

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

BENTON FIRE DEPARTMENT )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 2017-001  
 ) (UST Appeal)  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

**CERTIFICATE OF RECORD ON APPEAL**

Pursuant to 35 Ill. Adm. Code 105.116(b) and 105.410, the following constitutes an index of documents comprising the record:

<b>PAGES</b>	<b>DOCUMENT</b>	<b>DATE</b>
R001-R009	IEPA Decision Letter	June 10, 2016
R010-R012	Electronic Mail Message (4 of 4)	June 9, 2016 (11:03)
R013-R014	Electronic Mail Message (3 of 4)	June 9, 2016 (10:37)
R015-R015	Electronic Mail Message (2 of 4)	June 9, 2016 (10:33)
R016-R016	Electronic Mail Message (1 of 4)	June 9, 2016 (10:30)
R017-R017	Electronic Mail Message	June 8, 2016
R018-R018	Electronic Mail Message	June 6, 2016
R019-R082	Site Investigation Completion Report	February 9, 2016

I, Michael Piggush, certify on information and belief that the entire record of the Respondent's decision, as defined in 35 Ill. Adm. Code 105.410(b), is hereby enclosed.

BY: Michael Piggush  
Michael Piggush, LUST Project Manager  
Environmental Protection Engineer III  
Leaking Underground Storage Tank Section  
Illinois Environmental Protection Agency



## ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-2829

BRUCE RAUNER, GOVERNOR

LISA BONNETT, DIRECTOR

217-524-3300

CERTIFIED MAIL

**JUN 10 2016**

**7014 2120 0002 3289 0041**

City of Benton  
Attention: Fred Kondritz  
500 West Main Street  
Post Office Box 640  
Benton, Illinois 62812

RE: LPC 0550055092 - Franklin County  
Benton - Benton Fire Department  
107 North Maple Street  
LUST Incident 20141215  
LUST TECHNICAL FILE

Dear Mr. Kondritz:

The Illinois Environmental Protection Agency (Illinois EPA) has reviewed the February 9, 2016 Site Investigation Completion Report & Stage 1 Site Investigation Actual Costs. This information was prepared by Chase Environmental Group, and was received by the Illinois EPA on February 11, 2016. The report proposes the information which is summarized in Attachment 1 of this letter. Citations in this letter are from the Environmental Protection Act (415 ILCS 5) (Act) and 35 Illinois Administrative Code.

The Illinois EPA has determined that the requirements of Title XVI of the Act have been satisfied (Sections 57.7(a)(5) and 57.7(c) of the Act and 35 Illinois Administrative Code 734.505(b) and 734.510(a)). Therefore, the Site Investigation Completion Report is approved.

The Stage 1 Site Investigation Actual Costs are modified pursuant to Sections 57.7(a)(2) and 57.7(c) of the Act and 35 Illinois Administrative Code 734.505(b) and 734.510(b). Based upon the modifications which are explained in Attachment 2 of this letter, the amounts which are summarized in Attachment 3 of this letter are approved. Be aware that the amount of payment from the Fund may be limited by Sections 57.8(d), 57.8(e), and 57.8(g) of the Act, as well as 35 Illinois Administrative Code 734.630 and 734.655.

4302 N. Main St., Rockford, IL 61103 (815) 987-7760  
595 S. State, Elgin, IL 60123 (847) 608-3131  
2125 S. First St., Champaign, IL 61820 (217) 278-5800  
2009 Mall St., Collinsville, IL 62234 (618) 346-5120

9511 Harrison St., Des Plaines, IL 60016 (847) 294-4000  
412 SW Washington St., Suite D, Peoria, IL 61602 (309) 671-3022  
2309 W. Main St., Suite 116, Marion, IL 62959 (618) 993-7200  
100 W. Randolph, Suite 10-300, Chicago, IL 60601 (312) 814-6026

PLEASE PRINT ON RECYCLED PAPER

**PCB No. 2017-001 R. 001**

Pursuant to Sections 57.7(b)(2) and (3) and 57.12(c) and (d) of the Act and 35 Illinois Administrative Code 734.100, 734.125, and 734.335(a), the Illinois EPA requires submittal of a Corrective Action Plan and Budget within 30 days from the date of this letter to:

Illinois Environmental Protection Agency  
Bureau of Land - #24  
Division of Remediation Management  
Leaking Underground Storage Tank Section  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

Please note that the Illinois EPA does not require the submission of a budget if the owner or operator does not intend to seek payment from the Underground Storage Tank Fund.

Please submit all correspondence in duplicate and include the Re: block shown at the beginning of this letter.

The Illinois EPA also has additional comments. These comments are explained in Attachment 4 of this letter.

An underground storage tank system owner or operator may appeal this decision to the Illinois Pollution Control Board. Appeal rights are explained in Attachment 5 of this letter.

Any questions with regard to this letter should be directed to Michael Piggush via phone (217-782-3101) or electronic mail ([michael.piggush@illinois.gov](mailto:michael.piggush@illinois.gov)).

Sincerely,



Michael T. Lowder  
Unit Manager  
Leaking Underground Storage Tank Section  
Division of Remediation Management  
Bureau of Land

Attachments (5):

1. Summary of Report Proposal.
2. Stage 1 Site Investigation Actual Costs Modifications.
3. Stage 1 Site Investigation Actual Costs Summary.
4. Additional Comments.
5. Appeal Rights.

Electronic Copies:

1. Marvin Johnson ([mjohnson@chaseenv.com](mailto:mjohnson@chaseenv.com)).
2. Kelly Tensmeyer ([ktensmeyer@chaseenv.com](mailto:ktensmeyer@chaseenv.com)).

ATTACHMENT 1

SUMMARY OF REPORT PROPOSAL

RE: LPC 0550055092 - Franklin County  
Benton - Benton Fire Department  
107 North Maple Street  
LUST Incident 20141215  
LUST TECHNICAL FILE

The report proposes the following information:

1. The report proposes that releases have occurred from the following underground storage tank systems:
  - a. 1-500 gallon gasoline underground storage tank system.
  - b. 1-500 gallon diesel fuel underground storage tank system.
2. The report proposes that the indicator contaminants would be the following: BETX, MTBE & PNAs.
3. The report assumes a Class 1 groundwater designation.
4. The report proposes that the releases from the underground storage tank systems were discovered on October 24, 2014, as the result of a site assessment.
5. The report proposes that corrective action activities were performed from November 17, 2014 → November 19, 2014.
  - a. The report proposes that 800 gallons of fuel & water were removed from the underground storage tank systems & disposed of.
  - b. The report proposes that the underground storage tank systems were removed.
  - c. The report proposes that 83.73 cubic yards (125.6 tons) of contaminated soil were excavated & disposed of.
  - d. The report proposes that 6 soil samples (soil samples W-1 → W-4 & F-1 → F-2) were obtained from the soil excavation area.

- e. The report proposes that the soil samples were analyzed for the following: BETX, MTBE & PNAs.
  - f. The report proposes that the most stringent soil remediation objectives were not exceeded.
  - g. The report proposes that water was encountered in the soil excavation area.
  - h. The report proposes that the water was absorbed and the material disposed of.
  - i. The report proposes that site circumstances did not allow for the soil excavation area to be left open for 24 hours in order to observe for recharge.
  - j. The report proposes that the soil excavation area was backfilled & paved over.
6. The report proposes that additional site assessment activities were subsequently performed.
- a. The report proposes that 5 groundwater monitoring wells (groundwater monitoring wells MW-1 → MW-5) were installed on November 23, 2015.
  - b. The report proposes that groundwater samples were obtained from the groundwater monitoring wells on December 2, 2015.
  - c. The report proposes that the groundwater samples were analyzed for the following: BETX, MTBE & PNAs.
  - d. The report proposes that the most stringent groundwater remediation objectives were not exceeded.
7. The report requests approval of a Site Investigation Completion Report.
8. The report requests approval of Stage 1 Site Investigation Actual Costs, for an amount of \$20,119.05.
9. The report proposes that the next stage of work would be to submit a Corrective Action Plan & Budget for the abandonment of the groundwater monitoring wells.

ATTACHMENT 2

STAGE 1 SITE INVESTIGATION ACTUAL COSTS MODIFICATIONS

RE: LPC 0550055092 - Franklin County  
Benton - Benton Fire Department  
107 North Maple Street  
LUST Incident 20141215  
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The Illinois EPA approves of the Stage 1 Site Investigation Actual Costs, subject to the following modifications:

1. The total amount of costs from the Consulting Materials Cost Form (\$960.01) is reduced to \$0.00.
  - a. These costs lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Illinois Administrative Code 734.630(cc).
  - b. These costs may not be reasonable. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Illinois Administrative Code 734.630(dd).
  - c. These cost may include indirect corrective action costs for personnel, materials, service, or equipment charged as direct costs. Such costs are ineligible for payment from the Fund pursuant to 35 Illinois Administrative Code 734.630(v).

In accordance with 35 Illinois Administrative Code 734.505(a), the Illinois EPA may review any or all technical or financial information, or both, relied upon by the owner or operator or the Licensed Professional Engineer or Licensed Professional Geologist in developing any plan, budget, or report selected for review. The Illinois EPA may also review any other plans, budgets, or reports submitted in conjunction with the site.

The Illinois EPA has requested the following information directly from Chase Environmental Group. However, the information was not provided. The Illinois EPA may be willing to reconsider these costs if this information can be provided.

For each of the items which are listed on the Consulting Materials Costs Form, please provide the following information:

1. Please provide a mathematical financial derivation for how the unit rate for the item was determined. Include such variables (as applicable) as purchase costs (including receipts), operation & maintenance costs, estimated product usage, and estimated product life.
2. Please discuss if it is appropriate for the item to be charged as a direct project cost (versus as an indirect cost of doing business).

ATTACHMENT 3

STAGE 1 SITE INVESTIGATION ACTUAL COSTS SUMMARY

RE: LPC 0550055092 - Franklin County  
 Benton - Benton Fire Department  
 107 North Maple Street  
 LUST Incident 20141215  
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The Stage 1 Site Investigation Actual Costs are approved for the following amounts:

Category	Proposed Stage 1 Site Investigation Actual Cost Amounts	Approved Stage 1 Site Investigation Actual Cost Amounts
Drilling & Monitoring Well Costs	\$3,488.76	\$3,488.76
Analytical Costs	\$1,315.00	\$1,315.00
Remediation & Disposal Costs	\$1,548.95	\$1,548.95
UST Removal & Abandonment Costs	\$0.00	\$0.00
Paving, Demolition & Well Abandonment Costs	\$0.00	\$0.00
Consulting Personnel Costs	\$12,806.33	\$12,806.33
Consulting Materials Costs	\$960.01	\$0.00
Total	\$20,119.05	\$19,159.04

ATTACHMENT 4

ADDITIONAL COMMENTS

RE: LPC 0550055092 - Franklin County  
Benton - Benton Fire Department  
107 North Maple Street  
LUST Incident 20141215  
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The Illinois EPA has the following additional comments. These comments should be addressed with the next report submittal.

1. The plan diagrams illustrate that there are 2 property lines which go through the site property. The report explains that these are actually parcel lines, rather than property lines. However, the plan diagrams still refer to them as being property lines.
  - a. Please revise the plan diagrams to correctly indicate that these are parcel lines.
  - b. Please also revise the plan diagrams to include the parcel numbers.
2. Please refer to previous Figure 6 (dated December 2014).
  - a. Please revise the diagram to illustrate the geology of the subsurface.
  - b. Please provide an additional cross section diagram drawn perpendicular to the existing one.
3. Please refer to the soil boring & groundwater monitoring well logs for the 5 groundwater monitoring wells (groundwater monitoring wells MW-1 → MW-5) which were installed on November 23, 2015.
  - a. Please revise the soil boring logs to illustrate the groundwater monitoring well construction, to scale, on the same sheet of paper.
  - b. The soil boring logs state that groundwater was encountered at depths of 10' - 11.5'. However, the groundwater monitoring well logs state that the depth to groundwater in the groundwater monitoring wells was from 1.94' - 5.16'. Please discuss why there is such a significant different in groundwater levels while drilling versus the static level in the groundwater monitoring well logs.

ATTACHMENT 5

APPEAL RIGHTS

An underground storage tank system owner or operator may appeal this final decision to the Illinois Pollution Control Board pursuant to Sections 40 and 57.7(c)(4) of the Act by filing a petition for a hearing within 35 days after the date of issuance of the final decision. However, the 35 day period may be extended for a period of time not to exceed 90 days by written notice from the owner or operator and the Illinois EPA within the initial 35 day appeal period. If the owner or operator wishes to receive a 90 day extension, a written request that includes a statement of the date the final decision was received, along with a copy of this decision, must be sent to the Illinois EPA as soon as possible.

For information regarding the filing of an appeal, please contact:

Illinois Pollution Control Board  
James R. Thompson Center  
100 West Randolph  
Suite 11-500  
Chicago, Illinois 60601  
312-814-3620

For information regarding the filing of an extension, please contact:

Illinois Environmental Protection Agency  
Division of Legal Counsel  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276  
217-782-5544

# Electronic Filing: Received, Clerk's Office 4/19/2017

RE: LPC 0550055092 - Franklin County  
Benton - Benton Fire Department  
107 North Maple Street  
LUST Incident 20141215  
LUST TECHNICAL FILE

Piggush, Michael

---

**From:** Marvin Johnson <mjohnson@chaseenv.com>  
**Sent:** June 09, 2016 11:03  
**To:** Piggush, Michael  
**Subject:** LUST Incident 20141215 (Benton Fire Department)

RE: LPC 0550055092 - Franklin County  
Benton - Benton Fire Department  
107 North Maple Street  
LUST Incident 20141215  
LUST TECHNICAL FILE

Please provide the following information:

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  - a. Please revise the plan diagrams to correctly indicate that these are parcel lines.
  - b. Please also revise the plan diagrams to include the parcel numbers.

**As indicated within the SICR, no contamination is present in either the soil or the groundwater, thus making these changes will have no impact on the SICR, therefore these changes will be made and included within the CAP/CACR.**

2. Please refer to previous Figure 6 (dated December 2014).
  - a. Please revise the diagram to illustrate the geology of the subsurface.
  - b. Please provide an additional cross section diagram drawn perpendicular to the existing one.

**As indicated within the SICR, no contamination is present in either the soil or the groundwater. With this being the case, Chase fails to recognize how a 2<sup>nd</sup> cross section would provide any additional relevant data and would have no impact on the results included within the SICR. These changes will be made and included within the CAP/CACR.**

3. Please refer to the soil boring & groundwater monitoring well logs for the 5 groundwater monitoring wells (groundwater monitoring wells MW-1 → MW-5) which were installed on November 23, 2015.
  - a. Please revise the soil boring logs to illustrate the groundwater monitoring well construction, to scale, on the same sheet of paper.

**A review of Agency forms on June 9, 2016 found no forms that exist as requested. Since no forms are presently available that match the requested criteria, Chase personnel would have to spend significant time developing such forms to meet the Agency request. Due to the unknowns of developing these new forms, Chase proposes these changes be made and included within the CAP/CACR. The costs for these activities could then be included within the Budget associated with the CAP/CACR.**

- b. The soil boring logs state that groundwater was encountered at depths of 10' - 11.5'. However, the groundwater monitoring well logs state that the depth to groundwater in the groundwater monitoring wells was from 1.94' - 5.16'. Please discuss.

**This issues has been discussed on multiple occasions with the Agency and is thoroughly discussed within the Piasa Motor Fuels, Inc. v IEPA. Chase has no additional information to add to this previously discussed issue.**

4. For each of the items which are listed on the Consulting Materials Costs Form, please provide the following information:

- a. Please indicate if the item is owned or rented.
  - i. If the item is owned, then please provide a mathematical financial derivation for how the unit rate for the item was determined. Include such variables (as applicable) as purchase costs (including receipts), operation & maintenance costs, estimated product usage, and estimated product life.

**Chase has included all information required and in accordance with the Illinois EPA forms and instructions existing at the time of submittal. The rates proposed within the Consulting Materials Form are rates that have consistently been approved in our clients Budgets and Reimbursement requests.**

- ii. If the item is rented, then please provide a written cost estimate from the rental company for how the rental rate for the item was determined.

**No items within this section have been rented and the idea that a consultant should ask a rental company how they determine their rates is unreasonable. A conversation was conducted with Reis Equipment on June 9, 2016 and they would not disclose how their rental rates were determined but did comment that they were in business to make money.**

- b. Please discuss if it is appropriate for the item to be charged as a direct project cost (versus as an indirect cost of doing business).

**Since no promulgated definitions are provided, Chase has used standard accounting practices and believe all items included are direct costs.**

- 5. The Illinois EPA is required to issue a final decision letter by June 10, 2016. The Illinois EPA requests a time extension, in accordance with 35 Illinois Administrative Code 734.505(d).

**Chase believes the 120 day should remain.**

Michael Piggush  
Leaking Underground Storage Tank Section  
Illinois Environmental Protection Agency

**Marvin Johnson**  
**Manager, IL UST Services**



Chase Environmental Group, Inc.  
418 S. Poplar  
P.O. Box AB  
Centralia, IL 62801  
618-533-6740 Office  
618-533-6741 Fax  
618-322-8935 Mobile  
[www.chaseenv.com](http://www.chaseenv.com)

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**From:** Piggush, Michael [<mailto:Michael.Piggush@Illinois.gov>]  
**Sent:** Monday, June 6, 2016 4:31 PM  
**To:** JOHNSON, MARVIN <[MJOHNSON@CHASEENV.COM](mailto:MJOHNSON@CHASEENV.COM)>; TENSMEYER, KELLY  
<[KTENSMEYER@CHASEENV.COM](mailto:KTENSMEYER@CHASEENV.COM)>  
**Subject:** LUST Incident 20141215 (Benton Fire Department)

RE: LPC 0550055092 - Franklin County  
Benton - Benton Fire Department  
107 North Maple Street  
LUST Incident 20141215  
LUST TECHNICAL FILE

Please provide the following information:

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  - a. Please revise the plan diagrams to correctly indicate that these are parcel lines.
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  - a. Please revise the soil boring logs to illustrate the groundwater monitoring well construction, to scale, on the same sheet of paper.
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    - ii. If the item is rented, then please provide a written cost estimate from the rental company for how the rental rate for the item was determined.
  - b. Please discuss if it is appropriate for the item to be charged as a direct project cost (versus as an indirect cost of doing business).
5. The Illinois EPA is required to issue a final decision letter by June 10, 2016. The Illinois EPA requests a time extension, in accordance with 35 Illinois Administrative Code 734.505(d).

Michael Piggush  
Leaking Underground Storage Tank Section  
Illinois Environmental Protection Agency

Electronic Filing: Received, Clerk's Office 4/19/2017

RE: LPC 0550055092 - Franklin County  
Benton - Benton Fire Department  
107 North Maple Street  
LUST Incident 20141215  
LUST TECHNICAL FILE

Piggush, Michael

---

**From:** Piggush, Michael  
**Sent:** June 09, 2016 10:37  
**To:** mjohnson@chaseenv.com  
**Subject:** RE: LUST Incident 20141215 (Benton Fire Department)

RE: LPC 0550055092 - Franklin County  
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Okay that is fine. Just for now all I need is a time extension. You can submit the rest of the information whenever it is ready.

Michael Piggush  
Leaking Underground Storage Tank Section  
Illinois Environmental Protection Agency

---

**From:** Marvin Johnson [<mailto:mjohnson@chaseenv.com>]  
**Sent:** June 09, 2016 10:33  
**To:** Piggush, Michael  
**Subject:** RE: LUST Incident 20141215 (Benton Fire Department)

I am working on a reply now.

**Marvin Johnson**  
**Manager, IL UST Services**



Chase Environmental Group, Inc.  
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---

**From:** Piggush, Michael [<mailto:Michael.Piggush@Illinois.gov>]  
**Sent:** Thursday, June 9, 2016 10:30 AM  
**To:** JOHNSON, MARVIN <[MJOHNSON@CHASEENV.COM](mailto:MJOHNSON@CHASEENV.COM)>; TENSMEYER, KELLY  
<[KTENSMEYER@CHASEENV.COM](mailto:KTENSMEYER@CHASEENV.COM)>  
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RE: LPC 0550055092 - Franklin County  
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For your information in the absence of a time extension I will go ahead and issue a final decision letter.

Michael Piggush  
Leaking Underground Storage Tank Section  
Illinois Environmental Protection Agency

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**To:** Piggush, Michael  
**Subject:** RE: LUST Incident 20141215 (Benton Fire Department)

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**Marvin Johnson**  
**Manager, IL UST Services**



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P.O. Box AB  
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**From:** Piggush, Michael [<mailto:Michael.Piggush@Illinois.gov>]  
**Sent:** Thursday, June 9, 2016 10:30 AM  
**To:** JOHNSON, MARVIN <[MJOHNSON@CHASEENV.COM](mailto:MJOHNSON@CHASEENV.COM)>; TENSMEYER, KELLY <[KTENSMEYER@CHASEENV.COM](mailto:KTENSMEYER@CHASEENV.COM)>  
**Subject:** LUST Incident 20141215 (Benton Fire Department)

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Michael Piggush  
Leaking Underground Storage Tank Section  
Illinois Environmental Protection Agency

RE: LPC 0550055092 - Franklin County  
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LUST TECHNICAL FILE

Piggush, Michael

---

**From:** Piggush, Michael  
**Sent:** June 09, 2016 10:30  
**To:** JOHNSON, MARVIN; TENSMEYER, KELLY  
**Subject:** LUST Incident 20141215 (Benton Fire Department)

RE: LPC 0550055092 - Franklin County  
Benton - Benton Fire Department  
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LUST TECHNICAL FILE

Piggush, Michael

---

**From:** Piggush, Michael  
**Sent:** June 08, 2016 16:25  
**To:** JOHNSON, MARVIN; TENSMEYER, KELLY  
**Subject:** LUST Incident 20141215 (Benton Fire Department)

RE: LPC 0550055092 - Franklin County  
Benton - Benton Fire Department  
107 North Maple Street  
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I would need a time extension sometime tomorrow morning please.

Michael Piggush  
Leaking Underground Storage Tank Section  
Illinois Environmental Protection Agency

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Piggush, Michael

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**From:** Piggush, Michael  
**Sent:** June 06, 2016 16:31  
**To:** JOHNSON, MARVIN; TENSMEYER, KELLY  
**Subject:** LUST Incident 20141215 (Benton Fire Department)

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  - b. Please provide an additional cross section diagram drawn perpendicular to the existing one.
3. Please refer to the soil boring & groundwater monitoring well logs for the 5 groundwater monitoring wells (groundwater monitoring wells MW-1 → MW-5) which were installed on November 23, 2015.
  - a. Please revise the soil boring logs to illustrate the groundwater monitoring well construction, to scale, on the same sheet of paper.
  - b. The soil boring logs state that groundwater was encountered at depths of 10' - 11.5'. However, the groundwater monitoring well logs state that the depth to groundwater in the groundwater monitoring wells was from 1.94' - 5.16'. Please discuss.
4. For each of the items which are listed on the Consulting Materials Costs Form, please provide the following information:
  - a. Please indicate if the item is owned or rented.
    - i. If the item is owned, then please provide a mathematical financial derivation for how the unit rate for the item was determined. Include such variables (as applicable) as purchase costs (including receipts), operation & maintenance costs, estimated product usage, and estimated product life.
    - ii. If the item is rented, then please provide a written cost estimate from the rental company for how the rental rate for the item was determined.
  - b. Please discuss if it is appropriate for the item to be charged as a direct project cost (versus as an indirect cost of doing business).
5. The Illinois EPA is required to issue a final decision letter by June 10, 2016. The Illinois EPA requests a time extension, in accordance with 35 Illinois Administrative Code 734.505(d).

Michael Piggush  
Leaking Underground Storage Tank Section  
Illinois Environmental Protection Agency



Waste Management

0550055092 – Franklin County  
Benton Fire Department  
Incident # 20141215  
Leaking UST Technical File

February 9, 2016

Illinois Environmental Protection Agency  
Bureau of Land  
LUST Unit  
P.O. Box 19276  
Springfield, IL. 62794-9276

Re: LPC# 0550055092– Franklin County  
Benton Fire Department – Benton  
107 N Maple Street  
IEMA # 20141215

Mr. Michael Piggush:

Enclosed please find one (1) original and one (1) copy of the Site Investigation Completion Report for the above referenced site.

Should you have any questions or need additional information, please contact Marvin Johnson at (618) 533-6740.

Sincerely,

Chase Environmental Group, Inc.

A handwritten signature in black ink that reads 'Kelly Tensmeyer'.

Kelly Tensmeyer, LPG  
Sr. Project Manager

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**Site Investigation Completion Report**

LPC #0550055092 – Franklin County  
Benton / Benton Fire Department  
107 North Maple Street  
IEMA #20141215

CEG Project #T1407012

Prepared for:

Mr. Fred Kondritz, Mayor  
City of Benton  
500 West Main Street  
Benton, IL 62812

By:

Chase Environmental Group, Inc.  
PO Drawer AB  
Centralia, IL 62801

December 2015

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# 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 67.17). This form has been approved by the Forms Management Center.

## Leaking Underground Storage Tank Program Site Investigation Completion Report

### A. Site Identification

IEMA Incident # (6- or 8- digit): 20141215 IEPALPC # (10- digit): 0550055092

Site Name: Benton Fire Department

Site Address (not a P.O. Box): 107 North Maple Street

City: Benton County: Franklin Zip Code: 62812

Leaking UST Technical File

### B. Site Information

1. Will the owner or operator seek payment from the Underground Storage?  Yes  No

2. Has a Site Investigation Plan been approved?  Yes  No

Date(s) of approval letter(s): 08/12/2015

### C. Site Investigation Results

Provide the following:

1. Site history with respect to the release;
2. Site description:
  - a. Area surrounding the site;
  - b. Local geology, hydrogeology, and hydrology;
  - c. Local geography and topography;
  - d. Existing and potential migration pathways and exposure routes; and
  - e. Current and projected post-remediation land use;
3. Site investigation results:
  - a. Map(s) showing locations of all borings and groundwater monitoring wells completed as part of site investigation and the groundwater flow direction;
  - b. Map(s) showing the horizontal extent of soil and groundwater contamination exceeding the most stringent Tier 1 remediation objectives (ROs);
  - c. Map cross-section(s) showing the horizontal and vertical extents of soil and groundwater contamination exceeding the most stringent Tier 1 ROs;
  - d. Soil boring logs and monitoring well construction diagrams for all borings drilled and groundwater monitoring wells installed as part of site investigation;
  - e. Analytical results, chain of custody forms, and laboratory certifications;
  - f. Table comparing analytical results to the most stringent Tier 1 ROs (include sample depth, date collected, and detection limits); and
  - g. Potable water supply well survey;

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- 4. Conclusion that includes an assessment of the sufficiency of the data;
- 5. Site map(s) meeting the requirements of 35 Ill. Adm. Code 734.440; and
- 6. Budget forms of actual costs (documenting actual work performed during the previous stage).

**D. Signatures**

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**

Name: Benton Fire Department  
 Contact: Fred Kondritz  
 Address: 500 West Main Street  
 City: Benton  
 State: IL  
 Zip Code: 62812  
 Phone: 618-439-6131 ext 4  
 Signature: *Fred Kondritz*  
 Date: 2-4-16

**Consultant**

Company: Chase Environmental Group, Inc.  
 Contact: Marvin Johnson  
 Address: PO Box AB  
 City: Centralia  
 State: IL  
 Zip Code: 62801  
 Phone: 618-533-6740  
 Signature: *mb*  
 Date: 2-9-16

I certify under penalty of law that all activities that are the subject of this 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 report and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in this report has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 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].

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



**Licensed Professional Engineer or Geologist**

Name: Kelly Tensmeyer  
 Company: Chase Environmental Group, Inc.  
 Address: PO Box AB  
 City: Centralia  
 State: IL  
 Zip Code: 62801  
 Phone: 618-533-6740

Ill. Registration No.: 196-001293  
 License Expiration Date: 03/31/2017  
 Signature: *Kelly L Tensmeyer*  
 Date: 2-9-16

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**Site Investigation Completion Report**

**LPC #0550055092 – Franklin County  
Benton / Benton Fire Department  
107 North Maple Street  
IEMA #20141215**

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**Site Investigation Completion Report  
Benton Fire Department**

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- Appendix B: Soil Boring Logs
- Appendix C: Monitoring Well Completion Reports
- Appendix D: Stage 1 Site Investigation Analytical Results
- Appendix E: Stage 1 Site Investigation Actual Cost Summary
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**Site Investigation Completion Report  
Benton Fire Department  
107 North Maple Street  
LPC #0550055092  
IEMA # 20141215**

**C. Site Investigation Results**

Provide the following:

**1. Site History with respect to the release;**

A release of petroleum from one (1) 500 gallon underground storage tank (UST) containing diesel fuel and one (1) 500 gallon UST containing gasoline formerly operated by the City of Benton Fire Department located at 107 North Maple Street in Benton, Illinois was reported to the Illinois Emergency Management Agency (IEMA) on October 24, 2014. IEMA assigned the Benton Fire Department IEMA #20141215. On this date, a soil boring was advanced adjacent to the UST system(s) in an effort to evaluate site conditions as a result of the release. Evidence of a petroleum release was observed in soil samples collected from the October 24, 2014 soil boring. The soil exhibited a petroleum stain/odor and elevated readings were observed in soil samples collected for hydrocarbon screening with a photoionization detector (PID). Laboratory analyses of the soil sample collected on October 24, 2014 (WC-1) confirmed the presence of various polynuclear aromatic (PNA) indicator contaminants. The WC-1 soil sample was also analyzed for parameters necessary to complete a waste stream profile for acceptance by the West End Landfill located near Thompsonville, Illinois.

In accordance with 35 Illinois Administrative Code (IAC) Section 734.210(f), Early Action activities included removal of the USTs, visibly impacted UST backfill material and visibly impacted water contained in the UST backfill material. Laboratory analyses of soil samples collected during Early Action activities from the walls and floor of the former tankhold confirm contaminant concentrations below applicable Tier 1 Residential soil remediation objectives (ROs). It should be noted that the dispensers were mounted to a small concrete pump island located above the north wall of the former tankhold. As a result, the product lines were not installed in an excavated trench as is common with UST systems operated by convenience stores. Therefore, compliance with 35 IAC Section 734.210(h) did not require the collection/analyses of soil samples in addition to those collected from the walls and floor of the former tankhold.

As explained in the 45 Day Report, cold temperatures and need to minimize disruption to the operation of the Benton Fire Department prevented leaving the excavation open for 24 hours to determine if the water contained in the UST backfill material was groundwater or perched water. Since laboratory analyses of soil samples collected from the walls and floor of the former tankhold confirm contaminant concentrations below Tier 1 Residential soil ROs, additional soil investigation was not required. As a result, the Benton Fire Department requested IEPA guidance regarding the investigation of

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Site Investigation Completion Report  
LUST #20141215  
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groundwater at the site. In an August 12, 2015 decision letter, IEPA directed Benton Fire Department to proceed with a Stage 1 Site Investigation.

On November 23, 2015, monitoring wells MW-1 through MW-5 were installed as part of the Stage 1 Site Investigation. The well risers were also surveyed on this date such that the groundwater flow direction and gradient at the site could be determined. The monitoring wells were developed on December 1, 2015. Groundwater samples were collected from all five (5) monitoring wells on December 2, 2015.

Analyses of the groundwater samples collected during Stage 1 Site Investigation indicate IEMA #20141215 had a minor impact on groundwater quality (MW-5), but analytical results were below the below Tier 1 Residential groundwater ROs. Therefore, additional Site Investigation activities are not warranted.

## **2. Site description;**

### **a. Area surrounding the site;**

The Benton Fire Department site is located in a primarily commercial area of Benton, Illinois.

According to the soil boring logs documenting the Site Investigation borings advanced prior to monitoring well installation, the native soil beneath the site is predominately silty clay to depths of 10'-12' below ground surface (bgs) overlying a weathered sandstone that caused refusal of the direct push tooling at 11'-13' bgs at each boring location. Groundwater was encountered at 10' – 11.5' bgs during Site Investigation drilling activities.

### **b. Local geography and topography;**

The area surrounding the site is comprised primarily of commercial properties. The topography of the site gently slopes to the east - southeast. Please refer to the topographic map included as Figure 1 of the *45-Day Report*.

### **c. Existing and potential migration pathways and exposure routes; and**

Based on the Early Action and Site Investigation activities, it appears all potential Exposure Pathways can be excluded without any additional remedial action.

Benton Fire Department  
Site Investigation Completion Report  
LUST #20141215  
Page 3

**d. Current and projected post-remediation land use;**

The subject property is currently occupied by the Benton Fire Department. There are no immediate plans to redevelop the property or alter its current use.

**3. Site investigation results;**

**a. Map(s) showing locations of all borings and groundwater monitoring wells completed as part of site investigation and the groundwater flow direction;**

The location of soil samples collected during the Early Action and the monitoring wells installed during the Stage 1 Site Investigation activities are identified in Figure 1.

In an April 21, 2015 electronic correspondence, IEPA questioned the accuracy of Figure 5 included in the 45 Day Report by noting two (2) "*property lines going through the property*" and requested the figure be revised. Based on the information provided by the Franklin County Supervisor of Assessments and included in Appendix A, the property is comprised of three (3) parcels. As a result, Figure 5 does not require revision.

**b. Map(s) showing the horizontal extent of soil and groundwater contamination exceeding the most stringent Tier 1 remediation objectives (ROs);**

Laboratory analyses of soil samples collected from the walls and floor of the Early Action excavation confirm there is no soil contamination remaining as a result of IEMA #20141215. Laboratory analyses of groundwater samples collected during the Stage 1 Site Investigation indicate IEMA #20141215 had a minor impact on groundwater quality (MW-5), but analytical results were below the below Tier 1 Residential groundwater ROs.

**c. Map cross-section(s) showing the horizontal and vertical extents of soil and groundwater contamination exceeding the most stringent Tier 1 ROs;**

Refer to Section 3.b. above.

In an April 21, 2015 electronic correspondence, IEPA requested revision to Figure 6 included in the 45 Day Report dated December 2014 and a second cross-section map oriented perpendicular to Figure 6. Since there is no remaining impact as a result of IEMA #20141215, revising Figure 6 and/or drafting additional cross-section maps

Benton Fire Department  
Site Investigation Completion Report  
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Page 4

will not change the conclusion presented in this SICR or the scope of work to be proposed in a Corrective Action Plan (i.e., well abandonment and submittal of a Corrective Action Completion Report) upon IEPA approval of this SICR. However, if IEPA insists upon submittal of the site map revisions and additional cross-section for its review, both can be included in the Corrective Action Plan (CAP) to be submitted upon IEPA approval of this SICR.

Groundwater flow direction based on data collected during the Stage 1 Site Investigation is identified in Figure 2.

**d. Soil boring logs and monitoring well construction diagrams for all borings drilled and groundwater monitoring wells installed as part of site investigation;**

Site Investigation soil borings were advanced using a Direct Push (DP) technology and 2" X 5' continuous sampling tubes at each of the monitoring well locations. Each boring was geologically logged on a Boring Log formatted similar to the IEPA's standardized log. Copies of the Boring Logs are included in Appendix A. Soil constituents, consistency, color, moisture, and any petroleum stains/odors observed during drilling have been noted. As IEPA directed in its April 21, 2015 electronic correspondence, a Boring Log of the WC-1 boring advanced on October 24, 2014 is included in Appendix B.

Site Investigation Well Completion Reports documenting the construction of monitoring wells MW-1 through MW-5 are included in Appendix C.

**e. Analytical results, chain of custody forms, and laboratory certifications;**

Please refer to Appendix D for copies of the analytical reports, chain of custody form and laboratory certification relative to the groundwater samples collected during the Stage 1 Site Investigation.

**f. Table comparing analytical results to the most stringent Tier 1 ROs (include sample depth, date collected, and detection limits); and**

Table 1 offers a summary of soil analyses relative to the soil samples collected during Early Action activities. Table 2 summarizes the Stage 1 Site Investigation groundwater analytical results.

Benton Fire Department  
Site Investigation Completion Report  
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Page 5

**g. Potable water supply well survey;**

To date, there has been no evidence obtained suggesting that IEMA #20141215 has impacted groundwater quality. IEMA #20141215 had a minor impact on groundwater quality (MW-5), but analytical results were below the below Tier 1 Residential groundwater ROs. Please refer to the *45-Day Report* for information regarding the potable water supply well survey.

**4. Conclusion that includes an assessment of the sufficiency of the data;**

Laboratory analyses of soil samples collected from the walls and floor of the Early Action excavation (i.e., former tankhold) confirm contaminant concentrations below Tier 1 Residential soil ROs. Laboratory analyses have also confirmed IEMA #20141215 had a minor impact on groundwater quality (MW-5), but analytical results were below the below Tier 1 Residential groundwater ROs. As a result no additional site investigation activities are necessary. Furthermore, it appears all potential exposure pathways can be excluded without any additional remedial effort or implementation of Institutional Controls and/or Engineered Barriers. As a result, it is anticipated that the scope of work proposed in the CAP submitted upon IEPA approval of this SICR will most likely be limited to well abandonment and preparation/submittal of a Corrective Action Completion Report (CACR) for IEPA review/approval.

**5. Site map(s) meeting the requirements of 35 Ill. Adm. Code 734.440; and**

Figure 1: Soil Boring & Sample Locations  
Figure 2: Groundwater Flow Direction

**6. Budget forms for actual costs (documenting actual work performed during the previous stage).**

Appendix E contains the actual costs incurred during the Stage 1 Site Investigation on IEPA prescribed forms. Appendix F contains a copy of the OSFM Eligibility and Deductible Determination Letter.

As requested by IEPA in its April 21, 2015 electronic correspondence, a completed copy of the manifest documenting disposal of 800 gallons of fuel/water recovered from the USTs during Early Action activities is included in Appendix G.

City of Benton Fire Depart.  
 Benton, IL  
 IEMA #20141215

**TABLE 1**  
**Early Action Soil Analytical Summary**

results reported in mg/kg

Location	Depth	Date	Benzene	Ethylbenzene	Toluene	Total Xylene	MTBE
<b>Tier 1 Residential Soil ROs</b>	--	--	<b>0.03</b>	<b>13</b>	<b>12</b>	<b>5.6</b>	<b>0.32</b>
W-1	5'	11/19/14	<0.0245	0.052	<0.123	<0.123	<0.0491
W-2	5'	11/19/14	<0.0009	<0.0046	<0.0046	0.0027	<0.0019
W-3	5'	11/19/14	<0.0009	0.0011	0.0016	0.0059	<0.0018
W-4	5'	11/19/14	0.0017	0.0016	<0.0048	0.0013	<0.0019
F-1	8.5'	11/19/14	<0.001	<0.0048	<0.0048	<0.0048	<0.0019
F-2	8.5'	11/19/14	<0.0008	<0.004	<0.004	<0.004	<0.0016

City of Benton Fire Dept.  
 Benton, IL  
 IEMA #20141215

**TABLE 1 continued**  
**Early Action Soil Analytical Summary**

results reported in mg/kg

Location Date	Tier 1 Objectives	W-1	W-2	W-3	W-4	F-1	F-2
		11/19/14	11/19/14	11/19/14	11/19/14	11/19/14	11/19/14
Acenaphthene	570	0.006	<0.004	<0.004	<0.004	<0.004	<0.004
Acenaphthylene	85	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Anthracene	12000	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Benzo(a)anthracene	0.9	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Benzo(a)pyrene	0.09	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Benzo(b)fluoranthene	0.9	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Benzo(ghi)perylene	2300	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Benzo(k)fluoranthene	9	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Chrysene	88	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Dibenzo(a,h)anthracene	0.09	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluoranthene	3100	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Fluorene	3100	0.01	<0.004	<0.004	<0.004	<0.004	<0.004
Indeno(1,2,3-cd)pyrene	0.9	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Naphthalene	1.8	0.005	<0.004	<0.004	<0.004	<0.004	<0.004
Phenanthrene	210	0.013	<0.004	<0.004	<0.004	<0.004	<0.004
Pyrene	2300	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004

City of Benton Fire Dept.  
 Benton, IL  
 IEMA #20141215

**TABLE 2**  
**Site Investigation Groundwater Analytical Summary**  
 results reported in mg/L.

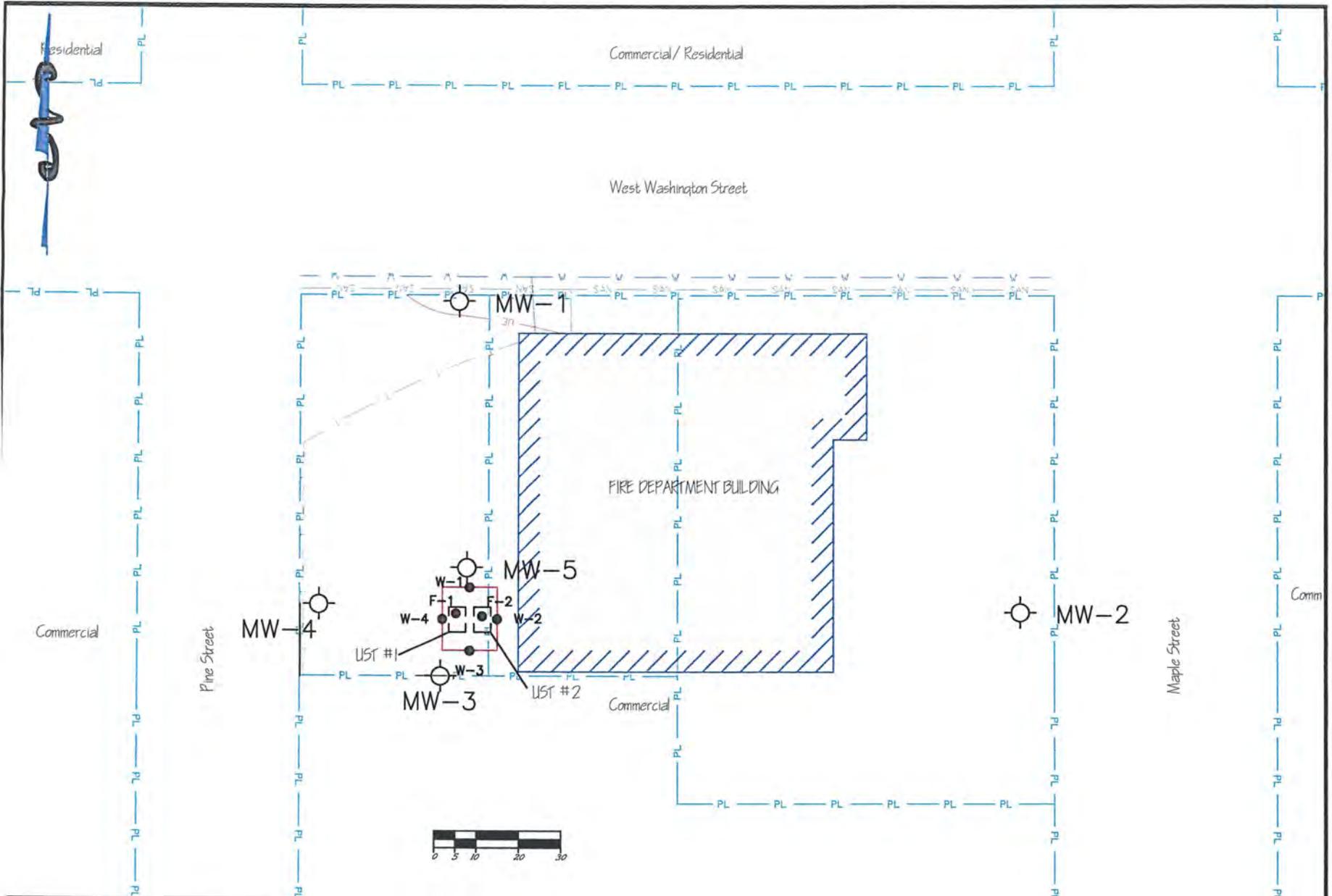
Location	Date	Benzene	Ethylbenzene	Toluene	Xylenes	MTBE
<b>Class I Grandwater Standard</b>	<b>-</b>	<b>0.005</b>	<b>0.7</b>	<b>1.0</b>	<b>10.0</b>	<b>0.07</b>
MW-1	12/2/15	<0.002	<0.005	<0.005	<0.005	0.0024
MW-2	12/2/15	<0.002	<0.005	<0.005	<0.005	<0.002
MW-3	12/2/15	<0.002	<0.005	<0.005	<0.005	<0.002
MW-4	12/2/15	<0.002	<0.005	<0.005	<0.005	<0.002
MW-5	12/2/15	0.0029	0.013	<0.005	0.0022	<0.002

City of Benton Fire Dept.  
 Benton, IL  
 IEMA # 20141215

**TABLE 2 (Continued)**  
**Site Investigation Groundwater Analytical Summary**

results reported in mg/L

<b>Location</b>	<b>Class I Groundwater r Standard</b>	<b>MW-1</b>	<b>MW-2</b>	<b>MW-3</b>	<b>MW-4</b>	<b>MW-5</b>
<b>Date</b>		<b>12/2/15</b>	<b>12/2/15</b>	<b>12/2/15</b>	<b>12/2/15</b>	<b>12/2/15</b>
Acenaphthene	0.42	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene	0.21	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Anthracene	2.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene	0.00013	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)pyrene	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(b)fluoranthene	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(ghi)perylene	0.21	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(k)fluoranthene	0.00017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene	0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene	0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoranthene	0.28	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluorene	0.28	<0.0001	<0.0001	<0.0001	<0.0001	0.00011
Indeno(1,2,3-cd)pyrene	0.00043	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Naphthalene	0.14	<0.0001	<0.0001	<0.0001	<0.0001	0.00309
Phenanthrene	0.21	0.00011	0.00014	<0.0001	<0.0001	0.00016
Pyrene	0.21	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

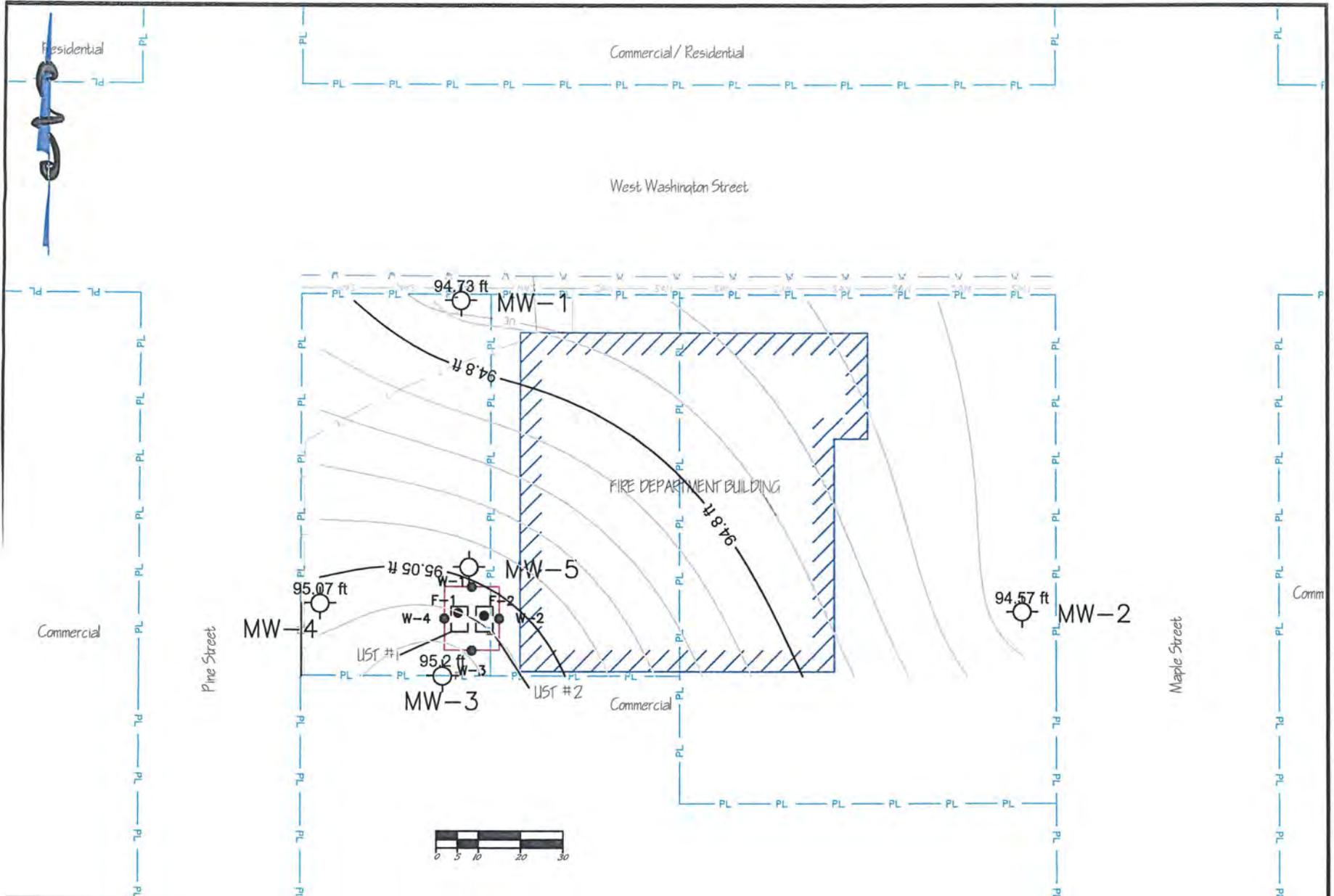


SS	STORM SEWER	⊕	SOIL BORING-BH	⊕	MONITORING WELL-MW
SAN	SANITARY SEWER	⊕	MONITORING WELL WITH SOIL SAMPLING-BH/MW		
W	WATER LINE	●	EARLY ACTION SAMPLE	RED FONT > TIER 1 RO <sub>3</sub>	
G	GAS LINE	□	EARLY ACTION EXCAVATION	□	UST
T	TELEPHONE LINE				
PL	PROPERTY LINE				
OHE	OVERHEAD ELECTRIC				
UE	UNDERGROUND ELECTRIC				

LPC# 0550055092  
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 Benton, IL 62812  
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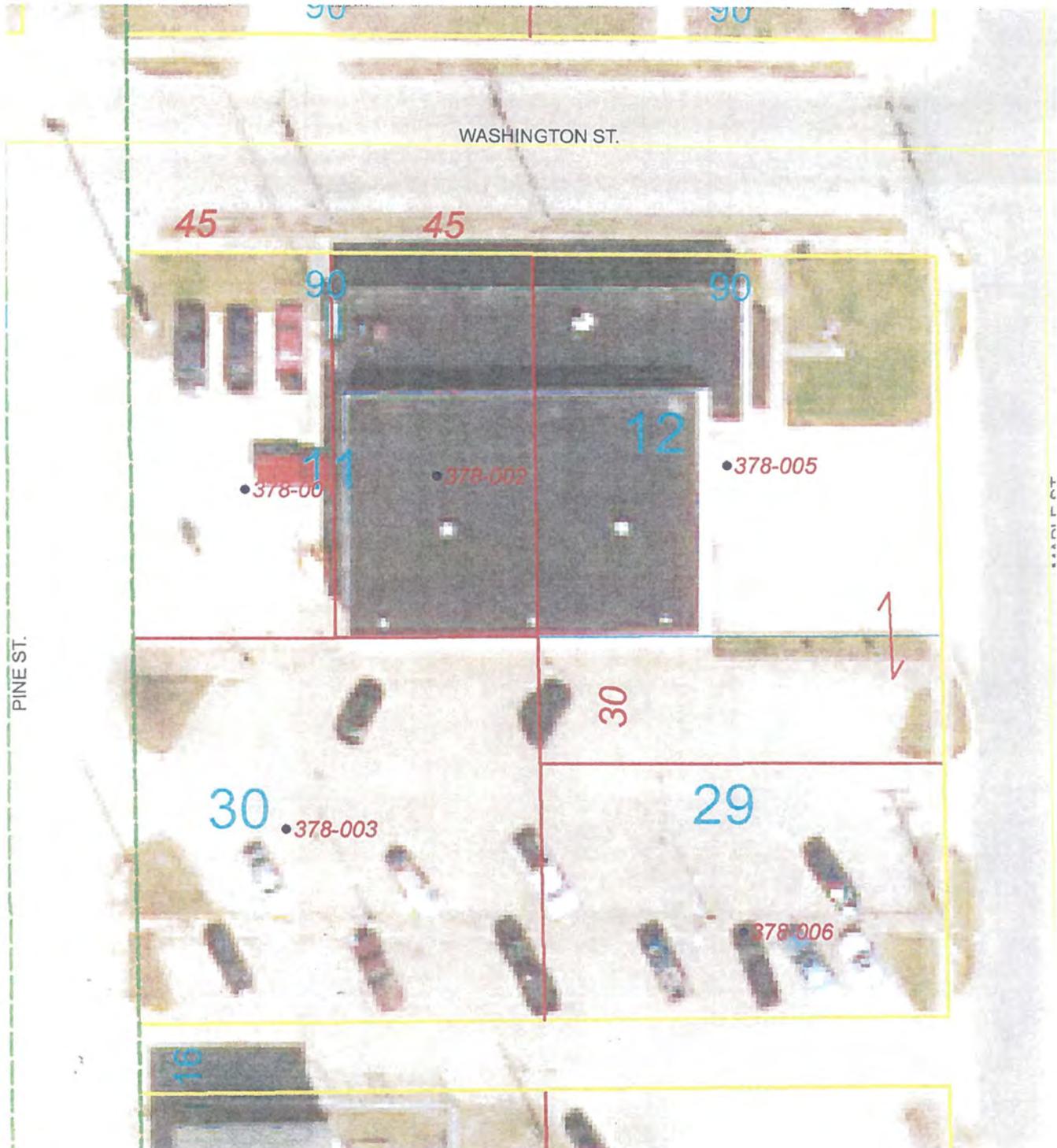


PROJECT NAME Benton Fire Department	
DRAWN BY: KT	PROJECT NO. T1407012
CHECKED BY:	TITLE SITE MAP
DATE DEC 2015	DWG NAME SITE.DWG
SCALE: 1" = 20'	

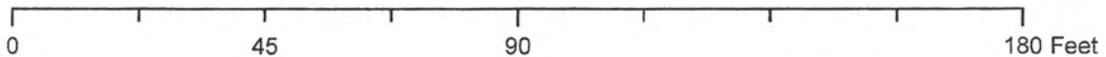


<b>LEGEND</b> —S— STORM SEWER —SAN— SANITARY SEWER —W— WATER LINE —G— GAS LINE —T— TELEPHONE LINE —PL— PROPERTY LINE —OHE— OVERHEAD ELECTRIC —UE— UNDERGROUND ELECTRIC ◆ SOIL BORING—BH ◆ MONITORING WELL WITH SOIL SAMPLING—BH/MW ● EARLY ACTION SAMPLE (RED FONT > TIER 1 RO) □ EARLY ACTION EXCAVATION □ UST UST #1 - 500 gal Gas UST #2 - 500 gal Diesel	LPC# 0550055092 Franklin County 107 N Maple Benton, IL 62812 LUST Incident No. 20141215		PROJECT NAME Benton Fire Department
	DRAWN BY: KT CHECKED BY: DATE: DEC 2015		PROJECT NO. TPA07012 TITLE: GW FLOW (12-2-15) DWG NAME: SITE.DWG

APPENDIX A  
Franklin County Supervisor of Assessments Documentation



FRANKLIN COUNTY ASSUMES NO LIABILITY WHATSOEVER ASSOCIATED WITH THE USE OR MISUSE OF THIS MAP RESOURCE AND DISCLAIMS ANY REPRESENTATION OR WARRANTY AS TO THE ACCURACY OF THE DATA. THIS MAP IS COMPILED FROM OFFICIAL RECORDS AND ONLY CONTAINS INFORMATION REQUIRED FOR LOCAL GOVERNMENT PURPOSES.



APPENDIX B  
Boring Logs

 CHASE ENVIRONMENTAL GROUP, INC. Drilling & Remedial Action Contractors 418 South Poplar, Centralia, Illinois 62801		Soil Boring Log			Page 1 of 11	
Project:		Benton Fire Dept.			Boring Location: MW-1	
Date Drilled:		11/23/2015			Sampling Method: 1 1/2" x 5' Liners	
Date Completed:		11/23/2015			Surface Elevation: NA	
Drilling Method:		Direct Push			Total Depth (ft): 11	
Drilling Company:		Earth Services			Geologist: Duane Doty	
Depth (ft)	Sample Number	Blow Count 6"	PID (ppm)	Recovery	Formation	Geologic Description
1	BH-1A		0	100%		0-0.5': Dark Brown Topsoil
2						0.5'-10': Brown abd gray silty clay
3						
4						
5						
6	BH-1B		0	100%		
7						
8						
9						
10						Groundwater at 10'
11	BH-1C		0	100		10'-11': Weathered sandstone; Refusal at 11' End of Boring

 CHASE ENVIRONMENTAL GROUP, INC. Drilling & Remedial Action Contractors 418 South Poplar, Centralia, Illinois 62801		Soil Boring Log		Page 1 of 11		
Project: Benton Fire Dept.			Boring Location: MW-2			
Date Drilled: 11/23/2015			Sampling Method: 1 1/2" x 5' Liners			
Date Completed: 11/23/2015			Surface Elevation: NA			
Drilling Method: Direct Push			Total Depth (ft): 13			
Drilling Company: Earth Services			Geologist: Duane Doty			
Depth (ft)	Sample Number	Blow Count 6"	PID (ppm)	Recovery	Formation	Geologic Description
1	BH-2A		0	95%		0-1': Concrete and crushed limestone
2						1'-3': Gray silty clay
3						3'-12': Brown silty clay
4						
5						
6	BH-2B		0	100%		
7						
8						
9						
10						
11	BH-2C		0	100		Groundwater at 11.5'
12						12'-13': Weathered sandstone, refusal at 13'
13						End of Boring

 CHASE ENVIRONMENTAL GROUP, INC. Drilling & Remedial Action Contractors 418 South Poplar, Centralia, Illinois 62801		Soil Boring Log		Page 1 of 11		
Project:			Benton Fire Dept.		Boring Location: MW-3	
Date Drilled:			11/23/2015		Sampling Method: 1 1/2" x 5' Liners	
Date Completed:			11/23/2015		Surface Elevation: NA	
Drilling Method:			Direct Push		Total Depth (ft): 11.5	
Drilling Company:			Earth Services		Geologist: Duane Doty	
Depth (ft)	Sample Number	Blow Count 6"	PID (ppm)	Recovery	Formation	Geologic Description
1	BH-3A		0	85%		0-1': Concrete and crushed limestone
2						1'-2.5': Gray silty clay
3						2.5'-11': Brown silty clay
4						
5						
6	BH-3B		0	100%		
7						
8						
9						
10						Groundwater at 10'
11	BH-3C		0	100%		10'-11.5': Weathered sandstone, refusal at 11.5'
						End of Boring

		CHASE ENVIRONMENTAL GROUP, INC. Drilling & Remedial Action Contractors 418 South Poplar, Centralia, Illinois 62801				Soil Boring Log		Page 1 of 11	
Project:		Benton Fire Dept.				Boring Location:		MW-4	
Date Drilled:		11/23/2015				Sampling Method:		1 ½" x 5' Liners	
Date Completed:		11/23/2015				Surface Elevation:		NA	
Drilling Method:		Direct Push				Total Depth (ft):		11	
Drilling Company:		Earth Services				Geologist:		Duane Doty	
Depth (ft)	Sample Number	Blow Count 6"	PID (ppm)	Recovery	Formation	Geologic Description			
1	BH-4A		0	95%		0-1': Concrete and crushed limestone			
2						1'-4': Gray silty clay			
3									
4									
5						4'-10': Brown silty clay			
6	BH-4B		0	100%					
7									
8									
9									
10						Groundwater at 10'			
11	BH-4C		0	100%		10'-11': Weathered sandstone, refusal at 11' End of Boring			
						15' EOB			

 CHASE ENVIRONMENTAL GROUP, INC. Drilling & Remedial Action Contractors 418 South Poplar, Centralia, Illinois 62801		Soil Boring Log		Page 1 of 11		
Project:		Benton Fire Dept.		Boring Location: MW-5		
Date Drilled:		11/23/2015		Sampling Method: 1 1/2" x 5' Liners		
Date Completed:		11/23/2015		Surface Elevation: NA		
Drilling Method:		Direct Push		Total Depth (ft): 12		
Drilling Company:		Earth Services		Geologist: Duane Doty		
Depth (ft)	Sample Number	Blow Count 6"	PID (ppm)	Recovery	Formation	Geologic Description
1						0-1': Concrete and crushed limestone
2						1'-5': Obstruction prevented collection of soil core
3				0%		
4						
5						
6						5'-7': Gray silty clay
7	BH-5A		0			
8				100%		7'-10': Brown silty clay
9						
10						Grounwater at 10'
11	BH-5B		0	85%		10'-12': Weathered sandstone, refusal at 12'
12						End of Boring

 CHASE ENVIRONMENTAL GROUP, INC. Drilling & Remedial Action Contractors 418 South Poplar, Centralia, Illinois 62801		Soil Boring Log		Page 1 of 11		
Project: Benton Fire Dept.			Boring Location: WC-1			
Date Drilled: 10/24/2014			Sampling Method: 1 1/2" x 5' Liners			
Date Completed: 10/24/2014			Surface Elevation: NA			
Drilling Method: Direct Push			Total Depth (ft): 15			
Drilling Company: Earth Services			Geologist: Duane Doty			
Depth (ft)	Sample Number	Blow Count 6"	PID (ppm)	Recovery	Formation	Geologic Description
1						0-1': Concrete and crushed limestone
2						1'-7': Gray silty clay
3	1		90	90%		
4						
5						
6	WC-1		191			
7						7'-12': Brown silty clay
8				100%		
9						
10						
11						Grounwater at 11'
12	2		5			
13				60%		12'-15': Weathered sandstone
14						
15						End of Boring

APPENDIX C  
Monitoring Well Completion Forms

	<b>CHASE ENVIRONMENTAL GROUP, INC.</b> <i>Drilling &amp; Remedial Action Contractors</i> 418 South Poplar, Centralia, Illinois 62801	<h2 style="margin: 0;">Well Completion Form</h2>	Page 1 of 1
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Project: Benton Fire Dept.	Well Location: MW-1
Date Drilled: 11/23/2015	Driller: Josh Blair
Date Completed: 11/23/2015	Incident #: 20141215
Drilling Method: H.S.A.	Drilling Fluids: None
Drilling Company: Earth Services	Geologist: Duane Doty

**Annular Space Details**

Type of Surface Seal:	Concrete
Type of Annular Sealant:	Bentonite
Type of Bentonite Seal:	Granular
Type of Sand Pack:	Filter

**Well Construction Materials**

	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint		2"	
Riser Pipe Above W.T.		2"	
Riser Pipe Below W.T.		2"	
Screen		2"	
Coupling Joint Screen to Riser		2"	
Protective Casing	12"		

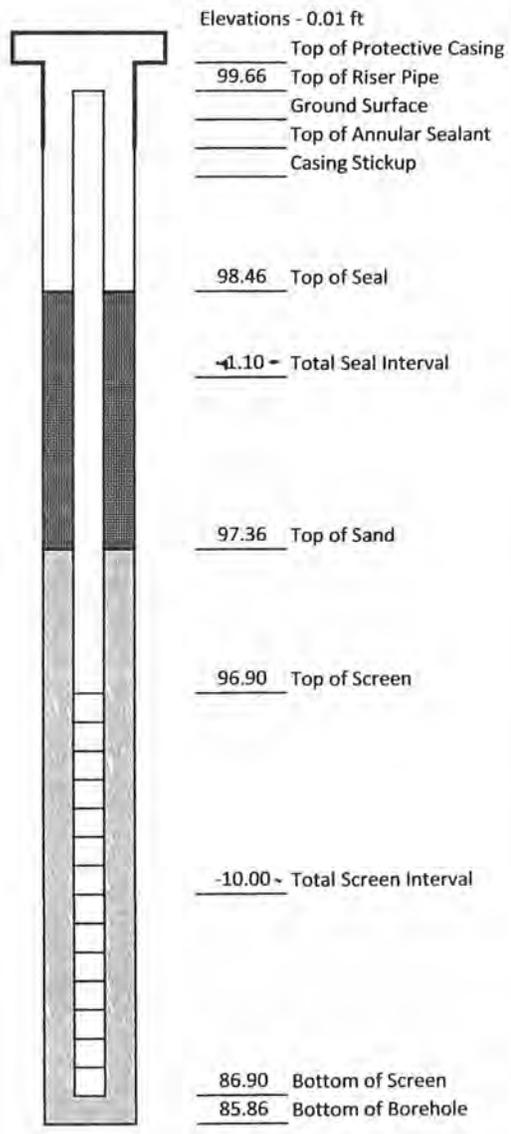
**Measurements**

to 0.01 ft (where applicable)

Riser Pipe Length	-2.76 -
Screen Length	-10 -
Screen Slot Size	0.01
Protective Casing Length (inches)	12
Depth to Water	4.93
Elevation of Water	94.73
Free Product Thickness	N/A
Gallons Removed (Developed)	4.5
Gallons Removed (Purged)	
Surveyed Riser Pipe Elevation	99.66
Borehole Diameter (inches)	8.25"

**Survey Information**

	Date	Depth to Water (ft)	Elevation of Water (ft)	Surveyor or Sampler
1	12/2/15	4.93	94.73	Duane Doty
2				
3				
4				



Drawing not to scale

Completed by: Duane Doty



	<b>CHASE ENVIRONMENTAL GROUP, INC.</b> Drilling & Remedial Action Contractors 418 South Poplar, Centralia, Illinois 62801	<b>Well Completion Form</b>	Page 1 of 1
Project: Benton Fire Dept.	Well Location: MW-3		
Date Drilled: 11/23/2015	Driller: Josh Blair		
Date Completed: 11/23/2015	Incident #: 20141215		
Drilling Method: H.S.A.	Drilling Fluids: None		
Drilling Company: Earth Services	Geologist: Duane Doty		

**Annular Space Details**

Type of Surface Seal:	Concrete
Type of Annular Sealant:	Bentonite
Type of Bentonite Seal:	Granular
Type of Sand Pack:	Filter

**Well Construction Materials**

	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint		2"	
Riser Pipe Above W.T.		2"	
Riser Pipe Below W.T.		2"	
Screen		2"	
Coupling Joint Screen to Riser		2"	
Protective Casing	12"		

**Measurements** to 0.01 ft (where applicable)

Riser Pipe Length	-3.33 ~
Screen Length	-10 ~
Screen Slot Size	0.01
Protective Casing Length (inches)	12
Depth to Water	4.8
Elevation of Water	95.2
Free Product Thickness	N/A
Gallons Removed (Developed)	5
Gallons Removed (Purged)	
Surveyed Riser Pipe Elevation	100
Borehole Diameter (inches)	8.25"

**Survey Information**

	Date	Depth to Water (ft)	Elevation of Water (ft)	Surveyor or Sampler
1	12/2/15	4.8	95.2	Kelly Tensmeyer
2				
3				
4				

Elevations - 0.01 ft

- \_\_\_\_\_ Top of Protective Casing
- 100.00 Top of Riser Pipe
- \_\_\_\_\_ Ground Surface
- \_\_\_\_\_ Top of Annular Sealant
- \_\_\_\_\_ Casing Stickup
  
- 98.80 Top of Seal
- 1.10 Total Seal Interval
  
- 97.70 Top of Sand
  
- 96.67 Top of Screen
- 10.00 Total Screen Interval
  
- 86.67 Bottom of Screen
- 85.50 Bottom of Borehole

Drawing not to scale

Completed by: Duane Doty

	<b>CHASE ENVIRONMENTAL GROUP, INC.</b> <i>Drilling &amp; Remedial Action Contractors</i> 418 South Poplar, Centralia, Illinois 62801	<b>Well Completion Form</b>	Page 1 of 1
	Project: <b>Benton Fire Dept.</b>	Well Location: <b>MW-4</b>	
Date Drilled: <b>11/23/2015</b>	Driller: <b>Josh Blair</b>		
Date Completed: <b>11/23/2015</b>	Incident #: <b>20141215</b>		
Drilling Method: <b>H.S.A.</b>	Drilling Fluids: <b>None</b>		
Drilling Company: <b>Earth Services</b>	Geologist: <b>Duane Doty</b>		

Annular Space Details

Type of Surface Seal:	Concrete
Type of Annular Sealant:	Bentonite
Type of Bentonite Seal:	Granular
Type of Sand Pack:	Filter

Well Construction Materials

	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint		2"	
Riser Pipe Above W.T.		2"	
Riser Pipe Below W.T.		2"	
Screen		2"	
Coupling Joint Screen to Riser		2"	
Protective Casing	12"		

Measurements

to 0.01 ft (where applicable)

Riser Pipe Length	-4.05 ~
Screen Length	-10 ~
Screen Slot Size	0.01
Protective Casing Length (inches)	12
Depth to Water	4.62
Elevation of Water	95.07
Free Product Thickness	N/A
Gallons Removed (Developed)	5
Gallons Removed (Purged)	
Surveyed Riser Pipe Elevation	99.69
Borehole Diameter (inches)	8.25"

Survey Information

	Date	Depth to Water (ft)	Elevation of Water (ft)	Surveyor or Sampler
1	12/2/15	4.62	95.07	Kelly Tensmeyer
2				
3				
4				



Elevations - 0.01 ft

- \_\_\_\_\_ Top of Protective Casing
- 99.69 Top of Riser Pipe
- \_\_\_\_\_ Ground Surface
- \_\_\_\_\_ Top of Annular Sealant
- \_\_\_\_\_ Casing Stickup

98.39 Top of Seal

-1.80 Total Seal Interval

96.59 Top of Sand

95.64 Top of Screen

-10.00 Total Screen Interval

85.64 Bottom of Screen

85.59 Bottom of Borehole

Drawing not to scale

Completed by: Duane Doty

	<b>CHASE ENVIRONMENTAL GROUP, INC.</b> <i>Drilling &amp; Remedial Action Contractors</i> 418 South Poplar, Centralia, Illinois 62801	<b>Well Completion Form</b>	Page 1 of 1
Project:	Benton Fire Dept.	Well Location:	MW-5
Date Drilled:	11/23/2015	Driller:	Josh Blair
Date Completed:	11/23/2015	Incident #:	20141215
Drilling Method:	H.S.A.	Drilling Fluids:	None
Drilling Company:	Earth Services	Geologist:	Duane Doty

**Annular Space Details**

Type of Surface Seal:	Concrete
Type of Annular Sealant:	Bentonite
Type of Bentonite Seal:	Granular
Type of Sand Pack:	Filter

**Well Construction Materials**

	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint		2"	
Riser Pipe Above W.T.		2"	
Riser Pipe Below W.T.		2"	
Screen		2"	
Coupling Joint Screen to Riser		2"	
Protective Casing	12"		

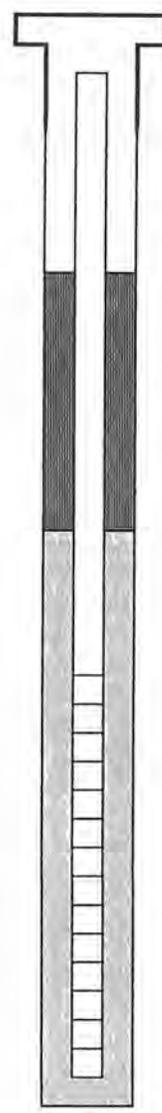
**Measurements** to 0.01 ft (where applicable)

Riser Pipe Length	-2.86
Screen Length	-10
Screen Slot Size	0.01
Protective Casing Length (inches)	12
Depth to Water	1.94
Elevation of Water	97.99
Free Product Thickness	N/A
Gallons Removed (Developed)	6
Gallons Removed (Purged)	
Surveyed Riser Pipe Elevation	99.93
Borehole Diameter (inches)	8.25"

**Survey Information**

	Date	Depth to Water (ft)	Elevation of Water (ft)	Surveyor or Sampler
1	12/2/15	1.94	97.99	Kelly Tensmeyer
2				
3				
4				



**Elevations - 0.01 ft**

- \_\_\_\_\_ Top of Protective Casing
- 99.93 Top of Riser Pipe
- \_\_\_\_\_ Ground Surface
- \_\_\_\_\_ Top of Annular Sealant
- \_\_\_\_\_ Casing Stickup
- \_\_\_\_\_
- 98.93 Top of Seal
- \_\_\_\_\_
- 1.70 Total Seal Interval
- \_\_\_\_\_
- 97.23 Top of Sand
- \_\_\_\_\_
- 97.07 Top of Screen
- \_\_\_\_\_
- 10.00 Total Screen Interval
- \_\_\_\_\_
- 87.07 Bottom of Screen
- 85.23 Bottom of Borehole

Drawing not to scale

Completed by: \_\_\_\_\_ *Duane Doty*

APPENDIX D

Laboratory Reports, Chain of Custody & Laboratory Certification



December 09, 2015

Marvin Johnson  
Chase Environmental Group  
P.O. Drawer AB  
Centralia, IL 62801  
TEL: (618) 533-6740  
FAX: (618) 533-6741



**RE:** Benton Fire Dept. T1407012

**WorkOrder:** 15120246

Dear Marvin Johnson:

TEKLAB, INC received 5 samples on 12/3/2015 8:55:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in cursive script that reads "Marvin L. Darling II".

Marvin L. Darling  
Project Manager  
(618)344-1004 ex 41  
[mdarling@teklabinc.com](mailto:mdarling@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

Client: Chase Environmental Group

Work Order: 15120246

Client Project: Benton Fire Dept. T1407012

Report Date: 09-Dec-15

**This reporting package includes the following:**

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	4
Laboratory Results	5
Receiving Check List	10
Chain of Custody	Appended



## Definitions

<http://www.teklabinc.com/>

Client: Chase Environmental Group

Work Order: 15120246

Client Project: Benton Fire Dept. T1407012

Report Date: 09-Dec-15

**Abbr Definition**

- CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
- DNI Did not ignite
- DUP Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
- ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH IL Dept. of Public Health
- LCS Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
- LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
- MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW Molecular weight
- ND Not Detected at the Reporting Limit
- NELAP NELAP Accredited
- PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
- RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
- Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
- TNTC Too numerous to count ( > 200 CFU )

**Qualifiers**

- |  |   |
|--|---|
| # - Unknown hydrocarbon                                      | B - Analyte detected in associated Method Blank |
| E - Value above quantitation range                           | H - Holding times exceeded                      |
| I - Associated internal standard was outside method criteria | J - Analyte detected below quantitation limits  |
| M - Manual Integration used to determine area response       | ND - Not Detected at the Reporting Limit        |
| R - RPD outside accepted recovery limits                     | S - Spike Recovery outside recovery limits      |
| T - TIC(Tentatively identified compound)                     | X - Value exceeds Maximum Contaminant Level     |



Case Narrative

<http://www.teklabinc.com/>

Client: Chase Environmental Group  
 Client Project: Benton Fire Dept. T1407012

Work Order: 15120246  
 Report Date: 09-Dec-15

Cooler Receipt Temp: 1.22 °C

Locations and Accreditations

	Collinsville	Springfield	Kansas City	Collinsville Air
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425	3920 Pintail Dr Springfield, IL 62711-9415	8421 Nieman Road Lenexa, KS 66214	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004	(217) 698-1004	(913) 541-1998	(618) 344-1004
Fax	(618) 344-1005	(217) 698-1005	(913) 541-1998	(618) 344-1005
Email	jhriley@teklabinc.com	KKlostermann@teklabinc.com	dthompson@teklabinc.com	EHurley@teklabinc.com

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2016	Collinsville
Kansas	KDHE	E-10374	NELAP	1/31/2016	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2016	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2016	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2016	Collinsville
Arkansas	ADEQ	88-0966		3/14/2016	Collinsville
Illinois	IDPH	17584		5/31/2017	Collinsville
Kentucky	KDEP	98006		12/31/2015	Collinsville
Kentucky	UST	0073		1/31/2016	Collinsville
Missouri	MDNR	00930		5/31/2017	Collinsville
Oklahoma	ODEQ	9978		8/31/2016	Collinsville



## Laboratory Results

<http://www.teklabinc.com/>

Client: Chase Environmental Group  
 Client Project: Benton Fire Dept. T1407012  
 Lab ID: 15120246-001  
 Matrix: GROUNDWATER

Work Order: 15120246

Report Date: 09-Dec-15

Client Sample ID: MW-1

Collection Date: 12/02/2015 9:58

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3510C, 8270C SIMS, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Acenaphthylene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Benzo(a)anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Benzo(a)pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Benzo(b)fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Benzo(g,h,i)perylene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Benzo(k)fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Chrysene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Dibenzo(a,h)anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Fluorene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Indeno(1,2,3-cd)pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Naphthalene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Phenanthrene	NELAP	0.00010		0.00011	mg/L	1	12/04/2015 18:51	114583
Pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 18:51	114583
Surr: 2-Fluorobiphenyl		10-143		63.4	%REC	1	12/04/2015 18:51	114583
Surr: 2-Fluorophenol		10-237		37.6	%REC	1	12/04/2015 18:51	114583
Surr: Nitrobenzene-d5		10-166		49.6	%REC	1	12/04/2015 18:51	114583
Surr: Phenol-d5		10-199		26.2	%REC	1	12/04/2015 18:51	114583
Surr: p-Terphenyl-d14		10-137		33.2	%REC	1	12/04/2015 18:51	114583
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Benzene	NELAP	2.0		ND	µg/L	1	12/03/2015 15:19	114600
Ethylbenzene	NELAP	5.0		ND	µg/L	1	12/03/2015 15:19	114600
Methyl tert-butyl ether	NELAP	2.0		2.4	µg/L	1	12/03/2015 15:19	114600
Toluene	NELAP	5.0		ND	µg/L	1	12/03/2015 15:19	114600
Xylenes, Total	NELAP	5.0		ND	µg/L	1	12/03/2015 15:19	114600
Surr: 1,2-Dichloroethane-d4		74.7-129		97.4	%REC	1	12/03/2015 15:19	114600
Surr: 4-Bromofluorobenzene		86-119		98.4	%REC	1	12/03/2015 15:19	114600
Surr: Dibromofluoromethane		81.7-123		100.1	%REC	1	12/03/2015 15:19	114600
Surr: Toluene-d8		84.3-114		96.6	%REC	1	12/03/2015 15:19	114600



## Laboratory Results

<http://www.teklabinc.com/>

Client: Chase Environmental Group

Work Order: 15120246

Client Project: Benton Fire Dept. T1407012

Report Date: 09-Dec-15

Lab ID: 15120246-002

Client Sample ID: MW-2

Matrix: GROUNDWATER

Collection Date: 12/02/2015 10:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3510C, 8270C SIMS, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Acenaphthylene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Benzo(a)anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Benzo(a)pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Benzo(b)fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Benzo(g,h,i)perylene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Benzo(k)fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Chrysene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Dibenzo(a,h)anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Fluorene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Indeno(1,2,3-cd)pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Naphthalene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Phenanthrene	NELAP	0.00010		0.00014	mg/L	1	12/04/2015 19:22	114583
Pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:22	114583
Surr: 2-Fluorobiphenyl		10-143		61.6	%REC	1	12/04/2015 19:22	114583
Surr: 2-Fluorophenol		10-237		35.2	%REC	1	12/04/2015 19:22	114583
Surr: Nitrobenzene-d5		10-166		45.6	%REC	1	12/04/2015 19:22	114583
Surr: Phenol-d5		10-199		24.1	%REC	1	12/04/2015 19:22	114583
Surr: p-Terphenyl-d14		10-137		53.4	%REC	1	12/04/2015 19:22	114583
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Benzene	NELAP	2.0		ND	µg/L	1	12/03/2015 15:46	114600
Ethylbenzene	NELAP	5.0		ND	µg/L	1	12/03/2015 15:46	114600
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	12/03/2015 15:46	114600
Toluene	NELAP	5.0		ND	µg/L	1	12/03/2015 15:46	114600
Xylenes, Total	NELAP	5.0		ND	µg/L	1	12/03/2015 15:46	114600
Surr: 1,2-Dichloroethane-d4		74.7-129		96.5	%REC	1	12/03/2015 15:46	114600
Surr: 4-Bromofluorobenzene		86-119		98.6	%REC	1	12/03/2015 15:46	114600
Surr: Dibromofluoromethane		81.7-123		100.9	%REC	1	12/03/2015 15:46	114600
Surr: Toluene-d8		84.3-114		98.2	%REC	1	12/03/2015 15:46	114600



## Laboratory Results

<http://www.teklabinc.com/>

Client: Chase Environmental Group  
 Client Project: Benton Fire Dept. T1407012  
 Lab ID: 15120246-003  
 Matrix: GROUNDWATER

Work Order: 15120246  
 Report Date: 09-Dec-15  
 Client Sample ID: MW-3  
 Collection Date: 12/02/2015 10:21

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3510C, 8270C SIMS, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Acenaphthylene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Benzo(a)anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Benzo(a)pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Benzo(b)fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Benzo(g,h,i)perylene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Benzo(k)fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Chrysene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Dibenzo(a,h)anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Fluorene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Indeno(1,2,3-cd)pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Naphthalene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Phenanthrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 19:53	114583
Surr: 2-Fluorobiphenyl		10-143		51.0	%REC	1	12/04/2015 19:53	114583
Surr: 2-Fluorophenol		10-237		26.2	%REC	1	12/04/2015 19:53	114583
Surr: Nitrobenzene-d5		10-166		37.8	%REC	1	12/04/2015 19:53	114583
Surr: Phenol-d5		10-199		18.4	%REC	1	12/04/2015 19:53	114583
Surr: p-Terphenyl-d14		10-137		33.4	%REC	1	12/04/2015 19:53	114583
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Benzene	NELAP	2.0		ND	µg/L	1	12/03/2015 16:12	114600
Ethylbenzene	NELAP	5.0		ND	µg/L	1	12/03/2015 16:12	114600
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	12/03/2015 16:12	114600
Toluene	NELAP	5.0		ND	µg/L	1	12/03/2015 16:12	114600
Xylenes, Total	NELAP	5.0		ND	µg/L	1	12/03/2015 16:12	114600
Surr: 1,2-Dichloroethane-d4		74.7-129		97.9	%REC	1	12/03/2015 16:12	114600
Surr: 4-Bromofluorobenzene		86-119		98.4	%REC	1	12/03/2015 16:12	114600
Surr: Dibromofluoromethane		81.7-123		101.0	%REC	1	12/03/2015 16:12	114600
Surr: Toluene-d8		84.3-114		95.6	%REC	1	12/03/2015 16:12	114600



## Laboratory Results

<http://www.teklabinc.com/>

Client: Chase Environmental Group  
 Client Project: Benton Fire Dept. T1407012  
 Lab ID: 15120246-004  
 Matrix: GROUNDWATER

Work Order: 15120246  
 Report Date: 09-Dec-15  
 Client Sample ID: MW-4  
 Collection Date: 12/02/2015 10:29

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3510C, 8270C SIMS, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Acenaphthylene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Benzo(a)anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Benzo(a)pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Benzo(b)fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Benzo(g,h,i)perylene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Benzo(k)fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Chrysene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Dibenzo(a,h)anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Fluorene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Indeno(1,2,3-cd)pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Naphthalene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Phenanthrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:24	114583
Surr: 2-Fluorobiphenyl		10-143		59.4	%REC	1	12/04/2015 20:24	114583
Surr: 2-Fluorophenol		10-237		33.5	%REC	1	12/04/2015 20:24	114583
Surr: Nitrobenzene-d5		10-166		43.2	%REC	1	12/04/2015 20:24	114583
Surr: Phenol-d5		10-199		23.5	%REC	1	12/04/2015 20:24	114583
Surr: p-Terphenyl-d14		10-137		38.2	%REC	1	12/04/2015 20:24	114583
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Benzene	NELAP	2.0		ND	µg/L	1	12/03/2015 16:39	114600
Ethylbenzene	NELAP	5.0		ND	µg/L	1	12/03/2015 16:39	114600
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	12/03/2015 16:39	114600
Toluene	NELAP	5.0		ND	µg/L	1	12/03/2015 16:39	114600
Xylenes, Total	NELAP	5.0		ND	µg/L	1	12/03/2015 16:39	114600
Surr: 1,2-Dichloroethane-d4		74.7-129		97.8	%REC	1	12/03/2015 16:39	114600
Surr: 4-Bromofluorobenzene		86-119		98.3	%REC	1	12/03/2015 16:39	114600
Surr: Dibromofluoromethane		81.7-123		99.6	%REC	1	12/03/2015 16:39	114600
Surr: Toluene-d8		84.3-114		96.9	%REC	1	12/03/2015 16:39	114600



## Laboratory Results

<http://www.teklabinc.com/>

Client: Chase Environmental Group  
 Client Project: Benton Fire Dept. T1407012  
 Lab ID: 15120246-005  
 Matrix: GROUNDWATER

Work Order: 15120246  
 Report Date: 09-Dec-15  
 Client Sample ID: MW-5  
 Collection Date: 12/02/2015 10:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3510C, 8270C SIMS, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Acenaphthylene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Benzo(a)anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Benzo(a)pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Benzo(b)fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Benzo(g,h,i)perylene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Benzo(k)fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Chrysene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Dibenzo(a,h)anthracene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Fluoranthene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Fluorene	NELAP	0.00010		0.00011	mg/L	1	12/04/2015 20:55	114583
Indeno(1,2,3-cd)pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Naphthalene	NELAP	0.00010		0.00309	mg/L	1	12/04/2015 20:55	114583
Phenanthrene	NELAP	0.00010		0.00016	mg/L	1	12/04/2015 20:55	114583
Pyrene	NELAP	0.00010		ND	mg/L	1	12/04/2015 20:55	114583
Surr: 2-Fluorobiphenyl		10-143		57.6	%REC	1	12/04/2015 20:55	114583
Surr: 2-Fluorophenol		10-237		28.9	%REC	1	12/04/2015 20:55	114583
Surr: Nitrobenzene-d5		10-166		41.0	%REC	1	12/04/2015 20:55	114583
Surr: Phenol-d5		10-199		21.3	%REC	1	12/04/2015 20:55	114583
Surr: p-Terphenyl-d14		10-137		27.8	%REC	1	12/04/2015 20:55	114583
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Benzene	NELAP	2.0		2.9	µg/L	1	12/03/2015 17:06	114600
Ethylbenzene	NELAP	5.0		13.0	µg/L	1	12/03/2015 17:06	114600
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	12/03/2015 17:06	114600
Toluene	NELAP	5.0		ND	µg/L	1	12/03/2015 17:06	114600
Xylenes, Total	NELAP	5.0	J	2.2	µg/L	1	12/03/2015 17:06	114600
Surr: 1,2-Dichloroethane-d4		74.7-129		96.1	%REC	1	12/03/2015 17:06	114600
Surr: 4-Bromofluorobenzene		86-119		98.7	%REC	1	12/03/2015 17:06	114600
Surr: Dibromofluoromethane		81.7-123		100.0	%REC	1	12/03/2015 17:06	114600
Surr: Toluene-d8		84.3-114		97.8	%REC	1	12/03/2015 17:06	114600



Receiving Check List

<http://www.teklabinc.com/>

Client: Chase Environmental Group  
 Client Project: Benton Fire Dept. T1407012

Work Order: 15120246  
 Report Date: 09-Dec-15

Carrier: FedEx  
 Completed by: *M. Kaminski*  
 On: 03-Dec-15  
 Mary Anne Kaminski

Received By: AMD  
 Reviewed by: *Elizabeth A. Hurley*  
 On: 03-Dec-15  
 Elizabeth A. Hurley

Pages to follow: Chain of custody  Extra pages included

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	Temp °C 1.22
Type of thermal preservation?	None <input type="checkbox"/>	Ice <input checked="" type="checkbox"/>	Blue Ice <input type="checkbox"/>	Dry Ice <input type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Reported field parameters measured:	Field <input type="checkbox"/>	Lab <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials <input type="checkbox"/>	
Water - TOX containers have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No TOX containers <input checked="" type="checkbox"/>	
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	
NPDES/CWA TCN interferences checked/treated in the field?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	

Any No responses must be detailed below or on the COC.

**CHAIN OF CUSTODY**

pg. 1 of 1 Work Order # 15120246

**TEKLAB, INC.** 5445 Horseshoe Lake Road ~ Collinsville, IL 62234 ~ Phone: (618) 344-1004 ~ Fax: (618) 344-1005

Client: CHASE ENVIRONMENTAL GROUP  
 Address: PO Box AB  
 City / State / Zip: CONTRAVIA, FL 62801  
 Contact: MARVIN JOHNSON Phone: 618-533-6740  
 E-Mail: mjohnson@chascenv.com Fax: \_\_\_\_\_

Samples on:  Ice  Blue Ice  No Ice 1.22 °C  
 Preserved in:  Lab  Field **FOR LAB USE ONLY**  
 Lab Notes:  
zero head space amp 2:3:15  
 Comments:  
IL LEAKING UST PROJECT

- Are these samples known to be involved in litigation? If yes, a surcharge will apply.  Yes  No
- Are these samples known to be hazardous?  Yes  No
- Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in comment section.  Yes  No

Project Name / Number		Sample Collector's Name		MATRIX								INDICATE ANALYSIS REQUESTED															
<u>BENTON FIRE DEPT.</u> <u>T1407012</u>		<u>D DOTY</u>		UNPRES	HNO <sub>3</sub>	NaOH	H <sub>2</sub> SO <sub>4</sub>	HCL	MeOH	NaHSO <sub>4</sub>	Other	Water	Drinking Water	Soil	Sludge	Sp. Waste	BTEX	MTBE	PNA's								
Results Requested	Billing Instructions	# and Type of Containers																									
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other _____ <input type="checkbox"/> 3 Day (50% Surcharge)	<u>PWP</u>																										
Lab Use Only	Sample Identification	Date/Time Sampled																									
<u>15120246</u>	<u>MW-1</u>	<u>12/2/15-0958</u>	<u>1</u>					<u>2</u>				<u>X</u>						<u>X</u>	<u>X</u>	<u>X</u>							
<u>002</u>	<u>MW-2</u>	<u>-1010</u>	<u>1</u>					<u>2</u>				<u>X</u>						<u>X</u>	<u>X</u>	<u>X</u>							
<u>003</u>	<u>MW-3</u>	<u>-1021</u>	<u>1</u>					<u>2</u>				<u>X</u>						<u>X</u>	<u>X</u>	<u>X</u>							
<u>004</u>	<u>MW-4</u>	<u>-1029</u>	<u>1</u>					<u>2</u>				<u>X</u>						<u>X</u>	<u>X</u>	<u>X</u>							
<u>005</u>	<u>MW-5</u>	<u>-1038</u>	<u>1</u>					<u>2</u>				<u>X</u>						<u>X</u>	<u>X</u>	<u>X</u>							
Relinquished By		Date / Time		Received By		Date / Time																					
<u>[Signature]</u>		<u>12/02/2015 1422</u>		<u>Donna DeCello FedEx</u>		<u>12/2-15 855am</u>																					

The individual signing this agreement on behalf of client acknowledges that he/she has read and understands the terms and conditions of this agreement, on the reverse side, and that he/she has the authority to sign on behalf of client. **WHITE - LAB YELLOW - SAMPLER'S COPY** 1/1/15

APPENDIX E  
Stage 1 Cost Summary



# Illinois Environmental Protection Agency

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

## General Information for the Budget and Billing Forms

LPC #: 0550055092 County: Franklin

City: Benton Site Name: Benton Fire Department

Site Address: 107 North Maple Street

IEMA Incident No.: 20141215

IEMA Notification Date: 10/24/2014

Date this form was prepared: 12/7/2015

**This form is being submitted as a (check one, if applicable):**

- Budget Proposal
- Budget Amendment (Budget amendments must include only the costs over the previous budget.)
- Billing Package

Please provide the name(s) and date(s) of report(s) documenting the costs requested:

Name(s): \_\_\_\_\_

Date(s): \_\_\_\_\_

**This package is being submitted for the site activities indicated below:**

**35 III. Adm. Code 734:**

- Early Action
- Free Product Removal after Early Action
- Site Investigation . . . . . Stage 1:  Stage 2:  Stage 3:
- Corrective Action Actual Costs

**35 III. Adm. Code 732:**

- Early Action
- Free Product Removal after Early Action
- Site Classification
- Low Priority Corrective Action
- High Priority Corrective Action

**35 III. Adm. Code 731:**

- Site Investigation
- Corrective Action

**General Information for the Budget and Billing Forms**

The following address will be used as the mailing address for checks and any final determination letters regarding payment from the Fund.

Pay to the order of: Benton Fire Department

Send in care of: Chase Environmental Group, Inc.

Address: PO Box AB

City: Centralia State: IL Zip: 62801

The payee is the: Owner  Operator  (Check one or both.)

\_\_\_\_\_  
**Signature of the owner or operator of the UST(s) (required)** W-9 must be submitted.  
[Click here to print off a W-9 Form.](#)

Number of petroleum USTs in Illinois presently owned or operated by the owner or operator; any subsidiary, parent or joint stock company of the owner or operator; and any company owned by any parent, subsidiary or joint stock company of the owner or operator:

Fewer than 101:  101 or more:

Number of USTs at the site: 2 (Number of USTs includes USTs presently at the site and USTs that have been removed.)

Number of incidents reported to IEMA for this site: 1

Incident Numbers assigned to the site due to releases from USTs: 20141215

Please list all tanks that have ever been located at the site and tanks that are presently located at the site.

Product Stored in UST	Size (gallons)	Did UST have a release?	Incident No.	Type of Release Tank Leak / Overfill / Piping Leak
Diesel	500	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	20141215	Tank Leak
Gasoline	500	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	20141215	Tank Leak
		Yes <input type="checkbox"/> No <input type="checkbox"/>		
		Yes <input type="checkbox"/> No <input type="checkbox"/>		
		Yes <input type="checkbox"/> No <input type="checkbox"/>		
		Yes <input type="checkbox"/> No <input type="checkbox"/>		
		Yes <input type="checkbox"/> No <input type="checkbox"/>		
		Yes <input type="checkbox"/> No <input type="checkbox"/>		

**Budget Summary**

Choose the applicable regulation:  734  732

<b>734</b>	Free Product	Stage 1 Site Investigation	Stage 2 Site Investigation	Stage 3 Site Investigation	Corrective Action
Drilling and Monitoring Well Costs Form	\$	\$ 3,488.76	\$	\$	\$
Analytical Costs Form	\$	\$ 1,315.00	\$	\$	\$
Remediation and Disposal Costs Form	\$	\$ 1,548.95	\$	\$	\$
UST Removal and Abandonment Costs Form	\$	\$	\$	\$	\$
Paving, Demolition, and Well Abandonment Costs Form	\$	\$	\$	\$	\$
Consulting Personnel Costs Form	\$	\$ 12,806.33	\$	\$	\$
Consultant's Materials Costs Form	\$	\$ 960.01	\$	\$	\$
Handling Charges Form	Handling charges will be determined at the time a billing package is submitted to the Illinois EPA. The amount of allowable handling charges will be determined in accordance with the Handling Charges Form.				
<b>Total</b>	\$	\$ 20,119.05	\$	\$	\$

**Drilling and Monitoring Well Costs Form**

1. Drilling

Number of Borings to Be Drilled	Type HSA/PUSH/ Injection	Depth (feet) of Each Boring	Total Feet Drilled	Reason for Drilling
1	HSA	14.00	14.00	Stage 1 monitoring well MW-1
4	HSA	15.00	60.00	Stage 1 monitoring wells MW-2 through MW-5

Subpart H minimum payment amount applies.

	Total Feet	Rate per Foot (\$)	Total Cost (\$)
Total Feet via HSA:	74.00	28.50	2,109.00
Total Feet via PUSH:			
Total Feet for Injection via PUSH:			
Total Drilling Costs:			2,109.00

2. Monitoring / Recovery Wells

Number of Wells	Type of Well HSA / PUSH / 4" or 6" Recovery / 8" Recovery	Diameter of Well (inches)	Depth of Well (feet)	Total Feet of Wells to Be Installed (\$)
1	HSA	2.00	12.76	12.76
1	HSA	2.00	14.47	14.47
1	HSA	2.00	13.33	13.33
1	HSA	2.00	14.05	14.05
1	HSA	2.00	12.86	12.86

Well Installation	Total Feet	Rate per Foot (\$)	Total Cost (\$)
Total Feet via HSA:	67.47	20.45	1,379.76
Total Feet via PUSH:			
Total Feet of 4" or 6" Recovery:			
Total Feet of 8" or Greater Recovery:			
Total Well Costs:			1,379.76

<b>Total Drilling and Monitoring Well Costs:</b>	<b>\$3,488.76</b>
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**Analytical Costs Form**

Laboratory Analysis	Number of Samples		Cost (\$) per Analysis		Total per Parameter
<b>Chemical Analysis</b>					
BETX Soil with MTBE EPA 8260		X		=	
BETX Water with MTBE EPA 8260	5	X	91.00	=	\$455.00
COD (Chemical Oxygen Demand)		X		=	
Corrosivity		X		=	
Flash Point or Ignitability Analysis EPA 1010		X		=	
Fraction Organic Carbon Content (f <sub>OC</sub> ) ASTM-D 2974-00		X		=	
Fat, Oil, & Grease (FOG)		X		=	
LUST Pollutants Soil - analysis must include volatile, base/neutral, polynuclear aromatics and metals list in Section 732. Appendix B and 734. Appendix B		X		=	
Dissolved Oxygen (DO)		X		=	
Paint Filter (Free Liquids)		X		=	
PCB / Pesticides (combination)		X		=	
PCBs		X		=	
Pesticides		X		=	
pH		X		=	
Phenol		X		=	
Polynuclear Aromatics PNA, or PAH SOIL EPA 8270		X		=	
Polynuclear Aromatics PNA, or PAH WATER EPA 8270	5	X	172.00	=	\$860.00
Reactivity		X		=	
SVOC - Soil (Semi-Volatile Organic Compounds)		X		=	
SVOC - Water (Semi-Volatile Organic Compounds)		X		=	
TKN (Total Kjeldahl) "nitrogen"		X		=	
TPH (Total Petroleum Hydrocarbons)		X		=	
VOC (Volatile Organic Compounds) - Soil (Non-Aqueous)		X		=	
VOC (Volatile Organic Compounds) - Water		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
<b>Geo-Technical Analysis</b>					
Soil Bulk Density (p <sub>b</sub> ) ASTM D2937-94		X		=	
Ex-situ Hydraulic Conductivity / Permeability		X		=	
Moisture Content (w) ASTM D2216-92 / D4643-93		X		=	
Porosity		X		=	
Rock Hydraulic Conductivity Ex-situ		X		=	
Sieve / Particle Size Analysis ASTM D422-63 / D1140-54		X		=	
Soil Classification ASTM D2488-90 / D2487-90		X		=	
Soil Particle Density (p <sub>s</sub> ) ASTM D854-92		X		=	
		X		=	
		X		=	
		X		=	

**Analytical Costs Form**

Metals Analysis					
Soil preparation fee for Metals TCLP Soil (one fee per soil sample)		X		=	
Soil preparation fee for Metals Total Soil (one fee per soil sample)		X		=	
Water preparation fee for Metals Water (one fee per water sample)		X		=	
Arsenic TCLP Soil		X		=	
Arsenic Total Soil		X		=	
Arsenic Water		X		=	
Barium TCLP Soil		X		=	
Barium Total Soil		X		=	
Barium Water		X		=	
Cadmium TCLP Soil		X		=	
Cadmium Total Soil		X		=	
Cadmium Water		X		=	
Chromium TCLP Soil		X		=	
Chromium Total Soil		X		=	
Chromium Water		X		=	
Cyanide TCLP Soil		X		=	
Cyanide Total Soil		X		=	
Cyanide Water		X		=	
Iron TCLP Soil		X		=	
Iron Total Soil		X		=	
Iron Water		X		=	
Lead TCLP Soil		X		=	
Lead Total Soil		X		=	
Lead Water		X		=	
Mercury TCLP Soil		X		=	
Mercury Total Soil		X		=	
Mercury Water		X		=	
Selenium TCLP Soil		X		=	
Selenium Total Soil		X		=	
Selenium Water		X		=	
Silver TCLP Soil		X		=	
Silver Total Soil		X		=	
Silver Water		X		=	
Metals TCLP Soil (a combination of all metals) RCRA		X		=	
Metals Total Soil (a combination of all metals) RCRA		X		=	
Metals Water (a combination of all metals) RCRA		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
Other					
EnCore® Sampler, purge-and-trap sampler, or equivalent sampling device		X		=	
Sample Shipping per sampling event <sup>1</sup>		X		=	

<sup>1</sup>A sampling event, at a minimum, is all samples (soil and groundwater) collected in a calendar day.

**Total Analytical Costs: \$ 1,315.00**

## Remediation and Disposal Costs Form

### A. Conventional Technology

**Excavation, Transportation, and Disposal of contaminated soil and/or the 4-foot backfill material removal during early action activities:**

Number of Cubic Yards	Cost per Cubic Yard (\$)	Total Cost

**Backfilling the Excavation:**

Number of Cubic Yards	Cost per Cubic Yard (\$)	Total Cost

**Overburden Removal and Return:**

Number of Cubic Yards	Cost per Cubic Yard (\$)	Total Cost

### B. Alternative Technology

Alternative Technology Selected:		
Number of Cubic Yards of Soil to Be Remediated		
Total Non-Consulting Personnel Costs Summary Sheet (\$)		
Total Remediation Materials Costs Summary Sheet (\$)		
Total Cost of the System		

**Remediation and Disposal Costs Form**

**C. Groundwater Remediation and/or Free Product Removal System**

Total Non-Consulting Personnel Costs Summary Sheet (\$)	
Total Remediation Materials Costs Summary Sheet (\$)	
Total Cost of the System	

**D. Groundwater and/or Free Product Removal and Disposal**

Subpart H minimum payment amount applies.

Number of Gallons	Cost per Gallon (\$)	Total Cost (\$)

**E. Drum Disposal**

Subpart H minimum payment amount applies.

Number of Drums of Solid Waste	Cost per Drum (\$)	Total Cost (\$)
5	309.79	1,548.95
Number of Drums of Liquid Waste	Cost per Drum (\$)	Total Cost (\$)
Total Drum Disposal Costs		1,548.95

<b>Total Remediation and Disposal Costs:</b>	<b>\$1,548.95</b>
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**Consulting Personnel Costs Form**

Employee Name	Personnel Title	Hours	Rate* (\$)	Total Cost
Remediation Category	Task			
	Senior Acct. Technician	21.50	66.81	\$1,436.42
EA-Pay	Prepare Early Action Reimbursement Application			
	Senior Acct. Technician	3.00	66.81	\$200.43
EA-Pay	Confirm/summarize landfill & backfill totals, manifests & scale tickets			
	Senior Prof. Geologist	2.50	133.64	\$334.10
EA-Pay	Review/certify Early Action Reimbursement Application			
	Senior Admin. Assistant	3.00	54.67	\$164.01
EA-Pay	Prepare/submit Early Action Reimbursement application to O/O and IEPA			
	Senior Project Manager	1.00	121.49	\$121.49
Stage 1-Field	Prepare Stage 1 Site Investigation Certification			
	Senior Project Manager	6.00	121.49	\$728.94
Stage 1-Results	Client & IEPA communications			
	Senior Prof. Geologist	.50	133.64	\$66.82
Stage 1-Field	Stage 1 Site Investigation Certification			
	Senior Project Manager	2.00	123.91	\$247.82
Stage 1-Field	Secure/coordinate drilling services			
	Senior Admin. Assistant	1.00	55.76	\$55.76
Stage 1-Field	Coordinate location of underground utilities prior to Stage 1 drilling activities			

EA-Pay - costs were incurred after end of EA and have not been requested for reimbursement previously

Electronic Filing: Received, Clerk's Office 4/19/2017

Employee Name	Personnel Title	Hours	Rate* (\$)	Total Cost
Remediation Category	Task			
	Senior Project Manager	2.00	123.91	\$247.82
Stage 1-Field	Determine Stage 1 drilling plan			
	Senior Project Manager	3.00	123.91	\$371.73
Stage 1-Field	Coordinate/schedule Stage 1 Site Investigation			
	Geologist III	10.00	109.04	\$1,090.40
Stage 1-Field	Document Stage 1 Site Investigation, log borings & well construction, site mapping			
	Senior Project Manager	10.50	123.91	\$1,301.06
Stage 1-Field	Drilling oversight, survey well risers			
	Geologist III	4.50	109.04	\$490.68
Stage 1-Field	Develop Stage 1 monitoring wells			
	Geologist III	7.00	109.04	\$763.28
Stage 1-Field	Groundwater sample collection and sample prep			
	Senior Project Manager	4.00	123.91	\$495.64
Stage 1-Results	Compile field data, prepare site map revisions for Draftsman			
	Senior Scientist	6.00	105.33	\$631.98
Stage 1-Results	Transcribe Boring Logs and Well Completion Forms. Summarize analytical results			
	Senior Project Manager	15.50	123.91	\$1,920.61
SICR	Draft SICR			

Employee Name	Personnel Title	Hours	Rate* (\$)	Total Cost
Remediation Category	Task			
	Senior Draftperson/CAD	3.00	74.34	\$223.02
SICR	Prepare maps/figures included in SICR			
	Senior Prof. Geologist	2.00	136.31	\$272.62
SICR	Review/certify SICR			
	Senior Admin. Assistant	3.00	55.76	\$167.28
SICR	Prepare/submit SICR to O/O and IEPA			
	Senior Acct. Technician	6.00	68.14	\$408.84
Stage 1-Pay	Prepare Stage 1 Site Investigation cost summary			
	Senior Prof. Geologist	2.00	136.31	\$272.62
Stage 1-Pay	Review/certify Stage 1 Site Investigation cost summary			
	Senior Acct. Technician	6.00	68.14	\$408.84
Stage 1-Pay	Prepare Stage 1 Site Investigation reimbursement application			
	Senior Prof. Geologist	2.00	136.31	\$272.62
Stage 1-Pay	Review/certify Stage 1 Site Investigation reimbursement application			
	Senior Admin. Assistant	2.00	55.76	\$111.52
Stage 1-Pay	Prepare/submit Stage 1 Site Investigation reimbursement application to O/O and IEPA			

\*Refer to the applicable Maximum Payment Amounts document.

<b>Total of Consulting Personnel Costs</b>	<b>\$12,806.33</b>
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**Consultant's Materials Costs Form**

Materials, Equipment, or Field Purchase		Time or Amount Used	Rate (\$)	Unit	Total Cost
Remediation Category	Description/Justification				
PID		~1.00	135.00	Day	\$135.00
Stage 1-Field	Soil hydrocarbon screening				
Zip Lock Bags		11.00	.25	Each	\$2.75
Stage 1-Field	Soil hydrocarbon screening				
Latex Gloves		42.00	.40	Each	\$16.80
Stage 1-Field	Soil hydrocarbon screening (22), well development (10) & groundwater sampling (10)				
Water Level Indicator		2.00	30.00	Day	\$60.00
Stage 1-Field	Well development and groundwater sample collection (1 day each)				
Disposable Bailer		5.00	25.00	Each	\$125.00
Stage 1-Field	Well development and groundwater sample collection				
Survey Equipment		1.00	150.00	Day	\$150.00
Stage 1-Field	Well riser and groundwater survey				
Vehicle		1.00	178.00	Day	\$178.00
Stage 1-Field	Consultant personnel & equipment transportation - well installation				
Mileage		180.00	.58	Mile	\$104.40
Stage 1-Field	Consultant personnel and equipment transportation-well development & sampling				
Digital Camera		1.00	30.00	Day	\$30.00
Stage 1-Field	Monitoring well installation				

Electronic Filing: Received, Clerk's Office 4/19/2017

Materials, Equipment, or Field Purchase		Time or Amount Used	Rate (\$)	Unit	Total Cost
Remediation Category	Description/Justification				
Ice		2.00	4.03	Bag	\$8.06
Stage 1-Field	Sample preservation				
Copies		3.00	30.00	Each	\$90.00
SICR	Preparation of SICR for O/O (1 copy) and IEPA (2 copies)				
Copies		2.00	30.00	Each	\$60.00
Stage 1-Pay	Prep. Stage 1 Site Investigation reimbursement application for O/O & IEPA (1 copy each)				
<b>Total of Consultant Materials Costs</b>					<b>\$960.01</b>

### Owner/Operator and Licensed Professional Engineer/Geologist Budget Certification Form

I hereby certify that I intend to seek payment from the UST Fund for costs incurred while performing corrective action activities for Leaking UST incident 20141215. I further certify that the costs set forth in this budget are for necessary activities and are reasonable and accurate to the best of my knowledge and belief. I also certify that the costs included in this budget are not for corrective action in excess of the minimum requirements of 415 ILCS 5/57, no costs are included in this budget that are not described in the corrective action plan, and no costs exceed Subpart H: Maximum Payment Amounts, Appendix D Sample Handling and Analysis amounts, and Appendix E Personnel Titles and Rates of 35 Ill. Adm. Code 732 or 734. I further certify that costs ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 732.606 or 734.630 are not included in the budget proposal or amendment. Such ineligible costs include but are not limited to:

- Costs associated with ineligible tanks.
- Costs associated with site restoration (e.g., pump islands, canopies).
- Costs associated with utility replacement (e.g., sewers, electrical, telephone, etc.).
- Costs incurred prior to IEMA notification.
- Costs associated with planned tank pulls.
- Legal fees or costs.
- Costs incurred prior to July 28, 1989.
- Costs associated with installation of new USTs or the repair of existing USTs.

Owner/Operator: City of Benton Fire Department

Authorized Representative: Fred Kondritz

Title: Mayor

Signature: *Fred Kondritz*

Date: 2-4-16

Subscribed and sworn to before me the 4<sup>th</sup> day of February, 2016

*Brook Craig*  
(Notary Public)

Seal:



In addition, 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 the plan, budget, or report has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 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 5/44 and 5/17 of the Environmental Protection Act [415 ILCS 5/44 and 57.17].



L.P.E./L.P.G.: Kelly Tensmeyer

L.P.E./L.P.G. Seal:

L.P.E./L.P.G. Signature: *Kelly L Tensmeyer*

Date: 2-9-16

Subscribed and sworn to before me the 9<sup>th</sup> day of Feb, 2016

*Marvin Johnson*  
(Notary Public)

Seal:



The Illinois EPA is authorized to require this information under 415 ILCS 5/1. Disclosure of this information is required. Failure to do so may result in the delay or denial of any budget or payment requested hereunder.

APPENDIX F  
OSFM Eligibility & Deductible Determination



Office of the Illinois  
**State Fire Marshal**

*"Partnering With the Fire Service to Protect Illinois"*

CERTIFIED MAIL - RECEIPT REQUESTED #7014 1820 0001 3147 8780

February 17, 2015

City of Benton Fire Department  
107 N. Maple Street  
Benton, IL 62812

In Re: Facility No. 7-002566  
IEMA Incident No. 14-1215  
City of Benton Fire Department  
107 N. Maple Street  
Benton, Franklin Co., IL

Dear Applicant:

The Reimbursement Eligibility and Deductible Application received on January 2, 2015 for the above referenced occurrence has been reviewed. The following determinations have been made based upon this review.

It has been determined that you are eligible to seek payment of costs in excess of \$5,000. The costs must be in response to the occurrence referenced above and associated with the following tanks:

Eligible Tanks

Tank 1 500 gallon Diesel Fuel  
Tank 2 500 gallon Gasoline

You must contact the Illinois Environmental Protection Agency to receive a packet of Agency billing forms for submitting your request for payment.

An owner or operator is eligible to access the Underground Storage Tank Fund if the eligibility requirements are satisfied:

1. Neither the owner nor the operator is the United States Government,
2. The tank does not contain fuel which is exempt from the Motor Fuel Tax Law,
3. The costs were incurred as a result of a confirmed release of any of the following substances:

"Fuel", as defined in Section 1.19 of the Motor Fuel Tax Law

Aviation fuel

Heating oil

Kerosene

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Used oil, which has been refined from crude oil used in a motor vehicle, as defined in Section 1.3 of the Motor Fuel Tax Law.

4. The owner or operator registered the tank and paid all fees in accordance with the statutory and regulatory requirements of the Gasoline Storage Act.
5. The owner or operator notified the Illinois Emergency Management Agency of a confirmed release, the costs were incurred after the notification and the costs were a result of a release of a substance listed in this Section. Costs of corrective action or indemnification incurred before providing that notification shall not be eligible for payment.
6. The costs have not already been paid to the owner or operator under a private insurance policy, other written agreement, or court order.
7. The costs were associated with "corrective action".

This constitutes the final decision as it relates to your eligibility and deductibility. We reserve the right to change the deductible determination should additional information that would change the determination become available. An underground storage tank owner or operator may appeal the decision to the Illinois Pollution Control Board (Board), pursuant to Section 57.9 (c) (2). An owner or operator who seeks to appeal the decision shall file a petition for a hearing before the Board within 35 days of the date of mailing of the final decision, (35 Illinois Administrative Code 105.504(b)).

For information regarding the filing of an appeal, please contact:

Clerk  
Illinois Pollution Control Board  
State of Illinois Center  
100 West Randolph, Suite 11-500  
Chicago, Illinois 60601  
(312) 814-3620

If you have any questions, please contact our Office at (217) 785-1020 or (217) 785-5878.

Sincerely,



Deanne Lock  
Administrative Assistant  
Division of Petroleum and Chemical Safety

cc: IEPA  
Chase Environmental Group, Inc.

APPENDIX G  
Early Action Waste Manifest

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number 055055092	2. Page 1 of 1	3. Emergency Response Phone 800 856 6877	4. Waste Tracking Number 208920		
5. Generator's Name and Mailing Address 107 N Maple St Benton, IL 62812			Generator's Site Address (if different than mailing address)				
Generator's Phone: 618-439-6131							
6. Transporter 1 Company Name First American Recovery			U.S. EPA ID Number KYR 00049346				
7. Transporter 2 Company Name			U.S. EPA ID Number				
8. Designated Facility Name and Site Address First American Recovery 535 Throbold Ln Paducah, KY 42003			U.S. EPA ID Number				
Facility's Phone: 270-575-4801			KYR 00049346				
GENERATOR	9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
			No.	Type			
	1.	Oil/Water Mixture, N.O.S.	101	TI	800	G	
	2.						
	3.						
4.							
13. Special Handling Instructions and Additional Information							
Not A.P.T. Regulated							
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.							
Generator's/Offoror's Printed/Typed Name M. Williams			Signature 		Month	Day	
					Year		
INT'L	15. International Shipments		<input type="checkbox"/> Import to U.S.		<input type="checkbox"/> Export from U.S.		
	Transporter Signature (for exports only):		Port of entry/exit:		Date leaving U.S.:		
TRANSPORTER	16. Transporter Acknowledgment of Receipt of Materials						
	Transporter 1 Printed/Typed Name M. Simmons			Signature 		Month	Day
	Transporter 2 Printed/Typed Name			Signature		Month	Day
DESIGNATED FACILITY	17. Discrepancy						
	17a. Discrepancy Indication Space						
	<input type="checkbox"/> Quantity		<input type="checkbox"/> Type		<input type="checkbox"/> Residue		
					<input type="checkbox"/> Partial Rejection		
				<input type="checkbox"/> Full Rejection			
Manifest Reference Number:							
17b. Alternate Facility (or Generator)			U.S. EPA ID Number				
Facility's Phone:							
17c. Signature of Alternate Facility (or Generator)					Month	Day	
					Year		
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a							
Printed/Typed Name Nichole Reigle			Signature 		Month	Day	
					Year		