity map
 - 4. Soil summary corrective action map
 - 5. Soil contamination / soil gas map(s)
 - 6. Groundwater summary corrective action map
 - 7. Groundwater monitoring results map
 - 8. Groundwater contamination map (from SMR software)
 - 9. Groundwater flow direction map
 - 10. Analytical data sheets
 - 11. Boring Logs / monitoring well construction diagrams
 - 12. Documentation
 - 13. Best management practices (Initial SMR only)
- Computer Disk

SMR, GROUNDWATER SOURCE, RECEPTOR SUMMARY TABLE

				B	T	E	X	D	W			
SMR, SOIL GAS AT GW SOURCE, USER							--		--			
SOIL GAS AT GW SOURCE, DATA				NS	NS	NS	--	NS	--			
Type	Receptor	Tier 2 Risk	Last Risk	T2(*) or Computed Risk						Corr. Action Taken?	Corrective Action(s) Completed	Current Risk
				Group I			TEH					
				B	T	E	X	D	W			
PWL	main, H2O MAIN	H	H	H	N*	N*	N*	N*	N*	N		H
PGWS	No-IC	L	L	L	L	L	N*	N*	N*	N		L
PGWS	IC	L	L	L	L	L	N*	N*	N*	N		L
PCS	No-IC	L	L	L	N*	N*	N/A	N*	N/A	N		L

N: no action required, L: low risk, H: high risk, N/A: not applicable, NSC: No source concentration, N(SG): Passed soil gas at SMR.

PE: Tier 2 preliminary pathway evaluation result. *: Risk shown is Tier 2 risk classification. Not sufficient data for risk reclassification or risk reclassification criteria for N, L or H have not been met.

Corrective Actions:		
1. Plugged drinking water wells	5. Notified sanitary sewer public authority	9. Established institutional controls
2. Plugged non-drinking water wells	6. Notified utility company-plastic water line	10. Conducted soil excavation
3. Notified IDNR Water Supply Section	7. Relocated plastic water lines	11. Cleared with soil gas
4. Notified designated county authority	8. Replaced plastic water lines	12. Zoning
		13. For actual PWL, GW > 3 feet

SMR, SOIL VAPOR, SOIL TO PLASTIC WATER LINE, RECEPTOR SUMMARY TABLE

				B	T	E	D				
SMR, SOIL GAS AT SOIL SOURCE, USER											
SOIL GAS AT SOIL SOURCE, DATA				NS	NS	NS	NS				
SUBMERGED SOIL SOURCE				???	???	???	???				
Type	Receptor	Tier 2 Risk	Last Risk	Tier 2 Risk				TEH D	Corr. Action Taken?	Corrective Action(s) Completed	Current Risk
				Group 1							
				B	T	E					
PCSNR	Source, SV	L	L	L	N	N	N	N		L	
PSSNR	East, PSS EAST		N	N	N	N/A	N	N		N	

Tier 2 risk classification shown for chemicals.

N: no action required. L: low risk. H: high risk. N/A: chemical is not applicable. NSC: No source concentration. N(SG): Passed soil gas at SMR.

PE: Tier 2 preliminary evaluation result.

Corrective Actions:		
1. Plugged drinking water wells	5. Notified sanitary sewer public authority	9. Established institutional controls
2. Plugged non-drinking water wells	6. Notified utility company-plastic water line	10. Conducted soil excavation
3. Notified IDNR Water Supply Section	7. Relocated plastic water lines	11. Cleared with soil gas
4. Notified designated county authority	8. Replaced plastic water lines	12. Zoning
		13. For actual PWL, GW > 3 feet

Potential Receptor Summary

SMR, V-2.51, Spill No. 032008-AHB-1021

Surveys for new, removed, and replaced receptors must be conducted within the larger area of either 1) the receptor identification plume for the appropriate receptor type; or 2) the receptor-specific distance listed in brackets below.

Receptor questions	Yes/No	Contact Name/Company Name/ Complete Address	Contact Phone #	Date
New drinking water well(s)? [1,000']	No	1) Iowa DNR Online Welll Search		01/03/2014
		''		
		2) Dan Miller Jefferson County Sanitarian 220 West Jefferson Fairfield, IA, 52556	641 472-2561	8/16/2012
New non-drinking water well(s)? [1,000']	No	3) Visual survey by Rich Vogel Seneca Environmental 7241 Gaines St Ct Davenport, Iowa, 52806	563 332-8000	09/05/2013
		1) Iowa DNR Online Welll Search		01/03/2014
		''		
Plugged drinking water well(s)? [1,000']	No	2) Dan Miller Jefferson County Sanitarian 220 West Jefferson Fairfield, IA, 52556	641 472-2561	8/16/2012
		3) Visual survey by Rich Vogel Seneca Environmental 7241 Gaines St Ct Davenport, Iowa, 52806	563 332-8000	09/05/2013
		1) Iowa DNR Online Welll Search		01/03/2014
Plugged non-drinking water well(s)? [1,000']	No	''		
		2) Dan Miller Jefferson County Sanitarian 220 West Jefferson Fairfield, IA, 52556	641 472-2561	8/16/2012
		3) Visual survey by Rich Vogel Seneca Environmental 7241 Gaines St Ct Davenport, Iowa, 52806	563 332-8000	09/05/2013

Potential Receptor Summary**SMR,V-2.51, Spill No. 032008-AHB-1021**

Surveys for new, removed, and replaced receptors must be conducted within the larger area of either 1) the receptor identification plume for the appropriate receptor type; or 2) the receptor-specific distance listed in brackets below.

Receptor questions	Yes/No	Contact Name/Company Name/ Complete Address	Contact Phone #	Date
New plastic water lines(s)? [200']	No	Carl Chandler Fairfield Water Superintendent PO Box 850 Fairfield, IA, 52556	641 472-2358	01/03/2014
Replaced or relocated plastic water line(s)? [200']	No	Carl Chandler Fairfield Water Superintendent PO Box 850 Fairfield, IA, 52556	641 472-2358	01/03/2014
New sanitary sewer(s)? [200']	No	Shawn Worley Fairfield Public Works 112 South Main Street Fairfield, IA, 52556	641 472-4750	01/03/2014
Replaced or relocated sanitary sewer(s)? [200']	No	Shawn Worley Fairfield Public Works 112 South Main Street Fairfield, IA, 52556	641 472-4750	01/03/2014
New building(s) with basements? [200']	No	1) Visual survey by Rich Vogel Seneca Environmental 7241 Gaines St Ct Davenport, Iowa, 52803 2) Rebecca Loper City Hall 112 South Main Street Fairfield, IA, 52556	563 332-8000 641 472-4181	09/05/2013 01/03/2014
Building(s) with basement(s) removed? [200']	No	1) Visual survey by Rich Vogel Seneca Environmental 7241 Gaines St Ct Davenport, Iowa, 52803 2) Rebecca Loper City Hall 112 South Main Street Fairfield, IA, 52556	563 332-8000 641 472-4181	09/05/2013 01/03/2014
Zoning changes? [200']	No	Rebecca Loper City Hall 112 South Main Street Fairfield, IA, 52556	641 472-4181	01/03/2014

Receptors: Status change**SMR,V-2.51, Spill No. 032008-AHB-1021**

List and describe all receptors whose status has changed since the previous receptor evaluation (e.g. Private Well A was plugged/water supply notification form was sent to the proper authorities; new houses were built; etc.).

Well #: 2101962 owned by a Duane Cline was listed on the Iowa DNR online well search. The status of the well is listed as plugged.

Ms. Rebecca Loper with the City of Fairfield was uncertain about any new basement changes to the receptor survey. When asked she stated that she couldn't tell us (Seneca Environmental) with certainty if there were new basements or changes to basements within the area because the City of Fairfield does not require a permit for below ground construction.

The Jefferson County Assessors web page was utilized as a tool in checking local properties for basements and basement changes. The web search yielded no changes to basements nor were there any basements within the 200' radius.

A visual survey was also conducted by Mr. Rich Vogel, a Field Technician for Seneca Environmental, on 09/05/2013 which also returned no basements or changes to basements within the 200' radius.

Mr. Carl Chandler, Fairfield Water Superintendent, stated that the City of Fairfield requires service lines running from the water main to the meter to be copper.

Site Reclassification**SMR,V-2.51, Spill No. 032008-AHB-1021**

Should the site be reclassified? No Yes If yes, the site should be reclassified as:

High Risk Low Risk No Action Required

If reclassification is recommended, provide the justification for reclassification and provide all necessary documentation in Appendix 12.

Reclassification is not requested at this time. Benzene groundwater concentrations have decreased at BH2/MW. The PWL receptor is still classified as high risk for benzene. Additional corrective action may be necessary in the future. Free product was not identified in BH2/MW during the 2013 sampling event. Annual groundwater monitoring will continue until conditions have been met for a no action required risk rating. This site will remain high risk.

SMR Groundwater Analytical Data (ug/L), V-2.51, Spill No. 032008-AHB-1021

Boring / Well #	Date Sampled	Elevations (ASL)				Group 1				Group 2		FP Type	FP Default?
		Ground	TOC	TOS	SWL	B	T	E	X	TEH-D	TEH-WO		
MW1	08/07/2008	100.47	100.00	97.47	99.41	537.	2,270.	223.	937.	4,850.	<300.	N	N
BH2/MW	08/07/2008	98.33	97.93	95.33	89.16	5,370.	6,600.	523.	2,280.	586.	<300.	N	N
BH2/MW	07/16/2009	98.33	97.93	95.33	90.21	<20.	40.3	303.	1,120.	N	N	G	N
BH2/MW	08/19/2010	98.33	97.93	95.33	93.79	22,100.	29,200.	1,480.	6,540.	N	N	N	N
BH2/MW	07/12/2011	98.33	97.93	95.33	90.24	23,800.	39,100.	1,740.	7,740.	N	N	N	N
BH2/MW	07/16/2012	98.33	97.93	95.33	87.46	23,600.	20,600.	1,780.	8,370.	N	N	N	N
BH2/MW	09/05/2013	98.33	97.93	95.33	87.73	12,700.	40,100.	7,760.	41,800.	N	N	N	N
MW3	08/07/2008	92.65	92.39	89.65	78.69	3.12	12.6	<2.	4.98	<300.	<300.	N	N
MW3	07/16/2009	92.65	92.39	89.65	87.44	<2.	<2.	<2.	<3.	N	N	N	N
MW3	08/19/2010	92.65	92.39	89.65	89.31	<2.	<2.	<2.	<3.	N	N	N	N
MW3	07/12/2011	92.65	92.39	89.65	88.14	<2.	<2.	<2.	<3.	N	N	N	N
MW3	07/16/2012	92.65	92.39	89.65	85.84	<1.	<1.	<1.	<3.	N	N	N	N
MW3	09/05/2013	92.65	92.39	89.65	86.22	<0.5	<1.	<1.	<3.	N	N	N	N
MW4	08/07/2008	94.19	93.86	91.19	84.11	4.65	18.2	<2.	6.18	<300.	<300.	N	N
MW4	07/16/2009	94.19	93.86	91.19	88.40	<2.	3.81	<2.	4.72	N	N	N	N
MW4	08/19/2010	94.19	93.86	91.19	89.75	<2.	<2.	<2.	<3.	N	N	N	N
MW4	07/12/2011	94.19	93.86	91.19	88.46	<2.	<2.	<2.	<3.	N	N	N	N
MW4	07/16/2012	94.19	93.86	91.19	86.25	<1.	2.25	<1.	3.54	N	N	N	N
MW4	09/05/2013	94.19	93.86	91.19	86.45	<0.5	<1.	<1.	<3.	N	N	N	N
MW7	10/30/2008	101.47	100.86	96.47	82.45	<2.	<2.	<2.	<3.	<300.	541.	N	N
MW7	09/05/2013	101.47	100.86	96.47	88.29	<0.5	<1.	<1.	<3.	N	N	N	N

Soil Vapor, Soil to Plastic Water Line, Tier 2 Defaults**V-2.51, Spill No. 032008-AHB-1021**

Type	Receptor	Soil Vapor, Soil to PWL Tier 2 Defaults (mg/kg)			
		Benzene	Toluene	Ethylbenzene	TEH-Diesel
PCSNR	Source, SV	2.19	75.	124.	74,000.
PSSNR	East, PSS EAST	4.38	150.	N/A	148,000.

**SMR, GROUNDWATER / SOIL LEACHING MONITORING PLAN SUMMARY
and NFA GW/SL MONITORING RESULTS**

MW	Most Recent Sample	SSTL	SSTL Met	Steady Decline/ 3 Year	Monitor Type(T2)	Receptor			Chem. Risk	Recept. Curr. Risk	Min. Freq.
						Type	Label	Description			
GW/SL MONITORING PLAN											
MW1	537										
		290	No	N/A	Int.E/Int.E	PGWS	No-IC		L	L	Once
		21,514	Yes	N/A	Int.E/Int.E	PGWS	IC		L	L	Once
BH2/MW	12,700**										
		3,802	No	Yes	S/	PWL	main	H20MAIN	H	H	Annual
		290	No	Yes	S	PGWS	No-IC		L	L	Annual
		477	No	Yes	S	PGWS	IC		L	L	Annual
		4,780	No	Yes	S	PCS	No-IC		L	L	Annual
MW3	<0.500										
		290	Yes	Yes	T-ML/T-ML	PGWS	No-IC		L	L	Annual
		372	Yes	Yes	T-ML/T-ML	PGWS	IC		L	L	Annual
		4,780	Yes	Yes	T-ML/T-ML	PCS	No-IC		L	L	Annual
MW4	<0.500										
		3,799	Yes	Yes	TG/	PWL	main	H20MAIN	H	H	Annual
		290	Yes	Yes	TG/TG	PGWS	No-IC		L	L	Annual
		4,780	Yes	Yes	TG/TG	PCS	No-IC		L	L	Annual
NFA GW/SL MONITORING RESULTS											

**SMR, GROUNDWATER / SOIL LEACHING MONITORING PLAN SUMMARY
and NFA GW/SL MONITORING RESULTS**

MW	Most Recent Sample	SSTL	SSTL Met	Steady Decline/ 3 Year	Monitor Type(T2)	Receptor			Chem. Risk	Recept. Curr. Risk	Min. Freq.
						Type	Label	Description			
GW/SL MONITORING PLAN											
BH2/MW	40,100**										
		7,300	No	No	S	PGWS	No-IC		L	L	Annual
		12,033	No	No	S	PGWS	IC		L	L	Annual
NFA GW/SL MONITORING RESULTS											

**SMR, GROUNDWATER / SOIL LEACHING MONITORING PLAN SUMMARY
and NFA GW/SL MONITORING RESULTS**

MW	Most Recent Sample	SSTL	SSTL Met	Steady Decline/ 3 Year	Monitor Type(T2)	Receptor			Chem. Risk	Recept. Curr. Risk	Min. Freq.
						Type	Label	Description			
GW/SL MONITORING PLAN											
BH2/MW	7,760**										
		3,700	No	No	S	PGWS	No-IC		L	L	Annual
		6,071	No	No	S	PGWS	IC		L	L	Annual
NFA GW/SL MONITORING RESULTS											

Soil Gas Monitoring Plan Comments/Justification	SMR,V-2.51, Spill No. 032008-AHB-1021
Soil gas sampling at BH3 at a depth of 5' is recommended to clear the low risk Soil Vapor pathway.	

Soil Gas Monitoring Plan Summary Table		SMR,V-2.51, Spill No. 032008-AHB-1021
Location	Receptor	Frequency
SG1	Soil Source	Annual

Appendix 1
Evaluation of analytical data

Evaluation of Analytical Data

Groundwater sampling was conducted on 09/05/2013. Groundwater samples were analyzed by Test America, Inc., located in Cedar Falls, Iowa, for benzene, toluene, ethylbenzene, and total xylenes (BTEX).

- BH2/MW: Results indicate a benzene concentration of 12,700 ppb which is a decrease and a toluene concentration of 40,100 ppb which has increased. SSTLs and steady and declining criteria have not been met. This is the source well for benzene and toluene and will continue to be monitored annually. During the 2013 sampling event Free Product was not observed in this well.
- MW3: Results indicate a benzene concentration of <0.5 ppb. SSTLs and steady and declining criteria have been met for the benzene chemical. This is a T-ML well for benzene and will continue to be sampled annually.
- MW4: Results indicate a benzene concentration of <0.5 ppb. SSTLs and steady and declining criteria have been met for the benzene chemical. This is a TG well for benzene and will continue to be monitored annually.
- MW7: This well was last sampled in 2008 and benzene concentrations were less than laboratory detection limits. In 2013, MW7 was sampled to determine if the contaminant plume was migrating. MW7 BTEX results were less than target levels and laboratory detection limits. At this point it doesn't seem the plume is migrating.

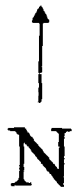
Reclassification is not requested at this time. The PWL receptor is still classified as high risk for benzene. SSTLs have not been met for BH2/MW. Free product was not observed in BH2/MW during the 2013 monitoring event. Annual groundwater monitoring will continue until conditions have been met for a no further action risk rating.

Appendix 2
Site plan map

Appendix 3
Site vicinity map

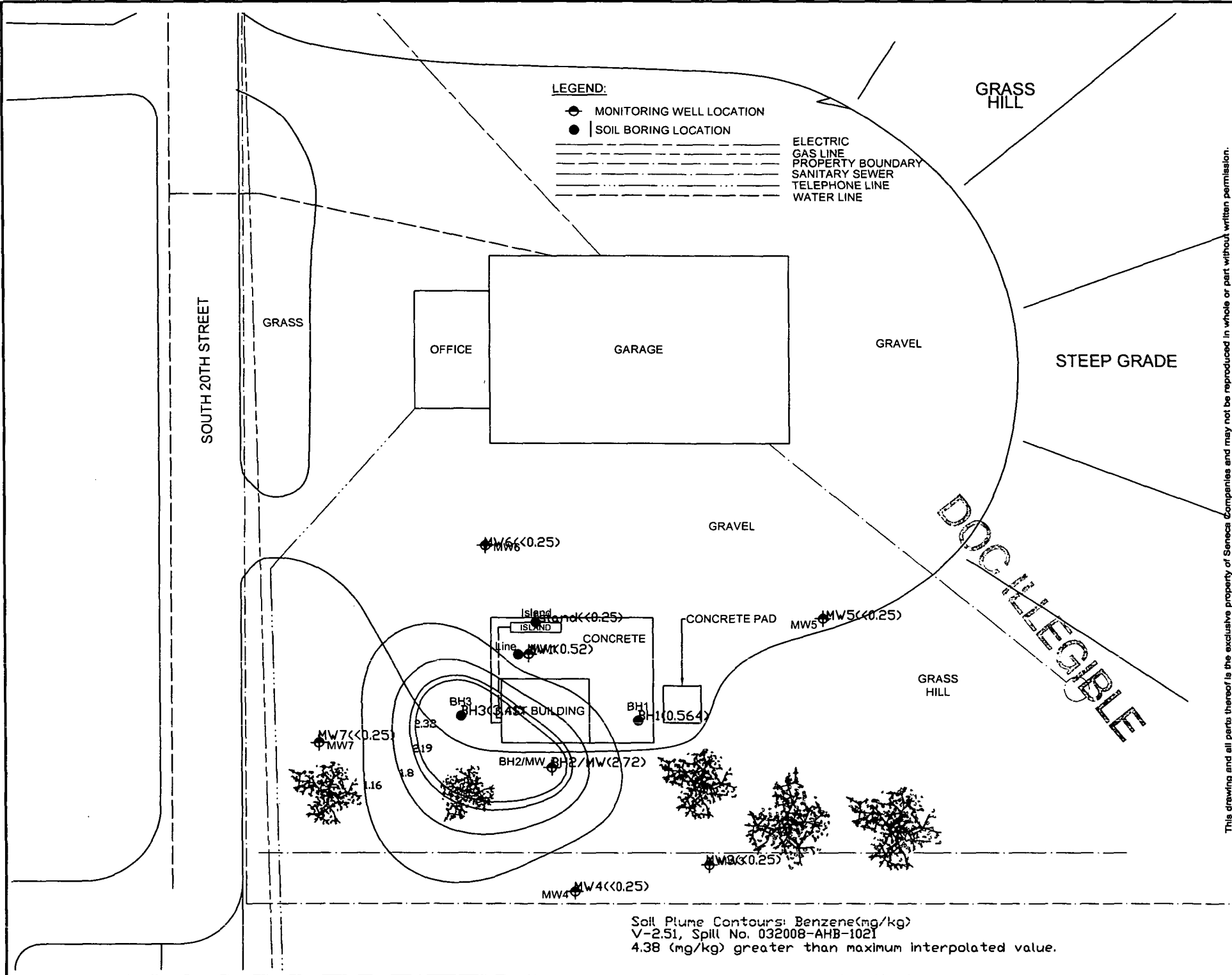


DOC ILLEGIBLE



Seneca Environmental Services	Seneca Job# 6341403	Date: July 30, 2012
Fairfield Community Schools 405 South 20 th Street Fairfield, Iowa	Approx. Scale: 1" = 214'	Appendix 3 Site Vicinity Map

Appendix 5
Soil contamination / soil gas map(s)



Appendix 6
Groundwater summary corrective action map

Appendix 7
Groundwater monitoring results map

SMR, Groundwater Monitoring Results Map: 09/05/2013, Benzene(ug/L)^{2.51}, Spill No. 032008-AHB-1021
#: Most recent sample more than 6 months older than current risk date.

Q MW6

Q MWS

Q MW1:537.#

Q MW7:<0.5

Q BH2/MW:12.700.

Q MW3:<0.5

Q MW4:<0.5

1 inch = 50 feet 

SMR, Groundwater Monitoring Results Map: 09/05/2013, Toluene(ug/L) 2.51, Spill No. 032008-AHB-1021
#: Most recent sample more than 6 months older than current risk date.

Q MW6

Q MW5

Q MW1:2.270.#

Q MW7:<1.

Q BH2/MW:40.100.

Q MW3:<1.

Q MW4:<1.

1 inch = 50 feet 

SMR, Groundwater Monitoring Results Map: 09/05/2013, Ethylbenzene (ug/L) Spill No. 032008-AHB-1021
#: Most recent sample more than 6 months older than current risk date.

MW6

MW5

MW1:223.#

MW7:<1.

BH2/MW:7.760.

MW3:<1.

MW4:<1.

1 inch = 50 feet 

SMR, Groundwater Monitoring Results Map: 09/05/2013, Xylenes(ug/L) 2.51, Spill No. 032008-AHB-1021
#: Most recent sample more than 6 months older than current risk date.

Q MW6

Q MWS


Q MW1:937.#

Q MW7:<3.

Q BH2/MW:41,800.

Q MW3:<3.

Q MW4:<3.

1 inch = 50 feet 

Appendix 8
Groundwater contamination map

Appendix 9
Groundwater flow direction map

Appendix 10
Analytical data sheets

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-15178-1
TestAmerica Sample Delivery Group: 6341403
Client Project/Site: Fairfield Schools

For:
Seneca Companies
7241 Gaines Street Court
Davenport, Iowa 52806

Attn: Todd Felderman

Angela Muehling

Authorized for release by:
9/11/2013 1:50:57 PM

Angela Muehling, Project Manager I
angela.muehling@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Sample Summary	4
Client Sample Results	5
Chronicle	9
Definitions	10
Certification Summary	11
Method Summary	12
Chain of Custody	13
Receipt Checklists	15

Case Narrative

Client: Seneca Companies
Project/Site: Fairfield Schools

TestAmerica Job ID: 310-15178-1
SDG: 6341403

Job ID: 310-15178-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-15178-1

Comments

No additional comments.

Receipt

The samples were received on 9/7/2013 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2° C.

GC/MS VOA

No analytical or quality issues were noted.

VOA Prep

No analytical or quality issues were noted.

Sample Summary

Client: Seneca Companies
Project/Site: Fairfield Schools

TestAmerica Job ID: 310-15178-1
SDG: 6341403

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-15178-1	BH-2 MW	Ground Water	09/05/13 09:50	09/07/13 09:15
310-15178-2	MW-3	Ground Water	09/05/13 09:30	09/07/13 09:15
310-15178-3	MW-4	Ground Water	09/05/13 09:40	09/07/13 09:15
310-15178-4	MW-7	Ground Water	09/05/13 09:45	09/07/13 09:15

Client Sample Results

Client: Seneca Companies
 Project/Site: Fairfield Schools

TestAmerica Job ID: 310-15178-1
 SDG: 6341403

Client Sample ID: ~~BH-2-MW~~ MW4 9/2/13

Lab Sample ID: 310-15178-1

Date Collected: 09/05/13 09:50

Matrix: Ground Water

Date Received: 09/07/13 09:15

Sampler Name: Garrett Boelkes

Sampler Phone Number: 563-332-8000

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.500		0.500		ug/L			09/10/13 17:04	1
Ethylbenzene	<1.00		1.00		ug/L			09/10/13 17:04	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			09/10/13 17:04	1
Toluene	<1.00		1.00		ug/L			09/10/13 17:04	1
Xylenes, Total	<3.00		3.00		ug/L			09/10/13 17:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		75 - 110					09/10/13 17:04	1
Dibromofluoromethane (Surr)	87		75 - 120					09/10/13 17:04	1
Toluene-d8 (Surr)	95		80 - 120					09/10/13 17:04	1

Client Sample Results

Client: Seneca Companies
Project/Site: Fairfield Schools

TestAmerica Job ID: 310-15178-1
SDG: 6341403

Client Sample ID: MW-3

Lab Sample ID: 310-15178-2

Date Collected: 09/05/13 09:30

Matrix: Ground Water

Date Received: 09/07/13 09:15

Sampler Name: Garrett Boelkes

Sampler Phone Number: 563-332-8000

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.500		0.500		ug/L			09/10/13 14:34	1
Ethylbenzene	<1.00		1.00		ug/L			09/10/13 14:34	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			09/10/13 14:34	1
Toluene	<1.00		1.00		ug/L			09/10/13 14:34	1
Xylenes, Total	<3.00		3.00		ug/L			09/10/13 14:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		75 - 110		09/10/13 14:34	1
Dibromofluoromethane (Surr)	90		75 - 120		09/10/13 14:34	1
Toluene-d8 (Surr)	96		80 - 120		09/10/13 14:34	1

Client Sample Results

Client: Seneca Companies
 Project/Site: Fairfield Schools

TestAmerica Job ID: 310-15178-1
 SDG: 6341403

Client Sample ID: ~~MW-4~~ BHO/MW 9/12/13

Lab Sample ID: 310-15178-3

Date Collected: 09/05/13 09:40

Matrix: Ground Water

Date Received: 09/07/13 09:15

Sampler Name: Garrett Boelkes

Sampler Phone Number: 563-332-8000

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	12700		50.0		ug/L			09/10/13 18:29	100
Ethylbenzene	7760		100		ug/L			09/10/13 18:29	100
Methyl tert-butyl ether	<100		100		ug/L			09/10/13 18:29	100
Toluene	40100		100		ug/L			09/10/13 18:29	100
Xylenes, Total	41800		300		ug/L			09/10/13 18:29	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		75 - 110					09/10/13 18:29	100
Dibromofluoromethane (Surr)	87		75 - 120					09/10/13 18:29	100
Toluene-d8 (Surr)	95		80 - 120					09/10/13 18:29	100

Client Sample Results

Client: Seneca Companies
 Project/Site: Fairfield Schools

TestAmerica Job ID: 310-15178-1
 SDG: 6341403

Client Sample ID: MW-7

Lab Sample ID: 310-15178-4

Date Collected: 09/05/13 09:45

Matrix: Ground Water

Date Received: 09/07/13 09:15

Sampler Name: Garrett Boelkes

Sampler Phone Number: 563-332-8000

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.500		0.500		ug/L			09/10/13 13:52	1
Ethylbenzene	<1.00		1.00		ug/L			09/10/13 13:52	1
Methyl tert-butyl ether	<1.00		1.00		ug/L			09/10/13 13:52	1
Toluene	<1.00		1.00		ug/L			09/10/13 13:52	1
Xylenes, Total	<3.00		3.00		ug/L			09/10/13 13:52	1
Surrogate									
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		75 - 110					09/10/13 13:52	1
Dibromofluoromethane (Surr)	84		75 - 120					09/10/13 13:52	1
Toluene-d8 (Surr)	93		80 - 120					09/10/13 13:52	1

Lab Chronicle

Client: Seneca Companies
Project/Site: Fairfield Schools

TestAmerica Job ID: 310-15178-1
SDG: 6341403

Client Sample ID: BH-2 MW

Lab Sample ID: 310-15178-1

Date Collected: 09/05/13 09:50

Matrix: Ground Water

Date Received: 09/07/13 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	24355	09/10/13 17:04	KNW	TAL CF

Client Sample ID: MW-3

Lab Sample ID: 310-15178-2

Date Collected: 09/05/13 09:30

Matrix: Ground Water

Date Received: 09/07/13 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	24355	09/10/13 14:34	KNW	TAL CF

Client Sample ID: MW-4

Lab Sample ID: 310-15178-3

Date Collected: 09/05/13 09:40

Matrix: Ground Water

Date Received: 09/07/13 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	24355	09/10/13 18:29	KNW	TAL CF

Client Sample ID: MW-7

Lab Sample ID: 310-15178-4

Date Collected: 09/05/13 09:45

Matrix: Ground Water

Date Received: 09/07/13 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	24355	09/10/13 13:52	KNW	TAL CF

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Definitions/Glossary

Client: Seneca Companies
Project/Site: Fairfield Schools

TestAmerica Job ID: 310-15178-1
SDG: 6341403

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: Seneca Companies
Project/Site: Fairfield Schools

TestAmerica Job ID: 310-15178-1
SDG: 6341403

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA	IHLAP		101044	11-01-14
Illinois	NELAP	5	200024	11-29-13
Iowa	State Program	7	7	12-01-13
Kansas	NELAP	7	E-10341	01-31-14
Minnesota	NELAP	5	019-999-319	12-31-13
North Dakota	State Program	8	R-186	09-29-13 *
Oregon	NELAP	10	IA100001	09-29-13 *
Wisconsin	State Program	5	999917270	08-31-13 *

* Expired certification is currently pending renewal and is considered valid.

Method Summary

Client: Seneca Companies
Project/Site: Fairfield Schools

TestAmerica Job ID: 310-15178-1
SDG: 6341403

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TestAmerica TestAmerica Sample Receipt and Cedar Falls Facility

THE LEADER IN ENVIRONMENTAL TESTING
704 Enterprise Drive • Cedar Falls, IA 50813
Tel 319-277-2401 • Fax 319-277-2425



Client: Seneca Project: Fairfield Schools

City: _____ State: _____

Date: 9-7-13 Receiver's Initials: CH Time (Delivered): 9:15

Temperature Record:

Cooler ID# (if Applicable)
QC

Uncorrected Temp:
2.2 °C

Corrected Temp:
2.2 °C

Thermometer:

IR "E" - 111531506
 IR "Front" - 61854108
 IR "G" - 130195822
 IR "H" - 130195853
 Other: _____

Courier:

UPS TA Courier
 FedEx TA Field Services
 FedEx Ground Client
 US Postal Service Other: _____
 Spee-Dee

Temperature blank
 Temperature out of compliance

Coolant Record:

Received on ice
 Wet ice
 Blue ice
 Dry ice
 Other: _____
 NONE

Exceptions Noted:

Sample(s) not received in cooler
 Sample(s) received same day of sampling
 Evidence of chilling process
 Temp blank <0°C, samples NOT FROZEN
 Temp blank <0°C, samples FROZEN
 Temperature not taken: *(Indicate reason)*

 Non-Conformance Report Started

Custody Seals:

<p>Cooler Custody Seals Present?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Cooler Custody Seals Intact?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>
<p>Sample Custody Seals Present?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Sample Custody Seals Intact?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p>

Document No.: CF-LG-WI-002
Revision: 20
Date: 7/31/2013

Login Sample Receipt Checklist

Client: Seneca Companies

Job Number: 310-15178-1

SDG Number: 6341403

Login Number: 15178

List Source: TestAmerica Cedar Falls

List Number: 1

Creator: Facciani, Melene K.

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix 12 Documentation

Well Search



Well Search Report

Included in search	No. of wells	Database
X	0	IGS well database General well database maintained by IGS, location accuracy varies 3,730 to 25 ft., last updated 8/2005.
X	0	Public wells Municipal and nonmunicipal public well databases maintained by IGS, location varies 3,730 to 25 ft., under development.
X	0	SDWIS public wells Public well database developed from the Safe Drinking Water Information System database maintained by IDNR, estimated locational accuracy varies from 15m. to 3300m. Created from 5/2005 data.
X	2	Private well tracking system IDNR database management system for Grants-to-counties-covered wells. Locational accuracy unknown, assumed to be +/- 17 m., Last update 7/2005.
X	0	Wells registered for testing Wells tested under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Permitted private wells Wells permitted under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Registered abandoned wells Wells abandoned under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Water use facilities Wells used by facilities permitted to withdraw >25,000 gallons per day, locational accuracy is +/-20m to 1150 m. Created from 7/2005 data.
X	0	Municipal wells and intakes Locational accuracy 220 m., last updated 8/96.
X	0	Ag drainage wells Locational accuracy 100 m., last updated 4/98.

Well Search Detail

Subject: XY UTM Coordinates: 585446/4539621
Search Radius (ft): 1000

IGS Well Database

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Public Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

SDWIS public wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Private Well Tracking System

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
357912	2102020	T. 72 N., R. 10W., Sec. 26, SE, SW, SE, SW, SW	nom. +/- 25m.	301 (m)	21	01/01/1950	Troxel, Mike	Status: Plugged; Well use: Household
357770	2138302	T. 72 N., R. 10W., Sec. 26, SE, NE, SE, SW, NE	nom. +/- 25m.	(m)	32	01/01/1950	Vogt, Laura	Status: Inactive; Well use: Household

Wells Registered For Testing

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Permitted Private Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Abandoned Wells (plugged)

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Water Use Facilities								
Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

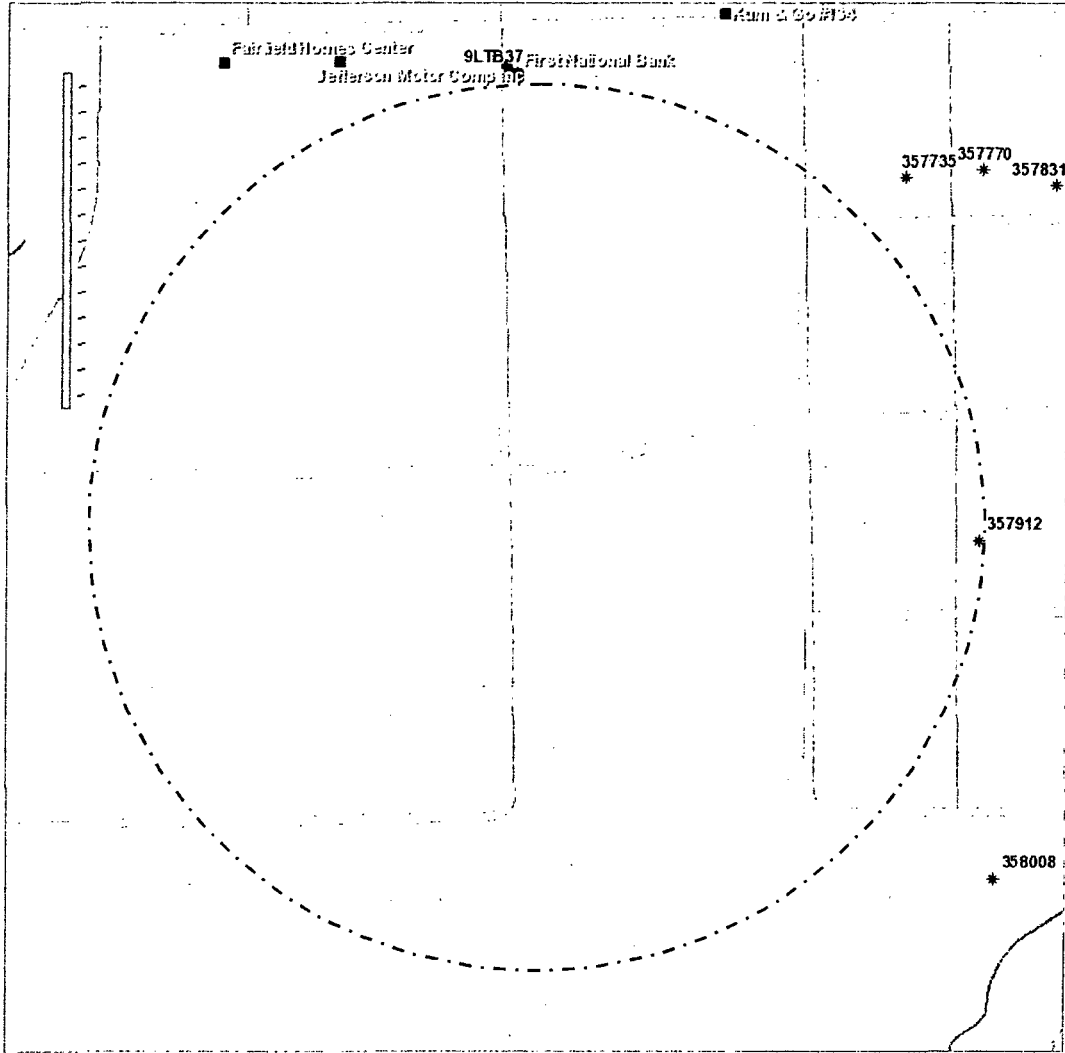
Municipal Wells And Intakes								
Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Ag Drainage Wells								
Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

DO NOT LEGAL

Well Search Buffered Map

Subject: XY UTM Coordinates: 585446/4539621
Search Radius (ft): 1000



Map Notes:

- UST
- ★ LUST
- * Wells

Please refer to the Accuracy column in Well Search Detail.
Since multiple points can be at the same spot (as those located to the center of a quarter section), points were randomly dispersed within 10 meters around that spot so all points can be seen.