



Shell Chemical Appalachia LLC  
300 Frankfort Rd  
Monaca, PA 15061

September 13, 2024

Mark Gorog, P.E.  
Air Quality Program Regional Manager  
Pennsylvania Department of Environmental Protection  
Southwest Regional Office  
400 Waterfront Drive  
Pittsburgh, PA 15222

**RE: Shell Chemical Appalachia LLC  
Shell Polymers Monaca Site  
Potter and Center Townships, Beaver County  
Plan Approval No. 04-00740C  
Plan Approval Construction Extension Request**

Dear Mr. Gorog:

Shell Chemical Appalachia LLC ("Shell") is requesting an extension of Plan Approval 04-00740C, along with our other associated Plan Approvals (04-00740A and 04-00740B), to extend temporary operation of commenced sources and to authorize the continued commissioning of sources and controls at the above-referenced facility.

The following documents are included in the extension request:

- Plan Approval Extension Form (completed and signed)
- Air Pollution Control Act Compliance Review Supplemental Form (completed and signed)
- Justification for the extension
- Schedule for the completion of the construction

The extension request was submitted via PADEP's OnBase Electronic Forms Upload platform. The application fee of \$750 for the application was paid via credit card through OnBase.

Please contact me at 724-709-2467 or [kimberly.kaal@shell.com](mailto:kimberly.kaal@shell.com) if you have any questions or need additional information.

Sincerely,

Kimberly Kaal  
Environmental Manager



### PLAN APPROVAL EXTENSION FORM

Current Plan Approval Information				
Plan Approval No.: 04-00740C		Owner Name: Shell Chemical Appalachia LLC		
Original Issued Date: 2/18/2021		Plant Name: Shell Polymers Monaca Site		
Current Expiration Date: 10/28/2024		Contact Name: Kimberly Kaal		
Project Commenced Date: 2/10/2016		Contact Title: Environmental Manager		
Contact Telephone: 724-709-2467		Contact Email: kimberly.kaal@shell.com		
Municipality: Potter & Center Twp		Mailing Address: 300 Frankfort Road		
County: Beaver		City: Monaca	State: PA	Zip Code: 15061
List of Source(s) and/or Air Cleaning Devices Specified in the Plan Approval (attach additional pages as needed)				
Source ID	Source Name	Air Cleaning Device	Date of Completion	Operational Commencement Date
	See attached schedule			
Reason for Extension (see instructions)				
<input checked="" type="checkbox"/>	(A) Plan Approval Extension to continue construction, modification, reactivation of the source(s) or installation of air cleaning device(s) in accordance with 25 Pa. Code §127.13(a).			
<input checked="" type="checkbox"/>	(B) Plan Approval Extension to extend temporary operation to facilitate the shake-down of sources and air cleaning devices, to permit operation pending issuance of a permit under Subchapter F (relating to operating permit requirements) or Subchapter G (relating to Title V operating permits) or to allow the evaluation of the source(s) for compliance with applicable regulations and requirements in accordance with 25 Pa. Code §127.12b(d).			
<input type="checkbox"/>	(C) Other (including the extension of the 18-month period specified in 25 Pa. Code §127.13(b)).			
Checklist				
<input checked="" type="checkbox"/>	Included Air Quality Fees Schedule			
<input type="checkbox"/>	Fees are not required in accordance with 25 Pa. Code § 127.702(i)(3); justification included			
<input checked="" type="checkbox"/>	Included justification for the extension request			
<input checked="" type="checkbox"/>	Included complete Compliance Review Form or Compliance Review Supplemental Form if one has not been submitted within 6 months from the date of this application			
<input checked="" type="checkbox"/>	Plan Approval Extension Form signed by a responsible official			
Certification of Truth, Accuracy and Completeness				
I certify that, subject to the penalties of Title 18 Pa. C.S.A. Section 4904 and 35 P.S. Section 4009(b)(2), I am the responsible official having primary responsibility for the design and operation of the facilities to which this application applies and that the information provided in this application is true, accurate, and complete to the best of my knowledge, information, and belief formed after reasonable inquiry.				
Name (Type): James Howell			Title: Production Manager	
Name (Signed):			Date: 9/13/2024	



COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF AIR QUALITY

**AIR POLLUTION CONTROL ACT COMPLIANCE REVIEW  
 SUPPLEMENTAL FORM**

Fully and accurately provide the following information, as specified. Attach additional sheets as necessary.

**Date of Submission of Original Compliance Review Form** 05/01/2014

**Type of Supplemental Compliance Review Form Submittal (check all that apply)**

- Original Filing                       Amended Filing  
 No Changes                               Date of Last Compliance Review Form Filing      6/19/2024

**Type of Submittal**

- New Plan Approval                       New Operating Permit                       Renewal of Operating Permit  
 Extension of Plan Approval               Change of Ownership                       Periodic Submission  
 Other \_\_\_\_\_ (every six months)

**SECTION A. GENERAL APPLICANT INFORMATION**

**1. Name of Applicant/Permittee/("Applicant") (non-corporations attach documentation of legal name)**

Shell Chemical Appalachia LLC

Address 300 Frankfort Road  
Monaca, PA 15061

Telephone 724-709-2467

Taxpayer ID# 46-1624986

Permit, Plan Approval or Application ID# PA-04-00740C

**2. Identify the form of management under which the applicant conducts its business.**

- Individual                                       Fictitious Name                                       Association  
 Municipality                                       Partnership                                       Syndicate  
 Proprietorship                                       Limited Partnership  
 Public corporation                                       Government Agency  
 Private Corporation                                       Joint Venture  
 Municipal Authority                                       Other Type of Business (specify)      Limited Liability Company

**3. Describe the type(s) of business activities performed.**

\*\*\* Supplemental \*\*\*

List only those changes since the date of the last original submission.

No Changes

**SECTION B. GENERAL INFORMATION REGARDING "APPLICANT"**

If applicant is a corporation or a division or other unit of a corporation, provide the names, principal places of business, state of incorporation, and taxpayer ID numbers of all domestic and foreign parent corporations (including the ultimate parent corporation), and all domestic and foreign subsidiary corporations of the ultimate parent corporation with operations in Pennsylvania. Please include all corporate divisions or units, (whether incorporated or unincorporated) and privately held corporations. (A diagram of corporate relationships may be provided to illustrate corporate relationships.) Attach additional sheets as necessary.

\*\*\* Supplemental \*\*\*

List only those changes since the date of the last original submission.

Unit Name	Principal Places of Business	State of Incorporation	Taxpayer ID	Relationship to Applicant
No Changes				

**SECTION C. INFORMATION REGARDING APPLICANT & ITS "RELATED PARTIES"**

**1. Pennsylvania Facilities.** List the name and location (mailing address, municipality, county), telephone number, and relationship to applicant (parent, subsidiary or general partner) of all Related Parties' places of business, and facilities in Pennsylvania. Attach additional sheets as necessary.

\*\*\* Supplemental \*\*\*

List only those changes since the date of the last original submission.

Unit Name	Street Business	County and Municipality	Telephone No.	Relationship to Applicant
No Changes				

**2. General Partners.** Provide the names and business addresses of all general partners of the applicant and parent corporation, if any.

\*\*\* Supplemental \*\*\*

List only those changes since the date of the last original submission.

Name	Business Address
No Changes	

**3. Management Responsibility.** Provide the names and business of persons with overall management responsibility for the process being permitted (i.e., plant manager).

\*\*\* Supplemental \*\*\*

List only those changes since the date of the last original submission.

Name	Business Address
James Howell Production Manager Shell Chemical Appalachia LLC	Shell Chemical Appalachia LLC 300 Frankfort Road Monaca, PA 15061
Kimberly Kaal Environmental Manager/Attorney-in-Fact Shell Chemical Appalachia LLC	Shell Chemical Appalachia LLC 300 Frankfort Road Monaca, PA 15061

**4. Plan Approvals or Operating Permits.** List all plan approvals or operating permits issued by the Department or an approved local air pollution control agency under the APCA to the applicant or related parties that are currently in effect or have been in effect at any time five years prior to the date on which this form is notarized. This list shall include the plan approval and operating permit numbers, locations, issuance and expiration dates. Attach additional sheets as necessary.

\*\*\* Supplemental \*\*\*

List only those changes since the date of the last original submission.

Source	Plan Approval Operating Permit Number	Location	Issuance Date	Expiration Date
No Changes				

**SECTION D. COMPLIANCE BACKGROUND**

*Note: Copies of specific documents, if applicable, must be made available to the Department upon its request.)*

**1. Documented Conduct.** List all documented conduct of violations or enforcement actions identified by the Department pursuant to the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. Attach additional sheets as necessary. See the definition of "documented conduct" for further clarification. Unless specifically directed by the Department, deviations which have been previously reported to the Department in writing, relating to monitoring and reporting, need not be reported.

\*\*\* Supplemental \*\*\*

List only those changes since the date of the last original submission.

Date	Location	Plan Approval/ Operating Permit#	Nature of Documented Conduct	Type of Department Action	Status Litigation; Existing / Continuing; or corrected/Date	Dollar Amount Penalty
6/17/2024	Shell Polymers Monaca	PA-04-00740A/B/C	Visible Emissions >5 min in consecutive 2 hrs from the MPGF Source C204B.	Notice of Violation	Pending	TBD
8/19/2024	Shell Polymers Monaca	PA-04-00740A/B/C	Visible Emissions >5 min in consecutive 2 hrs from the MPGF 204B, TEGF A C205A and TEGF B C205B	Notice of Violation	Pending	TBD
9/5/2024	Shell Polymers Monaca	PA-04-00740A/B/C	Exceedances of 12-Month Emission Limitations for NOx [February 2024 through July 2024]	Notice of Violation	Pending	TBD

**CONTINUING OBLIGATION:** Applicant is under a continuing obligation to update this form using the Compliance Review Supplemental Form if any additional documented conduct occurs or related parties develop between the date of submission and Department action on its application

**2. Incidents of Deviation.** List all incidents of deviations of the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. This list must include items both currently known and unknown to the Department. Attach additional sheets as necessary. See the definition of “deviations” for further clarification.

\*\*\* Supplemental \*\*\*

List only those changes since the date of the last original submission.

Date	Location	Plan Approval/ Operating Permit#	Nature of Deviation	Incident Status: Existing/Continuing; or Corrected Date
2/1/2024 to present	Shell Polymers Monaca	04-00740A/C	Site-wide NOx 12-month rolling limitation: The COA expired end of January 2024. Site remains non-compliant with emission limitation.	Continuing deviation. Engineering improvements and permitting corrections to match facility design. Proposed to be resolved in plan approval modification application.
4/3/2024	Shell Polymers Monaca	04-00740A/C	Leak Detection and Repair: Late initial repair attempt for one leaking valve by one (1) day.	Corrected: Shell will review assurance process to ensure timely repair of leaks.
7/4/2024 7/8/2024 8/8/2024	Shell Polymers Monaca	04-00740A/C	Cogeneration Units: Exceeded NOx 2 ppmvd at 15% O2 as detailed below: Unit 2: 1 hr on 7/4/2024 Unit 3: 1 hr on 7/8/2024 and 1 hr on 8/8/2024.	Corrected after each incident. See Malfunction Report submitted on July 25, 2024 for the July 4, 2024 deviation. Each deviation will be addressed in future quarterly excess emission reports.
6/21/2024 6/22/2024	Shell Polymers Monaca	04-00740A/C	Ethane Cracking Furnace 3 exceeded NOx 6.2 lbs/hr for 1 hr on 6/21/2024 and 3 hrs on 6/22/2024.	Corrected after each incident. See Malfunction Report submitted on July 11, 2024. The deviations are addressed in the submitted quarterly excess emission report.
1/16/2023 1/17/2023 1/18/2023 2/8/2023 Test Dates	Shell Polymers Monaca	04-00740A/C	Furnace stack test results not compliant for PM10 and PM2.5 on Furnaces 2, 3, 4, 6.	Update with June 2024 Submission: Furnace 3 was tested March 11, 2024. Furnace 6 was tested March 12, 2024. Both tests showed compliance with the PM10 and PM2.5 limits. Retest for Furnaces 2 and 4 scheduled for week of June 3, 2024.  Update with September 2024 Submission: Furnace 2 was tested June 4, 2024. Furnace 4 was tested June 25, 2024. Both tests showed compliance with the PM10 and PM2.5 limits.  This deviation was reported on previous Compliance Review Forms. This is not a new incident, just updating incident status.
2022 to present	Shell Polymers Monaca	04-00740A/C	Maximum designed water circulation rate through the cogeneration cooling tower is greater than limit in permit.	Correcting the designed water circulation rate for as-built in the plan approval modification application.

**2. Incidents of Deviation.** List all incidents of deviations of the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. This list must include items both currently known and unknown to the Department. Attach additional sheets as necessary. See the definition of "deviations" for further clarification.

\*\*\* Supplemental \*\*\*

List only those changes since the date of the last original submission.

Date	Location	Plan Approval/ Operating Permit#	Nature of Deviation	Incident Status: Existing/Continuing; or Corrected Date
6/26/2024 (1 15-min block period): TEGF A  6/29/2024 (1 15-min block period): TEGF A/B  7/2/2024 (1 15-min block period): TEGF A/B  7/15/2024 (1 15-min block period): TEGF A/B  7/24/2024 (3 15-min block periods): TEGF A/B	Shell Polymers Monaca	04-00740A/C	Net Heating Value TEGFs A/B.  Did not meeting requirements for NHV of $\geq 800$ Btu/scf in 40 CFR Part 63 Subparts YY and FFFF as required for pressure-assisted multi-point flares.	Corrected after each incident.
7/28/2024 (1 15-minute period)	Shell Polymers Monaca	04-00740A/C	Exit Velocity (Vtip) MPGF PE1/PE2 Header. Did not meet Vtip limit in 40 CFR Part 63 Subpart FFFF for one (1) 15-min block period. Slightly over the limit of 60 ft/sec.	Corrected after incident.
7/26/2023 to present	Shell Polymers Monaca	04-00740A/C	HPEF is not equipped with required monitoring system capable of continuously measuring, calculating, and recording the volumetric flow rate of assist steam.	Monitoring equipment will be added to measure and calculate the assist steam flow to the flare by October 2024.
7/26/2023 to present	Shell Polymers Monaca	04-00740A/C	HPEF is not equipped with automated controls for the control of the total steam mass flow rate to the flare.	A control valve will be installed in the small steam assist line to ensure proper controls are in place by October 2024. The large steam line has an existing control valve and automated controls.
6/17/2024	Shell Polymers Monaca	04-00740A/C	Visible Emissions TEGF B. Visible emissions > 5 minutes in consecutive 2 hours.	Corrected. See Malfunction Report submitted on 7/11/2024.
7/11/2024	Shell Polymers Monaca	04-00740A/C	Visible Emissions TEGF A and B. Visible emissions > 5 minutes in consecutive 2 hours for each flare.	Corrected. See Malfunction Report submitted on 8/7/2024.
7/6/2023 to 6/28/2024	Shell Polymers Monaca	04-00740A/C	Pilots TEGF A/B: Each stage of pilots must have two (2) pilots. Stages 2, 3, 4, 5, 8, and 9 only have 1 pilots.	Update: Corrected. Additional pilots installed and operating on June 19, 2024 for TEGF A and June 28, 2024 for TEGF B.  This deviation was reported on previous Compliance Review Forms. This is not a new incident, just updating incident status.

**2. Incidents of Deviation.** List all incidents of deviations of the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. This list must include items both currently known and unknown to the Department. Attach additional sheets as necessary. See the definition of “deviations” for further clarification.

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Date	Location	Plan Approval/ Operating Permit#	Nature of Deviation	Incident Status: Existing/Continuing; or Corrected Date
9/2022 to present	Shell Polymers Monaca	04-00740A/C	<p>LP and HP Header Systems: Root cause analysis (RCA) is required within 45 days after any startup, shutdown, or unforeseeable flaring event.</p> <p>HP Flare System: 9 RCAs were not completed within the 45-day window. Of these, 1 RCA remains outstanding as of submittal.</p> <p>LP Flare System: 28 RCAs were not completed within the 45-day window. Of these, 21 RCAs remain outstanding as of submittal.</p>	Continuing deviation. A work process has been implemented with tracking and assurances in place to ensure all flaring events are addressed with a root cause analysis within the 45-day window. SPM has committed to ensuring any outstanding RCAs are completed by end of October 2024.
5/21/2024 Test Date	Shell Polymers Monaca	04-00740A/C	CVTO stack test results not compliant with emission limitations for PM10 and PM2.5.	Retest planned for the week of September 16, 2024 for PM10 and PM2.5.
5/23/2023 Test Date	Shell Polymers Monaca	04-00740A/C	SCTO stack test results not compliant with emission limitations for NOx, PM10, and PM2.5.	Retest planned for the week of September 16, 2024 for PM10 and PM2.5. Burner tip modifications with the vendor are required to address NOx emissions and will be conducted by end of 2024. The NOx re-test will be scheduled once burners are modified and/or replaced. Burner work timeline is excepted no later than 1Q2025 barring any issues in procurement and scoping.
FEORs/ROT Blower Downtime: 6/4/2024: 2.14 hrs 6/11/2024: 8.93 hrs 6/13/2024: 6.15 hrs 7/10/2024: 1.08 hrs 7/11/2024: 3.60 hrs 7/17/2024: 2.28 hrs 8/5/2024: ~ 2 min  Spent Caustic Blower Downtime: 5/24/2024: ~ 2min 6/3/2024: ~ 2 min 6/30/2024: ~ 5min 7/10/2024: 1.08 hrs 7/11/2024: 3.60 hrs 7/17/2024: 2.28 hrs	Shell Polymers Monaca	04-00740A/C	SCTO Blower Downtime. Small amounts of excess emissions from FEOR A/B, recovered oil, spent caustic storage tanks, and temporary WEMCO and EC-15 Units due to blower issues where emissions did not go to the SCTO. The tanks are internal floating roof tanks with minimal uncontrolled emissions.	Corrected after each incident.



**2. Incidents of Deviation.** List all incidents of deviations of the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. This list must include items both currently known and unknown to the Department. Attach additional sheets as necessary. See the definition of "deviations" for further clarification.

\*\*\* Supplemental \*\*\*

List only those changes since the date of the last original submission.

Date	Location	Plan Approval/ Operating Permit#	Nature of Deviation	Incident Status: Existing/Continuing; or Corrected Date
3/30/2023 for PE 1 Pellet Dryer 4/30/2023 for PE 2 Pellet Dryer	Shell Polymers Monaca	04-00740A/C	Pellet Dryers for PE 1 and PE2: Did not test within 180 days of startup. Testing was required by 3/30/2023 for the PE 1 Pellet Dryer, and 4/30/2023 for the PE 2 Pellet Dryer.	Corrected. PE 1 Pellet Dryer was tested on 8/24/2023 and PE 2 Pellet Dryer was testing on 8/28/2023.
3/25/2024 4/25/2024 6/28/2024	Shell Polymers Monaca	04-00740A/C	Residual VOC Content Sampling for PE Unit. Missed the required sampling for PE2 grade changes.	Corrected. Shell is continuing to improve sampling procedures and pellet grade tracking.

**CONTINUING OBLIGATION:** Applicant is under a continuing obligation to update this form using the Compliance Review Supplemental Form if any additional documented conduct occur or related parties develop between the date of submission and Department action on its application

**VERIFICATION STATEMENT**

Subject to the penalties of Title 18 Pa.C.S. Section 4904 and 35 P.S. Section 4009(b)(2), I verify under penalty of law that I am authorized to make this verification on behalf of the Applicant/Permittee. I further verify that the information contained in this Compliance Review Supplemental Form is true and complete to the best of my belief formed after reasonable inquiry. I further verify that reasonable procedures are in place to ensure that "documented conduct" and "deviations" as defined in 25 Pa Code Section 121.1 are identified and included in the information set forth in this Compliance Review Supplemental Form.

*Js R Howell*

9/13/2024

Signature

Date

James Howell

Name (Print or Type)

Production Manager

Title

**Attachment A**  
**Plan Approval Extension Justification**

Shell is required to request an extension of the plan approvals until the Title V Operating Permit is issued. In accordance with PA-04-00740C, Section B, Condition #003 (d), Shell is requesting an extension of the 180-day shakedown period to continue temporary operation of sources that have commenced operation and for continued commissioning and emission testing activities of the remaining permitted sources and air cleaning devices. PA-04-00740A was first issued on June 18, 2015 and PA-04-00740B and C were issued on February 18, 2021, with all three permits expiring on October 28, 2024.

On February 22, 2024, Shell received a letter from PADEP requiring the submission of a Title V Operating Permit Application by June 21, 2024. Shell submitted the initial Title V Operating Permit Application to PADEP on June 19, 2024.

Also, concurrently with this plan approval extension request, Shell is submitting a Plan Approval Modification Application that proposes the following projects and plan approval reconciliations:

- Shell is proposing to implement the Wastewater Treatment Plant (WWTP) Permanent Controls Project to install permanent equipment at SPM that will improve the oils, grease, and VOC removal efficiency of the primary treatment section of SPM's WWTP.
- Shell is proposing the Ethylene Maximum Achievable Control Technology (EMACT) Project at SPM to comply with the 40 Code of Federal Regulations (CFR) Part 63 Subpart YY pressure-assisted multi-point flare minimum net heating value of flare combustion zone gas (NHV<sub>cz</sub>) requirement that recently became applicable to the High Pressure (HP) Ground Flare #1 and HP Ground Flare #2.
- After successfully commissioning all of SPM's operations and completing a review of the facility's as-built equipment and operations against the source inventory, potential to emit calculations, and conditions included in or referenced by PA-04-00740A, PA-04-00740B, and PA-04-00740C, Shell is proposing to reconcile specific plan approval source descriptions, potential to emit calculations, and conditions.

## Attachment B

List of Source(s) and/or Air Cleaning Devices Specified in Plan Approval No. 04-00740 A, B and C

Source ID	Source Name	Air Cleaning Device	Date of Completion	Operational Commencement Date
031	Ethane Cracking Furnace #1		July 6, 2022	July 30, 2022, lit burners to start dry out. Ethane feed in Sep. 5, 2022.
032	Ethane Cracking Furnace #2		July 6, 2022	May 27, 2022, lit burners to start dry out. Ethane feed in Sep. 13, 2022
033	Ethane Cracking Furnace #3		July 6, 2022	June 1, 2022, lit burners to start dry out. Ethane feed in Sep. 6, 2022
034	Ethane Cracking Furnace #4		July 6, 2022	August 17, 2022, lit burners to start dry out. Ethane feed in Sep. 17, 2022
035	Ethane Cracking Furnace #5		July 6, 2022	May 12, 2022, lit burners to start dry out. Ethane feed in Sep. 5, 2022
036	Ethane Cracking Furnace #6		July 6, 2022	May 6, 2022, lit burners to start dry out. Ethane feed in Sep. 25, 2022
037	Ethane Cracking Furnace #7		July 6, 2022	April 14, 2022, lit burners to start dry out. Ethane feed in Sep. 8, 2022
C031		SCR (Ethane Cracking Furnace #1)	August 15, 2022	August 15, 2022
C032		SCR (Ethane Cracking Furnace #2)	June 15, 2022	June 15, 2022
C033		SCR (Ethane Cracking Furnace #3)	June 19, 2022	June 19, 2022
C034		SCR (Ethane Cracking Furnace #4)	August 30, 2022	August 30, 2022
C035		SCR (Ethane Cracking Furnace #5)	May 22, 2022	May 22, 2022
C036		SCR (Ethane Cracking Furnace #6)	May 13, 2022	May 13, 2022
C037		SCR (Ethane Cracking Furnace #7)	April 22, 2022	April 22, 2022
101	Combustion Turbine/Duct Burner Unit #1		June 24, 2021	June 24, 2021

## Attachment B

## List of Source(s) and/or Air Cleaning Devices Specified in Plan Approval No. 04-00740 A, B and C

Source ID	Source Name	Air Cleaning Device	Date of Completion	Operational Commencement Date
102	Combustion Turbine/Duct Burner Unit #2		June 20, 2021	June 20, 2021
103	Combustion Turbine/Duct Burner Unit #3		June 30, 2021	June 30, 2021
C101		SCR (Unit #1)	July 2021	Sep 2021
C101A		Oxidation Catalyst (Unit #1)	July 2021	Sep 2021
C102		SCR (Unit #2)	July 2021	August 2021
C102A		Oxidation Catalyst (Unit #2)	July 2021	August 2021
C103		SCR (Unit #3)	July 2021	Sep 2021
C103A		Oxidation Catalyst (Unit #3)	July 2021	Sep 2021
104	Cogeneration Plant Cooling Tower(s)		June 20, 2021	June 20, 2021
C104		Drift Eliminators (Process Cooling Tower)	June 20, 2021	June 20, 2021
105 <sup>a</sup>	Diesel-Fired Emergency Generator Engines (2)		March 2, 2020	March 2, 2020
106	Fire Pump Engines (2)		Dec 4, 2020	Dec 4, 2020,
107 <sup>a</sup>	Natural Gas-Fired Emergency Generators (3)		March 2, 2020	March 2, 2020
201	Ethylene Manufacturing Line		July 6, 2022	September 7 2022 feed into ECU
202 <sup>b</sup>	Polyethylene Manufacturing Lines		July 6, 2022	See Note b
C202 <sup>b</sup>		Particulate Filters (PE MFG)	July 6, 2022	See Note b
203	Process Cooling Tower(s)		July 6, 2022, including chemical cleaning and passivation activities	September 7 2022 feed into ECU
C203		Drift Eliminators (Process Cooling Tower)	July 6, 2022	September 7 2022 feed into ECU
204	Low Pressure (LP) Header System		May 16, 2022	May 16, 2022
C204		LP System	May 16, 2022	May 16, 2022
C204A		LP Incinerator	March 31, 2022. Lit for initial dry out	March 31, 2022

## Attachment B

List of Source(s) and/or Air Cleaning Devices Specified in Plan Approval No. 04-00740 A, B and C

Source ID	Source Name	Air Cleaning Device	Date of Completion	Operational Commencement Date
C204B		LP Multipoint Ground Flare (MPGF)	March 21, 2022. Lit pilots for testing	March 21, 2022
205	High Pressure (HP) Header System		May 12, 2022	May 12, 2022
C205		HP System	May 12, 2022	May 12, 2022
C205A		HP Ground Flare	March 16, 2022. Lit pilots for testing	March 16, 2022
C205B		HP Ground Flare	March 16, 2022. Lit pilots for testing	March 16, 2022
C205C		HP Elevated Flare	March 16, 2022. Lit pilots for testing	March 16, 2022
206	Spent Caustic Vent Header System		Construction completed, refractory dry out started May 18, 2022, re lit June 7, 2022 for operation	June 7, 2022
C206		Spent Caustic Vent Incinerator	Construction completed, refractory dry out started May 18, 2022, re lit June 7, 2022 for operation	June 7, 2022
301	Polyethylene Pellet Material Storage/ Handling/Loadout		First pellet test run in PE3 March 19, 2022	March 19, 2022
C301		Fabric Filters (Pellet Storage/Handling/Loadout)	First pellet test run in PE3 March 19, 2022	March 19, 2022
302	Liquid Loadout (Recovered Oil)		July 6, 2022	May 24, 2023
303	Liquid Loadout (Pyrolysis Fuel Oil, Light Gasoline)		July 6, 2022	December 16, 2022 (PFO) March 21, 2023 (Light Gasoline)
304	Liquid Loadout (C3+)		July 6, 2022	September 9, 2022

Attachment B

List of Source(s) and/or Air Cleaning Devices Specified in Plan Approval No. 04-00740 A, B and C

Source ID	Source Name	Air Cleaning Device	Date of Completion	Operational Commencement Date
305	Liquid Loadout (Coke Residue/Tar)		July 6, 2022	March 14, 2023 1 <sup>st</sup> load out of blended pitch from ECU
401	Storage Tanks (Recovered Oil, Equalizations Wastewater)		April 30, 2021	April 30, 2021
402	Storage Tank (Spent Caustic)		July 6, 2022	August 18, 2022
403	Storage Tanks (Light Gasoline)		July 6, 2022	February 3, 2022
404	Storage Tanks (Hexene)		May 31, 2022	May 31, 2022 (Tank B) and June 26, 2022 (Tank A)
405	Storage Tanks (Misc Pressurized/ Refrigerated)		May 12, 2022	5/12/2022
406	Storage Tanks (Diesel Fuel > 150 gallons)		December 4, 2020	December 4, 2020
C406 <sup>c</sup>		Carbon Canisters (Diesel Storage Tanks)	Construction has not commenced	See Note c
407	Storage Tanks (Pyrolysis Fuel Oil)		July 6, 2022	November 8, 2022
408	Storage Tanks (Diesel Fuel < 150 gallons)		March 2, 2020	March 2, 2020
409	Methanol Storage Vessels and Components		May 12, 2022	May 12, 2022
501 <sup>b</sup>	Equipment Components		July 6, 2022	First pellets made at PE3 November 21, 2022, last PE unit to start. All areas have LDAR
502	Wastewater Treatment Plant		April 30, 2021	April 30, 2021
N/A	Induced Nitrogen Flootation Units covered under RfDs <ul style="list-style-type: none"> <li>RfD 10119 Approval Date 4/10/2023</li> <li>RfD 10277 Approval Date 8/9/2023</li> </ul>	Spent Caustic Vent Incinerator	Wemco INF: May 1, 2023 EC15 INF: November 19, 2023	Wemco INF: May 1, 2023 EC15 INF: November 19, 2023

Attachment B

List of Source(s) and/or Air Cleaning Devices Specified in Plan Approval No. 04-00740 A, B and C

Source ID	Source Name	Air Cleaning Device	Date of Completion	Operational Commencement Date
503	Plant Roadways		Started paving in October 2020	Completed site paving June 5, 2023
504	SF6 High Voltage Switchgear		November 12, 2019	November 12, 2019

<sup>a</sup> Source 105, 107 engines covered by RfD 8259

<sup>b</sup> PE1 Unit commissioned on October 1, 2022. PE2 Unit commissioned on November 1, 2022. PE3 Unit initially attempted commissioning November 21, 2022, but has experienced equipment design deficiencies and was shut down since March 25, 2023, following limited commissioning attempts. PE3 Unit was re-commissioned and produced polyethylene on February 23, 2024.

<sup>c</sup> No applicable storage tank installed for requirement to apply

