



Shell Chemical Appalachia LLC
300 Frankfort Rd.
Monaca, PA 15061

November 27, 2023

Mr. Ryan Decker
Clean Water Program
PA Department of Environmental Protection
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222

NOV 28 2023

CLEAN WATER
DEP, SOUTHWEST REGIONAL OFFICE

**RE: Water Quality Management (WQM) Permit 0417201 Amendment
Shell Chemical Appalachia LLC
Beaver County, Pennsylvania**

Dear Mr. Decker:

Shell Chemical Appalachia LLC ("Shell") has installed new temporary equipment was installed in the Wastewater Treatment Plant (WWTP) under a Temporary Discharge Authorization (TDA) approved by the Department on June 21, 2023. The equipment is to aid in the removal of oil and gas and VOCs from the off-spec wastewater before routing to Biotreaters.

The enclosed amendment is to add this temporary equipment into our existing WQM permit until permanent equipment can be installed. However, at this point the plant is not fully operational (about 70%) and as with any new facility, evaluations/modifications are being conducted to try and optimize operations. It is Shell's intent to operate these systems throughout the startup process (including during initial full operations) to obtain data and evaluate potential operational changes to engineer the permanent equipment for the WWTP. Once the evaluation process is complete, Shell will present this information to the Department to determine proper permitting steps for any final design.

Condition 12 of the TDA states that the TDA will expire on January 5, 2024, unless Shell submits a written request to the Department to extend the letter TDA approval. Please consider this letter/application as Shell's written request to extend the TDA approval period, if needed until the WQM permit is amended.

Shell is requesting the ability to operate this equipment until the Department reviews and issues the amended WQM permit. Please let us know if there is any issue with extending the TDA until an amended WQM is issued as operating the temporary equipment is critical to help meet compliance requirements.

If you have any questions or require additional information, please contact me at kimberly.kaal@shell.com or 724.709.2467.

Sincerely,

**Kimberly
Kaal**
Digitally signed by
Kimberly Kaal
DN: cn=Kimberly Kaal
Date: 2023.11.21
13:34:10 -05'00'

Kimberly Kaal
Environmental Manager, Attorney-in-Fact
Shell Chemical Appalachia LLC

Enclosures - WQM Application including Engineers Report

TABLE OF CONTENTS

	Section
General Information Form (GIF) (8000-PM-IT0001).....	1
Application Fee	2
Acts 14/67/68/127 Notifications and Receipts	3
Evidence of newspaper publication for 4 consecutive weeks.....	4
PADEP WQM Checklist, Forms and Modules	5
Design Engineers Report.....	6

Section 1

General Information Form (GIF)



RECEIVED
NOV 28 2023

CLEAN WATER
SOUTHWEST REGIONAL OFFICE

GENERAL INFORMATION FORM – AUTHORIZATION APPLICATION

Before completing this General Information Form (GIF), read the step-by-step instructions provided in this application package. This form is used by the Department of Environmental Protection (DEP) to inform our programs regarding what other DEP permits or authorizations may be needed for the proposed project or activity. This version of the General Information Form (GIF) must be completed and returned with any program-specific application being submitted to the DEP.

Related ID#s (If Known) Client ID# <u>311950</u> APS ID# _____ Site ID# <u>102360</u> Auth ID# _____ Facility ID# _____		DEP USE ONLY Date Received & General Notes
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CLIENT INFORMATION

DEP Client ID# 311950	Client Type / Code LLC	Dun & Bradstreet ID#	
Legal Organization Name or Registered Fictitious Name Shell Chemical Appalachia LLC		Employer ID# (EIN) 46-1624986	Is the EIN a SSN? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> NO
State of Incorporation or Registration of Fictitious Name		<input type="checkbox"/> Corporation <input checked="" type="checkbox"/> LLC <input type="checkbox"/> Partnership <input type="checkbox"/> LLP <input type="checkbox"/> LP <input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Association/Organization <input type="checkbox"/> Estate/Trust <input type="checkbox"/> Other	
Individual Last Name	First Name	MI	Suffix
Additional Individual Last Name	First Name	MI	Suffix
Mailing Address Line 1 300 Frankfort Rd		Mailing Address Line 2	
Address Last Line – City Monaca	State PA	ZIP+4 15061	Country Beaver
Client Contact Last Name Kaal	First Name Kimberly	MI	Suffix
Client Contact Title Environmental Manager (Attorney-in-Fact)	Phone 724-709-2467	Ext	Cell Phone
Email Address Kimberly.kaal@shell.com	FAX		

SITE INFORMATION

DEP Site ID# 102360	Site Name Shell Polymers Monaca Site																				
EPA ID#	Estimated Number of Employees to be Present at Site																				
Description of Site Petrochemical Complex																					
Tax Parcel ID(s):																					
County Name(s) Beaver	Municipality(ies) Potter																				
	<table border="1"> <tr> <th>City</th> <th>Boro</th> <th>Twp</th> <th>State</th> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td>PA</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </table>	City	Boro	Twp	State	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
City	Boro	Twp	State																		
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																			
Site Location Line 1 300 Frankfort Rd	Site Location Line 2																				
Site Location Last Line – City Monaca	State ZIP+4 PA 15061																				
Detailed Written Directions to Site From Pittsburgh International Airport – 376 North to Exit 39 (Monaca), turn left onto Rt 18 South and proceed for 1.5 miles, then turn right at light into plant.																					

Site Contact Last Name Kaal	First Name Kimberly	MI	Suffix
Site Contact Title Environmental Manager (Attorney-in-Fact)		Site Contact Firm Shell	
Mailing Address Line 1 300 Frankfort Rd		Mailing Address Line 2	
Mailing Address Last Line – City Monaca		State PA	ZIP+4 15061
Phone 724-709-2467	Ext	FAX	Email Address Kimberly.kaal@shell.com
NAICS Codes (Two- & Three-Digit Codes – List All That Apply) 32 and 22			6-Digit Code (Optional)
Client to Site Relationship OWN			

FACILITY INFORMATION

Modification of Existing Facility	Yes	No
1. Will this project modify an existing facility, system, or activity?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Will this project involve an addition to an existing facility, system, or activity? <i>If "Yes", check all relevant facility types and provide DEP facility identification numbers below.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Facility Type	DEP Fac ID#	Facility Type	DEP Fac ID#
<input type="checkbox"/> Air Emission Plant	_____	<input type="checkbox"/> Industrial Minerals Mining Operation	_____
<input type="checkbox"/> Beneficial Use (water)	_____	<input type="checkbox"/> Laboratory Location	_____
<input type="checkbox"/> Blasting Operation	_____	<input type="checkbox"/> Land Recycling Cleanup Location	_____
<input type="checkbox"/> Captive Hazardous Waste Operation	_____	<input type="checkbox"/> Mine Drainage Treatment / Land Recycling Project Location	_____
<input type="checkbox"/> Coal Ash Beneficial Use Operation	_____	<input type="checkbox"/> Municipal Waste Operation	_____
<input type="checkbox"/> Coal Mining Operation	_____	<input type="checkbox"/> Oil & Gas Encroachment Location	_____
<input type="checkbox"/> Coal Pillar Location	_____	<input type="checkbox"/> Oil & Gas Location	_____
<input type="checkbox"/> Commercial Hazardous Waste Operation	_____	<input type="checkbox"/> Oil & Gas Water Poll Control Facility	_____
<input type="checkbox"/> Dam Location	_____	<input type="checkbox"/> Public Water Supply System	_____
<input type="checkbox"/> Deep Mine Safety Operation -Anthracite	_____	<input type="checkbox"/> Radiation Facility	_____
<input type="checkbox"/> Deep Mine Safety Operation -Bituminous	_____	<input type="checkbox"/> Residual Waste Operation	_____
<input type="checkbox"/> Deep Mine Safety Operation -Ind Minerals	_____	<input type="checkbox"/> Storage Tank Location	_____
<input type="checkbox"/> Encroachment Location (water, wetland)	_____	<input checked="" type="checkbox"/> Water Pollution Control Facility	417201
<input type="checkbox"/> Erosion & Sediment Control Facility	_____	<input type="checkbox"/> Water Resource	_____
<input type="checkbox"/> Explosive Storage Location	_____	<input type="checkbox"/> Other:	_____

Latitude/Longitude Point of Origin	Latitude			Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
	40	40	17	80	20	10
Horizontal Accuracy Measure	Feet	18	--or--	Meters		
Horizontal Reference Datum Code	<input type="checkbox"/> North American Datum of 1927 <input type="checkbox"/> North American Datum of 1983 <input checked="" type="checkbox"/> World Geodetic System of 1984					
Horizontal Collection Method Code	eMAP					
Reference Point Code	CNTAR					
Altitude	Feet		--or--	Meters		
Altitude Datum Name	<input type="checkbox"/> The National Geodetic Vertical Datum of 1929 <input checked="" type="checkbox"/> The North American Vertical Datum of 1988 (NAVD88)					
Altitude (Vertical) Location Datum Collection Method Code	SRVEY					
Geometric Type Code	POINT					
Data Collection Date						
Source Map Scale Number		Inch(es)	=	Feet		
	--or--	Centimeter(s)	=	Meters		

PROJECT INFORMATION

Project Name

Modification of Water Quality Permit 417201

Project Description

Addition of equipment to enhance hydrocarbon removal from wastewater

Project Consultant Last Name **First Name** **MI** **Suffix**

Project Consultant Title **Consulting Firm**

Mailing Address Line 1 **Mailing Address Line 2**

Address Last Line – City **State** **ZIP+4**

Phone **Ext** **FAX** **Email Address**

Time Schedules	Project Milestone (Optional)

1. Is the project located in or within a 0.5-mile radius of an Environmental Justice community as defined by DEP? Yes No

To determine if the project is located in or within a 0.5-mile radius of an environmental justice community, please use the online [Environmental Justice Areas Viewer](#).

2. Have you informed the surrounding community prior to submitting the application to the Department? Yes No

Method of notification: Municipal notification letters

3. Have you addressed community concerns that were identified? Yes No N/A

If no, please briefly describe the community concerns that have been expressed and not addressed.

4. Is your project funded by state or federal grants? Yes No

Note: If "Yes", specify what aspect of the project is related to the grant and provide the grant source, contact person and grant expiration date.

Aspect of Project Related to Grant _____
Grant Source: _____
Grant Contact Person: _____
Grant Expiration Date: _____

5. Is this application for an authorization on Appendix A of the Land Use Policy? (For referenced list, see Appendix A of the Land Use Policy attached to GIF instructions) Yes No

Note: If "No" to Question 5, the application is not subject to the Land Use Policy.
If "Yes" to Question 5, the application is subject to this policy and the Applicant should answer the additional questions in the Land Use Information section.

LAND USE INFORMATION

Note: Applicants should submit copies of local land use approvals or other evidence of compliance with local comprehensive plans and zoning ordinances.

1.	Is there an adopted county or multi-county comprehensive plan?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
2.	Is there a county stormwater management plan?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
3.	Is there an adopted municipal or multi-municipal comprehensive plan?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
4.	Is there an adopted county-wide zoning ordinance, municipal zoning ordinance or joint municipal zoning ordinance?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
<p>Note: If the Applicant answers "No" to either Questions 1, 3 or 4, the provisions of the PA MPC are not applicable and the Applicant does not need to respond to questions 5 and 6 below. If the Applicant answers "Yes" to questions 1, 3 and 4, the Applicant should respond to questions 5 and 6 below.</p>					
5.	Does the proposed project meet the provisions of the zoning ordinance or does the proposed project have zoning approval? If zoning approval has been received, attach documentation.	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
6.	Have you attached Municipal and County Land Use Letters for the project?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No

COORDINATION INFORMATION

Note: The PA Historical and Museum Commission must be notified of proposed projects in accordance with DEP Technical Guidance Document 012-0700-001 utilizing the [Project Review Form](#).

If the activity will be a mining project (i.e., mining of coal or industrial minerals, coal refuse disposal and/or the operation of a coal or industrial minerals preparation/processing facility), respond to questions 1.0 through 2.5 below.

If the activity will not be a mining project, skip questions 1.0 through 2.5 and begin with question 3.0.

1.0	Is this a coal mining project? If "Yes", respond to 1.1-1.6. If "No", skip to Question 2.0.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
1.1	Will this coal mining project involve coal preparation/ processing activities in which the total amount of coal prepared/processed will be equal to or greater than 200 tons/day?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
1.2	Will this coal mining project involve coal preparation/ processing activities in which the total amount of coal prepared/processed will be greater than 50,000 tons/year?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
1.3	Will this coal mining project involve coal preparation/ processing activities in which thermal coal dryers or pneumatic coal cleaners will be used?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
1.4	For this coal mining project, will sewage treatment facilities be constructed and treated waste water discharged to surface waters?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
1.5	Will this coal mining project involve the construction of a permanent impoundment meeting one or more of the following criteria: (1) a contributory drainage area exceeding 100 acres; (2) a depth of water measured by the upstream toe of the dam at maximum storage elevation exceeding 15 feet; (3) an impounding capacity at maximum storage elevation exceeding 50 acre-feet?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
1.6	Will this coal mining project involve underground coal mining to be conducted within 500 feet of an oil or gas well?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
2.0	Is this a non-coal (industrial minerals) mining project? If "Yes", respond to 2.1-2.6. If "No", skip to Question 3.0.	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
2.1	Will this non-coal (industrial minerals) mining project involve the crushing and screening of non-coal minerals other than sand and gravel?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
2.2	Will this non-coal (industrial minerals) mining project involve the crushing and/or screening of sand and gravel with the exception of wet sand and gravel operations (screening only) and dry sand and gravel operations with a capacity of less than 150 tons/hour of unconsolidated materials?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No

2.3	Will this non-coal (industrial minerals) mining project involve the construction, operation and/or modification of a portable non-metallic (i.e., non-coal) minerals processing plant under the authority of the General Permit for Portable Non-metallic Mineral Processing Plants (i.e., BAQ-PGPA/GP-3)?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
2.4	For this non-coal (industrial minerals) mining project, will sewage treatment facilities be constructed and treated waste water discharged to surface waters?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
2.5	Will this non-coal (industrial minerals) mining project involve the construction of a permanent impoundment meeting one or more of the following criteria: (1) a contributory drainage area exceeding 100 acres; (2) a depth of water measured by the upstream toe of the dam at maximum storage elevation exceeding 15 feet; (3) an impounding capacity at maximum storage elevation exceeding 50 acre-feet?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
3.0	Will your project, activity, or authorization have anything to do with a well related to oil or gas production, have construction within 200 feet of, affect an oil or gas well, involve the waste from such a well, or string power lines above an oil or gas well? If "Yes", respond to 3.1-3.3. If "No", skip to Question 4.0.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
3.1	Does the oil- or gas-related project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a watercourse, floodway or body of water (including wetlands)?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
3.2	Will the oil- or gas-related project involve discharge of industrial wastewater or stormwater to a dry swale, surface water, ground water or an existing sanitary sewer system or storm water system? If "Yes", discuss in <i>Project Description</i> .	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
3.3	Will the oil- or gas-related project involve the construction and operation of industrial waste treatment facilities?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
4.0	Will the project involve a construction activity that results in earth disturbance? If "Yes", specify the total disturbed acreage.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
4.0.1	Total Disturbed Acreage				
4.0.2	Will the project discharge or drain to a special protection water (EV or HQ) or an EV wetland?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
4.0.3	Will the project involve a construction activity that results in earth disturbance in the area of the earth disturbance that are contaminated at levels exceeding residential or non-residential medium-specific concentrations (MSCs) in 25 Pa. Code Chapter 250 at residential or non-residential construction sites, respectively?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
5.0	Does the project involve any of the following: water obstruction and/or encroachment, wetland impacts, or floodplain project by the Commonwealth/political subdivision or public utility? If "Yes", respond to 5.1-5.7. If "No", skip to Question 6.0.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
5.1	Water Obstruction and Encroachment Projects – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a watercourse, floodway or body of water?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
5.2	Wetland Impacts – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a wetland?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
5.3	Floodplain Projects by the Commonwealth, a Political Subdivision of the Commonwealth or a Public Utility – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a floodplain?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
5.4	Is your project an interstate transmission natural gas pipeline?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No

5.5	Does your project consist of linear construction activities which result in earth disturbance in two or more DEP regions AND three or more counties?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
5.6	Does your project utilize Floodplain Restoration as a best management practice for Post Construction Stormwater Management?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
5.7	Does your project utilize Class V Gravity / Injection Wells as a best management practice for Post Construction Stormwater Management?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
6.0	Will the project involve discharge of construction related stormwater to a dry swale, surface water, ground water or separate storm water system?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
6.1	Will the project involve discharge of industrial waste stormwater or wastewater from an industrial activity or sewage to a dry swale, surface water, ground water or an existing sanitary sewer system or separate storm water system?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
7.0	Will the project involve the construction and operation of industrial waste treatment facilities?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
8.0	Will the project involve construction of sewage treatment facilities, sanitary sewers, or sewage pumping stations? If "Yes", indicate estimated proposed flow (gal/day). Also, discuss the sanitary sewer pipe sizes and the number of pumping stations/treatment facilities/name of downstream sewage facilities in the <i>Project Description</i> , where applicable. 8.0.1 Estimated Proposed Flow (gal/day)	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
9.0	Will the project involve the subdivision of land, or the generation of 800 gpd or more of sewage on an existing parcel of land or the generation of an additional 400 gpd of sewage on an already-developed parcel, or the generation of 800 gpd or more of industrial wastewater that would be discharged to an existing sanitary sewer system? 9.0.1 Was Act 537 sewage facilities planning submitted and approved by DEP? If "Yes" attach the approval letter. Approval required prior to 105/NPDES approval.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
10.0	Is this project for the beneficial use of biosolids for land application within Pennsylvania? If "Yes" indicate how much (i.e. gallons or dry tons per year). 10.0.1 Gallons Per Year (residential septage) _____ 10.0.2 Dry Tons Per Year (biosolids) _____	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
11.0	Does the project involve construction, modification or removal of a dam? If "Yes", identify the dam. 11.0.1 Dam Name _____	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
12.0	Will the project interfere with the flow from, or otherwise impact, a dam? If "Yes", identify the dam. 12.0.1 Dam Name _____	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
13.0	Will the project involve operations (excluding during the construction period) that produce air emissions (i.e., NOX, VOC, etc.)? 13.0.1 If "Yes", is the operation subject to the agricultural exemption in 35 P.S. § 4004.1? 13.0.2 If the answer to 13.0.1 is "No", identify each type of emission followed by the estimated amount of that emission. Enter all types & amounts of emissions; separate each set with semicolons.	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
	Although the unit itself is a minor source, it will decrease actual overall plant emissions by routing additional hydrocarbons to a permitted air pollution control device. See RFD 10277 submitted to Bureau of Air Quality on 06/16/2023 and revised on 7/29/2023.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No

14.0	Does the project include the construction or modification of a drinking water supply to serve 15 or more connections or 25 or more people, at least 60 days out of the year? If "Yes", check all proposed sub-facilities.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
14.0.1	Number of Persons Served _____				
14.0.2	Number of Employee/Guests _____				
14.0.3	Number of Connections _____				
14.0.4	Sub-Fac: Distribution System	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
14.0.5	Sub-Fac: Water Treatment Plant	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
14.0.6	Sub-Fac: Source	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
14.0.7	Sub-Fac: Pump Station	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
14.0.8	Sub Fac: Transmission Main	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
14.0.9	Sub-Fac: Storage Facility	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
15.0	Will your project include infiltration of storm water or waste water to ground water within one-half mile of a public water supply well, spring or infiltration gallery?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
16.0	Is your project to be served by an existing public water supply? If "Yes", indicate name of supplier and attach letter from supplier stating that it will serve the project.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
16.0.1	Supplier's Name _____				
16.0.2	Letter of Approval from Supplier is Attached	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
17.0	Will this project be served by on-lot drinking water wells?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
18.0	Will this project involve a new or increased drinking water withdrawal from a river, stream, spring, lake, well or other water bod(ies)? If "Yes", reference Safe Drinking Water Program.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
18.0.1	Source Name _____				
19.0	Will the construction or operation of this project involve treatment, storage, reuse, or disposal of waste? If "Yes", indicate what type (i.e., hazardous, municipal (including infectious & chemotherapeutic), residual) and the amount to be treated, stored, re-used or disposed.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
19.0.1	Type & Amount _____				
20.0	Will your project involve the removal of coal, minerals, contaminated media, or solid waste as part of any earth disturbance activities?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
21.0	Does your project involve installation of a field constructed underground storage tank? If "Yes", list each Substance & its Capacity. Note: Applicant may need a Storage Tank Site Specific Installation Permit.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
21.0.1	Enter all substances & capacity of each; separate each set with semicolons.				
22.0	Does your project involve installation of an aboveground storage tank greater than 21,000 gallons capacity at an existing facility? If "Yes", list each Substance & its Capacity. Note: Applicant may need a Storage Tank Site Specific Installation Permit.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
22.0.1	Enter all substances & capacity of each; separate each set with semicolons.				
23.0	Does your project involve installation of a tank greater than 1,100 gallons which will contain a highly hazardous substance as defined in DEP's Regulated Substances List, 2570-BK-DEP2724? If "Yes", list each Substance & its Capacity. Note: Applicant may need a Storage Tank Site Specific Installation Permit.	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No
23.0.1	Enter all substances & capacity of each; separate each set with semicolons.				

24.0 Does your project involve installation of a storage tank at a new facility with a total AST capacity greater than 21,000 gallons? Yes No
"Yes", list each Substance & its Capacity. **Note:** Applicant may need a Storage Tank Site Specific Installation Permit.

24.0.1 Enter all substances & capacity of each; separate each set with semicolons.

NOTE: If the project includes the installation of a regulated storage tank system, including diesel emergency generator systems, the project may require the use of a Department Certified Tank Handler. For a full list of regulated storage tanks and substances, please go to www.dep.pa.gov search term storage tanks

25.0 Will the intended activity involve the use of a radiation source? Yes No

CERTIFICATION

I certify that I have the authority to submit this application on behalf of the applicant named herein and that the information provided in this application is true and correct to the best of my knowledge and information.

For applicants supplying an EIN number: I am applying for a permit or authorization from the Pennsylvania Department of Environmental Protection (DEP). As part of this application, I will provide DEP with an accurate EIN number for the applicant entity. By filing this application with DEP, I hereby authorize DEP to confirm the accuracy of the EIN number provided with the Pennsylvania Department of Revenue. As applicant, I further consent to the Department of Revenue discussing the same with DEP prior to issuance of the Commonwealth permit or authorization.

Type or Print Name Kimberly Kaal


Signature

Environmental Manager (Attorney-in-Fact)

Title

November 6, 2023

Date

Section 3

Acts 14/67/68/127 Notifications and Receipts

- Beaver County
- Potter Township



Shell Chemical Appalachia LLC
300 Frankfort Road
Monaca, PA 15061

November 6, 2023

Daniel C. Camp III
Chairman, Beaver County Commissioners
Beaver County Courthouse
810 Third Street
Beaver, PA 15009

Dear Mr. Camp,

This notice is to inform you of Shell Chemical Appalachia LLC's intent to submit an amendment to Water Quality Management Permit (No. 0417201) to the Pennsylvania Department of Environmental Protection (PADEP) with the Permitting and Technical Services Section, Bureau of Water Standards and Facility Regulations for the following project:

Project:	Amend Water Quality Management Permit (No. 0417201) to add equipment to enhance hydrocarbon removal from wastewater
Applicant Name:	Shell Chemical Appalachia LLC
Project Location:	300 Frankfort Road, Monaca, PA 15061
Applicant Contact:	Kimberly Kaal Shell Chemical Appalachia LLC 300 Frankfort Road Monaca, Beaver County, Pennsylvania 15061
Municipality/County:	Potter Township, Beaver County, PA

This letter is intended to satisfy the requirements of Pennsylvania Acts 14, 67, 68, and 127 and the Pennsylvania Municipalities Planning Code. Section 1905-A of the Commonwealth Administrative Code as amended by Act 14, requires that each applicant for a PADEP permit must give written notice to the municipality(ies) and the county(ies) in which the permitted activity is located. The written notices shall be received by the municipality(ies) and county(ies) at least 30 days before the PADEP may issue or deny the permit.

Acts 67 and 68, which amended the Municipalities Planning Code to support sound land use practices and planning efforts, direct state agencies to consider comprehensive plans and zoning ordinances when reviewing applications for permitting of facilities or infrastructure, and specify that state agencies may rely upon comprehensive plans and zoning ordinances under certain conditions as described in Sections 619.2 and 1105 of the Municipalities Planning Code.

Enclosed are the completed General Information Form (GIF) for this project. PADEP invites you to review the attached information and comment on the land use aspects of this project; please be specific to PADEP when identifying any areas of conflict. If you wish to submit comments for PADEP to consider in a land use review of this project, you must respond within 30 days to the PADEP regional office listed below. If no land use comments are received by the end of the comment period, PADEP will assume that there are not substantive land use conflicts and proceed with the normal application review process.

Please submit any comments concerning this project within 30 days from the date of receipt of this letter to the PADEP, Southwest Regional Office, Bureau of Water Standards and Facility Regulation, 400 Waterfront Drive, Pittsburgh, PA 15222-4745.

For more information about the land use review process, please visit www.depweb.state.pa.us, (keyword: Land Use Reviews). For more information about this project, please contact me at 724.709.2467.

Sincerely,


Kimberly Kaal
Environmental Manager Shell Polymers PA

Enclosures: Completed GIF



November 27, 2023

Dear Customer,

The following is the proof-of-delivery for tracking number: 774137028048

Delivery Information:

Status:	Delivered	Delivered To:	Receptionist/Front Desk
Signed for by:	C.COOK	Delivery Location:	
Service type:	FedEx Standard Overnight		
Special Handling:	Deliver Weekday		BEAVER, PA,
		Delivery date:	Nov 17, 2023 08:37

Shipping Information:

Tracking number:	774137028048	Ship Date:	Nov 16, 2023
		Weight:	0.5 LB/0.23 KG
Recipient:		Shipper:	
BEAVER, PA, US,		Pittsburgh, PA, US,	

Reference 60694528

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Shell Chemical Appalachia LLC
One Shell Plaza
910 Louisiana Street
Houston, TX 77002

November 17, 2023

Rebecca Matsco
Chairwoman, Potter Township Supervisors
206 Mowry Road
Monaca, PA 15061

Dear Ms. Matsco,

This notice is to inform you of Shell Chemical Appalachia LLC's intent to submit an amendment to Water Quality Management Permit (No. 0417201) to the Pennsylvania Department of Environmental Protection (PADEP) with the Permitting and Technical Services Section, Bureau of Water Standards and Facility Regulations for the following project:

Project:	Amend Water Quality Management Permit (No. 0417201) to add equipment to enhance hydrocarbon removal from wastewater
Applicant Name:	Shell Chemical Appalachia LLC
Project Location:	300 Frankfort Road, Monaca, PA 15061
Applicant Contact:	Kimberly Kaal Shell Chemical Appalachia LLC 300 Frankfort Road Monaca, Beaver County, Pennsylvania 15061
Municipality/County:	Potter Township, Beaver County, PA

This letter is intended to satisfy the requirements of Pennsylvania Acts 14, 67, 68, and 127 and the Pennsylvania Municipalities Planning Code. Section 1905-A of the Commonwealth Administrative Code as amended by Act 14, requires that each applicant for a PADEP permit must give written notice to the municipality(ies) and the county(ies) in which the permitted activity is located. The written notices shall be received by the municipality(ies) and county(ies) at least 30 days before the PADEP may issue or deny the permit.

Acts 67 and 68, which amended the Municipalities Planning Code to support sound land use practices and planning efforts, direct state agencies to consider comprehensive plans and zoning ordinances when reviewing applications for permitting of facilities or infrastructure, and specify that state agencies may rely upon comprehensive plans and zoning ordinances under certain conditions as described in Sections 619.2 and 1105 of the Municipalities Planning Code.

Enclosed are the completed General Information Form (GIF) for this project. PADEP invites you to review the attached information and comment on the land use aspects of this project; please be specific to PADEP when identifying any areas of conflict. If you wish to submit comments for PADEP to consider in a land use review of this project, you must respond within 30 days to the PADEP regional office listed below. If no land use comments are received by the end of the comment period, PADEP will assume that there are not substantive land use conflicts and proceed with the normal application review process.

Please submit any comments concerning this project within 30 days from the date of receipt of this letter to the PADEP, Southwest Regional Office, Bureau of Water Standards and Facility Regulation, 400 Waterfront Drive, Pittsburgh, PA 15222-4745.

For more information about the land use review process, please visit www.depweb.state.pa.us, (keyword: Land Use Reviews). For more information about this project, please contact me at 724.709.2411.

Sincerely,

Kimberly Kaal
Environmental Manager Shell Polymers PA
300 Frankfort Road
Monaca, Beaver County, Pennsylvania 15061

Enclosures: Completed GIF



November 21, 2023

Dear Customer,

The following is the proof-of-delivery for tracking number: 774174235680

Delivery Information:

Status:	Delivered	Delivered To:	
Signed for by:	Signature release on file	Delivery Location:	206 MOWRY RD
Service type:	FedEx Standard Overnight		
Special Handling:	Deliver Weekday		MONACA, PA, 15061
		Delivery date:	Nov 21, 2023 14:43

Shipping Information:

Tracking number:	774174235680	Ship Date:	Nov 20, 2023
		Weight:	0.5 LB/0.23 KG

Recipient:
Rebecca Matsco, Potter Township
206 Mowry Road
MONACA, PA, US, 15061

Shipper:
Cheryl Surdick, AECOM
707 Grant Street
5th Floor
Pittsburgh, PA, US, 15219

Reference 60694528.04

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Section 4

Evidence of newspaper publication for 4 consecutive weeks

LOCALIQ

Erie Times-News | The Intelligencer
Bucks County Courier Times
The Daily American | Beaver County Times
Pocono Record | Burlington County Times

PO Box 630531 Cincinnati, OH 45263-0531

PROOF OF PUBLICATION

Kimberly Kaal
Kimberly Kaal
Shell Oil Company

300 Frankfort RD
Monaca PA 15061-2210

STATE OF PENNSYLVANIA, COUNTY OF BEAVER


The Beaver County Times, Ellwood City Ledger, a daily newspaper of general circulation, published and having its place of business at Aliquippa, Beaver County, PA; that attached hereto is a facsimile of the printed notice which is exactly as printed and published in said newspaper issue dated on:

11/03/2023, 11/10/2023, 11/17/2023, 11/24/2023

That said newspaper was regularly issued and circulated on those dates.

Sworn to and subscribed before on 11/24/2023

Legal Clerk




Notary, State of WI, County of Brown

8.25.26

My commission expires

Publication Cost: \$910.08
Order No: 9433869 # of Copies:
Customer No: 1192767 1
PO #:

THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

MARIAH VERHAGEN
Notary Public
State of Wisconsin

PUBLIC NOTICE

Notice is hereby given that Shell Chemical Appalachia LLC at 300 Frankfort Road, Monaca, PA 15061, (Phone - 724.709.2467) intends to make application to the Department of Environmental Protection (DEP) to amend the existing Water Quality Management Permit (WQM No. 0417201) in a manner which meets DEP requirements, from its facility located in Potter and Center Townships, Beaver County. The application is to amend the existing WQM permit to add equipment to enhance removal of hydrocarbons in the wastewater prior to treatment in the existing biotreater. This application is made under the provision of the Clean Streams Law, the Act of June 22, 1937, P.L. 1987, as amended. Persons desiring additional information, or who wish to provide comment regarding the permit application should contact the Company as indicated above, or DEP at the following address: Southwest Regional Office, Clean Water Environmental Program Manager, 400 Waterfront Drive, Pittsburgh, PA 15222-4745, (Phone 412.442.4000) after November 29, 2023.

9433869 11/3, 11/10, 11/17, 11/24/23

Section 5

PADEP WQM Checklist, Forms and Modules

- WQM Application 3850-PM-BCW0400 b
- WQM Checklist 3850-PM-BCW0400 c
- Module 15 - Industrial Wastewater Treatment Facility

Permit Application



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

**APPLICATION FOR
WATER QUALITY MANAGEMENT PERMIT**

Before completing this form, read the step-by-step instructions provided in this application package.

Related ID#s (If Known) Client ID# <u>311950</u> APS ID# _____ Site ID# <u>102360</u> Auth ID# _____ Facility ID# _____		DEP USE ONLY Date Received & General Notes
---	--	--

APPLICANT IDENTIFIER

Application Type: New Modification Renewal Permit Number (if modification or renewal) 417201

Applicant Name: Shell Chemical Appalachia LLC

Current Mailing Address: 300 Frankfort Rd, Monaca, PA 15061

Current Phone Number: (724) 7092467

FACILITY TYPE (Check all appropriate boxes below)

- Treatment Plant Summary – Module 1
- Sewer System – Module 2
- Flow Equalization and Grit Chambers – Module 3
- Screening and Settling – Module 4
- Trickling Filters and Aeration – Module 5
- Chemical Treatment – Module 6
- Rapid Sand Filters – Module 7
- Other Filters and Disinfection – Module 8
- Aerobic Digestion Tanks – Module 9
- Anaerobic Digestion – Module 10
- Sludge Filters and Centrifuges – Module 11
- Sludge Drying Beds – Module 12
- Stream Encroachment and Crossings – Module 13
- Spray Irrigation – Module 14
- Industrial Wastewater Treatment Facility – Module 15
- Small Flow Treatment Facility – Module 16
- Sewer Extensions – Module 17
- Manure Storage Facilities – Module 18
- Supplementary Geology and Groundwater Information – Module 19
- Impoundments – Module 20
- Sequencing Batch Reactor – Module 21
- Pump Stations – Module 22

Permit Application

COMPLIANCE HISTORY REVIEW	
Is/was the facility owner or operator in violation of any DEP regulation, permit, order <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No or schedule of compliance at this or any other facility?	
If "Yes," list each permit, order and schedule of compliance and provide compliance status. Use additional sheets to provide information on all permits.	
Permit Program See Attached Summary	Permit No.
Brief Description of Noncompliance	
Steps Taken to Achieve Compliance	Date(s) Compliance Achieved
Current Compliance Status <input type="checkbox"/> In Compliance	<input checked="" type="checkbox"/> In Noncompliance

COMPLIANCE HISTORY REVIEW SUMMARY

Date	Location	Plan Approval/ Operating Permit#	Nature of Documented Conduct	Type of Department Action	Status Litigation; Existing / Continuing; or corrected/Date	Dollar Amount Penalty
05/24/2023	Shell Polymers Monaca	PA-04-00740A/B/C	Various NOV's and Exceedances of 12-Month Emission Limitations in 2022 and 2023	Consent Order and Agreement	Signed COA and implementing required terms and conditions	<ul style="list-style-type: none"> • \$4,935,023 • \$5,000,000: Projects to Benefit Community, Environment and Health • \$521,549.62: Monthly emissions for May 2023 • \$1,046,766.94: Monthly emissions for June 2023 • \$844,373.39: Monthly emissions for July 2023 • \$250,791.20: Monthly emissions for August 2023 • \$0: Monthly emissions for September 2023
9/11/2023	Shell Polymers Monaca	PA-04-00740C	NOV for Benzene Waste NESHAP (BWON)	Notice of Violation	Pending settlement	TBD

Permit Application

CERTIFICATION (Check appropriate box below.)

I certify under penalty of law that I

- am the applicant
- am an officer or official of the applicant
- have the authority to make this application (attach delegation of signatory authority) and that the plans, reports and documents designated and attached here with part of the application are true and correct to the best of my knowledge and belief.

Kimberly Kaal

Environmental Manager (Attorney-in Fact)

Name (type or print legibly)

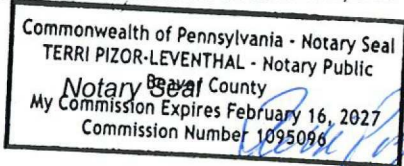
Official Title

Kimberly Kaal
Signature

11/16/23
Date

(Use corporate or professional seal as appropriate.)

Taken, sworn and subscribed before me, this 16th day of November 20 23.



LICENSED PROFESSIONAL ENGINEER

This is to certify that I have personally reviewed all engineering information contained in the accompanying modules, drawings, specifications and other documents which are part of this application and that I have found it to be of good engineering quality, true and correct, and is in conformance with the requirements of the Department of Environmental Protection (DEP), and it does not, to the best of my knowledge, withhold information that is pertinent to a determination of compliance with the requirements of DEP.

Name of Design Engineer: Carl J. Marsano, P.E.
 Design Firm: Wood Engineering & Architectural Services, P.C.
 Mailing Address: 1979 Lakeside Parkway, Suite 400
Tucker, GA 30084
 Telephone Number: (207) 286 7608
 E-mail Address: carl.marsano@woodplc.com



Carl J. Marsano
Signature of Professional Engineer

11/13/2023

NOTICE: It is an offense under Pennsylvania Criminal Code to affirm a false statement in documents submitted to DEP.

DEP will consider the licensed professional engineer whose seal is affixed to design documents to be fully responsible for the adequacy of all aspects of facility designs. The application and supporting documentation submitted for sewerage projects will be reviewed to ensure general consistency with good engineering practices, and the applicable design guidelines of DEP.



CHECKLIST FOR WATER QUALITY MANAGEMENT PERMIT

APPLICANT'S ✓ CHECKLIST		Check ✓ If Included	DEP Use Only
APPLICANT NAME	Shell Chemical Appalachia LLC		
<p>Check the following list to make sure that you have included all the required information. Place a checkmark in the column provided for all items completed and/or provided. Failure to provide all of the requested information will delay the processing of the application.</p> <p style="text-align: center;">ENCLOSE THIS CHECKLIST WITH YOUR APPLICATION FORM.</p>			
1.	General Information Form (GIF).	<input checked="" type="checkbox"/>	
2.	Appropriate application fee, with check payable to the Commonwealth of PA	<input checked="" type="checkbox"/>	
3.	Two (2) copies (original and 1 copy) of application, design module(s), and accompanying drawings and plans.	<input checked="" type="checkbox"/>	
	a. Certification and proper signatures.	<input checked="" type="checkbox"/>	
	b. Engineer's professional seal on each plan sheet.	<input checked="" type="checkbox"/>	
	c. <i>Design Engineer's Report</i> with signature and seal on cover	<input checked="" type="checkbox"/>	
	d. Properly notarized (original).	<input checked="" type="checkbox"/>	
	e. Technical specifications with engineer's seal and signature on cover	<input checked="" type="checkbox"/>	
	f. Additional copy for Delaware River Basin or Erie and Allegheny counties (if required).	<input type="checkbox"/>	
4.	Supplemental Information:	<input type="checkbox"/>	
	a. General Layout Diagram (unless design plans provide this information).	<input type="checkbox"/>	
	b. Sizes, Capacities and Dimensions Diagram (unless design plans provide this information).	<input type="checkbox"/>	
5.	Design Modules.	<input checked="" type="checkbox"/>	
6.	Topographic map with appropriate details.	<input type="checkbox"/>	
7.	Act 14 Notification.	<input checked="" type="checkbox"/>	
8.	Act 537 Approval (if required).	<input checked="" type="checkbox"/>	
9.	Cultural Resources Notification	<input type="checkbox"/>	
10.	Acts 67, 68 and 127 Notification (IW and Manure Storage Facilities only).	<input checked="" type="checkbox"/>	
11.	Proof of Public Notification (IW and Manure Storage Facilities only)	<input checked="" type="checkbox"/>	
12.	DRBC Notification (if required).	<input type="checkbox"/>	
13.	Other (specify):	<input type="checkbox"/>	

Module 15



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

**INDUSTRIAL WASTEWATER TREATMENT FACILITY
MODULE 15**

APPLICANT NAME		Shell Chemical Appalachia LLC	
Note: A copy of the <i>Design Engineer's Report</i> must be attached to this module.			
SIC/NAICS CODES			
	SIC CODE	NAICS CODE	Corresponding SIC/NAICS Description
1st	_____	<u>32</u>	<u>Manufacturing</u>
2nd	_____	<u>22</u>	<u>Utilities</u>
3rd	_____	_____	_____
4th	_____	_____	_____
GENERAL DESCRIPTION AND NATURE OF BUSINESS			
Petrochemical Complex			
LIST OF PERMITS (List all NPDES and WQM permits presently held for this facility.)			
NPDES Permit PA0002208			
Water Quality Permit 417201			

Module 15

Summary of Wastewater Source and Treatment Unit Information	1. SOURCE OF WASTE ECU and AC Pond 2. OUTFALL NO. NA -discharge is to other treatment systems		1. SOURCE OF WASTE 2. OUTFALL NO.		
3. TYPE(S) OF WASTE (i.e., Sanitary, Process . . .)	Process and general wastewater				
4. WASTE FLOW PATTERN	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent From (am) To (pm) <input type="checkbox"/> Batch	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent From (am) To (pm) <input type="checkbox"/> Batch			
5. DAILY WASTE VOLUME TOTAL	Batches/day Gallons/batch 1.58 Gallons/day	Batches/day Gallons/batch Gallons/day			
6. DESIGN FLOW AVERAGE MAXIMUM General Sequence of Treatment Units (See Treatment Process Code List)	MGD 1.58 MGD Unit (1) WEMCO 84	MGD 0.57 MGD Unit (1) EC-15	(Check) Existing <input type="checkbox"/>	(Check) Proposed <input checked="" type="checkbox"/>	Code for Treatment Unit FLOT
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
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			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	

(1) If impoundments are proposed and the wastewater entering the impoundment meets the definition of Residual Waste at Title 25 Pa. Code Chapter 287, the design must be in accordance with Title 25 Pa. Code § 299.144.

Use Additional Sheets If Necessary

Module 15

WASTE CHARACTERISTICS		OUTFALL NA -discharge is to other treatment systems SOURCE OF WASTE:			SAMPLING PERIOD: From To		NAME OF LABORATORY/CONSULTANT											
		<input type="checkbox"/> Yes <input type="checkbox"/> No NPDES Permit application submitted within last 3 years for this outfall.			Telephone No.: ()													
PARAMETER	UNITS	SAMPLING LOCATION * -- TREATMENT FACILITY INFLUENT			EXISTING TREATMENT FACILITY EFFLUENT			NEW TREATMENT FACILITY EFFLUENT (Expected)			ANALYTICAL METHOD USED (AA, GC/MS, etc.)							
		MONTHLY AVERAGE	24 HR. MAX.	MIN.	MAX.	MONTHLY AVERAGE	24 HR. MAX.	MIN.	MAX.	MONTHLY AVERAGE		24 HR. MAX.	MIN.	MAX.				
O&G	mg/L			30									30					
VOC	mg/L																	2

*Use Additional Sheets as Necessary

Comments/additional information:

Section 6

Design Engineers Report

SHELL POLYMERS MONACA (SPM)

ADDENDUM TO DESIGN ENGINEER'S REPORT (Prepared as part of the WQM Permit Amendment)

Preparer

Shell Chemical Appalachia LLC

Date of Preparation

November 2023



Carl J. Marsano
11/13/2023

TABLE OF CONTENTS

I.	General Information	2
II.	Detail Description of Proposed Wastewater Treatment Process	4
A.	Basis of Design for Individual Treatment Unit.....	4
B.	Supplemental Chemical Addition or Treatment.....	7
C.	Pumping Equipment.....	8
D.	Monitoring and Control Equipment.....	8
E.	Handling, Conditioning and Storage of Residual Materials.....	10
III.	Operational Flexibility and Reliability of Treatment System.....	11
A.	Alarms and Sensing Devices	11
B.	Control, and Quantity and Quality of Wastewater when Treatment System is Inoperative.....	12
C.	Personal Training.....	13
D.	Availability of Instructions and Guidelines for the Operation and Maintenance of Treatment Units	14
IV.	Appendices Containing Supporting Information.....	15
A.	Block Flow Diagram showing Flotation System	15
B.	WEMCO-84 Equipment P&ID	17
C.	EC-15 Equipment P&ID	20

I. GENERAL INFORMATION

This is an addendum to the original "Design Engineer's Report" for the existing Wastewater Treatment Plant (WWTP) under Water Quality Management (WQM) Permit Number 0417201. This addendum describes the new temporary equipment added to the existing WWTP to address off-spec wastewaters from Ethane Cracking Unit (ECU).

In the original Engineers Report (Section 1.5 - ECU Offspec Wastewater Management), the design premise based on preliminary engineering data was:

"ECU may on occasion produce off-spec wastewater that cannot be readily treated in the WWTP. During such infrequent events, the off-spec wastewater is stored in one of the two FEOR tanks and pumped at a controlled rate using Process Wastewater Bleed Pumps to the other FEOR tank where it comingles with stored wastewater."

During startup and initial operation of the ECU it was determined that the wastewater stream generated from the ECU had Oil and Grease (O&G) and Volatile Organic Compound (VOC) concentrations in excess of original estimates thus exceeding the design basis for the Biotreaters. The occurrence of these off-spec events did not allow the off-spec wastewater to have adequate residence time in the FEOR tank to separate the O&G before being routed to Biotreaters. Additionally, FEOR tanks equipped with internal floating roof did not allow stripping of the VOCs (and routing to the Spent Caustic Thermal Oxidizer, SCTO) from off-spec wastewater resulting in VOC emissions over the aeration basins.

New temporary equipment (hereafter referred to as "Flotation System") was installed (under a Temporary Discharge Authorization (TDA) approved by the Department) to remove the O&G and VOCs from the off-spec wastewater before routing to the Biotreaters. Gas flotation was chosen to address both dispersed O&G as well as VOCs in the influent wastewater stream. Gas flotation is a process by which dispersed hydrocarbon droplets are removed from water by attachment to rising gas bubbles. The oily froth which forms on the surface of the water is removed by skimming and overflowing to a collection trough. The oily froth with some lighter solids from the collection troughs is routed to Recovered Oil Tank (ROT). Treated effluent is routed to the Biotreaters. Nitrogen is used both as flotation

gas as well as sweep gas to remove VOCs (off gas from wastewater stream) from the vapor space of the Flotation Units. The vent stream (nitrogen sweep gas with VOCs) is routed to the SCTO for thermal destruction.

This addendum is being made to incorporate the temporary equipment into the existing WQM. However, at this point the petrochemical plant is not fully on-line (about 70%) and as with any new facility, evaluations/modifications are being conducted to try and optimize operations. Based on the fluid nature of the startup plant operations, it is Shell's intent to operate these systems to obtain data throughout the startup process and potential operational changes to obtain data to determine if these systems are to remain as permanent equipment or if there is a more efficient/effective design alternative. Once the evaluation process is complete, Shell will present this information to the Department to determine proper permitting steps for the final design.

II. DETAIL DESCRIPTION OF PROPOSED WASTEWATER TREATMENT PROCESS

A. Basis of Design for Individual Treatment Unit

Block flow diagram and equipment P&IDs included in Section IV illustrates the Flotation System equipment to address off-spec wastewater from Ethylene Cracker Unit (ECU). The Flotation System has the capacity to handle peak wet weather conditions and any incidental flows from upstream process units as units are coming online. Two flotation system, the WEMCO 84 and EC-15, will operate parallel with feed from existing Flow Equalization and Oil Removal (FEOR) Tanks.

Table II-1: Expected Influent and Effluent Composition

Parameter	Feed	WEMCO-84 Outlet	EC-15 Outlet
Flow capacity (gpm)*	990 - 1,100 (225 - 250 m ³ /h)	705 - 1,100 (160 - 250 m ³ /h)	396 (90 m ³ /h)
O&G (mg/L)**	5 - 160	< 30	< 30
VOCs (mg/L)***	0 - 15	< 2	< 2

*WEMCO-84 flow assumes partial flow with EC-15 parallel operation as well as full flow without EC-15 operating

**O&G feed concentration is based on the historical data from plant startup. Effluent O&G concentration is estimated based on maximum levels for Biotreater operation.

***VOC feed concentration is based on the historical data from plant startup. Effluent VOC concentration is model predicted with > 95% removal rate in Flotation Units.

New temporary equipment sizing basis and sparing philosophy:

■ WEMCO 84

WEMCO-84 is a mechanically induced gas flotation unit with four active cells that use nitrogen (N₂) as floatation gas because of presence of VOCs in the influent wastewater stream. A motor is mounted on the top of each active cell, which rotates a shaft, inside the standpipe, with a rotor at the bottom of the shaft. Rotating rotor creates a vortex inside of the standpipe which draws gas into the water. The water/gas mixture is expelled through the disperser that helps to create small bubbles. The disperser hood helps to suppress wave motion from the action of the rotor. The gas bubbles flow

upward, colliding with oil drops and carrying them to the surface. Skimmer paddles skim the oil/froth/foam off the surface, over an overflow lip into a launder or collection trough. The overflow lip known as a spillover weir allows treated effluent to flow to final clean cell where from treated effluent is pumped to Biotreaters.

Wastewater stream from existing Flow Equalization and Oil Removal (FEOR) Tanks (T-59707A/B) is routed to the WEMCO 84 (V-59781), using existing Biotreater Feed Pumps (P-59704A/B), to remove the oil and grease (O&G) and strip off volatile organic compounds (VOCs). Effluent Pumps (P-59785A/B) transfer treated effluent from V-59781 to the existing Biotreaters (T-59709A/B) for further removal of dissolved contaminants i.e., biological oxygen demand (BOD) and chemical oxygen demand (COD). Oil Recovery Pump (P-59784) transfers O&G, froth and solids separated in V-59781 to existing Recovered Oil Tank (T-59708) for further treatment. Vent gas, containing stripped off VOCs, from V-59781 is connected to the suction line of the existing Wastewater Tanks Vent Blower (K-59705) and routed to existing SCTO (A-53501) for thermal destruction.

Table II-2: WEMCO-84 Specifications

Flotation Unit	
Size	31'-6" L x 8'-0" W x 12'-4" H
Capacity	1,125 gpm (256 m ³ /h)
Design Pressure and Temperature	1 psig at 140 °F
Operating Pressure and Temperature	0.25 psig at 80 °F
Oil Removal Efficiency*	70 - 90% (> 6 µm droplets) ~50% (< 50 mg/L inlet O&G) 80 - 90% (> 100 mg/L inlet O&G)
Depurators	
Number of depurators	4
Motor /RPM	15 HP (each) / 1,800 rpm
Oil Recovery Pump (air operated diaphragm)	
Capacity	100 gpm (23 m ³ /h)
Pressure	42 psig
Air Supply	60 scfm at 65 psig
Effluent (Discharge) Pumps	

Capacity	1,200 gpm (273 m ³ /h)
Pressure	52 psig
Motor/RPM	50 HP / 1,800 rpm

*Based on WEMCO operational data from other Shell facility.

■ EC-15

EC-15 is a hydraulically induced gas flotation with four active cells unit using nitrogen (N₂) as floatation gas because of presence of VOCs in the influent wastewater stream. The operation of a hydraulically induced gas flotation unit is similar to the mechanically induced gas flotation unit except instead of using a mechanically driven impeller to generate bubbles, a recirculated stream of clean water is mixed with gas and the mixture is injected into the flotation unit. Each cell is separated by two steel plates which are referred to as weirs. The final chamber is the clean cell. Level is controlled in the clean cell at the outlet of the EC-15. Since all the cells are connected hydraulically, this level controls the level in all the cells. Gas is pulled from the common vapor space into a device called an eductor. The eductor is mounted in a pipe that carries water from the final chamber or "clean cell". Each chamber has a water pipe with two eductors. The water used in the eductor is recirculated from the clean water effluent or discharge. A pump is used to provide the motive force for this water recirculation. The amount of gas that is added to the water depends on the eductor venturi diameter, the inlet gas pressure, and the water flow rate.

Wastewater stream from existing FEOR Tanks (T-59707A/B) is routed to the EC-15 (V-59791), using existing Biotreater Feed Pumps (P-59704A/B), to remove the oil and grease (O&G) and strip off volatile organic compounds (VOCs). Effluent Pumps (P-59795A/B) transfer treated effluent from V-59791 to the existing Biotreaters (T-59709A/B) for further removal of dissolved contaminants i.e., biological oxygen demand (BOD) and chemical oxygen demand (COD). Oil Recovery Pump (P-59794) transfers O&G, froth and solids separated in V-59791 to existing Recovered Oil Tank (T-59708) for further treatment. Vent, containing stripped off VOCs, from V-59791 is connected to the existing Wastewater Tanks Vent Blower (K-59705) and routed to existing SCTO (A-53501) for thermal destruction.

Table II-3: EC-15 Specifications

Flotation Unit	
Size	24'-0" L x 5'-6" ID
Capacity	438 gpm (99 m ³ /h)
Design Pressure and Temperature	1 psig at 200 °F
Operating Pressure and Temperature	0.25 psig at 140 °F
Oil Removal Efficiency	90 - 97% (Vendor data)
Eductors	
Number of eductors	4 (dual eductors)
Capacity	25 gpm (6 m ³ /h)
Recycle Pumps	
Capacity	219 gpm (50 m ³ /h)
Pressure	60 psig
Motor/RPM	15 HP / 3,600 rpm
Oil Recovery Pump (air operated diaphragm)	
Capacity	40 gpm (9 m ³ /h)
Pressure	52 psig
Air Supply	30 scfm at 56 psig
Effluent (Discharge) Pumps	
Capacity	500 gpm (114 m ³ /h)
Pressure	65 psig
Motor/RPM	30 HP / 3,600 rpm

B. Supplemental Chemical Addition or Treatment

Chemical additives can be used to enhance O&G and solids removal in the Flotation System. Nitrogen is used as a sweep gas to help remove VOCs (stripped off from wastewater) from the vapor space in the Flotation Units.

■ O&G and Solids Removal Aid

Provisions are made to add coagulant (NALCO 8140) and flocculant (NALCO 71306), as needed, to the feed to Flotation Units to enhance O&G and solids removal. Based on current conditions, it is premised there will not be any need for addition of these chemicals on continuous basis.

■ VOC Stripping Gas

Nitrogen is used as flotation gas in both WEMCO-84 and EC-15. Nitrogen is also used as sweep gas for removing the stripped VOCs from wastewater in the Flotation Units.

C. Pumping Equipment

Pumps and Blowers servicing the Flotation System are listed below.

Table II-4: Pump and Blower Specifications

Name	Service	Sparing	Capacity	Controls
Biotreater Feed Pumps (Existing)	WW from FEOR tanks to Flotation Units	2x100%	823 gpm (187 m ³ /h)	Flotation System flow and level control
Oil Recovery Pump	O&G/Float from WEMCO-84 to Recovered Oil Tank	1x100%	100 gpm (23 m ³ /h)	WEMCO-84 oil trough level switch (local)
Effluent Pump	Treated effluent from WEMCO-84 to Biotreaters	2x100%	1,200 gpm (273 m ³ /h)	WEMCO-84 level control
Oil Recovery Pump	O&G/Float from EC-15 to Recovered Oil Tank	1x100%	40 gpm (9 m ³ /hr)	EC-15 oil trough level switch (local)
Recycle Pump	Treated effluent from EC-15 to Eductors	2x100%	219 gpm (50 m ³ /hr)	EC-15 level control
Effluent Pump	Treated effluent from EC-15 to Biotreaters	2x100%	500 gpm 114 m ³ /h)	EC-15 level control
Wastewater Tank Vent Blower (Existing)	Vent from Flotation Units to SCTO	1x100%	480 scfm (770 Nm ³ /h)	Flotation Units' Pressure Control

D. Monitoring and Control Equipment

Following objectives/provisions are implemented to control the Flotation System and ensure successful operation to meet the treatment goals.

- Objective A1: To control influent flow from FEOR Tanks to the Flotation Units.
 - WEMCO-84: has no direct flow control because capacity of unit is higher than the capacity of Biotreater Feed Pumps (P-59704A/B), however indirectly flow is controlled via level control loop (597LCV-018). Inlet flow is monitored using 597FIT-835.
 - EC-15: Flow control is achieved by monitoring the wastewater flow (597FIT-935) in the inlet line that modulates the inlet valve (597FCV-935) to maintain requisite flow to EC-15.

- Objective A2: To protect Flotation Unit(s) from overflowing.
 - WEMCO-84: Overflow protection is achieved by monitoring the liquid level (597LIT-018) in the outlet chamber which modulates the inlet valve (597LCV-018), and interlocks Biotreater Feed Pumps (P-59704A/B) and Vent Blower (K-59705) to stop when liquid level reaches High-High threshold. The operator will manually restart the Biotreater Feed pump to feed WEMCO-84 when level reaches normal operating range.
 - EC-15: Overflow protection is achieved by monitoring the liquid level (597LIT-919) in the outlet chamber which modulates the outlet valve (597LCV-919). Redundant level instrument (597LIT-918) interlocks Vent Blower (K-59705) to stop when liquid level reaches High-High threshold.

- Objective A3: To remove separated O&G from Flotation Unit(s) and transfer to Recovered Oil Tank.
 - WEMCO-84: Removal of separated O&G is achieved by measuring level in Oil Trough (597-LSH-864) and starting the Oil Recovery Pumps (P-59784) when oil trough level reaches High threshold and stopping the pump when level reaches Low threshold.
 - EC-15: Removal of separated O&G is achieved by measuring level in Oil Trough (597-LSH-964) and starting the Oil Recovery Pumps (P-59794) when oil trough level reaches High threshold and stopping the pump when level reaches Low threshold.

- Objective A4: To remove off-gas vapors from Flotation Units and send it to SCTO.
 - WEMCO-84: Venting off vapors is achieved by measuring pressure in the vapor space (597PIT-872) and starting the existing Vent Blower (K-59705) when the

pressure reaches High threshold and stopping when pressure reaches Low threshold. The blower is interlocked to stop when the pressure reaches Low-Low threshold.

- EC-15: Venting off vapors is achieved by measuring pressure in the vapor space (597PIT-972) and starting the existing Vent Blower (K-59705) when the pressure reaches High threshold and stopping when pressure reaches Low threshold. The blower is interlocked to stop when the pressure reaches Low-Low threshold.

E. Handling, Conditioning and Storage of Residual Materials

The residual materials generated from Flotation Units is the floated O&G, settled solids, and stripped off VOCs.

■ Recovered (floated) O&G:

The floated (separated) O&G is collected in oil troughs within the Flotation Units. Collected O&G with some lighter suspended solids are transferred to existing Recovered Oil Tank for further separation of entrained water. Separated water is periodically pumped back to the FEOR tanks. The separated oil will be pumped out periodically and sent off-site for disposal/reuse.

■ Settled Solids:

Any settled solids in the Flotation Units are also pumped to the Recovered Oil Tank for further separation of entrained water. Separated water is periodically pumped back to the FEOR tanks. The settled solids will be periodically pumped out and sent off-site for disposal.

■ Stripped off VOCs:

Stripped off VOCs from wastewater streams are swept with nitrogen gas and the vent is routed to the existing SCTO for thermal destruction.

III. OPERATIONAL FLEXIBILITY AND RELIABILITY OF TREATMENT SYSTEM

A. Alarms and Sensing Devices

Process controls, with sensing devices and alarms, used to monitor Flotation Units' operation are discussed in this section. Each monitored parameter is provided with alarms in Distributed Control System (DCS) in case the variable falls outside its normal operating range.

■ Flotation Unit Flow Control

- WEMCO-84
 - 597FIT-835 H
 - 597FIT-835 L
- EC-15
 - 597FIT-935 H
 - 597FIT-935 L

■ Flotation Unit Level Control

- WEMCO-84
 - 597LIT-018 H
 - 597LIT-018 L
- EC-15
 - 597LIT-918 H
 - 597LIT-918 L

■ Flotation Unit Pressure Control

- WEMCO-84
 - 597PIT-872 H
 - 597PIT-872 L
- EC-15
 - 597PIT-972 H
 - 597PIT-972 L

Table III-1: Summary of Sensing Devices

<ul style="list-style-type: none"> • WEMCO-84 Level Control (597LC-018)
<ul style="list-style-type: none"> • WEMCO-84 Oil Trough Level Switch (597LSH-864) - Local

• WEMCO-84 Flow Transmitter (597FT-835)
• WEMCO-84 Pressure Control (597PT-872)
• WEMCO-84 Nitrogen (sweep) Pressure Indicator (597PI-876) - Local
• EC-15 Level Transmitter (597LT-918)
• EC-15 Level Control (597LC-919)
• EC-15 Oil Trough Level Transmitter (597LSH-964) - Local
• EC-15 Flow Control (597-FC-935)
• EC-15 Pressure Control (597-PT-972)
• EC-15 Nitrogen (sweep) Pressure Indicator (597PI-976) - Local

B. Control, and Quantity and Quality of Wastewater when Treatment System is Inoperative

The performance of the Flotation Units can be affected by power loss, mechanical failure, and/or process upsets. Flotation Units are fed from the FEOR tanks each with working capacity of 660,400 gal (2500 m³) which is adequate to temporarily store wastewater for 20 - 30 hours. Provisions are made to isolate and use one FEOR tank to temporarily store off-spec wastewater and pump it at a controlled rate to the other FORT tank. The bleed pumps are 100% spared allowing maintenance of one pump. FEOR tanks' oil removal pumps are also spared. Pumps that return separated water from Recovered Oil Tank to FEOR Tanks are similarly spared.

The Flotation Units and associated pumps are installed in an area which drains to AC collection system to provide secondary containment in case of equipment failure. From the FEOR tanks wastewater is pumped to the Flotation Units using spared pumps. Effluent from Flotation Units is routed to redundant Biotreater Plants via redundant effluent pumps. All continuously operating pumps associated with Flotation Units are provided with installed spare that the Operator can put in service if the loss of service (lead) equipment is alarmed in the DCS.

Power failure lasting several hours is not expected to irreversibly impair the operation of the Flotation Units and wastewater can be stored in FEOR tanks temporarily.

Mechanical failure or Loss of power to existing vent blowers used to rout vent gases from Flotation Units to the SCTO can temporarily halt the operation of Flotation Units. However, upon power restoration these systems are expected to restore normal treatment efficiency.

C. Personal Training

This section briefly summarizes the training of personnel responsible for the operation, maintenance, and performance of Flotation Units. These Flotation Units will be operated from the Centralized Control Building (CCB) for the control and performance monitoring. Ensure Safe Production (ESP) program will be implemented to enable operators and support staff to clearly understand and operate the Flotation Units within their operational limits.

Along with WWTP operation, Flotation Units will be staffed 24 hours, 7 days a week covering periods of adverse weather conditions. Operation shall include all plant equipment, valves, sampling, and lab analyses.

Personnel training will include taking representative samples for laboratory analyses including preservation requirements. Personnel training also will include how to generate various "Reports" of all major and minor components for review and records including creating, maintaining, and dispositioning of reports that are specifically required for NPDES permit compliance, daily operating logs of plant including establishing process control set points. Importance of reporting equipment deficiencies promptly will be emphasized. Corrective maintenance in an emergency that is required to return the system or component to proper operating condition will be discussed.

All employees responsible for plant operation will possess a current appropriate Flotation Unit operation training for their assigned work duties. Management is responsible for maintaining a list of all employees including their current training status.

D. Availability of Instructions and Guidelines for the Operation and Maintenance of Treatment Units

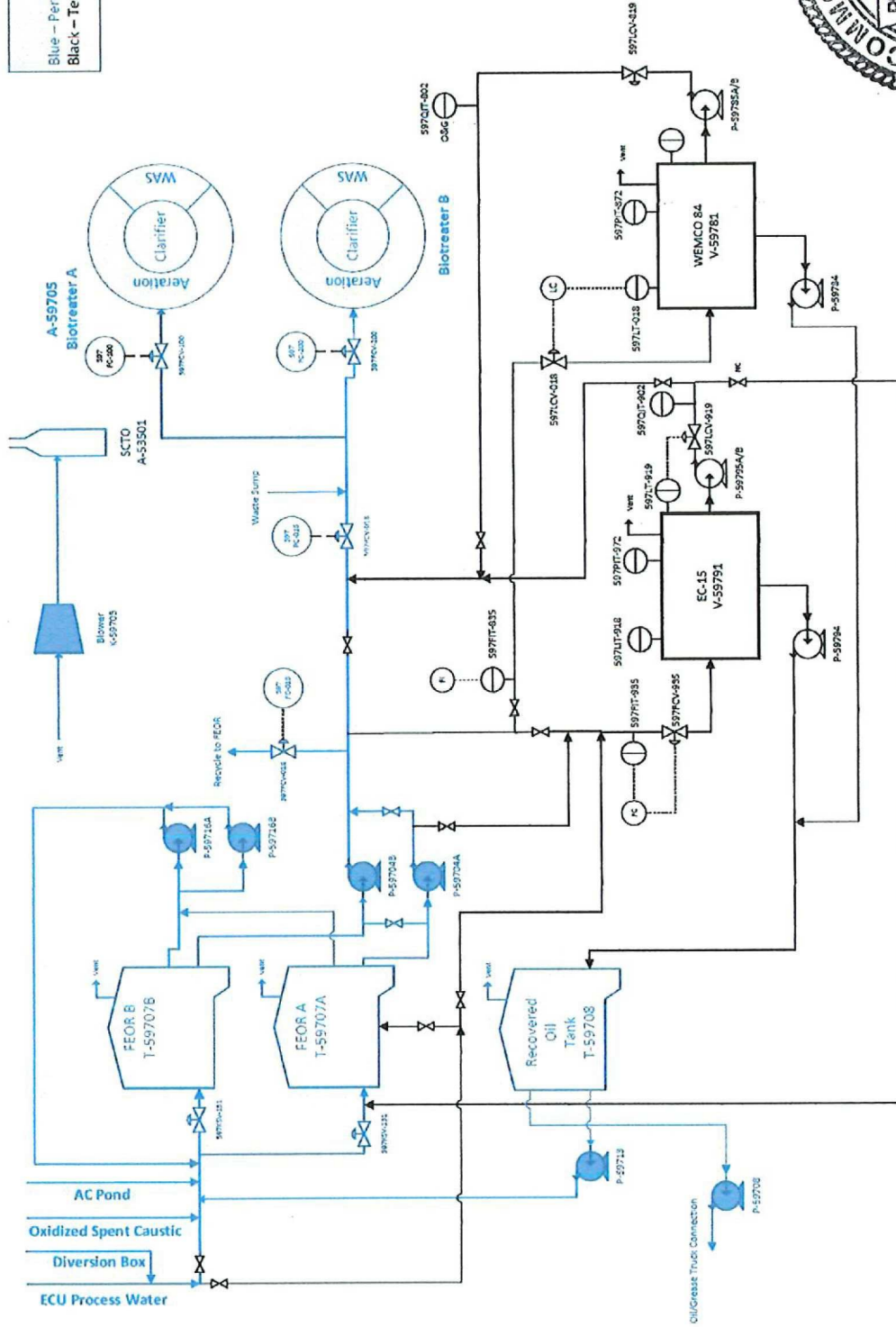
Operations and Maintenance (O&M) manual covering the operation of WEMCO-84 and EC-15 will be available to operators. The manual includes details on receiving, installation, startup, and run and maintain of Flotations Units and associated equipment.

IV. APPENDICES CONTAINING SUPPORTING INFORMATION

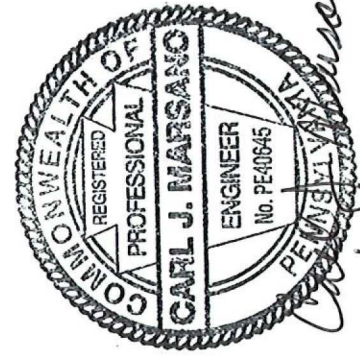
A. Block Flow Diagram showing Flotation System

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Legend:
Blue – Permanent Equipment
Black – Temporary Line



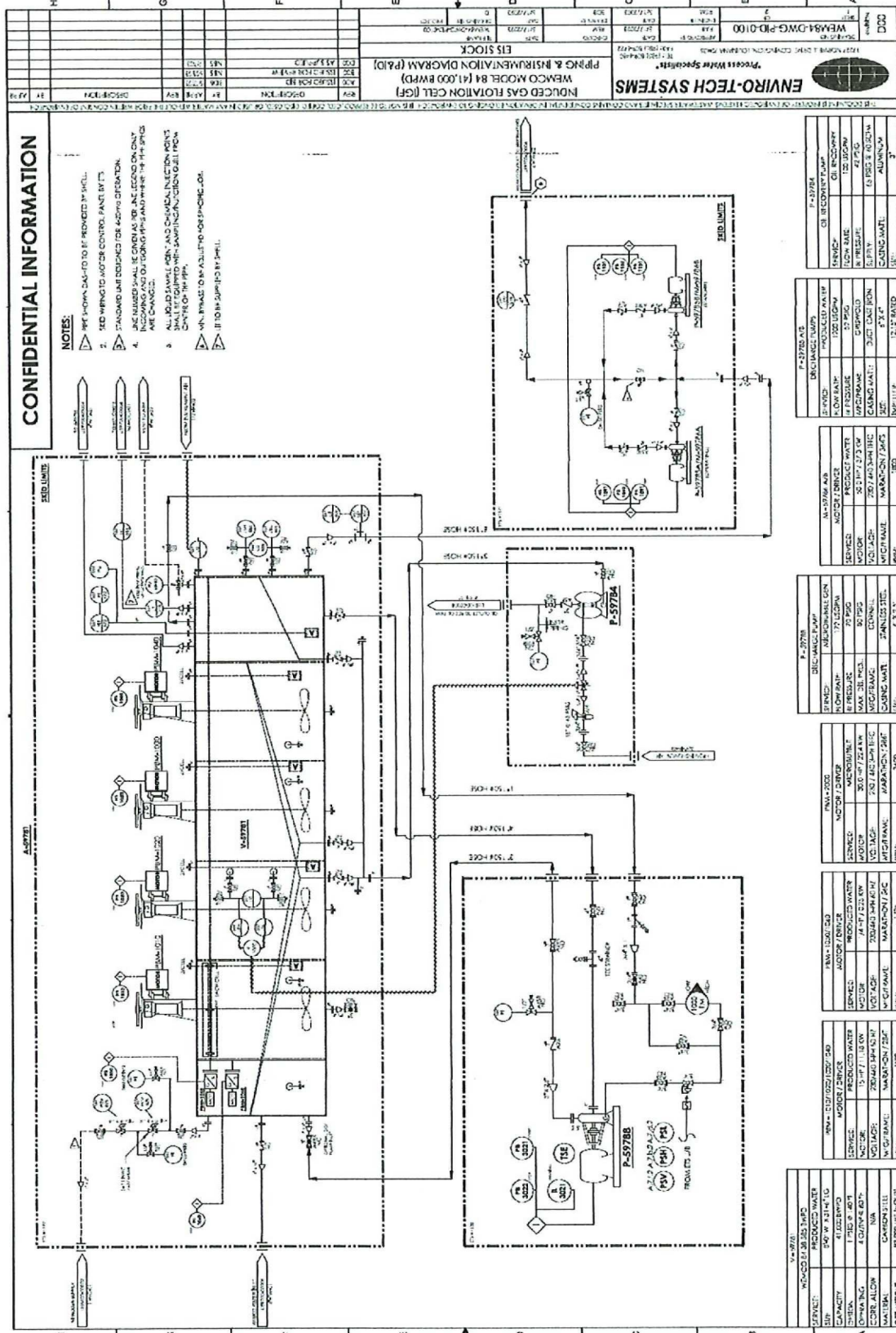
Flotation System – Block Flow Diagram

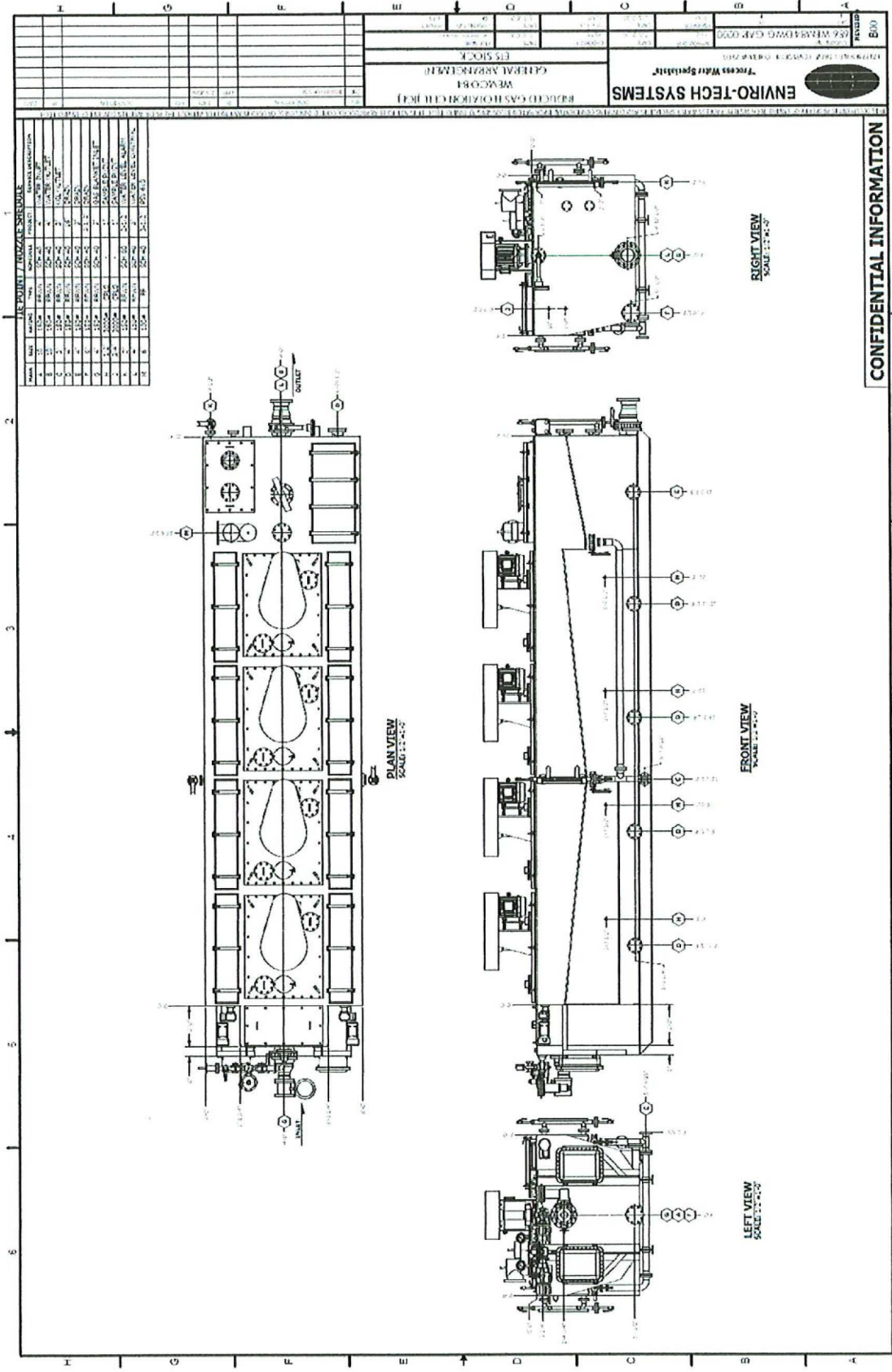


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3

B. WEMCO-84 Equipment P&ID

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C. EC-15 Equipment P&ID

