pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0261505**
Facility Type	**Industrial**	APS ID	**721047**
Major / Minor	**Minor**	Authorization ID	**1089830**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Lebanon Seaboard Corp**	Facility Name	**Lebanon Seaboard Corporation Chemicals Manufacturing Lebanon**
Applicant Address	1600 E Cumberland Street	Facility Address	1600 E Cumberland Street
	Lebanon, PA 17042-8323		Lebanon, PA 17042-8323
Applicant Contact	Richard Newmaster	Facility Contact	Richard Newmaster
Applicant Phone	(717) 273-1685	Facility Phone	(717) 273-1685
Client ID	280885	Site ID	451404
SIC Code	2875,2879	Municipality	South Lebanon Township
SIC Description	Manufacturing - Agricultural Chemicals, Nec,Manufacturing - Fertilizers, Mixing Only	County	Lebanon
Date Application Received	July 21, 2015	EPA Waived?	Yes
Date Application Accepted	September 18, 2015	If No, Reason	

Purpose of Application: NPDES renewal for discharge of stormwater and treated groundwater.

Summary of Review

This is a renewal for a NPDES individual permit for discharges from stormwater associated with industrial activity and treated groundwater from a groundwater remediation system (GRS) at a facility that manufactures consumer and professional lawn products containing pesticides. Pesticides are not manufactured onsite but are added as an ingredient in the fertilizer production process.
Figure 1 shows the site location.
Figure 2 shows the site layout including Outfalls 001 and 002 and Internal Monitoring Point (IMP) 001.

This facility falls under SIC Code 2879 (Pesticides and Other Agricultural Chemical Manufacturing) and SIC Code 2875 (Fertilizer (mixing only) manufacturing), which requires coverage for discharges of stormwater associated with industrial activity, as defined at 40 CFR § 122.26 (b) (14).

A historic spill of chlorobenzene occurred to the groundwater media. The release to soil and groundwater were managed through the Act 2 Land Recycling Program. However, seasonally, contaminated groundwater flow infiltrates into the on-site storm sewer system. The base flow (groundwater) is collected in the storm sewer system and is pumped through an activated carbon/polishing drum treatment system before being returned to the storm sewer to discharge through the stormwater outfall, Outfall 001. When stormwater is flowing through the storm sewer, the contaminated groundwater infiltrated in the storm sewer is not captured and treated, since it is a small portion of the total flow and is below treatment levels of chlorobenzene.
The current groundwater remediation system (GRS) began operating in 2010 and is expected to operate for more than 30 years.

Approve	Deny	Signatures	Date
x		*Brenda J Fruchtl* Brenda J. Fruchtl, P.G. / Licensed Professional Geologist	December 1, 2021
x		*Scott M Arwood* Scott M. Arwood, P.E. / Environmental Engineer Manager	12/2/2021

Summary of Review

The permit includes an internal monitoring point (IMP) 001 to sample the discharge from the GRS prior to it reentering the storm sewer prior to discharge at Outfall 001.
Outfall 001 is the location where stormwater associated with industrial activity from the northern portion of the site is discharged along with any discharge from the GRS depending on groundwater levels.

Outfall 002 is the location where stormwater from the southern portion of the site discharges. Outfall 002 (stormwater only) was not included in the 2010 NPDES Permit since the focus had shifted from stormwater to the Groundwater Remediation System (GRS) when it was installed in 2010. Prior to 2010, they were covered under the NPDES PAG-03 General Permit PAR233516 for discharges of stormwater associated with industrial activity. With this permit renewal, stormwater for the entire site will be required to be monitored as the facility meets the definition of discharges of stormwater associated with industrial activity.

Outfall numbers used for the 2010 NPDES permit have been updated to include the discharge from the GRS as an IMP and both stormwater outfalls. **Figure 3** shows the site layout with the 2010 NPDES Permit outfall numbers compared to the proposed permit outfall numbers.

2004 Protection Report.
The 2004 protection report supports development of limitations for the discharge of treated groundwater that has infiltrated the stormwater system of Lebanon Seaboard Corporation. A pump and treat operation continued for several years to the point where it is no longer effective, and the Corporation sought Act 2 relief for chlorobenzene.
An outstanding issue is the discharge of chlorobenzene contaminated groundwater that infiltrates the stormwater system as the water tables rises and falls.

DEP presented an alternative to treatment where Lebanon Seaboard would replace or seal the storm sewers to prevent infiltration of chlorobenzene as the water table rises above the system during wet weather or storm events. If sealing is implemented, “low flow” sampling will be conducted on three separate dates to determine if the problem is resolved.
Low flow sampling is the collection of a sample when the soil water is high enough for groundwater infiltration at least 24 hours after direct stormwater flow has stopped.

The recommendation was to limit chlorobenzene discharge levels to 50 ug/L. Treatment would be required only if sampling of the discharge during “low flow” of the storm sewer discharge exceeded this level with or without storm sewer replacement or sealing as discussed in the report. If the initial sampling requires no treatment, the discharge should be sampled biannually (spring and fall) to document chlorobenzene levels remain below the treatment trigger of 50 ug/L.

Additional sampling occurred at prescribed in-stream locations and samples from the onsite monitoring wells were analyzed. Based on the monitoring well results, it was determined that Lebanon Seaboard Corporation must treat the discharge to remove chlorobenzene.

2010 Protection Report
A new individual NPDES permit was issued to replace their existing PAG-03 General Permit PAR233516. The facility was no longer eligible for the PAG-03 due to the need to address the chlorobenzene contaminated groundwater infiltrating the storm sewer system onsite.
The stormwater contains chlorobenzene resulting from activities when DDT was manufactured.

Sampling of the stormwater during “low flow” storm sewer discharges following sealing storm sewers exceeded 50 ug/L. Consequently, an activated carbon drum treatment system was installed. The system operates to treat infiltrating groundwater when precipitation is not causing a stormwater discharge. A low 1” weir in the storm sewer will divert water to a wet well where a sump pump is installed pumping water to two 55-gallon activated carbon drums in parallel (Note: this should have been described as in a series, and not parallel). Treated water is returned to the storm sewer downstream of the weir.

Timeline of application
Currently, the facility is covered under NPDES Permit No PA0261505, which expired on December 31, 2015.

July 21, 2015 - The renewal application was received, which was considered late.

Summary of Review

September 23, 2015 – PA DEP sent an administrative completion letter.

January 17, 2019 - PADEP sent a Technical Deficiency email stating that Module 1 and Module 2 were incomplete. And requested some clarification regarding the outfalls.

May 23, 2019 -PADEP received revised Modules 1 and 2 and outfall maps via email.

June 17, 2021 – Conducted site visit with PADEP WQ Specialist Heather Dock and Ryan Zellner from Lebanon Seaboard Corporation.

June 25, 2021 – PADEP sent a follow up email requesting additional information in order to complete the technical review of the renewal application including revised tables to include stormwater for entire site, a revised site plan delineating drainage areas, a water balance diagram focusing on the GRS, and additional information about operation of the GRS.

August 3, 2021 – The permittee submitted additional information regarding the GRS as requested on 6/25/2021.

September 7, 2021 – The permittee submitted a site plan delineating the flow of water.

September 22, 2021 – I sent an email requesting an update on the other items requested on June 25, 2021 including updated application identifying all the outfalls, revised Module 1 showing both stormwater outfalls and revised Module 2 with updated data.

October 1, 2021 – I received the additional information requested on June 25, 2021.
October 1, 2021 – I reached out via email to schedule a meeting to discuss the revised documents received on 10/1/2021. There is still information that does not appear to be correct.

October 13, 2021 – Conference call with Ryan Zellner (Lebanon Seaboard) and Craig Herr (RT Environmental) to discuss my questions regarding the additional information received on October 1, 2021. They confirmed there will be 2 stormwater outfalls identified. They will update the forms to include Outfall 002 and update the latitude and longitude for all points. We discussed the Part C language I was considering since the Chlorobenzene result average was 0.03091 mg/L with a maximum of 0.092 mg/L (QL 0.00038 mg/l) in the 3 influent samples collected in April 2019. These results are below the Average monthly and Daily Maximum permit limits for the effluent. They explained that they have sampled the influent 2/month when the effluent samples are collected but did not include those results when completing Module 2. They explained that the chlorobenzene concentrations in the influent have been above the discharge limits at certain times throughout the year. I requested they include all the results when completing the sample results for untreated groundwater on a revised Module 2. I explained that all results taken should be included on an application in the future, not only samples taken specifically to complete the sample information on the application.

November 1, 2021 – I received the updated application package to address the issues I raised during our October 13, 2021 conference call except the additional chlorobenzene results from the past 3 years of influent sampling.

November 8, 2021 –I sent an email requesting that information along with a spreadsheet listing all the influent sample results for chlorobenzene taken over the past 3 years in order to allow me to better understand the ongoing chlorobenzene groundwater contamination concerns at the site that affects their stormwater being discharged at Outfall 001.

November 12, 2021 – The permittee submitted the additional chlorobenzene sample results from the untreated groundwater as requested.

November 14, 2021 – I requested clarification on the treatment system regarding the design flow and frequency of discharge.

December 1, 2021 – The permittee responded with revised pages 5 and 7 of the application.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-

Summary of Review
day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.014 (from GRS) plus Stormwater.
Latitude	40º 20' 51.4"	Longitude	-76º 23' 4.5"
Wastewater Description:	Groundwater Cleanup Discharge and Stormwater associated with industrial activity.		
Receiving Waters	Quittapahilla Creek (TSF, MF)	Stream Code	09691
NHD Com ID	56397705	RMI	16*
Drainage Area	3.12*	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	7.45	Q_{7-10} Basis	StreamStats (at point where stream is delineated on eMapPA)
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-D	Chapter 93 Class.	TSF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	FLOW REGIME MODIFICATION, HABITAT ALTERATIONS, PATHOGENS		
Source(s) of Impairment	SOURCE UNKNOWN, STREAMBANK MODIFICATIONS/DESTABILIZATION, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final	Name	Quittapahilla Creek Watershed
Nearest Downstream Public Water Supply Intake	PA American Water		
PWS Waters	Swatara Creek	Location	South Hanover Twp, Dauphin Co
PWS RMI	16.43	Distance from Outfall (mi)	22

Changes Since Last Permit Issuance:
This outfall includes the stormwater from the northern portion of the site and the treated groundwater discharge from the GRS. Previously Outfall 001 only included the treated groundwater from the GRS. And the stormwater discharge was previously identified as S01 in the 2010 NPDES Permit (and currently identified as 002 in the eDMR system). S01 has now been renamed Outfall 001. See Figure 3.

Other Comments:
Outfall 001 includes stormwater from the northern portion of the site and the treated discharge from the GRS at Internal Monitoring Point (IMP) 001 (see Figure 2)**.**

Drainage Area: 433,770 ft^2; 98% impervious

Description of Materials / Activities in Drainage Area Exposed to Precipitation: macadam parking lot, on-site buildings, and street runoff for the northern portion of the site. Impacted groundwater from a historic spill that seasonally infiltrates into stormwater collection system.

**Note: According to the streams delineated on StreamStats, it's 0.80 miles from the point of discharge at Outfall 001 to Quittapahilla Creek, the closest delineated stream to the discharge location on eMapPA.*
According to StreamStats, the DA for the combined area of Outfall 001 and 002 is 0.43 mi2.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	Stormwater only
Latitude	40º 20' 51.2"	Longitude	-76º 23' 4.4"
Wastewater Description:	Stormwater associated with industrial activity.		
Receiving Waters	Quittapahilla Creek (TSF, MF)	Stream Code	09691
NHD Com ID	56397705	RMI	16*
Drainage Area	3.12*	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	7.45	Q_{7-10} Basis	StreamStats (at point where stream is delineated on eMapPA)
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-D	Chapter 93 Class.	TSF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	FLOW REGIME MODIFICATION, HABITAT ALTERATIONS, PATHOGENS		
Source(s) of Impairment	SOURCE UNKNOWN, STREAMBANK MODIFICATIONS/DESTABILIZATION, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final	Name	Quittapahilla Creek Watershed
Nearest Downstream Public Water Supply Intake	PA American Water		
PWS Waters	Swatara Creek	Location	South Hanover Twp, Dauphin Co
PWS RMI	16.43	Distance from Outfall (mi)	22

Changes Since Last Permit Issuance:
This is newly designated outfall for discharges from stormwater outfall S02, which was not included on the 2010 permit. Previously Outfall 002 was assigned to the combined treated groundwater and stormwater discharged at Stormwater Outfall S01 in the eDMR system. However, for clarification purposes, Outfall 001 is now located at the previous S01, and includes SW and GRS discharge. Internal Monitoring Point (IMP) 001 is the discharge from the GRS. And Outfall 002 is the discharge of stormwater only from the southern portion of the site to what was previously identified as S02.
See Figure 3.

Other Comments:
Outfall 002 includes stormwater only from the southern portion of the site (see Figure 2).

Drainage Area: 653,080 sq ft, 74% impervious

Description of Materials / Activities in Drainage Area Exposed to Precipitation: macadam parking lot, on-site buildings, and southern portion of the site.

**Note: According to the streams delineated on StreamStats, it's 0.80 miles from the point of discharge of Outfall 002 to Quittapahilla Creek, the closest delineated stream to the discharge location on eMapPA.*
According to StreamStats, the DA for the combined area of Outfall 001 and 002 is 0.43 mi2.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	IMP 001	Design Flow (MGD)	0.014
Latitude	40º 20' 53.2"	Longitude	-76º 23' 3"
Wastewater Description:	Treated Groundwater from Groundwater Remediation System		
Receiving Waters	Quittapahilla Creek (TSF, MF)	Stream Code	Flows to Outfall 001
NHD Com ID	56397705	RMI	0.0000
Drainage Area	n/a	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	n/a	Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-D	Chapter 93 Class.	TSF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	FLOW REGIME MODIFICATION, HABITAT ALTERATIONS, PATHOGENS		
Source(s) of Impairment	SOURCE UNKNOWN, STREAMBANK MODIFICATIONS/DESTABILIZATION, URBAN RUNOFF/STORM SEWERS		
TMDL Status	Final	Name	Quittapahilla Creek Watershed
Nearest Downstream Public Water Supply Intake	PA American Water		
PWS Waters	Swatara Creek	Location	South Hanover Twp, Dauphin Co
PWS RMI	16.43	Distance from Outfall (mi)	22

Changes Since Last Permit Issuance:
This internal monitoring point (IMP) that was added to record the results directly after treatment to ensure compliance from the GRS effluent prior to mixing with stormwater in the pipe. The GRS discharge was previously identified as 001 in both the 2010 NPDES permit and the eDMR system. See Figure 3.

Other Comments:
This IMP is solely treated groundwater from the effluent valve on the GRS.

Treatment Facility Summary

Treatment Facility Name: Lebanon Seaboard Corporation Lebanon Groundwater Remediation System (GRS)

WQM Permit No.	Issuance Date
n/a	n/a

A weir has been installed in the storm sewer system to collect seasonal groundwater flow in the stormwater sewer, which is contaminated with chlorobenzene, is pumped through activated carbon/polishing drum treatment system and returned to discharge through Outfall 001. When the stormwater flows through the storm sewer, the contaminated groundwater infiltrated into the sewer is a small portion of the total flow, and below treatment levels for chlorobenzene. The current GRS began operating in 2010 and is expected to operate for more than 30 years.

Discharge from the GRS returns to the stormwater piping that discharges at Outfall 001 (formerly Outfall S01).

Figures 2 and 3 shows the interconnection of the GRS with the stormwater system.

Figure 4 shows the cross section of the weir / sump system at location 1/2 on Figure 3.

Figure 5 shows the cross section of the weir / sump system at location 2/2 on Figure 3.

Figure 6 shows the typical carbon drum treatment layout located at 3/2 on Figure 3.
Figure 7 includes the General Sequence of Construction and List of Materials.

Changes Since Last Permit Issuance:
None

Chemical Additives: None

Information received on 8/3/2021 via email in response to the request for more detailed information about the GRS system.
The maximum design flow of the carbon filter remediation system is 10 gpm. This is based on the design of the Carbtrol L-1 filter canister unit which is rated to handle up to 10 gpm per its specification sheet. At a 10 gpm flow rate, the contact time with the activated carbon is approximately 5 minutes per canister. The site operates 2 canisters in a series configuration providing a minimum contact time of 10 minutes if the system is running at the maximum rated flow.

The system itself is composed of the stormwater drains and piping, a collection basin, a sump pit, 1/2 hp pump, filter unit, 2 Carbtrol L-1 Canisters, and PVC piping and fittings. The canisters are utilized until they reach a back pressure of 5psi (1/2 the allowable system backpressure) at which time they are replaced. Water is transferred from the collection basin to the sump pit by gravity flow and pumped from the sump pit through the canisters and back to the stormwater pipe that discharges the collection basin (take and put occur within 12" of each other, with put being slightly downstream)

The method of entry of the groundwater into the stormwater piping system is through the natural gaps in the unsealed stormwater drainage piping during non-rain conditions. In 2008 the flow was evaluated when the system was put in place and had an approximate flow of 16 gpm entering the system in non-rain conditions. They will make an additional determination of current flow rate entering the system so long as there has not been rain for 24 - 48 hours prior. Based on the readings recorded and submitted via EDMR reporting, the average for the past 5 yrs was approximately 13811 gallons treated every 15 days (varies based on actual sample date). The past 3 months (May-July 2021) have averaged approximately 12170 gallons every 15 days, which is slightly below, but well within one standard deviation of the 5 year average.

There is a plan to add additional sediment filtration to the existing system prior to treatment which is expected to increase overall volume of material processed by the remediation system. This modification is being implemented as the average volume of water being processed has been reduced at times due to sedimentation blocking the filtration unit, which was restrictive enough to result in reduced flow. That being said, the testing results indicate the system is working extremely well at remediation of the water volume that is currently being processed.

Compliance History	
Summary of DMRs:	DMR results from 2015 to 2018 **Monthly for Outfall 001 (discharge from GRS, changing to IMP 001 in proposed permit)** for Chlorobenzene and pH. See compliance history for results. **Chlorobenzene**: No permit limits were exceeded in the past 5 years. **pH**: No permit limit exists **Twice per year sampling for Outfall 002 (discharge of combined SW and GRS discharge to Outfall S01, changing to Outfall 001 in proposed permit)** for pH, CBOD5, COD, TSS, Oil and Grease, TKN, Total Phosphorus, and Total Iron. There are no effluent limitations (or benchmark values) for any of these parameters. See compliance history for results. **In 2016, 2017, and 2018, samples were only reported once for the year.** eDMR results from December 2018 to August 2021 **Monthly for Outfall 001 (discharge from GRS, changing to IMP 001 in proposed permit)** for Chlorobenzene and pH. See compliance history for results. **Chlorobenzene**: No permit limits were exceeded. **pH**: No permit limit exists **Twice per year sampling for Outfall 002 (discharge of combined SW and GRS discharge to Outfall S01, changing to Outfall 001 in proposed permit)** for pH, CBOD5, COD, TSS, Oil and Grease, TKN, Total Phosphorus, and Total Iron. There are no effluent limitations (or benchmark values) for any of these parameters. See compliance history for results.
Summary of Inspections:	DEP conducted the following inspections: 7/2/2013 – Administrative/File Review. Violation(s) noted. 9/16/2016 – Compliance evaluation on site. Violation(s) noted. 4/11/2017 – Administrative/ File Review. Violation(s) noted. 6/25/2020 – Routine/Partial inspection. Violation(s) noted. 6/17/2021 - Compliance evaluation on site.
Summary of Violations:	• 7/2/2013 – Administrative review of DMR reveals violation. Resolved 7/18/2013. • 9/16/2016 – CSL -unauthorize, unpermitted discharge of polluting substances to waters of the Commonwealth. Resolved 10/18/2016. • 9/16/2016 – NPDES – Failure to submit monitoring report(s) or properly complete monitoring reports. Resolved 10/18/2016. • 4/11/2017 – NPDES – Failure to use a format or process required by DEP for self-monitoring results. Resolved 5/15/2017. • 6/25/2020 – NPDES – Failure to properly document monitoring activities and results. Resolved 8/13/2020. • There are not any open Clean Water Program violations for the facility. • There are open Storage Tank violations for this facility (as of 9/24/21)

Influent Data

Influent Data:

- Sample results for the untreated groundwater (influent to the GRS) were not provided in the 2015 renewal application.
- On May 23, 2019, the sample results for the untreated groundwater (influent to the GRS) were provided as part of a revised Module 2.
- Influent samples were collected on April 1, 2019; April 8, 2019; and April 15, 2019 and sampled for Oil and Grease, Dissolved Iron; Dissolved Lead; Dissolved Mercury; pH; TSS; and Chlorobenzene.
    - **The average and maximum were below the quantitation limits for Oil and Grease, Dissolved Iron; Dissolved Lead; and Dissolved Mercury.**
    - **The Chlorobenzene result average was 0.03091 mg/L with a maximum of 0.092 mg/L (QL 0.00038 mg/l) in the 3 samples according to the revised Module 2 received on May 23, 2019**. *Note: These results are below the Average monthly (0.05 mg/L) and Daily Maximum (0.10 mg/L) permit limits for chlorobenzene in the effluent.*
    - **The pH result average was 8.16 SU with a maximum of 8.56 SU in the 3 samples.**
    - **The TSS result average was 8.933 mg/L with a maximum of 13.6 mg/L (QL 1.75 mg/l) in the 3 samples.**
- On November 12, 2021, influent sample results for Chlorobenzene collected monthly for the past 3 years from November 2018 through October 2021 were provided upon request when it was discovered during the October 12, 2021 conference call that these results were not included in the May 23, 2019 Module 2 for untreated groundwater. See **Table 1** for influent sample results. **Figure 8** is a graph of the influent chlorobenzene trend for November 2018 through October 2021.
    - **The Chlorobenzene result average was 0.15 mg/L with a maximum of 0.91 mg/L (QL 0.00038 mg/l) in the 36 samples collected monthly between November 2018 through October 2021.** *Note: These results are above the Average monthly (0.05 mg/L) and Daily Maximum (0.10 mg/L) permit limits for chlorobenzene in the effluent, which demonstrates both the ongoing need for treatment and for permit limits.*

Compliance History

DMR Data for IMP 001 *(currently listed in eDMR as Outfall 001)* **(from August 1, 2020 to July 31, 2021)**

Parameter	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20
pH (S.U.) Minimum	7.1	7.6	7.6	7.2	7.0	6.9	7.2	7.3	7.8	7.3	7.0	7.1
pH (S.U.) Instantaneous Maximum	7.4	7.7	7.6	7.2	7.2	7.3	7.3	8.4	8.3	7.8	7.5	7.8
Chlorobenzene (mg/L) Average Monthly	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene (mg/L) Daily Maximum	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Parameter	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19
pH (S.U.) Minimum	7.4	7.5	7.7	7.4	7.0	8.1	7.7	7.5	7.7
pH (S.U.) Instantaneous Maximum	7.5	7.9	7.9	7.7	7.3	8.1	8.2	7.7	8.4
Chlorobenzene (mg/L) Average Monthly	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene (mg/L) Daily Maximum	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Parameter	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18
pH (S.U.) Minimum	7.7	7.7	7.3	7.1	7.7	7.6	7.9	8.0	7.4	7.7	7.4	7.0
pH (S.U.) Instantaneous Maximum	7.9	7.7	7.5	7.9	7.7	8.4	8.6	8.4	7.6	7.8	7.4	7.3
Chlorobenzene (mg/L) Average Monthly	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene (mg/L) Daily Maximum	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Parameter	OCT-18	APR-18	MAR-18	FEB-18	JAN-18	DEC-17	NOV-17
pH (S.U.) Minimum	7.3	7.3	7.4	6.7	6.6	6.9	6.8
pH (S.U.) Instantaneous Maximum	7.4	7.5	7.5	6.9	6.7	6.9	7.0
Chlorobenzene (mg/L) Average Monthly	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene (mg/L) Daily Maximum	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Parameter	OCT-17	SEP-17	AUG-17	JUL-17	JUN-17	MAY-17	APR-17	MAR-17	FEB-17	DEC-16	NOV-16
pH (S.U.) Minimum	6.7	7.05	6.8	6.9	6.9	6.9	7.2	7.1	7.0	7.2	7.2
pH (S.U.) Instantaneous Maximum	6.9	7.25	7.0	6.9	7.1	7.2	7.3	7.5	7.1	7.3	7.2
Chlorobenzene (mg/L) Average Monthly	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.0057**	< 0.001	< 0.001
Chlorobenzene (mg/L) Daily Maximum	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.012**	< 0.001	< 0.001

Parameter	OCT-16	SEP-16	AUG-16	JUL-16	JUN-16	MAY-16	APR-16	MAR-16	FEB-16	JAN-16
pH (S.U.) Minimum	7.2	7.1	7.2	7.1	7.1	6.7	6.8	6.7	6.8	6.3
pH (S.U.) Instantaneous Maximum	7.2	7.2	7.2	7.2	7.2	6.7	6.9	6.7	6.9	6.7
Chlorobenzene (mg/L) Average Monthly	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene (mg/L) Daily Maximum	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

DMR Data for Outfall 001 *(currently listed in eDMR as Outfall 002)* **(from June 2015 to June 2021)**

Parameter	JUN-21	DEC-20	JUN-20	DEC-19	JUN-19	DEC-18	JUN-17 6/19/17	DEC-16 9/19/16	DEC-15	JUN-15
pH (S.U.) Annual Average	7.0	7.2	7.37	7.5	7.4	7.2	6.7	6.9	6.9	6.9
CBOD5 (mg/L) Annual Average	1.7	1.3	2.04	7.5	9.7	5.1	2.5	2.4	7.8	6.8
COD (mg/L) Annual Average	19.3	10.3	19.1	26.8	29.5	56	44	33	71	73
TSS (mg/L) Annual Average	2.5	8.2	19.7	144	134	115	122	17	90	105
Oil and Grease (mg/L) Annual Average	< 1.4	< 1.4	<1.4	1.5	3.6	2.3	2.08	<1.2	1.3	3.9
TKN (mg/L) Annual Average	20.1	4.9	11	14.2	93.6	94	8.3	25	51	546
Total Phosphorus (mg/L) Annual Average	0.45	0.13	0.49	1.7	15.7	16	1.1	0.8	2.3	14
Total Iron (mg/L) Annual Average	0.138	0.29	0.52	1.5	1.4	1.9	1.8	0.35	2.3	2.6

Development of Effluent Limitations

Outfall No. 001* **Design Flow (MGD)** .014 (from IMP 001 GRS discharge)
Latitude 40º 20' 51.39" **Longitude** -76º 23' 4.39"
Wastewater Description: Groundwater Cleanup Discharge (IMP 001), Stormwater

**Note: Outfall 001 was previously Outfall S01 in the permit issued December 22, 2010 (and later identified as Outfall 002 in eDMR to meet DEP naming standards that no longer allows for alphabetic characters for an Outfall number). The Outfall number has been updated to Outfall 001 with this permit renewal.*

Best Professional Judgment (BPJ) Limitations

Previous Permit Monitoring Requirements, Outfalls 001 (effective January 1, 2011 through December 31, 2015)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (SU)	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
CBOD5	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
TKN	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	2/year	Grab

If the facility were to qualify for a PAG-03, the facility's stormwater associated with industrial activity would fall under Appendix F – Chemical and Allied Products based on their SIC Codes 2879 and 2875. Appendix F requires 1/6-month sampling of pH, Chemical Oxygen Demand, TSS, Nitrate + Nitrite-Nitrogen, Total Phosphorus, Total Lead, Total Zinc, Total Iron, and Total Aluminum. Including benchmarks for Chemical Oxygen Demand and TSS.

Proposed Monitoring Requirements, Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TKN	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

- The following parameters, which are not part of Appendix F, were retained from the previous permit due to their potential to be in the stormwater: TKN (due to the fertilizers mixed at the facility) and Oil and Grease (due to the warehousing and truck traffic).
- Benchmark Values of 120 mg/L for Chemical Oxygen Demand and 100 mg/L for TSS are included in the renewed permit (typical of PAG-03, Appendix F monitoring requirements) and 30 mg/L for Oil and Grease (typical benchmark value in the PAG-03 General Permit).
- Included Sector-Specific BMPs – General BMPs from Appendix L (Land Transportation) due to the warehousing and truck traffic at the facility.
- The requirement for routine inspections on a semiannual basis is included.
- The requirement to submit an Annual Report to the regional office is included
    - *Note: The "Annual Inspection" form (previously required to be available upon request and retained as part of the PPC plan) and the "Additional Information for the Reporting of Stormwater Monitoring" form has been replaced with the Annual Report and requirement for routine inspections.*

Development of Effluent Limitations

Outfall No. 002* **Design Flow (MGD)** 0
Latitude 40º 20' 51.39" **Longitude** -76º 23' 4.39"
Wastewater Description: Stormwater

**Note: Outfall 002 was not identified in the permit issued December 22, 2010. Outfall 002 was added to capture all the stormwater discharges associated with industrial activity. Also Outfall 002 was previously used as the identifier in DEP's eDMR system for S01. Outfall 002 is entirely new outfall for this renewal.*

Best Professional Judgment (BPJ) Limitations

If the facility were to qualify for a PAG-03, the facility's stormwater associated with industrial activity would fall under Appendix F – Chemical and Allied Products based on their SIC Codes 2879 and 2875.
Appendix F requires 1/6-month sampling of pH, Chemical Oxygen Demand, TSS, Nitrate + Nitrite-Nitrogen, Total Phosphorus, Total Lead, Total Zinc, Total Iron, and Total Aluminum. Including benchmarks for Chemical Oxygen Demand and TSS.

Proposed Monitoring Requirements, Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TKN	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

- The following parameters, which are not part of Appendix F, were retained from the previous permit due to their potential to be in the stormwater: TKN (due to the fertilizers mixed at the facility) and Oil and Grease (due to the warehouse and truck traffic).
- Benchmark Values of 120 mg/L for Chemical Oxygen Demand and 100 mg/L for TSS are included in the renewed permit (typical of PAG-03, Appendix F monitoring requirements) and 30 mg/L for Oil and Grease (typical benchmark value in the PAG-03 General Permit).
- Included Sector-Specific BMPs – General BMPs from Appendix L (Land Transportation) due to the warehousing and truck traffic at the facility.
- The requirement to submit an Annual Report is included.
- The requirement for routine inspections on a semiannual basis is included.

Recommended Part C Language relating to the Stormwater Outfalls:

I am recommending the following revised Part C language to address the Stormwater Outfalls to reflect department wide changes to this language since the permit was last issued:

I. REQUIREMENTS APPLICABLE TO STORMWATER OUTFALLS

A. The permittee is authorized to discharge non-polluting stormwater from its site, alone or in combination with other wastewaters, through the following outfalls:

Outfall No.	Area Drained (ft^2)	Latitude	Longitude	Description
001	433,770	40° 20' 51.4"	-76° 23' 4.5"	Macadam parking lot, on-site buildings, and street runoff for the northern portion of the site - Impacted groundwater from a historic spill that seasonally infiltrates into stormwater collection system
002	623,080	40° 20' 51.2"	-76° 23' 4.4"	Macadam parking lot, on-site buildings and southern portion of the site

Monitoring requirements and effluent limitations for these outfalls are specified in Part A of this permit, if applicable.

B. Stormwater Annual Report. *(**see comment 1 below**)*

The permittee shall submit a complete Annual Report to the DEP office that issued the permit by May 1 each year using DEP's Annual Report template, attached to this permit. The Annual Report shall address activities under the permit for the previous calendar year. The permittee shall submit the Annual Report electronically if notified by DEP in writing. If the permittee discharges to a municipal separate storm sewer system (MS4), a copy of the Annual Report shall be submitted to the operator of the MS4.

C. Best Management Practices (BMPs). *(**see comment 2 below**)*

The permittee shall implement and, as necessary, maintain the following BMPs to remain in compliance with this permit.

1. Pollution Prevention and Exposure Minimization.

The permittee shall minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff in order to minimize pollutant discharges by either locating industrial materials and activities inside or protecting them with storm resistant coverings wherever feasible. The permittee shall implement and maintain the following measures, at a minimum:

a. Use grading, berming or curbing to prevent runoff of polluted stormwater and divert run-on away from areas that contain polluted stormwater

b. Locate materials, equipment, and activities so that potential leaks and spills are contained or able to be contained or diverted before discharge to surface waters

c. Clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants to surface waters

d. Store leaky vehicles and equipment indoors or, if stored outdoors, use drip pans and absorbents to prevent the release of pollutants to the environment.

e. Use spill/overflow protection equipment.

f. Perform all vehicle and/or equipment cleaning operations indoors, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray.

g. Drain fluids from equipment and vehicles that will be decommissioned, and, for any equipment and vehicles that will remain unused for extended periods of time, inspect at least monthly for leaks.

h. Keep all dumpster lids closed when not in use. For dumpsters and roll off boxes that do not have lids, ensure that discharges have a control (e.g., secondary containment, treatment). This General Permit does not authorize dry weather discharges from dumpsters or roll off boxes.

i. Minimize contamination of stormwater runoff from fueling areas by implementing the following BMPs where determined to be feasible: cover fueling areas; install oil/water separators or oil and grease traps in fueling area storm drains; use berms to prevent run-on to and runoff from fueling areas; use spill/overflow protection and cleanup equipment; use dry cleanup methods; and/or treat and/or recycle collected stormwater runoff.

j. Train employees routinely (no less than annually) on pollution prevention practices as contained in the PPC Plan.

2. Good Housekeeping.

The permittee shall perform good housekeeping measures in order to minimize pollutant discharges including the routine implementation of the following measures, at a minimum:

a. Implement a routine cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust or debris may accumulate to minimize the discharge of pollutants in stormwater. The cleaning and maintenance program must encompass, as appropriate, areas where material loading and unloading, storage, handling and processing occur.

b. Store materials in appropriate containers.

c. Minimize the potential for waste, garbage and floatable debris to be discharged by keeping exposed areas free of such materials, or by intercepting them before they are discharged.

d. Eliminate floor drain connections to storm sewers.

e. Use drip pans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. Drain fluids from all equipment and parts prior to disposal. Promptly transfer used fluids to the proper container; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers.

f. Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries).

g. Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a municipal or other storm water collection system that conveys pollutants off-site without proper treatment.

3. Erosion and Sediment Controls.

a. The permittee shall minimize erosion and pollutant discharges by stabilizing exposed soils and placing flow velocity dissipation devices at discharge locations to minimize channel and stream bank erosion and scour in the immediate vicinity of stormwater outfalls.

b. The permittee shall conduct all earth disturbance activities and, when applicable, shall maintain all post-construction stormwater management (PCSM) BMPs in accordance with 25 Pa. Code Chapter 102.

c. The permittee may not utilize polymers or other chemicals to treat stormwater unless written permission is obtained from DEP.

4. Spill Prevention and Responses.

The permittee shall minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop a PPC Plan for effective responses to such releases. The permittee shall conduct the following spill prevention and response measures, at a minimum:

a. Maintain an organized inventory of materials on-site. Plainly label containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides") that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur.

b. Implement procedures for material storage and handling, including the use of secondary containment and barriers between material storage and traffic areas, or a similarly effective means designed to prevent the discharge of pollutants from these areas.

c. Develop and implement employee and contractor training on the procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. The permittee shall conduct periodic training, no less than annually, and document the training on the Annual Report specified in paragraph B of this section.

d. Keep spill kits on-site, located near areas where spills may occur or where a rapid response can be made.

e. Notify appropriate facility personnel when a leak, spill, or other release occurs.

f. To the extent possible, eliminate or reduce the number and amount of hazardous materials and waste by substituting non-hazardous or less hazardous materials of equal function, as determined by the permittee.

g. Clean up leaks, drips, and other spills without using large amounts of water or liquid cleaners. Use absorbents for dry cleanup whenever possible.

When a leak, spill or other release occurs during a 24-hour period that contains a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under 40 CFR Parts 110, 117 or 302, the permittee shall, in addition to the notification requirements contained in Part A III.C.4 of this permit, notify the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of 40 CFR Parts 110, 117, and 302 as soon as the permittee becomes aware of the discharge.

5. Site-Specific BMPs.

a. Vehicle and Equipment Storage Areas.
Minimize the potential for stormwater exposure to leaky or leak-prone vehicles/equipment awaiting maintenance through implementation of control measures including but not limited to the following: use drip pans under vehicles/equipment; store vehicles and equipment indoors; install berms or dikes; use absorbents; roof or cover storage areas; and clean pavement surfaces to remove oil and grease.

b. Material Storage Areas.
Maintain all material storage vessels (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of stormwater and plainly label them (e.g., "Used Oil," "Spent Solvents"). To minimize discharges of pollutants in stormwater from material storage areas, implement control measures including but not limited to the following: store materials indoors; install berms/dikes around material storage areas; minimize runoff of stormwater to the areas; use dry cleanup methods; and treat and/or recycle collected stormwater runoff.

c. Vehicle and Equipment Cleaning and Maintenance Areas.
Minimize contamination of stormwater runoff from all areas used for vehicle/equipment cleaning through implementation of control measures including but not limited to the following: perform all cleaning operations indoors; use dry cleanup methods; ensure that all wash water drains to a proper collection system (i.e., not the stormwater drainage system); treat and/or recycle collected wash water; or other equivalent measures.

D. Routine Inspections. *(**see comment 3 below**)*

1. The permittee shall visually inspect the following areas and BMPs on a semiannual basis (calendar periods), at a minimum:

a. Areas where industrial materials or activities are exposed to stormwater.

b. Areas identified in the PPC Plan as potential pollutant sources.

c. Areas where spills or leaks have occurred in the past three years.

d. Stormwater outfalls and locations where authorized non-stormwater discharges may commingle.

e. Physical BMPs used to comply with this permit.

At least once each calendar year, the routine inspection must be conducted during a period when a stormwater discharge is occurring.

2. The permittee shall evaluate and document the following conditions, at a minimum, in the Annual Report required by paragraph B of this section through required inspections:

a. Raw materials, products or wastes that may have or could come into contact with stormwater.

b. Leaks or spills from equipment, drums, tanks and other containers.

c. Off-site tracking of industrial or waste materials, or sediment where vehicles enter or exit the site.

d. Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas.

e. Control measures or BMPs needing replacement, maintenance or repair.

f. The presence of authorized non-stormwater discharges that were not identified in the permit application and non-stormwater discharges not authorized by this permit.

E. Preparedness, Prevention and Contingency (PPC) Plan

1. The permittee shall develop and implement a PPC Plan in accordance with 25 Pa. Code § 91.34 following the guidance contained in DEP's "Guidelines for the Development and Implementation of Environmental Emergency Response Plans" (DEP ID 400-2200-001), its NPDES-specific addendum and the minimum requirements below.

a. The PPC Plan must identify all potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges from the facility.

b. The PPC Plan must describe preventative measures and BMPs that will be implemented to reduce or eliminate pollutants from coming into contact with stormwater resulting from routine site activities and spills.

c. The PPC Plan must address actions that will be taken in response to on-site spills or other pollution incidents.

d. The PPC Plan must identify areas which, due to topography or other factors, have a high potential for soil erosion, and identify measures to limit erosion. Where necessary, erosion and sediment control measures must be developed and implemented in accordance with 25 Pa. Code Chapter 102 and DEP's "Erosion and Sediment Pollution Control Manual" (DEP ID 363-2134-008).

e. The PPC Plan must address security measures to prevent accidental or intentional entry which could result in an unintentional discharge of pollutants.

f. The PPC Plan must include a plan for training employees and contractors on pollution prevention, BMPs, and emergency response measures. This training must be conducted in accordance with paragraph C.4.c of this section.

g. If the facility is subject to SARA Title III, Section 313, the PPC Plan must identify releases of "Water Priority Chemicals" within the previous three years. Water Priority Chemicals are those identified in EPA's "Guidance for the Determination of Appropriate Methods for the Detection of Section 313 Water Priority Chemicals" (EPA 833-B-94-001, April 1994). The Plan must include an evaluation of all activities that may result in the stormwater discharge of Water Priority Chemicals.

h. Spill Prevention Control and Countermeasure (SPCC) plans may be used to meet the requirements of this section if the minimum requirements are addressed.

2. The permittee shall review and if necessary update the PPC Plan on an annual basis, at a minimum, and when one or more of the following occur:

a. Applicable DEP or federal regulations are revised, or this permit is revised.

b. The PPC Plan fails in an emergency.

c. The facility's design, industrial process, operation, maintenance, or other circumstances change in a manner that materially increases the potential for fires, explosions or releases of toxic or hazardous constituents; or which changes the response necessary in an emergency.

d. The list of emergency coordinators or equipment changes.

e. When notified in writing by DEP.

The permittee shall maintain all PPC Plan updates on-site, make the updates available to DEP upon request, and document the updates in Annual Reports.

F. Stormwater Monitoring Requirements.

1. The permittee shall conduct monitoring of its stormwater discharges at the representative outfalls identified in Part A of this permit, if applicable. The permittee shall document stormwater sampling event information and no exposure conditions for each calendar year on the Annual Report required by paragraph B of this section.

2. The permittee shall, upon written notice from DEP, install inlets, pipes, and/or other structures or devices that are considered necessary in order to conduct representative stormwater sampling, in accordance with a schedule provided by DEP.

3. The permittee shall collect all samples from discharges resulting from a storm event that is greater than 0.1 inch in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The 72-hour storm interval is waived when the preceding storm did not yield a measurable discharge, or if the permittee is able to document that a less than 72-hour interval is representative for local storm events during the sample period.

4. The permittee shall collect all grab samples within the first 30 minutes of a discharge, unless the permittee determines that this is not possible, in which case grab samples must be collected as soon as possible after the first 30 minutes of a discharge. The permittee shall explain why samples could not be collected within the first 30 minutes of any discharge on the Annual Report required by paragraph B of this section.

5. The permittee shall collect stormwater samples at times when commingling with non-stormwater discharges is not occurring or at locations prior to the commingling of non-stormwater discharges, unless Part A of this permit recognizes commingling of stormwater and non-stormwater discharges.

6. In the event that stormwater discharge concentrations for a parameter exceeds the benchmark values identified below at the same outfall for two or more consecutive monitoring periods, the permittee shall develop a corrective action plan to reduce the concentrations of the parameters in stormwater discharges. The permittee shall submit the corrective action plan to DEP within 90 days of the end of the monitoring period triggering the need for the plan, and shall implement the plan immediately upon submission or at a later time if authorized by DEP in writing. The permittee shall, in developing the plan, evaluate alternatives to reduce stormwater concentrations and select one or more BMPs or control measures for implementation, unless the

permittee can demonstrate in the plan that (1) the exceedances are solely attributable to natural background sources; (2) no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice; or (3) further pollutant reductions are not necessary to prevent stormwater discharges from causing or contributing to an exceedance of applicable water quality standards. *(**see comment 4 below**)*

Parameter	Benchmark Value (mg/L)
Total Suspended Solids (TSS)	100
Chemical Oxygen Demand (COD)	120
Oil and Grease	30

Comments regarding the above recommended Part C language relating to Stormwater Outfalls:

1. ***Relating to B:*** *The "Annual Inspection" form and the "Additional Information for the Reporting of Stormwater Monitoring" form has been replaced with the more comprehensive Annual Report. Note: previously the "Annual Inspection" form was required to be available upon request and retained as part of the PPC plan. The Annual Report is now required to be submitted annually to the DEP office that issued the permit.*
2. ***Relating to C****: BMPs have been expanded since the last permit issued. And includes additional site-specific BMPs.*
3. ***Relating to D:*** *Routine inspections are now required on a semiannual basis (previously this was only required once per year).*
4. ***Relating to F.6:*** *Benchmark values for some pollutants have been added based on recommendations from the 2016 NPDES PAG-03 General Permit for Discharges of Stormwater Associated with Industrial Activity.*

Development of Effluent Limitations

Outfall No. IMP 001* **Design Flow (MGD)** 0.0144
Latitude 40º 20' 52.87" **Longitude** -76º 23' 3.23"
Wastewater Description: Internal Monitoring Point to monitor discharge from the GRS

**Note: IMP 001 was previously Outfall 001 in the permit issued December 22, 2010. The Outfall number was updated to clarify that this is for an internal monitoring point and not at the point of discharge.*

Chemical Additives. None reported

Development of Technology Based Effluent Limits – Chlorobenzene
The WQBEL for Chlorobenzene are as follows: Fish and Aquatic Life Continuous Concentration criteria is 240 ug/L, Fish and Aquatic Life Maximum Concentration criteria is 1200 ug/L, and HHC is 100 ug/L.
The MCL for Chlorobenzene is 100 ug/L.

As in other groundwater remediation projects, technology-based treatment is required where the WQBEL requires little or no treatment. In 2004, DEP committed to developing technology limits.

Per the 2004 protection report, the permit writer referenced the EPA Treatability Database to determine the percent removal or effluent concentration achievable by various technologies. Granular activated carbon, powdered activated carbon, or air stripping are the most likely treatment options. When influent concentrations were less than 1 mg/L, treatment removals were 92 to 97% resulting in effluent concentrations from 5 ug/L to <14 ug/L. The wastewater sources were Superfund sites or industrial. When the influent concentrations were 1 to 10 mg/L, the powdered and granulated activated carbon percent removals were 99% (<10 ug/L) and stripping was 77 % (1800 mg/L). The wastewater sources were hazardous leachate, synthetic or industrial wastewater. The air stripping was synthetic wastewater with a chlorobenzene level of 7.8 mg/L based on the percent removal. No information was presented on the synthetic wastewater that would indicate if chlorobenzene was in a form that was difficult to air strip that would explain the lower percent removal.

The permit writer focused on the 100 to 1000 ug/L as this is the likely concentration range following mixing of the groundwater infiltration. If the minimum percent removal was 90% and the chlorobenzene concentration is 1000 ug/L, the effluent will be a maximum of 100 ug/L. At 97% removal, the effluent concentration would 30 ug/L. If a percent 95% removal is assumed, the target level is 50 ug/L at a wastewater concentration of 1000 ug/L.

It is recommended to maintain the limits developed in 2004.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Max	Min	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	Report	XXX	Report	Report	2/month	Grab
Chlorobenzene	XXX	XXX	XXX	0.05	0.10	0.12	2/month	Grab

- **The Chlorobenzene result average was 0.15 mg/L with a maximum of 0.91 mg/L (QL 0.00038 mg/l) in the 36 samples collected monthly between November 2018 through October 2021 according to the revised Module 2 received on November 12, 2021.** *Note: These results are above the Average monthly (0.05 mg/L) and Daily Maximum (0.10 mg/L) permit limits for chlorobenzene in the effluent, which demonstrates both the ongoing need for treatment and continued permit limits.*

Recommended Part C Language relating to the Groundwater Remediation System:

I am recommending the addition of the following Part C language to specifically address the Groundwater Remediation System (GRS) and chlorobenzene:

GROUNDWATER CLEANUP – Granulated Activated Carbon. Chlorobenzene.

A. If the applicable standard or effluent guideline limitation relating to the application for Best Available Technology Economically Achievable (BAT) or to Best Conventional Technology (BCT) is developed by the Department, or by EPA for this type of industry, and if such standard or limitation is more stringent than the corresponding conditions of this permit (or if it controls pollutants not covered by this permit), then the Department reserves the right to modify, or to revoke and reissue the permit to conform with that standard or limitation.

B. Sludges and other solids shall be handled and disposed of in compliance with 25 Pa. Code, Chapters 262, 263, and 264 (related to permits and requirements for landfilling and storage of hazardous sludge) and applicable federal regulations, the Federal Clean Water Act, RCRA and their amendments. The permittee is responsible to obtain or assure that contracted agents have all necessary permits and approvals for the handling, storage, transport and disposal of solid waste materials generated as a result of wastewater treatment.

C. A GRS Annual Report shall be submitted annually to the Clean Water Program on January 28 (for the previous calendar year). The Groundwater Remediation System (GRS) Annual Report shall address activities under the permit for the previous calendar year including groundwater quality data. If modification to the operation is proposed, details must be submitted along with the GRS Annual Report. *(**see comment 1 below**)*

D. A minimum of monthly sampling of the influent to the GRS for chlorobenzene is required. The results shall be included on the GRS Annual Report. *(**see comment 2 below**)*

E. The GRS shall continue until a minimum of one year's data of the untreated groundwater have documented a concentration that is protective of the environment. The cleanup operation shall not be considered terminated until the permittee further documents for a minimum of one year after treatment has ceased (samples taken quarterly) that a concentration of pollutants protective of the environment has been maintained in the untreated groundwater. Written approval to terminate must be received from DEP's Clean Water Program prior to shut down. *(**see comment 3 below**)*

F. The permittee shall operate the treatment facilities approved herein on a continual basis. If accidental breakdown or normal periodic maintenance should cause cessation of operation, the permittee shall take satisfactory measures to ensure the treatment works are placed back in operation at the earliest possible time. The permittee shall orally report to the Department within 24 hours of an unanticipated temporary shutdown of the treatment facility that is longer than 24 hours in duration or at least 24 hours prior to an anticipated maintenance shutdown.

Comments regarding the above recommended Part C language relating to Groundwater Cleanup:

1. ***Relating to C:*** *I have developed a Groundwater Remediation System (GRS) annual report, which was adapted from the Annual Report required by the PAG-05 NPDES General Permit for Discharges from Petroleum Product Contaminated Groundwater Remediation Systems (PPCGRS), in order to better track the effectiveness of the GRS.*
2. ***Relating to D:*** *Currently there is not a requirement to sample the influent; however, I am recommending that the influent should be sampled on a quarterly basis throughout the NPDES permit cycle to better access the effectiveness of the treatment system and determine its necessity.*
3. ***Relating to E:*** *The addition of this language was adapted from standard Part C Groundwater Cleanup language and provides a potential pathway to terminate the GRS if influent sampling indicates Chlorobenzene concentrations are protective of the environment.*

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

IMP 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.) Internal Monitoring Point	XXX	XXX	6.0 Daily Min	XXX	XXX	9.0	2/month	Grab
Chlorobenzene Internal Monitoring Point	XXX	XXX	XXX	0.05	0.10	0.12	2/month	Grab

Compliance Sampling Location: Effluent from GRS

Other Comments: Internal Monitoring Point to Outfall 001

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
CBOD5	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TKN	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 001

Other Comments: previously S01

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 002, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
CBOD5	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Oil and Grease	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TKN	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 002

Other Comments: previously S02

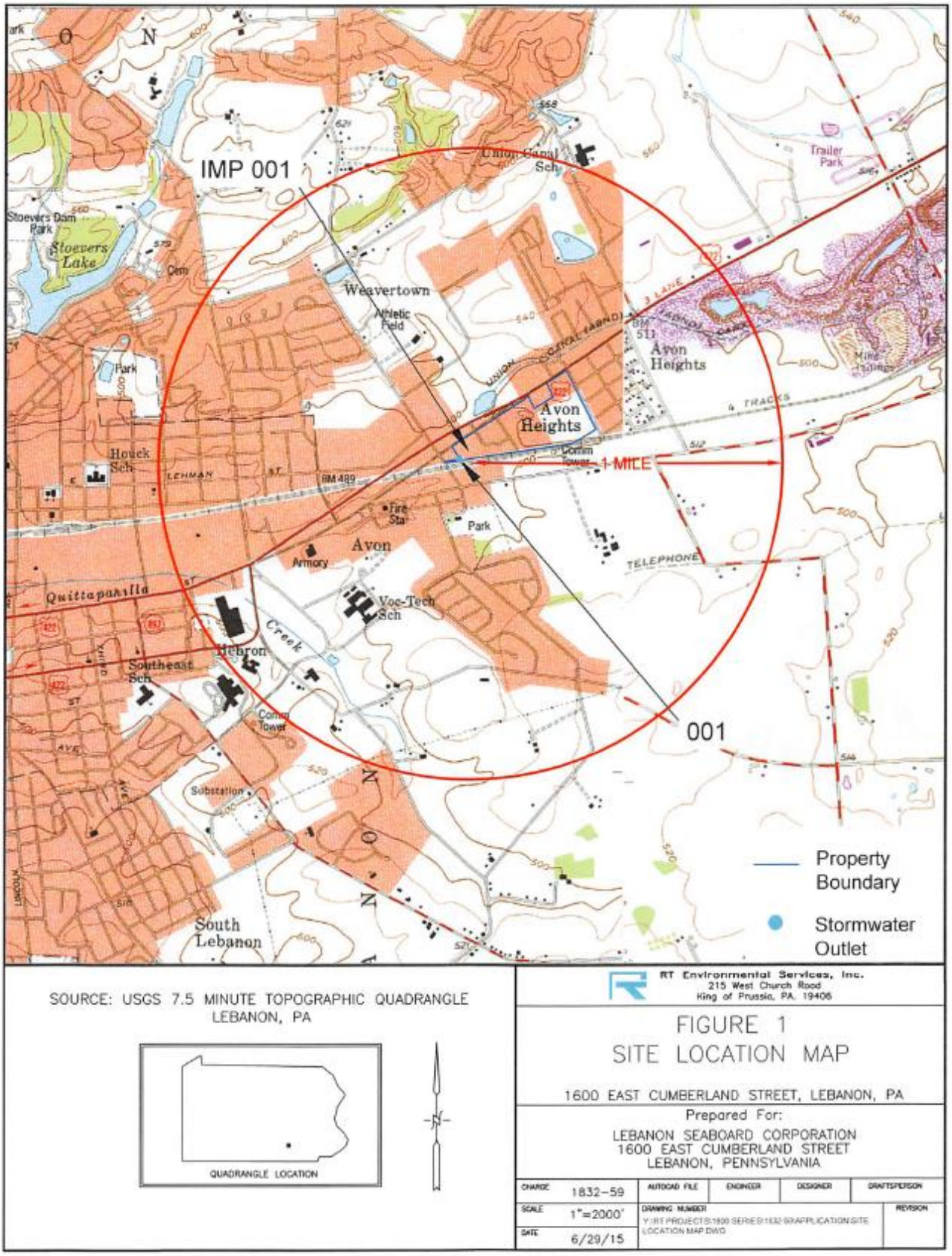

Figure 1. Site Location Map.

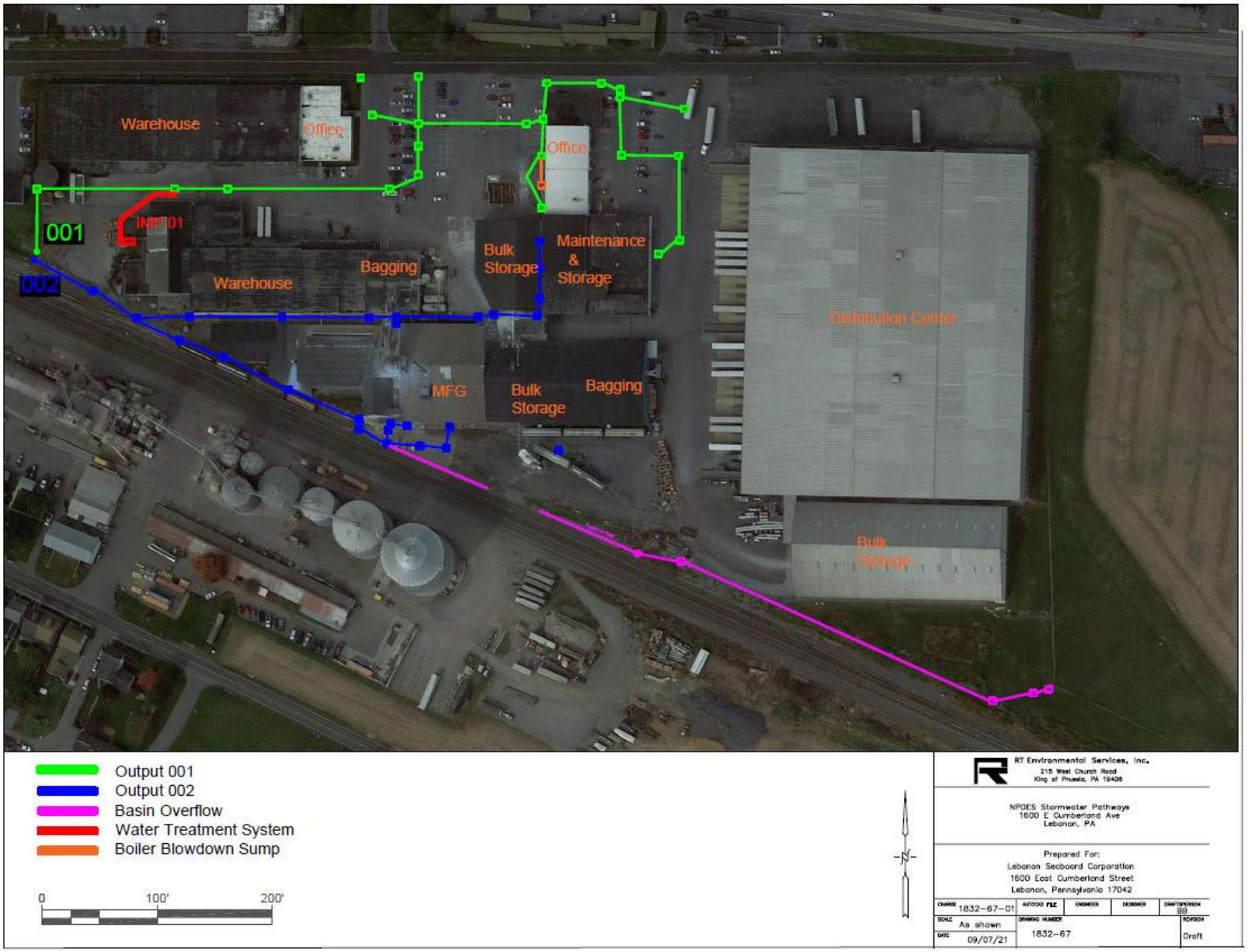

Figure 2. Site Layout and Stormwater system diagram. (*NPDES Permit Drawing received November 1, 2021 via email*).

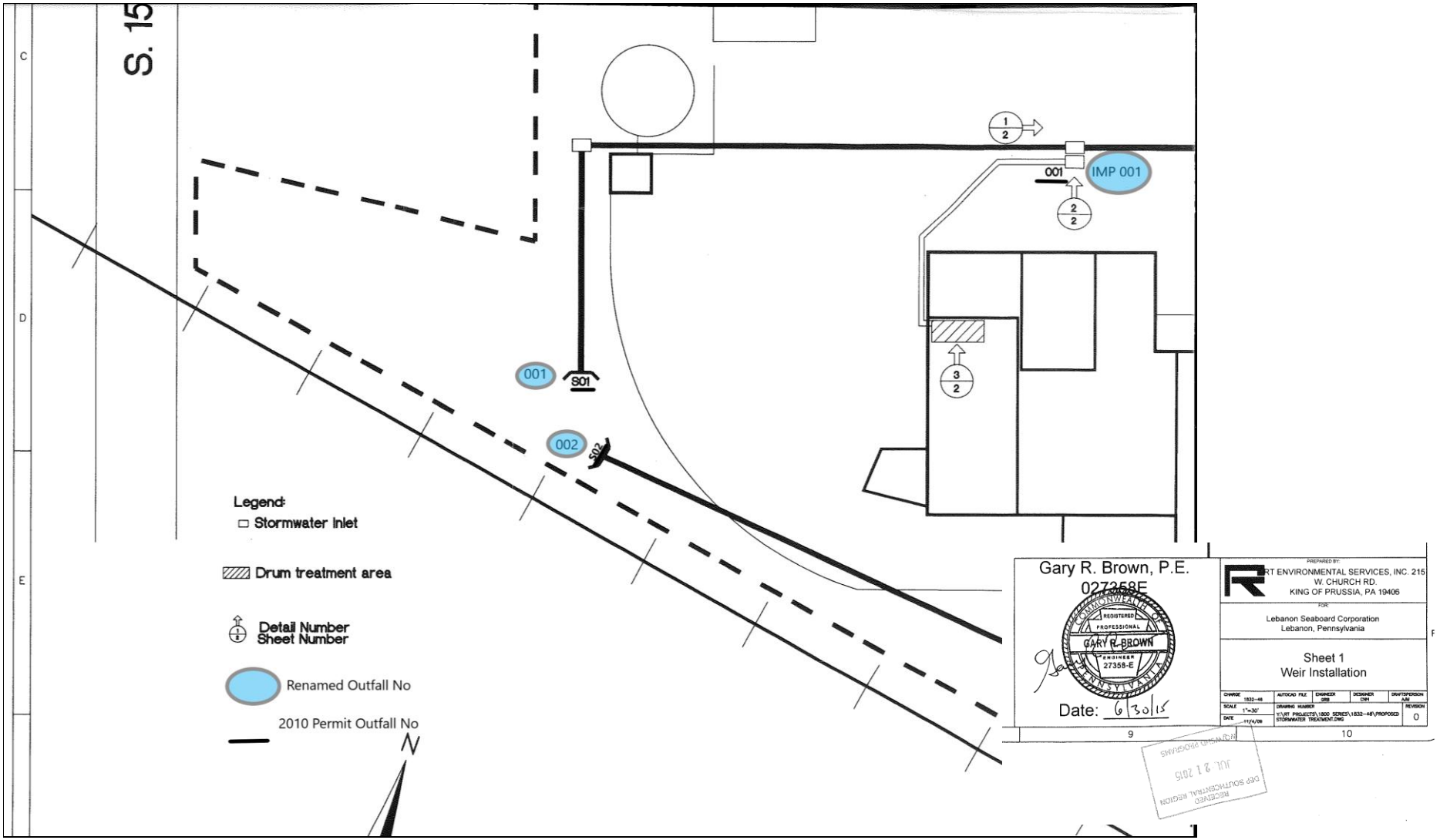

Figure 3. Site layout comparing 2010 NPDES Permit outfall numbers to the proposed permit outfall numbers. (base diagram taken from Sheet 1 Weir Installation included with the renewal application received on July 21, 2015, which was edited to indicate the outfall numbers proposed for the renewal)

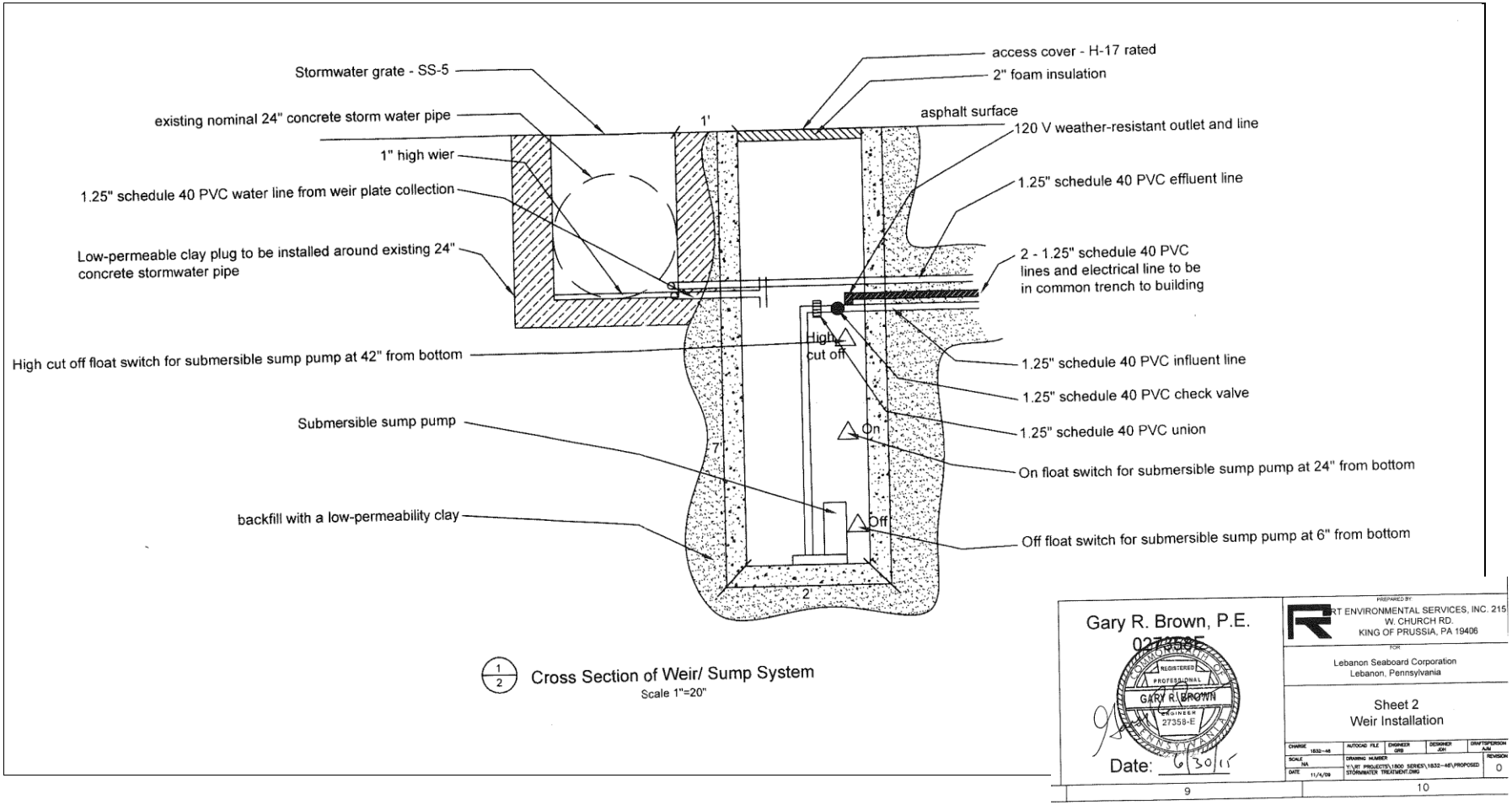

Figure 4. Cross section of the weir / sump system at location 1/2 on Figure 3. (taken from Sheet 2 Weir Installation included with the renewal application received on July 21, 2015)

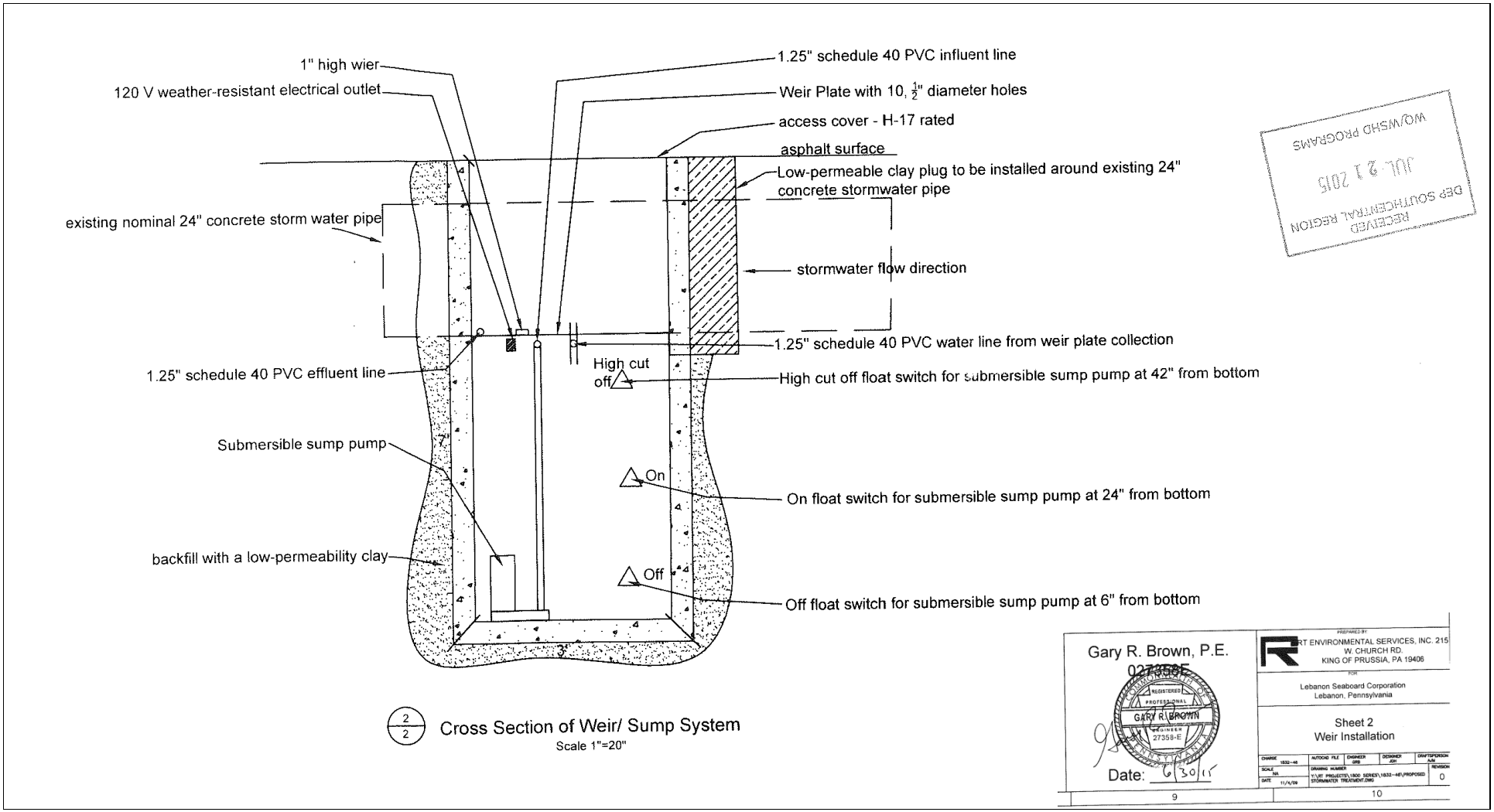

Figure 5. Cross section of the weir / sump system at location 2/2 on Figure 3. (taken from Sheet 2 Weir Installation included with the renewal application received on July 21, 2015)

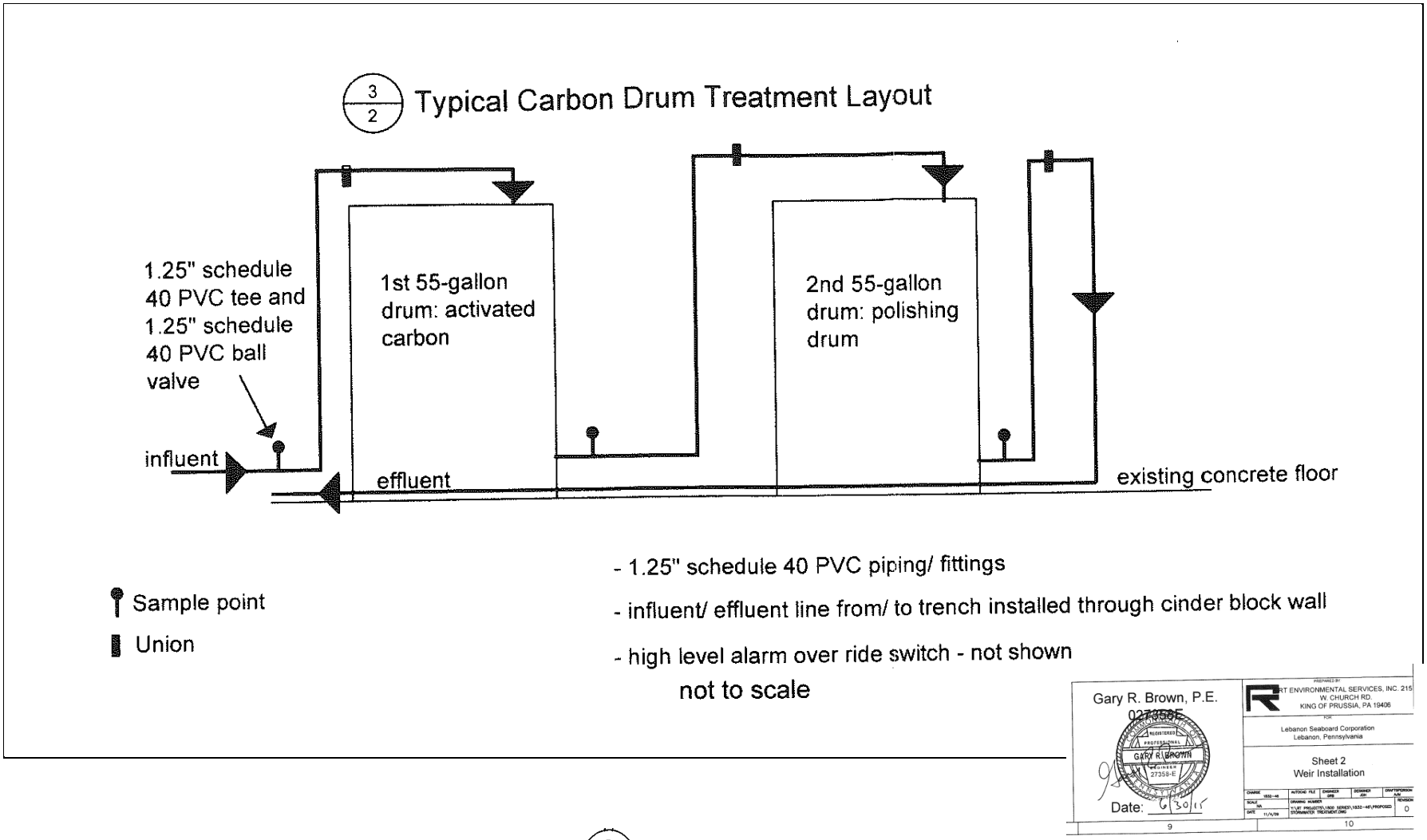

Figure 6. Cross section of the weir / sump system at location 3/2 on Figure 3. (taken from Sheet 2 Weir Installation included with the renewal application received on July 21, 2015)

General Sequence of Construction

1. Remove material for installation of 2' X 3' X 7' concrete vault with H-17 rated access cover.
   - H-17 access cover should be lined on bottom side with 2" foam insulation.
2. Install weir in SS-5 and install PVC pipe to concrete vault.
3. Excavate trench from new vault to building where drum treatment system is located - see sheet 1
4. Install PVC influent and effluent lines, and electrical lines in trench from vault to treatment system.
5. Backfill trench with standard backfill material and repair asphalt
6. Install effluent line from trench to existing 24" concrete stormwater pipe down stream of weir.
7. Install low-permeability clay plug around existing 24" concrete stormwater pipe upstream of SS-5 inlet.
8. Backfill concrete vault with low-permeability clay.
9. Repair asphalt around SS-5 inlet and new concrete vault
10. Install sump pump and float system and connect to influent PVC line.
11. Construct carbon drum treatment system and electrical connections.

List of Materials

- 1 - 1" high weir - steel or stainless steel
- Stainless steel sump pump with piggyback float switch
- 1 - 1.25" schedule 40 PVC check valve
- 4 - 1.25" schedule 40 PVC unions
- 4 - 1.25" schedule 40 PVC tee's
- 16 - 90° schedule 40 PVC elbows
- 4 - 45° schedule 40 PVC elbows
- 3 - 1.25" schedule 40 PVC ball valves
- 2 - 55 gallon drums containing granular activated carbon
- 1 - 120 V weather-resistant outlet
- 1 - H-17 rated access cover with insulation on bottom side
- 270' of schedule 40 PVC 1.25" pipe for influent line, effluent line, weir water line, and treatment area
- 120' of weather-resistant electrical line (to run from building to pump)
- 1 - 2'x3'x7' concrete vault
- 6 cubic yards of low-permeability clay backfill material
- High level cut off float and override switch

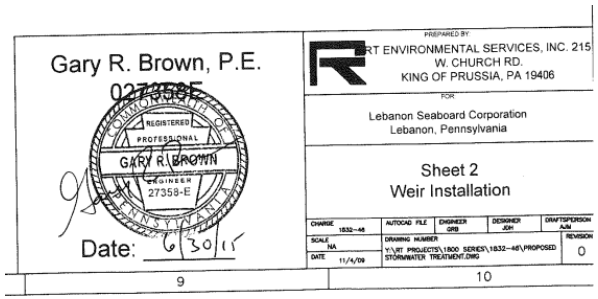

Figure 7. The General Sequence of Construction and List of Materials. (taken from Sheet 2 Weir Installation included with the renewal application received on July 21, 2015)

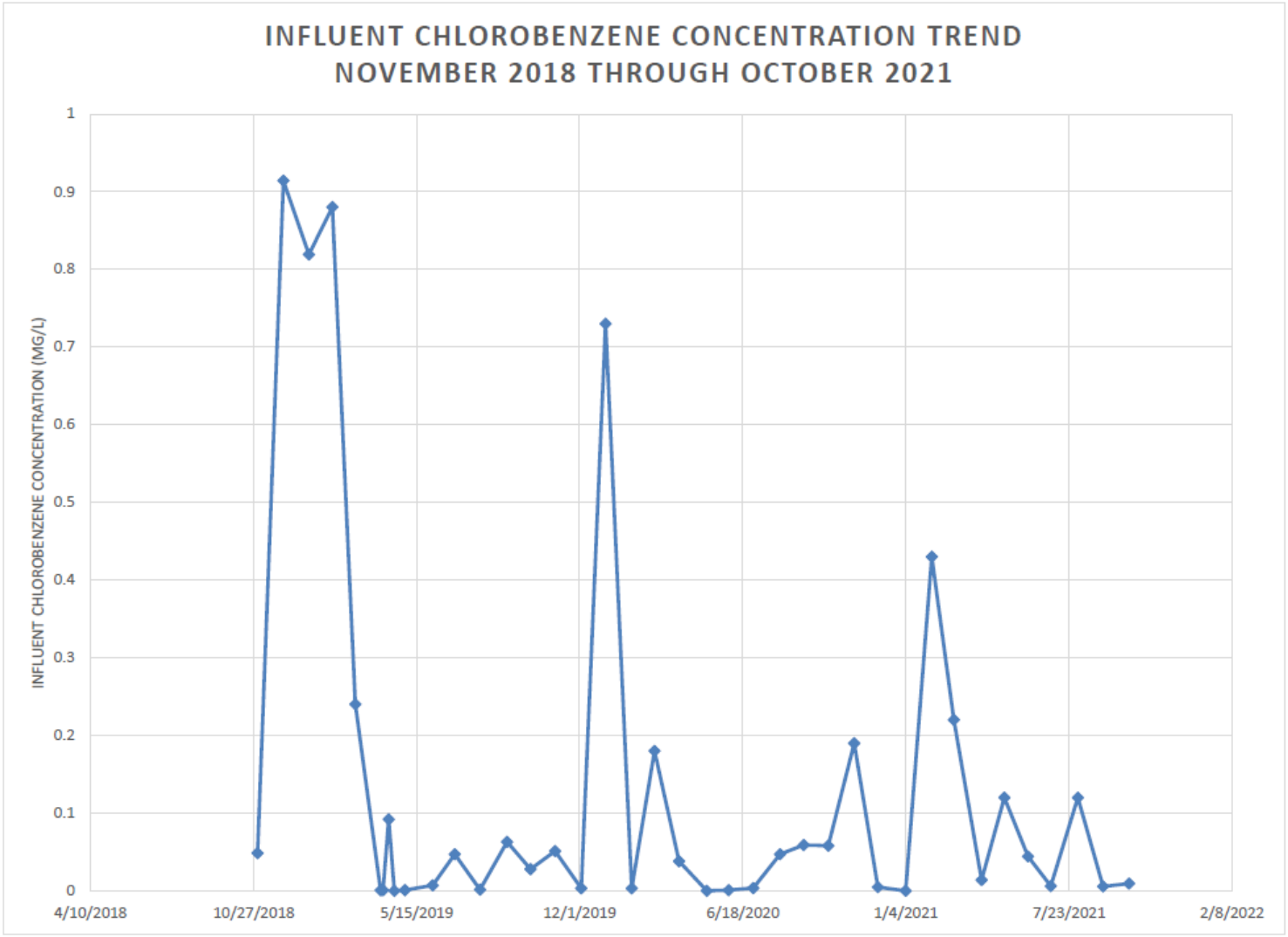

Figure 8. Graph of the influent chlorobenzene trend for November 2018 through October 2021 (received via email on November 12,2021)

Stormwater Abatement System
pH and Chlorobenzene Measurements
November 2018 through October 2021

Date	Influent pH	Chlorobenzene Concentrations		
		Influent		Effluent
		Pre-treatment	Post-treatment	Post-Polish
		mg/l	mg/l	mg/l
11/1/2018	7.03	0.0485	<0.0005	<0.0005
11/15/2018	7.3			<0.0005
12/3/2018	7.42	0.914	0.001	<0.0005
12/17/2018	7.41			<0.0005
1/3/2019	7.71	0.819	0.00175	<0.0005
1/17/2019	7.76			<0.00038
2/1/2019	7.56	0.88	0.0022	<0.00038
2/15/2019	7.44			<0.00038
3/1/2019	7.98	0.24	<0.00038	<0.00038
3/15/2019	8.38			<0.00038
4/1/2019	8.05	0.00045	<0.00038	<0.00038
4/4/2019	8.56	0.00073		<0.00038
4/11/2019	8.06	0.092		<0.00038
4/18/2019	7.88	<0.00038		<0.00038
5/1/2019	8.36	0.001	<0.00038	<0.00038
5/15/2019	7.70			<0.00038
5/22/2019	7.58			<0.00038
6/4/2019	7.70	0.0071	<0.00038	<0.00038
6/17/2019	7.73			<0.00038
7/1/2019	7.9	0.047	<0.00038	<0.00038
7/15/2019	7.09			<0.00038
8/1/2019	7.31	0.0015	<0.00038	<0.00038
8/16/2019	7.46			<0.00038
9/3/2019	7.68	0.063	<0.00038	<0.00038
9/16/2019	7.65			<0.00038
10/2/2019	7.94	0.028	<0.00038	<0.00038
10/15/2019	7.70			<0.00038
11/1/2019	8.36	0.051	<0.00038	<0.00038
11/15/2019	7.74			<0.00038
12/3/2019	7.65	0.0033	<0.00038	<0.00038
12/18/2019	7.51			<0.00038
1/2/2020	8.23	0.73	<0.00038	<0.00038
1/17/2020	7.70			<0.00038
2/3/2020	8.13	0.0031	<0.00038	<0.00038
2/14/2020	8.09			<0.00038
3/2/2020	7.28	0.18	<0.00038	<0.00038
3/16/2020	7.01			<0.00038
4/1/2020	7.40	0.038	<0.00038	<0.00038
4/15/2020	7.74			<0.00038
5/5/2020	7.65	<0.00038	<0.00038	<0.00038
5/15/2020	7.17			<0.00038

Stormwater Abatement System
pH and Chlorobenzene Measurements
November 2018 through October 2021

Date	Influent pH	Chlorobenzene Concentrations		
		Influent		Effluent
		Pre-treatment	Post-treatment	Post-Polish
		mg/l	mg/l	mg/l
6/1/2020	7.85	0.00089	<0.00038	<0.00038
6/15/2020	7.47			<0.00038
7/1/2020	7.35	0.0036	<0.00038	<0.00038
7/15/2020	7.51			<0.00038
8/3/2020	7.82	0.047	<0.00038	<0.00038
8/14/2020	7.07			<0.00038
9/1/2020	7.48	0.059	<0.00038	<0.00038
9/15/2020	7.01			<0.00038
10/1/2020	7.29	0.058	<0.00038	<0.00038
10/15/2020	7.75			<0.00038
11/2/2020	8.29	0.19	<0.00038	<0.00038
11/16/2020	7.79			<0.00038
12/1/2020	8.44	0.0046	<0.00038	<0.00038
12/15/2020	7.25			<0.00038
1/4/2021	7.21	<0.00038	<0.00038	<0.00038
1/18/2021	7.26			<0.00038
2/5/2021	7.26	0.43	0.00045	<0.00038
2/23/2021	6.94			<0.00038
3/4/2021	7.16	0.22	<0.00038	<0.00038
3/18/2021	7.01			<0.00038
4/7/2021	7.23	0.014	<0.00038	<0.00038
4/20/2021	7.21			<0.00038
5/5/2021	7.55	0.12	<0.00038	<0.00038
5/18/2021	7.64			<0.00038
6/3/2021	7.61	0.044	<0.00038	<0.00038
6/16/2021	7.68			<0.00038
7/1/2021	7.10	0.006	<0.00038	<0.00038
7/19/2021	7.42			<0.00038
8/3/2021	7.14	0.12	<0.00038	<0.00038
8/17/2021	7.01			<0.00038
9/3/2021	7.43	0.0055	<0.00038	<0.00038
9/16/2021	7.30			<0.00038
10/5/2021	7.24	0.0094	<0.00038	<0.00038

Table 1. Chlorobenzene Concentrations November 2018 through October 2021: Influent and Effluent from Groundwater Remediation System (GRS)