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Municipal Expertise. Community Commitment.

45-DAY REPORT

Submitted For:

LPC #1150150080 – Macon County
Decatur / Kroger #J250 (Kroger Limited Partnership I)
855 N. Fairview Avenue
LUST Release Incident No. 20190006

IEPA-DIVISION OF RECORDS MANAGEMENT
RELEASABLE

MAY 01 2019

REVIEWER: SAB

Prepared for:

Mr. Joe Linville
Kroger Co. Construction
3241 N. Shadeland Avenue
Indianapolis, Indiana 46226

RECFIVED

MAR 18 2019

IEPA/BOL

Prepared By:

Robinson Engineering, Ltd.
PO Box 7408
Champaign, Illinois 61826-7408

REL Project #18-R1114

February 13, 2019



1150150080 – Macon County
Kroger Ltd. Partnership 1
Incident # 20190006
Leaking UST Technical File

Karl F. Newman, PG
Direct Line: (217) 530-4084
E-mail: knewman@reltd.com

February 13, 2019

Project #18-R1114

Illinois Environmental Protection Agency
Bureau of Land - #24
Leaking UST Section
1021 N. Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Attn: Mr. Will Craig

RE: LPC #1150150080 – Macon County
Decatur / Kroger #J250 (Kroger Limited Partnership I)
855 N. Fairview Avenue
LUST Release Incident No. 20190006

Dear Mr. Craig:

Robinson Engineering, Ltd. (REL) has been retained by the owner/operator of the above-referenced leaking underground storage tank (LUST) release incident site, Kroger Limited Partnership I, to prepare the 45-Day Report for the above-referenced LUST project, 2 copies of which are provided.

As described in the 45-Day Report, REL, on behalf of Kroger Limited Partnership I, respectfully requests that the Illinois Environmental Protection Agency (IEPA) issue a No Further Remediation (NFR) Letter for LUST release incident number 20190006.

Should you have any questions with regard to this LUST release incident, please do not hesitate to contact the undersigned.

Very truly yours,
Robinson Engineering, Ltd.


Karl F. Newman, PG
Senior Project Scientist



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INTRODUCTION

The numbered sections below correspond to the information requested in Sections D, E and F of the 45-Day Report form provided in Appendix A. The information provided in this report was obtained from Kroger Limited Partnership I, the underground storage tank (UST) system owner and operator. Additional supporting documentation was obtained from the Office of the Illinois State Fire Marshal (OSFM) and Illinois Environmental Protection Agency (IEPA) via the internet, and from the Illinois State Water Survey (ISWS) through the IEPA Source Water Assessment Program (SWAP) ArcGIS mapping tool and Illinois State Geological Survey (ISGS) through the ISGS ILWATER mapping tool.

On Thursday, January 3, 2019, Illinois Oil Marketing Equipment, Inc. (IOME), a licensed tank removal and maintenance contractor of Pekin, Illinois, removed from the ground 1 20,000-gal. unleaded gasoline UST (Tank 6), 1 10,000-gal. diesel fuel UST (Tank 7) and 1 8,000-gal. unleaded gasoline UST (Tank 8) in accordance with Office of the State Fire Marshal (OSFM) Removal Permit No. 02003-2018REM.

The UST removal activities were observed by OSFM Storage Tank Safety Specialist (STSS) Mr. Mark Blough and Mr. Karl F. Newman, PG, of Robinson Engineering, Ltd. (REL).

After the removal of Tanks 6, 7 and 8 from the ground, OSFM STSS Mr. Blough observed evidence of a release of suspected petroleum products, presumably from historic spillage at the site from the former tanks removed from the ground in 1976, within the UST removal excavation zone and, therefore, required the reporting of a leaking UST (LUST) release to the Illinois Emergency Management Agency (IEMA). On that same day, a LUST release incident was reported by Mr. Newman of REL on behalf of Kroger Limited Partnership I to IEMA and LUST release incident number 20190006 was subsequently assigned to the site.

In order to comply with the OSFM Site Assessment requirements, REL completed soil sampling of the UST excavation zone on Thursday, January 3, 2019, upon completion of the removal of Tanks 6, 7 and 8 from the ground. REL collected confirmation soil samples from the sidewalls and floor of the UST removal excavation zone and the product piping trenches. A total of 21 confirmation soil samples, labeled as CS1 to CS21, were submitted to the Environmental Science Corporation Lab Sciences (ESC) laboratory for analytical testing for benzene, ethylbenzene, toluene and xylene(s) (BETX), methyl tertiary-butyl ether (MTBE) and polynuclear aromatic hydrocarbon (PNA) compounds.

It should be noted that confirmation soil samples were not collected from the backfill materials returned to each of the UST removal excavation as the backfill materials consisted of pea gravel, which is not an appropriate material to be collected and tested for the contaminants of concern due to the coarse granular nature of the stone comprising the gravel.

Comparison of the confirmation soil sample analytical test results to the Tier 1 soil remediation objectives (ROs) indicates that none of the 21 confirmation soil samples contained BETX, MTBE and PNA compound concentration levels in excess of an applicable Tier 1 soil RO. The results of the confirmation soil sampling work were summarized in a written report, *Underground Storage Tank Site Assessment*, dated January 14, 2019.

Based upon the results of the confirmation soil sample test results, a Site Assessment form, which included a copy of the *Underground Storage Tank Site Assessment* report, was submitted electronically to OSFM by GEOCON on behalf of the UST owner/operator, Kroger Limited Partnership I. As reported on the Site Assessment form, no soil contamination in excess of the Tier 1 soil ROs was the result of the site

assessment soil sampling work performed at the location of the former UST system on Thursday, January 3, 2019. As such, confirmation of LUST release incident 20190006 was completed.

In a letter to the IEPA, dated February 6, 2019, Kroger Limited Partnership I submitted 2 original *20-Day Certification* forms for the site.

D. SITE/RELEASE INFORMATION

Provide the following:

1. Data on the nature and estimated quantity of the release;

The site is the Kroger #J250 facility located at 855 N. Fairview Avenue on the west side of the City of Decatur, Macon County, Illinois. The site is located in the northeast corner of a parcel of land that has been assigned parcel identification number (PIN) 04-12-09-456-001. The site is comprised of an irregular-shaped tract of land located within the Southwest Quarter of the Southeast Quarter of Section 9, Township 16 North, Range 2 East, of the Third Principal Meridian, in Decatur Township, Macon County, Illinois. The approximate location of the site, as plotted on the USGS 7.5 Minute Decatur, Illinois topographic map, is provided as **Figure 1 in Appendix B.**

The site is located within a commercial and residential area on the west side of the downtown area of the City of Decatur, Illinois. The site is currently occupied by the closed Kroger #J250 grocery store, which is located in the east end of the Fairview Plaza Shopping Center. The site is occupied by a commercial strip mall-type shopping center with an automobile fueling facility located to the north-northeast of the east end of the shopping center building. The surface of the site, not occupied by the structures, is covered primarily with Portland cement and bituminous concrete pavement and drives. Pertinent site features are depicted on **Figure 2 in Appendix B.**

A review of the IEPA leaking underground storage tank (LUST) incident tracking (LIT) database available via the internet at <http://epadata.epa.state.il.us/land/ust/> indicates that no prior LUST release incident notifications have been made for the site facility.

A review of the OSFM records indicate that a total of 8 tanks are currently registered to Kroger Limited Partnership I, as the owner/operator, for the site as follows:

1. Tank 1 – 3,000-gal. gasoline tank;
2. Tank 2 – 560-gal. used oil tank;
3. Tank 3 – 560-gal. (no product listed) tank;
4. Tank 4 – 4,000-gal. gasoline tank;
5. Tank 5 – 3,000-gal. gasoline tank;
6. Tank 6 – 20,000-gal. unleaded gasoline tank;
7. Tank 7 – 10,000-gal. diesel fuel tank; and
8. Tank 8 – 8,000-gal. unleaded gasoline tank.

Tanks 1, 2, 3, 4 and 5 were reportedly removed from the ground on April 20, 1976 and the former locations are suspected to have been located on the east side of the site. Tanks 6, 7 and 8 are all of double-wall fiberglass construction. Tank 6 and Tanks 7 and 8, which comprise 2 compartments of a single large UST, were formerly located in a common basin on the south side of the automobile fueling facility in the

northeast corner of the site. Tanks 6, 7 and 8 were connected via product piping to dispensers formerly located on the northeast side of the UST basin and on the east side of the existing convenience store building. The locations of the Tanks 6, 7 and 8 are shown on Figure 2 in Appendix B and Figure 7 in Appendix E.

On Thursday, January 3, 2019, IOME removed from the ground Tanks 6, 7 and 8, which were used to store unleaded gasoline and diesel fuel, in accordance with OSFM Removal Permit No. 02003-2019REM, a copy of which is provided in Appendix F.

The UST removal activities were observed by OSFM STSS Mr. Blough and by Mr. Newman, PG of REL. After the removal of Tanks 6, 7, 8 and 9 from the ground, OSFM STSS Blough observed evidence of a release of suspected petroleum products, presumably from historic spillage at the site from the former tanks removed from the ground in 1976, within the UST removal excavation zone and, therefore, required the reporting of a LUST release to IEMA. On that same day, a LUST release incident was reported by Mr. Newman on behalf of Kroger Limited Partnership I to IEMA and LUST release incident number 20190006 was subsequently assigned to the site.

The estimated quantity of product released from the UST system is unknown.

2. Data from available sources or site investigations concerning the following factors:

a. Surrounding Populations:

The site is the Kroger #J250 facility located at 855 N. Fairview Avenue on the west side of the City of Decatur, Macon County, Illinois. The site is located in the northeast corner of a parcel of land that has been assigned parcel identification number (PIN) 04-12-09-456-001. The site is comprised of an irregular-shaped tract of land located within the Southwest Quarter of the Southeast Quarter of Section 9, Township 16 North, Range 2 East, of the Third Principal Meridian, in Decatur Township, Macon County, Illinois. The approximate location of the site, as plotted on the USGS 7.5 Minute Decatur, Illinois topographic map, is provided as Figure 1 in Appendix B.

The site is located in a commercial and residential area on the west side of the downtown area of the City of Decatur, Macon County, Illinois. The City of Decatur has a population of approximately 72,174 people. The site is bounded to the north by a multi-tenant commercial building, followed by the King Street right-of-way (ROW). The site is bounded to the east by the Fairview Avenue ROW, followed by residential properties. The site is bounded to the south by the Fairview Plaza Shopping Center, followed by a railroad ROW. The site is bounded to the west by the Fairview Plaza Shopping Center. Area buildings and nearby property uses are depicted in Figure 2 in Appendix B.

b. Water quality:

According to representatives of the City of Decatur Public Works Department, the site is connected to the municipal water service system. The City of Decatur obtains municipal water supplies from surface water impounded within Lake Decatur.

According to the IEPA Source Water Assessment Program Fact Sheet for the City of Decatur, the average pumpage is approximately 37,500,000 gallons per day to 24,000 service connections, in addition to other communities and facilities that purchase water from the City.

Based on available information, shallow groundwater beneath the site is not currently utilized as a potable source of drinking water. Therefore, conditions existing at the site are not likely to impact the source or quality of potable water located at greater depths in the area of the site.

The nearest surface body of water to the site is an unnamed pond, which is located approximately 2,300 feet southwest of the site, as indicated on the USGS Quadrangle maps as indicated on **Figure 1 in Appendix B**.

c. Use and approximate locations of wells potentially affected by the release;

A survey of water supply wells was completed by REL in order to obtain information for potable and community water supply wells located within 2,500-ft. of the former UST system at the site. In order to identify all wells that exist within a 2,500-ft. radius, REL obtained well information through the IEPA SWAP ArcGIS mapping tool and the ISGS ILWATER mapping tool for Sections 9, 10, 15 and 16 of Township 16 North, Range 2 East of the Third Principal Meridian in Macon County.

The IEPA and ISGS well databases provide well information of ISWS groundwater data wells, ISGS wells, non-community water service (CWS) wells and surface intakes, CWS wells and CWS surface water intakes located with the search area. It should be recognized that the ISWS and ISGS records for private and municipal wells also contain listings for test holes, engineering test holes and dead permits.

According to the SWAP database, no private wells are located within 200 feet of the site and no active municipal wells are located within 2,500 feet of the site as summarized on **Table 1 in Appendix C**.

During the soil sampling activities performed at the site, REL did not identify any active private or municipal wells on the site or within a 200-ft. radius of the former UST system.

Based on the information obtained from the ISWS, ISGS, IEPA and the City of Decatur Public Works Department, shallow groundwater beneath the site is not currently utilized as a potable source of drinking water and the former UST system does not appear to have been located within a minimum or maximum setback zone of a municipal or private water supply well.

Copies of the water well survey information provided are included in **Appendix C**. The locations of the water supply wells listed in the various information sources reviewed through the IEPA and ISGS mapping tools and located within a 2,500-ft. radius of the site are shown on **Figure 4 in Appendix C** and are summarized in **Table 1 in Appendix C**.

d. Subsurface soil conditions;

ISGS Circular No. 532 (1984), *Potential for Contamination of Shallow Aquifers From Land Burial of Municipal Wastes*, by Richard Berg, Karos Cartwright and John P. Kempton was reviewed to determine soil types in the area of the site. The ISGS Circular No. 532 map provides ratings of the capacities of earth materials to accept, transmit, restrict, or remove contaminants from waste effluents. The site is located in an area mapped as "E" type soils, which are described as uniform, relatively impermeable silty or clayey till at least 50 feet in thickness with no evidence of interbedded sand and gravel. **Figure 3 in Appendix B** shows the approximate location of the site on the ISGS Circular No. 532 map, and the key to the ISGS Circular No. 532 map can also be found in **Appendix B**.

e. Location of subsurface sewers;

Utilities on and immediately adjacent to the site consist of sanitary sewer, natural gas, water, overhead and underground telephone, and overhead and underground electrical.

f. Climatological conditions; and

Macon County has a continental climate typical of Central Illinois with annual temperatures ranging from the upper 80°F's in the summer months to 30°F's in the winter months.

g. Land Use.

The site is located in the southeast quadrant of the intersection of Fairview Avenue and King Street at 855 N. Fairview Avenue on the west side of the downtown area of the City of Decatur as shown on the Aerial Site Plan, Figure 2 in Appendix B. The site is currently occupied by the closed Kroger #J250 grocery store, which is located in the east end of the Fairview Plaza Shopping Center. The site is occupied by a commercial strip mall-type shopping center with an automobile fueling facility located to the north-northeast of the east end of the shopping center building. The surface of the site, not occupied by the structures, is covered primarily with Portland cement and bituminous concrete pavement and drives. Pertinent site features are depicted on Figure 2 in Appendix B.

3. **A discussion of what was done to measure for the presence of a release where contamination was most likely to be present at the UST site;**

On Thursday, January 3, 2019, IOME of Pekin, Illinois removed from the ground Tanks 6, 7 and 8, which were used to store unleaded gasoline and diesel fuel.

After the removal of Tanks 6, 7 and 8 from the ground, a total of 21 confirmation soil samples were collected from the sidewalls and floor and product piping trenches of the UST excavation zone by the REL Senior Project Scientist and were submitted for analytical testing for the presence and concentration levels of BETX, MTBE and PNA compounds. The results of the analytical testing indicated that none of the 21 confirmation soil samples contained BETX, MTBE and PNA compound concentration levels in excess of a Tier 1 soil RO.

4. **The results of the free product investigations;**

Free product was not observed during the UST removal activities completed at the site on Thursday, January 3, 2019.

5. **A discussion of the action taken to prevent further release of the regulated substance into the environment;**

On Thursday, January 3, 2019, IOME, the certified tank removal contractor, removed from the ground Tanks 6, 7 and 8, which were used to store unleaded gasoline and diesel fuel.

By completing the UST removal activities, the primary source of any potential contamination, the former USTs, has been removed, and the owner/operator has prevented any further petroleum releases to the environment.

6. **A discussion of the action taken to monitor and mitigate fire and safety hazards posed by vapors or free product that has migrated from the UST excavation zone and entered subsurface structures; and**

Based on observations made by REL during the UST removal work completed at the site, it was discovered that no below grade structures are present in the immediate area of the UST excavation zone. At this time, it does not appear that vapors or free product have migrated from the UST excavation zone and have entered subsurface structures located on or near the site.

7. Any other information collected while performing initial abatement measures pursuant to 35 IAC 731.162, 732.202(b), or 734.210(b).

No other information provided.

E. OTHER INFORMATION

Provide the following:

1. An area map showing the site in relation to surrounding properties;

A Site Vicinity Map and an Aerial Site Plan illustrating the surrounding properties and general area of the site are provided as Figures 1 and 2 in Appendix B.

2. A cross section, to scale, showing the UST(s) and the excavation;

The locations of the USTs are indicated on Figure 2 in Appendix B and on Figure 7 in Appendix E.

Cross-sections showing the 3 USTs and the UST removal excavation zone are provided on Figure 6 in Appendix D.

3. Analytical/screening results in a tabular format including the results of soil samples required pursuant to 35 IAC 732.202(h) or 734.210(h) and the most stringent Tier 1 remediation objectives;

On Thursday, January 3, 2019, UST removal activities were completed at the site as shown on Figure 7 in Appendix E.

Utilizing a track-mounted excavator provided by IOME, a total of 21 confirmation soil samples were collected from the sidewalls and floors of the UST removal excavation zone and from the product piping trench as shown on Figure 7 in Appendix E. The REL Senior Project Manager collected 1 soil sample for each approximate 20 linear feet of sidewall at a depth of approximately 9-ft. below ground surface (bgs) from each sidewall of the UST removal excavation zone; 1 soil sample from beneath each end of each UST at a depth of approximately 16-ft. bgs; and 1 soil sample for each approximate 20 linear feet of product piping trench at a depth of approximately 3.5-ft. bgs as follows:

1. East product piping trench – north – soil sample CS1
2. East product piping trench – center – soil sample CS2
3. East product piping trench – south – soil sample CS3
4. West product piping trench – north – soil sample CS4
5. West product piping trench – center – soil sample CS5
6. West product piping trench – south – soil sample CS6
7. South product piping trench – center – soil sample CS7
8. Tank 6 excavation floor – north – soil sample CS8
9. Tank 6 excavation floor – south – soil sample CS9
10. Tank 8 excavation floor – north – soil sample CS10
11. Tank 8 excavation floor – south – soil sample CS11
12. Tank 7 excavation floor – north – soil sample CS12

13. Tank 7 excavation floor – south – soil sample CS13
14. Tanks 6, 7 and 8 excavation west sidewall – north – soil sample CS14
15. Tanks 6, 7 and 8 excavation west sidewall – south – soil sample CS15
16. Tanks 6, 7 and 8 excavation south sidewall – west – soil sample CS16
17. Tanks 6, 7 and 8 excavation south sidewall – east – soil sample CS17
18. Tanks 6, 7 and 8 excavation north sidewall – west – soil sample CS18
19. Tanks 6, 7 and 8 excavation north sidewall – east – soil sample CS19
20. Tanks 6, 7 and 8 excavation east sidewall – north – soil sample CS20
21. Tanks 6, 7 and 8 excavation east sidewall – south – soil sample CS21

It should be noted that no confirmation soil samples were collected from the backfill materials returned to the UST removal excavation zone as the backfill materials consisted of pea gravel, which is not an appropriate material to be collected and tested for the contaminants of concern due to the nature of the stone comprising the pea gravel.

At each sample location, a portion of the sample was placed directly into appropriate, field-preserved sample containers and was sealed, labeled and stored in an iced cooler for laboratory analysis. The remaining portion of each of the confirmation samples was placed into new, Ziploc® style baggies for on-site field screening with a photoionization detector (PID).

During the sampling activities, REL followed the volatile organic compound (VOC) sample preservation procedures outlined in SW-846 Update III Method 5035, *Closed System Purge and Trap and Extraction for Volatile Organics in Soil and Waste Samples*.

The confirmation soil samples collected from the sidewalls and floor of the UST removal excavation zone and product piping trench were screened for the presence of ionizable vapors with an RAE Systems, Inc. MiniRAE 3000 PID equipped with a 10.6 electrovolt (eV) lamp and calibrated to the span gas isobutylene. PID readings of zero parts per million (ppm) meter units, or non-detect, were recorded for confirmation soil samples CS5, CS6, CS7, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16, CS17, CS18 and CS21 and PID readings ranging from 25 to 30 ppm meter units were recorded for confirmation soil samples CS1, CS2, CS3, CS4, CS19 and CS20. The PID results for the confirmation soil samples are summarized in Table 2 in Appendix E.

From each soil sample, approximately 50 grams of soil was collected with a decontaminated sampling trowel. New disposable plastic sample syringes were then used to collect equal portions of soil, each weighing approximately 5 grams. Each 5-gm. sample was injected from the syringe into 1 preserved, pre-weighed laboratory prepared 40-ml. volatile organic ampoule (VOA) containing methyl alcohol (Methanol). In addition, 1 4-oz. glass jar was also collected. Following collection, the soil samples were sealed, labeled, and placed in a cooler with ice for shipment to the laboratory for analysis.

The confirmation soil samples collected from the sidewalls and floor of the UST removal excavation zone and product piping trench were placed in a cooler on ice and submitted via overnight delivery service to the Pace Analytical (PACE) laboratory in Mount Juliet, Tennessee for analytical testing.

Confirmation soil samples CS1, CS2, CS3, CS4, CS5, CS6, CS7, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16, CS17, CS18, CS19, CS20 and CS21 were analyzed for benzene, ethylbenzene, toluene and xylene(s)

(BETX) and methyl tertiary-butyl ether (MTBE) compounds per United States Environmental Protection Agency (USEPA) SW-846 Test Method 8260B and for polynuclear aromatic hydrocarbon (PNA) compounds per USEPA SW-846 Test Method 8270C-SIM, the indicator contaminants of concern for unleaded gasoline and diesel fuel products.

Analytical testing was performed in accordance with USEPA SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, using test methods recognized by the IEPA for unleaded gasoline and diesel fuel releases. PACE (IL ELAP – NELAC Certification #200008) is an Illinois Environmental Protection Agency (IEPA) Environmental Laboratory Accreditation Program (ELAP) accredited laboratory.

The results of the analytical testing are summarized in Table 2 in Appendix E, and the laboratory analytical testing reports, chain-of-custody forms and laboratory certifications form are also included in Appendix E.

Detectable concentration levels of BETX and PNA compounds were obtained in 12 of the 21 confirmation soil samples submitted for analysis as follows:

1. Confirmation soil sample CS1

a. Benzene	0.0122	milligrams per kilogram (mg/kg)
b. Ethylbenzene	0.0226	mg/kg
c. Toluene	0.0194	mg/kg
d. Xylene(s)	0.244	mg/kg
e. Anthracene	0.0073	mg/kg
f. Benzo(a)anthracene	0.00326	mg/kg
g. Benzo(a)pyrene	0.00567	mg/kg
h. Benzo(b)fluoranthene	0.00794	mg/kg
i. Benzo(g,h,i)perylene	0.00672	mg/kg
j. Chrysene	0.00511	mg/kg
k. Fluoranthene	0.00943	mg/kg
l. Indeno(1,2,3-cd)pyrene	0.00469	mg/kg
m. Phenanthrene	0.00323	mg/kg
n. Pyrene	0.00817	mg/kg

2. Confirmation soil sample CS2

a. Benzene	0.00748	mg/kg
b. Ethylbenzene	0.0138	mg/kg
c. Toluene	0.0176	mg/kg
d. Xylene(s)	0.0631	mg/kg
e. Anthracene	0.00104	mg/kg

f. Benzo(a)anthracene	0.00299	mg/kg
g. Benzo(a)pyrene	0.00404	mg/kg
h. Benzo(b)fluoranthene	0.00477	mg/kg
i. Benzo(k)fluoranthene	0.002	mg/kg
j. Benzo(g,h,i)perylene	0.00331	mg/kg
k. Chrysene	0.00322	mg/kg
l. Phenanthrene	0.0035	mg/kg
m. Pyrene	0.00454	mg/kg
3. Confirmation soil sample CS3		
a. Ethylbenzene	0.00357	mg/kg
b. Toluene	0.00198	mg/kg
c. Xylene(s)	0.0226	mg/kg
d. Benzo(a)pyrene	0.00214	mg/kg
e. Benzo(b)fluoranthene	0.00309	mg/kg
f. Benzo(k)fluoranthene	0.00133	mg/kg
g. Benzo(g,h,i)perylene	0.0018	mg/kg
h. Chrysene	0.00209	mg/kg
i. Indeno(1,2,3-cd)pyrene	0.00176	mg/kg
j. Pyrene	0.00359	mg/kg
4. Confirmation soil sample CS4		
a. Ethylbenzene	0.00357	mg/kg
b. Toluene	0.00996	mg/kg
c. Xylene(s)	0.0168	mg/kg
5. Confirmation soil sample CS6		
a. Toluene	0.00244	mg/kg
6. Confirmation soil sample CS8		
a. Ethylbenzene	0.00258	mg/kg
b. Toluene	0.014	mg/kg
c. Xylene(s)	0.0151	mg/kg
7. Confirmation soil sample CS9		
a. Ethylbenzene	0.00205	mg/kg

b. Toluene	0.00882	mg/kg
c. Xylene(s)	0.0098	mg/kg
8. Confirmation soil sample CS11		
a. Phenanthrene	0.00101	mg/kg
b. Pyrene	0.000871	mg/kg
9. Confirmation soil sample CS17		
a. Ethylbenzene	0.0015	mg/kg
b. Toluene	0.0145	mg/kg
c. Xylene(s)	0.00922	mg/kg
10. Confirmation soil sample CS18		
a. Benzo(g,h,i)perylene	0.0.0019	mg/kg
b. Pyrene.	0.00142	mg/kg
11. Confirmation soil sample CS19		
a. Acenaphthene	0.00185	mg/kg
b. Phenanthrene	0.0016	mg/kg
12. Confirmation soil sample CS20		
a. Ethylbenzene	0.0184	mg/kg
b. Xylene(s)	0.062	mg/kg
c. Acenaphthene	0.00267	mg/kg
d. Fluorene	0.00116	mg/kg

No detectable concentration levels of BETX, MTBE and PNA compounds above the respective laboratory method detection limits were obtained in confirmation soil sample CS5, CS7, CS10, CS12, CS13, CS14, CS15, CS16 and CS21.

The analytical test results contained herein were compared to the Tier 1 soil ROs for BETX, MTBE and PNA compounds as contained in 35 Illinois Administrative Code (IAC) Part 742, *Tiered Approach to Corrective Action Objectives*. At this time, the Tier 1 ROs for a Class I groundwater setting, as summarized in Tables A and B of Appendix B of 35 IAC Part 742, are designated as the comparative remediation objectives for this project. The Tier 1 soil ROs for the soil component of the groundwater ingestion, ingestion and outdoor inhalation exposure routes for both Class I and Class II groundwater settings and for residential, industrial/commercial and construction worker land use settings are summarized in Table 3 in Appendix E.

Soil Component of the Groundwater Ingestion Exposure Route

None of the 21 confirmation soil samples submitted for laboratory analytical testing contained BETX, MTBE and PNA compound concentration levels which exceeded the Tier 1 soil ROs for the soil component of the groundwater ingestion exposure route for a Class I groundwater setting.

Ingestion Exposure Route

None of the 21 confirmation soil samples submitted for laboratory analytical testing contained BETX, MTBE and PNA compound concentration levels which exceeded the Tier 1 soil ROs for the ingestion exposure route for residential, industrial/commercial and construction worker land use settings.

Outdoor Inhalation Exposure Route

None of the 21 confirmation soil samples submitted for laboratory analytical testing contained BETX, MTBE and PNA compound concentration levels which exceeded the Tier 1 soil ROs for the outdoor inhalation exposure route for residential, industrial/commercial and construction worker land use settings.

Tier 1 Soil Evaluation Conclusions

The Tier 1 soil evaluation indicates that none of the 21 confirmation soil samples contained BETX, MTBE and PNA compound concentration levels in excess of an applicable Tier 1 soil RO.

Accordingly, REL, on behalf of Kroger Limited Partnership I, respectfully requests that the IEPA issue an NFR Letter in response to LUST release incident number 20190006.

4. **Site map meeting the requirements of 35 IAC 732.110(a) or 734.440 and including sample locations;**

Site maps illustrating the site and adjacent properties and sample locations and meeting the requirements of 35 IAC 734.440 are provided as **Figures 2 in Appendix B and Figure 7 in Appendix E.**

5. **Soil boring logs;**

Not applicable. As of the date of preparation of this *45-Day Report*, no soil borings have been advanced on-site in response to the LUST release incident.

6. **Chain-of-custody forms;**

A Chain-of-custody form for the confirmation soil samples is included with the laboratory analytical testing reports and laboratory certification form in **Appendix E.**

7. **Laboratory analytical reports;**

Laboratory analytical testing reports for the confirmation soil samples are included with the chain-of-custody form and laboratory certification form in **Appendix E.**

8. **Laboratory certifications;**

A laboratory certification form for the confirmation soil samples is included with the laboratory analytical testing reports and chain-of-custody form in **Appendix E.**

9. **A copy of the Office of the State Fire Marshal Permit for Removal, Abandonment-In-Place or other OSFM permits or notifications;**

On Thursday, January 3, 2019, Tanks 6, 7 and 8 were removed from the ground at the site under OSFM Permit # 02003-2018REM. A copy of the OSFM removal permit is included in **Appendix F.**

10. A narrative of tank removal and cleaning operations; describe how wastes generated during the tank removal were managed, treated and disposed of;

On Wednesday, January 2, 2019 and Thursday, January 3, 2019, IOME disconnected the product piping from the tanks and removed the cover material to expose the tanks within the excavations for accessing, degassing and final cleaning. The buried product piping and vent pipes above the tanks were removed during the tank removal activities.

In order to prepare the USTs for removal, the tanks were purged of flammable vapors by the use of forced air educators. After the tanks were purged, the vapor space of the tanks was tested with a combustible gas indicator meter. The combustible gas indicator provided readings as a percentage of the LEL of the vapors present within the atmosphere of the tanks. Upon verification that the LEL reading in Tanks 6, 7 and 8 were below 5%, the USTs were removed and placed on ground surface for final cleaning. Upon staging of each UST on surface grade, the vapor concentrations and oxygen levels within each tank were continually monitored with a combustible gas indicator meter. Upon verification that the tank atmosphere was free of flammable vapors and readings were below 5% of the LEL, the tanks were accessed for cleaning and inspection. Holes were cut in the ends of each of the steel tanks by cold cutting techniques for cleaning. The tanks were then inspected by the removal contractor and the OSFM STSS for signs of corrosion, holes or voids. The USTs appeared to be in good condition with no holes observed on the interior or exterior tank surfaces.

After completion of the tank cleaning activities, the former tanks were placed into a roll-off box for off-site disposal.

11. Photographs of UST removal activities and the excavation; and

Photographs taken by the REL Senior Project Scientist during the UST removal activities are included as Figure 5 in Appendix D.

12. Copies of manifests for soil and groundwater transported off-site.

Not applicable. No soil or groundwater was transported off-site.

F. EARLY ACTION TIER 1 REMEDIATION OBJECTIVES COMPLIANCE REPORT

If the most stringent Tier 1 ROs of 35 IAC Part 742 for the applicable indicator contaminants have been met and a groundwater investigation is not required, in addition to the information provided above, provide the following:

1. Site Characterization;

As described in previous sections of this report, REL, upon completion of the UST removal activities, collected confirmation soil samples from the outer limits of the UST excavation zone in accordance with 35 IAC 734.210(h). A total of 21 confirmation soil samples were submitted to the PACE laboratory for analytical testing for BETX, MTBE and PNA compounds. The results of the analytical testing indicated that none of the 21 confirmation soil samples contained BETX, MTBE and PNA compound concentration levels in excess of the Tier 1 soil ROs.

The laboratory analytical test results for the 21 confirmation soil samples are summarized in Table 2 in Appendix E and the Tier 1 soil ROs for each of the 3 routes of exposure are summarized in Table 3 in Appendix E.

REL Project #18-R1114
45-Day Report
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Decatur / Kroger #J250 (Kroger Limited Partnership I)
855 N. Fairview Avenue
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Page 13

Laboratory analytical testing reports, chain-of-custody forms and a laboratory certification form for the 21 confirmation soil samples collected from the UST excavation zone are included in Appendix D.

2. If water was encountered in the excavation, provide a demonstration pursuant to 35 IAC 732.202(h)(4)(C) or 734.210(h)(4)(C) that it is not representative of actual groundwater; and

The REL Licensed Professional Engineer has determined that a groundwater investigation was not necessary as infiltration of groundwater into the UST excavation zone was not observed during the UST removal activities.

3. **Property Owner Summary (form LPC 568).**

A completed Property Owner Summary form is included with the submittal of this *45-Day Report* to IEPA.

REL Project #18-R1114
45-Day Report
LPC #1150150080 – Macon County
Decatur / Kroger #J250 (Kroger Limited Partnership I)
855 N. Fairview Avenue
LUST Release Incident No. 20190006

APPENDIX A:
IEPA 45-Day Report Form
Licensed Professional Engineer Certification

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IEPA/BOL



Illinois Environmental Protection Agency

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

The Agency is authorized to require this information under Section 4 and Title XVI of the Environmental Protection Act (415 ILCS 5/4, 5/57 – 57.17). Failure to disclose this information may result in a civil penalty of not to exceed \$50,000.00 for the violation and an additional civil penalty of not to exceed \$10,000.00 for each day during which the violation continues (415 ILCS 5/42). Any person who knowingly makes a false material statement or representation, orally or in writing, in any label, manifest, record, report, permit, or license, or other document filed, maintained or used for the purpose of compliance with Title XVI commits a Class 4 felony. Any second or subsequent offense after conviction hereunder is a Class 3 felony (415 ILCS 5/44 and 57.17). This form has been approved by the Forms Management Center.

Leaking Underground Storage Tank Program 45-Day Report

A. Site Identification

IEMA Incident # (6- or 8-digit): 20190006

IEPA LPC# (10-digit): 1150150080

Site Name: Kroger #J250 (Kroger Limited Partnership 1)

Site Address (Not a P.O. Box): 855 N. Fairview Avenue

City: Decatur, Illinois

County: Macon

Zip Code: 62522

MAR 18 2019

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B. Release Information

UST Volume (gallons)	Material Stored in UST	Release Yes / No	Type of Release Tank Leak / Overfill / Piping Leak	Product Removed? Yes / No	Tank Status Repaired / Removed / Abandoned / In Use
20000	Unleaded gasoline	No			Removed
10000	Diesel fuel	No			Removed
8000	Unleaded gasoline	No			Removed

C. Early Action

- Does this report demonstrate that the most stringent Tier 1 remediation objectives have been met? ☒ Yes ☐ No
- Was free product encountered?
If yes, the owner or operator must submit a Free Product Removal Report (form LPC 504).
If free product removal will be conducted for more than 45 days, a Free Product Removal Plan (and budget, if applicable) must be submitted (form LPC 504). ☐ Yes ☒ No
- Have any fire or safety hazards posed by vapors or free product or contamination to a potable water supply been identified? ☐ Yes ☒ No
- What was the volume of backfill material excavated? 0 Yards³

5. What was the volume of native soil excavated? 0 Yards³

6. Was groundwater encountered at the site? ☐ Yes ☒ No

7. Did the groundwater exhibit a sheen? ☐ Yes ☒ No

D. Site/Release Information

Provide the following:

1. Data on the nature and estimated quantity of release;
2. Data from available sources or site investigations concerning the following factors:
 - a. Surrounding populations;
 - b. Water quality;
 - c. Use and approximate locations of wells potentially affected by the release;
 - d. Subsurface soil conditions;
 - e. Location of subsurface sewers;
 - f. Climatological conditions; and
 - g. Land use;
3. A discussion of what was done to measure for the presence of a release where contamination was most likely to be present at the UST site;
4. The results of the free product investigations;
5. A discussion of the action taken to prevent further release of the regulated substance into the environment;
6. A discussion of the action taken to monitor and mitigate fire and safety hazards posed by vapors or free product that has migrated from the UST excavation zone and entered subsurface structures; and
7. Any other information collected while performing initial abatement measures pursuant to 35 Ill. Adm. Code 731.162 or 734.210(b).

E. Other Information

Provide the following:

1. An area map showing the site in relation to surrounding properties;
2. A cross section, to scale, showing the UST(s) and the excavation;
3. Analytical/screening results in tabular format including the results of soil samples required pursuant to 35 Ill. Adm. Code 734.210(h) and the most stringent Tier 1 remediation objectives;
4. Site map meeting the requirements of 35 Ill. Adm. Code 734.440 and including sample locations;
5. Soil boring logs;
6. Chain of custody forms;
7. Laboratory analytical reports;
8. Laboratory certifications;
9. A copy of the Office of the State Fire Marshal Permit for Removal, Abandonment-in-Place, or other OSFM permits or notifications;

10. A narrative of tank removal and cleaning operations; describe how wastes generated during the tank removal were managed, treated, and disposed of;
11. Photographs of UST removal activities and the excavation; and
12. Copies of manifests for soil and groundwater transported off-site.

F. Early Action Tier 1 Remediation Objectives Compliance Report

If the most stringent Tier 1 remediation objectives of 35 Ill. Adm. Code 742 for the applicable indicator contaminants have been met and a groundwater investigation is not required, in addition to the information provided above, provide the following:

1. Site characterization;
2. If water was encountered in the excavation, provide a demonstration pursuant to 35 Ill. Adm. Code 734.210(h)(4)(C) that it is not representative of actual groundwater; and
3. Property Owner Summary (form LPC 568).

G. Signatures

UST Owner or Operator Signature:

All plans, budgets, and reports must be signed by the owner or operator and list the owner's or operator's full name, address, and telephone number.

UST Owner or Operator and Licensed Professional Engineer or Licensed Professional Geologist Certification of Stage 1 Site Investigation Plan and Budget (applies to Part 734 sites continuing beyond early action):

Pursuant to 35 Ill. Adm. Code 734.315(b) and 734.310(b), I certify that the Stage 1 site investigation will be conducted in accordance with 35 Ill. Adm. Code 734.315 and that the costs of the Stage 1 site investigation will not exceed the amounts set forth in 35 Ill. Adm. Code 734. Subpart H, Appendix D, and Appendix E. This certification is intended to meet the requirements for a plan and budget for the Stage 1 site investigation required to be submitted pursuant to 35 Ill. Adm. Code 734.315 and 734.310.

Continue onto next page.

Licensed Professional Engineer or Licensed Professional Geologist Certification:

I certify under penalty of law that all activities that are the subject of this plan, budget, or report were conducted under my supervision or were conducted under the supervision of another Licensed Professional Engineer or Licensed Professional Geologist and reviewed by me; that this plan, budget, or report and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in this plan, budget, or report has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 731, 732, or 734, and generally accepted standards and practices of my profession; and that the information presented is accurate and complete. I am aware there are significant penalties for submitting false statements or representations to the Illinois EPA, including but not limited to fines, imprisonment, or both as provided in Sections 44 and 57.17 of the Environmental Protection Act [415 ILCS 5/44 and 57.17].

UST Owner or Operator

Name Kroger Limited Partnership 1

Contact Mr. Joe Linville

Address 5960 Castle Way Drive

City Indianapolis

State Indiana

Zip Code 46250

Phone 317.649.3543

Signature [REDACTED]

Date 2/25/19

Consultant

Company Robinson Engineering, Ltd.

Contact Mr. Karl F. Newman, PG

Address PO Box 7408

City Champaign

State Illinois

Zip Code 61826-7408

Phone 217.530.4084

E-mail: knewman@reltd.com

Signature [REDACTED]

Date 2/13/2019

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IEPA/BOL

L.P.E. or L.P.G. Seal

Licensed Professional Engineer or Geologist

Name Mr. Karl F. Newman, PG

Company Robinson Engineering, Ltd.

Address PO Box 7408

City Champaign

State Illinois

Zip Code 61826-7408

Phone 217.530.4084

Ill. Registration No. 196.000152

License Expiration Date 03/31/2021

Signature [REDACTED]

Date 2/13/2019





Illinois Environmental Protection Agency

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The Agency is authorized to require this information under Section 4 and Title XVI of the Environmental Protection Act (415 ILCS 5/4, 5/57 – 57.17). Failure to disclose this information may result in a civil penalty of not to exceed \$50,000.00 for the violation and an additional civil penalty of not to exceed \$10,000.00 for each day during which the violation continues (415 ILCS 5/42). Any person who knowingly makes a false material statement or representation, orally or in writing, in any label, manifest, record, report, permit, or license, or other document filed, maintained or used for the purpose of compliance with Title XVI commits a Class 4 felony. Any second or subsequent offense after conviction hereunder is a Class 3 felony (415 ILCS 5/44 and 57.17). This form has been approved by the Forms Management Center.

Leaking Underground Storage Tank Program Licensed Professional Engineer Certification

A. Site Identification

IEMA Incident # (6- or 8-digit): 20190006

IEPA LPC# (10-digit): 1150150080

Site Name: Kroger #J250 (Kroger Limited Partnership I)

Site Address (Not a P.O. Box): 855 N. Fairview Avenue

City: Decatur, Illinois

County: Macon

ZIP Code: 62522

Leaking UST Technical File

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B. Certification

I certify under penalty of law that all activities that are the subject of this plan, budget, or report were conducted under my supervision or were conducted under the supervision of another Licensed Professional Engineer or Licensed Professional Geologist and reviewed by me; that this plan, budget, or report and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in this plan, budget, or report has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 731, 732, or 734, and generally accepted standards and practices of my profession; and that the information presented is accurate and complete. I am aware there are significant penalties for submitting false statements or representations to the Illinois EPA, including but not limited to fines, imprisonment, or both as provided in Sections 44 and 57.17 of the Environmental Protection Act [415 ILCS 5/44 and 57.17].

IEPA/BOL

Licensed Professional Engineer

L.P.E. Seal

Name Mr. Steven G. Zehner, PE

Company Robinson Engineering, Ltd.

Address 26575 W. Commerce Drive, Suite 212

City Volo

State Illinois

Zip Code 60073

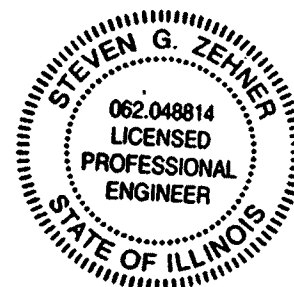
Phone 815.412.2011

Ill. Registration No. 062.048814

License Expiration Date 11/30/2019

Signature [Redacted]

Date 2/13/2019



REL Project #18-R1114
45-Day Report
LPC #1150150080 – Macon County
Decatur / Kroger #J250 (Kroger Limited Partnership I)
855 N. Fairview Avenue
LUST Release Incident No. 20190006

APPENDIX B:

Figure 1: Site Vicinity Map

Figure 2: Aerial Site Map

Figure 3: ISGS Circular No. 532 Map

Key to ISGS Circular No. 532 Map

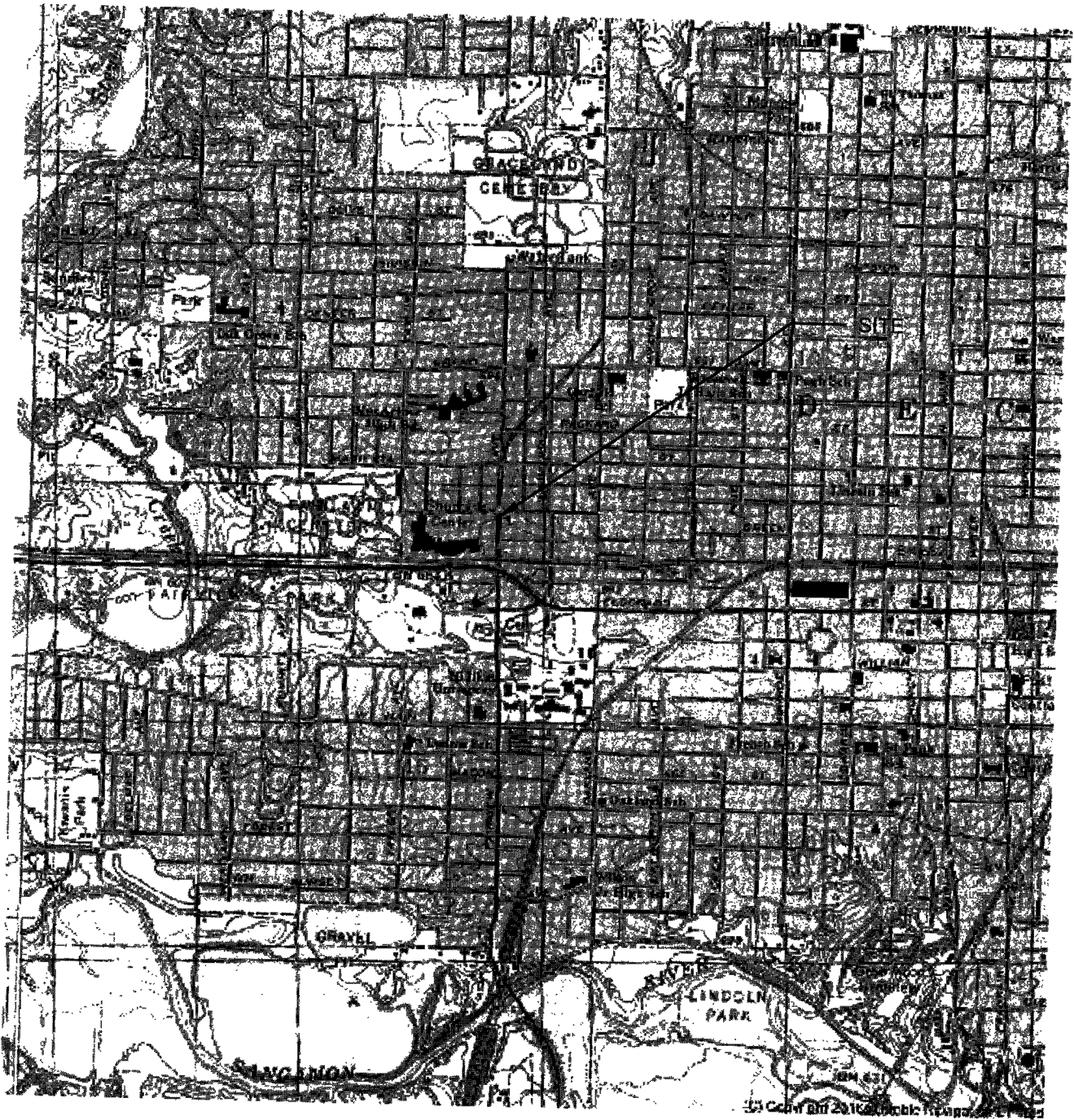
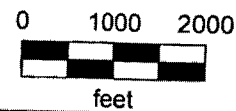


Diagram is a reproduction of a portion of the Decatur, Illinois and Harristown, Illinois 7.5 minute Quadrangle Maps.



North
Scale 1" = 2000'



FIGURE 1: SITE VICINITY MAP
Kroger #J250
855 N. Fairview Avenue
Decatur, Macon County, Illinois

PROJECT NO: 18-R1114

DATE: 02/2019

18-R1114-FIG-1



Diagram is a reproduction of a portion of a Macon County GIS online map.

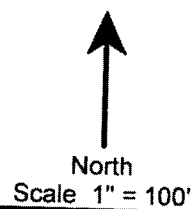
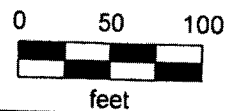


FIGURE 2: AERIAL SITE MAP
Kroger #J250
855 N. Fairview Avenue
Decatur, Macon County, Illinois

PROJECT NO: 18-R1114

DATE: 02/2019

18-R1114-FIG-2

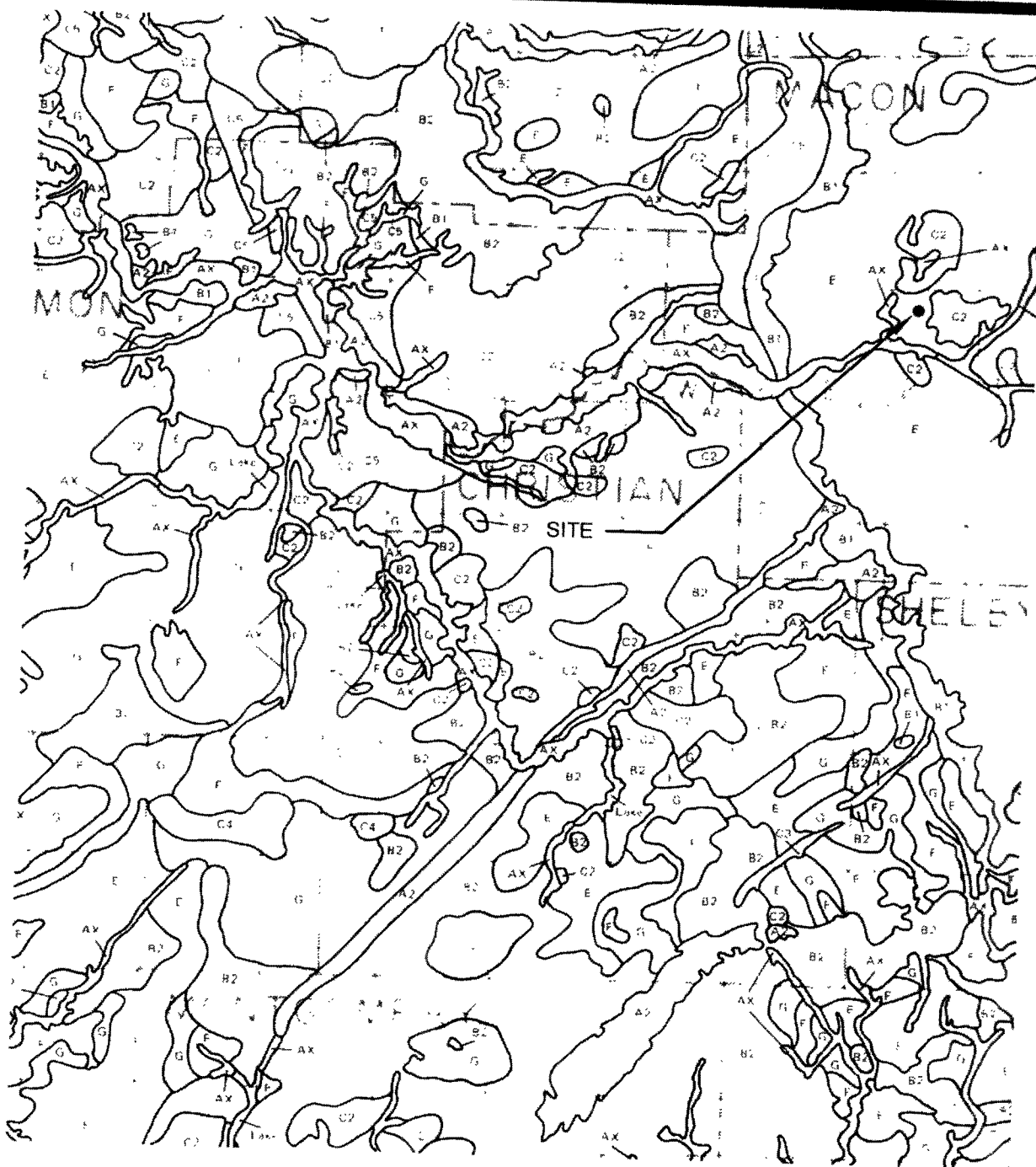


Diagram is a reproduction of a portion of Illinois
State Geological Survey Circular No. 532 Map.



North
Scale 1" = ~8 mi.



FIGURE 3: ISGS CIRCULAR NO. 532 MAP
Kroger #J250
855 N. Fairview Avenue
Decatur, Macon County, Illinois

PROJECT NO: 18-R1114

DATE: 02/2019

18-R1114-FIG-3

KEY TO ISGS CIRCULAR NO. 532 **"Potential for Contamination of Shallow Aquifers in Illinois"**

Potential for aquifer contamination increasing

A1	20 50	Permeable bedrock at or within 20 feet of land surface, variable overlying materials
A2	20 50	Thick, permeable sand and gravel within 20 ft of land surface.
A3	20 50	Permeable bedrock generally within 20 ft of land surface; where deeper, sand and gravel may be present.
A4	20 50	Cemented sandstone within 20 ft of land surface; variable, relatively impermeable overlying materials.
A5	20 50	Permeable bedrock generally within 20 ft of land surface; overlying materials variable but mostly till.
AX	20 50	Alluvium, a mixture of gravel, sand, silt, and clay along streams, variable in composition and thickness.
B1	20 50	Sand and gravel less than 20 ft thick over relatively impermeable till or bedrock.
B2	20 50	Sand and gravel, within 20 ft of surface, overlain and underlain by relatively impermeable till, other fine-grained material, and/or bedrock.
BX		Map complex of permeable bedrock on ridges, underlain primarily by shale on slopes and valleys.
C1	20 50	Permeable bedrock within 20 to 50 ft of surface, overlain by till or other fine-grained material.
C2	20 50	Sand and gravel within 20 to 50 ft of surface, overlain and underlain by relatively impermeable till, other fine-grained material, and/or bedrock.
C3	20 50	Permeable bedrock, mostly within 20 to 50 ft of surface, overlain by till or other fine-grained materials; bedrock surface below 50 ft in places.
C4	20 50	Cemented sandstone, within 20 to 50 ft of surface, overlain by relatively impermeable till or other fine-grained materials.
C5	20 50	Predominantly till with discontinuous sand and gravel locally present within 50 ft of land surface.
D	20 50	Uniform, relatively impermeable sandy till at least 50 ft thick; no evidence of interbedded sand and gravel.
E	20 50	Uniform, relatively impermeable silty or clayey till at least 50 ft thick; no evidence of interbedded sand and gravel.
F	20 50	Relatively impermeable bedrock within 20 ft of surface, mostly overlain by till or other fine-grained materials.
G	20 50	Relatively impermeable bedrock within 20 to 50 ft of surface, overlain by till or other fine-grained materials.

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Decatur / Kroger #J250 (Kroger Limited Partnership I)
855 N. Fairview Avenue
LUST Release Incident No. 20190006

APPENDIX C:

Figure 4: Water Well Location Diagram

Table 1: List of Wells

IEPA ArcGIS Web Map

ISGS ILWATER Map

Water Well Data Sheets

IEPA Source Water Assessment Program Factsheet – Aledo

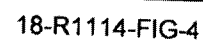


TABLE 1

LIST OF WATER WELLS WITHIN 2,500 FEET OF UST BASIN

Kroger #J250
855 N. Fairview Avenue
Decatur, Macon County, Illinois
LUST Release Incident No. 20190006
REL Project #18-R1114

1

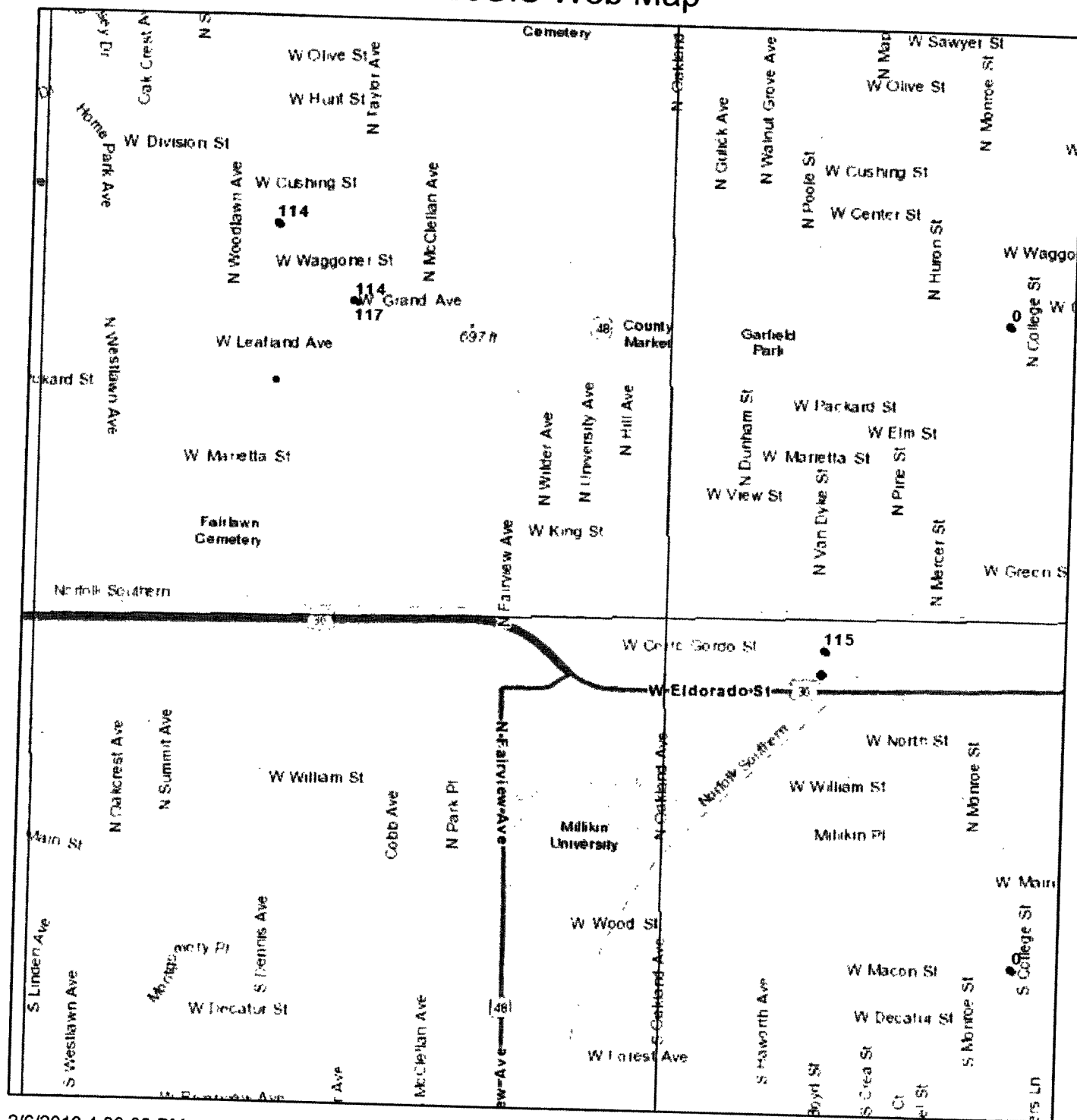


Location: Township 12 North, Range 2 East, Section 9

Distance from former UST Basin to setback: $\geq$ N/A feet.

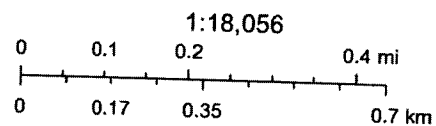
Well Owner	Driller	Date Installed	Depth	Setback
No wells	-	-	-	-

ArcGIS Web Map

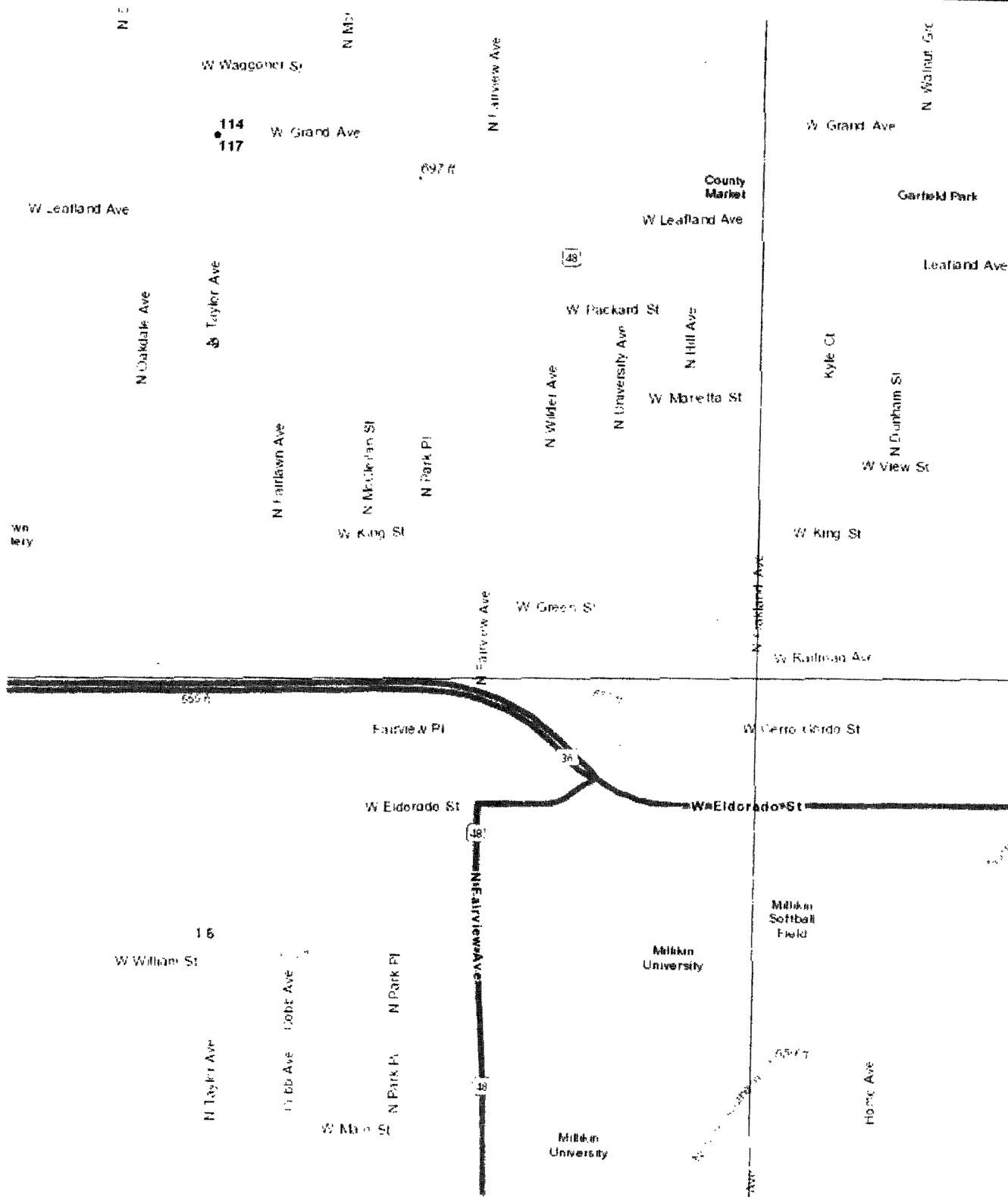


2/6/2019 4:33:03 PM

- Water and Related Wells
 - Water
 - Dry
 - Engineering
 - Stratigraphic
 - Observation
- Mineral Test
- Outcrop
- Mine-related
- Hazardous Waste or Leaking Tank
- Labels - Total Depth



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community, Illinois State



ILLINOIS STATE
GEOLOGICAL SURVEY
PRAIRIE RESEARCH INSTITUTE

My Map Title

Date: Feb 06, 2019





Illinois EPA FOIA Exemption Reference Sheet

SID: 68781

Agency ID: 170000677499

Media File Type: LAND

Bureau ID: 1150150080

Site Name: Kroger Ltd Ptnshp 1

Site Address1: 855 N Fairview

Site Address2:

Site City: Decatur

State: IL

Zip: 62522-

**This record has been determined to
be partially or wholly exempt from
public disclosure**

Exemption Type:

Redaction

Exempt Doc #: 1

Document Date: 3 /18/2019

Staff: SAB

Document Description: 45-DAY REPORT

Category ID: 21A

Category Description: LEAKING UST TECHNICAL

Permit ID: 20190006

Exempt Type: Redaction

Date of Determination:

5 /1 /2019

Domestic Wells Database

Domestic Wells Database

Records for Macon county, 16N township, 02E range, 09 section.

Well ID	Plot	Depth	Record Type	Well Use	Well Type	Aquifer Type	Driller	Date Drilled	Static Level	Pumping Level	Pumping GPM	Pumping Hours	ISGS No.
88122		118	RG	DO	~	~	LENTZ	04/07/1944					
Owner: [REDACTED]													
88123		123	RG	DO	~	~	LEONARD NEWBERRY	06/20/1946					
Owner: [REDACTED]													
88124		79	RG	DO	~	~	LENTZ	06/30/1949					
Owner: [REDACTED]													
88126	7D	60	RG	DO	~	~		03/20/1934					
Owner: [REDACTED]													
428583		130	R	DO	NR	NR	LENTZ	04/24/2000					
Owner: [REDACTED]													

[Search for a different Section](#)

If this page does not print correctly, change your browser's layout mode to landscape.

Please view our [Data Disclaimer](#), [Water Well Records Policies and Procedures](#), and [Plot Location System](#).

Column headings link to data explanations.

[DWD Home](#) | [Meta Data](#) | [Location System](#) | [Disclaimer](#) | [Contact Us](#) | [Help](#) | [Domestic Wells Database Home](#)

Illinois State Water Survey

2204 Griffith Dr., MC-674
Champaign, IL 61820-7463
217-244-5459
[Email us](#)

Email the [Web Administrator](#) with questions or comments.

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IEPA
DIVISION OF RECORDS MANAGEMENT
EXEMPT IN PART

MAY 01 2019

REVIEWER: SAB

Domestic Wells Database

Domestic Wells Database

Records for Macon county, 16N township, 02E range, 10 section.

Well ID	Plot	Depth	Record Type	Well Use	Well Type	Aquifer Type	Driller	Date Drilled	Static Level	Pumping Level	Pumping GPM	Pumping Hours	ISGS No.
428526	1E	33	O	DO	DU	UN	-	//					
Owner: [REDACTED]													

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Domestic Wells Database

Domestic Wells Database

Records for Macon county, 16N township, 02E range, 15 section.

Well ID	Plot	Depth	Record Type	Well Use	Well Type	Aquifer Type	Driller	Date Drilled	Static Level	Pumping Level	Pumping GPM	Pumping Hours	ISGS No.
89841		29	RG	DO	~	~	LUTHER BURT	03/ /1927					
Owner: Decatur Masonic Temple 1													
89842		32	RG	DO	~	~	LUTHER BURT	03/ /1927					
Owner: Decatur Masonic Temple 2													
89843		36	RG	DO	~	~	LUTHER BURT	03/ /1927					
Owner: Decatur Masonic Temple 3													
89844		32	RG	DO	~	~	LUTHER BURT	03/ /1927					
Owner: Decatur Masonic Temple 4													
89845		40	RG	DO	~	~	LUTHER BURT	03/ /1927					
Owner: Decatur Masonic Temple 5													
89846		30	RG	DO	~	~	LUTHER BURT	03/ /1927					
Owner: Decatur Masonic Temple 6													
89847		35	RG	DO	~	~	LUTHER BURT	03/ /1927					
Owner: Decatur Masonic Temple 7													
89848		34	RG	DO	~	~	LUTHER BURT	03/ /1927					
Owner: Decatur Masonic Temple 8													
89849		35	RG	DO	~	~	LUTHER BURT	03/ /1927					
Owner: Decatur Masonic Temple 9													
89850		35	RG	DO	~	~	LUTHER BURT	03/ /1927					
Owner: Decatur Masonic Temple 10													
89851		35	RG	DO	~	~	LUTHER BURT	03/ /1927					
Owner: Decatur Masonic Temple 11													
428524	8A	27	OG	DO	BD	UN		1911					
Owner: [REDACTED]													
428531	3C	93	C	DO	BD	UN		//					
Owner: Chas Powers													
439287		100	RG	DO	DL	UN			33	49	80	3	

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							BRUCE MASHBURN	05/30/1987					21924
Owner: [REDACTED]													
439288		94	OG	DO	NR	UN		//					00255
Owner: [REDACTED]													

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Domestic Wells Database

Domestic Wells Database

Records for Macon county, 16N township, 02E range, 16 section.

Well ID	Plot	Depth	Record Type	Well Use	Well Type	Aquifer Type	Driller	Date Drilled	Static Level	Pumping Level	Pumping GPM	Pumping Hours	ISGS No.
88133	6D	220	G	DO	~	DH	R R BURT	12/ /1928					
Owner: [REDACTED]													
88134	6H	93	RG	DO	~	UN	HAROLD L SMITH	1958					00628
Owner: [REDACTED]													
428522	3E	35	OG	DO	DU	UN		//					
Owner: [REDACTED]													
428549	2E	35	OC	DO	BD	NR		//					
Owner: [REDACTED]													

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Source Water Assessment Program Factsheets

Select Water System Type	
Community	
Select County	
Macon	
Search County	
-- Or --	
Enter any part of a Facility Name	
Search Facility Name	
Search Results	
DECATUR	
Select Water System	

To view a summary version of the completed Source Water Assessments, you may search our records by county or public water supply name. This summary information describes pertinent sub-sections of each completed assessment including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts. However, summaries of Source Water Protection Efforts have not been documented for non-community water supplies. It should be noted that these Source Water Assessment summaries are presented in strict compliance with Illinois EPA's security policy on the release of sensitive information. Therefore, all locational data and maps pertaining to wells, aquifers and/or surface water intakes have been removed. To obtain a complete version of the Source Water Assessment Report, please contact your local water supply officials.

Water Percentages:

Surface Water %	Surface Water Purchase %	Ground Water %	Ground Water Purchase %	Ground Water UDI %	Ground Water UDI Purchase %
100.00	0.00	0.00	0.00	0.00	0.00

Importance Of Source Water:

Drinking water for the City of Decatur, Illinois (Facility No. 1150150) is supplied by the Decatur community water supply (CWS). Lake Decatur and ten groundwater wells, serve as the source of this drinking water. Combined pumpage from the two surface water intakes (IEPA #45004 and #00122) and the wells exceeds 37.5 million gallons per day, providing water to approximately 34,000 service connections and an estimated population of 87,000 people. Connected facilities that purchase all their water from Decatur include the Village of Mt. Zion (1150350).

Well Data For This Facility:

Well ID	Well Description	Status	Depth	Minimum Setback	Pumpage	Aquifer Code	Aquifer Description	Max Zone
WL00953	WELL 3 (00953) EMERGENCY	A	339.00	200	108000	0101	Sand & Gravel	0
WL00954	WELL 4 (00954) EMERGENCY	A	340.00	200	108000	0101	Sand & Gravel	0
WL00955	WELL 5 (00955) EMERGENCY	A	316.00	200	108000	0101	Sand & Gravel	0
WL00956	WELL 6 (00956) EMERGENCY	A	335.00	200	108000	0101	Sand & Gravel	0
WL00957	WELL 7 (00957) EMERGENCY	A	349.00	200	108000	0101	Sand & Gravel	0
WL00958	WELL 8 (00958) EMERGENCY	A	340.00	200	108000	0101	Sand & Gravel	0
WL00959	WELL 9 (00959) EMERGENCY	A	332.00	200	50760000	0101	Sand & Gravel	0

WL00960	WELL 10 (00960) EMERGENCY	A	320.00	200	108000	0101	Sand & Gravel	0
WL01998	LAKE DECATUR WELL 1 (01998)	P	71.00					0
WL01999	WELL 2 (01999)	P	90.00	400		0101		0
WL02003	LAKE DECATUR WELL 3 (02003)	P	71.00					0
WL02004	LAKE DECATUR WELL 4 (02004)	P	65.00					0
WL45005	WELL 1 (45005) EMERGENCY	A	244.00	200	5938800	1010	Sand & Gravel	0
WL45006	WELL 2 (45006) EMERGENCY	A	255.00	200	44179200	1010	Sand & Gravel	0

Intake Details:

Intake ID	Source	Description	Watershed ID	Stream Segment ID	Lake Name
IN00122		INTAKE (00122) NORTH INTAKE DISCONNECTED			
IN02000		CITY WATER MINE			
IN02001		LAKE TOKOROZAWA			
IN02002		SANGAMON RIVER REACH (WW EFF)			
IN45004		INTAKE (45004) SOUTH INTAKE			

Source Water Quality:

Results from Illinois EPA's 2000 Ambient Lakes Monitoring Program indicate the untreated raw water from Lake Decatur has had detections of the pesticide compound atrazine ranging from 0.4 to 1.1 parts per billion (ppb). Atrazine is a widely used selective herbicide for control of broadleaf and grassy weeds in crops such as corn. Atrazine is fairly persistent and highly mobile in soils and water. (As a result, atrazine is often found in surface waters, and in some cases groundwater, in areas where it is used extensively.) In addition, the Lake had low level (less than 1 ppb) detections of the pesticide compounds endrin and metolachlor. These are also broadleaf herbicides, frequently used in conjunction with atrazine. The supply uses carbon slurry in its treatment process to reduce levels of pesticides in the finished water. Lake Decatur also has a history of nitrate detections over the drinking water standard, set at 10 parts per million (ppm). Results from Illinois EPA's 2000 Ambient Lakes Monitoring Program show levels between 1.0 and 2.0 ppm. In general, all other inorganic parameters meet Public and Food Processing Water Supply Standards. These standards apply to Waters of the State at the point of withdrawal for treatment and distribution. Waters not attaining water quality standards with technology-based controls alone (e.g. water quality limited) must be identified in accordance with Section 303(d) of the Federal Clean Water Act (CWA). Water body segments (streams) within these watersheds are included on the 303(d) list. For information pertaining to the water bodies or watershed discussed in this fact sheet, refer to the CWA Section 303(d) list: Illinois' submittal for 1998. Information pertaining to this program, designated stream segments and the 303(d) document can be obtained by contacting the Watershed Management Section of the Bureau of Water (IEPA) at 217/782-3362. Decatur Wells #1, and #2 were sampled in 1987 as part of Illinois EPA's Statewide Groundwater Monitoring Network for inorganic chemicals (IOC) and volatile organic compounds (VOC). VOC results did not indicate the presence of any volatile organic compounds. IOC analysis indicates parameters are consistent with other sand and gravel wells in central Illinois.

Finished Water Quality:

Finished water quality data is available at U.S. EPA's website <http://www.epa.gov/>. This data includes tables of monitored parameters and any contaminants detected, including any health advisory information, drinking water standards, or maximum contaminant levels (MCLs). This data may also be found in the Consumer Confidence Report provided by the Decatur CWS to its customers.

Potential Sources Of Contamination:

The phrase potential source is expressly used here to describe sources existing in possibility or having the capability of becoming a source of contamination. The term point source is used to distinguish it from the term nonpoint source. Figure 1 shows the locations of known potential point sources of contamination within the Lake Decatur Watershed. The names of potential point sources of contamination identified in Figure 1 are listed in Table I. The sites listed in Table I are considered potential sources of contamination due to: the nature of the activity; the availability of data in electronic databases; and their geographic proximity to the source water protection area. These are divided into seven different types that are classified by the following abbreviations: CERCL = Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site; CU = cleanup (sites that are actively doing cleanups); LF = landfill; NPDES = National Pollutant Discharge Elimination System discharge point; RCRA = Resource Conservation and Recovery Act site; LU = Leaking Underground Storage Tank (sites with leaking underground storage tanks that have not received a No Further Remediation letter); and TRI = Toxic Release Inventory site (a site that has had a toxic release to a receiving stream or publicly owned treatment works). Figures 1a and 1b shows potential sources of contamination located proximate to the Decatur CWS wells. These sources were located by Illinois EPA, or Illinois Rural Water Association field personnel. No sites were located within 1,500 feet of the Decatur wells.

Figure 2 illustrates the land cover within the watershed, indicating areas that may contribute to nonpoint source pollution. Nonpoint source pollution is the diffuse, intermittent runoff of pollutants from various sources. Precipitation moving over and through the ground picks up pollutants from these sources and carries them into rivers, lakes, and groundwater. Major activities that contribute to Illinois' nonpoint source pollution problems are agriculture, construction erosion, urban runoff, hydrologic modifications, and resource extraction activities. Within the 587,950-acre watershed, the percent of land cover is composed of: 80% agricultural, 2% urban, 1% transportation, 15% forest/grasslands, and 3% water/wetlands. Figure 3 shows past and present mining activities within the Lake Decatur Watershed, focusing on the area around the Lake itself.

A major concern for the above watershed is the nutrient loading and other effects due to agricultural activities and other nonpoint sources of pollution. Potential nonpoint source contaminants of concern include waterborne pathogens such as Cryptosporidia, Leptospira, E. coli, Giardia, and fecal coliform, as well as nitrogen and herbicides such as atrazine. Cryptosporidia and Leptospira are single cell disease causing parasites that live in wildlife, livestock and domestic animals. If these animals live near bodies of water they may serve as carriers of these parasites. Figure 4 shows estimated wildlife and livestock density information for relevant counties in the watershed. Livestock densities are based on actual numbers of cattle, hogs, sheep, goats and horses per county; wildlife densities are based on the estimated number of whitetail deer per county. Due to their ability to adapt to different environments, whitetail deer are a good indicator of wildlife density on a countywide level. See <http://www.epa.gov/ogwdw/> for more information on Cryptosporidia. Figure 5 shows estimated nitrogen usage in tons per square mile. Figure 6 shows estimated atrazine usage in the watershed area, illustrated in pounds per square mile. Maps and tables are not available in the Visually Impaired Accessible version. However, the information presented in the maps and tables is summarized within the text sections of this fact sheet.

Table I

MAP ID	SITE NAME	SOURCE CLASS
1	PEOPLES GAS LIGHT & COKE CO.	LU
2	HA STUEHM INC.	LU
3	TAYLOR, JACQUELINE	LU
4	SUPER PANTRY #07	LU
5	FLESSNER TRUCK EQUIPMENT	LU
6	CLIFTON MOVERS	LU
7	CARADCO CO.	LU
8	CARADCO CO.	LU
9	WESTRAY AMOCO SERVICE	LU
10	EMRO MARKETING	LU
11	ILLINOIS BELL TELEPHONE	LU
12	HARRISON'S AUTO REPAIR	LU
13	CRAIG'S SUNOCO	LU
14	AE STALEY	LU
15	AE STALEY	LU
16	D&R WELDING SUPPLY	LU
17	SHELL OIL CO.	LU
18	SMITH & SONS AMOCO	LU
19	DECATUR PARK DIST.	LU
20	DECATUR PARK DIST.	LU
21	NORCO FUELS SERVICE STATION	LU
22	NORFOLK & WESTERN RAILWAY	LU
23	ADM WEST PLANT	LU
24	DECATUR, CITY OF	LU
25	ST. MARY'S HOSPITAL	LU
26	ARCHER DANIELS MIDLAND	LU
27	ARCHER DANIELS MIDLAND	LU
28	ARCHER DANIELS MIDLAND	LU
29	SPEEDWAY SUPERAMERICA	LU
30	ADM RENOVATIONS	LU
31	BAGLEY REALTORS	LU
32	BILLINGSLEY AMOCO SERVICE #8550	LU
33	BILLINGSLEY'S AMOCO FOOD SHOP #5088	LU
34	MUELLER GARAGE	LU
35	DECATUR, CITY OF	LU
36	ROBY, DENNIS	LU
37	CONTINENTAL BAKING CO.	LU
38	DECATUR AVIATION	LU
39	CONTINENTAL CARBONIC	LU
40	DECATUR, CITY OF	LU
41	WARECO SERVICE INC.	LU
42	HARMON, WILLIAM	LU
43	LOGAN, ROBERT	LU
44	SPEED LUBE, INC.	LU
45	MT. ZION RD. DIST.	LU
46	MT. ZION, VILLAGE OF	LU
47	NIANTIC OIL CO.	LU
48	PIATT COUNTY SERVICE CO.	LU
49	PRAIRIE PAINT & ADHESIVES	CERCL
50	ADM CORN SWEETENERS DIVISION ALCOHOL PLANT	CERCL
51	A.E. STALEY MANUFACTURING, COMPANY	CERCL
52	BORG-WARNER CORP MARV SCHEB TILLOTSN DIV	CERCL
53	FLO-CON NORTH	CU
54	MID-AMERICA SAND & GRAVEL	CU
55	CARADCO	CU
56	NORFOLK & WESTERN	CU
57	DECATUR AIRPORT FIRE PIT	CU
58	ILLINOIS POWER TOWN GAS PLANT	CU
59	BURKS PUMPS	CU
60	ARMY AVIATION SUPPORT FACILITY	CU
61	WAGNER CASTINGS COMPANY	CU
62	ROBY PROPERTY	CU
63	CSX TRANSPORTATION	CU
64	GATES & JOHNSON LUMBER COMPANY	CU
65	FEDERAL AVIATION ADMINISTRATIO	CU
66	GROWMARK TRANSPORTATION & MAIN	CU
67	BRADD	LF
68	GIBSON CITY STP	NPDES
69	FISHER STP	NPDES
70	PEOPLES GAS LIGHT&COKE-MANLOVE	NPDES
71	SANGAMON VALLEY PWD	NPDES
72	MAHOMET STP	NPDES

73 WELDON WTP NPDES
 74 DELAND WTP NPDES
 75 MONTICELLO WWTF NPDES
 76 FRIENDS CREEK REGIONAL PARK NPDES
 77 UNIV-ALLERTON PARK & IL 4H CMP NPDES
 78 ARGENTA WTP NPDES
 79 CISCO WTP NPDES
 80 OREANA WTP NPDES
 81 ARCHER DANIEL MIDLAND NORTH WTP NPDES
 82 ARCHER DANIEL MIDLAND-EAST NPDES
 83 DECATUR SOUTH WTP NPDES
 84 PPG INDUSTRIES NPDES
 85 GIBSON COMMUNITY HOSP RCRA
 86 3-C'S ULIMITED CLEANERS RCRA
 87 ILL BELL TEL CO GIBSON CITY CO RCRA
 88 BLOOMER LINE RCRA
 89 HOBBS AUTO SALES RCRA
 90 ANDERSON FORD INC RCRA
 91 BIRKEYS INC RCRA
 92 BACHTOLD BROTHERS INC RCRA
 93 PAXTON ELECTRONIC COMPONENTS RCRA
 94 M AND M GEAR CO RCRA
 95 CENTRAL SOYA CO INC RCRA
 96 MARCO FARM SUPPLY UNIT 195 RCRA
 97 SUNOCO SERVICE STATION RCRA
 98 GIBSON CITY STATION RCRA
 99 FORD IROQUOIS FS INC RCRA
 100 ARENDS AND SONS INC RCRA
 101 EMRO MARKETING NO 7604 RCRA
 102 AT AND T LONG LINES SAYBROOK RCRA
 103 COILES GARAGE RCRA
 104 CASEYS GENERAL STORES INC RCRA
 105 MCLEAN COUNTY SERVICE CO RCRA
 106 KAISER AGRICULTURAL CHEMICALS RCRA
 107 FLO-CON SYSTEMS INC RCRA
 108 EAGLE WINGS INDUSTRIES RCRA
 109 TEXTRON RANTOUL PLANT ONE RCRA
 110 CONAIR CORP RCRA
 111 ACCURATE ELECTRONICS RCRA
 112 CARADCO WINDOWS AND DOORS RCRA
 113 ROESSLER CONSTRUCTION CO RCRA
 114 SHIELDS AUTO CTR RCRA
 115 VESUVIUS USA RCRA
 116 TATMANS AUTOBODY REPAIR NORTH RCRA
 117 HUDSON TECHNOLOGIES INC RCRA
 118 TERRA INTERNATIONAL RCRA
 119 PEOPLES GAS LIGHT & COKE CO RCRA
 120 SOHIGRO SERVICE CO RCRA
 121 COOKS AUTOBODY RCRA
 122 WALLYS AUTOBODY RCRA
 123 TERRYS AUTOBODY RCRA
 124 COURTESY CLEANERS RCRA
 125 AMOCO LAKE OF THE WOODS RCRA
 126 MID AMERICA SAND AND GRAVEL CO RCRA
 127 PRAIRIE PAINT & ADHESIVES CO RCRA
 128 SUNOCO SERVICE STATION RCRA
 129 ILLINI FS INC RCRA
 130 CASEYS GENERAL STORES INC RCRA
 131 SOHIGRO SERVICE CO RCRA
 132 FISHER TRUCKING RCRA
 133 DELAND WELDON CUSD 57 RCRA
 134 KAISER AGRICULTURAL CHEMICALS RCRA
 135 AT AND T RCRA
 136 WEBER BODY SHOP RCRA
 137 POLING CHEVROLET RCRA
 138 ABBOTT BILL INC RCRA
 139 VIOBIN CORP RCRA
 140 MONTICELLO CITY OF FIRE DEPT RCRA
 141 STERLING DRUG INC RCRA
 142 CARLTON CLEANERS RCRA
 143 AMOCO OIL CO SS 5574 RCRA
 144 STROHL FORD INC RCRA
 145 PIATT COUNTY SERVICE CO RCRA

146 PIATT COUNTY SERVICE CO RCRA
147 GENERAL CABLE CO RCRA
148 GROWMARK INC RCRA
149 GTE NORTH INC RCRA
150 MONTICELLO STREET DEPT RCRA
151 WEBER BODY SHOP RCRA
152 DAVIS JERRY RCRA
153 MONTICELLO CITY OF LANDFILL RCRA
154 ADVANCED DRAINAGE SYSTEMS MONT RCRA
155 MONTICELLO AIRPORT RCRA
156 GROWMARK INC RCRA
157 CASEYS GENERAL STORES INC RCRA
158 CISCO AREA ECONOMIC DEVELOPMET RCRA
159 AT AND T LONG LINES CISCO RCRA
160 MACON COUNTY CONSERVATION DIST RCRA
161 GEORGES STANDARD RCRA
162 ASHLAND CHEMICAL CO RCRA
163 Z AND R OIL EQUIPMENT CO INC RCRA
164 DELS SUNOCO GAS STATION RCRA
165 SUNOCO SERVICE STATION RCRA
166 SOUTHWIND CORP RCRA
167 PENSKE TRUCK LEASING CO LP RCRA
168 SLAYBACH AVIATION INC RCRA
169 MCKESSON CHEMICAL CO RCRA
170 ADM NORTH WAREHOUSE RCRA
171 ACME DECATUR RCRA
172 H AND S SYSTEMS OF DECATUR INC RCRA
173 GROWMARK INC RCRA
174 ADM CORNSWEETNERS PLANT RCRA
175 ADM BIO CHEMICAL PLANT RCRA
176 ADM COGENERATION PLANT RCRA
177 ADM EAST PLT RCRA
178 ADM RENOVATIONS RCRA
179 ADM WEST PLT RCRA
180 ARCHER DANIELS MIDLAND CO RCRA
181 ADM PACKAGING PLANT RCRA
182 KOPETZ MFG INC RCRA
183 FRAZIER SIGNS INC RCRA
184 MEANS SERVICES INC RCRA
185 AUTOBODY REPAIRS RCRA
186 NORFOLK & WESTERN RAILWAY CO RCRA
187 WAGNER CASTINGS CO RCRA
188 PRAIRIE FARMS DAIRY ICE CREAM DIV RCRA
189 CASH AW VALVE MFG CORP RCRA
190 GENERAL ELECTRIC RAILCAR REPAIR SVCS RCRA
191 DECATUR AUTO BODY RCRA
192 STALEY A E MFG CO RCRA
193 WABEL TOOL CO RCRA
194 JG AUTO RPR RCRA
195 ELDORADO DRY CLEANING RCRA
196 HAMILTON PROTECTIVE COATINGS RCRA
197 MAGNA MILLIKIN BANK OF DECATUR RCRA
198 SOL TICK & CO RCRA
199 DECATUR ARMORY RCRA
200 WALLACE LABORATORIES RCRA
201 CROWN OLDSMOBILE RCRA
202 HERALD AND REVIEW RCRA
203 DECO MFG CO RCRA
204 HUSTON PATTERSON CORP RCRA
205 MARVEL-SCHEBLER/TILLOTSON RCRA
206 DECATUR PARK DIST ZOO RCRA
207 ILLINOIS POWER CO RCRA
208 UHAUL CTR OF DECATUR RCRA
209 LG SEEDS RCRA
210 PEACOCK CLEANERS RCRA
211 MCCLOUD W B & CO RCRA
212 SEARS UNIT 1320 RCRA
213 ILLINOIS POWER CO RCRA
214 PARKWOOD CLEANERS RCRA
215 ONE HOUR MARTINIZING RCRA
216 SHERWIN-WILLIAMS CO THE RCRA
217 DECATUR CITY OF RCRA
218 IL EPA DECATUR RCRA

219 ILLINOIS POWER CO RCRA
 220 ILLINOIS POWER PLAZA RCRA
 221 ORNAMENTAL METALWORKS CO RCRA
 222 CRANE PUMPS AND SYSTEMS INC RCRA
 223 NORMAN LAUNDRY AND DRY CLEANING RCRA
 224 ILL STATE OF ARNG DECATUR AASF 1 RCRA
 225 CARS AUTO BODY RCRA
 226 DECATUR AIRPORT RCRA
 227 ADM AVIATION DEPT RCRA
 228 WAITES DRY CLEANERS RCRA
 229 BILLINGSLEY AMOCO RCRA
 230 EMRO MARKETING NO 5143 RCRA
 231 ILLINOIS DEPT OF TRANSPORTATION RCRA
 232 DECATUR AVIATION INC RCRA
 233 BODINE SERVICES INC RCRA
 234 MARBELL AUTOBODY RCRA
 235 MIDWEST FIELD RESEARCH STATION RCRA
 236 ILLICO APOLLOMART UNOCAL RCRA
 237 KMART RCRA
 238 KRAFT BROTHERS RCRA
 239 PPG INDUSTRIES INC WORKS NO 14 RCRA
 240 MAYFLOWER CONTACT SVC RCRA
 241 LAIDLAW TRANSIT RCRA
 242 GOODMAR INC RCRA
 243 SUNOCO SERVICE STATION RCRA
 244 MT ZION TOWNSHIP CEMETARY RCRA
 245 CORN BELT FS INC RCRA
 246 SOHIGRO SERVICE CO RCRA
 247 AT&T LONG LINES MACON RCRA
 248 MACON CITY OF RCRA
 249 CENTRAL SOYA CO, INC. TRI
 250 EAGLE WINGS IND. INC. TRI
 251 COMBE LABORATORIES INC. TRI
 252 VIOBIN CORPORATION TRI
 253 GENERAL CABLE COMPANY TRI
 254 ADM BIO PRODUCTS (FORMALLY ADM BIO CHEM) TRI
 255 ADM CORN PROCESSING TRI
 256 ARCHER DANIELS MIDLAND CO. TRI
 257 IMI CASH VALVE INC. TRI
 258 A. E. STALEY MANUFACTURING COMPANY TRI
 259 BURKS PUMPS, INC. TRI
 260 PPG INDUSTRIES, INC., WORKS NO. 14 TRI

Site Data For This Facility:

No Data

Susceptibility To Contamination:

Illinois EPA considers all surface water sources of public water supply to be susceptible to potential pollution problems. Hence the reason for mandatory treatment of all public water supplies in Illinois. Mandatory treatment includes coagulation, sedimentation, filtration and disinfection. Primary sources of pollution in Illinois lakes can include agricultural runoff, land disposal (septic systems) and shoreline erosion. Figures 1a and 1b show the location of the Decatur community water wells and the Minimum Setback Zones associated with each well. In addition, any potential sources of contamination located near the wells are also displayed. Due to the low geologic sensitivity of the wells and monitoring results, Illinois EPA does not consider these wells to be susceptible to VOC, SOC or IOC contamination.

Source Water Protection Efforts:

Under CWA Section 319, U.S. EPA provides grants for the Illinois EPA to finance projects that demonstrate cost-effective solutions to NPS problems and promote public knowledge and awareness of non point source (NPS) pollution. Section 319 projects funded for the Lake Decatur Watershed include: Upper Sangamon River Basin Water Quality Improvement Project - This project reduced the amount of nonpoint source (NPS) pollution in the Upper Sangamon River (ILE28) basin and Lake Decatur (ILREA) by working in direct cooperation with the majority of the basin's land use decision makers. The two target NPS pollutants were nutrients and sediment. Through subcontracts with local soil and water conservation districts one-on-one on-site technical and educational assistance was provided to landowners throughout the watershed. Cost-share funds were used to implement agricultural best management practices including GIS/GPS w/fertilizer monitors and two wetlands. Nutrient Management Plan Implementation - This project will demonstrate to producers that Nutrient Management Plans should be an integral component to their farming operation. Producers will be provided with an incentive payment to follow (not exceed) the nitrogen rate, timing, and application guidelines established by the University of Illinois within watersheds identified as having nitrate impaired waters. The short-term goal is to increase the number of acres managed according to nutrient management plans in the selected watersheds. The long-term goal is to maintain the number of acres managed with nutrient management plans in these watersheds after the project ends and to be able to demonstrate to other producers in the State the value of nutrient management planning. In order to help farmers in adopting sound agricultural practices, The Illinois Council on Best Management Practices (C-BMP) was formed. The Council is a coalition of agribusiness and agricultural producer organizations with the support of the University of Illinois Extension and serves as a clearinghouse on current research to protect water quality in Illinois. The Council also provides information and support to local watershed groups to help implement sound water quality initiatives and can offer educational assistance and help facilitate the technical and financial resources needed to carry out water quality objectives. For more information on C-BMP contact Dr. George Czapar, Springfield Extension Center, P.O. Box 8199, Springfield, IL 62791, email: g-czapar@uiuc.edu. For more information on BMPs, please refer to the website at

<http://www.ctic.purdue.edu>, as well as A Guide to Illinois Lake Management available from Illinois EPA. On a national level, U.S. EPA made significant changes to the atrazine use label in 1990 to ensure adequate protection against groundwater contamination. It is a violation of law to apply, mix, or load atrazine within 50 feet of any well, including water wells, irrigation wells, livestock water wells, improperly abandoned wells or sinkholes. In 1992, the atrazine label was further amended to protect surface waters by requiring a 200 foot application setback for lakes and reservoirs. In addition, there is a 66 foot setback from any point where field surface water runoff enters a stream or river. A concerted effort to incorporate best management practices for atrazine applications is on-going, an atrazine BMP document is available from Novartis Crop Protection, or by contacting the Illinois Fertilizer & Chemical Association at (800) 892-7122. In an effort to minimize the impact of livestock facilities on water resources on a statewide basis, livestock facilities are now regulated under the Livestock Management Facilities Act. This legislation is designed to keep Illinois' livestock industry productive and environmentally responsible by establishing requirements for design, construction, operation and management of livestock facilities and waste-handling structures. Detailed information on the Livestock Management Facilities Act may be found at the website <http://www.agr.state.il.us>. In addition, the watershed protection efforts and priorities of the Illinois EPA, Illinois Department of Agriculture, Illinois Department of Natural Resources, U.S. Department of Agriculture's Natural Resources Conservation Service, U.S. Army Corps of Engineers, and The Nature Conservancy are described and illustrated at the website: <http://www.epa.state.il.us/water/unified-watershed-assessment/index.html>. Groundwater protection efforts have included the following: • The Illinois Environmental Protection Act provides minimum protection zones of 200 feet for Decatur's wells. These minimum protection zones are regulated by the Illinois EPA. To further minimize the risk to the city's groundwater supply, the Illinois EPA recommends that three additional activities be considered. First, the water supply staff may wish to revisit their contingency planning documents in order to ensure the plans are kept current, and the water department and emergency response staff are aware of and adequately trained to implement emergency procedures. Contingency planning documents are a primary means to ensure that, through emergency preparedness, a community will minimize their risk of being without safe and adequate water. Second, the water supply staff is encouraged to review and sustain their cross connection control program to ensure that it remains current and viable. Cross connections to either the water treatment plant (for example, at bulk water loading stations) or in the distribution system may negate all source water protection initiatives provided by the community. Finally, the Illinois EPA recommends that the city continue to evaluate additional source water protection management options to address the regulatory and non-regulatory land use activities within the community wells' recharge area.

REL Project #18-R1114
45-Day Report
LPC #1150150080 – Macon County
Decatur / Kroger #J250 (Kroger Limited Partnership I)
855 N. Fairview Avenue
LUST Release Incident No. 20190006

APPENDIX D:

Figure 5: Site Photographs
Figure 6: Cross-Section Diagrams

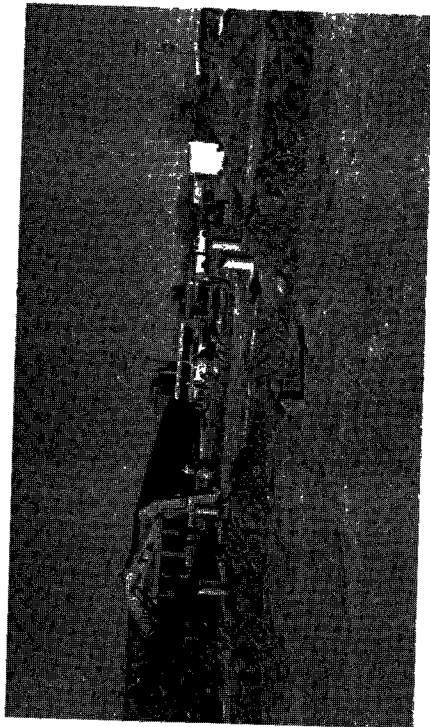


PHOTO 1: Viewing West-Southwest. View of location of underground storage tank (UST) system prior to removal.



PHOTO 2: Viewing East. View of removal of Tank 6 from the ground.



PHOTO 3: Viewing Northeast. View of removal of Tanks 7 and 8 (compartmentalized tanks) from the ground.

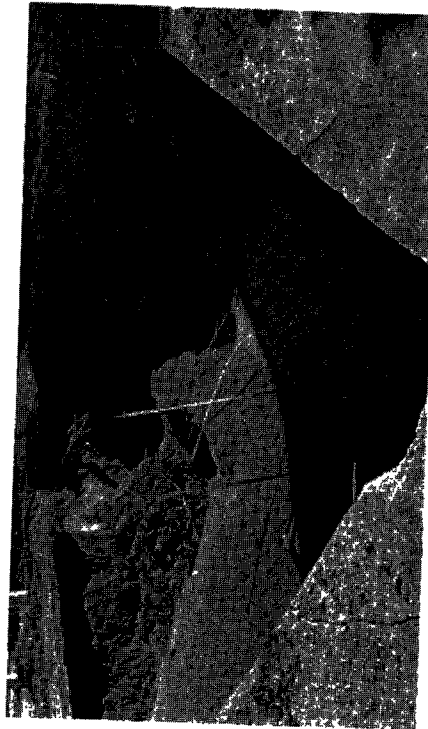


PHOTO 4: Viewing Southeast. View of UST removal excavation cavity after removal of tanks from the ground.

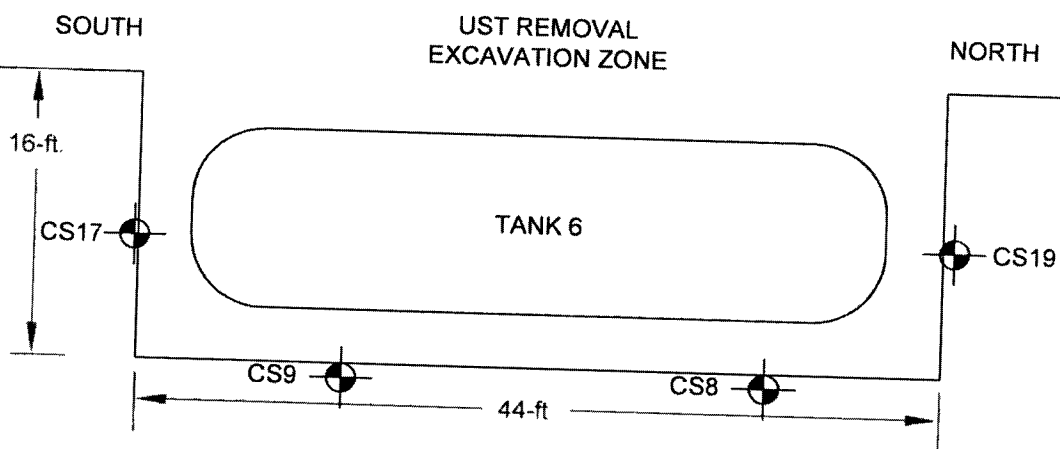
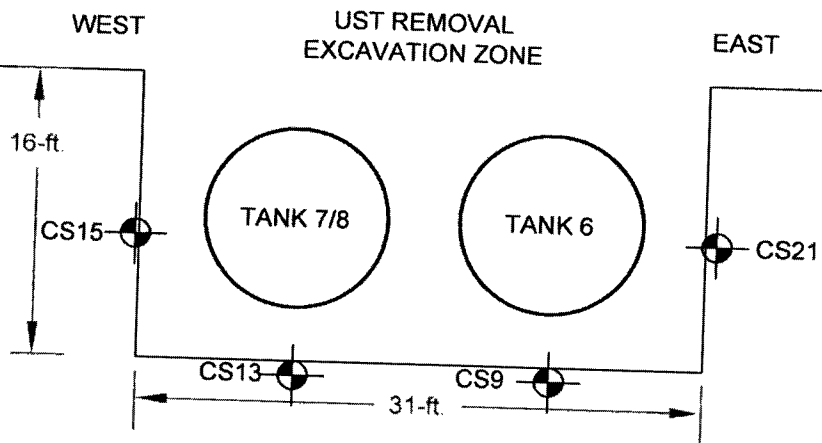


FIGURE 5: SITE PHOTOGRAPHS
Kroger #J250
855 N. Fairview Avenue
Decatur, Macon County, Illinois

PROJECT NO: 18-R1114

DATE: 02/2019

18-R1114-FIG-5



Approximate Vertical Scale 1" = 10'
Approximate Horizontal Scale 1" = 10'



FIGURE 6: CROSS-SECTION DIAGRAMS
Kroger #J250
855 N. Fairview Avenue
Decatur, Macon County, Illinois

PROJECT NO: 18-R1114

DATE: 1/2019

18-R1114-FIG-6

REL Project #18-R1114
45-Day Report
LPC #1150150080 – Macon County
Decatur / Kroger #J250 (Kroger Limited Partnership I)
855 N. Fairview Avenue
LUST Release Incident No. 20190006

APPENDIX E:

Figure 7: Soil Sample Location Diagram
Table 2: Summary of Soil Sample Analytical Testing
Table 3: Tier 1 Soil Remediation Objectives
Laboratory Analytical Test Reports
Chain-of-Custody Form
IEPA Laboratory Certification for Chemical Analysis Form

TANK LEGEND	
TANK 6	- 20,000-gal. UNLEADED GASOLINE UST
TANK 7	- 10,000-gal. DIESEL FUEL UST
TANK 8	- 8,000-gal. UNLEADED GASOLINE UST

- CS# - SOIL SAMPLE DOES NOT EXCEED TIER 1 SOIL REMEDIATION OBJECTIVE
- CS# - SOIL SAMPLE EXCEEDS TIER 1 SOIL REMEDIATION OBJECTIVE

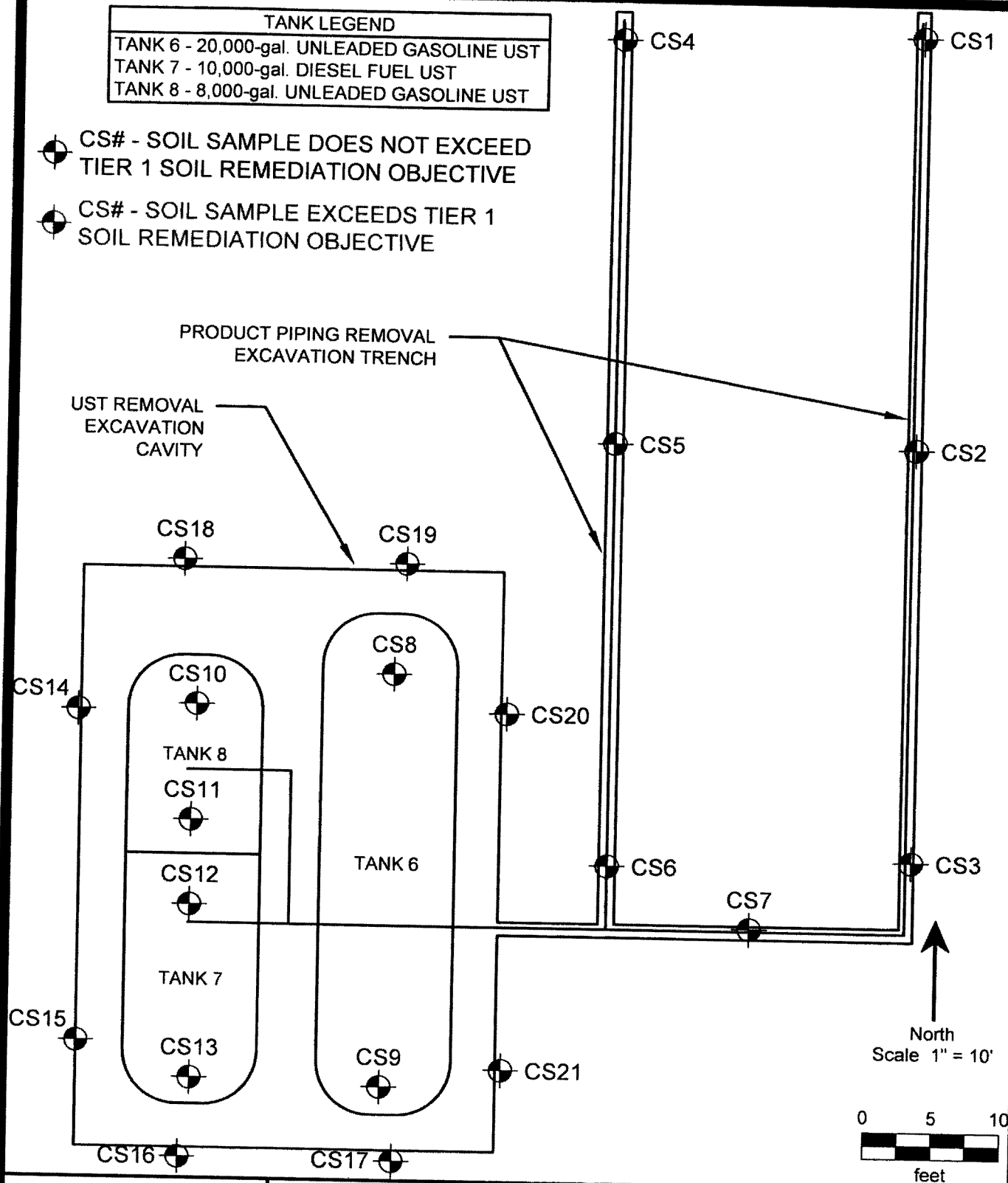


FIGURE 7: SOIL SAMPLE LOCATION DIAGRAM
 Kroger #J250
 855 N. Fairview Avenue
 Decatur, Macon County, Illinois

PROJECT NO: 18-R1114
DATE: 02/2019
18-R1114-FIG-7

TABLE 2: SUMMARY OF SOIL SAMPLE ANALYTICAL TESTING

SITE:		Kroger #J250 855 N. Fairview Avenue Decatur, Macon County, Illinois OSFM Facility ID No. 4-016960				LABORATORY:		PACE Soil	
ANALYTE		SAMPLE ID							
ITEM #		CS1	CS2	CS3	CS4	CS5	CS6		
	DATE	1/3/2019	1/3/2019	1/3/2019	1/3/2019	1/3/2019	1/3/2019		
	DEPTH	3.5'	3.5'	3.5'	3.5'	3.5'	3.5'		
	PID	25	25	39	25	N.D.	N.D.		
	BETX and MTBE								
1	BENZENE	0.0122	0.00748	<0.00129	<0.00131	<0.00129	<0.00129		
2	ETHYLBENZENE	0.0226	0.0138	0.00357	0.00239	<0.00323	<0.00323		
3	TOLUENE	0.0194	0.0176	0.00198	0.00996	<0.00646	0.00244		
4	XYLENES (TOTAL)	0.244	0.0631	0.0226	0.0168	<0.00840	<0.00840		
5	METHYL TERTIARY-BUTYL ETHER	<0.00120	<0.00130	<0.00129	<0.00131	<0.00129	<0.00129		
	PNAs								
6	ACENAPHTHENE	<0.00721	<0.00781	<0.00775	<0.00786	<0.00776	<0.00775		
7	ACENAPHTHYLENE	<0.00721	<0.00781	<0.00775	<0.00786	<0.00776	<0.00775		
8	ANTHRACENE	0.00073	0.00104	<0.00775	<0.00786	<0.00776	<0.00775		
9	BENZO(a)ANTHRACENE	0.00326	0.00299	<0.00775	<0.00786	<0.00776	<0.00775		
10	BENZO(a)PYRENE	0.00567	0.00404	0.00214	<0.00786	<0.00776	<0.00775		
11	BENZO(b)FLUORANTHENE	0.00794	0.00477	0.00309	<0.00786	<0.00776	<0.00775		
12	BENZO(k)FLUORANTHENE	<0.00721	0.002	0.00133	<0.00786	<0.00776	<0.00775		
13	BENZO(g,h,i)PERYLENE	0.00672	0.00331	0.0018	<0.00786	<0.00776	<0.00775		
14	CHRYSENE	0.00511	0.00322	0.00209	<0.00786	<0.00776	<0.00775		
15	DIBENZO(a,h)ANTHRACENE	<0.00721	<0.00781	<0.00775	<0.00786	<0.00776	<0.00775		
16	FLUORANTHENE	0.00943	<0.00781	<0.00775	<0.00786	<0.00776	<0.00775		
17	FLUORENE	<0.00721	<0.00781	<0.00775	<0.00786	<0.00776	<0.00775		
18	INDENO(1,2,3-cd)PYRENE	0.00469	<0.00781	0.00176	<0.00786	<0.00776	<0.00775		
19	NAPHTHALENE	<0.0240	<0.0260	<0.0258	<0.0262	<0.0259	<0.0258		
20	PHENANTHRENE	0.00323	0.0035	<0.00775	<0.00786	<0.00776	<0.00775		
21	PYRENE	0.00817	0.00454	0.00359	<0.00786	<0.00776	<0.00775		

NOTES:
ALL RESULTS ARE EXPRESSED IN MILLIGRAMS PER KILOGRAM (mg/kg) CONCENTRATION.
SAMPLE RESULTS ARE COMPARED TO TIER 1 SOIL REMEDIATION OBJECTIVES (ROs) LISTED IN TABLE 2.
PID - PHOTOIONIZATION DETECTOR SCREENING VALUE IN PARTS PER MILLION (ppm).
N.D. - NON-DETECTABLE PID SCREENING VALUE.
X.XXX INDICATES PARAMETER EXCEEDS A TIER 1 RO.

TABLE 2: SUMMARY OF SOIL SAMPLE ANALYTICAL TESTING

SITE: Kroger #J250 855 N. Fairview Avenue Decatur, Macon County, Illinois OSFM Facility ID No. 4-016960			LABORATORY: PACE MATRIX: Soil				
ANALYTE		SAMPLE ID					
ITEM #		CS7	CS8	CS9	CS10	CS11	CS12
	DATE	1/3/2019	1/3/2019	1/3/2019	1/3/2019	1/3/2019	1/3/2019
	DEPTH	3.5'	16'	16'	16'	16'	16'
	PID	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	BETX and MTBE						
1	BENZENE	<0.00112	<0.00112	<0.00113	<0.00112	<0.00112	<0.00112
2	ETHYLBENZENE	<0.00281	0.00258	0.00205	<0.00279	<0.00281	<0.00281
3	TOLUENE	<0.00562	0.014	0.00882	<0.00559	<0.00562	<0.00561
4	XYLENES (TOTAL)	<0.00731	0.0151	0.0098	<0.00726	<0.00730	<0.00730
5	METHYL TERTIARY-BUTYL ETHER	<0.00112	<0.00112	<0.00113	<0.00112	<0.00112	<0.00112
	PNAs						
6	ACENAPHTHENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
7	ACENAPHTHYLENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
8	ANTHRACENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
9	BENZO(a)ANTHRACENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
10	BENZO(a)PYRENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
11	BENZO(b)FLUORANTHENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
12	BENZO(k)FLUORANTHENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
13	BENZO(g,h,i)PERYLENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
14	CHRYSENE	<0.00674	<0.00672	<0.00676	<0.00670	0.00113	<0.00674
15	DIBENZO(a,h)ANTHRACENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
16	FLUORANTHENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
17	FLUORENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
18	INDENO(1,2,3-cd)PYRENE	<0.00674	<0.00672	<0.00676	<0.00670	<0.00674	<0.00674
19	NAPHTHALENE	<0.0225	<0.0224	<0.0225	<0.0223	<0.0225	<0.0225
20	PHENANTHRENE	<0.00674	<0.00672	<0.00676	<0.00670	0.00101	<0.00674
21	PYRENE	<0.00674	<0.00672	<0.00676	<0.00670	0.000871	<0.00674
NOTES:							
ALL RESULTS ARE EXPRESSED IN MILLIGRAMS PER KILOGRAM (mg/kg) CONCENTRATION.							
SAMPLE RESULTS ARE COMPARED TO TIER 1 SOIL REMEDIATION OBJECTIVES (ROs) LISTED IN TABLE 2.							
PID - PHOTOIONIZATION DETECTOR SCREENING VALUE IN PARTS PER MILLION (ppm).							
N.D. - NON-DETECTABLE PID SCREENING VALUE.							
X.XXX INDICATES PARAMETER EXCEEDS A TIER 1 RO.							

TABLE 2: SUMMARY OF SOIL SAMPLE ANALYTICAL TESTING

SITE:		Kroger #J250 855 N. Fairview Avenue Decatur, Macon County, Illinois OSFM Facility ID No. 4-016960				LABORATORY: MATRIX:		PACE Soil	
ANALYTE		SAMPLE ID							
ITEM #		CS13	CS14	CS15	CS16	CS17	CS18		
	DATE	1/3/2019	1/3/2019	1/3/2019	1/3/2019	1/3/2019	1/3/2019		
	DEPTH	16'	9'	9'	9'	9'	9'		
	PID	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		
	BETX and MTBE								
1	BENZENE	<0.00111	<0.00118	<0.00115	<0.00114	<0.00110	<0.00114		
2	ETHYLBENZENE	<0.00278	<0.00295	<0.00287	<0.00285	0.0015	<0.00285		
3	TOLUENE	<0.00556	<0.00589	<0.00575	<0.00571	0.0145	<0.00569		
4	XYLENES (TOTAL)	<0.00723	<0.00766	<0.00747	<0.00742	0.00922	<0.00740		
5	METHYL TERTIARY-BUTYL ETHER	<0.00111	<0.00118	<0.00115	<0.00114	<0.00110	<0.00114		
	PNAs								
6	ACENAPHTHENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
7	ACENAPHTHYLENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
8	ANTHRACENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
9	BENZO(a)ANTHRACENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
10	BENZO(a)PYRENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
11	BENZO(b)FLUORANTHENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
12	BENZO(k)FLUORANTHENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
13	BENZO(g,h,i)PERYLENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	0.0019		
14	CHRYSENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
15	DIBENZO(a,h)ANTHRACENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
16	FLUORANTHENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
17	FLUORENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
18	INDENO(1,2,3-cd)PYRENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
19	NAPHTHALENE	<0.0223	<0.0236	<0.0230	<0.0228	<0.0220	<0.0228		
20	PHENANTHRENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	<0.00683		
21	PYRENE	<0.00668	<0.00707	<0.00690	<0.00685	<0.00660	0.00142		

NOTES:
ALL RESULTS ARE EXPRESSED IN MILLIGRAMS PER KILOGRAM (mg/kg) CONCENTRATION.
SAMPLE RESULTS ARE COMPARED TO TIER 1 SOIL REMEDIATION OBJECTIVES (ROs) LISTED IN TABLE 2.
PID - PHOTOIONIZATION DETECTOR SCREENING VALUE IN PARTS PER MILLION (ppm).
N.D. - NON-DETECTABLE PID SCREENING VALUE.
X.XXX INDICATES PARAMETER EXCEEDS A TIER 1 RO.

TABLE 2: SUMMARY OF SOIL SAMPLE ANALYTICAL TESTING

SITE:		Kroger #J250 855 N. Fairview Avenue Decatur, Macon County, Illinois OSFM Facility ID No. 4-016960			LABORATORY: PACE MATRIX: Soil		
ANALYTE		SAMPLE ID					
ITEM #		CS19	CS20	CS21			
	DATE	1/3/2019	1/3/2019	1/3/2019			
	DEPTH	9'	9'	9'			
	PID	30	30	N.D.			
	BETX and MTBE						
1	BENZENE	<0.00121	<0.00125	<0.00124			
2	ETHYLBENZENE	<0.00302	0.0184	<0.00311			
3	TOLUENE	<0.00603	<0.00624	<0.00622			
4	XYLENES (TOTAL)	<0.00784	0.062	<0.00808			
5	METHYL TERTIARY-BUTYL ETHER	<0.00121	<0.00125	<0.00124			
	PNAs						
6	ACENAPHTHENE	0.00185	0.00267	<0.00746			
7	ACENAPHTHYLENE	<0.00724	<0.00749	<0.00746			
8	ANTHRACENE	<0.00724	<0.00749	<0.00746			
9	BENZO(a)ANTHRACENE	<0.00724	<0.00749	<0.00746			
10	BENZO(a)PYRENE	<0.00724	<0.00749	<0.00746			
11	BENZO(b)FLUORANTHENE	<0.00724	<0.00749	<0.00746			
12	BENZO(k)FLUORANTHENE	<0.00724	<0.00749	<0.00746			
13	BENZO(g,h,i)PERYLENE	<0.00724	<0.00749	<0.00746			
14	CHRYSENE	<0.00724	<0.00749	<0.00746			
15	DIBENZO(a,h)ANTHRACENE	<0.00724	<0.00749	<0.00746			
16	FLUORANTHENE	<0.00724	<0.00749	<0.00746			
17	FLUORENE	<0.00724	0.00116	<0.00746			
18	INDENO(1,2,3-cd)PYRENE	<0.00724	<0.00749	<0.00746			
19	NAPHTHALENE	<0.0241	<0.0250	<0.0249			
20	PHENANTHRENE	0.0016	<0.00749	<0.00746			
21	PYRENE	<0.00724	<0.00749	<0.00746			
NOTES:							
ALL RESULTS ARE EXPRESSED IN MILLIGRAMS PER KILOGRAM (mg/kg) CONCENTRATION.							
SAMPLE RESULTS ARE COMPARED TO TIER 1 SOIL REMEDIATION OBJECTIVES (ROs) LISTED IN TABLE 2.							
PID - PHOTOIONIZATION DETECTOR SCREENING VALUE IN PARTS PER MILLION (ppm).							
N.D. - NON-DETECTABLE PID SCREENING VALUE.							
X.XXX INDICATES PARAMETER EXCEEDS A TIER 1 RO.							

TABLE 3: TIER 1 SOIL REMEDIATION OBJECTIVES

SITE: Kroger #J250 855 N. Fairview Avenue Decatur, Macon County, Illinois OSFM Facility ID No. 4-018860		TIER 1 SOIL REMEDIATION OBJECTIVES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		ANALYTE <i>BETX and MTBE</i>		SOIL COMPONENT OF GROUNDWATER INGESTION EXPOSURE PATHWAY		INGESTION EXPOSURE PATHWAY				OUTDOOR INHALATION EXPOSURE PATHWAY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
				CLASS I GROUNDWATER SETTING	CLASS II GROUNDWATER SETTING	RESIDENTIAL	INDUSTRIAL/ COMMERCIAL	CONSTRUCTION WORKER	RESIDENTIAL	INDUSTRIAL/ COMMERCIAL	CONSTRUCTION WORKER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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NOTE:

REMEDIAL OBJECTIVES ARE EXPRESSED IN MILLIGRAMS PER KILOGRAM (mg/kg) CONCENTRATIONS.

NOTE 1 - REMEDIATION OBJECTIVES ARE PROVISIONAL AND SUBJECT TO CHANGE BY THE IEPA TOXICITY ASSESSMENT UNIT.

NO - NO REMEDIATION OBJECTIVE ESTABLISHED BY THE IEPA FOR THIS CONSTITUENT.



ANALYTICAL REPORT

January 11, 2019

Robinson Engineering, Ltd.

Sample Delivery Group: L1058458
Samples Received: 01/05/2019
Project Number: 18-R1114
Description: Kroger #J250
Site: DECATUR, ILLINOIS
Report To: Karl Newman
PO Box 7408
Champaign, IL 61826

Entire Report Reviewed By

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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ONE LAB. NATIONWIDE.



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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



CS1 L1058458-01 Solid

Collected by Karl Newman
 Collected date/time 01/03/19 09:30
 Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220531	1	01/09/19 10:23	01/09/19 10:36	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 09:30	01/08/19 01:01	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 15:09	LEA

CS2 L1058458-02 Solid

Collected by Karl Newman
 Collected date/time 01/03/19 09:40
 Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220531	1	01/09/19 10:23	01/09/19 10:36	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 09:40	01/08/19 01:20	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 07:46	LEA

CS3 L1058458-03 Solid

Collected by Karl Newman
 Collected date/time 01/03/19 09:45
 Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220531	1	01/09/19 10:23	01/09/19 10:36	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 09:45	01/08/19 01:39	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 08:07	LEA

CS4 L1058458-04 Solid

Collected by Karl Newman
 Collected date/time 01/03/19 09:50
 Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220531	1	01/09/19 10:23	01/09/19 10:36	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 09:50	01/08/19 01:58	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 09:10	LEA

CS5 L1058458-05 Solid

Collected by Karl Newman
 Collected date/time 01/03/19 09:55
 Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220531	1	01/09/19 10:23	01/09/19 10:36	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 09:55	01/08/19 02:17	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 09:31	LEA

CS6 L1058458-06 Solid

Collected by Karl Newman
 Collected date/time 01/03/19 10:00
 Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220665	1	01/09/19 16:24	01/09/19 16:38	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 10:00	01/08/19 02:36	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 09:52	LEA

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



CS7 L1058458-07 Solid

Collected by
Karl Newman
Collected date/time
01/03/19 10:10
Received date/time
01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220665	1	01/09/19 16:24	01/09/19 16:38	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 10:10	01/08/19 02:54	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 10:14	LEA

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

CS8 L1058458-08 Solid

Collected by
Karl Newman
Collected date/time
01/03/19 14:00
Received date/time
01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220665	1	01/09/19 16:24	01/09/19 16:38	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 14:00	01/08/19 03:13	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 10:35	LEA

CS9 L1058458-09 Solid

Collected by
Karl Newman
Collected date/time
01/03/19 14:10
Received date/time
01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220665	1	01/09/19 16:24	01/09/19 16:38	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 14:10	01/08/19 03:32	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 10:56	LEA

CS10 L1058458-10 Solid

Collected by
Karl Newman
Collected date/time
01/03/19 14:20
Received date/time
01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220665	1	01/09/19 16:24	01/09/19 16:38	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 14:20	01/08/19 03:51	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 11:17	LEA

CS11 L1058458-11 Solid

Collected by
Karl Newman
Collected date/time
01/03/19 14:30
Received date/time
01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220665	1	01/09/19 16:24	01/09/19 16:38	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 14:30	01/08/19 04:10	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 11:38	LEA

CS12 L1058458-12 Solid

Collected by
Karl Newman
Collected date/time
01/03/19 14:40
Received date/time
01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220665	1	01/09/19 16:24	01/09/19 16:38	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 14:40	01/08/19 04:29	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 11:59	LEA

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



CS13 L1058458-13 Solid

Collected by Karl Newman
Collected date/time 01/03/19 14:50
Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220665	1	01/09/19 16:24	01/09/19 16:38	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 14:50	01/08/19 04:48	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 12:20	LEA

CS14 L1058458-14 Solid

Collected by Karl Newman
Collected date/time 01/03/19 15:00
Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220665	1	01/09/19 16:24	01/09/19 16:38	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 15:00	01/08/19 05:07	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 12:41	LEA

CS15 L1058458-15 Solid

Collected by Karl Newman
Collected date/time 01/03/19 15:05
Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220665	1	01/09/19 16:24	01/09/19 16:38	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 15:05	01/08/19 05:26	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 13:02	LEA

CS16 L1058458-16 Solid

Collected by Karl Newman
Collected date/time 01/03/19 15:10
Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220669	1	01/09/19 16:08	01/09/19 16:21	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 15:10	01/08/19 05:45	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 13:23	LEA

CS17 L1058458-17 Solid

Collected by Karl Newman
Collected date/time 01/03/19 15:15
Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220669	1	01/09/19 16:08	01/09/19 16:21	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 15:15	01/08/19 06:04	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 13:44	LEA

CS18 L1058458-18 Solid

Collected by Karl Newman
Collected date/time 01/03/19 15:20
Received date/time 01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220669	1	01/09/19 16:08	01/09/19 16:21	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 15:20	01/08/19 06:23	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 14:05	LEA

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



CS19 L1058458-19 Solid

Collected by
Karl Newman

Collected date/time
01/03/19 15:25

Received date/time
01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220669	1	01/09/19 16:08	01/09/19 16:21	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 15:25	01/08/19 06:42	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 14:27	LEA

CS20 L1058458-20 Solid

Collected by
Karl Newman

Collected date/time
01/03/19 15:40

Received date/time
01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220669	1	01/09/19 16:08	01/09/19 16:21	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220283	1	01/03/19 15:40	01/08/19 07:01	DWR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1220215	1	01/08/19 07:42	01/09/19 14:48	LEA

CS21 L1058458-21 Solid

Collected by
Karl Newman

Collected date/time
01/03/19 15:45

Received date/time
01/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1220669	1	01/09/19 16:08	01/09/19 16:21	JD
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1220535	1	01/03/19 15:45	01/08/19 17:39	JHH
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1221341	1	01/10/19 08:06	01/10/19 15:24	CJR

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

CASE NARRATIVE

ONE LAB. NATIONWIDE.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

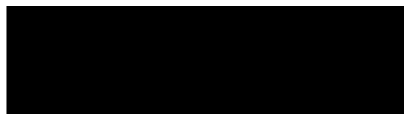
⁶ Qc

⁷ Gl

^c Al

⁹ Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

CS1

Collected date/time: 01/03/19 09:30

SAMPLE RESULTS - 01

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.2		1	01/09/2019 10:36	WG1220531

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.0122		0.000481	0.00120	1	01/08/2019 01:01	WG1220283
Toluene	0.0194		0.00150	0.00601	1	01/08/2019 01:01	WG1220283
Ethylbenzene	0.0226		0.000637	0.00300	1	01/08/2019 01:01	WG1220283
Total Xylenes	0.244		0.00574	0.00781	1	01/08/2019 01:01	WG1220283
Methyl tert-butyl ether	U		0.000354	0.00120	1	01/08/2019 01:01	WG1220283
(S) Toluene-d8	111			75.0-131		01/08/2019 01:01	WG1220283
(S) Dibromofluoromethane	79.7			65.0-129		01/08/2019 01:01	WG1220283
(S) 4-Bromofluorobenzene	100			67.0-138		01/08/2019 01:01	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	0.000730	J	0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Acenaphthene	U		0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Acenaphthylene	U		0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Benzo(a)anthracene	0.00326	J	0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Benzo(a)pyrene	0.00567	J	0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Benzo(b)fluoranthene	0.00794		0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Benzo(g,h,i)perylene	0.00672	J	0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Benzo(k)fluoranthene	U		0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Chrysene	0.00511	J	0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Dibenz(a,h)anthracene	U		0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Fluoranthene	0.00943		0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Fluorene	U		0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Indeno(1,2,3-cd)pyrene	0.00469	J	0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Naphthalene	U		0.00240	0.0240	1	01/09/2019 15:09	WG1220215
Phenanthrene	0.00323	J	0.000721	0.00721	1	01/09/2019 15:09	WG1220215
Pyrene	0.00817		0.000721	0.00721	1	01/09/2019 15:09	WG1220215
1-Methylnaphthalene	U		0.00240	0.0240	1	01/09/2019 15:09	WG1220215
2-Methylnaphthalene	U		0.00240	0.0240	1	01/09/2019 15:09	WG1220215
2-Chloronaphthalene	U		0.00240	0.0240	1	01/09/2019 15:09	WG1220215
(S) Nitrobenzene-d5	94.3			14.0-149		01/09/2019 15:09	WG1220215
(S) 2-Fluorobiphenyl	81.3			34.0-125		01/09/2019 15:09	WG1220215
(S) p-Terphenyl-d14	82.3			23.0-120		01/09/2019 15:09	WG1220215

Cp

Tc

Ss

Cn

Sr

Qc

GI

AI

Sc

CS2

Collected date/time: 01/03/19 09:40

SAMPLE RESULTS - 02

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	76.8		1	01/09/2019 10:36	WG1220531

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00748		0.000521	0.00130	1	01/08/2019 01:20	WG1220283
Toluene	0.0176		0.00163	0.00651	1	01/08/2019 01:20	WG1220283
Ethylbenzene	0.0138		0.000690	0.00325	1	01/08/2019 01:20	WG1220283
Total Xylenes	0.0631		0.00622	0.00846	1	01/08/2019 01:20	WG1220283
Methyl tert-butyl ether	U		0.000384	0.00130	1	01/08/2019 01:20	WG1220283
(S) Toluene-d8	106			75.0-131		01/08/2019 01:20	WG1220283
(S) Dibromofluoromethane	87.6			65.0-129		01/08/2019 01:20	WG1220283
(S) 4-Bromofluorobenzene	102			67.0-138		01/08/2019 01:20	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00104	J	0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Acenaphthene	U		0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Acenaphthylene	U		0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Benzo(a)anthracene	0.00299	J	0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Benzo(a)pyrene	0.00404	J	0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Benzo(b)fluoranthene	0.00477	J	0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Benzo(g,h,i)perylene	0.00331	J	0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Benzo(k)fluoranthene	0.00200	J	0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Chrysene	0.00322	J	0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Dibenz(a,h)anthracene	U		0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Fluoranthene	U		0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Fluorene	U		0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Naphthalene	U		0.00260	0.0260	1	01/09/2019 07:46	WG1220215
Phenanthrene	0.00350	J	0.000781	0.00781	1	01/09/2019 07:46	WG1220215
Pyrene	0.00454	J	0.000781	0.00781	1	01/09/2019 07:46	WG1220215
1-Methylnaphthalene	U		0.00260	0.0260	1	01/09/2019 07:46	WG1220215
2-Methylnaphthalene	U		0.00260	0.0260	1	01/09/2019 07:46	WG1220215
2-Chloronaphthalene	U		0.00260	0.0260	1	01/09/2019 07:46	WG1220215
(S) Nitrobenzene-d5	84.3			14.0-149		01/09/2019 07:46	WG1220215
(S) 2-Fluorobiphenyl	76.7			34.0-125		01/09/2019 07:46	WG1220215
(S) p-Terphenyl-d14	73.9			23.0-120		01/09/2019 07:46	WG1220215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

ACCOUNT:

Robinson Engineering, Ltd.

PROJECT:

18-R1114

SDG:

L1058458

DATE/TIME:

01/11/19 14:43

PAGE:

9 of 42

CS3

Collected date/time: 01/03/19 09:45

SAMPLE RESULTS - 03

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	77.4		1	01/09/2019 10:36	WG1220531

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000517	0.00129	1	01/08/2019 01:39	WG1220283
Toluene	0.00198	J	0.00161	0.00646	1	01/08/2019 01:39	WG1220283
Ethylbenzene	0.00357		0.000685	0.00323	1	01/08/2019 01:39	WG1220283
Total Xylenes	0.0226	B	0.00618	0.00840	1	01/08/2019 01:39	WG1220283
Methyl tert-butyl ether	U		0.000381	0.00129	1	01/08/2019 01:39	WG1220283
(S) Toluene-d8	110			75.0-131		01/08/2019 01:39	WG1220283
(S) Dibromofluoromethane	99.0			65.0-129		01/08/2019 01:39	WG1220283
(S) 4-Bromofluorobenzene	105			67.0-138		01/08/2019 01:39	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Acenaphthene	U		0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Acenaphthylene	U		0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Benzo(a)anthracene	U		0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Benzo(a)pyrene	0.00214	J	0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Benzo(b)fluoranthene	0.00309	J	0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Benzo(g,h,i)perylene	0.00180	J	0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Benzo(k)fluoranthene	0.00133	J	0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Chrysene	0.00209	J	0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Dibenz(a,h)anthracene	U		0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Fluoranthene	U	J3	0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Fluorene	U		0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Indeno(1,2,3-cd)pyrene	0.00176	J	0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Naphthalene	U		0.00258	0.0258	1	01/09/2019 08:07	WG1220215
Phenanthrene	U		0.000775	0.00775	1	01/09/2019 08:07	WG1220215
Pyrene	0.00359	J	0.000775	0.00775	1	01/09/2019 08:07	WG1220215
1-Methylnaphthalene	U		0.00258	0.0258	1	01/09/2019 08:07	WG1220215
2-Methylnaphthalene	U		0.00258	0.0258	1	01/09/2019 08:07	WG1220215
2-Chloronaphthalene	U		0.00258	0.0258	1	01/09/2019 08:07	WG1220215
(S) Nitrobenzene-d5	89.3			14.0-149		01/09/2019 08:07	WG1220215
(S) 2-Fluorobiphenyl	80.1			34.0-125		01/09/2019 08:07	WG1220215
(S) p-Terphenyl-d14	73.4			23.0-120		01/09/2019 08:07	WG1220215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

CS4

Collected date/time: 01/03/19 09:50

SAMPLE RESULTS - 04

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	76.4		1	01/09/2019 10:36	WG1220531

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000524	0.00131	1	01/08/2019 01:58	WG1220283
Toluene	0.00996		0.00164	0.00655	1	01/08/2019 01:58	WG1220283
Ethylbenzene	0.00239	J	0.000694	0.00327	1	01/08/2019 01:58	WG1220283
Total Xylenes	0.0168	B	0.00626	0.00851	1	01/08/2019 01:58	WG1220283
Methyl tert-butyl ether	U		0.000386	0.00131	1	01/08/2019 01:58	WG1220283
(S) Toluene-d8	109			75.0-131		01/08/2019 01:58	WG1220283
(S) Dibromofluoromethane	95.0			65.0-129		01/08/2019 01:58	WG1220283
(S) 4-Bromofluorobenzene	101			67.0-138		01/08/2019 01:58	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Acenaphthene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Acenaphthylene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Benzo(a)anthracene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Benzo(a)pyrene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Benzo(b)fluoranthene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Benzo(g,h,i)perylene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Benzo(k)fluoranthene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Chrysene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Dibenz(a,h)anthracene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Fluoranthene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Fluorene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Naphthalene	U		0.00262	0.0262	1	01/09/2019 09:10	WG1220215
Phenanthrene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
Pyrene	U		0.000786	0.00786	1	01/09/2019 09:10	WG1220215
1-Methylnaphthalene	U		0.00262	0.0262	1	01/09/2019 09:10	WG1220215
2-Methylnaphthalene	U		0.00262	0.0262	1	01/09/2019 09:10	WG1220215
2-Chloronaphthalene	U		0.00262	0.0262	1	01/09/2019 09:10	WG1220215
(S) Nitrobenzene-d5	102			14.0-149		01/09/2019 09:10	WG1220215
(S) 2-Fluorobiphenyl	88.5			34.0-125		01/09/2019 09:10	WG1220215
(S) p-Terphenyl-d14	78.4			23.0-120		01/09/2019 09:10	WG1220215

Cp

Tc

Ss

Cn

Sr

Qc

GI

Al

Sc

CS5

Collected date/time: 01/03/19 09:55

SAMPLE RESULTS - 05

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	77.4		1	01/09/2019 10:36	WG1220531

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000517	0.00129	1	01/08/2019 02:17	WG1220283
Toluene	U		0.00162	0.00646	1	01/08/2019 02:17	WG1220283
Ethylbenzene	U		0.000685	0.00323	1	01/08/2019 02:17	WG1220283
Total Xylenes	U		0.00618	0.00840	1	01/08/2019 02:17	WG1220283
Methyl tert-butyl ether	U		0.000381	0.00129	1	01/08/2019 02:17	WG1220283
(S) Toluene-d8	108			75.0-131		01/08/2019 02:17	WG1220283
(S) Dibromofluoromethane	90.3			65.0-129		01/08/2019 02:17	WG1220283
(S) 4-Bromofluorobenzene	102			67.0-138		01/08/2019 02:17	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Acenaphthene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Acenaphthylene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Benzo(a)anthracene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Benzo(a)pyrene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Benzo(b)fluoranthene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Benzo(g,h,i)perylene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Benzo(k)fluoranthene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Chrysene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Dibenz(a,h)anthracene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Fluoranthene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Fluorene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Naphthalene	U		0.00259	0.0259	1	01/09/2019 09:31	WG1220215
Phenanthrene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
Pyrene	U		0.000776	0.00776	1	01/09/2019 09:31	WG1220215
1-Methylnaphthalene	U		0.00259	0.0259	1	01/09/2019 09:31	WG1220215
2-Methylnaphthalene	U		0.00259	0.0259	1	01/09/2019 09:31	WG1220215
2-Chloronaphthalene	U		0.00259	0.0259	1	01/09/2019 09:31	WG1220215
(S) Nitrobenzene-d5	94.6			14.0-149		01/09/2019 09:31	WG1220215
(S) 2-Fluorobiphenyl	80.8			34.0-125		01/09/2019 09:31	WG1220215
(S) p-Terphenyl-d14	80.5			23.0-120		01/09/2019 09:31	WG1220215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CS6

Collected date/time: 01/03/19 10:00

SAMPLE RESULTS - 06

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	77.4		1	01/09/2019 16:38	WG1220665

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000517	0.00129	1	01/08/2019 02:36	WG1220283
Toluene	0.00244	J	0.00162	0.00646	1	01/08/2019 02:36	WG1220283
Ethylbenzene	U		0.000685	0.00323	1	01/08/2019 02:36	WG1220283
Total Xylenes	U		0.00618	0.00840	1	01/08/2019 02:36	WG1220283
Methyl tert-butyl ether	U		0.000381	0.00129	1	01/08/2019 02:36	WG1220283
(S) Toluene-d8	109			75.0-131		01/08/2019 02:36	WG1220283
(S) Dibromofluoromethane	89.4			65.0-129		01/08/2019 02:36	WG1220283
(S) 4-Bromofluorobenzene	103			67.0-138		01/08/2019 02:36	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Acenaphthene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Acenaphthylene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Benzo(a)anthracene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Benzo(a)pyrene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Benzo(b)fluoranthene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Benzo(g,h,i)perylene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Benzo(k)fluoranthene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Chrysene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Dibenz(a,h)anthracene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Fluoranthene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Fluorene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Naphthalene	U		0.00258	0.0258	1	01/09/2019 09:52	WG1220215
Phenanthrene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
Pyrene	U		0.000775	0.00775	1	01/09/2019 09:52	WG1220215
1-Methylnaphthalene	U		0.00258	0.0258	1	01/09/2019 09:52	WG1220215
2-Methylnaphthalene	U		0.00258	0.0258	1	01/09/2019 09:52	WG1220215
2-Chloronaphthalene	U		0.00258	0.0258	1	01/09/2019 09:52	WG1220215
(S) Nitrobenzene-d5	93.3			14.0-149		01/09/2019 09:52	WG1220215
(S) 2-Fluorobiphenyl	82.0			34.0-125		01/09/2019 09:52	WG1220215
(S) p-Terphenyl-d14	74.6			23.0-120		01/09/2019 09:52	WG1220215

CS7

Collected date/time: 01/03/19 10:10

SAMPLE RESULTS - 07

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.0		1	01/09/2019 16:38	WG1220665

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000450	0.00112	1	01/08/2019 02:54	WG1220283
Toluene	U		0.00140	0.00562	1	01/08/2019 02:54	WG1220283
Ethylbenzene	U		0.000596	0.00281	1	01/08/2019 02:54	WG1220283
Total Xylenes	U		0.00537	0.00731	1	01/08/2019 02:54	WG1220283
Methyl tert-butyl ether	U		0.000332	0.00112	1	01/08/2019 02:54	WG1220283
(S) Toluene-d8	110			75.0-131		01/08/2019 02:54	WG1220283
(S) Dibromofluoromethane	93.5			65.0-129		01/08/2019 02:54	WG1220283
(S) 4-Bromofluorobenzene	101			67.0-138		01/08/2019 02:54	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Acenaphthene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Acenaphthylene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Benzo(a)anthracene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Benzo(a)pyrene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Benzo(b)fluoranthene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Benzo(g,h,i)perylene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Benzo(k)fluoranthene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Chrysene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Dibenz(a,h)anthracene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Fluoranthene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Fluorene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Naphthalene	U		0.00225	0.0225	1	01/09/2019 10:14	WG1220215
Phenanthrene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
Pyrene	U		0.000674	0.00674	1	01/09/2019 10:14	WG1220215
1-Methylnaphthalene	U		0.00225	0.0225	1	01/09/2019 10:14	WG1220215
2-Methylnaphthalene	U		0.00225	0.0225	1	01/09/2019 10:14	WG1220215
2-Chloronaphthalene	U		0.00225	0.0225	1	01/09/2019 10:14	WG1220215
(S) Nitrobenzene-d5	104			14.0-149		01/09/2019 10:14	WG1220215
(S) 2-Fluorobiphenyl	85.9			34.0-125		01/09/2019 10:14	WG1220215
(S) p-Terphenyl-d14	81.1			23.0-120		01/09/2019 10:14	WG1220215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

CS8

Collected date/time: 01/03/19 14:00

SAMPLE RESULTS - 08

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.3		1	01/09/2019 16:38	WG1220665

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000448	0.00112	1	01/08/2019 03:13	WG1220283
Toluene	0.0140		0.00140	0.00560	1	01/08/2019 03:13	WG1220283
Ethylbenzene	0.00258	J	0.000594	0.00280	1	01/08/2019 03:13	WG1220283
Total Xylenes	0.0151	B	0.00535	0.00728	1	01/08/2019 03:13	WG1220283
Methyl tert-butyl ether	U		0.000330	0.00112	1	01/08/2019 03:13	WG1220283
(S) Toluene-d8	81.7			75.0-131		01/08/2019 03:13	WG1220283
(S) Dibromofluoromethane	86.5			65.0-129		01/08/2019 03:13	WG1220283
(S) 4-Bromofluorobenzene	103			67.0-138		01/08/2019 03:13	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Acenaphthene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Acenaphthylene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Benzo(a)anthracene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Benzo(a)pyrene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Benzo(b)fluoranthene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Benzo(g,h,i)perylene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Benzo(k)fluoranthene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Chrysene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Dibenz(a,h)anthracene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Fluoranthene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Fluorene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Naphthalene	U		0.00224	0.0224	1	01/09/2019 10:35	WG1220215
Phenanthrene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
Pyrene	U		0.000672	0.00672	1	01/09/2019 10:35	WG1220215
1-Methylnaphthalene	U		0.00224	0.0224	1	01/09/2019 10:35	WG1220215
2-Methylnaphthalene	U		0.00224	0.0224	1	01/09/2019 10:35	WG1220215
2-Chloronaphthalene	U		0.00224	0.0224	1	01/09/2019 10:35	WG1220215
(S) Nitrobenzene-d5	102			14.0-149		01/09/2019 10:35	WG1220215
(S) 2-Fluorobiphenyl	82.7			34.0-125		01/09/2019 10:35	WG1220215
(S) p-Terphenyl-d14	77.3			23.0-120		01/09/2019 10:35	WG1220215

Cp

Tc

Ss

Cn

Sr

Qc

GI

AI

Sc

CS9

Collected date/time: 01/03/19 14:10

SAMPLE RESULTS - 09

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	88.7		1	01/09/2019 16:38	WG1220665

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000451	0.00113	1	01/08/2019 03:32	WG1220283
Toluene	0.00882		0.00141	0.00563	1	01/08/2019 03:32	WG1220283
Ethylbenzene	0.00205		0.000597	0.00282	1	01/08/2019 03:32	WG1220283
Total Xylenes	0.00980		0.00539	0.00733	1	01/08/2019 03:32	WG1220283
Methyl tert-butyl ether	U		0.000332	0.00113	1	01/08/2019 03:32	WG1220283
(S) Toluene-d8	87.9			75.0-131		01/08/2019 03:32	WG1220283
(S) Dibromofluoromethane	89.4			65.0-129		01/08/2019 03:32	WG1220283
(S) 4-Bromofluorobenzene	102			67.0-138		01/08/2019 03:32	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Acenaphthene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Acenaphthylene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Benzo(a)anthracene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Benzo(a)pyrene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Benzo(b)fluoranthene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Benzo(g,h,i)perylene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Benzo(k)fluoranthene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Chrysene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Dibenz(a,h)anthracene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Fluoranthene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Fluorene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Naphthalene	U		0.00225	0.0225	1	01/09/2019 10:56	WG1220215
Phenanthrene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
Pyrene	U		0.000676	0.00676	1	01/09/2019 10:56	WG1220215
1-Methylnaphthalene	U		0.00225	0.0225	1	01/09/2019 10:56	WG1220215
2-Methylnaphthalene	U		0.00225	0.0225	1	01/09/2019 10:56	WG1220215
2-Chloronaphthalene	U		0.00225	0.0225	1	01/09/2019 10:56	WG1220215
(S) Nitrobenzene-d5	98.7			14.0-149		01/09/2019 10:56	WG1220215
(S) 2-Fluorobiphenyl	93.3			34.0-125		01/09/2019 10:56	WG1220215
(S) p-Terphenyl-d14	80.3			23.0-120		01/09/2019 10:56	WG1220215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CS10

Collected date/time: 01/03/19 14:20

SAMPLE RESULTS - 10

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.5		1	01/09/2019 16:38	WG1220665

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000447	0.00112	1	01/08/2019 03:51	WG1220283
Toluene	U		0.00140	0.00559	1	01/08/2019 03:51	WG1220283
Ethylbenzene	U		0.000592	0.00279	1	01/08/2019 03:51	WG1220283
Total Xylenes	U		0.00534	0.00726	1	01/08/2019 03:51	WG1220283
Methyl tert-butyl ether	U		0.000330	0.00112	1	01/08/2019 03:51	WG1220283
(S) Toluene-d8	81.2			75.0-131		01/08/2019 03:51	WG1220283
(S) Dibromofluoromethane	92.2			65.0-129		01/08/2019 03:51	WG1220283
(S) 4-Bromofluorobenzene	101			67.0-138		01/08/2019 03:51	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Acenaphthene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Acenaphthylene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Benzo(a)anthracene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Benzo(a)pyrene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Benzo(b)fluoranthene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Benzo(g,h,i)perylene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Benzo(k)fluoranthene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Chrysene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Dibenz(a,h)anthracene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Fluoranthene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Fluorene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Naphthalene	U		0.00223	0.0223	1	01/09/2019 11:17	WG1220215
Phenanthrene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
Pyrene	U		0.000670	0.00670	1	01/09/2019 11:17	WG1220215
1-Methylnaphthalene	U		0.00223	0.0223	1	01/09/2019 11:17	WG1220215
2-Methylnaphthalene	U		0.00223	0.0223	1	01/09/2019 11:17	WG1220215
2-Chloronaphthalene	U		0.00223	0.0223	1	01/09/2019 11:17	WG1220215
(S) Nitrobenzene-d5	93.9			14.0-149		01/09/2019 11:17	WG1220215
(S) 2-Fluorobiphenyl	79.6			34.0-125		01/09/2019 11:17	WG1220215
(S) p-Terphenyl-d14	74.6			23.0-120		01/09/2019 11:17	WG1220215

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

CS11

Collected date/time: 01/03/19 14:30

SAMPLE RESULTS - 11

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.0		1	01/09/2019 16:38	WG1220665

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000449	0.00112	1	01/08/2019 04:10	WG1220283
Toluene	U		0.00140	0.00562	1	01/08/2019 04:10	WG1220283
Ethylbenzene	U		0.000596	0.00281	1	01/08/2019 04:10	WG1220283
Total Xylenes	U		0.00537	0.00730	1	01/08/2019 04:10	WG1220283
Methyl tert-butyl ether	U		0.000331	0.00112	1	01/08/2019 04:10	WG1220283
(S) Toluene-d8	85.9			75.0-131		01/08/2019 04:10	WG1220283
(S) Dibromofluoromethane	86.5			65.0-129		01/08/2019 04:10	WG1220283
(S) 4-Bromofluorobenzene	104			67.0-138		01/08/2019 04:10	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Acenaphthene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Acenaphthylene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Benzo(a)anthracene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Benzo(a)pyrene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Benzo(b)fluoranthene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Benzo(g,h,i)perylene	0.00113	J	0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Benzo(k)fluoranthene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Chrysene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Dibenz(a,h)anthracene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Fluoranthene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Fluorene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Naphthalene	U		0.00225	0.0225	1	01/09/2019 11:38	WG1220215
Phenanthrene	0.00101	J	0.000674	0.00674	1	01/09/2019 11:38	WG1220215
Pyrene	0.000871	J	0.000674	0.00674	1	01/09/2019 11:38	WG1220215
1-Methylnaphthalene	U		0.00225	0.0225	1	01/09/2019 11:38	WG1220215
2-Methylnaphthalene	U		0.00225	0.0225	1	01/09/2019 11:38	WG1220215
2-Chloronaphthalene	U		0.00225	0.0225	1	01/09/2019 11:38	WG1220215
(S) Nitrobenzene-d5	98.6			14.0-149		01/09/2019 11:38	WG1220215
(S) 2-Fluorobiphenyl	80.5			34.0-125		01/09/2019 11:38	WG1220215
(S) p-Terphenyl-d14	83.1			23.0-120		01/09/2019 11:38	WG1220215

Cp

Tc

Ss

Cn

Sr

Qc

GI

AI

Sc

CS12

Collected date/time: 01/03/19 14:40

SAMPLE RESULTS - 12

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.1		1	01/09/2019 16:38	WG1220665

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000449	0.00112	1	01/08/2019 04:29	WG1220283
Toluene	U		0.00140	0.00561	1	01/08/2019 04:29	WG1220283
Ethylbenzene	U		0.000595	0.00281	1	01/08/2019 04:29	WG1220283
Total Xylenes	U		0.00537	0.00730	1	01/08/2019 04:29	WG1220283
Methyl tert-butyl ether	U		0.000331	0.00112	1	01/08/2019 04:29	WG1220283
(S) Toluene-d8	89.1			75.0-131		01/08/2019 04:29	WG1220283
(S) Dibromofluoromethane	96.5			65.0-129		01/08/2019 04:29	WG1220283
(S) 4-Bromofluorobenzene	102			67.0-138		01/08/2019 04:29	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Acenaphthene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Acenaphthylene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Benzo(a)anthracene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Benzo(a)pyrene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Benzo(b)fluoranthene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Benzo(g,h,i)perylene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Benzo(k)fluoranthene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Chrysene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Dibenz(a,h)anthracene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Fluoranthene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Fluorene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Naphthalene	U		0.00225	0.0225	1	01/09/2019 11:59	WG1220215
Phenanthrene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
Pyrene	U		0.000674	0.00674	1	01/09/2019 11:59	WG1220215
1-Methylnaphthalene	U		0.00225	0.0225	1	01/09/2019 11:59	WG1220215
2-Methylnaphthalene	U		0.00225	0.0225	1	01/09/2019 11:59	WG1220215
2-Chloronaphthalene	U		0.00225	0.0225	1	01/09/2019 11:59	WG1220215
(S) Nitrobenzene-d5	102			14.0-149		01/09/2019 11:59	WG1220215
(S) 2-Fluorobiphenyl	83.5			34.0-125		01/09/2019 11:59	WG1220215
(S) p-Terphenyl-d14	75.5			23.0-120		01/09/2019 11:59	WG1220215

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

CS13

Collected date/time: 01/03/19 14:50

SAMPLE RESULTS - 13

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.9		1	01/09/2019 16:38	WG1220665

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000445	0.00111	1	01/08/2019 04:48	WG1220283
Toluene	U		0.00139	0.00556	1	01/08/2019 04:48	WG1220283
Ethylbenzene	U		0.000590	0.00278	1	01/08/2019 04:48	WG1220283
Total Xylenes	U		0.00532	0.00723	1	01/08/2019 04:48	WG1220283
Methyl tert-butyl ether	U		0.000328	0.00111	1	01/08/2019 04:48	WG1220283
(S) Toluene-d8	81.0			75.0-131		01/08/2019 04:48	WG1220283
(S) Dibromofluoromethane	93.3			65.0-129		01/08/2019 04:48	WG1220283
(S) 4-Bromofluorobenzene	99.6			67.0-138		01/08/2019 04:48	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Acenaphthene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Acenaphthylene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Benzo(a)anthracene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Benzo(a)pyrene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Benzo(b)fluoranthene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Benzo(g,h,i)perylene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Benzo(k)fluoranthene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Chrysene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Dibenz(a,h)anthracene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Fluoranthene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Fluorene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Naphthalene	U		0.00223	0.0223	1	01/09/2019 12:20	WG1220215
Phenanthrene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
Pyrene	U		0.000668	0.00668	1	01/09/2019 12:20	WG1220215
1-Methylnaphthalene	U		0.00223	0.0223	1	01/09/2019 12:20	WG1220215
2-Methylnaphthalene	U		0.00223	0.0223	1	01/09/2019 12:20	WG1220215
2-Chloronaphthalene	U		0.00223	0.0223	1	01/09/2019 12:20	WG1220215
(S) Nitrobenzene-d5	95.2			14.0-149		01/09/2019 12:20	WG1220215
(S) 2-Fluorobiphenyl	83.6			34.0-125		01/09/2019 12:20	WG1220215
(S) p-Terphenyl-d14	79.7			23.0-120		01/09/2019 12:20	WG1220215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CS14

Collected date/time: 01/03/19 15:00

SAMPLE RESULTS - 14

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.8		1	01/09/2019 16:38	WG1220665

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000471	0.00118	1	01/08/2019 05:07	WG1220283
Toluene	U		0.00147	0.00589	1	01/08/2019 05:07	WG1220283
Ethylbenzene	U		0.000625	0.00295	1	01/08/2019 05:07	WG1220283
Total Xylenes	U		0.00563	0.00766	1	01/08/2019 05:07	WG1220283
Methyl tert-butyl ether	U		0.000348	0.00118	1	01/08/2019 05:07	WG1220283
(S) Toluene-d8	107			75.0-131		01/08/2019 05:07	WG1220283
(S) Dibromofluoromethane	90.7			65.0-129		01/08/2019 05:07	WG1220283
(S) 4-Bromofluorobenzene	103			67.0-138		01/08/2019 05:07	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Acenaphthene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Acenaphthylene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Benzo(a)anthracene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Benzo(a)pyrene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Benzo(b)fluoranthene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Benzo(g,h,i)perylene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Benzo(k)fluoranthene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Chrysene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Dibenz(a,h)anthracene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Fluoranthene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Fluorene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Naphthalene	U		0.00236	0.0236	1	01/09/2019 12:41	WG1220215
Phenanthrene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
Pyrene	U		0.000707	0.00707	1	01/09/2019 12:41	WG1220215
1-Methylnaphthalene	U		0.00236	0.0236	1	01/09/2019 12:41	WG1220215
2-Methylnaphthalene	U		0.00236	0.0236	1	01/09/2019 12:41	WG1220215
2-Chloronaphthalene	U		0.00236	0.0236	1	01/09/2019 12:41	WG1220215
(S) Nitrobenzene-d5	91.0			14.0-149		01/09/2019 12:41	WG1220215
(S) 2-Fluorobiphenyl	83.9			34.0-125		01/09/2019 12:41	WG1220215
(S) p-Terphenyl-d14	77.1			23.0-120		01/09/2019 12:41	WG1220215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

CS15

Collected date/time: 01/03/19 15:05

SAMPLE RESULTS - 15

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.0		1	01/09/2019 16:38	WG1220665

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000460	0.00115	1	01/08/2019 05:26	WG1220283
Toluene	U		0.00144	0.00575	1	01/08/2019 05:26	WG1220283
Ethylbenzene	U		0.000609	0.00287	1	01/08/2019 05:26	WG1220283
Total Xylenes	U		0.00550	0.00747	1	01/08/2019 05:26	WG1220283
Methyl tert-butyl ether	U		0.000339	0.00115	1	01/08/2019 05:26	WG1220283
(S) Toluene-d8	107			75.0-131		01/08/2019 05:26	WG1220283
(S) Dibromofluoromethane	89.0			65.0-129		01/08/2019 05:26	WG1220283
(S) 4-Bromofluorobenzene	103			67.0-138		01/08/2019 05:26	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Acenaphthene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Acenaphthylene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Benzo(a)anthracene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Benzo(a)pyrene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Benzo(b)fluoranthene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Benzo(g,h,i)perylene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Benzo(k)fluoranthene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Chrysene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Dibenz(a,h)anthracene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Fluoranthene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Fluorene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Naphthalene	U		0.00230	0.0230	1	01/09/2019 13:02	WG1220215
Phenanthrene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
Pyrene	U		0.000690	0.00690	1	01/09/2019 13:02	WG1220215
1-Methylnaphthalene	U		0.00230	0.0230	1	01/09/2019 13:02	WG1220215
2-Methylnaphthalene	U		0.00230	0.0230	1	01/09/2019 13:02	WG1220215
2-Chloronaphthalene	U		0.00230	0.0230	1	01/09/2019 13:02	WG1220215
(S) Nitrobenzene-d5	99.4			14.0-149		01/09/2019 13:02	WG1220215
(S) 2-Fluorobiphenyl	84.2			34.0-125		01/09/2019 13:02	WG1220215
(S) p-Terphenyl-d14	80.7			23.0-120		01/09/2019 13:02	WG1220215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

CS16

Collected date/time: 01/03/19 15:10

SAMPLE RESULTS - 16

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.6		1	01/09/2019 16:21	WG1220669

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000457	0.00114	1	01/08/2019 05:45	WG1220283
Toluene	U		0.00143	0.00571	1	01/08/2019 05:45	WG1220283
Ethylbenzene	U		0.000605	0.00285	1	01/08/2019 05:45	WG1220283
Total Xylenes	U		0.00546	0.00742	1	01/08/2019 05:45	WG1220283
Methyl tert-butyl ether	U		0.000337	0.00114	1	01/08/2019 05:45	WG1220283
(S) Toluene-d8	104			75.0-131		01/08/2019 05:45	WG1220283
(S) Dibromofluoromethane	92.6			65.0-129		01/08/2019 05:45	WG1220283
(S) 4-Bromofluorobenzene	103			67.0-138		01/08/2019 05:45	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Acenaphthene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Acenaphthylene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Benzo(a)anthracene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Benzo(a)pyrene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Benzo(b)fluoranthene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Benzo(g,h,i)perylene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Benzo(k)fluoranthene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Chrysene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Dibenz(a,h)anthracene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Fluoranthene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Fluorene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Naphthalene	U		0.00228	0.0228	1	01/09/2019 13:23	WG1220215
Phenanthrene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
Pyrene	U		0.000685	0.00685	1	01/09/2019 13:23	WG1220215
1-Methylnaphthalene	U		0.00228	0.0228	1	01/09/2019 13:23	WG1220215
2-Methylnaphthalene	U		0.00228	0.0228	1	01/09/2019 13:23	WG1220215
2-Chloronaphthalene	U		0.00228	0.0228	1	01/09/2019 13:23	WG1220215
(S) Nitrobenzene-d5	102			14.0-149		01/09/2019 13:23	WG1220215
(S) 2-Fluorobiphenyl	80.0			34.0-125		01/09/2019 13:23	WG1220215
(S) p-Terphenyl-d14	80.9			23.0-120		01/09/2019 13:23	WG1220215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CS17

Collected date/time: 01/03/19 15:15

SAMPLE RESULTS - 17

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.9		1	01/09/2019 16:21	WG1220669

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000440	0.00110	1	01/08/2019 06:04	WG1220283
Toluene	0.0145		0.00138	0.00550	1	01/08/2019 06:04	WG1220283
Ethylbenzene	0.00150	J	0.000583	0.00275	1	01/08/2019 06:04	WG1220283
Total Xylenes	0.00922	B	0.00526	0.00715	1	01/08/2019 06:04	WG1220283
Methyl tert-butyl ether	U		0.000325	0.00110	1	01/08/2019 06:04	WG1220283
(S) Toluene-d8	107			75.0-131		01/08/2019 06:04	WG1220283
(S) Dibromofluoromethane	94.9			65.0-129		01/08/2019 06:04	WG1220283
(S) 4-Bromofluorobenzene	103			67.0-138		01/08/2019 06:04	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Acenaphthene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Acenaphthylene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Benzo(a)anthracene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Benzo(a)pyrene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Benzo(b)fluoranthene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Benzo(g,h,i)perylene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Benzo(k)fluoranthene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Chrysene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Dibenz(a,h)anthracene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Fluoranthene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Fluorene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Naphthalene	U		0.00220	0.0220	1	01/09/2019 13:44	WG1220215
Phenanthrene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
Pyrene	U		0.000660	0.00660	1	01/09/2019 13:44	WG1220215
1-Methylnaphthalene	U		0.00220	0.0220	1	01/09/2019 13:44	WG1220215
2-Methylnaphthalene	U		0.00220	0.0220	1	01/09/2019 13:44	WG1220215
2-Chloronaphthalene	U		0.00220	0.0220	1	01/09/2019 13:44	WG1220215
(S) Nitrobenzene-d5	90.0			14.0-149		01/09/2019 13:44	WG1220215
(S) 2-Fluorobiphenyl	76.7			34.0-125		01/09/2019 13:44	WG1220215
(S) p-Terphenyl-d14	75.7			23.0-120		01/09/2019 13:44	WG1220215

CS18

Collected date/time: 01/03/19 15:20

SAMPLE RESULTS - 18

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.9		1	01/09/2019 16:21	WG1220669

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000455	0.00114	1	01/08/2019 06:23	WG1220283
Toluene	U		0.00142	0.00569	1	01/08/2019 06:23	WG1220283
Ethylbenzene	U		0.000603	0.00285	1	01/08/2019 06:23	WG1220283
Total Xylenes	U		0.00544	0.00740	1	01/08/2019 06:23	WG1220283
Methyl tert-butyl ether	U		0.000336	0.00114	1	01/08/2019 06:23	WG1220283
(S) Toluene-d8	111			75.0-131		01/08/2019 06:23	WG1220283
(S) Dibromofluoromethane	91.0			65.0-129		01/08/2019 06:23	WG1220283
(S) 4-Bromofluorobenzene	105			67.0-138		01/08/2019 06:23	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Acenaphthene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Acenaphthylene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Benzo(a)anthracene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Benzo(a)pyrene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Benzo(b)fluoranthene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Benzo(g,h,i)perylene	0.00190	J	0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Benzo(k)fluoranthene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Chrysene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Dibenz(a,h)anthracene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Fluoranthene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Fluorene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Naphthalene	U		0.00228	0.0228	1	01/09/2019 14:05	WG1220215
Phenanthrene	U		0.000683	0.00683	1	01/09/2019 14:05	WG1220215
Pyrene	0.00142	J	0.000683	0.00683	1	01/09/2019 14:05	WG1220215
1-Methylnaphthalene	U		0.00228	0.0228	1	01/09/2019 14:05	WG1220215
2-Methylnaphthalene	U		0.00228	0.0228	1	01/09/2019 14:05	WG1220215
2-Chloronaphthalene	U		0.00228	0.0228	1	01/09/2019 14:05	WG1220215
(S) Nitrobenzene-d5	95.2			14.0-149		01/09/2019 14:05	WG1220215
(S) 2-Fluorobiphenyl	83.0			34.0-125		01/09/2019 14:05	WG1220215
(S) p-Terphenyl-d14	79.5			23.0-120		01/09/2019 14:05	WG1220215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

3 Al

9 Sc

CS19

Collected date/time: 01/03/19 15:25

SAMPLE RESULTS - 19

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	82.9		1	01/09/2019 16:21	WG1220669

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000483	0.00121	1	01/08/2019 06:42	WG1220283
Toluene	U		0.00151	0.00603	1	01/08/2019 06:42	WG1220283
Ethylbenzene	U		0.000639	0.00302	1	01/08/2019 06:42	WG1220283
Total Xylenes	U		0.00577	0.00784	1	01/08/2019 06:42	WG1220283
Methyl tert-butyl ether	U		0.000356	0.00121	1	01/08/2019 06:42	WG1220283
(S) Toluene-d8	62.7	J2		75.0-131		01/08/2019 06:42	WG1220283
(S) Dibromofluoromethane	101			65.0-129		01/08/2019 06:42	WG1220283
(S) 4-Bromofluorobenzene	88.6			67.0-138		01/08/2019 06:42	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Acenaphthene	0.00185	J	0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Acenaphthylene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Benzo(a)anthracene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Benzo(a)pyrene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Benzo(b)fluoranthene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Benzo(g,h,i)perylene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Benzo(k)fluoranthene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Chrysene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Dibenz(a,h)anthracene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Fluoranthene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Fluorene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Naphthalene	U		0.00241	0.0241	1	01/09/2019 14:27	WG1220215
Phenanthrene	0.00160	J	0.000724	0.00724	1	01/09/2019 14:27	WG1220215
Pyrene	U		0.000724	0.00724	1	01/09/2019 14:27	WG1220215
1-Methylnaphthalene	U		0.00241	0.0241	1	01/09/2019 14:27	WG1220215
2-Methylnaphthalene	U		0.00241	0.0241	1	01/09/2019 14:27	WG1220215
2-Chloronaphthalene	U		0.00241	0.0241	1	01/09/2019 14:27	WG1220215
(S) Nitrobenzene-d5	124			14.0-149		01/09/2019 14:27	WG1220215
(S) 2-Fluorobiphenyl	86.5			34.0-125		01/09/2019 14:27	WG1220215
(S) p-Terphenyl-d14	85.1			23.0-120		01/09/2019 14:27	WG1220215

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CS20

Collected date/time: 01/03/19 15:40

SAMPLE RESULTS - 20

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.2		1	01/09/2019 16:21	WG1220669

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000499	0.00125	1	01/08/2019 07:01	WG1220283
Toluene	U		0.00156	0.00624	1	01/08/2019 07:01	WG1220283
Ethylbenzene	0.0184		0.000661	0.00312	1	01/08/2019 07:01	WG1220283
Total Xylenes	0.0620	J3	0.00596	0.00811	1	01/08/2019 07:01	WG1220283
Methyl tert-butyl ether	U		0.000368	0.00125	1	01/08/2019 07:01	WG1220283
(S) Toluene-d8	133	J1		75.0-131		01/08/2019 07:01	WG1220283
(S) Dibromofluoromethane	97.2			65.0-129		01/08/2019 07:01	WG1220283
(S) 4-Bromofluorobenzene	75.8			67.0-138		01/08/2019 07:01	WG1220283

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Acenaphthene	0.00267	J	0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Acenaphthylene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Benzo(a)anthracene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Benzo(a)pyrene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Benzo(b)fluoranthene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Benzo(g,h,i)perylene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Benzo(k)fluoranthene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Chrysene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Dibenz(a,h)anthracene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Fluoranthene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Fluorene	0.00116	J	0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Indeno(1,2,3-cd)pyrene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Naphthalene	U		0.00250	0.0250	1	01/09/2019 14:48	WG1220215
Phenanthrene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
Pyrene	U		0.000749	0.00749	1	01/09/2019 14:48	WG1220215
1-Methylnaphthalene	0.107		0.00250	0.0250	1	01/09/2019 14:48	WG1220215
2-Methylnaphthalene	0.0682		0.00250	0.0250	1	01/09/2019 14:48	WG1220215
2-Chloronaphthalene	U		0.00250	0.0250	1	01/09/2019 14:48	WG1220215
(S) Nitrobenzene-d5	9.58	J2		14.0-149		01/09/2019 14:48	WG1220215
(S) 2-Fluorobiphenyl	31.3	J2		34.0-125		01/09/2019 14:48	WG1220215
(S) p-Terphenyl-d14	88.6			23.0-120		01/09/2019 14:48	WG1220215

Sample Narrative:

L1058458-20 WG1220215: Surrogate failure due to matrix interference

CS21

Collected date/time: 01/03/19 15:45

SAMPLE RESULTS - 21

L1058458

ONE LAB. NATIONWIDE.



Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	80.4		1	01/09/2019 16:21	WG1220669

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000497	0.00124	1	01/08/2019 17:39	WG1220535
Toluene	U		0.00155	0.00622	1	01/08/2019 17:39	WG1220535
Ethylbenzene	U		0.000659	0.00311	1	01/08/2019 17:39	WG1220535
Total Xylenes	U		0.00595	0.00808	1	01/08/2019 17:39	WG1220535
Methyl tert-butyl ether	U		0.000367	0.00124	1	01/08/2019 17:39	WG1220535
(S) Toluene-d8	110			75.0-131		01/08/2019 17:39	WG1220535
(S) Dibromofluoromethane	80.5			65.0-129		01/08/2019 17:39	WG1220535
(S) 4-Bromofluorobenzene	95.5			67.0-138		01/08/2019 17:39	WG1220535

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Acenaphthene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Acenaphthylene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Benzo(a)anthracene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Benzo(a)pyrene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Benzo(b)fluoranthene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Benzo(g,h,i)perylene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Benzo(k)fluoranthene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Chrysene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Dibenz(a,h)anthracene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Fluoranthene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Fluorene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Indeno(1,2,3-cd)pyrene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Naphthalene	U		0.00249	0.0249	1	01/10/2019 15:24	WG1221341
Phenanthrene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
Pyrene	U		0.000746	0.00746	1	01/10/2019 15:24	WG1221341
1-Methylnaphthalene	U		0.00249	0.0249	1	01/10/2019 15:24	WG1221341
2-Methylnaphthalene	U		0.00249	0.0249	1	01/10/2019 15:24	WG1221341
2-Chloronaphthalene	U		0.00249	0.0249	1	01/10/2019 15:24	WG1221341
(S) Nitrobenzene-d5	90.2			14.0-149		01/10/2019 15:24	WG1221341
(S) 2-Fluorobiphenyl	86.9			34.0-125		01/10/2019 15:24	WG1221341
(S) p-Terphenyl-d14	75.9			23.0-120		01/10/2019 15:24	WG1221341

Cp

Tc

Ss

Cn

Sr

Qc

GI

AI

Sc

WG1220531

Total Solids by Method 2540 G-2011

QUALITY CONTROL SUMMARY

L1058458-01.02.03.04.05

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3374739-1 01/09/19 10:36

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1058448-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1058448-08 01/09/19 10:36 • (DUP) R3374739-3 01/09/19 10:36

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	82.4	81.4	1	1.26		10

Laboratory Control Sample (LCS)

(LCS) R3374739-2 01/09/19 10:36

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ACCOUNT:

Robinson Engineering, Ltd.

PROJECT:

18-R114

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WG1220665

Total Solids by Method 2540 G-2011

QUALITY CONTROL SUMMARY

L1058458-05,07,08,09,10,11,12,13,14,15

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3374756-1 01/09/19 16:38

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1058458-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1058458-12 01/09/19 16:38 • (DUP) R3374756-3 01/09/19 16:38

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	89.1	90.0	1	1.01		10

Laboratory Control Sample (LCS)

(LCS) R3374756-2 01/09/19 16:38

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

ACCOUNT:

Robinson Engineering, Ltd.

PROJECT:

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WG1220669

Total Solids by Method 2540 G-2011

QUALITY CONTROL SUMMARY

L1058458-16,17,18,19,20,21

ONE LAB. NATIONWIDE

Method Blank (MB)

(MB) R3374754-1 01/09/19 16:21

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1058458-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1058458-21 01/09/19 16:21 • (DUP) R3374754-3 01/09/19 16:21

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	80.4	80.5	1	0.0629		10

Laboratory Control Sample (LCS)

(LCS) R3374754-2 01/09/19 16:21

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

ACCOUNT:
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WG1220283

Volatile Organic Compounds (GC/MS) by Method 8260B

QUALITY CONTROL SUMMARY

L1058458-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15,16,17,18,19,20

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3374040-2 01/07/19 21:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U	0.000400	0.000400	0.00100
Ethylbenzene	U	0.000530	0.000530	0.00250
Methyl tert-butyl ether	U	0.000295	0.000295	0.00100
Toluene	U	0.00125	0.00125	0.00500
Xylenes, Total	U	0.00478	0.00478	0.00650
(S) Toluene-d8	107			75.0-131
(S) Dibromofluoromethane	93.8			65.0-129
(S) 4-Bromofluorobenzene	98.6			67.0-138

Laboratory Control Sample (LCS)

(LCS) R3374040-1 01/07/19 20:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.0931	74.5	70.0-123	
Ethylbenzene	0.125	0.132	106	74.0-126	
Methyl tert-butyl ether	0.125	0.130	104	66.0-132	
Toluene	0.125	0.114	90.9	75.0-121	
Xylenes, Total	0.375	0.443	118	72.0-127	
(S) Toluene-d8			106	75.0-131	
(S) Dibromofluoromethane			93.6	65.0-129	
(S) 4-Bromofluorobenzene			99.4	67.0-138	

L1058458-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1058458-20 01/08/19 07:01 • (MS) R3374040-3 01/07/19 22:18 • (MSD) R3374040-4 01/07/19 23:45

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MS Rec. %	MSD Result (dry) mg/kg	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD	RPD Limits %
Benzene	0.624	U	0.531	85.1	0.508	81.4	1	10.0-149		4.40	37	
Ethylbenzene	0.624	0.0184	0.666	104	0.875	137	1	10.0-160		27.1	38	
Methyl tert-butyl ether	0.624	U	0.619	99.2	0.641	103	1	11.0-147		3.53	35	
Toluene	0.624	U	0.707	113	0.564	90.4	1	10.0-156		22.5	38	
Xylenes, Total	1.87	0.0620	2.19	114	2.89	151	1	10.0-160	J3	27.8	38	
(S) Toluene-d8				102		103		75.0-131				
(S) Dibromofluoromethane				96.5		101		65.0-129				
(S) 4-Bromofluorobenzene				71.5		76.0		67.0-138				

ACCOUNT:
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Volatile Organic Compounds (GC/MS) by Method 8260B

QUALITY CONTROL SUMMARY

L1058458-21

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3374287-2 01/08/19 11:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U	0.000400		0.00100
Ethylbenzene	U	0.000530		0.00250
Methyl tert-butyl ether	U	0.000295		0.00100
Toluene	U	0.00125		0.00500
Xylenes, Total	U	0.00478		0.00650
(S) Toluene-d8	96.5			75.0-131
(S) Dibromofluoromethane	114			65.0-129
(S) 4-Bromofluorobenzene	87.7			67.0-138

Laboratory Control Sample (LCS)

(LCS) R3374287-1 01/08/19 10:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.141	113	70.0-123	
Ethylbenzene	0.125	0.147	118	74.0-126	
Methyl tert-butyl ether	0.125	0.154	124	66.0-132	
Toluene	0.125	0.113	90.6	75.0-121	
Xylenes, Total	0.375	0.428	114	72.0-127	
(S) Toluene-d8			95.6	75.0-131	
(S) Dibromofluoromethane			109	65.0-129	
(S) 4-Bromofluorobenzene			94.9	67.0-138	

1 Cp 2 Tc 3 Ss 4 Cn 5 Sr 6 Qc 7 Gl 8 Al 9 Sc

ACCOUNT:

Robinson Engineering, Ltd.

PROJECT:

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WG1220215

QUALITY CONTROL SUMMARY

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-~~1058458~~-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15,16,17,18,19,20

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3374696-3 01/09/19 07:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U	0.000600	0.000600	0.00600
Acenaphthene	U	0.000600	0.000600	0.00600
Acenaphthylene	U	0.000600	0.000600	0.00600
Benzo(a)anthracene	U	0.000600	0.000600	0.00600
Benzo(a)pyrene	U	0.000600	0.000600	0.00600
Benzo(b)fluoranthene	U	0.000600	0.000600	0.00600
Benzo(g,h,i)perylene	U	0.000600	0.000600	0.00600
Benzo(k)fluoranthene	U	0.000600	0.000600	0.00600
Chrysene	U	0.000600	0.000600	0.00600
Dibenz(a,h)anthracene	U	0.000600	0.000600	0.00600
Fluoranthene	U	0.000600	0.000600	0.00600
Fluorene	U	0.000600	0.000600	0.00600
Indeno(1,2,3-cd)pyrene	U	0.000600	0.000600	0.00600
Naphthalene	U	0.00200	0.00200	0.0200
Phenanthrene	U	0.000600	0.000600	0.00600
Pyrene	U	0.000600	0.000600	0.00600
1-Methylnaphthalene	U	0.00200	0.00200	0.0200
2-Methylnaphthalene	U	0.00200	0.00200	0.0200
2-Chloronaphthalene	U	0.00200	0.00200	0.0200
(S) Nitrobenzene-d5	85.0			14.0-149
(S) 2-Fluorobiphenyl	68.2			34.0-125
(S) p-Terphenyl-d14	69.7			23.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Oc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3374696-1 01/09/19 06:42 • (LCSD) R3374696-2 01/09/19 07:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0603	0.0607	75.4	75.9	50.0-126		0.661	0.661	20
Acenaphthene	0.0800	0.0662	0.0670	82.8	83.8	50.0-120		1.20	1.20	20
Acenaphthylene	0.0800	0.0646	0.0663	80.7	82.9	50.0-120		2.60	2.60	20
Benzo(a)anthracene	0.0800	0.0602	0.0592	75.3	74.0	45.0-120		1.68	1.68	20
Benzo(a)pyrene	0.0800	0.0532	0.0511	66.5	63.9	42.0-120		4.03	4.03	20
Benzo(b)fluoranthene	0.0800	0.0594	0.0562	74.3	70.3	42.0-121		5.54	5.54	20
Benzo(g,h,i)perylene	0.0800	0.0605	0.0622	75.6	77.8	45.0-125		2.77	2.77	20
Benzo(k)fluoranthene	0.0800	0.0740	0.0702	92.5	87.8	49.0-125		5.27	5.27	20
Chrysene	0.0800	0.0660	0.0694	82.5	86.8	49.0-122		5.02	5.02	20
Dibenz(a,h)anthracene	0.0800	0.0622	0.0668	77.8	83.5	47.0-125		7.13	7.13	20
Fluoranthene	0.0800	0.0620	0.0723	77.5	90.4	49.0-129		15.3	15.3	20

ACCOUNT:

Robinson Engineering, Ltd.

PROJECT:

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WG1220215

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-11858458-01.02.03.04.05.06.07.08.09.10.11.12.13.14.15.16.17.18.19.20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3374696-1 01/09/19 06:42 • (LCSD) R3374696-2 01/09/19 07:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluorene	0.0800	0.0676	0.0624	84.5	78.0	49.0-120			8.00	20
Indeno[1,2,3-cd]pyrene	0.0800	0.0613	0.0661	76.6	82.6	46.0-125			7.54	20
Naphthalene	0.0800	0.0642	0.0652	80.3	81.5	50.0-120			1.55	20
Phenanthrene	0.0800	0.0587	0.0573	73.4	71.6	47.0-120			2.41	20
Pyrene	0.0800	0.0552	0.0597	69.0	74.6	43.0-123			7.83	20
1-Methylnaphthalene	0.0800	0.0644	0.0700	80.5	87.5	51.0-121			8.33	20
2-Methylnaphthalene	0.0800	0.0603	0.0633	75.4	79.1	50.0-120			4.85	20
2-Chloronaphthalene	0.0800	0.0657	0.0608	82.1	76.0	50.0-120			7.75	20
(S) Nitrobenzene-d5					86.9	14.0-149				
(S) 2-Fluorobiphenyl					73.6	34.0-125				
(S) p-Terphenyl-d14					74.2	23.0-120				

L1058458-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1058458-03 01/09/19 08:07 • (MS) R3374696-4 01/09/19 08:28 • (MSD) R3374696-5 01/09/19 08:49

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.103	U	0.0584	0.0659	56.5	63.8	1	10.0-145			12.1	30
Acenaphthene	0.103	U	0.0576	0.0612	55.8	59.3	1	14.0-127			6.09	27
Acenaphthylene	0.103	U	0.0531	0.0606	51.4	58.6	1	21.0-124			13.2	25
Benzo[a]anthracene	0.103	U	0.0597	0.0699	57.8	67.6	1	10.0-139			15.8	30
Benzo[a]pyrene	0.103	0.00214	0.0655	0.0709	61.3	66.6	1	10.0-141			7.95	31
Benzo[b]fluoranthene	0.103	0.00309	0.0566	0.0658	51.8	60.6	1	10.0-140			15.0	36
Benzo[k]fluoranthene	0.103	0.00180	0.0583	0.0663	54.6	62.4	1	10.0-140			12.9	33
Chrysene	0.103	0.00133	0.0677	0.0674	64.2	64.0	1	10.0-137			0.382	31
Dibenz[a,h]anthracene	0.103	0.00209	0.0701	0.0771	65.8	72.6	1	10.0-145			9.47	30
Fluorene	0.103	U	0.0642	0.0698	62.1	67.5	1	10.0-132			8.29	31
Fluoranthene	0.103	U	0.0629	0.0890	60.9	86.1	1	10.0-153			34.4	33
Indeno[1,2,3-cd]pyrene	0.103	U	0.0518	0.0588	50.1	56.9	1	11.0-130		J3	12.6	29
Naphthalene	0.103	0.00176	0.0619	0.0683	58.2	64.4	1	10.0-137			9.92	32
Phenanthrene	0.103	U	0.0665	0.0692	64.4	67.0	1	10.0-135			4.00	27
Pyrene	0.103	U	0.0530	0.0660	51.3	63.9	1	10.0-144			21.9	31
1-Methylnaphthalene	0.103	0.00359	0.0585	0.0749	53.1	69.0	1	10.0-148			24.6	35
2-Methylnaphthalene	0.103	U	0.0630	0.0665	61.0	64.4	1	10.0-142			5.38	28
2-Chloronaphthalene	0.103	U	0.0612	0.0612	59.3	59.3	1	10.0-137			0.000	28
(S) Nitrobenzene-d5	0.103	U	0.0543	0.0616	52.5	59.6	1	29.0-120			12.7	24
(S) 2-Fluorobiphenyl					90.3	93.0		14.0-149				
(S) p-Terphenyl-d14					71.6	74.7		34.0-125				
					71.3	76.4		23.0-120				

ACCOUNT:
Robinson Engineering, Ltd.PROJECT:
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WG1221341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

QUALITY CONTROL SUMMARY

L1058458-21

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3375056-3 01/10/19 15:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U	0.000600	0.000600	0.00600
Acenaphthene	U	0.000600	0.000600	0.00600
Acenaphthylene	U	0.000600	0.000600	0.00600
Benzo(a)anthracene	U	0.000600	0.000600	0.00600
Benzo(a)pyrene	U	0.000600	0.000600	0.00600
Benzo(b)fluoranthene	U	0.000600	0.000600	0.00600
Benzo(g,h,i)perylene	U	0.000600	0.000600	0.00600
Benzo(k)fluoranthene	U	0.000600	0.000600	0.00600
Chrysene	U	0.000600	0.000600	0.00600
Dibenz(a,h)anthracene	U	0.000600	0.000600	0.00600
Fluoranthene	U	0.000600	0.000600	0.00600
Fluorene	U	0.000600	0.000600	0.00600
Indeno(1,2,3-cd)pyrene	U	0.000600	0.000600	0.00600
Naphthalene	U	0.00200	0.00200	0.0200
Phenanthrene	U	0.000600	0.000600	0.00600
Pyrene	U	0.000600	0.000600	0.00600
1-Methylnaphthalene	U	0.00200	0.00200	0.0200
2-Methylnaphthalene	U	0.00200	0.00200	0.0200
2-Chloronaphthalene	U	0.00200	0.00200	0.0200
(S) Nitrobenzene-d5	104			14.0-149
(S) 2-Fluorobiphenyl	100			34.0-125
(S) p-Terphenyl-d14	90.2			23.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3375056-1 01/10/19 14:22 • (LCSD) R3375056-2 01/10/19 14:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0699	0.0710	87.4	88.8	50.0-126			156	20
Acenaphthene	0.0800	0.0738	0.0773	92.3	96.6	50.0-120			463	20
Acenaphthylene	0.0800	0.0750	0.0772	93.8	96.5	50.0-120			289	20
Benzo(a)anthracene	0.0800	0.0698	0.0726	87.3	90.8	45.0-120			393	20
Benzo(a)pyrene	0.0800	0.0598	0.0616	74.8	77.0	42.0-120			297	20
Benzo(b)fluoranthene	0.0800	0.0650	0.0685	81.3	85.6	42.0-121			524	20
Benzo(g,h,i)perylene	0.0800	0.0717	0.0752	89.6	94.0	45.0-125			477	20
Benzo(k)fluoranthene	0.0800	0.0716	0.0808	89.5	101	49.0-125			12.1	20
Chrysene	0.0800	0.0724	0.0777	90.5	97.1	49.0-122			7.06	20
Dibenz(a,h)anthracene	0.0800	0.0754	0.0801	94.3	100	47.0-125			6.05	20
Fluoranthene	0.0800	0.0855	0.0912	107	114	49.0-129			6.45	20

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Robinson Engineering, Ltd.

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Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

QUALITY CONTROL SUMMARY

L1058458-21

ONE LAB. NATIONWIDE.

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3375056-1 01/10/19 14:22 • (LCSD) R3375056-2 01/10/19 14:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluorene	0.0800	0.0769	0.0803	96.1	100	49.0-120			4.33	20
Indeno[1,2,3-cd]pyrene	0.0800	0.0736	0.0776	92.0	97.0	46.0-125			5.29	20
Naphthalene	0.0800	0.0684	0.0704	85.5	88.0	50.0-120			2.88	20
Phenanthrene	0.0800	0.0667	0.0709	83.4	88.6	47.0-120			6.10	20
Pyrene	0.0800	0.0614	0.0634	76.8	79.3	43.0-123			3.21	20
1-Methylnaphthalene	0.0800	0.0744	0.0792	93.0	99.0	51.0-121			6.25	20
2-Methylnaphthalene	0.0800	0.0750	0.0786	93.8	98.3	50.0-120			4.69	20
2-Chloronaphthalene	0.0800	0.0770	0.0798	96.3	99.8	50.0-120			3.57	20
(S) Nitrobenzene-d5				106	113	14.0-149				
(S) 2-Fluorobiphenyl				103	110	34.0-125				
(S) p-Terphenyl-d14				88.1	92.8	23.0-120				

L1058945-61 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1058945-61 01/10/19 20:15 • (MS) R3375056-4 01/10/19 20:35 • (MSD) R3375056-5 01/10/19 20:56

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0873	0.000868	0.0657	0.0771	74.3	85.5	1	10.0-145			15.9	30
Acenaphthene	0.0873	U	0.0716	0.0715	82.0	80.2	1	14.0-127			0.161	27
Acenaphthylene	0.0873	U	0.0719	0.0720	82.4	80.8	1	21.0-124			0.160	25
Benzofluoranthene	0.0873	0.00882	0.0674	0.0732	67.1	72.2	1	10.0-139			8.17	30
Benzofluoranthene	0.0873	0.00912	0.0695	0.0725	69.2	71.1	1	10.0-141			4.21	31
Benzofluoranthene	0.0873	0.0114	0.0667	0.0703	63.4	66.1	1	10.0-140			5.20	36
Benzofluoranthene	0.0873	0.0104	0.0698	0.0710	68.1	68.0	1	10.0-140			1.63	33
Benzofluoranthene	0.0873	0.00451	0.0624	0.0661	66.3	69.0	1	10.0-137			5.72	31
Chrysene	0.0873	0.0106	0.0703	0.0713	68.4	68.1	1	10.0-145			1.46	30
Dibenzofluoranthene	0.0873	0.00235	0.0706	0.0738	78.2	80.1	1	10.0-132			4.30	31
Fluoranthene	0.0873	0.0156	0.0864	0.0964	81.1	90.6	1	10.0-153			10.9	33
Fluorene	0.0873	U	0.0715	0.0729	81.8	81.8	1	11.0-130			2.07	29
Indeno[1,2,3-cd]pyrene	0.0873	0.00565	0.0678	0.0701	71.2	72.3	1	10.0-137			3.33	32
Naphthalene	0.0873	0.00308	0.0712	0.0690	78.1	74.0	1	10.0-135			3.11	27
Phenanthrene	0.0873	0.00432	0.0647	0.0710	69.1	74.8	1	10.0-144			9.31	31
Pyrene	0.0873	0.0117	0.0624	0.0662	58.0	61.1	1	10.0-148			5.90	35
1-Methylnaphthalene	0.0873	U	0.0752	0.0750	86.2	84.1	1	10.0-142			0.306	28
2-Methylnaphthalene	0.0873	U	0.0757	0.0751	86.7	84.3	1	10.0-137			0.762	28
2-Chloronaphthalene	0.0873	U	0.0731	0.0739	83.7	82.9	1	29.0-120			1.09	24
(S) Nitrobenzene-d5					97.3	103		14.0-149				
(S) 2-Fluorobiphenyl					93.3	97.3		34.0-125				
(S) p-Terphenyl-d14					81.4	86.9		23.0-120				

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Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ²	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AJ30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas ³	LA80152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

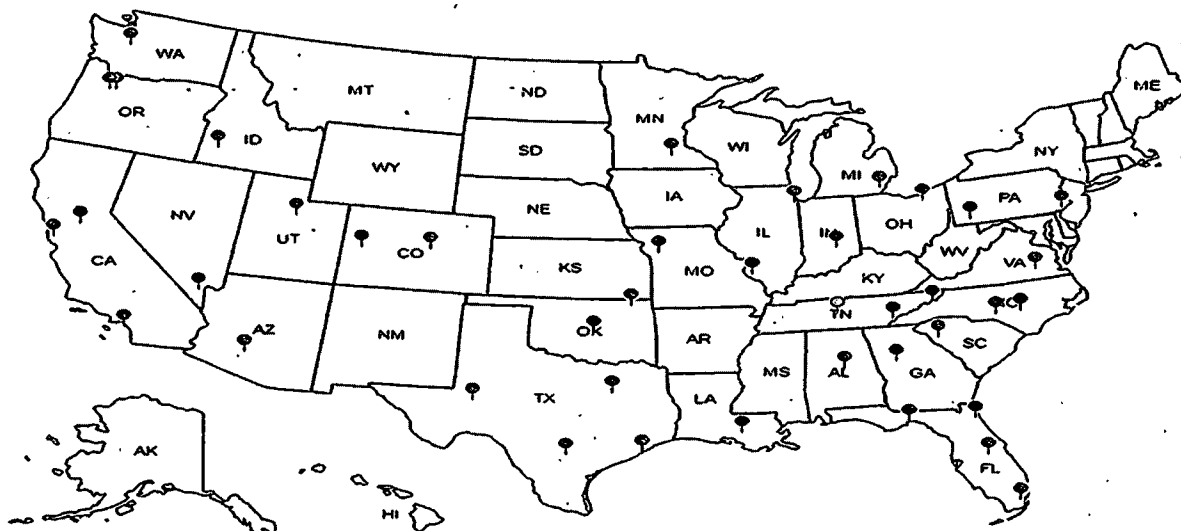
Third Party Federal Accreditations

A2LA - ISO 17025	1461.01	AHA-LAP, LLC EMLAP	100789
A2LA - ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



ACCOUNT:
Robinson Engineering, Ltd.

PROJECT:
18-R1114

SDG:
L1058458

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Robinson Engineering, Ltd.				Billing Information:			
PO Box 7408 Champaign, IL 61826				Accounting 10045 W. Lincoln Highway Frankfort, IL 60423			
Report To: Karl Newman				Email To: knewman@geosconcompanies.com reltd.com			
Project Description: Kroger #1250				City/State Collected: Decatur, IL			
Phone: 217-530-4084		Client Project #: 18-R1114		Lab Project #: GEOPROCIL-18-R1114			
Fax:				P.O.#			
Collected by (print): Karl Newman		Site/Facility ID #: DECATUR, ILLINOIS		Quote #: GEOPROCIL 12181BS		Date Results Needed	
Collect Date: [Redacted]		Rush? (Lab MUST Be Notified)					
Immediately Packed on Ice N Y X		Same Day Five Day					
		Next Day 5 Day (Rad Only)					
		Two Day 10 Day (Rad Only)					
		Three Day					
Sample ID	Camp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	
CS1	G	SS	3.5'	1/3/19	930 AM	2	X X
CS2	G	SS	3.5'	1/3/19	940 Am	2	x x
CS3	G	SS	3.5'	1/3/19	945 Am	2	x x
CS4	G	SS	3.5'	1/3/19	960 Am	2	x x
CS5	G	SS	3.5'	1/3/19	955 Am	2	x x
CS6	G	SS	3.5'	1/3/19	1000Am	2	x x
CS7	G	SS	16' 3"	1/3/19	1010 Am	2	x x
CS8	G	SS	16'	1/3/19	200 PM	2	x x
CS9	G	SS	16'	1/3/19	210 pm	2	x x
CS10	G	SS	16'	1/3/19	220 pm	2	x x

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other _____

Remarks: RADON DETECTED AT CS 7 & 8

Samples returned via: UPS FedEx Courier Tracking # 4757 5078 5090

pH ____ Temp ____
Flow ____ Other ____

Radiation Checklist

COC Seal Present/Intact:	Y	N
COC Signed/Accurate:	/	M
Bottles arrive intact:	/	H
Correct bottles used:	/	H
Sufficient volume sent:	/	H
If Applicable VOA Zero Headspace:	Y	N
Preservation Correct/Cheeked:	Y	N

Received By: Signature	Trip Blank Received: Yes No
[Signature] 1/4/19 10:30am	1 HCl / MeOH
Relinquished by : (Signature)	Temp: °C Bottles Received: 42°F
[Signature]	21°C at 20°F
Retinquired by : (Signature)	Date: Time: Hold: Condition: NCF / OK
[Signature]	01/05/19 8:45

Robinson Engineering, Ltd. PO Box 7408 Champaign, IL 61826				Billing Information: Accounting 10045 W. Lincoln Highway Frankfort, IL 60423				Pres Chk:		Analysis / Container / Preservative										Chain of Custody Page 2 of 3 12085 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-3659 Fax: 615-758-5859					
Report to: Karl Newman				Email To: knewman@geoproc.com retd.com						S3427CPAHSHA, TS 40gCl-NoPres V826QBTEXM 40mlamb/MeOH5ml/Syr															
Project Description: Kroger #1250				City/State Collected: Decatur, IL																					
Phone: 217-530-4084 Fax:				Client Project #: 18-R1114				Lab Project #: GEOPROCIL-18-R1114																	
Collected by (print): Karl Newman				Site/Facility ID #: DECATUR, ILLINOIS				P.O. #:																	
Collected by (signature): [Signature]				Rush? (Lab MUST Be Notified) Same Day _____ Five Day _____ Next Day _____ 5 Day (Rad Only) _____ Two Day _____ 10 Day (Rad Only) _____ Three Day _____				Quote #: GEOPROCIL18IB1B5				Date Results Needed				No. of Cntrs									
Immediately Packed on Ice N Y X																									
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs																			
C511	G	SS	16'	1/3/19	230PM	2	X	X										11							
C512	G	SS	16'	1/3/19	240PM	2	X	X										12							
C513	G	SS	16'	1/3/19	250PM	2	X	X										13							
C514	G	SS	9'	1/3/19	300PM	2	X	X										14							
C515	G	SS	9'	1/3/19	305PM	2	X	X										15							
C516	G	SS	9'	1/3/19	310PM	2	X	X										16							
C517	G	SS	9'	1/3/19	315PM	2	X	X										17							
C518	G	SS	9'	1/3/19	320PM	2	X	X										18							
C519	G	SS	9'	1/3/19	325PM	2	X	X										19							
C520	G	SS	9'	1/3/19	340PM	2	X	X										20							
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Biossay WW - WasteWater DW - Drinking Water OT - Other _____				Remarks: RAD SCORING 3.5 m/hr				pH _____ Temp _____ Flow _____ Other _____				Tracking # 4757 5078 5090				Sample Receipt Checklist COC Seal Present/Intact: Y/N COC Signed/Accurate?: Y/N Bottles Arrive-Intact: Y/N Correct Bottle used: Y/N Sufficient volume sent: Y/N If Applicable Vox Zero Response: Y/N Preservation Correct/Checked: Y/N									
Samples returned via: UPS FedEx Courier				Retrieved by (Signature): [Signature]				Date: 1/4/19 Time: 1030AM				Received by (Signature): [Signature]				Trip Blank Received: Yes/No 1 HCO/Meq/L									
Relinquished by (Signature): [Signature]				Date: _____ Time: _____				Received by (Signature): [Signature]				Temp: °C BoJies Received: 42 + 13				If preservation required by LogIn Date/Time									
Relinquished by (Signature): [Signature]				Date: _____ Time: _____				Received by (Signature): [Signature]				Date: 01/05/19 Time: 8:45				Hold: _____ Conditions: NCF 100									

[illegible]



Illinois Environmental Protection Agency

Bureau of Land • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

The Agency is authorized to require this information under Section 4 and Title XVI of the Environmental Protection Act (415 ILCS 5/4, 5/57 - 57.17). Failure to disclose this information may result in a civil penalty of not to exceed \$50,000.00 for the violation and an additional civil penalty of not to exceed \$10,000.00 for each day during which the violation continues (415 ILCS 5/42). Any person who knowingly makes a false material statement or representation, orally or in writing, in any label, manifest, record, report, permit, or license, or other document filed, maintained or used for the purpose of compliance with Title XVI commits a Class 4 felony. Any second or subsequent offense after conviction hereunder is a Class 3 felony (415 ILCS 5/44 and 57.17). This form has been approved by the Forms Management Center.

Leaking Underground Storage Tank Program Laboratory Certification for Chemical Analysis

A. Site Identification

IEMA Incident # (6- or 8-digit): 20190006 IEPA LPC# (10-digit): 1150150080
Site Name: Kroger #J250 (Kroger Limited Partnership I)
Site Address (Not a P.O. Box): 855 N. Fairview Avenue
City: Decatur, IL County: Macon ZIP Code: 62522
Leaking UST Technical File

B. Sample Collector

I certify that:

1. Appropriate sampling equipment/methods were utilized to obtain representative samples.
2. Chain-of-custody procedures were followed in the field.
3. Sample integrity was maintained by proper preservation.
4. All samples were properly labeled.

KFN
(Initial)
KFN
(Initial)
KFN
(Initial)
KFN
(Initial)

C. Laboratory Representative

I certify that:

1. Proper chain-of-custody procedures were followed as documented on the chain-of-custody forms
2. Sample integrity was maintained by proper preservation.
3. All samples were properly labeled.
4. Quality assurance/quality control procedures were established and carried out.
5. Sample holding times were not exceeded.

SM
(Initial)
SM
(Initial)
SM
(Initial)
SM
(Initial)
SM
(Initial)

6. SW-846 Analytical Laboratory Procedure (USEPA) methods were used for the analyses.
7. An accredited lab performed quantitative analysis using test methods identified in 35 IAC 186.180 (for samples collected on or after January 1, 2003).

JH
(Initial)

JH
(Initial)

D. Signatures

I hereby affirm that all information contained in this form is true and accurate to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sample Collector

Name Mr. Karl F. Newman, PG

Title Senior Project Scientist

Company Robinson Engineering, Ltd.

Address PO Box 7408

City Champaign

State Illinois

Zip Code 61826-7408

Phone 217.530.4084

Signature [REDACTED]

Date 2/11/2019

Laboratory Representative

Name Mr. John Hawkins

Title Project Manager

Company PACE Analytical

Address 12065 Lebanon Road

City Mount Juliet

State Tennessee

Zip Code 37122

Phone 615.758.5858

Signature [REDACTED]

Date 2/15/2019

REL Project #18-R1114
45-Day Report
LPC #1150150080 – Macon County
Decatur / Kroger #J250 (Kroger Limited Partnership I)
855 N. Fairview Avenue
LUST Release Incident No. 20190006

APPENDIX F:
OSFM Removal Permit



Office of the Illinois State Fire Marshal
Division of Petroleum and Chemical Safety
1035 Stevenson Drive
Springfield, IL 62703
2177851020

FOR OFFICE USE ONLY

Facility # 4016960
Permit # 02003-2018REM
Request Rec'd 12/19/2018
Amended Date
Approval Date 12/19/2018 DS
Permit Expires 6/19/2019

Permit for REMOVAL of Underground Storage Tank(s) and Piping for Petroleum and Hazardous Substances.

Permission to remove underground storage tank(s) or piping is hereby granted. Such removal shall not commence until the contractor the permit was issued to or an employee of that contractor (this does not include a subcontractor) shall establish a date certain to perform the UST activity by contacting the Office of the State Fire Marshal, Division of Petroleum and Chemical Safety, at which time the UST activity shall be scheduled. **THIS PERMIT IS VALID FOR SIX MONTHS FROM THE APPROVAL DATE.**

(1) OWNER OF TANKS - Corporation, partnership, or other business entity: Kroger Limited Partnership I 5960 Castleway West Drive Indianapolis, IN 46250 Contact: Harley Ruger (317) 710-1212	(2) FACILITY - name and address where tanks are located: Kroger #J 250 855 N. Fairview Decatur, IL 62522 Contact: Mike Carson (918) 661-6600
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(3) REMOVAL OF TANKS:

(a) *Number and size of tanks being removed: (TK # 6) - 20,000, (TK # 7) - 10,000, (TK # 8) - 8,000*

(b) *Description/location of piping being removed:*

(c) *Product to be stored in each tank: (TK # 6, 8) - Gasoline, (TK # 7) - Diesel Fuel*

(d) *Reason of tanks being removed:*

(e) *If tank(s) is leaking, indicate IEMA incident number:*

(f) *Date each tank was last used: (TK # 6, 7, 8) - 8/15/2018*

(4) The owner must notify this Office when completion of tank removal has occurred, on the Notification for Underground Storage Tank Form. This form can be obtained at www.sfm.illinois.gov or by calling (217)785-1020. After removal is completed, the owner/operator shall perform a site assessment by measuring for the presence of a release where contamination is most likely to be present at the UST site. This is in accordance with the Illinois Administrative Code 176.360 (a) regulations and 40 CFR Part 280.72 (a) Federal Register Requirement.

(5) **SPECIAL CONTINGENCIES**: Removing tanks, islands, and canopy.

(6) <u>PERSON, FIRM OR COMPANY PERFORMING WORK:</u>	
Illinois Oil Marketing Equipment, Inc. 850 Brenkman Drive Pekin, IL 61554	Contact Person: Chris Epkins Phone: (309) 347-1819 Contractor Registration # IL1293 Exp. 2/4/2020

Sincerely,



Daniel Starks

cc: Storage Tank Safety Specialist
Division File