East End Laundry and Crystal Coin Laundry

302 E Main Street, Peru, Miami County SCP Site #0001181

RM record



Indiana Department of Environmental Management RM Record

Description Incident # 107496

Received By: Keller, Joshua

Received Date: 06/08/2023 10:35 am

Incident Description: VRP referral. VRP Site (Square D, Site #6211202). Additional off-site sources contributing to

the groundwater contaminant plume. Former dry cleaner(s) located directly across the street.

Incident Type: Complaint-Other Regulatory Program: State Cleanup

Incident Status: Closed

Location

Location Description: Former Dry Cleaner (Crystal Coin and East End Laundry)

302 East Main Street Peru, Indiana 46970

County: Miami

Reporter

Jource Linkly

Source Type: Agency Interest

Telecom: Email address 1 ncday@idem.in.gov

Reporter

Reporter Type: Consultant/Contractor

Name: Nadine Weinberg

Title: Partner in Charge

Organization: Environmental Resources Management (ERM)

Address 1: 8425 Woodfield Crossing Boulevard, Suite 560-W

Municipality: Indianapolis

State: IN

Zip Code: 46204

Telecom: Business phone number 1 (317) 706-2000

Inner Agency Correspondence

From: CHESTERSON, DANIEL
To: Keller, Joshua

Cc: Day, Chelsea; HOLLAND, BILL; Davis, Kevin

Subject: FW: Site Referral 5/11/2023 - Peru drycleaner (Crystal Coin & East End Laundry - 302 E. Main St.)

Date: Friday, May 12, 2023 12:17:27 PM

Attachments: Referral Form May 2023.doc

imaqe001.pnq imaqe002.pnq imaqe003.pnq imaqe004.pnq imaqe005.pnq imaqe006.pnq imaqe007.pnq

Josh – Off-site contamination was found during an investigation at the Square D VRP site in Peru. PCE has been detected in groundwater in a boring (APS-104) at various depths (444 ppb [13 ft], 1,500 ppb [18 ft], 2,070 ppb [21 ft] and 80 ppb [25 ft]). Other VOCs were also detected including TCE, vinyl chloride, and cis-1,2-DCE at levels exceeding the IDEM RGW SL. There is a former drycleaner (Crystal Coin [1962-75] and East End laundry [1977-90]) located at 302 E. Main St. which is just essentially across the street from the boring location.

The site is not located within a WHPA. However, there are numerous residences located in this area and VI could be an issue.

The Site Investigation Program refers this site to the State Cleanup Program.

TEMPO360 Master AI #: Needed (the former drycleaning site/address is not in TEMPO360 – it is in the SiteSeer database).

Thanks,

Dan

Miami County, IN

306 E MAIN St, PERU, IN 46970 52-08-27-401-392.000-016

Site address and Occupant

- The Site is currently addressed:
 - 306 E. Main Street
- Previous address
 - 302 E Main Street
- Previous occupants
 - Crystal Coin Laundry 1962 1975
 - East End Laundry 1977- 1990



Parcel Information

Parcel Number: 52-08-27-401-392.000-016

Alt Parcel Number: 021-44244-00

Property Address: 306 E MAIN S

PERU, IN 46970

Neighborhood: East End Business District

Property Class: Other Retail Structures

Owner Name: Evenson, Bridgette M

Owner Address: 288 E Main St

Legal Description: 021-44244-00 GODFROY ADD; 00-00-00;

00 LOT 225 42 092 44000

Taxing District

Township: PERU TOWNSHIP
Corporation: PERU COMMUNITY

Land Description

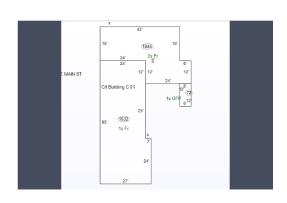
| Acreage | Dimension |
|---------|-----------|
| None | 66x93 |
| None | 66x39 |
| | None |

Street View



PRC and Past owners listed

- The Site was sold on August 18 to the current flower shop tenant
- Dry cleaning operations 1962- 1990





Parcel Information

Nice, Larry W & Toni Owner Name 638 E 5th St Peru, In 46970 Owner Address Parcel Number 52-08-27-401-392.000-016 021-44244-00 Alt Parcel Number

Property Address 306 E Main St, Peru, In 46970

Property Class Code

Property Class

Other Retail Structures

Neighborhood East End Business District, 15903-016

Legal Description 021-44244-00 GODFROY ADD; 00-00-00; .00 LOT 225 42 092 44000

Taxing District

Township Peru Township Corporation Peru Community **Taxing District Name** Peru City-peru Township

Taxing District Number

| Transfer of Ownership | | | | | | | | |
|-----------------------|---|-------|-----------|---------------|--------------|--|--|--|
| Date | Name | Buyer | Document | Deed Type | Sale Price | | | |
| 1900-01-01 | Fletcher, Harold | | | Wd | | | | |
| 2006-01-23 | Bitner, Rebecca A Harrison, Ramon | | 06 - 0281 | Qc | | | | |
| 2008-02-14 | Bitner, Rebecca A Harrison, Ramon | | 08 - 0693 | Wd | \$50,000.00 | | | |
| 2008-02-20 | Harmon, Bridget M, Annamarie | te | 08 - 0753 | Wd | \$50,000.00 | | | |
| 2019-09-23 | Harmon-smith, Bridgette M & Jeremy Gouvan | | 19 - 3887 | Qu | | | | |
| 2022-11-02 | Evenson, Bridget M | tte | 22 - 4944 | Qu | | | | |
| 2023-08-18 | Nice, Larry W & 1 | Toni | | Warranty Deed | \$145,000.00 | | | |
| | | | | | | | | |

| Summary of Imp | provements | | | | |
|--------------------|------------|-----------|-------------------|----------------|-------|
| Buildings | Grade | Condition | Construction Year | Effective Year | Area |
| Utility Shed R 01 | С | F | 1970 | 1970 | 64 |
| Single-family R 01 | D+2 | G | 1900 | 1942 | 1,553 |
| C/i Building C 01 | D | А | 1920 | 1920 | 3,720 |

Rebecca Bitner



Current Address

718 E Gano St Kokomo, IN 46901

2 Bed | 1 Bath | 672 Sq Ft | Built 1953 Howard County (May 1989 - Aug 2023)



 Rebecca is still living, probably elderly but was an owner between the dry cleaning time period and the current time

IN Biz

- No entries in the business directory for East End Laundry or Crystal Coin at the Site location
- None for Harold Fletcher first listed owner of the Site
- No entries for the Site addresses
- No entries for the current and previous owners
- Current occupant is a flower shop and possibly a residential apartment; business owner and property owner are different people

Dry Cleaners database

| East End Laundry | 302 E Main St | Peru | Subtype Not Recorded | 1977 Polk City Directory |
|----------------------|---------------|------|----------------------|--------------------------|
| East End Laundry | 302 E Main St | Peru | Subtype Not Recorded | 1979 Polk City Directory |
| East End Laundry | 302 E Main St | Peru | Subtype Not Recorded | 1981 Polk City Directory |
| East End Laundry | 302 E Main St | Peru | Subtype Not Recorded | 1983 Polk City Directory |
| East End Laundry | 302 E Main St | Peru | Subtype Not Recorded | 1984 Polk City Directory |
| East End Laundry | 302 E Main St | Peru | Subtype Not Recorded | 1987 Polk City Directory |
| East End Laundry | 302 E Main St | Peru | Subtype Not Recorded | 1990 Polk City Directory |
| Crystal Coin Laundry | 302 E Main St | Peru | Subtype Not Recorded | 1962 Polk City Directory |
| Crystal Coin Laundry | 302 E Main St | Peru | Subtype Not Recorded | 1969 Polk City Directory |
| Crystal Coin Laundry | 302 E Main St | Peru | Subtype Not Recorded | 1975 Polk City Directory |

Current occupant

Articles of incorporation filed this year on 3/6/2023



Business Details

Business Name: PERU'S HOMETOWN CREATIONS, LLC

Entity Type: Domestic Limited Liability Company

Creation Date: 03/06/2023

Principal Office Address: 300 E. Main St., Peru, IN, 46970, USA

Jurisdiction of Formation: Indiana



JIN.gov

Business ID: 202303061670103

Business Status: Active

Inactive Date:

Expiration Date: Perpetual

Business Entity Report Due Date: 03/31/2025

Years Due:

Governing Person Information

| Title | Name | Address |
|--------|--------------|--------------------------------------|
| Member | Toni M. Nice | 638 E. 5th St., Peru, IN, 46970, USA |

Page 1 of 1, records 1 to 1 of 1

Registered Agent Information

Type: Individual
Name: Toni M. Nice

Address: 638 E. 5th St., Peru, IN, 46970, USA

Back

Return to Search

Owner is deceased: Harold Fletcher – transfers property to

Jan. 6, 1920 - Jan. 9, 2006

PERU - Harold E. Fletcher, 86, of Peru and formerly of Kokomo, died at 5 a.m. Monday, Jan. 9, 2006, at Northwood Village Health Care Center in Kokomo.

He was born Jan. 6, 1920, in Forest, the son of Thomas Dayton and Iva (Baker) Fletcher. On May 4, 1946, he married Ruth E. Chism, in Peru, who preceded him in death July 26, 1996.

He was a business man and had owned Fletcher Grocery, Victory Dinner and Kosan Lunch restaurants, Ruth's Follies Resort on Lake Shaffer and the East End Laundromat in Peru.

He graduated from Kokomo High School in 1940.

He served in the Army in World War II, in Germany. He was a prisoner of war and received two Bronze Stars, a Purple Heart and many service ribbons.

He was an avid sports fan and enjoyed watching the Pacers, Indiana University basketball and football and the St. Louis Cardinals on television.

Surviving are two step-daughters, Mona Harrison and husband Tom, Kokomo, and Becky Bitner, Kokomo; four step-grandchildren, Matt Harrison and wife Patti, Kokomo, Guy Harrison and wife Nancy, Ft. Myers, Fla., Doug Bitner and wife Jancie, Kokomo, and Crystal Dyar, Kokomo; seven great-grandchildren, Amie McFadden, Jason McFadden, Zachary Harrison, Alec Harrison, Nicole Harrison, Morgan Dyar and Katie Klein; a brother and sister-in-law, Tom Doyal and Ruth Fletcher, Largo, Fla., and three sisters, Norma Jean Mann and husband Delbert, Kokomo, Edna Canard and husband Luther, Kokomo, and Arlene McNally, of Henderson, Nev.; and a brother-in-law and sister-in-law, Bill and Roma Chism of Galveston.

He was preceded in death by his wife, parents, a brother and two sisters.

Services are 1 p.m. Thursday at Ellers Webster Street Mortuary, 3400 S. Webster St., with burial to follow at Crown Point Cemetery. Rev. Ted Dudzinski will officiate. Graveside military service will be conducted by the U.S. Army and VFW Military Rites Team. Calling will be from 4 to 8 p.m. Wednesday at the mortuary.

Square D Investigations- excerpt from Comment Letter #83488398

 TCE in shallow groundwater appear to be migrating east-southeast, and RRCs are adequately characterized to the north, northeast, and southwest of the site. Additional characterization of the groundwater plume is needed downgradient (southeast of MW-32S) of the site.

As presented in SIRA #3, the overburden groundwater delineation is complete. IDEM's comment letter dated 6 June 2023 states that "off-site dissolved RRCs in the overburden appear adequately characterized. Quarterly monitoring is required to verify adequate characterization". The quarterly groundwater monitoring program was briefly discussed with you during a call on 13 June 2023 and will be summarized in VRIPA #5. ERM is anticipating that the quarterly groundwater monitoring will commence in July 2023.

Response to IDEM's 6 June 2023 Comment Letter

1. Off-site dissolved RRCs in the overburden appear adequately characterized. Quarterly monitoring is required to verify adequate characterization.

Agreed.

Further investigation of RRCs in bedrock was proposed and is appropriate.

Agreed. Additional bedrock characterization is being planned for July 2023. The scope of work and schedule will be communicated to IDEM once finalized.

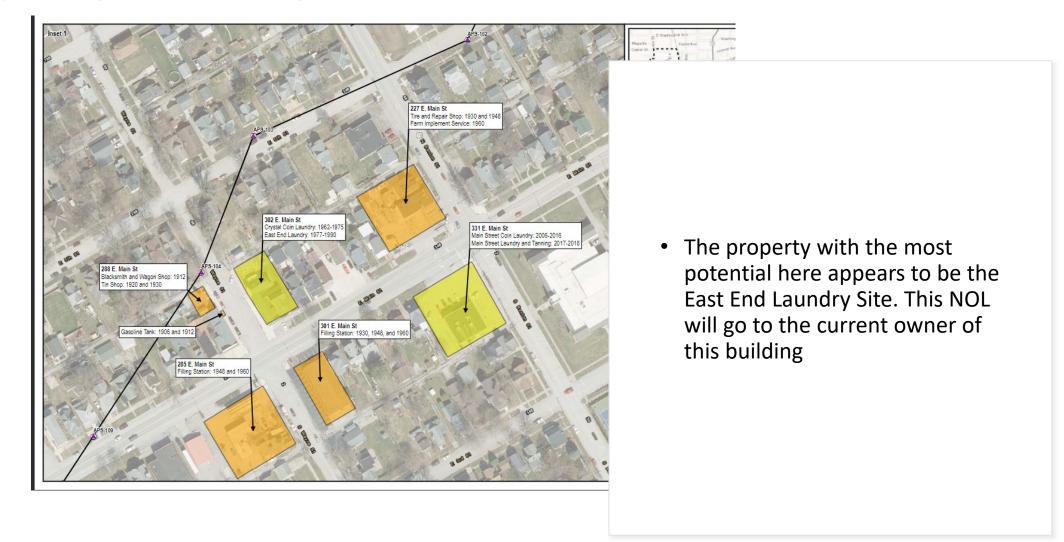
 VRP has referred the identified potential off-site sources near APS-104 to the State Cleanup Program. VRP concurs that the detected VOCs appear unrelated to this site and likely originate from a source near the boring.

Agreed.

Square D Investigations – PRP suggestion for additional contributing source #83473102

Several potential off-Site sources unrelated to the former Square D operations were identified near APS-104 and are depicted on Figure 9. ERM reviewed information obtained from Lightbox Environmental Data Resources (EDR) and IDEM's Dry Cleaner and Laundry Data Set for potential off-Site sources. Copies of the EDR reports are provided in Attachment C. ERM identified potential off-Site VOC sources near APS-104 including a former laundry operation at 301 East Main Street, which is across the street from APS-104.

Map depicting EDR findings and Transect D (includes APS -4)



Groundwater flow — east southeast

1. APPROACH

This work plan describes installation of a pilot-scale permeable reactive barrier (PRB) for overburden groundwater flowing east-southeastward from the Former Square D Plant 1 (Site) in Peru, Indiana (Figure 1). The PRB will be installed using injections that will target the overburden saturated zone, which is anticipated to start approximately 11 to 15 feet below ground surface (ft bgs) and extend downward to approximately 24 to 31 ft bgs. The PRB pilot test will target an approximately 310-foot length (southwest to northeast) perpendicular to groundwater flow with relatively higher concentrations off-site of release-related chemicals (RRC), including trichloroethene (TCE) and related chlorinated volatile organic compounds (cVOCs) (Figure 2).

Table 1 - Waterloo^{APS} Groundwater Analytical Results Former Square D 252 North Tippecanoe Street, Peru, IN

| | | Location ID | APS-101 | APS-101 | APS-101 | APS-102 | APS-102 | APS-102 | APS-103 | APS-103 | APS-103 | APS-103 |
|----------------------------|------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | Sample Date | 3/23/2023 | 3/23/2023 | 3/23/2023 | 3/20/2023 | 3/20/2023 | 3/20/2023 | 3/21/2023 | 3/21/2023 | 3/21/2023 | 3/21/2023 |
| | | Sample Type | N | N | N | N | N | N | N | N | N | N |
| | | Sample Depth | 13.0-13.0 ft | 18.0-18.0 ft | 22.4-22.4 ft | 11.8-11.8 ft | 16.8-16.8 ft | 17.0-17.0 ft | 16.3-16.3 ft | 18.3-18.3 ft | 19.5-19.5 ft | 33.6-33.6 ft |
| Analyte | Unit | IDEM RGW SL 2023 | | | | | | | | | | |
| Volatile Organic Compounds | | | | | | | | | | | | |
| Tetrachloroethene | μg/L | 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Trichloroethene | μg/L | 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| cis-1,2-Dichloroethene | μg/L | 70 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| trans-1,2-Dichloroethene | μg/L | 100 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Vinyl chloride | μg/L | 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| 1,1,1-Trichloroethane | μg/L | 200 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| 1,1-Dichloroethane | μg/L | 30 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| 1,1-Dichloroethene | μg/L | 7 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Benzene | μg/L | 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Toluene | μg/L | 1,000 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Ethylbenzene | μg/L | 700 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Xylenes, total | μg/L | 10,000 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| m,p-Xylenes | μg/L | NS | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| o-Xylene | μg/L | NS | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Carbon tetrachloride | μg/L | 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Chlorobenzene | μg/L | 100 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Chloroform | μg/L | 80 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Naphthalene | μg/L | 1 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 |

Notes: N = Normal

FD = Field Duplicate

NS = No standard, xylene isomers regulated as total xylenes

J = Estimated concentration below laboratory reporting limit

g = Estimated contential and below laboratory reporting limit µg/L = micrograms per liter < = Compound not detected above the laboratory reporting detection limit as shown Bold = Analyte was detected above laboratory reporting limit. IDEM RGW SL 2023 = IDEM Residential Long Term Groundwater Screening Level (IDEM R2 - March 2023)

Concentrations highlighted in purple exceed the Residential Long Term Groundwater Screening Level (IDEM R2 - March 2023)

Table 1 - Waterloo^{APS} Groundwater Analytical Results Former Square D 252 North Tippecanoe Street, Peru, IN

| | | Location ID | APS-103 | APS-103 | APS-104 | APS-104 | APS-104 | APS-104 | APS-104 | APS-105 | APS-105 | APS-105 |
|----------------------------|------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | Sample Date | 3/21/2023 | 3/21/2023 | 3/22/2023 | 3/22/2023 | 3/22/2023 | 3/22/2023 | 3/22/2023 | 3/23/2023 | 3/23/2023 | 3/23/2023 |
| | | Sample Type | N | N | FD | N | N | N | N | N | N | N |
| | | Sample Depth | 36.9-36.9 ft | 40.3-40.3 ft | 13.0-13.0 ft | 13.0-13.0 ft | 18.0-18.0 ft | 21.4-21.4 ft | 24.9-24.9 ft | 11.5-11.5 ft | 22.0-22.0 ft | 27.0-27.0 ft |
| Analyte | Unit | IDEM RGW SL 2023 | | | | | | | | | | |
| Volatile Organic Compounds | | | | | | | | | | | | |
| Tetrachloroethene | μg/L | 5 | < 5 | < 5 | 438 | 444 | 1,500 | 2,070 | 80.3 | < 5 | < 5 | < 5 |
| Trichloroethene | μg/L | 5 | < 5 | 0.57 J | 11.3 | 12.1 | 57.5 | 1,420 | 139 | < 5 | < 5 | < 5 |
| cis-1,2-Dichloroethene | μg/L | 70 | < 5 | 7.3 | 9.3 | 9.6 | 29.1 | 2,060 | 1,230 | < 5 | < 5 | < 5 |
| trans-1,2-Dichloroethene | μg/L | 100 | < 5 | < 5 | < 5 | < 5 | < 5 | 14.6 | 5.5 | < 5 | < 5 | < 5 |
| Vinyl chloride | μg/L | 2 | < 2 | < 2 | < 2 | < 2 | < 2 | 4.1 | 38.9 | < 2 | < 2 | < 2 |
| 1,1,1-Trichloroethane | μg/L | 200 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| 1,1-Dichloroethane | μg/L | 30 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| 1,1-Dichloroethene | μg/L | 7 | < 5 | < 5 | < 5 | < 5 | < 5 | 5.7 | 3.1 J | < 5 | < 5 | < 5 |
| Benzene | μg/L | 5 | < 5 | < 5 | < 5 | < 5 | < 5 | 0.94 J | 2.6 J | < 5 | < 5 | < 5 |
| Toluene | μg/L | 1,000 | < 5 | < 5 | < 5 | < 5 | < 5 | 0.30 J | < 5 | < 5 | < 5 | < 5 |
| Ethylbenzene | μg/L | 700 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Xylenes, total | μg/L | 10,000 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| m,p-Xylenes | μg/L | NS | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| o-Xylene | μg/L | NS | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Carbon tetrachloride | μg/L | 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Chlorobenzene | μg/L | 100 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Chloroform | μg/L | 80 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Naphthalene | µg/L | 1 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 | < 1.2 |

Notes:

N = Normal

FD = Field Duplicate

NS = No standard, xylene isomers regulated as total xylenes

J = Estimated concentration below laboratory reporting limit

μg/L = micrograms per liter

< = Compound not detected above the laboratory reporting detection limit as shown

Bold = Analyte was detected above laboratory reporting limit.

IDEM RGW SL 2023 = IDEM Residential Long Term Groundwater Screening Level (IDEM

R2 - March 2023)

Concentrations highlighted in purple exceed the Residential Long Term Groundwater Screening Level (IDEM R2 - March 2023)

Square D Investigation continued



CASCADE HIGH RESOLUTION SITE CHARACTERIZATION

SOP DEVIATIONS SUMMARY TABLE

The table below provides a summary of deviations from the SOP and short explanations of those instances, where appropriate. Not all locations contained deviations from the SOP.

| Location | Sample Depth (feet) | Parameters That Did Not Meet Stabilization Criteria | Comments |
|----------|-------------------------------|--|--|
| APS101 | -18.0, -22.4 | ORP | Samples collected prior to full parameter stabilization due to reaching established maximum purge volume. |
| APS102 | -16.8, -17.0 | ORP | Samples collected prior to full parameter stabilization due to reaching established maximum purge volume. |
| APS103 | -18.3, -33.7, -36.9, -40.3 | ORP | Samples collected prior to full parameter stabilization due to reaching established maximum purge volume. |
| APS104 | -21.4, -24.9 | ORP | Samples collected prior to full parameter stabilization due to reaching established maximum purge volume. |
| APS105 | -22.0 | ORP | Samples collected prior to full parameter stabilization due to reaching established |
| | -27.9 | DO, ORP | maximum purge volume. |
| APS106 | -22.4, | ORP | Samples collected prior to full parameter stabilization due to reaching established |
| | -23.4 | SC, DO, Ph, ORP | maximum purge volume |
| | -24.3, -26.0, -27.5, | ORP | |
| | -32.0, -37.0 | | |
| APS107 | -40.6 | ORP | Sample collected prior to full parameter stabilization due to reaching established maximum purge volume |
| APS108 | -32.1 | ORP | Sample collected prior to full parameter stabilization due to reaching established maximum purge volume. |
| APS109 | -14.1 | SC, DO, Ph, ORP | Sample collected prior to full parameter stabilization due to reaching established maximum purge volume. |

Square D Investigation continued

CASCADE HIGH RESOLUTION SITE CHARACTERIZATION

RESULTS AND RECOMMENDATIONS

This section provides a summary of the data collected during this investigation program, Cascade's recommendations for updating the conceptual site model, and suggestions for next steps in the site management process, including remediation, if appropriate.

Data Summary

Index of Hydraulic Conductivity logs were generated across three transects around North Benton St. to the East of the site, identified here as West of N. Benton St., Southwest of N. Benton St., and East of N. Benton St.

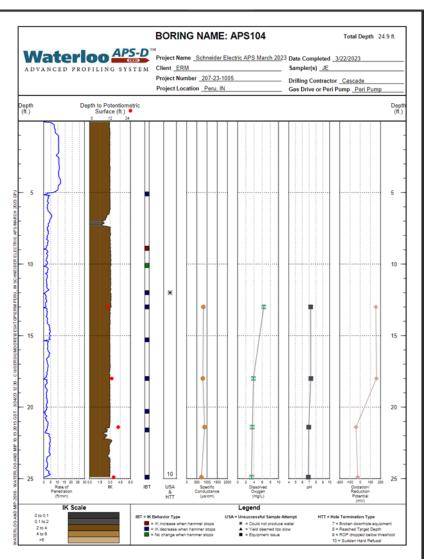
The West of N. Benton St. transect consists of profiles APS-105, APS-106, APS-107, and APS-108. APS-105, APS-106, APS-107 indicate a similar stratigraphy to one another with a zone of homogenous high lk from ground surface to an average of 12' bgs where a sharp transition to an impermeable soil occurs. APS-105 and APS-106 transition back into a zone of higher lk around 22' bgs for the remainder of the boring with some intermixing on APS-106. APS-107 exhibits consistently impermeable soils after 12' bgs, excluding a few intermixing lenses, one thin 1' zone at 16' bgs of higher lk, and at refusal 40.6' bgs. APS-108 is a homogenous and consistent boring with meager variation throughout. All borings on this transect were advanced until either rate of penetration dropped below the acceptable threshold or encountered sudden hard refusal, with an average depth of 35.4' bgs, and included the collection of 20 total samples.

The Southwest of N. Benton St. transect contains profiles APS-103, APS-104, and APS-109. APS-103 has alternating zones of high lk to intermixing to no flow throughout the profiles. The most considerable zone is identified as 13' of impermeable soil from 20' to 33' bgs. APS-104 and APS-109 are comprised of an overall homogenous high lk unit. All borings on this transect were advanced until encountering sudden hard refusal, with an average depth of 26.7' bgs, and included the collection of 10 total samples.

Finally, the East of N. Benton St. transect includes the remaining four profiles, APS-101, APS-102, APS-110, and APS-111. The profiles on this transect consist largely of one homogenous unit with little variation. APS-101 is the exception with a 7' zone starting at 8' bgs of little to no flow, intermixing with lenses of moderate to low lk. All borings on this transect were advanced until encountering sudden hard refusal, with an average depth of 23.6' bgs, and included the collection of 15 total samples.

This interpretation is limited by the absence of the laboratory analytical data associated with the samples collected during this program.

A full review of the physicochemical parameters data set was not conducted as part of this scope of work. To properly use these data, it is recommended that the results of the laboratory analyses are reviewed for anomalies and trends, and these physicochemical parameters are compared to those collected elsewhere at the site during previous investigations.



Residential occupants in the vicinity of APS-4

