



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

618-346-5120
618-346-5155 *fax*

July 24, 2023

Shell Oil Products US
Attn: Leroy Bealer
128 E. Center St.
Nazareth, PA 18064

Re: BOL # 1191150002 — Madison County
Roxana/Equilon Enterprises LLC dba Shell Oil Products US
Compliance File

Dear Leroy Bealer:

On June 21, 2023, representatives of the Illinois Environmental Protection Agency evaluated the above-referenced site. The purpose of this evaluation was to determine the site's compliance with the solid and hazardous waste provisions of the Environmental Protection Act, Title 35 Illinois Administrative Code Subtitles F and G regulations, and any permits issued thereunder, as applicable.

For your information, a copy of the evaluation report is enclosed. Please contact me at **(618) 346-5136** if you have questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris N. Cahnovsky".

Chris N. Cahnovsky, CHMM
Southern Regional Manager
Field Operations Section
Bureau of Land

Enclosure

cc: Bureau of Land File
Collinsville Regional File

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000
595 S. State Street, Elgin, IL 60123 (847) 608-3131

2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

Illinois Environmental Protection Agency

Bureau of Land – Field Operations Section

RCRA Inspection Report

General Facility Information

BOL ID	1191150002	Evaluation Date	6/21/2023
USEPA Id	ILD080012305	Region	Collinsville
Site Name	Equilon Enterprises LLC dba Shell Oil Products US	County	Madison
Address	900 S. Central Ave.	Phone	484-632-7955
City/State/Zip	Roxana, IL 62084	EJ Status	Low Income
Limited English	<input type="checkbox"/>	Primary Language	English

Facility Type

<u>Most Recent Notification Date</u>	<u>Notified As</u>	<u>Regulated As</u>
2/24/2023	LQG	LQG, TSD

Observations

Time	0900 - 15:00
Weather Conditions	Clear, sunny with dry soil conditions
Temperature	73° – 86° Fahrenheit
Photos Taken	Yes (12)

Evaluation Type

RCRA Program - Compliance Evaluation Inspection

Owner

Shell Oil Products US
Attn: Leroy Bealer
128 E. Center St.
Nazareth, PA 18064

Operator

Phillips 66
Attn: Thomas Morgan
900 S. Central Ave.
Roxana, IL 62084

Inspection Participants

<u>Person</u>	<u>Affiliation</u>	<u>Phone</u>
Chris Cahnovsky	IEPA FOS Primary Inspector	(618) 346-5136
Jacob McQuaid	IEPA FOS Secondary Inspector	(618) 346-5142
Hannah Field	IEPA FOS Secondary Inspector	(618) 346-5140

Persons Interviewed

<u>Person</u>	<u>Phone</u>	<u>E-Mail</u>
Wendy Pennington	314-452-8929	wendy.pennington@aecom.com
Samuel Fisher	314-296-1969	samuel.fisher@aecom.com

RCRA Permit Information

<u>Application Date</u>	<u>Log #</u>	<u>Issue Date</u>	<u>Expiration Date</u>	<u>Mod/Sp #</u>	<u>Mod/Sp Date</u>
4/30/2020	RCRA: B-43R RCRA: Post-Closure Permit	9/23/2010	10/28/2020	B-43R-M-2, B-43R-M-3, B-43R-M-5, B-43R-CA-49,	3/28/2022

Active Enforcement Orders

<u>State Court</u>	<u>Consent Decree</u>	<u>CAFO</u>	<u>IPCB</u>	<u>Federal Court</u>	<u>CACO</u>
12-CH-612					

TSD Activity Summary

<u>Activity Process</u>	<u>On Part B</u>	<u>Ever Done</u>	<u>Closed</u>	<u>Done During Inspection</u>
S04 - Surface Impoundment	Yes	Yes	Yes	No

Executive Summary

On June 21, 2023, Jacob McQuaid, Hannah Field, and I (Chris Cahnovsky) conducted a Resource Conservation and Recovery Act (RCRA) Compliance Evaluation Inspection of Equilon Enterprises LLC d/b/a Shell Oil Products US (SOPUS). SOPUS is conducting remediation activities at the WRB Refining LLC Wood River Refinery (WRR). Present during this inspection were Wendy Pennington, Project Manager and Samuel Fisher, Environmental Scientist with AECOM. AECOM is the primary contractor for SOPUS for remediation work at the refinery, Rand Avenue release site, and in the village of Roxana.

Evaluation Narrative

SOPUS was the original owner of the WRR. The refinery is currently owned by WRB Refining LLC, a 50/50 joint venture between Phillips 66 and Cenovus Energy, Inc. WRR is currently operated by Phillips 66. SOPUS is contractually bound to, among other things, address certain environmental liabilities at the WRR. A RCRA Part B Permit (Permit) was issued to SOPUS and WRB Refining on September 23, 2010, for the post-closure care of a hazardous waste surface impoundment (closed as a landfill), a groundwater monitoring/remediation program, and corrective action at 20 solid waste management units. This permit expired on October 28, 2020. SOPUS submitted a new application on April 30, 2020. This inspection focused on the post-closure care of the surface impoundment closed as a landfill and the corrective action waste generated by SOPUS.

The Permit requires the post-closure care of the surface impoundment closed as a landfill; Solid Waste Disposal Basin (Site 15). Site 15 is located within the WRR. Site 15 received hazardous waste until 1988; from 1988 to 2001, the unit only received non-hazardous waste. The unit has been closed as a landfill in accordance with an Illinois Environmental Protection Agency (Illinois EPA) approved interim status closure plan. Since hazardous waste was left in place at Site 15, the unit must receive at least thirty years of post-closure care after the date the closure certification was approved by the Illinois EPA (this certification was approved on August 24, 2006).

Site 15 was an above-ground surface impoundment with thirty-foot dikes and covered an area of approximately 20 acres located in the eastern portion of the facility. This unit was closed as a landfill on December 20, 1999. From 1973 to 1988, the non-hazardous wastewater treatment sludge from refinery operations and water treatment sludge from a lime-softening process were discharged to Site 15. From 1998 until 2001, Site 15 only received lime-softening sludge. Closure of Site 15 as a landfill began in 2001 and was completed in 2006. The final cover system over this unit included (from top to bottom): 1) a one-foot compacted clay layer; (2) a 0.04-inch polyethylene geomembrane; (3) a one-foot-thick granular layer, with geotextile above and below the layer; (4) a six-inch protective soil cover; and (5) a six-inch topsoil layer.

Illinois EPA personnel walked the cap of Site 15. The cover vegetation appeared to be in good condition. No erosion or leachate seeps were observed. I observed what appeared to be animal burrows in the cap. None of the burrows that I observed appeared to extend beyond six inches in depth. The required signs were posted at the entrances to Site 15. Quarterly inspections and descriptions of corrective actions taken to repair the landfill cap are being documented by AECOM on the Post-Closure Inspection Checklist.

AECOM operates and maintains a Soil Vapor Extraction System (SVE) for SOPUS located along the inside the west boundary of the WRR North Property and within the Public Works (PW) property in the village of Roxana.

WRR North Property

The system utilizes over 40 SVE wells that are connected via 4-inch steel piping to manifolds within an intermodal freight container (east conex) located on WRR property. The system wells are located on WRR property in the vicinity of the 4th Street and Chaffer Street intersection in the village, and along the West Fenceline within WRR. Piping from the SVE wells feed into the east conex where the vapor is pumped from the well field and through the vapor liquid separators (VLS) under negative pressure by the blower. The blower then pushes the vapor under positive pressure through a baffle tank, through a mixing box, and past automated fresh air dampers that add variable amounts of ambient air to the system. The ambient air amounts are based on Regenerative Thermal Oxidizer (RTO) combustion and temperature needs. The vapor finally feeds into the variable speed system fan which forces the vapor to the RTO where it is combusted.

The VLS units are located inside the east conex. Sediment entrained in the vapor flow accumulate inside each VLS unit and is periodically removed. The hazardous waste sediment is removed from the VLS units and containerized in a 30-gallon plastic container staged at the satellite accumulation area located outside on the west side of the east conex. This satellite accumulation drum of benzene contaminated hazardous waste sediment (U019) was properly closed and labeled. I observed the required emergency equipment also staged outside of the east conex.

Condensate which drops out the vapor stream and into the VLS units is pumped to two 625-gallon, double-walled, above ground storage tanks (ASTs) located outdoors on the east side of the east conex. Tank #2 or WF AST is used for the storage of condensate from the West Fenceline portion of the system. The condensate from this tank is discharged through WRR's National Pollutant Discharge Elimination System (NPDES) permitted wastewater treatment plant (WWTP). The condensate water is transported by vacuum truck to Site 9 inside the WRR facility.

The second tank, Tank #1 or PW AST, is used as a less than 90-day hazardous waste accumulation tank of condensate generated from SVE activities on PW property located at 143 East 8th Street in Roxana.. This condensate is managed as a listed hazardous waste for benzene carrying a U019 waste code. The condensate from the PW property is not managed in the WRR's WWTP because it is generated from the portion of the SVE that is not located on WRR property. The waste condensate is either shipped off-site in bulk or pumped into 55-gallon drums.

The secondary containment for the PW AST is provided via a double-walled tank. The tank is monitored daily to ensure that a vacuum is maintained within the space between the tank walls. This tank was empty at the time of this inspection. During cold weather months the tank is emptied about every two weeks. The tank was labeled with the words "Hazardous Waste." A tank assessment per 35 Ill Adm. Code 725.292 was conducted by URS on March 29, 2013. This tank and associated equipment are not subject to RCRA Subparts BB and CC for organic air emissions.

AECOM, on behalf of SOPUS, is constructing and will be operating and maintaining a Steam Enhanced Extraction (SEE) system located on the Former Public Works Yard (FPWY) property in Roxana. Waste generated during the construction of the SEE are soil cuttings, debris (tubing, personal protective equipment), groundwater/purge water, and drilling soils. The groundwater/purge water will be managed as a hazardous waste for benzene (U019). At the FPWY, I observed a 9,000-gallon frac tank containing about 100 gallons of groundwater/purge water and a 15-yard roll-off box of soil cuttings. Both containers were labeled with the words "Hazardous Waste." The frac tank and roll-off box had accumulation start dates of June 20, 2023 and April 24, 2023, respectively. Both containers were not labeled with indications of the hazards of the contents as required by 35 Ill. Adm. Code 722.117(a)(5)(A)(ii). However, Mr. Fisher labeled the two containers with Department of Transportation Class 9 labels during the inspection.

Recordkeeping

After the inspection of the cap and SVE system, I reviewed the uniform hazardous waste manifests and Land Disposal Restriction Notification (LDR) forms from May 5, 2021 to present. I also reviewed the waste profiles for selected waste streams. No discrepancies were observed in the review of the manifests, LDR notifications forms, and waste analyses.

AECOM maintains two RCRA Contingency Plans for the SOPUS projects. There is a separate contingency plan for Roxana SVE System at the WRR. Since this location is within the WRR, the emergency response is managed by WRR's emergency response teams. The second contingency plan is for the PW Property since this area is located outside of the WRR facility. Both contingency plans have quick reference guides. In addition, the plans and guides have been sent to the local authorities.

RCRA training job descriptions were available for all AECOM employees. I reviewed the computer-based training content which appeared to meet the applicable RCRA regulations. Annual training for 2023 has not been conducted yet.

Weekly container inspections, daily tank inspections, and quarterly Site 15 inspection records were reviewed. No discrepancies were observed in the review of these records.

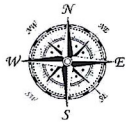
The violations alleged in Violation Notice Letter (VNL) L-2008-01134 dated May 2, 2008 and VNL L-2011-01125 dated April 19, 2011 are listed below in the Summary of Apparent Violations. These alleged violations have been included in a May 18, 2012, Complaint For Injunctive and Other Relief, 2012-CH-612. These alleged violations were not evaluated during this inspection.

Waste Disposition Form								
Facility Name:	Equilon Enterprises LLC dba Shell Oil Products US					USEPA Id:	ILD080012305	
Inspection Date:	6/21/2023					IEPA Id:	1191150002	
Waste Name	Generating Process	Waste Determination	Waste Type	HW Annual Report	Amount On-Site	Generation Rate	Last Ship Date	Destination
Hazardous Waste Solid	Drilling mud and SVE solids	Generator Knowledge	U019	Yes	10 gallons	Episodic	5/15/2023	Veolia Environmental Services Sauget, Illinois
Hazardous Waste Solids	Public Works Yard soils	Generator Knowledge	U019	Yes	15 yards	Episodic	4/4/2023	Veolia Environmental Services
Hazardous Waste Solids	Tubing and other waste from groundwater sampling	Generator Knowledge	U019	Yes	0	Every quarter	1/19/2023	Heritage Environmental Services Indianapolis, Indiana
Hazardous Waste Liquids	Groundwater sampling purge water	Generator Knowledge	U019	Yes	0	Every quarter	1/19/2023	Heritage Environmental Services Indianapolis, Indiana
Hazardous Waste Liquid	Public Works Yard purge water	Analysis	U019	Yes	100 gallons	Episodic	5/31/2023	Heritage Environmental Services Indianapolis, Indiana
Hazardous Waste Liquid	SVE AST water	Analysis	U019	Yes	0	Episodic - Winter months	6/9/2023	Heritage

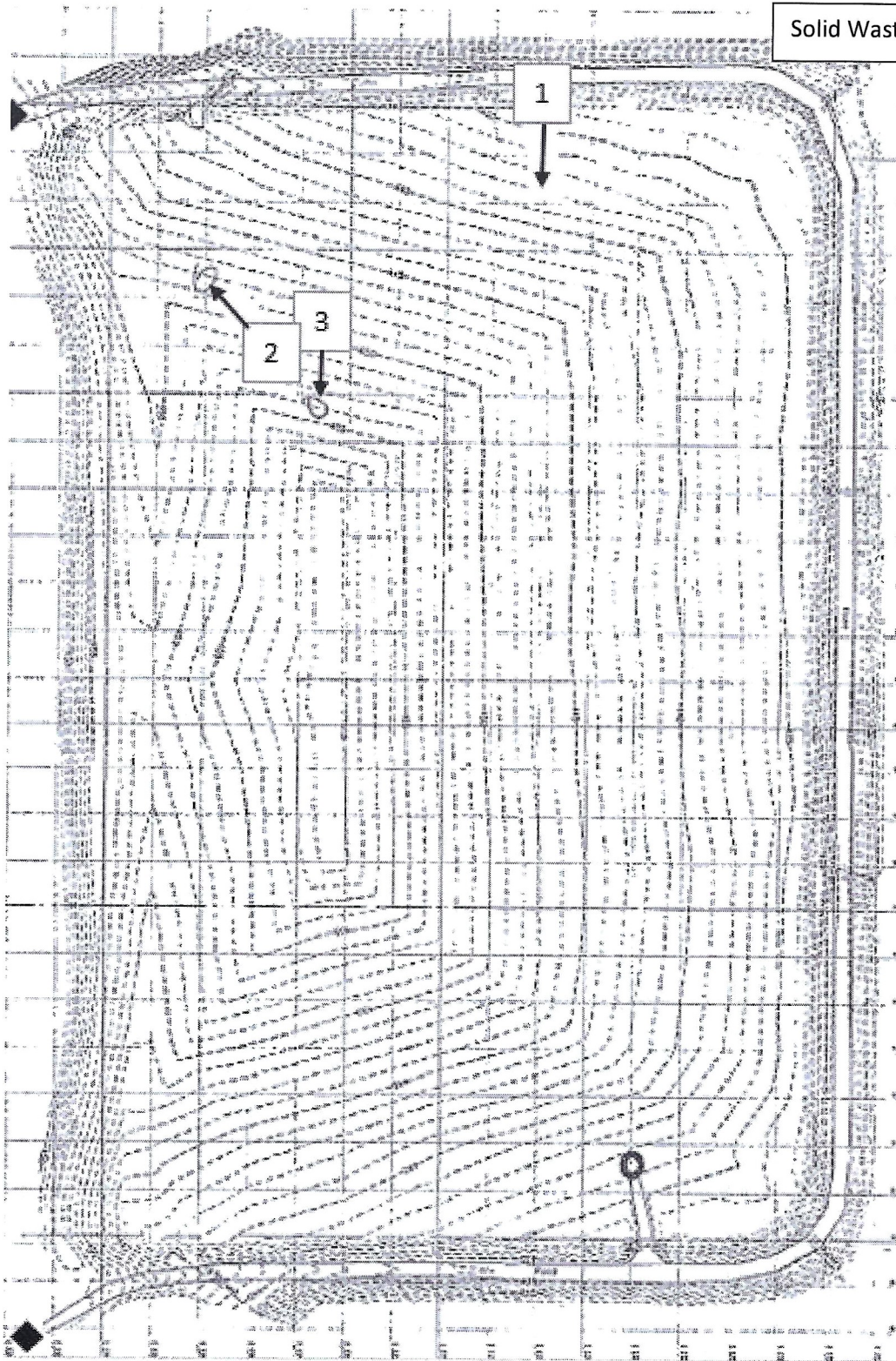
Summary of Apparent Violation(s)

Status	Date	Violation	Narrative
Resolved	6/21/2023	21(f)(1)	Conduct any hazardous waste storage, treatment, or disposal operation without or in violation of a RCRA permit
Resolved	6/21/2023	21(f)(2)	Conduct any hazardous waste storage, treatment, or disposal operation in violation of IPCB regulations or standards
Resolved	6/21/2023	703.121(a)	Hazardous waste storage, treatment, or disposal operation conducted without or in violation of RCRA permit
Not Evaluated	3/29/2008	12(a)	Cause or threaten or allow the discharge of any contaminants into the environment in any State so as to cause or tend to cause water pollution in Illinois, either alone or in combination with matter from other sources, or so as to violate regulations or standards adopted by the Pollution Control Board under this Act.
Not Evaluated	3/29/2008	12(d)	Deposit any contaminants upon the land in such place and manner so as to create a water pollution hazard. Not evaluated during this site evaluation.
Not Evaluated	3/29/2008	620.115	No person shall cause, threaten, or allow a violation of the Act, the IGPA or regulations adopted by the Board thereunder, including but not limited to this Part.
Not Evaluated	3/29/2008	620.301(a)	No person shall cause, threaten, or allow the release of any contaminant to a resource groundwater such that:
Not Evaluated	3/29/2008	620.405	Cause, threaten or allow release of any contaminant to groundwater so as to cause a groundwater quality standard of Subpart D to be exceeded.
Not Evaluated	3/29/2008	620.410(b)	Inorganic Chemical Constituents Except due to natural causes or as provided in Section 620.450, concentrations of the following chemical constituents must not be exceeded in Class I groundwater:
Not Evaluated	3/22/2011	703.121(a)	Hazardous waste storage, treatment, or disposal operation conducted without or in violation of RCRA permit. Failure to comply with Section IV.F.2.a. and Section IV.D.2 of the RCRA Post-Closure Permit.
Not Evaluated	3/22/2011	PC	IV.D.2 - The Permittee shall maintain the Water Production Wells to allow for the withdrawal of contaminated groundwater, in order to adequately control the flow of groundwater. Failure to properly maintain the Water Production Wells.
Not Evaluated	3/22/2011	PC	IV.D.4 - The Permittee shall notify the Illinois EPA within 30 days in writing of any of the wells identified in Conditions IV.D.1 and IV.D. 2 are damaged or the structural integrity has been compromised causing the well not to serve its function or to act as a contaminant pathway. Failure to notify the Agency within 30 days of the production wells being taken out of service.
Not Evaluated	3/22/2011	PC	IV.F.2.a - The pumping from the Water Production Wells, at a minimum rate of 3,000 gpm, shall maintain the cone of depression to ensure groundwater flow is adequately controlled in the uppermost aquifer. Rate of groundwater pumping from the Water Production Wells was not high enough to ensure that groundwater flow was adequately controlled in the uppermost aquifer.
Not Evaluated	3/22/2011	21(f)	Conduct any hazardous waste-storage, hazardous waste-treatment, or hazardous waste-disposal operations in violations of any regulations or standards adopted by the Board under this Act. Failure to comply with 35 Illinois Administrative Code Part 703.

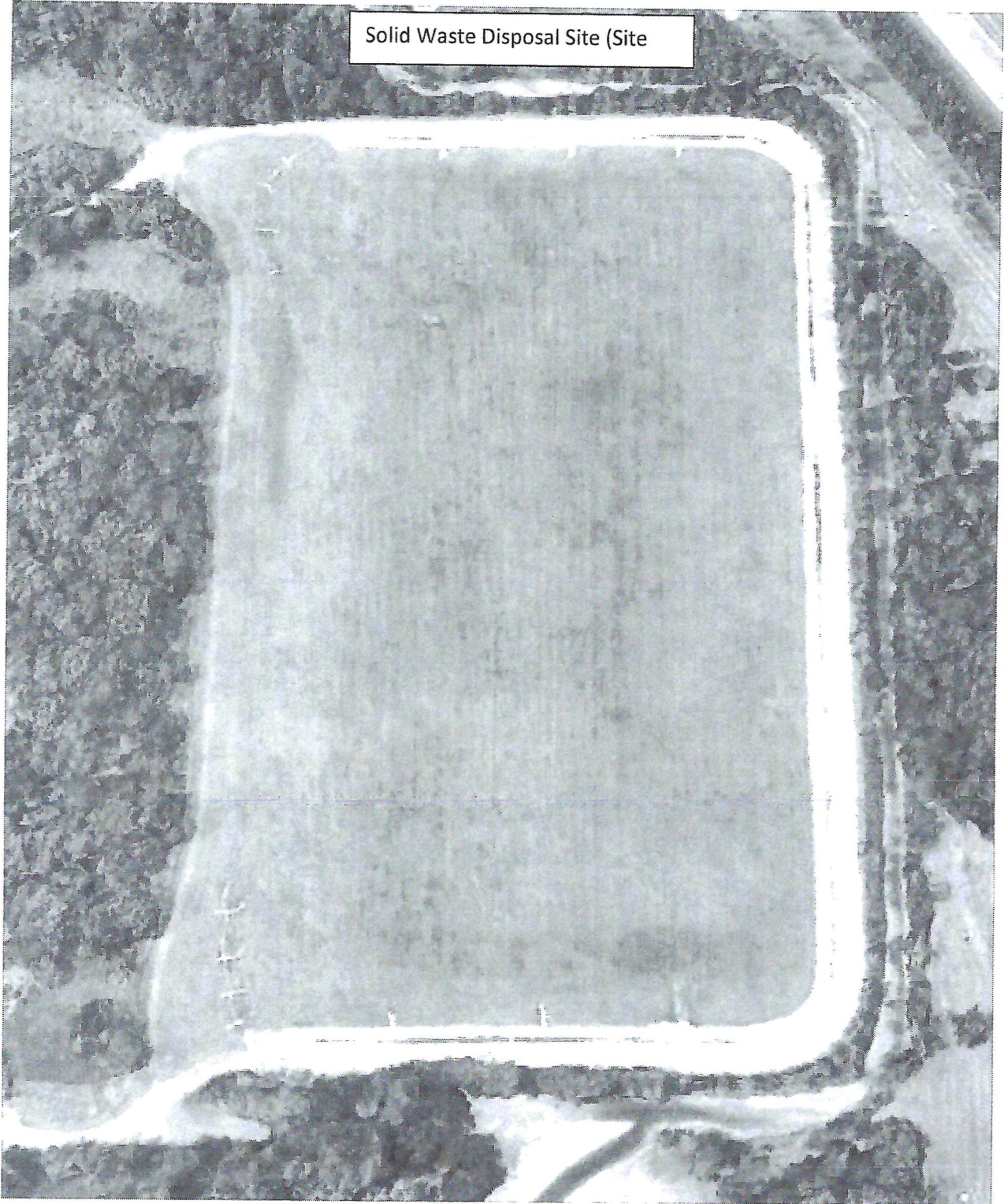
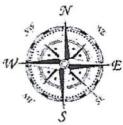
Site Diagram



Solid Waste Disposal Site (Site

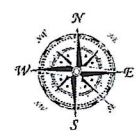


Site Diagram





Site Diagram



Digital Photographs



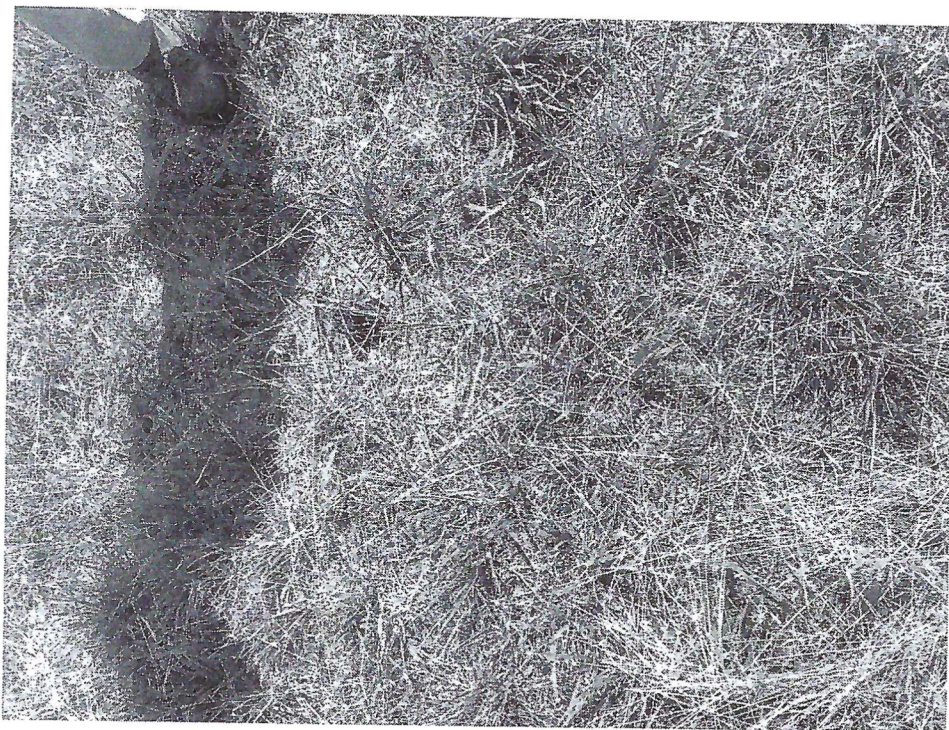
Bureau Id: 1191150002
Photo No.: 1
Photo Date: 6/21/2023
Photo Time: 10:19:33 AM
Direction: South
Taken By: Chris Cahnovsky

Vegetative cap on Site 15



Bureau Id: 1191150002
Photo No.: 2
Photo Date: 6/21/2023
Photo Time: 10:24:19 AM
Direction: Northwest
Taken By: Chris Cahnovsky

Possible animal burrow on Site 15 cap.



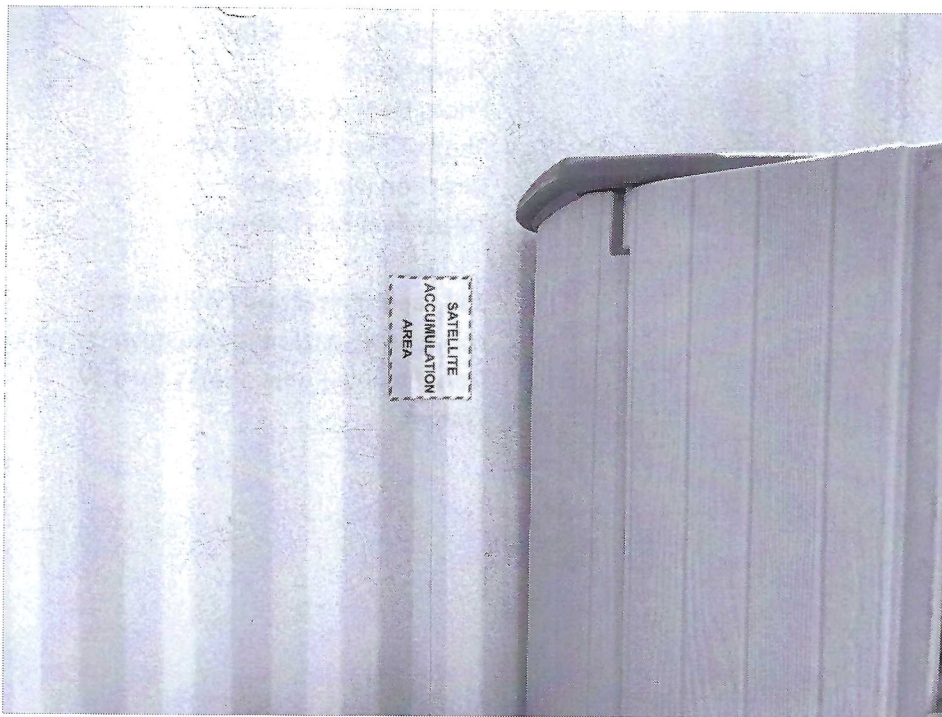
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Photo No.: 3
Photo Date: 6/21/2023
Photo Time: 10:25:13 AM
Direction: South
Taken By: Chris Cahnovsky

Possible animal burrow on Site 15 cap.



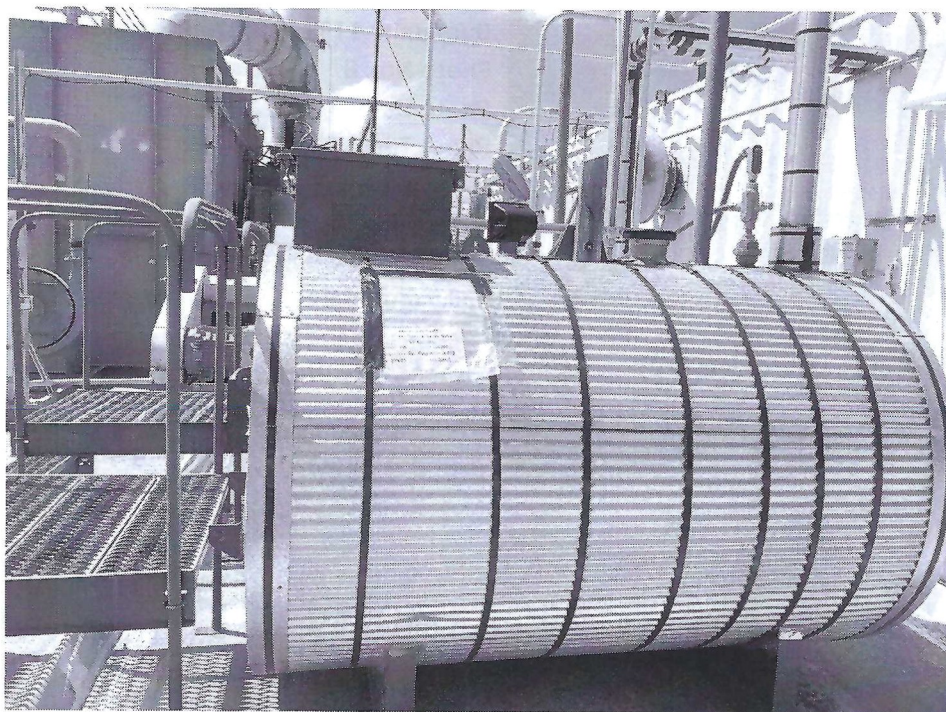
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Photo No.: 4
Photo Date: 6/21/2023
Photo Time: 10:56:25 AM
Direction: Southeast
Taken By: Chris Cahnovsky

Satellite accumulation drum for waste
from soil vapor extraction system.



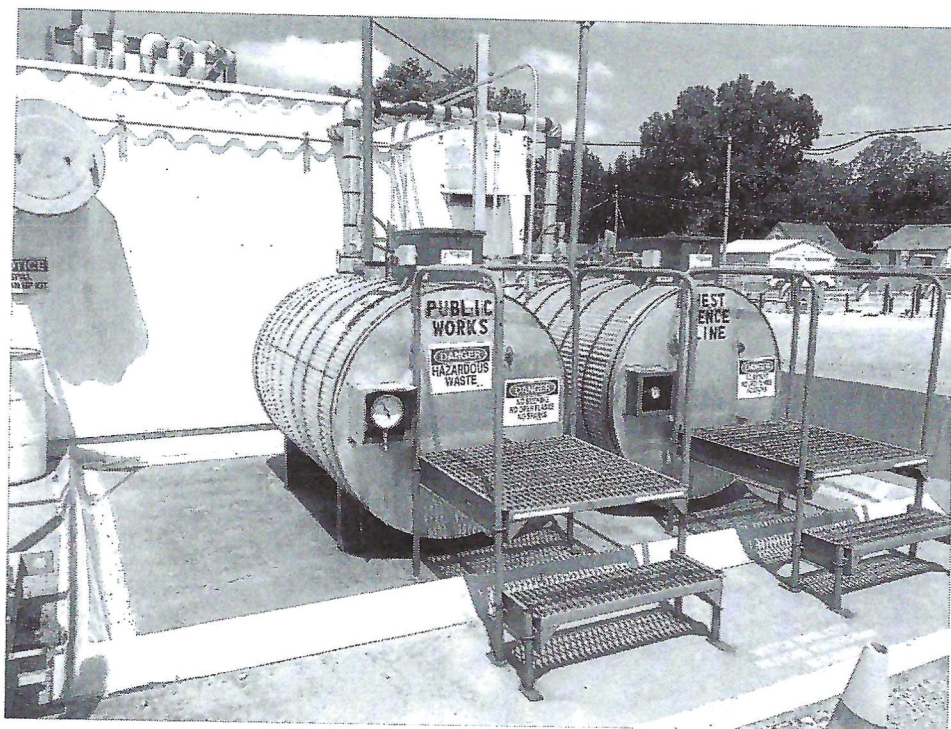
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Taken By: Chris Cahnovsky

Satellite Accumulation Area.



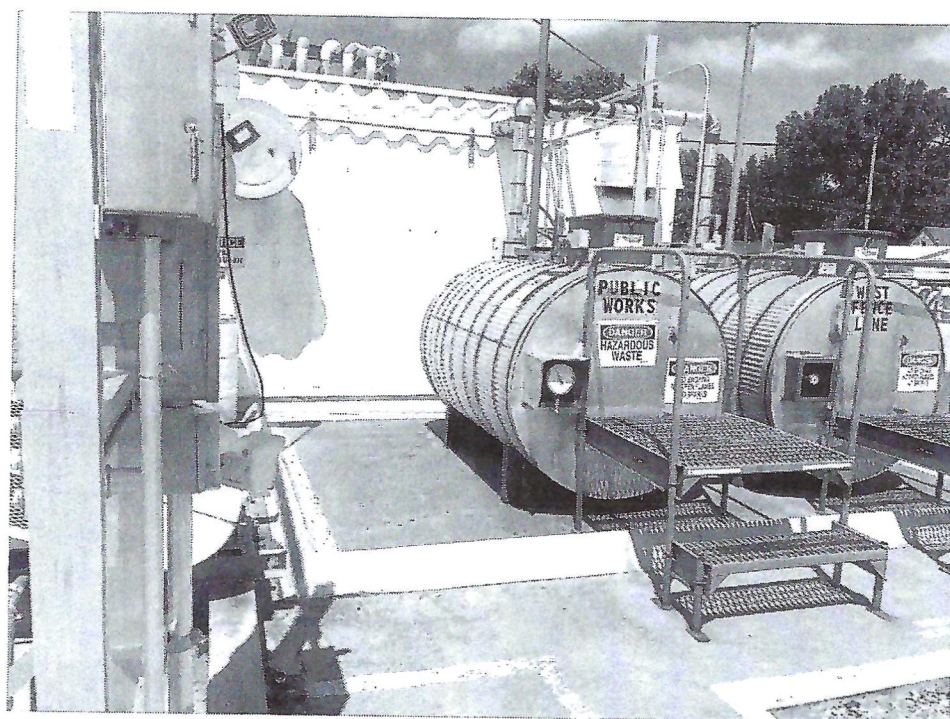
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Photo No.: 6
Photo Date: 6/21/2023
Photo Time: 11:01:35 AM
Direction: South
Taken By: Chris Cahnovsky

Soil vapor extraction (SVE) system
condensate water tank from refinery
SVE system.



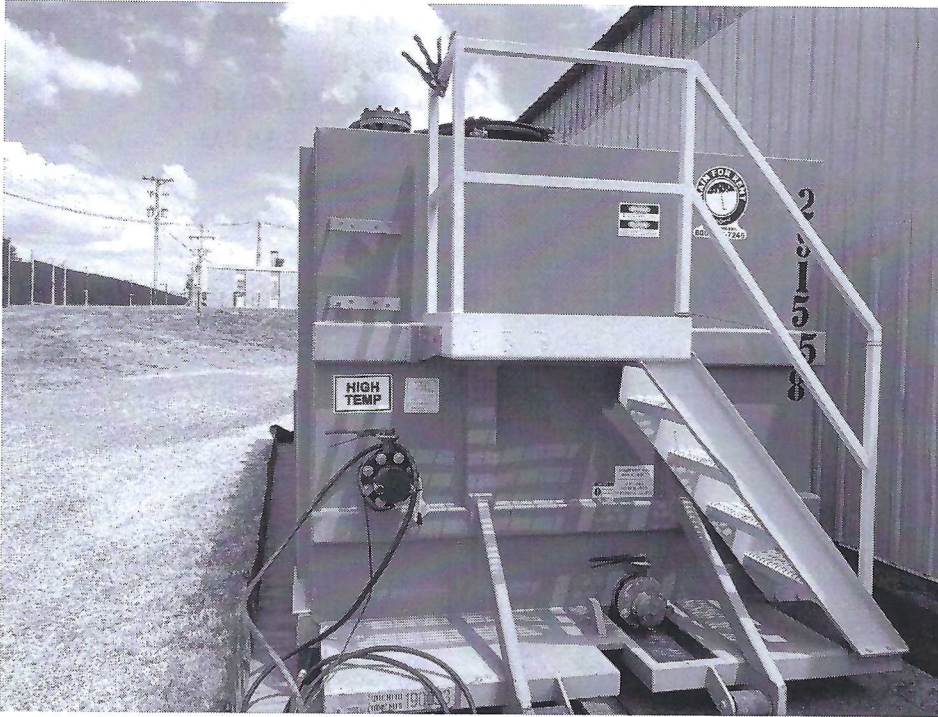
Bureau Id: 1191150002
 Photo No.: 7
 Photo Date: 6/21/2023
 Photo Time: 11:02:56 AM
 Direction: Northwest
 Taken By: Chris Cahnovsky

Soil vapor extraction (SVE) system
 condensate hazardous wastewater tank
 from Roxana Public Works Yard SVE
 system.



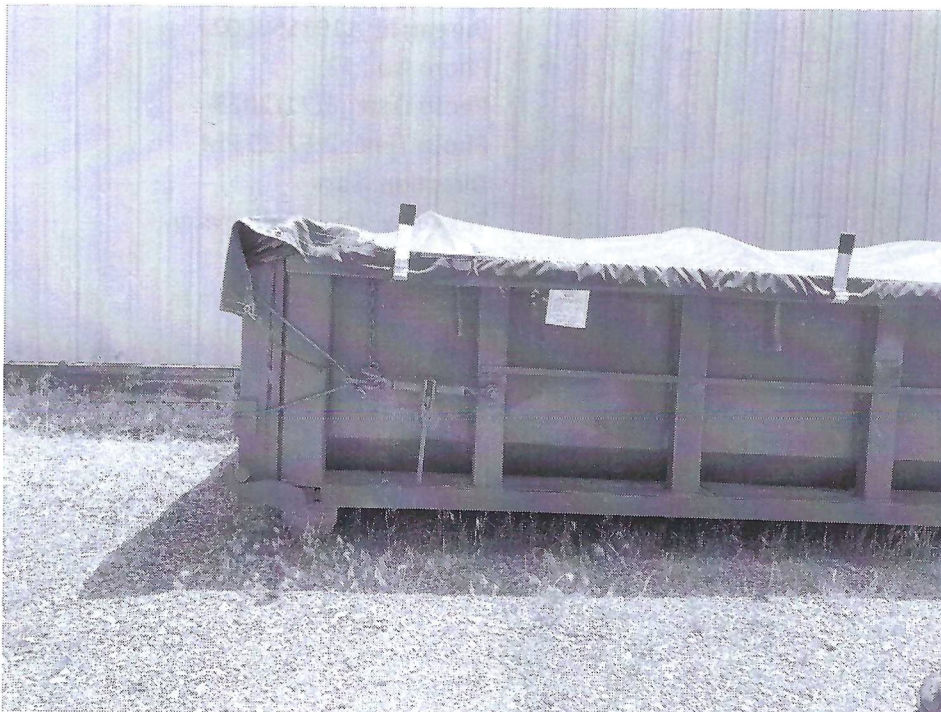
Bureau Id: 1191150002
 Photo No.: 8
 Photo Date: 6/21/2023
 Photo Time: 11:08:42 AM
 Direction: Northwest
 Taken By: Chris Cahnovsky

Soil vapor extraction (SVE) system
 condensate hazardous wastewater tank
 from Roxana Public Works Yard SVE
 system.



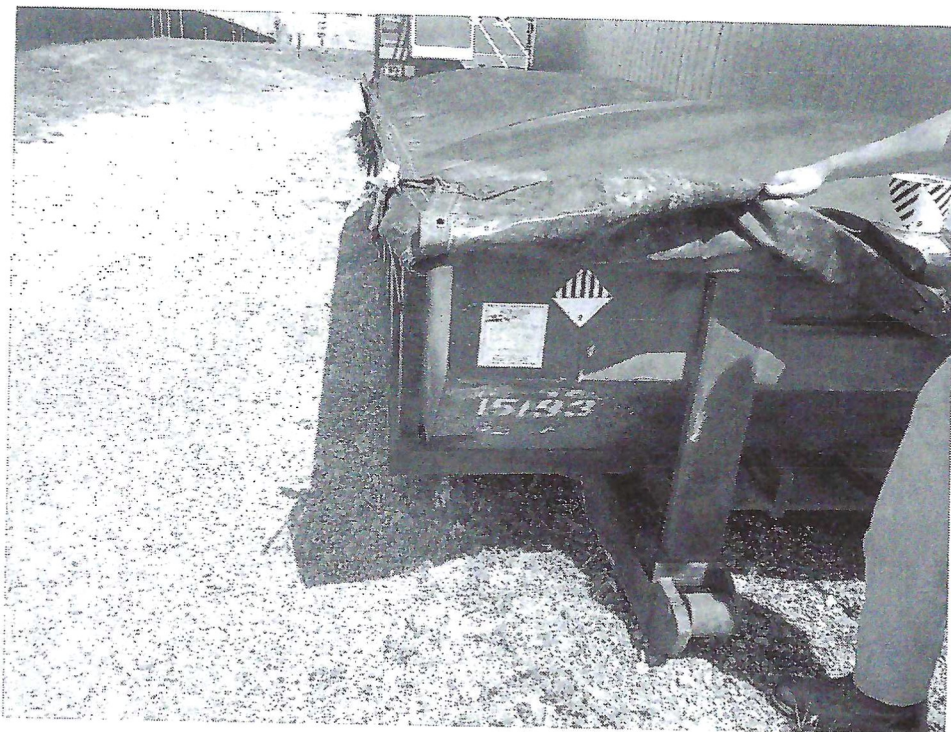
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Photo No.: 9
Photo Date: 6/21/2023
Photo Time: 2:18:44 PM
Direction: East
Taken By: Chris Cahnovsky

Hazardous waste purge water from
Roxana Public Work Yard. No indication
of hazard label.



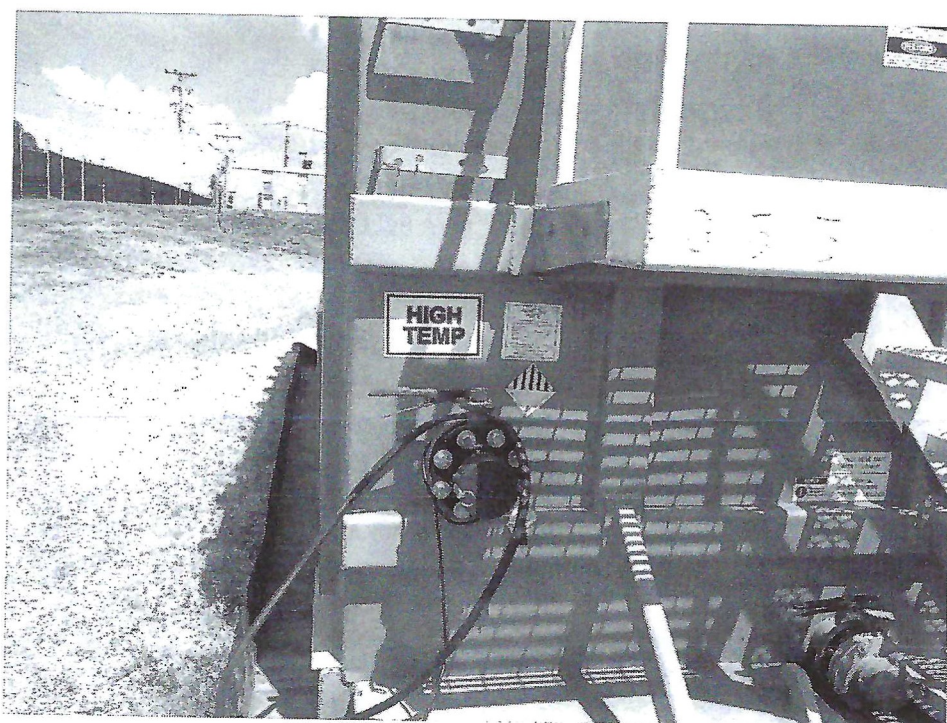
Bureau Id: 1191150002
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Photo Date: 6/21/2023
Photo Time: 2:19:01 PM
Direction: South
Taken By: Chris Cahnovsky

Hazardous waste soil from Roxana Public
Works Yard. No indication of hazard
label.



Bureau Id: 1191150002
Photo No.: 11
Photo Date: 6/21/2023
Photo Time: 2:56:55 PM
Direction: East
Taken By: Chris Cahnovsky

Properly labeled container.



Bureau Id: 1191150002
Photo No.: 12
Photo Date: 6/21/2023
Photo Time: 2:57:35 PM
Direction: East
Taken By: Chris Cahnovsky

Properly labeled container.