

Murphy Oil USA, Inc.

Further Site Investigation: Storm Sewer Inspection Work Plan

Store #7512

Facility ID #25387

Incident #202311515

30898 Old U.S. 20

Elkhart, IN 46514

July 2024





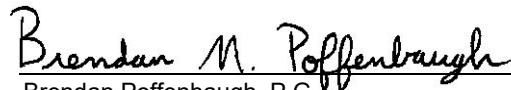
Storm Sewer Inspection Work Plan

Murphy Oil #7512
Facility ID #25387
Incident #202311515
30898 Old U.S. 20
Elkhart, IN 46517

Prepared for:
Murphy Oil USA, Inc.
Ryan Pederson
200 East Peach Street
PO Box 7300
El Dorado, AR 71730

Prepared by:
Groundwater & Environmental Services, Inc.
508 Thomson Park Drive
Cranberry Township, PA 16066

Date:
July 1, 2024


Brendan Poffenbaugh, P.G.
Project Geologist


Shannon Smith
Project Environmental Scientist/Project Manager



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Acronyms

BHUG	Blood Hound, LLC.
GES	Groundwater & Environmental Services, Inc.
FSI	Further Site Investigation
IDEM	Indiana Department of Environmental Management
Murphy	Murphy Oil USA, LLC.
PID	photoionization detector
Site	Murphy Store #7512 – 30898 Old U.S. 20, Elkhart, Indiana 46517

1 Introduction

On behalf of Murphy Oil USA, Inc. (Murphy), Groundwater & Environmental Services, Inc. (GES) has prepared this Further Site Investigation: Storm Sewer Inspection Work Plan (Work Plan). The goal of the project outlined in this Work Plan is to evaluate the condition and integrity of the buried storm sewer piping that drains the paved areas of Murphy station #7512, located at 30898 Old U.S. 20, Elkhart, IN 46517, Facility ID #25387 (Site), and depicted in **Figure 1 – Site Location Map**.

2 Background

On November 22, 2023, a release of approximately 100 gallons of regular unleaded gasoline occurred at the Site (Incident #202311515). An unknown volume of gasoline reached a storm sewer grate onsite (Sewer Grate 1) and flowed into and through approximately 196 feet of the buried corrugated sewer line. See **Figure 2 – Storm Sewer Route Map** for a depiction of fluid flow path through the storm sewer and the approximate extent of gasoline flow within the sewer. Fresh water was flushed through the storm sewer and the mixture of water and gasoline was collected with a vacuum truck. Readings collected with a photoionization detector (PID) before and after the flush indicated that gasoline collected within the storm sewer had been washed out by the fresh water. There were no indications that gasoline had migrated past the vacuum truck collection point at Sewer Grate 3 (**Figure 2**).

GES submitted two reports documenting the release and response actions to the Indiana Department of Environmental Management (IDEM): the Free Product Removal and 20-Day Abatement Report, dated December 12, 2023, and the Spill Recovery Response Report, dated December 22, 2023. In response to these reports, IDEM issued a Further Site Investigation (FSI) Request on February 15, 2024 (**Appendix A**). The FSI Request determined that additional delineation of the nature and extent of potential contamination around the storm sewer was necessary. In an email dated March 13, 2024, IDEM personnel confirmed that the use of a camera to confirm the integrity of the corrugated piping within the sewer system is an acceptable alternative to sampling (**Appendix B**).

The following Work Plan outlines the method that will be used to inspect the storm sewer.

3 Location

GES and Blood Hound LLC (BHUG) will mobilize to the Site to inspect the portion of the storm sewer that evidence indicates the gasoline migrated through. This area is depicted on Figure 2 and includes approximately 196 feet of buried corrugated pipe.

4 Equipment and Tools

BHUG will deploy a robotic camera into the storm sewer piping. Video will be recorded as the camera moves along the flow path of the release. The captured footage will be examined to



determine the integrity of the sewer piping. This examination will focus on identifying any cracks, holes, or other defects that may allow fluid within the storm sewer to leak out. Should conditions exist that prevent the use of a robotic camera, BHUG will deploy a push-pull sewer camera to conduct the inspection.

5 FSI Report

A summary report (FSI Report) will be prepared and submitted to IDEM on or before November 22, 2024. The report will include a description of and findings from the storm sewer camera inspection. If punctures, holes, cracks, or any other integrity deficiencies are discovered within the sewer piping, IDEM will be notified and additional site investigation activities will be discussed and completed at that time. Should additional site investigation activities be necessary, GES and Murphy anticipate that such activities would be completed and the full FSI Report submitted to IDEM on or before November 22, 2024.



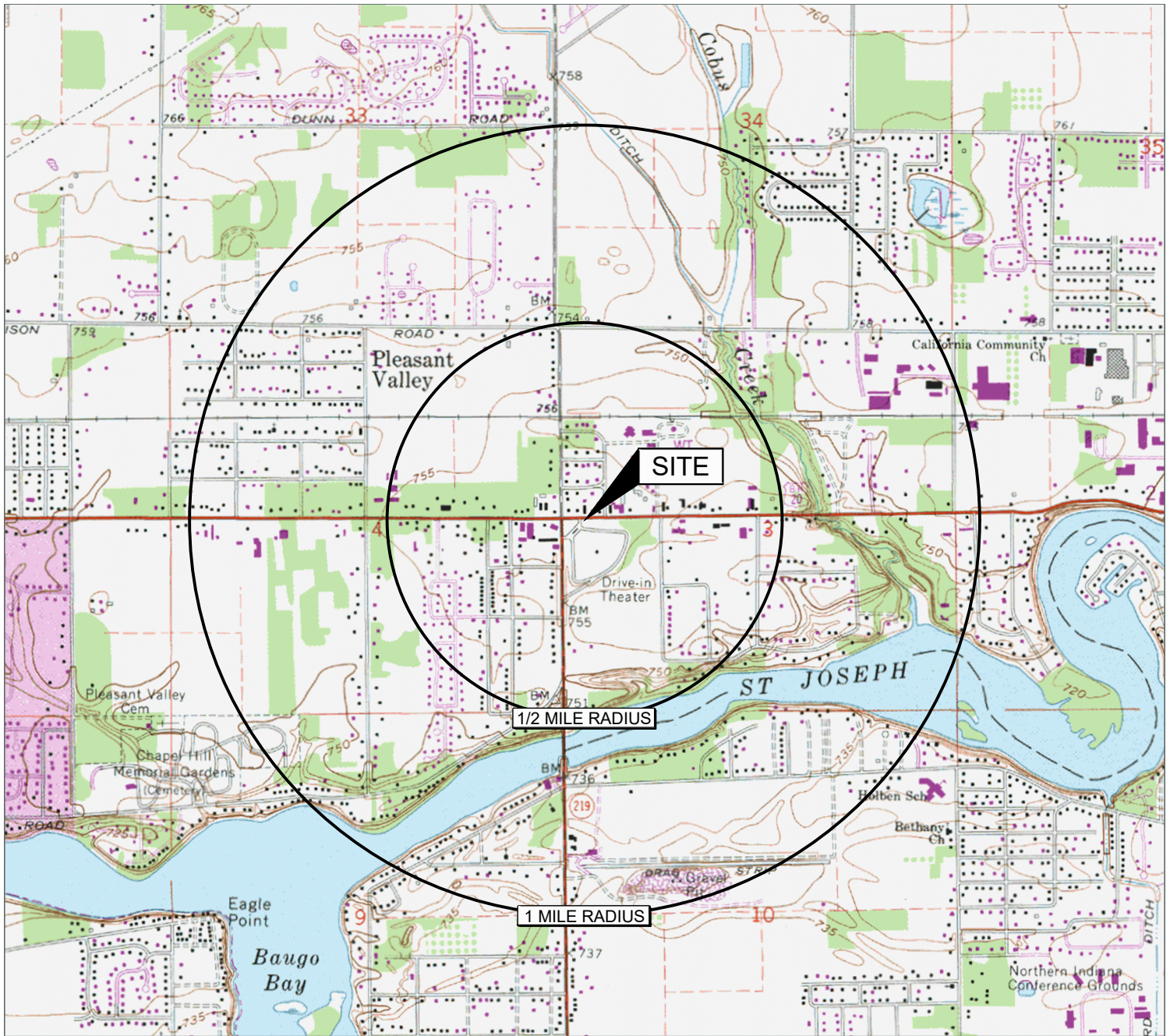
References

Groundwater and Environmental Services, Inc., Free Product Removal and 20-Day Abatement Report, Dated December 12, 2023.

Groundwater and Environmental Services, Inc., Spill Recovery Response Report, Dated December 22, 2023.



Figures



Source:
 USGS 7.5 Minute Series
 Topographic Quadrangle, 1994
 Osceola, Indiana
 Contour Interval = 5'
 Township - T37N
 Range - R4E
 Section - 3



Quadrangle Location
 LAT. 41° 41' 17.22" N
 LONG. 86° 03' 35.07" W
 (Approximate Site Coordinates)

Site Location Map

Murphy USA
 30898 Old US 20
 Elkart, Indiana

Drawn
 T.P.
 Designed
 B.P.
 Approved
 S.S.

Date
 12/06/23
 Figure
 1



Scale In Feet

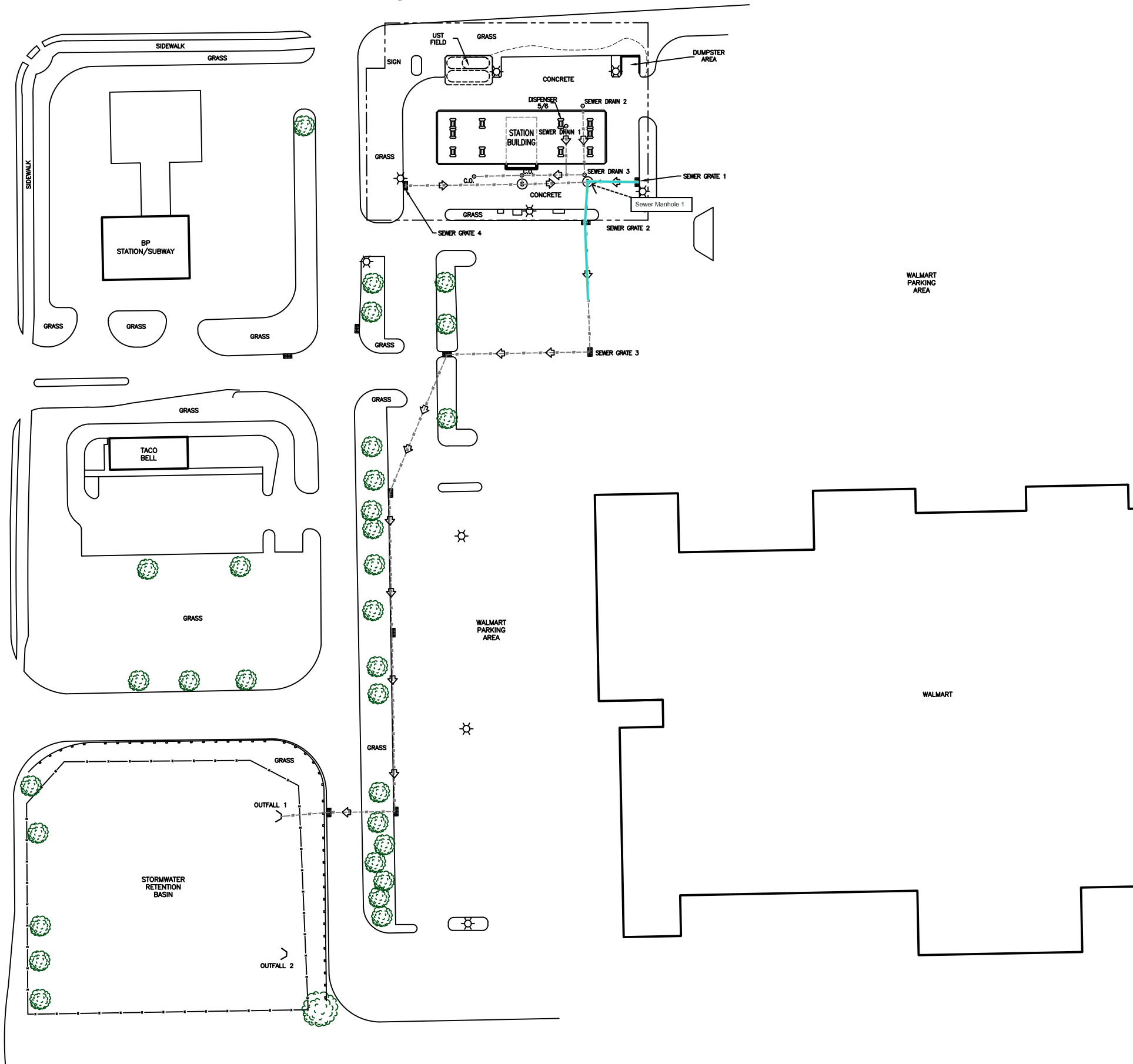


Groundwater & Environmental Services, Inc.

M:\Graphics\0700-Pittsburgh\MISC\Murphy USA\30898 Old US 20 Elkart Mich\30898 Old US 20 SM.dwg, B(expanded 100), T\Peters

W COUNTY LINE RD

McKINLEY HWY (OLD US 20)



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- ▣ STORM SEWER GRATE
- ☼ LIGHT POLE
- ⊙ SEWER MANHOLE
- C.O. CLEAN OUT/SEWER DRAIN
- ST — STORM SEWER LINE
- ◀ STORM SEWER FLOW DIRECTION
- ☐ PROXIMATE EXTENT OF GASOLINE FLOW IN STORM SEWER

Storm Sewer Route Map

Murphy USA
30898 Old US 20
Elkart, Indiana

Drawn
T.P.
Designed
B.P.
Approved
S.S.

Date
12/08/23
Figure
2



Scale In Feet



Groundwater & Environmental Services, Inc.



Appendix A



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

February 15, 2024

VIA ELECTRONIC MAIL

Mr. Ryan Pederson
Murphy Oil USA
200 E. Peach Street
El Dorado, AR 71730
ryan.pederson@murphyusa.com

Re: **Further Site Investigation Request**
Murphy USA 7512
30898 Old US Hwy 20
Elkhart, Indiana 46514
Elkhart County
Facility ID #25387
Incident #202311515

Dear Mr. Pederson:

IDEM staff reviewed the file pertaining to a release of petroleum product for the Murphy USA 7512 located at 30898 Old US Hwy 20. The following documents were reviewed:

- Free Product Removal and 20-Day Abatement Report, prepared by Groundwater and Environmental Services, Inc., dated December 2023
- Spill Recovery Response Report, prepared by Groundwater and Environmental Services, Inc., dated December 2023

As a result of the review, IDEM has determined that you must conduct a further site investigation (FSI) in order to fully delineate the nature and extent of contamination in accordance with applicable portions of 40 CFR Part 280¹ and IC 13-23-13-1.

¹ IDEM has incorporated the majority of the federal underground storage tank regulations of 40 Code Fed. Reg. (CFR) Part 280 via 329 Ind. Admin. Code 9-1-1. All CFR citations refer to the regulation as incorporated.



Visit on.IN.gov/survey or scan the QR code to provide feedback.

We appreciate your input!



Pursuant to 40 CFR 280.65, in order to determine the full extent and location of soils contaminated by the release and the presence and concentrations of dissolved product contamination in the groundwater, owners and operators must conduct investigation of the release, the release site, and the surrounding area possibly affected by the release if any of the following conditions exist:

1. There is evidence that groundwater wells have been affected by the release (e.g., as found during release confirmation or previous corrective action measures);
2. Free product is found to need recovery in compliance with 40 CFR 280.64;
3. There is evidence that contaminated soils may be in contact with groundwater (e.g., as found during conduct of the initial response measures or investigations required under 40 CFR 280.60 through 280.64); and
4. The implementing agency requests an investigation, based on the potential effects of contaminated soil or groundwater on nearby surface water and groundwater resources.

Releases requiring an FSI to complete site characterization will be given a deadline of 365 days from the date the release was confirmed to determine the full nature and extent of soil and groundwater contamination and submit documentation to IDEM. If delineation requires more than one mobilization and sampling event, the owner or operator should continue with delineation until the delineation process is completed and then submit a comprehensive FSI Report within the 365-day deadline set by IDEM. Interim report and work plan submittal and IDEM review is not required. However, IDEM advises that you receive project manager approval for an FSI work plan (entailing a one page summary of proposed work and a site map with proposed sampling locations) to assist with showing reasonableness and cost effectiveness for purposes of reimbursement from the Excess Liability Trust Fund (ELTF), if the site is or has been found to be eligible for such reimbursement. The IDEM project manager assigned to your site will be available to provide informal guidance via telephone, email, or on-site support during the step out process.

Listed below are the deficiencies which must be addressed in the FSI. You should refer to the Risk-based Closure Guide (R2, Waste #0046-R2) and the Petroleum Remediation Program Guide (PRPG, Waste-0082). These non-rule policy documents are available at www.in.gov/idem/tanks/2329.htm.

Specific Comments

1. The reports detail the emergency response actions and product recovery efforts, which appear thorough and appropriate. However, integrity of the plastic corrugated piping was not discussed and is a data gap regarding potential soil or groundwater contamination. In addition, there was a time gap between the initial response/product recovery efforts on November 22 and storm sewer flushing activities.

Based on the discussed response/product recovery efforts and the lack of observed infiltration from any of the storm sewer basins, the consultant

concluded they did not believe any product released infiltrated the soil to groundwater and requested a No Further Action determination for Incident #202311515 from IDEM. Based on the lack of information regarding integrity of the corrugated plastic pipe where product remained during the time gap between the initial response activities and flushing of the sewer, IDEM recommends a limited site investigation of the release area and sewer migration pathway.

Additional IDEM expectations

In order to facilitate complete site characterization within a year, IDEM requests that staff be notified of all investigative site work in a timely manner. Early staff involvement with the site investigation will assist in efforts to develop a complete conceptual site model within the year timeframe. Please inform the project manager via email or telephone (listed below) as field work dates for investigations are scheduled.

Conclusions

Soil and grab groundwater samples should be taken near the release area and sewer migration pathway. Clarification on if precipitation or other fluid-related activities affected the sewer system between November 22 and November 27 should be provided.

You must submit the FSI report to IDEM on or before November 22, 2024. All FSI reports must be submitted in the FSI Report Format and include an FSI Cover Sheet for IDEM to complete their review. The FSI Report Format and Cover Sheet are available on the IDEM website forms page at <http://www.in.gov/idem/5157.htm>.

IDEM is currently requesting Petroleum Remediation Section (PRS) correspondence, reports, and related documents under 15 MB be submitted electronically to: LeakingUST@IDEM.in.gov. Electronic submittal directly to the PRS email inbox will streamline the documents distribution and help facilitate quicker document review times. Paper copies and CDs are no longer necessary as previously required in OLQ Document Submittal Guidelines.

Please label the email and attached documents as directed below:

- Email Subject Line: REPORT NAME (ie. 1Q 2024 QMR, ISC, FSI, etc.)_FID (insert number)_LUST (insert number)_DATE (yyyymmdd)
- Document/File Name: REPORT NAME (ie. 1Q 2024 QMR, ISC, FSI, etc.)_FID (insert number)_LUST (insert number)_DATE (yyyymmdd)

For more information regarding document and data submittal guidelines, sampling and analysis requirements or technical information, visit the LUST Home page at www.in.gov/idem/tanks/2333.htm or contact the site project manager.

Failure to submit this information within the specified timeframe may result in a referral to IDEM Enforcement. If you anticipate seeking reimbursement for your remediation costs, please contact the ELTF Section at (317) 234-0990.

If you have any questions, please contact me at (317) 234-0154 or toll free at (800) 451-6027. I can also be reached at: LWelch@idem.IN.gov.

Sincerely,

A handwritten signature in cursive script that reads "Lauren Welch".

Lauren Welch
Environmental Project Manager
Petroleum Remediation Section
Petroleum Branch
Office of Land Quality

ecopy:IDEM File
Shannon Smith, Groundwater and Environmental Services, Inc.



Appendix B

Brendan Poffenbaugh

From: Welch, Lauren <LWelch@idem.IN.gov>
Sent: Wednesday, March 13, 2024 2:27 PM
To: Shannon Smith
Subject: RE: Facility ID #25387, Incident #202311515, Murphy Station #7512, Elkhart, IN

Follow Up Flag: Follow up
Flag Status: Flagged

Stop – Look – Think – Decide: This e-mail came from outside of GES. Adhere to the guidelines of our ongoing GES cybersecurity awareness and training presentations. Be Aware – Be Smart

Good afternoon, Shannon,

The use of a camera to confirm the integrity of the corrugated piping within the sewer system is an acceptable alternative to sampling. Depending on the results of the investigation with the camera borings may still be needed.

Let me know if you have any other questions.

Thanks,



Indiana Department of
Environmental Management

Lauren Welch

Environmental Manager

• (317) 234-0154 • lwelch@idem.IN.gov

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From: Shannon Smith <SSmith@gesonline.com>
Sent: Tuesday, March 12, 2024 2:25 PM
To: Welch, Lauren <LWelch@idem.IN.gov>
Subject: RE: Facility ID #25387, Incident #202311515, Murphy Station #7512, Elkhart, IN

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That sounds great, thank you!

Shannon Smith
Project Manager

Office: 800.267.2549 ext. 3614

Mobile: 412-287-8380

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Safety: Plan, Prevent, Protect

From: Welch, Lauren <LWelch@idem.IN.gov>

Sent: Tuesday, March 12, 2024 2:10 PM

To: Shannon Smith <SSmith@gesonline.com>

Subject: RE: Facility ID #25387, Incident #202311515, Murphy Station #7512, Elkhart, IN

Stop – Look – Think – Decide: This e-mail came from outside of GES. Adhere to the guidelines of our ongoing GES cybersecurity awareness and training presentations. Be Aware – Be Smart

Hi Shannon,

Let me get with my technical staff and see what they say about using cameras as an alternative and I will get back to you. Hopefully by the end of the week.

Thanks,



Indiana Department of
Environmental Management

Lauren Welch

Environmental Manager

• (317) 234-0154 • lwelch@idem.IN.gov

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Help us improve!

IDEM values your feedback

From: Shannon Smith <SSmith@gesonline.com>

Sent: Tuesday, March 12, 2024 1:47 PM

To: Welch, Lauren <LWelch@idem.IN.gov>

Subject: Facility ID #25387, Incident #202311515, Murphy Station #7512, Elkhart, IN

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Hello Lauren,

GES and Murphy have reviewed the Further Site Investigation Request for Facility ID #25387, Incident #202311515 at Murphy Station #7512, and after discussing we had a few questions that I'm hoping you can answer for us before we move forward.

From reading the FSI request letter, it appears as though the main concern appears to be the integrity of the corrugated piping within the sewer system. The FSI indicates that IDEM would expect soil and groundwater samples to be taken near the release area and sewer pathway in order to confirm no release to the environment from the sewer piping occurred.

- Would use of a camera to confirm the integrity of the corrugated piping within the sewer system be an acceptable alternative to soil and groundwater sampling if we are able to find a camera with picture quality good enough to identify any potential cracks, etc. in the piping?
 - If not acceptable as an alternative would this be an acceptable means to identify potential areas of the piping of questionable integrity to focus where to complete soil and groundwater sampling activities?
- If a camera is not a reasonable alternative or means to limit scope of where soil and groundwater samples are needed, can you provide some additional clarification as to the number and location of samples? Would these need to go the entire length of the sewer system from onsite to the retention area on the Walmart property? Or could our investigation focus on on-site areas closest to the release first, and if those areas are deemed to not have impacts would further investigation further down the sewer system still be needed?

Please let me know if you would prefer to discuss the above on a call and we could schedule a time to talk. Although not required, we are planning on submitting a FSI work plan for your/IDEM's review prior to beginning any work, so that will be out next step once you've provided guidance on the items above so that we have a better idea of what needs to go into our work plan.

Thank you,
Shannon

Shannon Smith

Project Manager

Office: 800.267.2549 ext. 3614

Mobile: 412-287-8380

SSmith@GESonline.com

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Cranberry Township, PA 16066

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