

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
BEAUMONT DIVISION

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|---------------------------|---|------------------|
| _____ |) | |
| UNITED STATES OF AMERICA, |) | |
| |) | |
| Plaintiff, |) | |
| |) | Civil Action No. |
| v. |) | |
| |) | |
| TPC GROUP LLC, |) | |
| |) | |
| |) | Judge |
| Defendant. |) | |
| _____ |) | |

CONSENT DECREE

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WHEREAS, Plaintiff United States of America, on behalf of the United States Environmental Protection Agency (“EPA”), has filed a Complaint in this action concurrently with this Consent Decree, alleging that the TPC Group LLC (“TPC” or “Defendant”), violated Sections 112(r)(1) and 112(r)(7) of the Clean Air Act (“CAA” or the “Act”), 42 U.S.C. § 7412(r)(1) and (r)(7), and the 40 C.F.R. Part 68 Chemical Accident Prevention Provisions (the “Risk Management Program Regulations”), at its facilities located in Houston, Texas (“Houston Facility”) and Port Neches, Texas (“Port Neches Facility”) (collectively “the Facilities”).

WHEREAS, the Complaint against Defendant alleges that certain violations caused or contributed to conditions that, on November 27, 2019, led to an explosion at the Port Neches Facility that resulted in the release of more than 11 million pounds of regulated substances, the evacuation of a significant number of people from the City of Port Neches and surrounding areas, more than \$150 million in offsite property damage, and other impacts to human health and the environment (the “Port Neches Explosion”).

WHEREAS, the Complaint against Defendant also alleges numerous other violations of the Risk Management Program Regulations at the Houston Facility and Port Neches Facility.

WHEREAS, the Port Neches Facility no longer operates as a chemical manufacturing facility and currently operates only as a storage terminal.

WHEREAS, on June 1, 2022 (the “Petition Date”), Defendant filed a voluntary petition for relief in the United States Bankruptcy Court for the District of Delaware (“Bankruptcy Court”) under Chapter 11 of title 11 of the United States Bankruptcy Code at Case No 22-10493 (the “Bankruptcy Code” and such proceedings thereunder, the “Chapter 11 Case”).

WHEREAS, on November 29, 2022, the EPA filed Proof of Claim No. 40198 (“Proof of Claim”) against the Defendant seeking, among other things, a claim for payment of a civil

penalty pursuant to Section 113(e) of the Act, 42 U.S.C. §7413(e), for the Defendant's alleged violations of Sections 112(r)(1) and 112(r)(7) of the Act, 42 U.S.C. § 7412(r)(1) and (r)(7), and the 40 C.F.R. Part 68 Risk Management Program Regulations.

WHEREAS, on December 1, 2022, the Bankruptcy Court entered the *Findings of Fact, Conclusions of Law and Order Confirming Modified Second Amended Joint Chapter 11 Plan of TPC Group, Inc. and Its Debtor Affiliates* [Docket No. 1281] (the "Confirmation Order"), thereby confirming the *Modified Second Amended Joint Chapter 11 Plan of TPC Group Inc. and its Debtor Affiliates* [Docket No. 1281-1] (the "Plan"). The GUC Trust Agreement (as defined in the Plan and approved in the Confirmation Order) provides that the Reorganized Debtors have the authority to enter into a settlement of the Proof of Claim with the consent of the GUC Trustee, solely to the extent such reconciliation results in an allowed general unsecured claim, which shall not be reasonably withheld, conditioned, or delayed.

WHEREAS, on December 16, 2022, the Effective Date of the Plan occurred, and the Defendant emerged from Chapter 11.

WHEREAS, the Parties have engaged in good faith settlement negotiations to resolve the claims in the Complaint and the Proof of Claim, and the Parties desire to memorialize certain understandings and agreements they have reached with respect thereto.

WHEREAS, the GUC Trustee has provided a letter, which is attached as Appendix B to this Consent Decree, consenting to the allowance of a general unsecured claim in the amount of \$4,840,000 for EPA, in settlement of the EPA's claim for civil penalties in connection with Defendant's Port Neches Facility.

WHEREAS, Defendant does not admit any liability to the United States arising out of the transactions or occurrences alleged in the Complaint or the Proof of Claim.

WHEREAS, the Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I (Jurisdiction and Venue) below, and with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 113(b) of the Act, 42 U.S.C. § 7413(b), and over the Parties. Venue lies in this District pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) and (c) and 1395(a), because some of the violations alleged in the Complaint are alleged to have occurred in, and Defendant conducts business in, this judicial district. For purposes of this Consent Decree, or any action to enforce this Consent Decree, Defendant consents to the Court's jurisdiction over this Consent Decree and any such action and over Defendant and consents to venue in this judicial district.

2. For purposes of this Consent Decree, Defendant agrees that the Complaint states claims upon which relief may be granted pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b).

3. Notice of the commencement of this action has been given to the State of Texas, as required by Section 113(b) of the Act, 42 U.S.C. § 7413(b).

II. APPLICABILITY

4. The obligations of this Consent Decree apply to and are binding upon the United States and upon Defendant and any successors, assigns, or other entities or persons otherwise bound by law.

5. No transfer of ownership or operation of the Houston Facility or the Port Neches Facility, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Defendant of its obligation to ensure that the terms of the Consent Decree are implemented, unless (1) the transferee agrees to undertake obligations required by this Consent Decree and to be substituted for the Defendant as a Party under the Consent Decree and thus be bound by the terms thereof, and (2) the United States consents to relieve Defendant of its obligations. At least 30 Days prior to such transfer, Defendant shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to the United States in accordance with Section XIV (Notices) of the Consent Decree. Defendant's written notice of the prospective transfer must demonstrate that the proposed transferee has the financial and technical ability to comply with this Consent Decree and the Act and must include a detailed summary of the proposed transferee's accidental release history and compliance with Section 112(r) of the Act, 42 U.S.C. § 7412(r). The United States' consent or non-consent shall be based upon a determination regarding whether the proposed transferee has the financial and technical ability to comply with the Consent Decree as well as the proposed transferee's accidental release history. No later than five Days after the completion of such transfer, Defendant shall provide an executed copy of the written agreement to the same entities that received written notice of the prospective transfer, in accordance with Section XIV (Notices). Any attempt to transfer

ownership or operation of the Houston Facility or the Port Neches Facility without complying with this Paragraph constitutes a violation of this Consent Decree.

6. Defendant shall provide a copy of this Consent Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Consent Decree, as well as to any contractor retained to perform work required under this Consent Decree. Defendant shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

7. In any action to enforce this Consent Decree, Defendant shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. OBJECTIVES

8. It is the express purpose of the Parties in entering into this Consent Decree to further the objectives set forth in 42 U.S.C. § 7412(r) by the expeditious implementation of the requirements of this Consent Decree. All obligations of this Consent Decree have the objective of causing the Defendant to come into and remain in full compliance with Section 112(r) of the Act, 42 U.S.C. § 7412(r), including implementing the Risk Management Program Regulations found at 40 C.F.R. Part 68.

IV. DEFINITIONS

9. Terms used in this Consent Decree that are defined in the Act or in regulations promulgated pursuant to the Act shall have the meanings assigned to them in the Act or such regulations, unless otherwise provided in this Consent Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions apply:

- a. “Administrative Order on Consent” means the Order entered into between EPA and Defendant and filed with the Regional Hearing Clerk on August 23, 2022, which is attached hereto as Appendix A.
- b. “Catastrophic Release” means a major uncontrolled emission, fire, or explosion, involving one or more regulated substances that presents imminent and substantial endangerment to public health and the environment.
- c. “Complaint” means the complaint filed by the United States in this action.
- d. “Consent Decree” means this Consent Decree and all appendices attached hereto listed in Section XXIV (Appendices).
- e. “Date of Lodging” means the Day this Consent Decree is filed for lodging with the Clerk for this Court for the United States District Court for the Eastern District of Texas.
- f. “Day” means a calendar day unless expressly stated to be a business day. In computing any period of time for a deadline under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period runs until the close of business of the next business day.
- g. “Defendant” means TPC Group LLC.
- h. “DOJ” means the United States Department of Justice and any of its successor departments or agencies.
- i. “Effective Date” means the definition provided in Section XV (Effective Date).
- j. “EPA” means the United States Environmental Protection Agency and any of its successor departments or agencies.

- k. “Houston Facility” means Defendant’s petrochemical manufacturing facility located at 8600 Park Place Boulevard, Houston, Texas 77017.
- l. “Open Corrective Action” or “Open” means a team’s finding or recommendation resulting from a process hazard analysis conducted pursuant to 40 C.F.R. § 68.67, that has not been resolved and documented, and the completed action communicated to operating, maintenance and other employees whose work assignments are in the process and who may be affected by the recommendations or actions in accordance with 40 C.F.R. § 68.67(e).
- m. “Port Neches Facility” means Defendant’s petrochemical facility located at 2102 Spur 136, Port Neches, Texas 77654.
- n. “Paragraph” means a portion of this Consent Decree identified by an Arabic numeral.
- o. “Parties” means the United States and Defendant, each of which is a “Party.”
- p. “PHA” or “Process Hazard Analysis” means the hazard evaluation described in and required by 40 C.F.R. Part 68.
- q. “PHA Action Item Tracking Spreadsheet” means a spreadsheet created and managed by TPC that summarizes corrective actions taken or to be taken in response to a process hazard analysis (e.g. spreadsheet generated from the PHA compliance tracking system). The spreadsheet shall include each PHA finding and the related recommendation, an assigned risk level, a description of any interim measures taken, the current implementation status of each corrective action (e.g. in process or completed), a scheduled due date for completion of the corrective

action and the actual completion date, and any rejection of a finding including the associated reasoning for the rejection.

- r. “PHA Report” means a written report generated during a Process Hazard Analysis as required by 40 C.F.R. § 68.67.
- s. “Process” means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances, or combination of these activities. For the purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process. “Process” shall apply to all processes at the Facilities.
- t. “Reporting Period” means the two six-month periods in each calendar year, the first running from January 1st through June 30th and the second running from July 1st through December 31st.
- u. “Section” means a portion of this Consent Decree identified by a roman numeral.
- v. “United States” means the United States of America, acting on behalf of EPA.

V. CIVIL PENALTY

10. Defendant shall be liable to the United States for an allowed civil penalty totaling \$12,100,000 to resolve the civil penalty claims asserted by the United States in its Complaint and Proof of Claim alleging that the Defendant violated Sections 112(r)(1) and 112(r)(7) of the Act, 42 U.S.C. § 7412(r)(1) and (r)(7), and the 40 C.F.R. Part 68 Risk Management Program Regulations, at the Houston Facility and Port Neches Facility.

11. The Parties agree that \$4,840,000 of the total allowed civil penalty provided for in Paragraph 10 shall be in resolution of the United States’ civil penalty claims asserted in its

Complaint and Proof of Claim related to alleged violations at the Port Neches Facility and shall be treated as an allowed general unsecured claim, which shall be paid in accordance with the Defendant's Plan. This allowed general unsecured claim shall receive the same treatment under Defendant's Plan, without discrimination, as all other allowed Class 4 Unsecured Claims, with all attendant rights provided by the Bankruptcy Code, the Plan, the Confirmation Order, and other applicable law, and shall not be entitled to any priority in distribution over other allowed Class 4 Unsecured Claims.

12. The Parties agree that \$7,260,000 of the total civil penalty provided for in Paragraph 10 shall be in resolution of the United States' civil penalty claims as asserted in its Complaint and Proof of Claim related to alleged violations at the Houston Facility and shall be treated as an allowed subordinated claim under Defendant's Plan, which shall be paid in accordance with the Defendant's Plan.

13. The Parties acknowledge that, based on the Plan's treatment of allowed general unsecured claims and subordinated claims in Defendant's Chapter 11 Case, all distributions on account of EPA's claims allowed herein shall be paid, as applicable, by the GUC Trust (as defined in the Plan) in accordance with the Plan. The GUC Trustee has provided a letter consenting to the allowance of a general unsecured claim in the amount of \$4,840,000 for EPA, in settlement of the EPA's claim for civil penalties in connection with Defendant's Port Neches Facility, attached hereto as Appendix B. For such distributions, Defendant will notify and instruct the GUC Trust to use FedWire Electronic Funds Transfer ("EFT") to the DOJ account, in accordance with instructions provided to Defendant by the Financial Litigation Unit ("FLU") of the United States Attorney's Office for the Eastern District of Texas after the Effective Date. The Defendant will notify the GUC Trust that the payment instructions provided by the FLU will

include a Consolidated Debt Collection System (“CDCS”) number, which the GUC Trust shall use to identify all payments required to be made in accordance with this Consent Decree. The FLU will provide the payment instructions to:

Edgar C. Gentle, III, Esq.
Gentle Turner & Benson, LLC
501 Riverchase Parkway East Suite 100
Hoover, AL 35244
Email: egentle@gtandslaw.com

With a copy to counsel:

Aland D. Halperin, Esq., Bankruptcy Counsel
Halperin Battaglia Benzija, LLP
40 Wall Street – 37th Floor
New York, New York 10005
Email: ahalperin@halperinlaw.net

And a copy to Defendant:

Legal Department
500 Dallas Street, Suite 2000
Houston, Texas 77002
Email: legal@tpcgrp.com

on behalf of the GUC Trust. The GUC Trust may change the individual to receive payment instructions on its behalf by providing written notice of such change to DOJ and EPA in accordance with Section XIV (Notices).

14. At the time of payment, Defendant will notify and instruct the GUC Trust to send notice that payment has been made: (i) to EPA via email at cinwd_acctsreceivable@epa.gov or via regular mail at EPA Cincinnati Finance Office, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45268; (ii) to DOJ via email or regular mail in accordance with Section XIV (Notices); and (iii) to EPA in accordance with Section XIV (Notices). Such notice shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in *United States v. TPC Group LLC*

and shall reference the civil action number, CDCS Number and DOJ case number 90-5-2-1-12550.

15. Defendant shall not deduct any penalties paid by the GUC Trust or Defendant under this Consent Decree pursuant to this Section or Section VIII (Stipulated Penalties) in calculating its federal income tax.

VI. COMPLIANCE REQUIREMENTS

16. Defendant shall comply with Section 112(r) of the Act and the 40 C.F.R. Part 68 Risk Management Program Regulations at the Houston Facility and the Port Neches Facility. The Compliance Requirements contained herein shall be completed at the Houston Facility and at the Port Neches Facility, unless otherwise specifically indicated.

17. Process Safety Information. Within 365 Days after the Effective Date, with respect to process safety information, Defendant shall:

- a. Complete a compilation of written process safety information for all equipment in each Process, that includes design codes and standards employed, in accordance with 40 C.F.R. § 68.65(d)(1)(vi);
- b. Complete a compilation of written process safety information for all equipment in each Process designed and constructed in accordance with codes, standards, or practices that are no longer in general use;
- c. Determine and document that the equipment identified in Paragraph 17(b) is designed, maintained, inspected, tested, and operating in a safe manner;
- d. If any equipment for which information compiled in Paragraph 17(b) is determined not to be designed, maintained, inspected, tested, or operated in a safe manner pursuant to Paragraph 17(c), take corrective action in

accordance with 40 C.F.R. § 68.73(e);

- e. Evaluate all equipment in each Process to determine and document whether the equipment complies with recognized and generally accepted good engineering practices (“RAGAGEP”) in accordance with 40 C.F.R. § 68.65(d)(2). Such evaluation shall be documented and all non-compliant equipment listed;
- f. If any equipment evaluated in Paragraph 17(e) is determined to not be compliant with RAGAGEP, take corrective action in accordance with 40 C.F.R. § 68.73(e);
- g. Submit to EPA:
 - (1) A summary of the compilations of written process safety information prepared in accordance with Paragraphs 17(a) and (b);
 - (2) A summary of the steps taken (e.g. explanation of what specific documentation was reviewed) to make the determination in Paragraph 17(c), and documentation of the determination as to whether the equipment is designed, maintained, inspected, tested, and operating in a safe manner, and an explanation of any corrective action taken pursuant to Paragraph 17(d); and
 - (3) A summary of the steps taken (e.g. explanation of what specific documentation was reviewed) to complete the evaluation conducted in Paragraph 17(e), and documentation that the equipment identified in Paragraph 17(e) is compliant with RAGAGEP, and any explanation of any corrective action taken

pursuant to Paragraph 17(f); and

- h. No later than 5 years from the Effective Date, and no sooner than 4 years from the Effective Date, Defendant shall repeat the steps required by this Paragraph and certify, using the statement in Paragraph 37, that the equipment complies with RAGAGEP and is operating in a safe manner.

18. Process Hazard Analysis. With respect to Process Hazard Analysis, Defendant shall:

- a. Within 15 Days of the Effective Date:
 - (1) Submit to EPA, the PHA Report from each PHA conducted from June 23, 2020, through the Effective Date, at the Houston Facility, and each PHA conducted from March 1, 2020, through the Effective Date at the Port Neches Facility.
 - (2) Submit to EPA the current PHA Action Item Tracking Spreadsheet, including both Open and overdue corrective actions, resulting from any PHA conducted at the Houston Facility or Port Neches Facility.
 - (3) Complete interim measures, as necessary, (administrative, procedural, engineering, etc.) to assure safe operation and mitigate hazards associated with all Open Corrective Actions classified with a red or orange risk level (as defined in Appendix D) for any finding resulting from any PHA conducted at the Houston Facility or Port Neches Facility; and
 - (4) Submit to EPA documentation describing the interim measures and

demonstrating that the Defendant completed the interim measures, including the current PHA Action Item Tracking Spreadsheet.

- b. Within 30 Days of the Effective Date:
 - (1) Complete interim measures, as necessary, to assure safe operation and mitigate hazards associated with all Open Corrective Actions classified with a yellow or green risk level for any finding resulting from any PHA conducted at the Houston Facility or Port Neches Facility; and
 - (2) Submit to EPA documentation describing the interim measures and demonstrating that the Defendant has completed the interim measures, including the current PHA Action Item Tracking Spreadsheet.

- c. As to all Open Corrective Actions listed in Appendix E as well as any Open Corrective Actions generated between the date of Appendix E and the Effective Date of this Consent Decree (the "Paragraph 18(c) Actions"):
 - (1) Within 6 months of the Effective Date:
 - (a) Complete fifteen percent (15%) of all Paragraph 18(c) Actions classified with a red or orange risk level for any finding resulting from any PHA conducted at the Houston Facility or Port Neches Facility, unless otherwise agreed to in writing by EPA.
 - (b) Submit to EPA documentation that such corrective actions have been completed, including the current PHA Action

Item Tracking Spreadsheet.

- (2) Within 12 months of the Effective Date:
 - (a) Complete fifty percent (50%) of all Paragraph 18(c) Actions classified with a red or orange risk level for any finding resulting from any PHA conducted at the Houston Facility or Port Neches Facility through the Effective Date, unless otherwise agreed to in writing by EPA.
 - (b) Submit to EPA documentation that such corrective actions have been completed, including the current PHA Action Item Tracking Spreadsheet.
- (3) Within 24 months of the Effective Date:
 - (a) Complete one hundred percent (100%) of all Paragraph 18(c) Actions classified with a red or orange risk level for any finding resulting from any PHA conducted at the Houston Facility or Port Neches Facility through the Effective Date, unless otherwise agreed to in writing by EPA.
 - (b) Complete fifty percent (50%) of all Paragraph 18(c) Actions classified with a yellow or green risk level for any finding resulting from any PHA conducted at the Houston Facility or Port Neches Facility through the Effective Date, unless otherwise agreed to in writing by EPA.
 - (c) Submit to EPA documentation that such corrective actions

have been completed, including the current PHA Action Item Tracking Spreadsheet.

- (4) Within 36 months of the Effective Date:
 - (a) Complete one hundred percent (100%) of all Paragraph 18(c) Actions classified with a yellow or green risk level for any finding resulting from any PHA conducted at the Houston Facility or Port Neches Facility through the Effective Date, unless otherwise agreed to in writing by EPA.
 - (b) Submit to EPA documentation that such corrective actions have been completed, including the current PHA Action Item Tracking Spreadsheet.
- d. With respect to corrective actions generated from PHAs after the Effective Date, the Defendant shall:
 - (1) Immediately (i.e. no more than 14 Days) after the date the PHA Report was issued complete interim measures to reduce the risk level for findings classified with a red level to an orange level.
 - (2) Complete interim measures, as necessary, to assure safe operation and mitigate hazards associated with corrective actions classified with an orange risk level as soon as practical but not later than within 90 Days of the date the PHA Report was issued.
 - (3) Complete interim measures, as necessary, to assure safe operation and mitigate hazards associated with corrective actions classified

with a yellow or green risk level as soon as practical but not later than within 6 months of the date the PHA Report was issued.

- (4) Complete corrective actions classified with an orange risk level, or original red risk level lowered to orange with interim measures, as soon as practical but no later than within 18 months of the date the PHA Report was issued or during the next turnaround, whichever is earlier.
- (5) Complete corrective actions classified with a yellow risk level as soon as practical but no later than within 24 months of the date the PHA Report was issued or during the next turnaround, whichever is earlier.
- (6) Complete corrective actions classified with a green risk level as soon as practical but no later than within 30 months of the date the PHA Report was issued or during the next turnaround, whichever is earlier.
- (7) In the event the corrective action cannot be completed safely in the timeframe specified in Paragraph 18(d)(4), 18(d)(5), or 18(d)(6), without a process shutdown and Defendant has appropriately documented, prior to the corrective action due date, the reason for deferring the action, a review of all PHA team findings and recommendations that resulted in the corrective action, appropriate risk-analysis of the deferral, consideration and, if appropriate, implementation of controls to mitigate risk during the deferral, and

appropriate management approvals of the deferral, the corrective action shall be completed no later than the next process shutdown, not to exceed three years from completion of the relevant PHA.

e. Communicate the actions to operating, maintenance and other employees whose work assignments are in the process and who may be affected by the PHA recommendations or actions.

f. Within 45 Days of the Effective Date, revise, and implement as revised, Defendant's PHA program, including Defendant's Corrective Action Management Procedure, EHS-GEN-ALL-1103, to require:

- (1) Immediate completion (i.e. no more than 14 Days), after the date the PHA Report was issued, of interim measures to reduce the risk level for findings classified with a red level to an orange level.
- (2) Completion of interim measures, as necessary, to assure safe operation and mitigate hazards associated with corrective actions classified with an orange risk level as soon as practical but not later than within 90 Days of issuance of the PHA Report.
- (3) Completion of interim measures, as necessary, to assure safe operation and mitigate hazards associated with corrective actions classified with a yellow or green risk level as soon as practical but not later than within 6 months of issuance of the PHA Report.
- (4) Completion of corrective actions classified with an orange risk level, or original red risk level lowered to orange with interim measures, as soon as practical but no later than within 18 months

- of issuance of the PHA Report.
- (5) Completion of corrective actions classified with a yellow risk level as soon as practical but no later than within 24 months of issuance of the PHA Report.
 - (6) Completion of corrective actions classified with a green risk level as soon as practical but no later than within 30 months of issuance of the PHA Report.
 - (7) In the event the corrective action cannot be completed safely in the timeframe specified in Paragraph 18(f)(4), 18(f)(5), or 18(f)(6), without a process shutdown and Defendant has appropriately documented, prior to the corrective action due date, the reason for deferring the action, a review of all PHA team findings and recommendations that resulted in the corrective action, appropriate risk-analysis of the deferral, consideration and, if appropriate, implementation of controls to mitigate risk during the deferral, and appropriate management approvals of the deferral, the corrective action shall be completed no later than the next process shutdown, not to exceed three years from completion of the relevant PHA.
 - (8) PHAs to explicitly address natural hazards, including those caused by climate change or other triggering events (*e.g.* extreme temperatures, high winds, floods, storm surge).
 - (9) PHAs to explicitly address the stationary source siting, including the placement of Processes, equipment, and buildings within the

facility, hazards posed by proximate facilities, and potential accidental release consequences to nearby public and environmental receptors.

(10) PHAs to explicitly include evaluation of existing dead legs, potential for dead legs to be created based on operational variances and potential for dead legs to be created based on maintenance activities or delays.

g. For five years from the Effective Date, submit to EPA in each semi-annual report submitted pursuant to Section VII (Reporting Requirements) all new, updated and revalidated PHAs completed after the Effective Date, including the current version of the PHA Action Item Tracking Spreadsheet. For any corrective action not completed within the non-extended timeframes (e.g. 18, 24, and 30 months) due to requiring a process shutdown for safely completing the corrective action, include in the relevant semi-annual report, the documentation describing the reason for deferring the action, a review of all PHA team findings and recommendations that resulted in the corrective action, appropriate risk-analysis of the deferral, consideration and, if appropriate, implementation of controls to mitigate risk during the deferral, and appropriate management approvals of the deferral.

19. Operating Procedures and Training. With respect to operating procedures and training:

a. Within 180 Days of the Effective Date Defendant shall:

- (1) Identify the operating procedures subject to training requirements pursuant to 40 C.F.R. § 68.71;
- (2) Identify safety, health or environmentally critical operating procedures;
- (3) Consult with the employees involved in operating each Process to determine and identify any operating procedures that the employees believe training should be conducted on more frequently than at least every three years;
- (4) Identify operating procedures that are implemented or used at a frequency less than every six months;
- (5) After evaluating the information in Paragraphs 19(a)(1)-19(a)(4), revise refresher training program requirements to provide refresher training:
 - (a) More frequently than every three years on any operating procedure identified in Paragraphs 19(a)(2) and 19(a)(3).
 - (b) More frequently than every three years on any operating procedure identified in 19(a)(4) except those procedures implemented for scheduled activities (e.g. scheduled shutdown).
 - (c) Immediately (i.e. less than 7 Days) prior to use for any operating procedure identified in Paragraph 19(a)(4) implemented for scheduled activities (e.g. scheduled shutdown).

- (6) Submit all revised training programs to EPA;
 - (7) Conduct training on the operating procedures at the frequency required in the revised refresher training program; and
- b. For five years from the Effective Date, submit to EPA in each semi-annual report submitted pursuant to Section VII (Reporting Requirements) documentation demonstrating:
- (1) The initial and refresher training required for each operator position; and
 - (2) A report of all operating procedure refresher trainings completed during the semi-annual time period including a record containing the identity of the employee, the date of the refresher training, the date of the same previously completed training, and the means used to verify that the employee understood the training.

20. Emergency Shutdown Procedures. Within 270 Days of the Effective Date, with respect to emergency shutdown operating procedures, Defendant shall:

- a. Complete an audit of all emergency shutdown procedures to verify compliance with 40 C.F.R. § 68.69(a)(1)(iv), including verification of whether the procedures include conditions under which the emergency shutdown is required;
 - b. Revise any procedures not compliant, including those that do not include conditions under which emergency shutdown is required; and
- (1) Within 30 Days of revising any operating procedure revised pursuant to Paragraph 20(b), Defendant shall train all operators

involved in each Process.

- c. Submit to EPA in the semi-annual report submitted pursuant to Section VII (Reporting Requirements) due after completion of the actions required by this Paragraph:
 - (1) a list of the operating procedures revised pursuant to Paragraph 20(b) and copies of the associated procedures;
 - (2) if no operating procedures required revision, a copy of 5 representative emergency shutdown procedures;
 - (3) a summary explanation of the operator training conducted pursuant to Paragraph 20(b(1) and the date the training was completed.

21. Management of Change. With respect to Management of Change (“MOC”), Defendant shall:
 - a. Within 30 Days of the Effective Date, and continuing with each semi-annual report submitted pursuant to Section VII (Reporting Requirements), identify and submit to EPA a list detailing the date opened and the status (e.g. new, authorized for construction, authorized for startup) of all MOCs open as of the Effective Date.
 - b. Within 120 Days of the Effective Date, unless otherwise dictated by a PHA schedule pursuant to Paragraph 18 and except as noted in Paragraph 21(c), complete or address all MOC action items for any MOC authorized for startup prior to the Effective Date. Action items include addressing considerations pursuant to 40 C.F.R. § 68.75(b), conducting training pursuant to 40 C.F.R. §68.75(c), and updating operating procedures

pursuant to 40 C.F.R. § 75(e), unless otherwise authorized by EPA.

- c. Within 180 Days of the Effective Date, complete MOC action items relating to updating process safety information for any MOC authorized for startup prior to the Effective Date.
- d. Within 180 Days of the Effective Date, unless otherwise dictated by a PHA schedule pursuant to Paragraph 18, complete all MOC action items or remove the change from the MOC system for any MOC that has been in-progress (initiated but not authorized for startup) for greater than 12 months and not closed (change has occurred and startup completed), unless initial authorization (change authorized to proceed to development of pre-startup activities, approved for construction) for the change has been granted or physical onsite construction is being done to complete the MOC and such work is documented or unless otherwise authorized by EPA. Defendant shall document the reason(s) for each change in the MOC system that has been in-progress for greater than 12 months and not closed or removed from the system pursuant to this paragraph.
- e. Within 180 Days of the Effective Date revise Defendant's MOC procedures to include the following and implement the same:
 - (1) Explicitly prohibit the change from occurring unless the considerations pursuant to 40 C.F.R. § 68.75(b) are addressed.
 - (2) Explicitly prohibit start-up of the Process unless training is conducted pursuant to 40 C.F.R. § 68.75(c).
 - (3) Explicitly require the completion of any process safety information

updates pursuant to 40 C.F.R. § 68.75(d) within 6 months from the change occurring.

(4) Explicitly require the completion of operating procedure updates pursuant to 40 C.F.R. § 68.75(e) and 40 C.F.R. § 68.77(b)(2) prior to start-up of the process.

(5) Establish a system for an annual evaluation of the MOC database consistent with the requirements of Paragraphs 21(b) - 21(d) above.

f. Within 365 Days of the Effective Date, and annually thereafter, or until Defendant submits adequate documentation to EPA demonstrating no MOC from the prior reporting period required revisions in accordance with Paragraph 21(g), perform an audit of all closed MOCs with operations, maintenance, and engineering personnel, beginning with MOCs initiated November 1, 2021, to the first Reporting Period to verify whether:

(1) All changes made pursuant to 40 C.F.R. § 68.75(a) are being documented.

(2) All considerations pursuant to 40 C.F.R. § 68.75(b) are addressed prior to the change.

(3) Authorization requirements pursuant to 40 C.F.R. § 68.75(b) were met prior to the change.

(4) Training on the change was conducted for employees pursuant to 40 C.F.R. § 68.75(c) prior to start-up of each Process or affected

part of each Process.

- (5) Process safety information and operating procedures were updated pursuant to 40 C.F.R. § 68.75(d) and (e).
 - (6) The change action described in the MOC was completed.
- g. Within 30 Days of the audit described in Paragraph 21(f), revise any MOC that does not include sufficient documentation of completed elements described in Paragraphs 21(e)(1) - 21(e)(5); if the review described in Paragraph 21(f) identifies elements that were not completed, resolve these items within 3 months of the audit, unless otherwise agreed by EPA.
- h. For five years from the Effective Date, report to EPA in each semi-annual report submitted pursuant to Section VII (Reporting Requirements), a summary of each completed MOC conducted and documentation demonstrating completion of the considerations set forth in 40 C.F.R. § 68.75(b) and training conducted pursuant to 40 C.F.R. § 68.75(c).

22. Risk Management Plan (“RMP”) Action Tracking. Within 180 Days of the Effective Date, with respect to RMP action tracking, Defendant shall:

- a. Establish an action item tracking and resolution management systems to track to resolution all action items generated from:
 - (1) PHAs conducted pursuant to 40 C.F.R. § 68.67;
 - (2) Operating procedure reviews conducted pursuant to 40 C.F.R. § 68.69(c);
 - (3) Employee training consultation conducted pursuant to 40 C.F.R. § 68.71(b);

- (4) The results of mechanical integrity inspection and testing, equipment deficiencies, and quality assurance pursuant to 40 C.F.R. § 68.73;
 - (5) MOCs conducted pursuant to 40 C.F.R. § 68.75;
 - (6) Pre-startup safety reviews (“PSSR”) conducted pursuant to 40 C.F.R. § 68.77;
 - (7) Compliance audits conducted pursuant to 40 C.F.R. § 68.79;
 - (8) Incident investigations conducted pursuant to 40 C.F.R. § 68.81; and
 - (9) Consultation with employees pursuant to 40 C.F.R. § 68.83.
- b. The action item tracking and resolution management system shall include, as applicable:
- (1) Risk ranked prioritization for each action item;
 - (2) Target due-dates based on risk ranking for each action item;
 - (3) Monthly management review of the status of resolution versus target due dates with the person with responsibility for implementing the respective requirement;
 - (4) Documentation of the rationale for extending the deadline for an action item;
 - (5) Documentation of the rationale for rejecting an action item;
 - (6) Close-out of action items shall be based on completed implementation of the action item (e.g. equipment installed, procedure written, training completed); and

- (7) Close-out of action items shall include independent verification of implementation (e.g. field observation, review of procedure, review of training record).

23. Key Performance Indicators (KPIs). With respect to KPIs – PHA program implementation, mechanical integrity program implementation, operating procedure implementation, training program implementation, management of change, PSSR, incident investigations, and compliance audits, action item tracking and resolution, Defendant shall:

- a. Within 90 Days of the Effective Date, implement the KPIs and system for the regular evaluation of Defendant’s compliance with its company developed procedures for implementing PHA, mechanical integrity, operating procedures, training program, management of change, and PSSR (“Implementation Review System”) described in Appendix C.
- b. Where KPI metrics indicate actual performance below targets, Defendant shall develop and implement corrective actions.
- c. Submit to EPA, in each semi-annual report submitted pursuant to Section VII (Reporting Requirements), the steps taken pursuant to the Implementation Review System, including any corrective action and the associated dates of completion.
- d. Repeat the evaluation pursuant to the approved Implementation Review System in Paragraph 23(a) annually and submit summary reports as described in Paragraph 23(c) for a period of 5 years form the Effective Date.

24. Compliance Audits. With respect to compliance audits, Defendant shall:

- a. Within 90 Days of the Effective Date, review all compliance audits conducted pursuant to 40 C.F.R. § 68.79 at the Houston Facility from August 1, 2015, to the Effective Date, (including the PSM/RMP Compliance Audit Report prepared for the TPC Group by AE Solutions dated January 29, 2016; PSM/RMP Compliance Audit Report prepared for the TPC Group by PSRG dated September 27, 2018; and PSM/RMP Compliance Audit Report prepared for the TPC Group by AE Solutions dated September 10, 2021 (“2021 Audit”)); and at the Port Neches Facility from March 1, 2020, to the Effective Date to identify any findings that do not have an associated:
 - (1) Appropriate response; and
 - (2) Documentation that deficiencies have been corrected.
- b. Within 180 Days of the Effective Date, unless otherwise dictated by the timing associated with a different compliance requirement term under this Consent Decree, revise any compliance audit responses that do not have an appropriate response to the finding and take actions to correct all deficiencies identified in the compliance audits reviewed pursuant to Paragraph 24(a).
- c. Within 210 Days of the Effective Date, submit to EPA for review:
 - (1) all compliance audits reviewed pursuant to Paragraph 24(a);
 - (2) all findings identified pursuant to Paragraph 24(a);
 - (3) any revisions made to compliance audit responses; and
 - (4) a description of any actions taken to correct deficiencies and the

associated date of completion.

- d. Within 180 Days of the Effective Date, revise Defendant's compliance audit program to require the correction of all findings be completed within 1 year of the audit completion date unless an explanation and the mitigation steps taken to assure safe operation are documented.

25. Incident Investigation. With respect to incident investigations, Defendant shall:

- a. Within 5 Days of any incident occurring after the Effective Date that resulted in or could have resulted in a Catastrophic Release regardless of whether the released amount was over reportable quantities, report release information to a webpage located on Defendant's website (the webpage can be accessed at TPCCommunityConnect.com). The webpage must be available to the general public and not require an account or login information for access. The release information must include at a minimum:

- (1) anything submitted to the State of Texas Environmental Electronic Reporting System ("STEERS");
- (2) the date of the incident;
- (3) date the investigation began;
- (4) a description of the incident;
- (5) any known factors that contributed to the incident; and
- (6) any known recommendations resulting from the investigation of the incident.

Such information shall be posted on Defendant's website and publicly

available for a minimum of 3 years from the date of the incident.

- b. Within 30 Days of any accidental release occurring after the Effective Date that resulted in or could have resulted in a Catastrophic Release regardless of whether the released amount was over reportable quantities, and on the first business Day every month thereafter, prepare and post a status report with a summary of the corrective actions taken, interim measures taken to prevent a reoccurrence or similar incident until corrective actions can be implemented, and any root cause analysis on the publicly available website maintained by TPC, unless otherwise authorized by EPA. All status reports and additions shall be posted and made publicly available for a minimum of 3 years from the date of the release.
- c. For any accidental release occurring after the Effective Date that resulted in or could have resulted in a Catastrophic Release regardless of whether the release amount was over reportable quantities:
 - (1) Immediately (i.e. less than 24 hours) identify and take interim measures and/or complete repairs, if any, to prevent a reoccurrence or similar incident until corrective actions can be implemented;
 - (2) Address and resolve all incident report findings and recommendations within 12 months after the incident, unless Defendant demonstrates in writing with appropriate documentation that: (1) the recommended corrective action cannot be successfully completed due to health, safety, environmental, or technological

factors, (2) interim measures are implemented to prevent a reoccurrence or similar incident until the corrective action can be implemented, and (3) EPA has agreed in writing to extend the deadline.

- d. Within 60 Days of the Effective Date, revise Defendant's incident investigation system to require implementation of the actions and timelines described in Paragraphs 25(a), 25(b), and 25(c), but not including EPA approval in subparagraph 25(c)(2).
- e. For any incident occurring from November 1, 2019, to the Effective Date that resulted in or could have resulted in a Catastrophic Release regardless of whether the release amount was over reportable quantities:
 - (1) Within 60 Days of the Effective Date, take the actions described in Paragraphs 25(a) and 25(b) to post incident investigation information.
 - (2) Within 30 Days of the Effective Date, (i) take interim measures to prevent a reoccurrence or similar incident until corrective actions can be implemented; and (ii) address and resolve all incident report findings or recommendations involving minor repairs.
 - (3) Address and resolve all incident report findings or recommendations within 9 months of the Effective Date, unless Defendant demonstrates in writing with appropriate documentation that: (1) the recommended corrective action cannot be successfully completed due to health, safety, environmental, or technological

factors, (2) interim measures are implemented to prevent a reoccurrence or similar incident until the corrective action can be implemented, and (3) EPA has agreed in writing to extend the deadline.

f. Submit to EPA, in each semi-annual reports submitted pursuant to Section VII (Reporting Requirements), for any release subject to 40 C.F.R. § 68.81(a) and occurring during the prior semi-annual period:

- (1) The incident investigation report required pursuant to 40 C.F.R. § 68.81(d); and
- (2) A report of the corrective actions taken, or schedule of the corrective actions to be taken, to address and resolve the incident report findings and recommendations.

g. Within 30 Days of written notice from EPA, correct any incident investigation report deficiencies with the elements required by 40 C.F.R. § 68.81(d) (e.g. missing date investigation began).

26. Risk Management Plan Required Corrections. Within 90 Days of the Effective Date, with respect to RMP required corrections, Defendant shall:

- a. Update its RMP in accordance with 40 C.F.R. § 68.195 to include accident history information for the release that occurred at the Houston Facility on April 6, 2018 (frac tank over pressured and exploded resulting in a fire);
- b. Develop and submit to EPA for review and approval, a proposed work plan for the audit of all incidents which resulted in or could have resulted in a Catastrophic Release occurring from March 1, 2020, to the Effective

Date, for identifying any incidents meeting the accidental release five-year accident history reporting criteria of 40 C.F.R. § 68.42. Within 30 Days of receipt of EPA's approval, Defendant shall complete the actions described in the incident review work plan and submit to EPA a summary of any incidents identified.

- c. Within 30 Days of completing the audit described in 26(b), update the RMP in accordance with 40 C.F.R. § 68.195 to include the relevant accident history information.

27. Administrative Order on Consent.

- a. The Administrative Order on Consent ("AOC") entered into between the EPA and Defendant on August 23, 2022, attached hereto as Appendix A, is incorporated herein by reference. The terms, conditions, and requirements of paragraph 72 of the AOC, as modified by Appendix G, are fully enforceable under this Consent Decree; provided that to the extent of any inconsistency between this Consent Decree and the AOC, the terms of this Consent Decree shall govern. Defendant shall implement the terms, conditions, and requirements of the AOC at the Port Neches Facility.
- b. Defendant shall complete work orders and service requests at the Houston Facility by the anticipated completion dates listed in Appendix H, unless otherwise agreed to by EPA in writing.

28. Port Neches Facility Operations. Should Defendant modify the operations at the Port Neches Facility such that any operations are beyond the scope of activities associated with

NAICS 424710 – Petroleum Bulk Stations and Terminals, or if Defendant brings into service any equipment for which Defendant has not evaluated fitness for service since December 10, 2020,

Defendant must take the following actions:

- a. At least 120 Days prior to modifying operations at the Port Neches Facility, Defendant must notify the United States, in a manner consistent with Section XIV (Notices), of the operational change. The notice must include:
 - (1) Detailed plans for start-up.
 - (2) A detailed plan describing the steps being taken by Defendant to ensure compliance with this Consent Decree and the Risk Management Program Regulations, including an assessment of any change to potential offsite impacts from the proposed modification in operations.
 - (3) An updated hazard assessment conducted pursuant to 40 C.F.R. Part 68 Subpart B accounting for the additional equipment brought online including indications of any changes to offsite impacts (as defined under 40 C.F.R. § 68.3, 40 C.F.R. § 68.30, and 40 C.F.R. § 68.33) as compared to the offsite consequence analysis reported in the most recent Risk Management Plan Defendant submitted to EPA per 40 C.F.R. Part 68 Subpart G.
 - (4) A summary of equipment being brought into service or used to store regulated substances that were not storing regulated substances as of December 10, 2020, a summary of any fitness for

service evaluations conducted by Defendant, and the results of those fitness for service evaluations.

b. At least 90 Days prior to any modification of operations at the Port Neches Facility, Defendant must notify the public of the operational change by:

- (1) Posting a notice on a public facing webpage located on Defendant's website that does not require an account or login information for access that describes the change in operation at the Port Neches Facility.
- (2) Posting a notice in a newspaper of record describing the change in operation at the Port Neches Facility.
- (3) Sending a written notice to any public receptors, as identified in the worst-case release scenario conducted pursuant to 40 C.F.R. § 68.25.

c. In addition to the requirements of Paragraphs 5 and 6 of this Consent Decree, should Defendant seek to transfer ownership of the Port Neches Facility Defendant must notify the United States, in accordance with Section XIV (Notices), if the transferee will operate the Port Neches Facility as a storage terminal, petrochemical manufacturing facility, or other facility subject to the Risk Management Program Regulations.

29. Relief System Design Audit and Repair.

a. Within 2 years of the Effective Date, conduct an audit of the relief system design ("Relief System Design Audit") at the Houston Facility, including pressure relief valves, vapor recovery systems, and flare systems, to

ensure the relief system is adequately designed to handle all appropriate relieving scenarios and submit to the United States a report detailing the audit. "Relief System" is defined as the collection of all pressure relieving devices; headers and manifolds; vapor recovery system including compressors and associated piping and vessels; flare piping, headers, and manifolds; and flares including all components (including knock-out and seal vessels) at the Facility.

- (1) The Relief System Design Audit shall include at a minimum:
 - (a) An evaluation of the design and design basis for all pressure relief valves and other pressure relieving devices (e.g., rupture disks), including those relieving to the atmosphere and to the relief system, to ensure:
 - 1) All appropriate overpressure scenarios were considered, including but not limited to power loss, fires, and other overpressure scenarios identified in the Houston Facility's PHAs.
 - 2) The design of all pressure relief valves and other pressure relieving devices are appropriate to safely relieve the pressure-containing equipment for the identified overpressure scenarios.
 - (b) An evaluation of all pressure relief valves and other pressure relieving devices that relieve to the atmosphere to ensure all such devices discharge to a safe location and in a

manner that does not cause harm to human or equipment receptors.

- (c) An evaluation of the design of the closed relief system, including relief headers, vapor recovery system, flare headers, and flares to ensure the closed relief system can safely relieve the overpressure scenarios identified in Paragraph 29(a)(1)(a)(1).
 - (d) An identification of prior reportable release events occurring within 5 years prior to the Effective Date that resulted from the point of discharge from a pressure relieving device or flare and an evaluation of whether the design or operation of the flare system, including the vapor recovery system and flares, was a contributing factor to the reportable release events.
 - (e) Findings of any inadequacies of design, construction, or installation identified during the Relief System Design Audit.
- (2) The Relief System Design Audit report shall document, at a minimum, the following information:
- (a) A list of any findings of inadequacies of design or construction identified during the Relief System Design Audit.
 - (b) A plan to resolve all findings of inadequacies of design or

construction identified during the Relief System Design Audit, including a schedule for completion of corrective actions.

(c) A list of industry standards and corporate and Houston Facility policies and procedures referenced during the Relief System Design Audit.

- b. Within five years of the Effective Date, unless otherwise agreed by EPA, perform corrective actions to resolve any findings of inadequacies of design or construction identified during the Relief System Design Audit.
- c. Within 30 Days following completion of corrective actions to resolve findings of inadequacies of design or construction, Defendant shall submit to the United States a Notice of Completion in accordance with Section XIV (Notices). The Notice of Completion shall include the date of completion and a description of the work performed. The United States may request additional information after Defendant submits the Notice of Completion, if the information provided is not adequate to conclude that the work has been performed and completed in accordance with this Consent Decree.

30. Air Monitoring and Notification.

- a. Monitoring Program Elements. Within 120 Days of the Effective Date, Defendant shall develop and submit to the United States for review and approval, a proposed quality assurance project plan (“QAPP”) for the following:

- (1) Installation, continual use, and maintenance of chlorine air monitoring equipment at the fence line and a community monitoring station at the Houston Facility; and installation, continual use, and maintenance of air monitoring equipment for 1,3 butadiene and isobutylene at the fence lines of the Houston Facility and Port Neches Facility, and within the communities surrounding both Facilities (“Air Monitors”).
- (2) Monitoring locations: The QAPP must include a map and geographic coordinates of proposed monitoring locations that include at minimum:
 - (a) Chlorine – At the Houston Facility, one chlorine monitor at each of the five 1,3 butadiene and isobutylene fence line monitoring stations referenced in Paragraph 30(a)(2)(b). A chlorine monitor must also be placed at the community monitoring station referenced in Paragraph 30(a)(2)(b).
 - (b) 1,3 Butadiene and isobutylene at the Houston Facility’s two existing monitoring sites at the northwestern and southeastern fence lines; three additional fence line monitoring sites added near the southwestern, southeastern, and northeastern property boundaries; and one community monitoring site placed within a half mile of the fence line south/southeast of the Houston Facility in or near the Allendale neighborhood; and

- (c) 1,3 Butadiene and isobutylene at the Port Neches Facility's existing four monitoring sites at the fence line; and two community monitoring sites, both placed within a half mile of the fence line, one in the area bound by Avenue K, Park Street, Grigsby Avenue, and Main Street, and the other in a residential setting in the area bound by Merriam Street, Magnolia Avenue (Hwy 366), Twin City Highway (Hwy 347), and Hwy 136.
 - (3) Communication of data derived from the Air Monitors to a public facing webpage located on Defendant's website that does not require an account or login information for access. For 1,3 butadiene and isobutylene, data must be communicated for 15-minute averages. For chlorine, data must be communicated for averaging times not longer than 10 minutes.
 - (4) Reoccurring community outreach for the purpose of educating and explaining the data derived from the Air Monitors to the public and the local community response systems referred to in Paragraph 30(d)(2).
- b. Detection Levels. Table 1, included in Appendix F to this Consent Decree, lists the "Warning Levels" for air monitoring. The 1,3 butadiene and isobutylene Air Monitors shall be calibrated to be capable of reliably detecting these substances at the Houston Facility and Port Neches Facility at concentrations at least 10 times lower than the Warning Level shown in

Table 1 of Appendix F. The chlorine Air Monitors shall be calibrated to be capable of reliably detecting the substance at the Houston Facility at concentrations of 0.5 parts per million (ppm) on a volume basis.

- c. Investigative Warning Levels. An investigation must be completed within 14 Days of any exceedance of a Warning Level. The investigation must document the pollutant and concentration that exceeded the Warning Level, the factors that were believed to cause the exceedance, and recommendations for avoiding future exceedances. All investigations must be posted to a public facing webpage located on Defendant's website that does not require an account or login information for access. If the investigation determines that the warning conditions resulted from a release unrelated to TPC's operations, the evidence for the conclusion must be documented and recommendations for avoiding future exceedances are not required.

- d. Notification Action Levels.

- (1) Table 2, included in Appendix F to this Consent Decree, lists the Action Levels for the air monitoring. Notification to local community response systems must be made immediately, but no longer than within 15 minutes, of the following:

- (a) Exceedances of Action Levels for 1,3 butadiene or isobutylene at a fence line or community monitoring site;
- (b) Exceedances of the Action Level for chlorine at the Houston Facility fence line; or

- (c) Exceedances of the Action Level for chlorine at the community monitoring site provided either of the following is also met: (1) a fence line detection above 0.5 ppm within two hours of the community monitoring detection, or (2) a Process monitor detection above 2 ppm within two hours of the community monitor detection.
- (2) Notifications to local community response systems surrounding the Houston Facility and the Port Neches Facility includes, but is not limited to, the East Harris County Manufacturers Association's Community Awareness Emergency Response (CAER) online system via the E-Notify emergency notification system for the Houston Facility, and the Southeast Plant Managers Forum, through the Southeast Texas Alerting Network (STAN) for the Port Neches Facility.
- (3) Additionally, an investigation must be completed within 14 Days of any measured exceedance of an Action Level. The investigation must document the pollutant and concentration that exceeded the Action Level, the factors that were believed to cause the exceedance, and recommendations for avoiding future exceedances. All investigations must be posted to a public facing webpage located on Defendant's website that does not require an account or login information for access. If the investigation determines that the alert conditions resulted from a release unrelated to TPC's

operations, the evidence for the conclusion must be documented and recommendations for avoiding future exceedances are not required.

- e. Community Comments. Prior to submitting the QAPP to the United States for review and approval, Defendant shall host a community meeting for the purpose of presenting and receiving community comments on the proposed QAPP (“QAPP Community Meeting”). Defendant shall notify the United States of the date, time, and location of the QAPP Community Meeting at least 20 Days in advance of the meeting, in accordance with the provisions in Section XIV (Notices). The QAPP Community Meeting shall be open to all members of the public and held in a publicly accessible space, compliant with the American with Disabilities Act, 42 U.S.C. § 12101 et seq., (“ADA”), within five (5) miles of each Facility. Defendant shall provide notice of the date, time, and location of the QAPP Community Meeting to the community surrounding the Houston Facility and the Port Neches Facility at least 20 Days in advance of the meeting by:

- (1) Posting a notice on a public facing webpage located on Defendant’s website that does not require an account or login information for access.
- (2) Posting a notice in a newspaper or record.
- (3) Sending a written notice to any public receptors, as identified in the worst-case release scenario conducted pursuant to 40 C.F.R.

§ 68.25.

- f. Community Outreach. Establish reoccurring community outreach for the purpose of educating and explaining the data derived from the Air Monitors to the public and the local community response systems referred to in Paragraph 30(d)(2). This must include at least one open meeting per year for each of the Houston and Port Neches Facilities, at which community members can ask questions about the monitoring data. All such meetings shall be publicized to local communities at least 20 Days prior to the meeting and advertised in accordance with Paragraph 30(e).
- g. Data Quality. The QAPP must address all elements in “EPA Requirements for Quality Assurance Project Plans (QA/R5)” (document EPA/240/B-01/003, last reissued in May 2006) and in “Guidance for Quality Assurance Project Plans (QA/G-5)” (document EPA/240/R-02/009, December 2002). The QAPP must specify the proposed monitoring methods. The QAPP must also specify how air monitoring precision and accuracy will be quantified and set acceptable bounds for these parameters. Data quality metrics must be reported on a quarterly basis to a public facing webpage located on Defendant’s website that does not require an account or login information for access.
- h. Within 210 Days of receipt of the United States approval of the QAPP, subject to the approval process set forth in Paragraph 33, Defendant shall complete installation of the fence line monitors described in the approved QAPP.

- i. Within 270 Days of receipt of the United States approval of the QAPP, subject to the approval process set forth in Paragraph 33, Defendant shall complete installation of the community monitors described in the approved QAPP.
- j. Within 30 Days of completing the installation of all required fence line and community monitoring stations, Defendant shall submit to the United States a Notice of Completion in accordance with Section XIV (Notices). The Notice of Completion shall include the date of completion and a description of the work performed. The United States may request additional information after Defendant submits the Notice of Completion, if the information provided is not adequate to conclude that the work has been performed and completed in accordance with this Consent Decree.

31. Inherently Safer Technology Review.

- a. Within five years of the Effective Date or the date of completion of the PHA update and revalidation pursuant to 40 C.F.R. § 68.67(f), whichever is earlier, Defendant shall conduct an inherently safer technology review (“ISTR”) at each covered Process at the Houston Facility and Port Neches Facility and submit to the United States a ISTR report detailing the review.
 - (1) The ISTR shall be conducted by a team consisting of: (a) an independent third-party expert qualified in conducting and facilitating ISTRs (“independent third-party ISTR Facilitator” or “ISTR Facilitator”); (b) at least one operator of the Process; (c) at

least one individual knowledgeable in the chemistry of the Process;
(d) at least one individual knowledgeable in the technology of the Process; and (e) at least one member of the environmental and health safety staff for the facility (collectively, the “ISTR Team”). The ISTR Facilitator shall be responsible for leading the ISTR Team, including conducting necessary training, guiding the team through the ISTR process, and appropriately documenting the ISTR.

- (2) Defendant has proposed and the United States has agreed that AcuTech Consulting Group and/or PSRG shall serve as the ISTR Facilitator pursuant to the requirements of this Paragraph until such time, if any, that Defendant proposes and the United States approves a successor.
- (3) In the event it becomes necessary for Defendant to replace a previously approved ISTR Facilitator, Defendant shall notify the United States within 10 Days of learning of the need for a successor, and within 45 Days Defendant shall submit to the United States the name, contact information (including mailing address, phone number, and e-mail address), and qualifications of the proposed successor ISTR Facilitator with a signed certification. The certification shall be signed by the proposed successor ISTR Facilitator and an authorized representative of Defendant and shall certify that the competency and independence requirements set

forth in ISTR Facilitator Qualifications are met.

- (4) ISTR Facilitator Qualifications. The independent third party ISTR Facilitator shall, unless otherwise agreed to by EPA:
 - (a) Receive no financial benefit from the outcome of the ISTR, apart from payment for the review services.
 - (b) Shall not have conducted past research, development, design, construction services, or consulting for Defendant within the last two years.
 - (c) Shall not provide other business or consulting services to Defendant, including advice or assistance to implement the findings or recommendations of the ISTR for a period of at least two years following submission of the ISTR Report.
- (5) Within at least 30 Days prior to the initiation of any ISTR, all ISTR Team members, other than the ISTR Facilitator, shall attend formal ISTR training that instructs on the purpose, scope, and objective of an ISTR.
- (6) Immediately prior to the initiation of any ISTR, for which formal training was conducted more than 60 Days prior, the ISTR Facilitator shall provide refresher training on the purpose, scope, and objective of an ISTR.
- (7) In each semi-annual report submitted pursuant to Section VIII (Reporting Requirements), Defendant shall submit to the United States the name and qualifications of the members of the ISTR

Team and a signed agreement to abide by Paragraph 31(a)(1), a summary and verification of the training conducted pursuant to Paragraphs 31(a)(3) and 31(a)(4), for any ISTR conducted.

- (8) The ISTR shall identify available inherently safer technology alternatives or combinations of alternatives that minimize or eliminate the potential for an accidental release. Using a recognized and generally accepted ISTR evaluation method, the review shall include, at a minimum, an analysis of the following principles and techniques:
 - (a) Reducing the amount of hazardous substances that potentially may be released;
 - (b) Substituting safer substances for hazardous substances;
 - (c) Using hazardous substances in the least hazardous process conditions or form; and
 - (d) Designing equipment and processes to minimize the potential for equipment failure and human error.
- (9) The ISTR Report shall document, at a minimum, the following information:
 - (a) An identification of the covered Process that is the subject of the review; a list of the ISTR Team members with name, position, affiliation, responsibilities, qualifications and experience for each; the date of report completion; and the inherently safer technology analysis method used to

complete the review.

- (b) A list of the drawings, documents, reports, data, studies, referenced by the ISTR Team during the review.
- (c) The questions asked and answered to address the inherently safer technology principles and techniques pursuant to Paragraph (5)(8).
- (d) A list of inherently safer technologies determined to be already present in the covered Process.
- (e) A list of additional inherently safer technologies identified that could reasonably be added to the covered Process.
- (f) A list of the additional inherently safer technologies selected to be implemented and a schedule for their implementation.
- (g) A list of the additional inherently safer technologies that could not be reasonably added to the covered Process.
- (h) A written explanation justifying the determination for each inherently safer technology listed pursuant to Paragraph 31(a)(9)(g) (those that cannot reasonably be added to the covered Process). The determination shall include a qualitative and quantitative evaluation of environmental, public health and safety, legal, technological, and economic factors.

- b. Within two years of the ISTR, Defendant shall install the inherently safer

technology selected for implementation through the ISTR, unless otherwise agreed by EPA.

- (1) In in each semi-annual report following the installation of the inherently safer technology selected for implementation through the ISTR, Defendant shall submit to the United States a Notice of Completion in accordance with Section XIV (Notices). The Notice of Completion shall include the date of completion and a description of the work performed. The United States may request additional information after Defendant submits the Notice of Completion, if the information provided is not adequate to conclude that the work has been performed and completed in accordance with this Consent Decree.

32. Community Safety Information Sharing.

- a. Within 365 Days of the Effective Date, Defendant shall host two community meetings for the public regarding the risks to the community posed by the Houston Facility and how Defendant is mitigating those risks. Defendant shall also host two community meetings for the public regarding the risks to the community posed by the Port Neches Facility and how Defendant is mitigating those risks. Information shared during the community meeting must include, at minimum, the following:
 - (1) Risk Management Plans.
 - (2) Emergency response plans and procedures.
 - (3) Evacuation routes.

- (4) Understanding Facility alarms.
 - (5) Understanding Air Monitoring information.
 - (6) How to properly shelter in place.
 - (7) Information regarding the work performed at the Facility.
- b. Defendant shall provide notice of the date, time, and location of the Houston Facility community meeting and the Port Neches Facility community meeting to the public at least 20 Days in advance of each community meeting by:
- (1) Posting a notice on a public facing webpage located on Defendant's website that does not require an account or login information for access.
 - (2) Posting a notice in a newspaper of record.
 - (3) Sending a written notice to any public receptors, as identified in the worst-case release scenario conducted pursuant to 40 C.F.R. § 68.25.
- c. The meeting must be open to the public. The location of the meeting must be no further than three miles from each of the Facilities and held in a publicly accessible and ADA compliant space.
- d. At least 15 Days prior to each community meeting, Defendant shall submit the following information regarding the community meeting to the United States in accordance with Section XIV (Notices):
- (1) The date, times, and location of the community meeting.
 - (2) A copy of the notice sent to the community.

- (3) A description of the information to be shared with the community.
- e. Within 30 Days following each community meeting, Defendant shall submit to the United States a Notice of Completion in accordance with Section XIV (Notices). The Notice of Completion shall include the date of the community meeting and a description of the meeting, including a summary of the information shared and the number of participants. The United States may request additional information after Defendant submits the Notice of Completion, if the information provided is not adequate to conclude that the work has been performed and completed in accordance with this Consent Decree.

33. Approval of Deliverables. After review of any plan, report, or other item that is required to be submitted for approval pursuant to this Consent Decree, the United States will notify Defendant that it approves or disapproves of the submission.

- a. If the submission is approved, Defendant shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved.
- b. If the submission is disapproved, Defendant shall, within 15 Days or such other time as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other item for approval. If the resubmission is approved, Defendant shall proceed in accordance with Paragraph 33(a).
- c. If a resubmitted plan, report, or other item is disapproved, the United States may again require Defendant to correct any deficiencies, in accordance with the preceding subparagraphs.

- d. If Defendant elects to invoke dispute resolution as set forth in Section X (Dispute Resolution) concerning a decision by the United States to disapprove a deliverable, Defendant shall do so by sending a Notice of Dispute in accordance with Paragraph 60 within 15 Days (or such other time as the Parties agree to in writing) after receipt of the applicable decision.
- e. Any stipulated penalties applicable to the original submission, as provided in Section VIII (Stipulated Penalties), accrue during the 15 Day period or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved; provided that, if the original submission was so deficient as to constitute a material breach of Defendant's obligations under this Consent Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

VII. REPORTING REQUIREMENTS

34. Defendant shall submit the following reports to the United States at the addresses set forth in Section XIV (Notices):

- a. Semi-annual Reports. By January 31st and July 31st of each year, commencing after the Effective Date of this Consent Decree and continuing until termination of this Consent Decree pursuant to Section XVIII (Termination), Defendant shall submit to the United States a semi-annual report for the preceding Reporting Period. Each semi-annual report shall include the following information for the applicable Reporting Period from the Effective Date forward:

- (1) A description of Defendant's activities undertaken during the Reporting Period to achieve compliance with this Consent Decree, corresponding with each of the obligations set forth in Section VI (Compliance Requirements);
- (2) A description of all completed corrective actions taken by Defendant during the Reporting Period;
- (3) Identification of all plans, reports, and other submissions required by this Consent Decree that Defendant completed and submitted during the Reporting Period; and
- (4) A description of any additional activities Defendant plans to undertake during the next Report Period in order to achieve compliance with this Consent Decree.

b. Non-compliance Reports. Each semi-annual report shall also include a description of any non-compliance with the requirements of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If Defendant violates, or has reason to believe that it may violate, any requirement of this Consent Decree, Defendant shall notify the United States of such violation and its likely duration, in writing, within 10 business Days of the Day Defendant first becomes aware of the violation, with an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Defendant shall so state in the report. Defendant shall investigate the cause of the violation and shall then submit an amendment to the report, including a full

explanation of the cause of the violation, within 30 Days of the Day Defendant becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Defendant of its obligation to provide the notice required by Section IX (Force Majeure).

35. Whenever any violation of this Consent Decree or any other event affecting Defendant's performance under this Consent Decree, or the performance of its Facilities, may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA by telephone or email as soon as possible, but no later than 24 hours after Defendant first knew of the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

36. All reports shall be submitted to the persons designated in Section XIV (Notices).

37. Each report submitted by Defendant under this Section shall be signed by an official of the submitting Party and include the following certification:

I certify under penalty of perjury that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

38. This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

39. The reporting requirements of this Consent Decree do not relieve Defendant of any reporting obligations required by the Act or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

40. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

VIII. STIPULATED PENALTIES

41. Defendant shall be liable for stipulated penalties to the United States for violations of this Consent Decree as specified below, unless excused under Section IX (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Consent Decree, including any work plan or schedule approved under this Consent Decree, according to all applicable requirements of this Consent Decree and within the specified time schedules established by or approved under this Consent Decree.

42. Transfer of Ownership. If Defendant fails to: (a) provide a copy of this Consent Decree to any proposed transferee or to provide written notice to the United States at least 30 Days prior to any transfer of any portion of the Facility; or (b) timely provide to the United States an executed copy of the written agreement with the transferee as required by Paragraph 5, Defendant shall pay a stipulated penalty of \$10,000 per occurrence.

43. Compliance Milestones. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements identified in Paragraphs 17-32:

| Penalty per Day per Violation | |
|-------------------------------|--|
| \$3,500 | 1 st through 14 th Day of violation |
| \$7,000 | 15 th through 30 th Day of violation |
| \$15,000 | 31 st through 60 th Day of violation |
| \$22,500 | 61 st Day of violation and beyond |

44. Reporting Requirements. The following stipulated penalties shall accrue per violation per Day for each violation of the reporting requirements of Section VII (Reporting Requirements):

| Penalty per Day per Violation | |
|-------------------------------|--|
| \$700 | 1 st through 14 th Day of violation |
| \$1,500 | 15 th through 30 th Day of violation |
| \$3,000 | 31 st Day of violation and beyond |

45. Stipulated penalties that accrue per Day under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

46. Defendant shall pay any stipulated penalty within 30 Days of receiving the United States' written demand, subject to Paragraph 50.

47. The United States may in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

48. Stipulated penalties shall continue to accrue as provided in Paragraph 45, during any dispute resolution invoked pursuant to Section X (Dispute Resolution), but need not be paid until the following:

- a. If the dispute is resolved by agreement of the Parties or by a decision of the United States that is not appealed to the Court, Defendant shall pay accrued penalties determined to be owing, together with interest, to the United States within 30 Days of the

effective date of the agreement or the receipt of the United States' decision or order.

b. If the dispute is appealed to the Court and the United States prevails in whole or in part, Defendant shall pay all accrued penalties determined by the Court to be owing, together with interest, within 60 Days of receiving the Court's decision or order, except as provided in Paragraph 48(c), below.

c. If any Party appeals the District Court's decision, Defendant shall pay all accrued penalties determined to be owing, together with interest, within 15 Days of receiving the final appellate court decision.

49. Defendant shall pay stipulated penalties owing to the United States in the manner set forth in Paragraph 13 and with the confirmation notices required by Paragraph 14, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid.

50. If Defendant fails to pay stipulated penalties according to the terms of this Consent Decree, Defendant shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States from seeking any remedy otherwise provided by law for Defendant's failure to pay any stipulated penalties.

51. The payment of penalties and interest, if any, shall not alter in any way Defendant's obligation to complete the performance of the requirements of this Consent Decree.

52. Non-Exclusivity of Remedy. Stipulated penalties are not the United States' exclusive remedy for violations of this Consent Decree. Subject to the provisions of Section XII (Effect of Settlement/Reservation of Rights), the United States expressly reserves the right to seek any other relief it deems appropriate for Defendant's violation of this Consent Decree or

applicable law, including but not limited to an action against Defendant for statutory penalties, additional injunctive relief, mitigation or offset measures, and/or contempt. However, the amount of any statutory penalty assessed for a violation of this Consent Decree shall be reduced by an amount equal to the amount of any stipulated penalty assessed and paid pursuant to this Consent Decree.

IX. FORCE MAJEURE

53. “Force Majeure,” for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Defendant, of any entity controlled by Defendant, or of Defendant’s contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Defendant’s best efforts to fulfill the obligation. Given the need to protect public health and welfare and the environment, the requirement that Defendant exercise “best efforts to fulfill the obligation” includes using best efforts to anticipate any potential Force Majeure and best efforts to address the effects of any potential Force Majeure (a) as it is occurring and (b) following the potential Force Majeure, such that the delay or non-performance is, and any adverse effects of the delay or noncompliance are, minimized to the greatest extent possible. “Force Majeure” does not include Defendant’s financial inability to perform any obligation under this Consent Decree.

54. If any event occurs for which Defendant will or may claim a Force Majeure, Defendant shall provide notice by email to EPA in accordance with Section XIV (Notices). The deadline for the initial notice is three Days after Defendant first knew or should have known that the event would likely delay or prevent performance. Defendant shall be deemed to know of any

circumstance of which any contractor of, subcontractor of, or entity controlled by Defendant knew or should have known.

55. If Defendant seeks to assert a claim of Force Majeure concerning the event, within seven Days after the notice under Paragraph 54 Defendant shall submit a further notice to EPA that includes (a) an explanation and description of the event and its effect on Defendant's completion of the requirements of the Consent Decree; (b) a description and schedule of all actions taken or to be taken to prevent or minimize the delay and/or other adverse effects of the event; (c) if applicable, the proposed extension of time for Defendant to complete the requirements of the Consent Decree; (d) Defendant's rationale for attributing such delay to a Force Majeure; (e) a statement as to whether, in the opinion of Defendant, such event may cause or contribute to an endangerment to public health or welfare or the environment; and (f) all available proof supporting any claim that the delay was attributable to a Force Majeure

56. Failure to submit a timely or complete notice or claim under Paragraphs 54 and 55 regarding an event precludes Defendant from asserting any claim of Force Majeure regarding that event, provided, however, that EPA may, in its unreviewable discretion, excuse such failure if it is able to assess to its satisfaction whether the event is a Force Majeure, and whether Defendant has exercised its best efforts under Paragraph 53.

57. After receipt of any claim of Force Majeure, EPA will notify Defendant in writing of its determination whether Defendant is entitled to relief under Paragraph 53, and, if so, the excuse of, or the extension of time for, performance of the obligations affected by the Force Majeure. An excuse of, or extension of the time for performance of, the obligations affected by the Force Majeure does not, of itself, excuse or extend the time for performance of any other obligation.

58. If Defendant elects to invoke the dispute resolution procedures set forth in Section X (Dispute Resolution), it shall do so no later than 20 Days after receipt of the EPA's notice. In any such proceeding, Defendant shall have the burden of proving that it is entitled to relief under Paragraph 53, that its proposed excuse or extension was or will be warranted under the circumstance, and that it complied with the requirements of Paragraphs 53 - 55. If Defendant carries this burden, the delay or non-performance at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree identified to EPA and the Court.

X. DISPUTE RESOLUTION

59. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Defendant's failure to seek resolution of a dispute under this Section concerning an issue of which it had notice and an opportunity to dispute under this Section prior to an action by the United States to enforce any obligation of Defendant arising under this Consent Decree precludes Defendant from raising any such issue as a defense to any such enforcement action.

60. Informal Dispute Resolution. Any dispute subject to dispute resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Defendant sends the United States a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 30 Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within 20

Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

61. Formal Dispute Resolution. Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by sending the United States a written “Statement of Position” regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Defendant’s position and any supporting documentation relied upon by Defendant.

62. The United States shall send Defendant its Statement of Position within 45 Days of receipt of Defendant’s Statement of Position. The United States’ Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States’ Statement of Position shall be binding on Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph.

63. Judicial Dispute Resolution. Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section XIV (Notices), a motion requesting judicial resolution of the dispute. The motion (a) must be filed within 15 Days of receipt of the United States’ Statement of Position pursuant to the preceding Paragraph; (b) may not raise any issue not raised in informal dispute resolution, unless the United States raises a new issue of law or fact in its Statement of Position; (c) shall contain a written statement of Defendant’s position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation; and (d) shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

64. The United States shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum, to the extent permitted by the Local Rules.

65. Standard of Review. In a formal dispute resolution proceeding under this Section, Defendant bears the burden of demonstrating that its position complies with this Consent Decree and the CAA, and that it is entitled to relief under applicable principles of law. The United States reserves the right to argue that its position is reviewable only on the administrative record and must be upheld unless arbitrary and capricious or otherwise not in accordance with law, and Defendant reserves the right to argue to the contrary.

66. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 48. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section VIII (Stipulated Penalties).

XI. INFORMATION COLLECTION AND RETENTION

67. The United States and its representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility covered by this Consent Decree, at all reasonable times, subject to any applicable federal law and regulation, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States in

accordance with the terms of this Consent Decree;

- c. obtain samples and, upon request, splits of any samples taken by

Defendant or its representatives, contractors, or consultants;

- d. obtain documentary evidence, including photographs and similar data; and

- e. assess Defendant's compliance with this Consent Decree.

68. Upon request, Defendant shall provide EPA or its authorized representatives splits of any samples taken by Defendant relevant to compliance with the terms of this Consent Decree. Upon request, EPA shall provide Defendant splits of any samples taken by EPA relevant to compliance with the terms of this Consent Decree.

69. Until five years after the termination of this Consent Decree, Defendant shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Defendant's performance of its obligations under this Consent Decree. This information retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information retention period, upon request by the United States, Defendant shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

70. At the conclusion of the information retention period provided in the preceding Paragraph, Defendant shall notify the United States at least 90 Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding

Paragraph and, upon request by the United States, Defendant shall deliver any such documents, records, or other information to EPA.

71. Defendant may assert that certain documents, records, or other information required to be provided under this Section is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Defendant asserts such a privilege, it shall provide the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of each author of the document, record, or information; (d) the name and title of each addressee and recipient; (e) a description of the subject of the document, record, or information; and (f) the privilege asserted by Defendant. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

72. Defendant may also assert that information required to be provided under this Consent Decree is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2. As to any information that Defendant seeks to protect as CBI, Defendant shall follow the procedures set forth in 40 C.F.R. Part 2.

73. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

74. This Consent Decree resolves only the civil claims of the United States for the violations alleged in the Complaint filed in this action and the Proof of Claim through the Date of Lodging of this Consent Decree.

75. Neither this Consent Decree nor Defendant's consent to its entry constitutes an admission by Defendant of violations alleged by the United States in the Complaint or allegations stated in the Proof of Claim.

76. The United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree. This Consent Decree shall not be construed to limit the rights of the United States to obtain penalties or injunctive relief under the Act or implementing regulations, or under other federal laws, regulations, or permit conditions, except as expressly specified in Paragraph 74. The United States further reserves all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, Defendant's Facilities, whether related to the violations addressed in this Consent Decree or otherwise.

77. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, civil penalties, other appropriate relief relating to the Facilities or Defendant's violations, Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 74.

78. This Consent Decree is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. Defendant is responsible for achieving and maintaining complete compliance with all applicable federal, state, and local laws, regulations, and permits; and Defendant's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States does not, by its consent to the entry of this Consent Decree, warrant or aver in any manner that Defendant's compliance with any aspect of this Consent Decree will result in compliance with provisions of the Act, 42 U.S.C. § 7401, *et seq.*, or with any other provisions of federal, state, or local laws, regulations, or permits.

79. This Consent Decree does not limit or affect the rights of Defendant or of the United States against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against Defendant, except as otherwise provided by law.

80. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

81. For administrative purposes in Defendant's Chapter 11 Case, the entry into this Consent Decree by the Parties with either the consent of the GUC Trustee (as defined in the Plan) or the approval of the Bankruptcy Court shall constitute a settlement and resolution of the Proof of Claim; provided, that the DOJ and EPA shall retain the right to enforce their rights hereunder to payment of the civil penalty in the Bankruptcy Court. Nothing in this Consent Decree modifies Paragraphs 62, 65, 66, and 67 of the Confirmation Order.

XIII. COSTS

82. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of any stipulated penalties due but not paid by Defendant.

XIV. NOTICES

83. Unless otherwise specified in this Consent Decree, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows, with a courtesy copy by email (except that attachments that are too voluminous to email must be copied onto other electronic media and sent by mail):

To the United States (notifications to the United States also shall be sent to the EPA):

As to the United States by email: eescdcopy.enrd@usdoj.gov
Re: DJ # 90-5-2-1-12550

As to the United States by mail: EES Case Management Unit
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DJ # 90-5-2-1-12550

As to EPA by mail and email: Samuel Tates, Chief
Chemical Accident Enforcement Section (ECDAC)
Air Enforcement Branch
Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency
Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75720
Tates.Samuel@EPA.gov

As to Defendant by mail and email: Legal Department
500 Dallas Street, Suite 2000
Houston, Texas 77002
legal@tcpgrp.com

Scott Janoe
Baker Botts L.L.P.
910 Louisiana St.
Houston, Texas 77002
Scott.Janoe@bakerbotts.com

84. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

85. Notices submitted pursuant to this Section shall be deemed submitted upon mailing or transmission by email, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XV. EFFECTIVE DATE

86. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket.

XVI. RETENTION OF JURISDICTION

87. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Consent Decree or entering orders modifying this Consent Decree, pursuant to Sections X (Dispute Resolution) and XVII (Modification), or effectuating or enforcing compliance with the terms of this Consent Decree.

XVII. MODIFICATION

88. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Consent Decree, it shall be effective only upon approval by the Court.

89. Any disputes concerning modification of this Consent Decree shall be resolved pursuant to Section X (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 65, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XVIII. TERMINATION

90. Before seeking termination of the Consent Decree, the Defendant must have:
- a. Paid the civil penalty and any accrued stipulated penalties as required by this Consent Decree;
 - b. Completed all requirements of Section VI (Compliance Requirements) with substantial compliance with Paragraph 16;
 - c. Completed all Open Corrective Actions as of the Effective Date, and any overdue corrective actions not meeting the timeframes set forth in Paragraphs 18(d) and 18(f);
 - d. Maintained satisfactory compliance with the Consent Decree for a period of five years; and
 - e. No releases that resulted in or could have resulted in a Catastrophic Release for at least two years.

91. After Defendant has satisfied the conditions for termination set forth in Paragraph 90, Defendant may serve upon the United States a Request for Termination. The Request for Termination must demonstrate that Defendant has satisfied all requirements for termination set forth in Paragraph 90 and include all necessary supporting documentation.

92. Following receipt by the United States of Defendant's Request for Termination, the Parties shall confer informally concerning the Request for Termination and any disagreement that the Parties may have as to whether Defendant has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States agrees that the Consent Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Consent Decree. Section XI (Information Collection and Retention) shall survive termination.

93. If the United States does not agree that the Consent Decree may be terminated, Defendant may invoke dispute resolution under Section X. However, Defendant shall not seek dispute resolution of any dispute regarding termination until 120 Days after service of its Request for Termination.

XIX. PUBLIC PARTICIPATION

94. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Defendant consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to

challenge any provision of the Consent Decree, unless the United States has notified Defendant in writing that it no longer supports entry of the Consent Decree.

XX. SIGNATORIES/SERVICE

95. Each undersigned representative of Defendant and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice identified on the DOJ signature page below, certifies that they are fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party that person represents to this document.

96. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Defendant agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. Defendant need not file an answer to the Complaint in this action unless or until the Court expressly declines to enter this Consent Decree.

XXI. INTEGRATION

97. This Consent Decree, including deliverables that are subsequently approved pursuant to this Consent Decree, constitutes the entire agreement among the Parties regarding the subject matter of the Consent Decree and supersedes all prior representations, agreements and understandings, whether oral or written, regarding the subject matter of the Consent Decree, except as to Paragraphs 62, 65, 66, and 67 of the Confirmation Order.

XXII. 26 U.S.C. § 162(f)(2)(A)(ii) IDENTIFICATION

98. For purposes of the identification requirement of Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 162(f)(2)(A)(ii), performance of Section II (Applicability), Paragraph 6; Section VI (Compliance Requirements) and related Appendices, Paragraphs 17 -27; Section VII (Reporting Requirements), Paragraphs 34 and 40; and Section XI (Information Collection and Retention), Paragraphs 67 and 73 is restitution or required to come into compliance with the law.

XXIII. FINAL JUDGMENT

99. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States and Defendant.

XXIV. APPENDICES

100. The following Appendices are attached to and part of this Consent Decree:

“Appendix A” is the Administrative Order on Consent

“Appendix B” is the Letter of No Objection from the GUC Trust

“Appendix C” is the KPI Attachment

“Appendix D” is the Risk Ranking Program Summary and Definitions

“Appendix E” is the PHA Corrective Actions List

“Appendix F” is the Air Monitoring Tables

“Appendix G” is the PNO AOC Requirements

“Appendix H” is the HNO Service Requests and Work Orders

Dated and entered this __ Day of _____, 2024

UNITED STATES DISTRICT JUDGE

Signature Page for Consent Decree in the matter of *United States of America v. TPC Group LLC*

FOR THE UNITED STATES OF AMERICA:

TODD KIM
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice

4/24/2024
Date


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Signature Page for Consent Decree in the matter of *United States of America v. TPC Group LLC*

FOR THE U.S. ENVIRONMENTAL PROTECTION
AGENCY:

Dated: _____

David M. Uhlmann

DAVID M. UHLMANN
Assistant Administrator
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dated: March 4, 2024

Cheryl T. Seager

CHERYL T. SEAGER
Director
Enforcement and Compliance Assurance Division
United States Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270

Dated: 3/1/2024

Patricia Welton

PATRICIA WELTON
Acting Regional Counsel
United States Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
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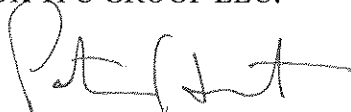
Dated: 3/1/2024

Clarissa Howley Mills

CLARISSA HOWLEY MILLS
Deputy Regional Counsel
United States Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270

Signature Page for Consent Decree in the matter of *United States of America v. TPC Group LLC*

FOR TPC GROUP LLC:

A handwritten signature in black ink, appearing to read "Patrick Hurt", written over a horizontal line.

Dated: 3/12/24

Patrick Hurt
Vice President, General Counsel & Corporate Secretary
500 Dallas Street, Suite 2000
Houston, Texas 77002

Appendix A: Administrative Order on Consent

FILED

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REGIONAL HEARING CLERK
EPA REGION VI

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 6
Dallas, Texas

In the Matter of

TPC Group LLC,

Respondent.

§
§
§
§
§
§

Docket No. CAA-06-2022-3364

ADMINISTRATIVE ORDER ON CONSENT

Preliminary Statement

1. The U.S. Environmental Protection Agency, Region 6 (“EPA” or “Complainant”), and TPC Group LLC (“Respondent”) have agreed to voluntarily enter into this Administrative Order on Consent (“Order”) for the purposes of carrying out the goals of Section 112(r) of the Clean Air Act (“CAA”), 42 U.S.C. § 7412(r), and the regulations promulgated thereunder and codified at 40 C.F.R. Part 68.

Jurisdiction

2. This Order is entered into pursuant to the authority of Section 113(a)(3)(B) of the CAA, 42 U.S.C. § 7413(a)(3)(B). Section 113(a)(3)(B) of the CAA, 42 U.S.C. § 7413(a)(3)(B), provides that whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any other requirement or prohibition of Subchapter I of the CAA, which includes, among other things, the requirements of Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and the regulations promulgated thereunder, the Administrator may issue an order requiring compliance with such requirement or prohibition.

Parties

3. Complainant is the Director of the Enforcement and Compliance Assurance Division, EPA, Region 6, as duly delegated by the Administrator of the EPA and the Regional Administrator, EPA, Region 6.

4. Respondent is TPC Group LLC, a company organized under the laws of the state of Texas and authorized to conduct business in the state of Texas.

Statutory and Regulatory Background

5. On November 15, 1990, the President signed into law the CAA Amendments of 1990. The Amendments added Section 112(r) to Title I of the CAA, 42 U.S.C. § 7412(r). The objective of Section 112(r) is to prevent the accidental release and to minimize the consequences of any such release of any substance listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), or any other extremely hazardous substance.

6. Pursuant to Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), commonly referred to as the General Duty Clause, owners and operators of stationary sources producing, processing, handling or storing substances listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), or any other extremely hazardous substance, have a general duty in the same manner and the same extent as the Occupational Safety and Health Act (“OSHA”), 29 U.S.C. § 654 et. seq., to identify hazards which may result from accidental releases using appropriate hazard assessment techniques, to design and maintain a safe facility, taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur.

7. Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), mandates the Administrator to promulgate a list of regulated substances which, in the case of an accidental

release, are known to cause or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment. Section 112(r)(5) of the CAA, 42 U.S.C. § 7412(r)(5), mandates that the Administrator establish a threshold quantity for any substance listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3). The list of regulated substances and respective threshold quantities is codified at 40 C.F.R. § 68.130.

8. Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7), requires the Administrator to promulgate regulations that address release prevention, detection, and correction requirements for stationary sources with threshold quantities of regulated substances listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3). On June 20, 1996, EPA promulgated a final rule known as the Risk Management Program, 40 C.F.R. Part 68 – Chemical Accident Prevention Provisions, which implements Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

9. The regulations at 40 C.F.R. Part 68 require owners and operators to develop and implement a Risk Management Program at each stationary source with over a threshold quantity of regulated substances. The Risk Management Program must include, among other things, a hazard assessment, a prevention program, and an emergency response program. The Risk Management Program is described in a Risk Management Plan (“RMP”) that must be submitted to the EPA.

10. Pursuant to Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7), and 40 C.F.R. § 68.150, an RMP must be submitted for all covered processes by the owner or operator of a stationary source subject to 40 C.F.R. Part 68 no later than the latter of June 21, 1999, or the date on which a regulated substance is first present above the threshold quantity in a process.

11. The regulations at 40 C.F.R. § 68.10 set forth how the Chemical Accident Prevention Provisions of 40 C.F.R. Part 68 apply to each program level of covered processes.

Pursuant to 40 C.F.R. § 68.10(i), a covered process is subject to Program 3 requirements if the process does not meet the requirements of Program 1, as described in 40 C.F.R. § 68.10(g), and if it is in a specified North American Industrial Classification System code or is subject to the OSHA process safety management standard, 29 C.F.R. § 1910.119.

Definitions

12. Section 302(e) of the CAA, 42 U.S.C. § 7602(e), defines “person” to include any individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency department, or instrumentality of the United States and any officer, agent, or employee thereof.

13. Section 112(r)(2)(A) of the CAA, 42 U.S.C. § 7412(r)(2)(A), and the regulation at 40 C.F.R. § 68.3 defines “accidental release” as an unanticipated emission of a regulated substance or other extremely hazardous substance into the ambient air from a stationary source.

14. Section 112(r)(2)(C) of the CAA, 42 U.S.C. § 7412(r)(2)(C) and the regulation at 40 C.F.R. § 68.3 defines “stationary source,” in part, as any buildings, structures, equipment, installations or substance emitting stationary activities which belong to the same industrial group, which are located on one or more contiguous properties, which are under the control of the same person (or persons under common control) and from which an accidental release may occur.

15. Section 112(r)(2)(B) of the CAA, 42 U.S.C. § 7412(r)(2)(B), and the regulation at 40 C.F.R. § 68.3 define “regulated substance” as any substance listed pursuant to Section 112(r)(3) of the CAA, as amended, in 40 C.F.R. § 68.130.

16. The regulation at 40 C.F.R. § 68.3 defines “threshold quantity” as the quantity specified for regulated substances pursuant to Section 112(r)(5) of the CAA, as amended, listed

in 40 C.F.R. § 68.130 and determined to be present at a stationary source as specified in 40 C.F.R. § 68.115.

17. The regulation at 40 C.F.R. § 68.3 defines “process” as any activity involving a regulated substance including any use, storage, manufacturing, handling or on-site movement of such substances or combination of these activities. For the purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

18. The regulation at 40 C.F.R. § 68.3 defines “covered process” as a process that has a regulated substance present in more than a threshold quantity as determined under 40 C.F.R. § 68.115.

EPA Findings of Fact and Conclusions of Law

19. Respondent is, and at all times referred to herein was, a “person” as defined by Section 302(e) of the CAA, 42 U.S.C. § 7602(e).

20. Respondent is the owner and operator of the facility located at: 8600 Park Place Boulevard, Houston, Texas 70017 (“the Facility”).

21. On April 3, 2018, the EPA conducted an inspection at the Facility to evaluate Respondent’s compliance with Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and 40 C.F.R. Part 68.

22. On October 28, 2020, the EPA requested, and on December 15, 2020, January 8, 2021, and July 13, 2021, Respondent provided documentation and information concerning the Respondent’s compliance with Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and 40 C.F.R. Part 68.

23. On June 15, 2022, the EPA conducted a site visit at the Facility to evaluate Respondent's compliance with Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and 40 C.F.R. Part 68.

24. The Facility is a "stationary source" pursuant to Section 112(r)(2)(C) of the CAA, 42 U.S.C. 7412(r)(2)(C), and the regulation at 40 C.F.R. § 68.3.

25. Respondent operates a petrochemical manufacturing process at the Facility that produces butadiene, butene-1, raffinate, isobutylene, diisobutylene, and polyisobutylene.

26. Respondent's petrochemical manufacturing process at the Facility meets the definition of a "process" as defined by 40 C.F.R. § 68.3

27. Respondent's activities at the Facility involve the use, storage, manufacturing, handling, and/or on-site movement of 1-butene, isobutane, ammonia (conc 20% or greater), 1,3-butadiene, and flammable mixtures consisting of butane, 1-butene, propane, 2-butene, 1,3-butadiene, pentane, 2-methylpropene, isopentane, and chlorine (hereinafter the "HNO Regulated Substances").

28. The HNO Regulated Substances are each a "listed substance" as referred to in Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

29. From the time Respondent first produced, processed, handled, or stored listed substances at the Facility, Respondent was subject to the requirements of the General Duty Clause in Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

30. The HNO Regulated Substances are each a "regulated substance" pursuant to Section 112(r)(2)(B) of the CAA, and the regulation at 40 C.F.R. § 68.3.

31. Respondent has greater than threshold quantities of the HNO Regulated Substances, as listed in 40 C.F.R. § 68.130 and determined pursuant to 40 C.F.R. § 68.115(b)(3), in a process at the Facility.

32. Multiple processes at the Facility meet the definition of “covered process” as defined by 40 C.F.R. § 68.3.

33. From the time Respondent first had on-site greater than a threshold quantity of any of the HNO Regulated Substances in a process, Respondent was subject to the requirements of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7), and 40 C.F.R. Part 68 because it was the owner or operator of a stationary source that had more than a threshold quantity of a regulated substance in a process.

34. The covered processes at the Facility do not meet the Program 1 eligibility requirements set forth in 40 C.F.R. § 68.10(g), is in the NAICS code 32511 – Petroleum Manufacturing, and are subject to the OSHA process safety management standards; therefore, meeting the Program 3 applicability and eligibility requirements pursuant to 40 C.F.R. § 68.10(i).

35. From the time Respondent first had on-site greater than a threshold quantity of any of the HNO Regulated Substances in a process and met the Program 3 eligibility requirements of 40 C.F.R. §68.10(i), Defendant was required to comply with the Program 3 requirements set forth in 40 C.F.R. § 68.12(d).

EPA Findings of Violation

36. The facts stated in the EPA Findings of Fact and Conclusions of Law above are herein incorporated.

37. Complainant hereby states and alleges that Respondent has violated the CAA and federal regulations promulgated thereunder as follows:

General Duty Clause

38. Pursuant to Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), owners and operators of stationary sources producing, processing, handling or storing substances listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), or any other extremely hazardous substance, have a general duty in the same manner and the same extent as the OSHA, 29 U.S.C. § 654 et. seq., to identify hazards and to design and maintain a safe facility, taking such steps as are necessary to prevent releases.

39. The process at the Facility has piping and equipment with visible external corrosion. The visible external corrosion has created equipment deficiencies including pinhole leaks, pitting, and line leaks.

40. Respondent's failure to identify hazards and to design and maintain a safe facility free of external corrosion, and hazardous conditions, taking such steps as are necessary to prevent releases is a violation of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

General Duty Clause

41. Pursuant to Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), owners and operators of stationary sources producing, processing, handling or storing substances listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), or any other extremely hazardous substance, have a general duty in the same manner and the same extent as the OSHA, 29 U.S.C. § 654 et. seq., to identify hazards and to design and maintain a safe facility, taking such steps as are necessary to prevent releases.

42. Dead legs, which are piping segments open to the process but with no flow through them, in equipment containing high purity butadiene, can allow for the formation of popcorn polymer if not properly managed. The formation and growth of popcorn polymer can

result in over pressurization, equipment failure, and loss of containment, as evidenced in the catastrophic release that occurred at Respondent's facility located in Port Neches, Texas.

43. The design of the Facility includes at least sixty-three (63) dead legs.

44. At least fifty-three (53) of the dead legs identified by Respondent at the Facility are managed with administrative controls. Administrative controls allow for human error and the potential for a release.

45. TPC was unable to identify the status of at least eighteen (18) dead legs at the time of the June 15, 2022, site visit.

46. The Mobile Ops tracking system used by Respondent for tracking and recording the status of operational and permanent dead legs at the Facility does not reliably and timely record and register the current status of the dead legs.

47. Temporary dead legs at the Facility are not tracked.

48. The catastrophic release at the Port Neches, Texas facility was as a result of a temporary dead leg.

49. Respondent has failed to identify hazards and to design and maintain a facility with controls necessary for managing and mitigating dead legs, including inadequately tracking the status of all dead legs for appropriate management and mitigation, which includes permanent removal, blinding, valving, and regular flushing of the dead legs.

50. Respondent's failure to identify hazards, and to design and maintain a safe facility taking such steps as are necessary to prevent releases is a violation of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

Mechanical Integrity - Inspection and Testing

51. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(d)(2), inspection and testing procedures shall follow recognized and generally accepted good engineering practices.

52. Consistent with recognized and generally accepted good engineering practices (“RAGAGEP”) for the petrochemical manufacturing industry, owners and operators should calculate the remaining life of the process equipment and record the same.

53. Respondent has failed to calculate the remaining life of process equipment.

54. Respondent’s failure to calculate the remaining life of process equipment following RAGAGEP pursuant to 40 C.F.R. § 68.73(d)(2), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Mechanical Integrity – Inspection and Testing

55. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(d)(3), the frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers’ recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience.

56. Visual external and thickness measurement inspections for piping should be conducted consistent with applicable manufacturers’ recommendations and good engineering practices.

57. Respondent failed to perform visual external and thickness measurement inspections consistent with applicable manufacturers' recommendations and good engineering practices.

58. Respondent's failure to perform inspections and tests on piping process equipment at a frequency consistent with applicable manufacturers' recommendations and good engineering practices pursuant to 40 C.F.R. § 68.73(d)(3), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Mechanical Integrity – Piping Equipment Deficiencies

59. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(e) the owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in § 68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

60. Respondent failed to correct equipment deficiencies in piping process equipment, including where there is corrosion found under piping insulation and labeling, where pitting is exhibited, and where pinhole leaks and line leaks are found.

61. Respondent's failure to correct deficiencies in piping process equipment that are outside acceptable limits before further use or in a safe and timely manner pursuant to 40 C.F.R. § 68.73(e), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Mechanical Integrity – Pump Equipment Deficiencies

62. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(e) the owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in § 68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

63. Respondent failed to correct equipment deficiencies in pump process equipment where a running water stream and spray is being used on external pump assemblies.

64. Respondent's failure to correct deficiencies in pump process equipment that are outside acceptable limits before further use or in a safe and timely manner pursuant to 40 C.F.R. § 68.73(e), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Mechanical Integrity – Pressure Gauges Equipment Deficiencies

65. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(e) the owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in § 68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

66. Respondent failed to correct equipment deficiencies in pressure gauge process equipment where the gauges had no readings or incorrect readings.

67. Respondent's failure to correct deficiencies in pressure gauge process equipment that are outside acceptable limits before further use or in a safe and timely manner pursuant to 40 C.F.R. § 68.73(e), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Mechanical Integrity – Compressor Equipment Deficiencies

68. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(e) the owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in § 68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

69. Respondent failed to correct equipment deficiencies in compressors that were outside acceptable limits before further using the compressors, or taking necessary means to assure safe operation, resulting in accidental releases.

70. Respondent's failure to correct deficiencies in compressor equipment that are outside acceptable limits before further use or in a safe and timely manner pursuant to 40 C.F.R. § 68.73(e), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Order for Compliance

71. Based on the EPA Findings of Fact and Conclusions of Law and the EPA Findings of Violation set forth above, and pursuant to the authority of Section 113(a)(3)(B) of the CAA, 42 U.S.C. § 7413(a)(3)(B), as amended, Respondent is hereby ORDERED and agrees

to comply with the requirements of Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and the regulations promulgated thereunder and codified at 40 C.F.R. Part 68.

72. The EPA and Respondent agree that Respondent shall, as expeditiously as possible, but in no event later than the timeframes specified below, complete the following actions (“Compliance Actions”) at the Facility:

a. Fixed Equipment (Vessels and Piping):

- i. Remaining Life Calculations: Within sixty (60) days of the effective date of this Order, identify all fixed equipment that requires a remaining life calculation pursuant to RAGAGEP and does not have a recorded remaining life calculation. Within one hundred twenty (120) days of the effective date of this Order, calculate and record remaining life calculations as required for all fixed equipment consistent with RAGAGEP.
- ii. Damage Mechanism Reviews: Within thirty (30) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for the audit of the damage mechanism reviews/corrosion control studies and inspection plans for fixed equipment to ensure these reviews/studies cover all appropriate damage/corrosion mechanisms at the entire Facility and are up-to-date and accurate. Within sixty (60) days of receipt of EPA’s approval, Respondent shall complete the actions described in the approved damage mechanism review work plan and submit, as provided herein, a summary of and

schedule for preparing any new damage mechanism review/control studies or otherwise addressing any observations, findings, and recommendations.

- iii. Inspection Plans: Within thirty (30) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for the audit of the Facility's inspection plans and policies in existence as of the effective date of this Order for all fixed equipment to evaluate whether the inspection plans and policies are consistent with Respondent's corporate and Facility specific programs and policies as well as established RAGAGEP, including but not limited to API 510, API 570, API 580/581. Within ninety (90) days of receipt of EPA's approval, Respondent shall complete the actions described in the approved inspection plans and policies work plan and submit, as provided herein, a summary of and schedule for addressing any observations, findings, and recommendations.
- iv. Overdue Inspections: Within thirty (30) days of the effective date of this Order, identify all fixed equipment with inspections that were overdue on the effective date of this Order, and for which inspections are due consistent with frequencies established by applicable manufacturers' recommendations and good engineering practices. Within ninety (90) days of the effective date of this Order, unless otherwise agreed by the EPA in writing, conduct all overdue inspections on fixed equipment, including but not limited to the equipment specified in Appendix A, consistent with the requirements of 40 C.F.R. § 68.73(d). Within one hundred twenty (120)

days of the effective date of this Order, based on the results of overdue inspections: (i) evaluate and update inspection plans and policies; (ii) ensure inspection schedules are up-to-date and compliant with the inspection plans, policies, and RAGAGEP; (iii) update and record remaining life calculations as required by RAGAGEP; and (iv) correct any equipment deficiencies identified consistent with 40 C.F.R. § 68.73(e). Within one hundred twenty (120) days of the effective date of this Order, submit, as provided herein, a summary of the corrective actions taken pursuant to this paragraph, including documentation that any inspection observations, findings, and recommendations and equipment deficiencies were addressed.

- v. **Materials of Construction:** Within thirty (30) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for identifying any unknown, incompatible or inadequate materials of construction (e.g., metallurgy, gaskets) based on the latest audit of damage mechanism reviews/corrosion control studies and inspections. Within sixty (60) days of receipt of EPA's approval, Respondent shall complete the actions described in the work plan and submit, as provided herein, a list of equipment with unknown, incompatible or inadequate materials of construction. Within ninety (90) days of identifying the list of equipment, unless otherwise agreed by EPA in writing, Respondent shall take action to: (a) identify any unknown materials of construction and incorporate the information into damage

mechanism reviews/corrosion studies and inspection plans and policies;
and (b) replace any incompatible or inadequate materials of construction
with those that are compatible or adequate.

b. Rotating Equipment (Pumps and Compressors):

- i. Criticality Risk Ranking: Within sixty (60) days of the effective date of this Order, Respondent shall develop and submit to EPA for review and approval, a proposed work plan for the audit of any criticality risk ranking performed for rotating equipment, or conduct a risk ranking if one has not previously been done, to ensure the ranking covers all appropriate rotating equipment and is accurate and current. Within thirty (30) days of receipt of EPA's approval, Respondent shall complete the actions described in the approved criticality risk ranking audit work plan and submit, as provided herein, a summary and schedule for addressing any observations, findings, and recommendations.
- ii. ITPM Plans: Within sixty (60) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for the audit of the inspection, testing, and preventative maintenance ("ITPM") plans and schedules for rotating equipment to ensure completeness, accuracy, compliance with manufacturer's recommendations or RAGAGEP, and consistency with the most current criticality risk ranking. Within thirty (30) days of receipt of EPA's approval, unless otherwise agreed by EPA in writing, Respondent shall complete the actions described in the approved work plan and

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submit, as provided herein, a summary of and schedule for addressing any observations, findings, and recommendations.

- iii. ITPM Schedules: Within sixty (60) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for the audit of the ITPM schedules for each piece of rotating equipment to identify overdue ITPMs. Within thirty (30) days of receipt of EPA's approval, Respondent shall complete the actions described in the approved work plan and submit, as provided herein, the list of overdue ITPM task. Within thirty (30) days of submitting the list of overdue ITPMs tasks, unless otherwise agreed by EPA in writing: (a) complete all overdue ITPMs tasks; (b) take action to ensure future schedules are up-to-date and compliant with the ITPM plans; and (c) submit, as provided herein, a summary of the actions taken to address the overdue ITPM tasks and correct any future schedules.
- iv. Deficiencies: Within thirty (30) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for the purpose of identifying all rotating equipment with deficiencies, including as identified from releases at HNO occurring within the last five (5) years. Within sixty (60) days of receipt of EPA's approval, Respondent shall complete the actions described in the approved deficient rotating equipment work plan and correct deficiencies before further use or submit, as provided herein, a plan to EPA for correcting

deficiencies in a safe and timely manner when necessary means are taken to assure safe operation.

c. Instrumentation and Safety Systems:

- i. Within sixty (60) days of the effective date of this Order, compile a list or lists of safety systems (see 40 C.F.R. § 68.65(d)(1)(viii)), and audit the list(s) to ensure the list is accurate, complete, and current. Submit, as provided herein, a summary of Respondent's process for identifying safety systems, and the compiled the list of safety systems.
- ii. Within ninety (90) days of the effective date of this Order, perform an audit of the hazard and risk assessments ("H&RA") conducted for all safety instrumented systems ("SIS") to ensure they are accurate, complete, and compliant with Respondent's corporate and Facility specific programs and policies and established RAGAGEP (e.g. ANSI/ISA 61511). Submit, as provided herein, a summary of and schedule for addressing any observations, findings, and recommendations.
- iii. Within one hundred twenty (120) days of the effective date of this Order, perform an audit of the safety requirements, design, and safety integrity level ("SIL") and/or risk reduction factor ("RRF") designations for all safety instrumented systems ("SIS") to determine whether they are accurate, current, and consistent with the latest H&RAs. Submit, as provided herein, a summary of Respondent's process for auditing the SIS.
- iv. Within one hundred twenty (120) days of the effective date of this Order, Respondent shall develop and submit to EPA for review and approval, a

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proposed work plan for the audit of the ITPM plans and schedules for all instrumentation and safety systems to determine whether they are accurate, current, and consistent with the latest H&RAs and current safety systems. Within sixty (60) days of EPA's approval, Respondent shall complete the actions described in the approved work plan and submit, as provided herein, a summary of and schedule for addressing any observations, findings, and recommendations.

- v. Within sixty (60) days of the effective date of this order, identify all overdue instrumentation and safety system ITPM tasks and submit, as provided herein, the list of overdue ITPM tasks to EPA. Within ninety (90) days of the effective date of this Order, unless otherwise agreed by EPA in writing, conduct all overdue ITPMs tasks and ensure schedules are up-to-date and compliant with the ITPM plans.
 - vi. Within one hundred twenty (120) days of the effective date of this Order, Respondent shall identify all instrumentation and safety system deficiencies and correct deficiencies before further use or submit, as provided herein, a plan to EPA for correcting deficiencies in a safe and timely manner when necessary means are taken to assure safe operation.
- d. Water on Pumps: Within twenty-one (21) days of the effective date of this Order:
- i. Evaluate and identify the cause for water streams and spray being utilized on the exterior of pumps at the Facility.

- ii. Identify and perform corrective measures to ensure pumps are operated and maintained consistent with manufacturers' recommendations and the Facility's applicable safe operating parameters.

e. Deficient Pressure Gauges:

- i. Within sixty (60) days of the effective date of this Order:
 - a. Survey all operating units to evaluate the operating condition of local gauges used in operator rounds, including but not limited to pressure, temperature, level, and flow gauges.
 - b. Remove, replace, or repair all gauges determined to be non-functioning or in-error consistent with 40 C.F.R. § 68.73(e).

- ii. Within two hundred forty (240) days of the effective date of this Order, unless otherwise agreed by EPA in writing:

- a. Survey all operating units to evaluate the operating condition of local gauges, including but not limited to pressure, temperature, level, and flow gauges.
- b. Remove, replace, or repair all gauges determined to be non-functioning or in-error consistent with 40 C.F.R. § 68.73(e).

f. Idle or Out-of-Service Equipment: Within one hundred twenty (120) days of the effective date of this Order, unless otherwise agreed by EPA in writing:

- i. Identify all units or equipment classified as idle, meaning retired from service and abandoned in place, or out-of-service, including equipment that has been permanently removed from operational service and equipment that has been taken out-of-service for an undetermined length

- of time (e.g. equipment currently out of service but may be returned to operational service at some future time).
- ii. Evaluate whether the idle or out-of-service units or equipment are physically connected to in-service units or equipment.
- iii. Positively isolate any units or equipment determined to be physically connected to in-service units or equipment.

g. Dead Legs Administrative Controls:

- i. Within forty-five (45) days of the effective date of this Order, evaluate each administratively managed dead leg in high purity butadiene service to determine whether the dead leg can be permanently removed or is necessary for continued operation and submit, as provided herein, a summary of the evaluation, including an explanation of why the dead leg cannot be permanently removed if so determined, for each administratively managed dead leg.
 - a. Within 90 days of the effective date of this Order, for dead legs that Respondent determines are not necessary for continued operation, submit to EPA a work plan to permanently mitigate the dead leg, such as through removal or blinding.
- ii. Within sixty (60) days of the effective date of this Order, for each dead leg in high purity butadiene service that are managed with administrative controls and are necessary for continued operation, Respondent shall: (1) submit to EPA, as provided herein, a description of the type of administrative controls in place; (2) establish a dedicated team of trained

personnel to perform the administrative control measures; and (3) establish a system that documents ongoing and completed administrative control measures in a timely, adequate, and reliable manner.

iii. Every 30 days from the effective date of this Order and continuing until this Order is terminated, assess, and submit a report, as provided herein, indicating whether the administrative control measures performed on each dead leg have been performed and are effective.

h. Dead Legs Mobile Ops Tracking System: Within thirty (30) days of the effective date of this Order:

- i. Take corrective action to ensure the Mobile Ops system provides reliable, timely, and current tracking and recording of Facility dead legs; or
- ii. Alternatively, establish a different electronic system or platform to reliably and timely track and record the current status of Facility dead legs.

i. Temporary Dead Legs: Within sixty (60) days of the effective date of this Order:

- i. Establish an electronic system or platform to reliably and timely track and record the current status and type of mitigation employed for all temporary dead legs in high purity butadiene service that can be reviewed and assessed by all necessary Facility personnel.
- ii. Every seven (7) days from the effective date of this Order and continuing until this Order is terminated, confirm the implementation of mitigation measures for every temporary dead leg.

j. Missing Operational or Permanent Dead Legs: Within five (5) days of the effective date of this Order:

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- i. Identify the status of each dead leg for which no status is known, including but not limited to dead leg numbers: 35, 44, 53, 54, 63, 65, 78, 86, 87, 88, 104, 107, 108, 110, 117, 122, 124, 125, 135, 139, 140, 143, and 145.
 - ii. Evaluate whether these dead legs have been permanently removed, or what mitigation controls need to be or are being implemented.
 - iii. Add any of the missing dead legs not permanently removed to the tracking system.
- k. Maintenance:
- i. Within ninety (90) days of the effective date of this Order, unless otherwise agreed by EPA in writing, audit the Maximo maintenance work process software for outstanding work orders (approved work orders not yet completed with a past due date) and outstanding work order requests (work order requests awaiting approval or denial), as of the effective date of this Order. Submit, as provided herein, the procedures and training related to submitting work order requests and a list of any outstanding work order requests and work orders.
 - ii. Within one hundred twenty (120) days of the effective date of this Order, unless otherwise agreed by EPA in writing, resolve all outstanding work orders.
 - iii. Within three hundred (300) days of the effective date of this Order, unless otherwise agreed by EPA in writing, resolve all outstanding work order requests.

- i. Housekeeping Standard: Within thirty (30) days of the effective date of this

Order:

- i. Develop a housekeeping standard for the Facility, including purpose, scope, objective, and regularly schedule plant tours, occurring at least every two weeks for the initial six (6) months, to identify housekeeping issues and establish corrective actions.
- ii. Inform Facility personnel of the developed housekeeping standard.
- iii. Designate responsible personnel, to oversee implementation of the housekeeping standard.
- iv. Establish a system to track and manage identified housekeeping issues and the status of corrective actions.

Submissions

73. Every 30 days from the effective date of this Order until the termination of this Order, Respondent shall provide a progress report to EPA detailing the actions Respondent has taken in furtherance of its obligations under this Order, including records in electronic format (e.g. Excel) of the tracking system used for managing dead legs at the Facility. Such records shall include the routine reporting of administrative control compliance issued at least monthly by the production manager to site leadership and the HNO Dead Leg Table.xls located on Intranet in the HNO Polymer Study Folder referred to in the BD Dead Leg Management Policy, EHS-MGT-HNO-1110, effective January 31, 2021.

74. Upon completion of each milestone detailed in Paragraph 71 of this Order, Respondent shall provide verification in the monthly progress report that the requirement is

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satisfied. The first progress report shall be due no later than 30 days after the effective date of this Order. Each subsequent progress report shall be due every 30 days thereafter.

75. Within 7 days of each progress report submission, Respondent shall meet with the EPA virtually, in person, or otherwise to discuss the progress towards its obligations under this Order and any questions related to that progress.

76. All submissions to EPA required by this Order shall contain the following certification signed by an authorized representative of Respondent:

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

77. All submissions to EPA required by this Order, and requests for progress report meetings, shall be sent by electronic mail to:

Justin McDowell
Enforcement and Compliance Assurance Division
Air Enforcement Branch
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500 (ECDAC)
Dallas, Texas 75270-2101
mcdowell.justin@epa.gov

and

Clarissa Mills
Office of Regional Counsel
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500 (ECDAC)
Dallas, Texas 75270-2101
mills.clarissa@epa.gov

78. All documents submitted by Respondent to EPA in the course of implementing this Order shall be available to the public unless identified and determined to be confidential business information pursuant 40 C.F.R. Part 2, Subpart B.

Stipulated Penalties

79. Respondent shall be liable for stipulated penalties for failure to comply with the requirements of this Order. The following stipulated penalties shall accrue per violation per day for failure to comply with the Compliance Actions or Submissions requirements above:

| <u>Penalty per Violation per Day</u> | <u>Period of Noncompliance</u> |
|--------------------------------------|--------------------------------|
| \$7,500 | 1st through 15th day |
| \$15,000 | 15th through 30th day |
| \$37,500 | 31st day and beyond |

80. All penalties shall begin to accrue on the day after the complete performance is due, or on the day a violation occurs and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity required by this Order.

81. If EPA rejects Respondent's proposed resolution of any Compliance Action or rejects any written submittal required in paragraph 72 above, EPA will notify Respondent promptly in writing. Respondent shall have 15 days in which to address EPA's concern. Any stipulated penalties applicable shall accrue during the 15-Day period, but shall not be payable unless the Respondent's further efforts to address EPA's concerns are rejected as insufficient by the EPA at the conclusion of the 15-Day period. As to any written submittal required in paragraph 72 above, if the original submittal was so deficient as to constitute a material breach of Respondent's obligations under this Order, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

82. The EPA may, in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due to it under this Order.

83. Respondent retains the right to dispute any demand for stipulated penalties.

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84. The payment of penalties shall not alter in any way Respondent's obligation to comply with the provisions of this Order.

85. All penalties accruing under this section shall be due and payable to the United States within thirty (30) days of Respondent's receipt from the EPA of a demand for payment of stipulated penalties. Such payments shall identify Respondent by name and docket number and shall be by certified or cashier's check made payable to the "United States Treasury" and sent to:

U.S. Environmental Protection Agency
Fines and Penalties
Cincinnati Finance Center
PO Box 979077
St. Louis, Missouri 63197-9000

or by alternate payment method described at <http://www.epa.gov/financial/makepayment>.

86. A copy of the check or other information confirming payment shall simultaneously be sent by electronic mail to:

Justin McDowell
Enforcement and Compliance Assurance Division
Air Enforcement Branch
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500 (ECDAC)
Dallas, Texas 75270-2101
mcdowell.justin@epa.gov

87. Respondent understands that failure to timely pay any portion of the stipulated penalty may result in the commencement of a civil action in Federal District Court to recover the full remaining balance, along with penalties and accumulated interest. In such case, interest shall begin to accrue on the stipulated penalty from the date of delinquency until such stipulated penalty and any accrued interest are paid in full. 31 C.F.R. § 901.9(b)(1). Interest will be assessed at a rate of the United States Treasury Tax and loan rates in accordance with 31 U.S.C. § 3717. Additionally, a charge will be assessed to cover the costs of debt collection including

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processing and handling costs, and a non-payment penalty charge of six percent (6%) per year compounded annually will be assessed on any portion of the debt which remains delinquent more than ninety (90) days after payment is due. 31 U.S.C. § 3717(e)(2).

Other Terms and Conditions

88. By entering into this Order, Respondent: (a) consents to and agrees to not contest the EPA's authority or jurisdiction to issue or enforce this Order; and (b) agrees to undertake all actions required by this Order. Respondent reserves the right to challenge the Findings of Fact and Conclusions of Law made herein in any proceedings outside of this Order, not including any enforcement of this Order.

89. Respondent neither admits nor denies the EPA Findings of Fact and Conclusions of Law and the EPA Findings of Violation. By entering into this Order, Respondent makes no factual or legal admissions.

90. Respondent and the EPA agree to bear their respective costs and attorney's fees. Respondent waives its right to seek reimbursement of their costs and attorney's fees under the Equal Access to Justice Act (5 U.S.C. § 504), as amended by the Small Business Regulatory Enforcement Fairness Act (P.L. 104-121), and any regulations promulgated thereunder.

General Provisions

91. Respondent waives any and all remedies, claims for relief and otherwise available rights to jurisdictional or administrative review of this Order that Respondent may have with respect to any issue of fact or law set forth in this Order, including, but not limited to, any right of judicial review under Section 307(b)(1) of the CAA, 42 U.S.C. § 7607(b)(1), or under the Administrative Procedure Act, 5 U.S.C. §§ 701-706.

92. Any violation of this Order may result in an additional enforcement action under Section 113 of the CAA, 42 U.S.C. § 7413. The EPA may use any information submitted under this Order in an administrative, civil judicial, or criminal action. Section 113 of the CAA, 42 U.S.C. § 7413, authorizes the Administrator to:

- a. issue an administrative penalty order under Section 113(d)(1) of the CAA, 42 U.S.C. § 7413(d)(1), assessing a civil penalty not to exceed \$51,796 (or amount as adjusted by the Civil Monetary Penalty Adjustment Rule) per day of violation, pursuant to Section 113(d)(1)(B) of the CAA, 42 U.S.C. § 7413(d)(1)(B);
- b. bring a civil judicial enforcement action for permanent or temporary injunction, or to assess and recover a civil penalty not to exceed \$414,364 (or amount as adjusted by the Civil Monetary Penalty Adjustment Rule) per day of violation, or both, pursuant to Section 113(b)(2) of the CAA, 42 U.S.C. § 7413(b)(2); or
- c. request the Attorney General to commence a criminal action pursuant to Section 113(c) of the CAA, 42 U.S.C. § 7413(c).

93. This Order does not resolve any civil or criminal claims for violations alleged in this Order. In accordance with Section 113(a)(4) of the CAA, 42 U.S.C. § 7413(a)(4), issuance of this Order does not preclude EPA from assessing penalties, obtaining injunctive relief, or taking any other action authorized under the CAA, or other applicable federal laws or regulation. This Order does not affect the obligation of Respondent to comply with all federal, state, and local statutes, regulations, and permits.

94. Nothing herein shall be construed to limit the power of the EPA to undertake any action against Respondent or any person in response to conditions that may present an imminent and substantial endangerment to public health, welfare, or the environment.

95. Nothing in this Order shall limit EPA's right to obtain access to, and/or inspect the Facility, and/or to request additional information from Respondent pursuant to the authority of Section 114 of the CAA, 42 U.S.C. § 7414.

96. For purposes of the identification requirement in Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 162(f)(2)(A)(ii), and 26 C.F.R. § 162-21(b)(2), performance of the Order for Compliance is restitution, remediation, or required to come into compliance with the law.

97. By signing this Order, the undersigned representative of Respondent certifies that he or she is authorized to enter into the terms and conditions of this Order, and to execute and legally bind Respondent to this Order.

98. The provisions of this Order shall apply and be binding upon Respondent and its agents, officers, directors, employees, trustees, authorized representatives, successors, and assigns. Respondent shall ensure that any agents, officers, directors, employees, contractors, consultants, firms or other persons or entities acting under or for Respondent with respect to matters included herein comply with the terms of this Order. From the Effective Date until termination of this Order, Respondent must give written notice and a copy of this Order to any successors in interest prior to any transfer of ownership or control of any portion or interest in the Facility. Simultaneously with such notice, Respondent shall provide written notice of such transfer, assignment, or delegation to the EPA. In the event of such transfer, assignment, or delegation, Respondent shall not be released from the obligations or liabilities of this Order unless the EPA has provided written approval of the release of said obligations or liabilities.

99. Pursuant to Section 113(a)(4) of the CAA, 42 U.S.C. § 7413(a)(4), this Order shall be effective when fully executed, shall not exceed the earlier of one year or the date of a

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determination by the EPA that Respondent has achieved compliance with all terms of this Order, and shall be nonrenewable.

100. The EPA and Respondent may subsequently amend this Order, in writing, in accordance with the authority of the CAA. In the event of any amendment to this Order, all requirements for performance of this Order not affected by the amendment shall remain as specified by the original Order.

101. Unless otherwise stated, all time periods stated herein shall be calculated in calendar days from such date. If a deadline or reporting obligation falls on a Saturday, Sunday, or Federal holiday, the period continues to run until the end of the next day that is not a Saturday, Sunday, or Federal holiday.

102. The EPA and Respondent agree to the use of electronic signatures for this matter. The EPA and Respondent further agree to electronic service of this Order by electronic mail to the following:

To EPA:

mills.clarissa@epa.gov

To Respondent:

*scott.elliott@bakerbotts.com; and
scott.janoe@bakerbotts.com*

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RESPONDENT:
TPC GROUP, LLC

Date: 8/20/2022

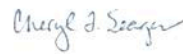

Signature

John Harvey III
Name

Vice President Operations
Title

COMPLAINANT:
U.S. ENVIRONMENTAL PROTECTION AGENCY

Date: August 22, 2022



Digitally signed by
CHERYL SEAGER
Date: 2022.08.22
17:57:23 -05'00'

Cheryl T. Seager
Director
Enforcement and
Compliance Assurance Division
U.S. EPA, Region 6

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CERTIFICATE OF SERVICE

I certify that on the date noted below I sent a true and correct copy of the original

Administrative Order on Consent to:

Scott Elliott, counsel for TPC Group, LLC
scott.elliott@bakerbotts.com; and

Scott Janoe, counsel for TPC Group, LLC
scott.janoe@bakerbotts.com

CLARISS Digitally signed by
A MILLS CLARISSA MILLS
Date: 2022.08.23
08:29:23 -05'00'

Signed
Office of Regional Counsel
U.S. EPA, Region 6

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APPENDIX A

| Piping Unit ID | Equipment ID | Equipment Type | Inspection Date |
|------------------|----------------|----------------|-----------------|
| H2O-FRFR | 0090C XTML DUP | Pipe | 8/30/2007 |
| H2O-FRFR | 0090D XTML DUP | Pipe | 8/30/2007 |
| SYSTEM#10 IGS | 01 | Pipe | 9/8/2011 |
| SYSTEM#11 COMPTU | 01 | Pipe | 11/16/2011 |
| SYSTEM#15 STPR | 01 | Pipe | 9/19/2011 |
| SYSTEM#16 LN | 01 | Pipe | 9/17/2011 |
| SYSTEM#17 5040VH | 01 | Pipe | 9/17/2011 |
| SYSTEM#26 STEAM- | 01 | Pipe | 11/1/2011 |
| SYSTEM#6 H2O | 01 | Pipe | 11/3/2011 |
| SYSTEM#9 QUENCH | 01 | Pipe | 9/12/2011 |
| SYSTEM#15 STPR | 02 | Pipe | 9/19/2011 |
| SYSTEM#16 LN | 02 | Pipe | 9/18/2011 |
| SYSTEM#17 5040VH | 02 | Pipe | 9/18/2011 |
| SYSTEM#2 REO | 02 | Pipe | 8/23/2011 |
| SYSTEM#26 STEAM- | 02 | Pipe | 11/2/2011 |
| SYSTEM#28 NG | 02 | Pipe | 10/31/2011 |
| SYSTEM#12 QOR | 03 | Pipe | 9/26/2019 |
| SYSTEM#16 LN | 03 | Pipe | 9/18/2011 |
| SYSTEM#2 REO | 03 | Pipe | 8/24/2011 |
| SYSTEM#26 STEAM- | 03 | Pipe | 11/2/2011 |
| SYSTEM#10 IGS | 04 | Pipe | 11/17/2011 |
| SYSTEM#16 LN | 04 | Pipe | 9/18/2011 |
| SYSTEM#18 505DPS | 04 | Pipe | 9/24/2011 |
| SYSTEM#26 STEAM- | 04 | Pipe | 11/2/2011 |
| SYSTEM#16 LN | 05 | Pipe | 9/19/2011 |
| SYSTEM#22 CWR | 05 | Pipe | 9/28/2011 |
| SYSTEM#28 NG | 05 | Pipe | 10/28/2011 |
| SYSTEM#15 STPR | 06 | Pipe | 9/19/2011 |
| SYSTEM#16 LN | 06 | Pipe | 9/19/2011 |
| SYSTEM#16 LN | 07 | Pipe | 9/19/2011 |
| SYSTEM#6 H2O | 07 | Pipe | 8/29/2011 |
| SYSTEM#7 ABS-INT | 07 | Pipe | 8/31/2011 |
| SYSTEM#9 QUENCH | 07 | Pipe | 9/16/2011 |
| SYSTEM#15 STPR | 08 | Pipe | 12/5/2011 |

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| | | | |
|------------------|---------------|------|------------|
| SYSTEM#16 LN | 08 | Pipe | 9/19/2011 |
| SYSTEM#21 CWS | 08 | Pipe | 10/21/2011 |
| SYSTEM#25 STEAM | 08 | Pipe | 11/3/2011 |
| SYSTEM#9 QUENCH | 08 | Pipe | 9/16/2011 |
| SYSTEM#23 STEAM | 09 | Pipe | 10/3/2011 |
| SYSTEM#21 CWS | 10 | Pipe | 10/30/2011 |
| SYSTEM#23 STEAM | 10 | Pipe | 11/14/2011 |
| SYSTEM#9 QUENCH | 10 | Pipe | 9/16/2011 |
| SYSTEM#23 STEAM | 11 | Pipe | 11/14/2011 |
| SYSTEM#23 STEAM | 12 | Pipe | 11/22/2011 |
| SYSTEM#7 ABS-INT | 12 | Pipe | 10/27/2011 |
| SYSTEM#15 STPR | 13 | Pipe | 12/5/2011 |
| SYSTEM#23 STEAM | 14 | Pipe | 11/3/2011 |
| SYSTEM#18 505DPS | 18 | Pipe | 11/2/2011 |
| SYSTEM#23 STEAM | 18 | Pipe | 11/3/2011 |
| SYSTEM#5 COMP | 22 | Pipe | 10/30/2011 |
| B1 | B1-C0180B | Pipe | 3/4/2016 |
| CONDENSATE | COND-C0090C | Pipe | 1/9/2017 |
| FLR | FLR-C0520A | Pipe | 3/29/2011 |
| FLR | FLR-C0800C | Pipe | 4/5/2007 |
| FLR | FLR-C1021A | Pipe | 9/14/2009 |
| FLR | FLR-C1022 | Pipe | 9/14/2009 |
| FLR | FLR-C1030 | Pipe | 9/11/2009 |
| FLR | FLR-C1032 | Pipe | 9/30/2016 |
| FRFRL | FRFRL-C0004A | Pipe | 7/19/2016 |
| FRFRL | FRFRL-C0021 | Pipe | 10/24/2016 |
| FRFRL | FRFRL-C0059 | Pipe | 2/4/2008 |
| FRFRL | FRFRL-C0060 | Pipe | 5/10/2016 |
| FRFRL | FRFRL-C0128 | Pipe | 1/31/2011 |
| IBTYLN | IBTYLN-C0580B | Pipe | 2/29/2016 |
| IC4 | IC4-C0110I | Pipe | 6/2/2016 |
| OLIG | OLIG-C0060A | Pipe | 9/14/2009 |
| OLIG | OLIG-C0070A | Pipe | 9/1/2009 |
| OLIG | OLIG-C0080A | Pipe | 9/14/2009 |
| OLIG | OLIG-C0090A | Pipe | 9/14/2009 |
| OLIG | OLIG-C0110A | Pipe | 9/14/2009 |
| OLIG | OLIG-C0120A | Pipe | 9/8/2009 |
| OLIG | OLIG-C0150A | Pipe | 3/2/2016 |
| OLIG | OLIG-C0170A | Pipe | 9/9/2009 |
| OLIG | OLIG-C0180A | Pipe | 9/9/2009 |

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| | | | |
|-------------|---------------|------|------------|
| OLIG | OLIG-C0190A | Pipe | 9/9/2009 |
| PPWW | PIB-C0010A | Pipe | 1/24/2017 |
| PPWW | PIB-C0010A | Pipe | 1/16/2017 |
| PPWW | PIB-C0020A | Pipe | 3/11/2020 |
| PIB | PIB-C0027D | Pipe | 8/9/2019 |
| PIB | PIB-C0041A | Pipe | 5/5/2008 |
| RACLN | RACLN-C0056 | Pipe | 10/3/2006 |
| RAFF PIPING | RAFF-C0027 | Pipe | 8/15/2002 |
| STEAM 150# | STM150-C0060A | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0080A | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0090A | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0100A | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0100B | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0110A | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0110B | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0110C | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0110D | Pipe | 1/28/2010 |
| STEAM 150# | STM150-C0110E | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0110F | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0110G | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0110H | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0110I | Pipe | 1/25/2010 |
| STEAM 150# | STM150-C0120A | Pipe | 1/28/2010 |
| STEAM 150# | STM150-C0120C | Pipe | 1/21/2010 |
| STEAM 150# | STM150-C0120D | Pipe | 1/26/2010 |
| STEAM 150# | STM150-C0120E | Pipe | 12/14/2009 |
| STEAM 150# | STM150-C0130A | Pipe | 1/28/2010 |
| STEAM 150# | STM150-C0140A | Pipe | 1/15/2010 |
| STEAM 150# | STM150-C0140B | Pipe | 1/15/2010 |
| STEAM 150# | STM150-C0140C | Pipe | 1/15/2010 |
| STEAM 150# | STM150-C0140D | Pipe | 1/28/2010 |
| STEAM 150# | STM150-C0140E | Pipe | 1/28/2010 |
| STEAM 150# | STM150-C0140F | Pipe | 1/15/2010 |
| STEAM 150# | STM150-C0150A | Pipe | 1/15/2010 |
| STEAM 150# | STM150-C0150B | Pipe | 1/26/2010 |
| STEAM 150# | STM150-C0160A | Pipe | 1/15/2010 |
| STEAM 150# | STM150-C0160E | Pipe | 1/15/2010 |
| STEAM 150# | STM150-C0350A | Pipe | 8/24/2009 |
| STEAM 150# | STM150-C0390G | Pipe | 4/26/2013 |
| STEAM 150# | STM150-C0510B | Pipe | 12/3/2009 |

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| STEAM 150# | STM150-C0520A | Pipe | 12/9/2009 |
| STEAM 150# | STM150-C0530A | Pipe | 12/3/2009 |
| STEAM 150# | STM150-C0540A | Pipe | 12/3/2009 |
| STEAM 150# | STM150-C0540B | Pipe | 12/3/2009 |
| STEAM 150# | STM150-C0540C | Pipe | 12/3/2009 |
| STEAM 150# | STM150-C0550A | Pipe | 12/3/2009 |
| STEAM 150# | STM150-C0560A | Pipe | 12/3/2009 |
| STEAM 150# | STM150-C0560B | Pipe | 12/3/2009 |
| STEAM 150# | STM150-C0600A | Pipe | 10/27/2009 |
| STEAM 150# | STM150-C0600B | Pipe | 10/27/2009 |
| STEAM 150# | STM150-C0610A | Pipe | 10/28/2009 |
| STEAM 150# | STM150-C0620A | Pipe | 10/28/2009 |
| STEAM 150# | STM150-C0640B | Pipe | 10/29/2009 |
| STEAM 150# | STM150-C0650A | Pipe | 10/30/2009 |
| STEAM 150# | STM150-C0660A | Pipe | 10/31/2009 |
| STEAM 150# | STM150-C0660B | Pipe | 10/31/2009 |
| STEAM 150# | STM150-C0670A | Pipe | 11/1/2009 |
| STEAM 150# | STM150-C0670B | Pipe | 11/1/2009 |
| STEAM 150# | STM150-C0670C | Pipe | 11/2/2009 |
| STEAM 150# | STM150-C0680A | Pipe | 11/2/2009 |
| STEAM 150# | STM150-C0680B | Pipe | 11/2/2009 |
| STEAM 150# | STM150-C0680C | Pipe | 11/2/2009 |
| STEAM 150# | STM150-C0680D | Pipe | 11/3/2009 |
| STEAM 150# | STM150-C0690A | Pipe | 11/3/2009 |
| STEAM 150# | STM150-C0690B | Pipe | 11/3/2009 |
| STEAM 150# | STM150-C0700A | Pipe | 11/3/2009 |
| STEAM 150# | STM150-C0700B | Pipe | 11/4/2009 |
| STEAM 150# | STM150-C0710A | Pipe | 11/5/2009 |
| STEAM 150# | STM150-C0710B | Pipe | 11/5/2009 |
| STEAM 150# | STM150-C0710C | Pipe | 11/5/2009 |
| STEAM 150# | STM150-C0720A | Pipe | 11/9/2009 |
| STEAM 150# | STM150-C0720B | Pipe | 11/5/2009 |
| STEAM 150# | STM150-C0730A | Pipe | 11/9/2009 |
| STEAM 150# | STM150-C0730B | Pipe | 11/9/2009 |
| STEAM 150# | STM150-C0740A | Pipe | 11/9/2009 |
| STEAM 150# | STM150-C0750A | Pipe | 11/10/2009 |
| STEAM 150# | STM150-C0760A | Pipe | 11/10/2009 |
| STEAM 150# | STM150-C0760B | Pipe | 11/12/2009 |
| STEAM 150# | STM150-C0770A | Pipe | 11/12/2009 |
| STEAM 150# | STM150-C0790A | Pipe | 11/13/2009 |

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| STEAM 150# | STM150-C0800A | Pipe | 11/13/2009 |
| STEAM 150# | STM150-C0800B | Pipe | 11/14/2009 |
| STEAM 150# | STM150-C0810A | Pipe | 11/14/2009 |
| STEAM 150# | STM150-C0820A | Pipe | 11/14/2009 |
| STEAM 150# | STM150-C0820B | Pipe | 11/16/2009 |
| STEAM 150# | STM150-C0830A | Pipe | 11/16/2009 |
| STEAM 150# | STM150-C0830B | Pipe | 11/16/2009 |
| STEAM 150# | STM150-C0840A | Pipe | 11/16/2009 |
| STEAM 150# | STM150-C0840B | Pipe | 11/16/2009 |
| STEAM 150# | STM150-C0850A | Pipe | 11/16/2009 |
| STEAM 150# | STM150-C0860A | Pipe | 11/16/2009 |
| STEAM 150# | STM150-C0870A | Pipe | 11/18/2009 |
| STEAM 150# | STM150-C0880A | Pipe | 11/18/2009 |
| STEAM 150# | STM150-C0880B | Pipe | 11/18/2009 |
| STEAM 150# | STM150-C0890A | Pipe | 11/18/2009 |
| STEAM 150# | STM150-C0900A | Pipe | 11/18/2009 |
| STEAM 150# | STM150-C0900B | Pipe | 11/18/2009 |
| STEAM 150# | STM150-C0910A | Pipe | 11/19/2009 |
| STEAM 150# | STM150-C0920A | Pipe | 11/19/2009 |
| STEAM 150# | STM150-C0930A | Pipe | 11/19/2009 |
| STEAM 150# | STM150-C0950A | Pipe | 11/19/2009 |
| WW | WW-C0001 | Pipe | 9/9/2009 |
| WW | WW-C0002 | Pipe | 9/9/2009 |
| WW | WW-C0003 | Pipe | 7/13/2009 |
| WW | WW-C0014 | Pipe | 3/8/2016 |
| WW | WW-C0016 | Pipe | 3/8/2016 |

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|-----|------------|------|-----------|
| FLR | FLR-C0880H | Pipe | 6/30/2017 |
| FLR | FLR-C0930B | Pipe | 6/30/2017 |
| FLR | FLR-C0930D | Pipe | 6/30/2017 |
| FLR | FLR-C0500C | Pipe | 6/29/2017 |
| FLR | FLR-C0500D | Pipe | 6/29/2017 |
| FLR | FLR-C0900C | Pipe | 6/29/2017 |
| FLR | FLR-C0930H | Pipe | 6/29/2017 |
| FLR | FLR-C0930I | Pipe | 6/29/2017 |
| FLR | FLR-C0500F | Pipe | 6/28/2017 |
| FLR | FLR-C0500K | Pipe | 6/28/2017 |
| FLR | FLR-C0870B | Pipe | 6/28/2017 |
| FLR | FLR-C0930J | Pipe | 6/28/2017 |
| FLR | FLR-C0930K | Pipe | 6/28/2017 |

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| FLR | FLR-C0930L | Pipe | 6/28/2017 |
| FLR | FLR-C0130B | Pipe | 6/27/2017 |
| FLR | FLR-C0850A | Pipe | 6/27/2017 |
| FLR | FLR-C0880L | Pipe | 6/27/2017 |
| FLR | FLR-C0880M | Pipe | 6/27/2017 |
| FLR | FLR-C0880N | Pipe | 6/27/2017 |
| FLR | FLR-C0500N | Pipe | 6/26/2017 |
| FLR | FLR-C0500Q | Pipe | 6/26/2017 |
| FLR | FLR-C0800G | Pipe | 6/23/2017 |
| FLR | FLR-C0800H | Pipe | 6/23/2017 |
| FLR | FLR-C0800I | Pipe | 6/23/2017 |
| FLR | FLR-C0800K | Pipe | 6/23/2017 |
| FLR | FLR-C0800L | Pipe | 6/23/2017 |
| FLR | FLR-C0800D | Pipe | 6/22/2017 |
| FLR | FLR-C0280A | Pipe | 6/19/2017 |
| FLR | FLR-C0660A | Pipe | 6/19/2017 |
| FLR | FLR-C0910G | Pipe | 6/16/2017 |
| FLR | FLR-C0910I | Pipe | 6/16/2017 |
| FLR | FLR-C0910J | Pipe | 6/16/2017 |
| FLR | FLR-C0460A | Pipe | 6/15/2017 |
| FLR | FLR-C0640A | Pipe | 6/15/2017 |
| FLR | FLR-C0650A | Pipe | 6/15/2017 |
| FLR | FLR-C0910A | Pipe | 6/15/2017 |
| FLR | FLR-C0910C | Pipe | 6/15/2017 |
| FLR | FLR-C0910D | Pipe | 6/15/2017 |
| FLR | FLR-C0910F | Pipe | 6/15/2017 |
| B2 | B2-C0030B | Pipe | 6/14/2017 |
| FLR | FLR-C0010B | Pipe | 6/14/2017 |
| FLR | FLR-C0430A | Pipe | 6/14/2017 |
| FLR | FLR-C0570A | Pipe | 6/14/2017 |
| FLR | FLR-C0600A | Pipe | 6/14/2017 |
| FLR | FLR-C0630A | Pipe | 6/14/2017 |
| BD PIPING | BD-C0345 | Pipe | 6/13/2017 |
| FLR | FLR-C0010C | Pipe | 6/13/2017 |
| FLR | FLR-C0110D | Pipe | 6/13/2017 |
| FLR | FLR-C0130A | Pipe | 6/13/2017 |
| FLR | FLR-C0360A | Pipe | 6/13/2017 |
| FLR | FLR-C0470A | Pipe | 6/13/2017 |
| MTBE | MTBE-C0048 | Pipe | 6/13/2017 |
| B2 | B2-C0100D | Pipe | 6/12/2017 |

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| B2 | B2-C0100E | Pipe | 6/12/2017 |
| B2 | B2-C0100F | Pipe | 6/12/2017 |
| B2 | B2-C0110A | Pipe | 6/12/2017 |
| B2 | B2-C0110B | Pipe | 6/12/2017 |
| BD PIPING | BD-C0016 | Pipe | 6/12/2017 |
| BD PIPING | BD-C0018 | Pipe | 6/12/2017 |
| BD PIPING | BD-C0020 | Pipe | 6/12/2017 |
| BD PIPING | BD-C0412 | Pipe | 6/12/2017 |
| FLR | FLR-C0010D | Pipe | 6/12/2017 |
| FLR | FLR-C0210A | Pipe | 6/12/2017 |
| FLR | FLR-C0500L | Pipe | 6/12/2017 |
| B2 | B2-C0040B | Pipe | 6/9/2017 |
| B2 | B2-C0060 | Pipe | 6/9/2017 |
| B2 | B2-C0080 | Pipe | 6/9/2017 |
| B2 | B2-C0090A | Pipe | 6/9/2017 |
| B2 | B2-C0090B | Pipe | 6/9/2017 |
| BD PIPING | BD-C0003 | Pipe | 6/9/2017 |
| BD PIPING | BD-C0008 | Pipe | 6/9/2017 |
| BD PIPING | BD-C0013 | Pipe | 6/9/2017 |
| BD PIPING | BD-C0014 | Pipe | 6/9/2017 |
| BD PIPING | BD-C0017 | Pipe | 6/9/2017 |
| B2 | B2-C0040A | Pipe | 6/8/2017 |
| B2 | B2-C0070A | Pipe | 6/8/2017 |
| B2 | B2-C0070B | Pipe | 6/8/2017 |
| B2 | B2-C0110C | Pipe | 6/8/2017 |
| B2 | B2-C0220C | Pipe | 6/7/2017 |
| FLR | FLR-C0550A | Pipe | 6/6/2017 |
| FLR | FLR-C0820C | Pipe | 6/5/2017 |
| FLR | FLR-C0900D | Pipe | 6/2/2017 |
| PIB | PIB-C0007 | Pipe | 6/2/2017 |
| FLR | FLR-C0500G | Pipe | 6/1/2017 |
| FLR | FLR-C0680I | Pipe | 6/1/2017 |
| FLR | FLR-C0800E | Pipe | 6/1/2017 |
| FLR | FLR-C0830A | Pipe | 6/1/2017 |
| FLR | FLR-C0830B | Pipe | 6/1/2017 |
| FLR | FLR-C0840A | Pipe | 6/1/2017 |
| FLR | FLR-C0880F | Pipe | 6/1/2017 |
| FRFRL | FRFRL-C0060 | Pipe | 6/1/2017 |
| HCSLOP | HCSLOP-C0100A | Pipe | 6/1/2017 |
| FLR | FLR-C0220A | Pipe | 5/31/2017 |

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| FLR | FLR-C0500P | Pipe | 5/31/2017 |
| FLR | FLR-C0800A | Pipe | 5/31/2017 |
| FLR | FLR-C0880E | Pipe | 5/31/2017 |
| FLR | FLR-C0610A | Pipe | 5/30/2017 |
| FLR | FLR-C0620A | Pipe | 5/30/2017 |
| FLR | FLR-C0650B | Pipe | 5/30/2017 |
| FLR | FLR-C0860B | Pipe | 5/30/2017 |
| FLR | FLR-C0860E | Pipe | 5/30/2017 |
| FLR | FLR-C0860G | Pipe | 5/30/2017 |
| FLR | FLR-C0870C | Pipe | 5/30/2017 |
| FLR | FLR-C0880A | Pipe | 5/30/2017 |
| FLR | FLR-C0890D | Pipe | 5/30/2017 |
| FLR | FLR-C0890K | Pipe | 5/30/2017 |
| FLR | FLR-C0540A | Pipe | 5/26/2017 |
| FLR | FLR-C0380A | Pipe | 5/24/2017 |
| FLR | FLR-C0380B | Pipe | 5/24/2017 |
| FLR | FLR-C0380D | Pipe | 5/24/2017 |
| FLR | FLR-C0500E | Pipe | 5/23/2017 |
| FLR | FLR-C0500H | Pipe | 5/23/2017 |
| FLR | FLR-C0500M | Pipe | 5/23/2017 |
| FLR | FLR-C0250A | Pipe | 5/22/2017 |
| FLR | FLR-C0250B | Pipe | 5/22/2017 |
| FLR | FLR-C0410A | Pipe | 5/22/2017 |
| FLR | FLR-C0440A | Pipe | 5/22/2017 |
| FLR | FLR-C0260A | Pipe | 5/19/2017 |
| FLR | FLR-C0310A | Pipe | 5/18/2017 |
| FLR | FLR-C0320A | Pipe | 5/18/2017 |
| FLR | FLR-C0320B | Pipe | 5/18/2017 |
| FLR | FLR-C0350D | Pipe | 5/18/2017 |
| FLR | FLR-C0370A | Pipe | 5/18/2017 |
| BD PIPING | BD-C0050 | Pipe | 5/17/2017 |
| FLR | FLR-C0070A | Pipe | 5/17/2017 |
| FLR | FLR-C0160A | Pipe | 5/17/2017 |
| FLR | FLR-C0220B | Pipe | 5/17/2017 |
| FLR | FLR-C0220C | Pipe | 5/17/2017 |
| FLR | FLR-C0220D | Pipe | 5/17/2017 |
| FLR | FLR-C0230A | Pipe | 5/17/2017 |
| FLR | FLR-C0240A | Pipe | 5/17/2017 |
| FLR | FLR-C0240C | Pipe | 5/17/2017 |
| FLR | FLR-C0340A | Pipe | 5/17/2017 |

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| FLR | FLR-C0340C | Pipe | 5/17/2017 |
| FLR | FLR-C0040D | Pipe | 5/16/2017 |
| FLR | FLR-C0050A | Pipe | 5/16/2017 |
| FLR | FLR-C0060A | Pipe | 5/16/2017 |
| FLR | FLR-C0090A | Pipe | 5/16/2017 |
| FLR | FLR-C0140A | Pipe | 5/16/2017 |
| FLR | FLR-C0140B | Pipe | 5/16/2017 |
| FLR | FLR-C0170A | Pipe | 5/16/2017 |
| FLR | FLR-C0180A | Pipe | 5/16/2017 |
| FLR | FLR-C0190A | Pipe | 5/16/2017 |
| FLR | FLR-C0200A | Pipe | 5/16/2017 |
| FLR | FLR-C0010E | Pipe | 5/15/2017 |
| FLR | FLR-C0030A | Pipe | 5/15/2017 |
| FLR | FLR-C0040B | Pipe | 5/15/2017 |
| FLR | FLR-C0100A | Pipe | 5/15/2017 |
| FLR | FLR-C0820D | Pipe | 5/15/2017 |
| FLR | FLR-C0860C | Pipe | 5/12/2017 |
| FLR | FLR-C0860F | Pipe | 5/12/2017 |
| FLR | FLR-C0860D | Pipe | 5/11/2017 |
| PIB | PIB-C0040G | Pipe | 5/10/2017 |
| HCSLOP | HCSLOP-C0020A | Pipe | 5/8/2017 |
| BD PIPING | BD-C0411 | Pipe | 5/4/2017 |
| FLR | FLR-C0020D | Pipe | 5/3/2017 |
| FLR | FLR-C0040A | Pipe | 5/3/2017 |
| FLR | FLR-C0040C | Pipe | 5/3/2017 |
| FLR | FLR-C0060C | Pipe | 5/3/2017 |
| HCSLOP | HCSLOP-C0060A | Pipe | 5/3/2017 |
| HCSLOP | HCSLOP-C0060B | Pipe | 5/3/2017 |
| HCSLOP | HCSLOP-C0170B | Pipe | 5/3/2017 |
| FLR | FLR-C0110A | Pipe | 5/2/2017 |
| FLR | FLR-C0110B | Pipe | 5/2/2017 |
| FLR | FLR-C0680A | Pipe | 5/2/2017 |
| FLR | FLR-C0690A | Pipe | 5/2/2017 |
| FLR | FLR-C0890E | Pipe | 5/2/2017 |
| FLR | FLR-C0890F | Pipe | 5/2/2017 |
| BD PIPING | BD-C0065 | Pipe | 5/1/2017 |
| BD PIPING | BD-C0239 | Pipe | 5/1/2017 |
| METH | METH-C0006 | Pipe | 5/1/2017 |
| RAFF PIPING | RAFF-C0040 | Pipe | 5/1/2017 |
| PIB | PIB-C0038F | Pipe | 4/28/2017 |

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| BD PIPING | BD-C0037 | Pipe | 4/27/2017 |
| BD PIPING | BD-C0042 | Pipe | 4/27/2017 |
| BD PIPING | BD-C0279 | Pipe | 4/27/2017 |
| MTBE | MTBE-C0053 | Pipe | 4/27/2017 |
| BD PIPING | BD-C0110 | Pipe | 4/26/2017 |
| BD PIPING | BD-C0120 | Pipe | 4/26/2017 |
| BD PIPING | BD-C0280 | Pipe | 4/26/2017 |
| BD PIPING | BD-C0289 | Pipe | 4/26/2017 |
| BD PIPING | BD-C0404 | Pipe | 4/26/2017 |
| HCSLOP | HCSLOP-C0030A | Pipe | 4/26/2017 |
| RAFF PIPING | RAFF-C0039 | Pipe | 4/26/2017 |
| BD PIPING | BD-C0388 | Pipe | 4/25/2017 |
| BD PIPING | BD-C0399 | Pipe | 4/25/2017 |
| BD PIPING | BD-C0405 | Pipe | 4/25/2017 |
| BD PIPING | BD-C0406 | Pipe | 4/25/2017 |
| FRFRL | FRFRL-C0013 | Pipe | 4/25/2017 |
| FRFRL | FRFRL-C0110 | Pipe | 4/25/2017 |
| HCSLOP | HCSLOP-C0130A | Pipe | 4/25/2017 |
| BD PIPING | BD-C0056 | Pipe | 4/24/2017 |
| BD PIPING | BD-C0369 | Pipe | 4/24/2017 |
| BD PIPING | BD-C0376 | Pipe | 4/24/2017 |
| BD PIPING | BD-C0377 | Pipe | 4/24/2017 |
| BD PIPING | BD-C0402 | Pipe | 4/24/2017 |
| MTBE | MTBE-C0042 | Pipe | 4/24/2017 |
| BD PIPING | BD-C0350 | Pipe | 4/21/2017 |
| BD PIPING | BD-C0363 | Pipe | 4/21/2017 |
| BD PIPING | BD-C0367 | Pipe | 4/20/2017 |
| BD PIPING | BD-C0375 | Pipe | 4/20/2017 |
| BD PIPING | BD-C0380 | Pipe | 4/20/2017 |
| BD PIPING | BD-C0381 | Pipe | 4/20/2017 |
| MTBE | MTBE-C0005 | Pipe | 4/20/2017 |
| MTBE | MTBE-C0007 | Pipe | 4/20/2017 |
| MTBE | MTBE-C0033 | Pipe | 4/20/2017 |
| BD PIPING | BD-C0005 | Pipe | 4/19/2017 |
| BD PIPING | BD-C0408 | Pipe | 4/19/2017 |
| BD PIPING | BD-C0415 | Pipe | 4/19/2017 |
| BD PIPING | BD-C0063 | Pipe | 4/18/2017 |
| BD PIPING | BD-C0214 | Pipe | 4/18/2017 |
| BD PIPING | BD-C0278 | Pipe | 4/18/2017 |
| BD PIPING | BD-C0286 | Pipe | 4/18/2017 |

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| BD PIPING | BD-C0329 | Pipe | 4/18/2017 |
| PIB | PIB-C0038G | Pipe | 4/18/2017 |
| BD PIPING | BD-C0248 | Pipe | 4/17/2017 |
| BD PIPING | BD-C0341 | Pipe | 4/17/2017 |
| BD PIPING | BD-C0360 | Pipe | 4/17/2017 |
| BD PIPING | BD-C0374 | Pipe | 4/17/2017 |
| BD PIPING | BD-C0414 | Pipe | 4/17/2017 |
| RAFF PIPING | RAFF-C0037A | Pipe | 4/17/2017 |
| BD PIPING | BD-C0006 | Pipe | 4/13/2017 |
| BD PIPING | BD-C0371 | Pipe | 4/12/2017 |
| BD PIPING | BD-C0372 | Pipe | 4/12/2017 |
| BD PIPING | BD-C0373 | Pipe | 4/12/2017 |
| MTBE | MTBE-C0054 | Pipe | 4/12/2017 |
| RAFF PIPING | RAFF-C0044 | Pipe | 4/12/2017 |
| BD PIPING | BD-C0114 | Pipe | 4/11/2017 |
| BD PIPING | BD-C0364 | Pipe | 4/11/2017 |
| BD PIPING | BD-C0366 | Pipe | 4/11/2017 |
| BD PIPING | BD-C0067 | Pipe | 4/10/2017 |
| BD PIPING | BD-C0141 | Pipe | 4/10/2017 |
| BD PIPING | BD-C0149 | Pipe | 4/10/2017 |
| BD PIPING | BD-C0242 | Pipe | 4/7/2017 |
| BD PIPING | BD-C0243 | Pipe | 4/7/2017 |
| BD PIPING | BD-C0244 | Pipe | 4/7/2017 |
| BD PIPING | BD-C0241 | Pipe | 4/6/2017 |
| BD PIPING | BD-C0047 | Pipe | 4/5/2017 |
| RAFF PIPING | RAFF-C0038 | Pipe | 4/5/2017 |
| BD PIPING | BD-C0118 | Pipe | 3/22/2017 |
| BD PIPING | BD-C0139 | Pipe | 3/22/2017 |
| BD PIPING | BD-C0259 | Pipe | 3/22/2017 |
| BD PIPING | BD-C0260 | Pipe | 3/22/2017 |
| BD PIPING | BD-C0378 | Pipe | 3/22/2017 |
| BD PIPING | BD-C0383 | Pipe | 3/22/2017 |
| FRFRL | FRFRL-C0021 | Pipe | 3/22/2017 |
| BD PIPING | BD-C0115 | Pipe | 3/21/2017 |
| BD PIPING | BD-C0122 | Pipe | 3/21/2017 |
| BD PIPING | BD-C0250 | Pipe | 3/21/2017 |
| BD PIPING | BD-C0111 | Pipe | 3/20/2017 |
| BD PIPING | BD-C0112 | Pipe | 3/20/2017 |
| BD PIPING | BD-C0130 | Pipe | 3/20/2017 |
| BD PIPING | BD-C0131 | Pipe | 3/20/2017 |

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| BD PIPING | BD-C0142 | Pipe | 3/20/2017 |
| FRFRL | FRFRL-C0128 | Pipe | 3/20/2017 |
| RAFF PIPING | RAFF-C0006 | Pipe | 3/20/2017 |
| BD PIPING | BD-C0281 | Pipe | 3/17/2017 |
| BD PIPING | BD-C0098 | Pipe | 3/16/2017 |
| BD PIPING | BD-C0106 | Pipe | 3/16/2017 |
| BD PIPING | BD-C0123 | Pipe | 3/16/2017 |
| BD PIPING | BD-C0150 | Pipe | 3/16/2017 |
| BD PIPING | BD-C0238 | Pipe | 3/16/2017 |
| BD PIPING | BD-C0267 | Pipe | 3/16/2017 |
| BD PIPING | BD-C0269 | Pipe | 3/16/2017 |
| BD PIPING | BD-C0240 | Pipe | 3/15/2017 |
| BD PIPING | BD-C0263 | Pipe | 3/15/2017 |
| BD PIPING | BD-C0264 | Pipe | 3/15/2017 |
| BD PIPING | BD-C0265 | Pipe | 3/15/2017 |
| BD PIPING | BD-C0352 | Pipe | 3/15/2017 |
| HCSLOP | HCSLOP-C0020C | Pipe | 3/15/2017 |
| HCSLOP | HCSLOP-C0130B | Pipe | 3/15/2017 |
| HCSLOP | HCSLOP-C0130C | Pipe | 3/15/2017 |
| HCSLOP | HCSLOP-C0130D | Pipe | 3/15/2017 |
| BD PIPING | BD-C0253 | Pipe | 3/14/2017 |
| BD PIPING | BD-C0262 | Pipe | 3/14/2017 |
| BD PIPING | BD-C0234 | Pipe | 3/13/2017 |
| BD PIPING | BD-C0251 | Pipe | 3/13/2017 |
| BD PIPING | BD-C0252 | Pipe | 3/13/2017 |
| BD PIPING | BD-C0254 | Pipe | 3/13/2017 |
| BD PIPING | BD-C0342 | Pipe | 3/10/2017 |
| BD PIPING | BD-C0343 | Pipe | 3/10/2017 |
| BD PIPING | BD-C0233 | Pipe | 3/9/2017 |
| BD PIPING | BD-C0255 | Pipe | 3/9/2017 |
| BD PIPING | BD-C0347 | Pipe | 3/9/2017 |
| BD PIPING | BD-C0348 | Pipe | 3/9/2017 |
| BD PIPING | BD-C0271 | Pipe | 3/8/2017 |
| BD PIPING | BD-C0273 | Pipe | 3/8/2017 |
| BD PIPING | BD-C0288 | Pipe | 3/8/2017 |
| BD PIPING | BD-C0290 | Pipe | 3/8/2017 |
| BD PIPING | BD-C0316 | Pipe | 3/8/2017 |
| BD PIPING | BD-C0349 | Pipe | 3/8/2017 |
| BD PIPING | BD-C0266 | Pipe | 3/7/2017 |
| BD PIPING | BD-C0268 | Pipe | 3/7/2017 |

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| BD PIPING | BD-C0277 | Pipe | 3/7/2017 |
| BD PIPING | BD-C0287 | Pipe | 3/7/2017 |
| BD PIPING | BD-C0272 | Pipe | 3/6/2017 |
| BD PIPING | BD-C0274 | Pipe | 3/6/2017 |
| BD PIPING | BD-C0301 | Pipe | 3/6/2017 |
| BD PIPING | BD-C0303 | Pipe | 3/6/2017 |
| BD PIPING | BD-C0306 | Pipe | 3/6/2017 |
| BD PIPING | BD-C0302 | Pipe | 3/3/2017 |
| BD PIPING | BD-C0304 | Pipe | 3/3/2017 |
| BD PIPING | BD-C0305 | Pipe | 3/3/2017 |
| BD PIPING | BD-C0344 | Pipe | 3/3/2017 |
| BD PIPING | BD-C0346 | Pipe | 3/3/2017 |
| BD PIPING | BD-C0153 | Pipe | 3/2/2017 |
| BD PIPING | BD-C0163 | Pipe | 3/2/2017 |
| BD PIPING | BD-C0183 | Pipe | 3/2/2017 |
| BD PIPING | BD-C0213 | Pipe | 3/2/2017 |
| BD PIPING | BD-C0300 | Pipe | 3/2/2017 |
| DIB | DIB-C0210A | Pipe | 3/2/2017 |
| BD PIPING | BD-C0094 | Pipe | 3/1/2017 |
| BD PIPING | BD-C0258 | Pipe | 3/1/2017 |
| BD PIPING | BD-C0382 | Pipe | 3/1/2017 |
| BD PIPING | BD-C0413 | Pipe | 3/1/2017 |
| METH | METH-C0009 | Pipe | 3/1/2017 |
| BD PIPING | BD-C0126 | Pipe | 2/28/2017 |
| BD PIPING | BD-C0144 | Pipe | 2/28/2017 |
| BD PIPING | BD-C0145 | Pipe | 2/28/2017 |
| BD PIPING | BD-C0256 | Pipe | 2/28/2017 |
| BD PIPING | BD-C0257 | Pipe | 2/28/2017 |
| BD PIPING | BD-C0320 | Pipe | 2/28/2017 |
| FRFRL | FRFRL-C0035 | Pipe | 2/28/2017 |
| RAFF PIPING | RAFF-C0047 | Pipe | 2/28/2017 |
| BD PIPING | BD-C0051 | Pipe | 2/27/2017 |
| BD PIPING | BD-C0091 | Pipe | 2/27/2017 |
| BD PIPING | BD-C0116 | Pipe | 2/27/2017 |
| BD PIPING | BD-C0117 | Pipe | 2/27/2017 |
| FRFRL | FRFRL-C0027 | Pipe | 2/27/2017 |
| FRFRL | FRFRL-C0091 | Pipe | 2/27/2017 |
| BD PIPING | BD-C0029 | Pipe | 2/24/2017 |
| BD PIPING | BD-C0124 | Pipe | 2/24/2017 |
| BD PIPING | BD-C0330 | Pipe | 2/24/2017 |

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| FRFRL | FRFRL-C0014 | Pipe | 2/24/2017 |
| SYSTEM#13 RED-GA | 02 | Pipe | 2/23/2017 |
| SYSTEM#28 NG | 16 | Pipe | 2/23/2017 |
| SYSTEM#28 NG | 18 | Pipe | 2/23/2017 |
| SYSTEM#28 NG | 21 | Pipe | 2/23/2017 |
| SYSTEM#28 NG | 22 | Pipe | 2/23/2017 |
| BD PIPING | BD-C0054 | Pipe | 2/23/2017 |
| BD PIPING | BD-C0055 | Pipe | 2/23/2017 |
| BD PIPING | BD-C0105 | Pipe | 2/23/2017 |
| BD PIPING | BD-C0046 | Pipe | 2/22/2017 |
| BD PIPING | BD-C0058 | Pipe | 2/22/2017 |
| BD PIPING | BD-C0311 | Pipe | 2/22/2017 |
| BD PIPING | BD-C0410 | Pipe | 2/22/2017 |
| BD PIPING | BD-C0059 | Pipe | 2/21/2017 |
| BD PIPING | BD-C0060 | Pipe | 2/21/2017 |
| BD PIPING | BD-C0113 | Pipe | 2/21/2017 |
| FRFRL | FRFRL-C0017 | Pipe | 2/21/2017 |
| METH | METH-C0002 | Pipe | 2/21/2017 |
| BD PIPING | BD-C0001 | Pipe | 2/20/2017 |
| BD PIPING | BD-C0009 | Pipe | 2/20/2017 |
| BD PIPING | BD-C0384 | Pipe | 2/20/2017 |
| BD PIPING | BD-C0401 | Pipe | 2/20/2017 |
| BD PIPING | BD-C0337A | Pipe | 2/17/2017 |
| BD PIPING | BD-C0356 | Pipe | 2/17/2017 |
| BD PIPING | BD-C0317 | Pipe | 2/16/2017 |
| BD PIPING | BD-C0321 | Pipe | 2/16/2017 |
| BD PIPING | BD-C0357 | Pipe | 2/16/2017 |
| FRFRL | FRFRL-C0011 | Pipe | 2/16/2017 |
| MTBE | MTBE-C0039 | Pipe | 2/16/2017 |
| MTBE | MTBE-C0043A | Pipe | 2/16/2017 |
| MTBE | MTBE-C0050 | Pipe | 2/16/2017 |
| MTBE | MTBE-C0052 | Pipe | 2/16/2017 |
| BD PIPING | BD-C0010 | Pipe | 2/15/2017 |
| BD PIPING | BD-C0310 | Pipe | 2/15/2017 |
| BD PIPING | BD-C0312 | Pipe | 2/15/2017 |
| BD PIPING | BD-C0339 | Pipe | 2/15/2017 |
| FRFRL | FRFRL-C0023 | Pipe | 2/15/2017 |
| MTBE | MTBE-C0043 | Pipe | 2/15/2017 |
| MTBE | MTBE-C0051 | Pipe | 2/15/2017 |
| BD PIPING | BD-C0019 | Pipe | 2/14/2017 |

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| BD PIPING | BD-C0132 | Pipe | 2/14/2017 |
| BD PIPING | BD-C0270 | Pipe | 2/14/2017 |
| BD PIPING | BD-C0275 | Pipe | 2/14/2017 |
| BD PIPING | BD-C0276 | Pipe | 2/14/2017 |
| BD PIPING | BD-C0002 | Pipe | 2/13/2017 |
| BD PIPING | BD-C0102 | Pipe | 2/13/2017 |
| BD PIPING | BD-C0103 | Pipe | 2/13/2017 |
| BD PIPING | BD-C0104 | Pipe | 2/13/2017 |
| BD PIPING | BD-C0351 | Pipe | 2/13/2017 |
| BD PIPING | BD-C0325 | Pipe | 2/10/2017 |
| BD PIPING | BD-C0045 | Pipe | 2/9/2017 |
| BD PIPING | BD-C0066 | Pipe | 2/9/2017 |
| BD PIPING | BD-C0083 | Pipe | 2/9/2017 |
| BD PIPING | BD-C0136 | Pipe | 2/9/2017 |
| BD PIPING | BD-C0324 | Pipe | 2/9/2017 |
| BD PIPING | BD-C0326 | Pipe | 2/9/2017 |
| BD PIPING | BD-C0340 | Pipe | 2/9/2017 |
| BD PIPING | BD-C0355 | Pipe | 2/9/2017 |
| BD PIPING | BD-C0021 | Pipe | 2/8/2017 |
| BD PIPING | BD-C0027 | Pipe | 2/8/2017 |
| BD PIPING | BD-C0033 | Pipe | 2/8/2017 |
| BD PIPING | BD-C0034 | Pipe | 2/8/2017 |
| BD PIPING | BD-C0137 | Pipe | 2/8/2017 |
| BD PIPING | BD-C0309 | Pipe | 2/8/2017 |
| BD PIPING | BD-C0353 | Pipe | 2/8/2017 |
| BD PIPING | BD-C0354 | Pipe | 2/8/2017 |
| BD PIPING | BD-C0039 | Pipe | 2/7/2017 |
| BD PIPING | BD-C0135 | Pipe | 2/7/2017 |
| BD PIPING | BD-C0307 | Pipe | 2/7/2017 |
| BD PIPING | BD-C0308 | Pipe | 2/7/2017 |
| BD PIPING | BD-C0327 | Pipe | 2/7/2017 |
| RAFF PIPING | RAFF-C0066 | Pipe | 2/7/2017 |
| RAFF PIPING | RAFF-C0069 | Pipe | 2/7/2017 |
| BD PIPING | BD-C0044 | Pipe | 2/6/2017 |
| BD PIPING | BD-C0133 | Pipe | 2/6/2017 |
| BD PIPING | BD-C0134 | Pipe | 2/6/2017 |
| BD PIPING | BD-C0285 | Pipe | 2/6/2017 |
| BD PIPING | BD-C0292 | Pipe | 2/6/2017 |
| RAFF PIPING | RAFF-C0055 | Pipe | 2/6/2017 |
| RAFF PIPING | RAFF-C0071 | Pipe | 2/6/2017 |

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|-----------------|-------------|------|-----------|
| BD PIPING | BD-C0023 | Pipe | 2/3/2017 |
| MTBE | MTBE-C0047 | Pipe | 2/3/2017 |
| SYSTEM#1 HCFEED | 03 | Pipe | 2/2/2017 |
| BD PIPING | BD-C0030 | Pipe | 2/2/2017 |
| BD PIPING | BD-C0031 | Pipe | 2/2/2017 |
| BD PIPING | BD-C0040 | Pipe | 2/2/2017 |
| BD PIPING | BD-C0061 | Pipe | 2/2/2017 |
| BD PIPING | BD-C0299 | Pipe | 2/2/2017 |
| RAFF PIPING | RAFF-C0007 | Pipe | 2/2/2017 |
| RAFF PIPING | RAFF-C0017 | Pipe | 2/2/2017 |
| RAFF PIPING | RAFF-C0025B | Pipe | 2/2/2017 |
| SYSTEM#28 NG | 15 | Pipe | 2/1/2017 |
| BD PIPING | BD-C0049 | Pipe | 2/1/2017 |
| BD PIPING | BD-C0249 | Pipe | 2/1/2017 |
| BD PIPING | BD-C0298 | Pipe | 2/1/2017 |
| BD PIPING | BD-C0392 | Pipe | 2/1/2017 |
| BD PIPING | BD-C0048 | Pipe | 1/31/2017 |
| BD PIPING | BD-C0064 | Pipe | 1/31/2017 |
| FLR | FLR-C08900 | Pipe | 1/31/2017 |
| FRFRL | FRFRL-C0002 | Pipe | 1/31/2017 |
| FRFRL | FRFRL-C0015 | Pipe | 1/31/2017 |
| RAFF PIPING | RAFF-C0009 | Pipe | 1/31/2017 |
| BD PIPING | BD-C0143 | Pipe | 1/30/2017 |
| BD PIPING | BD-C0245 | Pipe | 1/30/2017 |
| BD PIPING | BD-C0246 | Pipe | 1/30/2017 |
| BD PIPING | BD-C0338 | Pipe | 1/30/2017 |
| FRFRL | FRFRL-C0028 | Pipe | 1/30/2017 |
| RAFF PIPING | RAFF-C0075 | Pipe | 1/30/2017 |
| BD PIPING | BD-C0359 | Pipe | 1/27/2017 |
| SYSTEM#15 STPR | 07 | Pipe | 1/26/2017 |
| BD PIPING | BD-C0004 | Pipe | 1/26/2017 |
| BD PIPING | BD-C0036 | Pipe | 1/26/2017 |
| BD PIPING | BD-C0079 | Pipe | 1/26/2017 |
| BD PIPING | BD-C0119 | Pipe | 1/26/2017 |
| RAFF PIPING | RAFF-C0072 | Pipe | 1/26/2017 |
| RAFF PIPING | RAFF-C0076 | Pipe | 1/26/2017 |
| BD PIPING | BD-C0385 | Pipe | 1/25/2017 |
| FLR | FLR-C0890P | Pipe | 1/25/2017 |
| BD PIPING | BD-C0125 | Pipe | 1/24/2017 |
| BD PIPING | BD-C0128 | Pipe | 1/24/2017 |

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| FLR | FLR-C0890M | Pipe | 1/24/2017 |
| RAFF PIPING | RAFF-C0053 | Pipe | 1/23/2017 |
| RAFF PIPING | RAFF-C0057 | Pipe | 1/19/2017 |
| RAFF PIPING | RAFF-C0058 | Pipe | 1/19/2017 |
| BD PIPING | BD-C0396 | Pipe | 1/18/2017 |
| BD PIPING | BD-C0397 | Pipe | 1/18/2017 |
| FLR | FLR-C0890C | Pipe | 1/18/2017 |
| BD PIPING | BD-C0038 | Pipe | 1/17/2017 |
| BD PIPING | BD-C0074 | Pipe | 1/17/2017 |
| BD PIPING | BD-C0080 | Pipe | 1/17/2017 |
| BD PIPING | BD-C0333 | Pipe | 1/17/2017 |
| BD PIPING | BD-C0334 | Pipe | 1/17/2017 |
| BD PIPING | BD-C0394 | Pipe | 1/17/2017 |
| FRFRL | FRFRL-C0010 | Pipe | 1/17/2017 |
| RAFF PIPING | RAFF-C0036 | Pipe | 1/17/2017 |
| RAFF PIPING | RAFF-C0045 | Pipe | 1/17/2017 |
| BD PIPING | BD-C0088 | Pipe | 1/16/2017 |
| BD PIPING | BD-C0089 | Pipe | 1/16/2017 |
| BD PIPING | BD-C0090 | Pipe | 1/16/2017 |
| BD PIPING | BD-C0129 | Pipe | 1/16/2017 |
| BD PIPING | BD-C0205 | Pipe | 1/16/2017 |
| BD PIPING | BD-C0331 | Pipe | 1/16/2017 |
| BD PIPING | BD-C0335 | Pipe | 1/16/2017 |
| METH | METH-C0001 | Pipe | 1/16/2017 |
| RAFF PIPING | RAFF-C0012 | Pipe | 1/16/2017 |
| RAFF PIPING | RAFF-C0061 | Pipe | 1/16/2017 |
| BD PIPING | BD-C0101 | Pipe | 1/14/2017 |
| BD PIPING | BD-C0398 | Pipe | 1/13/2017 |
| BD PIPING | BD-C0400 | Pipe | 1/13/2017 |
| MTBE | MTBE-C0036 | Pipe | 1/13/2017 |
| BD PIPING | BD-C0092 | Pipe | 1/12/2017 |
| BD PIPING | BD-C0096 | Pipe | 1/12/2017 |
| BD PIPING | BD-C0151 | Pipe | 1/12/2017 |
| BD PIPING | BD-C0323 | Pipe | 1/12/2017 |
| BD PIPING | BD-C0332 | Pipe | 1/12/2017 |
| BD PIPING | BD-C0390 | Pipe | 1/12/2017 |
| BD PIPING | BD-C0391 | Pipe | 1/12/2017 |
| BD PIPING | BD-C0026 | Pipe | 1/11/2017 |
| BD PIPING | BD-C0084 | Pipe | 1/11/2017 |
| BD PIPING | BD-C0085 | Pipe | 1/11/2017 |

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|-----------------|---------------|------|-----------|
| BD PIPING | BD-C0086 | Pipe | 1/11/2017 |
| BD PIPING | BD-C0093 | Pipe | 1/11/2017 |
| BD PIPING | BD-C0100 | Pipe | 1/11/2017 |
| BD PIPING | BD-C0386 | Pipe | 1/11/2017 |
| BD PIPING | BD-C0387 | Pipe | 1/11/2017 |
| BD PIPING | BD-C0011 | Pipe | 1/10/2017 |
| BD PIPING | BD-C0041 | Pipe | 1/10/2017 |
| BD PIPING | BD-C0043 | Pipe | 1/10/2017 |
| BD PIPING | BD-C0073 | Pipe | 1/10/2017 |
| BD PIPING | BD-C0075 | Pipe | 1/10/2017 |
| BD PIPING | BD-C0082 | Pipe | 1/10/2017 |
| FRFRL | FRFRL-C0016 | Pipe | 1/9/2017 |
| FRFRL | FRFRL-C0020 | Pipe | 1/9/2017 |
| METH | METH-C0007 | Pipe | 1/9/2017 |
| RAFF PIPING | RAFF-C0051 | Pipe | 1/9/2017 |
| BD PIPING | BD-C0062 | Pipe | 1/5/2017 |
| BD PIPING | BD-C0409 | Pipe | 1/5/2017 |
| FRFRL | FRFRL-C0112 | Pipe | 1/5/2017 |
| FRFRL | FRFRL-C0126 | Pipe | 1/5/2017 |
| IBTYLN | IBTYLN-C0091B | Pipe | 1/5/2017 |
| MTBE | MTBE-C0019 | Pipe | 1/5/2017 |
| RAFF PIPING | RAFF-C0060 | Pipe | 1/5/2017 |
| BD PIPING | BD-C0314 | Pipe | 1/4/2017 |
| BD PIPING | BD-C0328 | Pipe | 1/4/2017 |
| BD PIPING | BD-C0393 | Pipe | 1/4/2017 |
| FRFRL | FRFRL-C0107 | Pipe | 1/4/2017 |
| FRFRL | FRFRL-C0121 | Pipe | 1/4/2017 |
| FRFRL | FRFRL-C0123 | Pipe | 1/4/2017 |
| H2O-FRFRL | H2OF-C0180A | Pipe | 1/4/2017 |
| H2O-FRFRL | H2OF-C0180B | Pipe | 1/4/2017 |
| SYSTEM#23 STEAM | 02 | Pipe | 1/3/2017 |
| SYSTEM#23 STEAM | 06 | Pipe | 1/3/2017 |
| SYSTEM#23 STEAM | 17 | Pipe | 1/3/2017 |
| BD PIPING | BD-C0313 | Pipe | 1/3/2017 |
| BD PIPING | BD-C0318 | Pipe | 1/3/2017 |
| FRFRL | FRFRL-C0007 | Pipe | 1/3/2017 |
| FRFRL | FRFRL-C0008 | Pipe | 1/3/2017 |
| FRFRL | FRFRL-C0009 | Pipe | 1/3/2017 |
| FRFRL | FRFRL-C0030 | Pipe | 1/3/2017 |
| FRFRL | FRFRL-C0101 | Pipe | 1/3/2017 |

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| FRFRL | FRFRL-C0106 | Pipe | 1/3/2017 |
| PPWW | PIB-C0010C | Pipe | 1/3/2017 |
| SYSTEM#23 STEAM | 05 | Pipe | 12/30/2016 |
| SYSTEM#23 STEAM | 04 | Pipe | 12/28/2016 |
| FRFRL | FRFRL-C0022 | Pipe | 12/28/2016 |
| FRFRL | FRFRL-C0109 | Pipe | 12/28/2016 |
| RAFF PIPING | RAFF-C0070 | Pipe | 12/28/2016 |
| SYSTEM#13 RED-GA | 01 | Pipe | 12/27/2016 |
| SYSTEM#24 STEAM | 01 | Pipe | 12/27/2016 |
| BD PIPING | BD-C0095 | Pipe | 12/27/2016 |
| BD PIPING | BD-C0099 | Pipe | 12/27/2016 |
| FRFRL | FRFRL-C0029 | Pipe | 12/27/2016 |
| SYSTEM#23 STEAM | 01 | Pipe | 12/21/2016 |
| SYSTEM#17 5040VH | 05 | Pipe | 12/21/2016 |
| SYSTEM#22 CWR | 11 | Pipe | 12/21/2016 |
| SYSTEM#21 CWS | 12 | Pipe | 12/21/2016 |
| SYSTEM#28 NG | 12 | Pipe | 12/21/2016 |
| SYSTEM#28 NG | 13 | Pipe | 12/21/2016 |
| SYSTEM#28 NG | 14 | Pipe | 12/21/2016 |
| SYSTEM#28 NG | 08 | Pipe | 12/20/2016 |
| SYSTEM#28 NG | 09 | Pipe | 12/20/2016 |
| SYSTEM#28 NG | 10 | Pipe | 12/20/2016 |
| SYSTEM#25 STEAM | 11 | Pipe | 12/20/2016 |
| SYSTEM#28 NG | 11 | Pipe | 12/20/2016 |
| SYSTEM#5 COMP | 23 | Pipe | 12/20/2016 |
| SYSTEM#24 STEAM | 02 | Pipe | 12/19/2016 |
| SYSTEM#24 STEAM | 03 | Pipe | 12/15/2016 |
| SYSTEM#1 HCFEED | 04 | Pipe | 12/15/2016 |
| SYSTEM#24 STEAM | 04 | Pipe | 12/15/2016 |
| SYSTEM#2 REO | 01 | Pipe | 12/14/2016 |
| SYSTEM#20 MISC | 02 | Pipe | 12/14/2016 |
| SYSTEM#1 HCFEED | 05 | Pipe | 12/14/2016 |
| SYSTEM#9 QUENCH | 05 | Pipe | 12/14/2016 |
| SYSTEM#20 MISC | 01 | Pipe | 12/13/2016 |
| SYSTEM#3 AIRFEED | 01 | Pipe | 12/13/2016 |
| SYSTEM#17 5040VH | 04 | Pipe | 12/13/2016 |
| SYSTEM#17 5040VH | 06 | Pipe | 12/13/2016 |
| SYSTEM#22 CWR | 06 | Pipe | 12/13/2016 |
| SYSTEM#17 5040VH | 07 | Pipe | 12/13/2016 |
| SYSTEM#22 CWR | 07 | Pipe | 12/13/2016 |

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| SYSTEM#9 QUENCH | 11 | Pipe | 12/13/2016 |
| SYSTEM#9 QUENCH | 13 | Pipe | 12/13/2016 |
| SYSTEM#4 RAE | 01 | Pipe | 12/12/2016 |
| SYSTEM#3 AIRFEED | 02 | Pipe | 12/12/2016 |
| SYSTEM#17 5040VH | 03 | Pipe | 12/12/2016 |
| SYSTEM#17 5040VH | 08 | Pipe | 12/12/2016 |
| SYSTEM#17 5040VH | 09 | Pipe | 12/12/2016 |
| SYSTEM#17 5040VH | 10 | Pipe | 12/12/2016 |
| BD PIPING | BD-C0127 | Pipe | 12/12/2016 |
| SYSTEM#26 STEAM- | 05 | Pipe | 12/8/2016 |
| SYSTEM#26 STEAM- | 06 | Pipe | 12/8/2016 |
| SYSTEM#26 STEAM- | 07 | Pipe | 12/8/2016 |
| SYSTEM#26 STEAM- | 08 | Pipe | 12/8/2016 |
| SYSTEM#23 STEAM | 08 | Pipe | 12/1/2016 |
| SYSTEM#18 505DPS | 17 | Pipe | 12/1/2016 |
| SYSTEM#14 RO | 03 | Pipe | 11/28/2016 |
| SYSTEM#5 COMP | 19 | Pipe | 11/28/2016 |
| H2O-FRFR | H2OF-C0280A | Pipe | 11/28/2016 |
| SYSTEM#14 RO | 02 | Pipe | 11/22/2016 |
| SYSTEM#14 RO | 04 | Pipe | 11/21/2016 |
| SYSTEM#9 QUENCH | 04 | Pipe | 11/21/2016 |
| SYSTEM#19 REVH | 01 | Pipe | 11/17/2016 |
| SYSTEM#15 STPR | 12 | Pipe | 11/17/2016 |
| SYSTEM#14 RO | 08 | Pipe | 11/15/2016 |
| SYSTEM#22 CWR | 08 | Pipe | 11/14/2016 |
| SYSTEM#16 LN | 09 | Pipe | 11/14/2016 |
| SYSTEM#12 QOR | 04 | Pipe | 11/8/2016 |
| SYSTEM#12 QOR | 01 | Pipe | 11/3/2016 |
| SYSTEM#18 505DPS | 13 | Pipe | 11/3/2016 |
| SYSTEM#28 NG | 01 | Pipe | 11/2/2016 |
| SYSTEM#21 CWS | 05 | Pipe | 11/2/2016 |
| SYSTEM#14 RO | 06 | Pipe | 11/2/2016 |
| SYSTEM#28 NG | 06 | Pipe | 11/2/2016 |
| SYSTEM#14 RO | 07 | Pipe | 11/2/2016 |
| SYSTEM#7 ABS-INT | 08 | Pipe | 11/2/2016 |
| SYSTEM#18 505DPS | 09 | Pipe | 11/2/2016 |
| SYSTEM#18 505DPS | 10 | Pipe | 11/2/2016 |
| SYSTEM#18 505DPS | 11 | Pipe | 11/2/2016 |
| SYSTEM#18 505DPS | 12 | Pipe | 11/2/2016 |
| SYSTEM#18 505DPS | 14 | Pipe | 11/2/2016 |

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| SYSTEM#21 CWS | 07 | Pipe | 11/1/2016 |
| SYSTEM#18 505DPS | 08 | Pipe | 11/1/2016 |
| SYSTEM#21 CWS | 13 | Pipe | 11/1/2016 |
| PIB | PIB-C0005 | Pipe | 11/1/2016 |
| SYSTEM#14 RO | 01 | Pipe | 10/31/2016 |
| SYSTEM#18 505DPS | 03 | Pipe | 10/31/2016 |
| SYSTEM#28 NG | 04 | Pipe | 10/31/2016 |
| SYSTEM#18 505DPS | 05 | Pipe | 10/31/2016 |
| SYSTEM#18 505DPS | 06 | Pipe | 10/31/2016 |
| SYSTEM#21 CWS | 09 | Pipe | 10/31/2016 |
| SYSTEM#22 CWR | 12 | Pipe | 10/28/2016 |
| SYSTEM#22 CWR | 03 | Pipe | 10/27/2016 |
| SYSTEM#21 CWS | 06 | Pipe | 10/27/2016 |
| SYSTEM#18 505DPS | 07 | Pipe | 10/27/2016 |
| SYSTEM#15 STPR | 09 | Pipe | 10/27/2016 |
| SYSTEM#5 COMP | 01 | Pipe | 10/26/2016 |
| SYSTEM#12 QOR | 03 | Pipe | 10/26/2016 |
| SYSTEM#9 QUENCH | 03 | Pipe | 10/26/2016 |
| SYSTEM#18 505DPS | 01 | Pipe | 10/25/2016 |
| SYSTEM#22 CWR | 02 | Pipe | 10/25/2016 |
| SYSTEM#9 QUENCH | 02 | Pipe | 10/25/2016 |
| SYSTEM#6 H2O | 06 | Pipe | 10/25/2016 |
| SYSTEM#18 505DPS | 15 | Pipe | 10/25/2016 |
| SYSTEM#18 505DPS | 16 | Pipe | 10/25/2016 |
| SYSTEM#21 CWS | 01 | Pipe | 10/24/2016 |
| SYSTEM#18 505DPS | 02 | Pipe | 10/24/2016 |
| SYSTEM#21 CWS | 02 | Pipe | 10/24/2016 |
| SYSTEM#21 CWS | 03 | Pipe | 10/24/2016 |
| SYSTEM#5 COMP | 15 | Pipe | 10/24/2016 |
| SYSTEM#5 COMP | 16 | Pipe | 10/24/2016 |
| SYSTEM#5 COMP | 13 | Pipe | 10/20/2016 |
| SYSTEM#5 COMP | 14 | Pipe | 10/20/2016 |
| SYSTEM#5 COMP | 17 | Pipe | 10/20/2016 |
| SYSTEM#15 STPR | 03 | Pipe | 10/19/2016 |
| SYSTEM#8 OFF-GAS | 03 | Pipe | 10/19/2016 |
| SYSTEM#15 STPR | 04 | Pipe | 10/19/2016 |
| SYSTEM#15 STPR | 05 | Pipe | 10/19/2016 |
| SYSTEM#9 QUENCH | 06 | Pipe | 10/19/2016 |
| SYSTEM#5 COMP | 18 | Pipe | 10/19/2016 |
| SYSTEM#5 COMP | 20 | Pipe | 10/19/2016 |

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| SYSTEM#5 COMP | 21 | Pipe | 10/19/2016 |
| SYSTEM#8 OFF-GAS | 01 | Pipe | 10/18/2016 |
| SYSTEM#8 OFF-GAS | 02 | Pipe | 10/18/2016 |
| SYSTEM#5 COMP | 12 | Pipe | 10/18/2016 |
| SYSTEM#12 QOR | 02 | Pipe | 10/17/2016 |
| SYSTEM#7 ABS-INT | 13 | Pipe | 10/17/2016 |
| SYSTEM#7 ABS-INT | 14 | Pipe | 10/17/2016 |
| SYSTEM#5 COMP | 08 | Pipe | 10/14/2016 |
| SYSTEM#5 COMP | 09 | Pipe | 10/14/2016 |
| SYSTEM#7 ABS-INT | 10 | Pipe | 10/14/2016 |
| SYSTEM#7 ABS-INT | 11 | Pipe | 10/14/2016 |
| SYSTEM#5 COMP | 05 | Pipe | 10/13/2016 |
| SYSTEM#5 COMP | 07 | Pipe | 10/13/2016 |
| SYSTEM#7 ABS-INT | 09 | Pipe | 10/13/2016 |
| SYSTEM#5 COMP | 03 | Pipe | 10/12/2016 |
| SYSTEM#5 COMP | 04 | Pipe | 10/12/2016 |
| SYSTEM#5 COMP | 06 | Pipe | 10/12/2016 |
| SYSTEM#7 ABS-INT | 06 | Pipe | 10/12/2016 |
| RAFF PIPING | RAFF-C0011 | Pipe | 10/12/2016 |
| SYSTEM#7 ABS-INT | 03 | Pipe | 10/11/2016 |
| SYSTEM#7 ABS-INT | 05 | Pipe | 10/11/2016 |
| SYSTEM#7 ABS-INT | 01 | Pipe | 10/10/2016 |
| SYSTEM#7 ABS-INT | 02 | Pipe | 10/10/2016 |
| SYSTEM#7 ABS-INT | 04 | Pipe | 10/10/2016 |
| SYSTEM#5 COMP | 10 | Pipe | 10/10/2016 |
| SYSTEM#5 COMP | 11 | Pipe | 10/10/2016 |
| RAFF PIPING | RAFF-C0035 | Pipe | 10/10/2016 |
| SYSTEM#6 H2O | 04 | Pipe | 10/6/2016 |
| SYSTEM#6 H2O | 05 | Pipe | 10/6/2016 |
| SYSTEM#5 COMP | 02 | Pipe | 10/5/2016 |
| SYSTEM#6 H2O | 02 | Pipe | 10/5/2016 |
| SYSTEM#1 HCFEED | 02 | Pipe | 10/4/2016 |
| PIB | PIB-C0009 | Pipe | 9/30/2016 |
| BD PIPING | BD-C0024 | Pipe | 9/29/2016 |
| PIB | PIB-C0022 | Pipe | 9/29/2016 |
| SYSTEM#1 HCFEED | 01 | Pipe | 9/28/2016 |
| BD PIPING | BD-C0022 | Pipe | 9/28/2016 |
| PIB | PIB-C0006 | Pipe | 9/27/2016 |
| PIB | PIB-C0014 | Pipe | 9/27/2016 |
| METH | METH-C0010 | Pipe | 9/26/2016 |

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| METH | METH-C0011 | Pipe | 9/26/2016 |
| PIB | PIB-C0015 | Pipe | 9/26/2016 |
| FRFRL | FRFRL-C0120 | Pipe | 9/23/2016 |
| PIB | PIB-C0002 | Pipe | 9/22/2016 |
| PIB | PIB-C0003 | Pipe | 9/21/2016 |
| PIB | PIB-C0004 | Pipe | 9/20/2016 |
| PIB | PIB-C0024 | Pipe | 9/20/2016 |
| METH | METH-C0008 | Pipe | 9/19/2016 |
| FRFRL | FRFRL-C0088 | Pipe | 9/14/2016 |
| MTBE | MTBE-C0011 | Pipe | 9/14/2016 |
| RAFF PIPING | RAFF-C0032 | Pipe | 9/14/2016 |
| FRFRL | FRFRL-C0019 | Pipe | 9/13/2016 |
| FRFRL | FRFRL-C0033 | Pipe | 9/13/2016 |
| FRFRL | FRFRL-C0125 | Pipe | 9/12/2016 |
| MTBE | MTBE-C0010 | Pipe | 9/12/2016 |
| RAFF PIPING | RAFF-C0063 | Pipe | 9/12/2016 |
| RAFF PIPING | RAFF-C0065 | Pipe | 9/12/2016 |
| RAFF PIPING | RAFF-C0073 | Pipe | 9/12/2016 |
| RAFF PIPING | RAFF-C0067 | Pipe | 9/8/2016 |
| RAFF PIPING | RAFF-C0068 | Pipe | 9/8/2016 |
| BD PIPING | BD-C0077 | Pipe | 9/6/2016 |
| MTBE | MTBE-C0018 | Pipe | 9/6/2016 |
| RAFF PIPING | RAFF-C0028 | Pipe | 8/31/2016 |
| FRFRL | FRFRL-C0026 | Pipe | 8/29/2016 |
| MTBE | MTBE-C0056 | Pipe | 8/29/2016 |
| RAFF PIPING | RAFF-C0034 | Pipe | 8/29/2016 |
| METH | METH-C0018A | Pipe | 8/25/2016 |
| RAFF PIPING | RAFF-C0054 | Pipe | 8/22/2016 |
| RAFF PIPING | RAFF-C0030B | Pipe | 8/17/2016 |
| RAFF PIPING | RAFF-C0004 | Pipe | 8/16/2016 |
| RAFF PIPING | RAFF-C0019 | Pipe | 8/1/2016 |
| PPWW | PIB-C0010J | Pipe | 7/21/2016 |
| MTBE | MTBE-C0035 | Pipe | 7/19/2016 |
| MTBE | MTBE-C0012 | Pipe | 7/12/2016 |
| FRFRL | FRFRL-C0036 | Pipe | 7/11/2016 |
| HCSLOP | HCSLOP-C0160B | Pipe | 7/7/2016 |
| RAFF PIPING | RAFF-C0002 | Pipe | 7/5/2016 |
| BD PIPING | BD-C0389 | Pipe | 6/15/2016 |
| HCSLOP | HCSLOP-C0040E | Pipe | 6/15/2016 |
| B1 | B1-C0200Q | Pipe | 6/14/2016 |

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|-------------|----------------|------|-----------|
| BD PIPING | BD-C0078 | Pipe | 6/14/2016 |
| HCSLOP | HCSLOP-C0040A | Pipe | 6/14/2016 |
| IBTYLN | IBTYLN-C0540F | Pipe | 6/14/2016 |
| MTBE | MTBE-C0027 | Pipe | 6/14/2016 |
| RAF-MTBE | RAF-MTBE-C0003 | Pipe | 5/11/2016 |
| MTBE | MTBE-C0032 | Pipe | 5/6/2016 |
| RAFF PIPING | RAFF-C0025A | Pipe | 5/6/2016 |
| RAFF PIPING | RAFF-C0025C | Pipe | 5/6/2016 |
| RAFF PIPING | RAFF-C0027 | Pipe | 5/6/2016 |
| RAFF PIPING | RAFF-C0062 | Pipe | 5/6/2016 |
| BD PIPING | BD-C0057 | Pipe | 5/5/2016 |
| HCVENT | HCVENT-C0001 | Pipe | 5/5/2016 |
| HCSLOP | HCSLOP-C0030B | Pipe | 4/25/2016 |
| MTBE | MTBE-C0043B | Pipe | 4/21/2016 |
| PPWW | PIB-C0010E | Pipe | 4/21/2016 |
| PPWW | PIB-C0010D | Pipe | 4/19/2016 |
| RAF-MTBE | RAF-MTBE-C0001 | Pipe | 4/19/2016 |
| IBTYLN | IBTYLN-C0710C | Pipe | 4/14/2016 |
| PPWW | PIB-C0010F | Pipe | 4/14/2016 |
| BD PIPING | BD-C0007 | Pipe | 4/6/2016 |
| BD PIPING | BD-C0028 | Pipe | 4/6/2016 |
| BD PIPING | BD-C0076 | Pipe | 4/6/2016 |
| BD PIPING | BD-C0362 | Pipe | 4/6/2016 |
| BD PIPING | BD-C0365 | Pipe | 4/6/2016 |
| IBTYLN | IBTYLN-C0690A | Pipe | 4/6/2016 |
| IBTYLN | IBTYLN-C0690C | Pipe | 4/6/2016 |
| B2 | B2-C0100B | Pipe | 4/5/2016 |
| BD PIPING | BD-C0337E | Pipe | 4/5/2016 |
| CBD | CBD-C0220A | Pipe | 4/5/2016 |
| H2 | H2-C0010B | Pipe | 4/5/2016 |
| IBTYLN | IBTYLN-C0360C | Pipe | 4/5/2016 |
| MTBE | MTBE-C0021 | Pipe | 4/5/2016 |
| NG | NG-C0040A | Pipe | 3/31/2016 |
| DIB | DIB-C0240A | Pipe | 3/30/2016 |
| METH | METH-C0003B | Pipe | 3/7/2016 |
| PIB | PIB-C0031A | Pipe | 3/4/2016 |
| BD PIPING | BD-C0337B | Pipe | 2/4/2016 |
| FLR | FLR-C0890J | Pipe | 2/1/2016 |
| MTBE | MTBE-C0061 | Pipe | 2/1/2016 |
| FLR | FLR-C0890H | Pipe | 1/28/2016 |

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|-------------|---------------|------|------------|
| RAFF PIPING | RAFF-C0037E | Pipe | 8/21/2015 |
| RAFF PIPING | RAFF-C0037G | Pipe | 8/21/2015 |
| RAFF PIPING | RAFF-C0037R | Pipe | 8/20/2015 |
| CBD | CBD-C0330H | Pipe | 6/2/2015 |
| CBD | CBD-C0330I | Pipe | 6/2/2015 |
| CBD | CBD-C0330J | Pipe | 6/2/2015 |
| CBD | CBD-C0330K | Pipe | 6/2/2015 |
| CBD | CBD-C0330L | Pipe | 6/2/2015 |
| OLIG | OLIG-C0020A | Pipe | 10/7/2014 |
| OLIG | OLIG-C0030A | Pipe | 10/7/2014 |
| NG | NG-C0150A | Pipe | 8/8/2014 |
| PIB | PIB-C0029E | Pipe | 2/11/2014 |
| NG | NG-C0030D | Pipe | 12/4/2013 |
| NG | NG-C0130A | Pipe | 11/19/2013 |
| DIB | DIB-C0130A | Pipe | 11/12/2013 |
| DIB | DIB-C0150A | Pipe | 11/12/2013 |
| DIB | DIB-C0150B | Pipe | 11/12/2013 |
| NG | NG-C0060A | Pipe | 11/5/2013 |
| DMF | DMF-C0010A | Pipe | 10/2/2013 |
| DMF | DMF-C0020A | Pipe | 10/2/2013 |
| BD PIPING | BD-C0199 | Pipe | 9/11/2013 |
| B2 | B2-C0140B | Pipe | 8/21/2013 |
| C5 | C5-C0070D | Pipe | 8/16/2013 |
| IBTYLN | IBTYLN-C0220B | Pipe | 8/14/2013 |
| IBTYLN | IBTYLN-C0010C | Pipe | 8/2/2013 |
| FLR | 08800 | Pipe | 7/17/2013 |
| METH | METH-C0015B | Pipe | 7/17/2013 |
| METH | METH-C0015C | Pipe | 7/16/2013 |
| DIMER | DIMER-C0040C | Pipe | 5/22/2013 |
| DIMER | DIMER-C0040A | Pipe | 5/21/2013 |
| DIMER | DIMER-C0040B | Pipe | 5/21/2013 |
| DIMER | DIMER-C0040D | Pipe | 5/21/2013 |
| PIB | PIB-C0029A | Pipe | 5/21/2013 |
| PIB | PIB-C0038K | Pipe | 5/15/2013 |
| PIB | PIB-C0035A | Pipe | 5/9/2013 |
| PIB | PIB-C0035D | Pipe | 5/8/2013 |
| PIB | PIB-C0035E | Pipe | 5/6/2013 |
| B1 | B1-C0220B | Pipe | 4/18/2013 |
| B1 | B1-C0290D | Pipe | 4/4/2013 |
| LN | LN-C0250G | Pipe | 2/27/2013 |

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| B1 | B1-C0070E | Pipe | 2/22/2013 |
| B1 | B1-C0171A | Pipe | 2/22/2013 |
| LN | LN-C0250D | Pipe | 2/21/2013 |
| B1 | B1-C0270A | Pipe | 2/11/2013 |
| C5 | C5-C0200A | Pipe | 12/17/2012 |
| HONWTR | HONWTR-C0170A | Pipe | 12/17/2012 |
| HONWTR | HONWTR-C0170E | Pipe | 12/17/2012 |
| HONWTR | HONWTR-C0170F | Pipe | 12/17/2012 |
| LN | LN-C0180D | Pipe | 12/14/2012 |
| LN | LN-C0250A | Pipe | 12/14/2012 |
| LN | LN-C0250B | Pipe | 12/14/2012 |
| LN | LN-C0250J | Pipe | 12/14/2012 |
| LN | LN-C0300A | Pipe | 12/14/2012 |
| H2O-FRFR | H2OF-C0160B | Pipe | 12/12/2012 |
| H2O-FRFR | H2OF-C0290A | Pipe | 12/12/2012 |
| LN | LN-C0200A | Pipe | 12/12/2012 |
| LN | LN-C0250L | Pipe | 12/12/2012 |
| LN | LN-C0300B | Pipe | 12/12/2012 |
| H2O-FRFR | H2OF-C0290E | Pipe | 12/11/2012 |
| H2O-FRFR | H2OF-C0300B | Pipe | 12/11/2012 |
| HONWTR | HONWTR-C0170B | Pipe | 12/11/2012 |
| LN | LN-C0260B | Pipe | 12/11/2012 |
| LN | LN-C0270A | Pipe | 12/11/2012 |
| LN | LN-C0020A | Pipe | 12/10/2012 |
| LN | LN-C0250F | Pipe | 12/10/2012 |
| LN | LN-C0250C | Pipe | 12/8/2012 |
| H2O-FRFR | H2OF-C0130A | Pipe | 12/7/2012 |
| H2O-FRFR | H2OF-C0160A | Pipe | 12/7/2012 |
| H2O-FRFR | H2OF-C0210A | Pipe | 12/7/2012 |
| H2O-FRFR | H2OF-C0220A | Pipe | 12/6/2012 |
| LN | LN-C0240A | Pipe | 12/6/2012 |
| LN | LN-C0250H | Pipe | 12/6/2012 |
| LN | LN-C0230D | Pipe | 12/5/2012 |
| LN | LN-C0230F | Pipe | 12/5/2012 |
| LN | LN-C0250K | Pipe | 12/5/2012 |
| LN | LN-C0210E | Pipe | 12/4/2012 |
| H2O-FRFR | H2OF-C0070A | Pipe | 11/30/2012 |
| H2O-FRFR | H2OF-C0140B | Pipe | 11/30/2012 |
| H2O-FRFR | H2OF-C0250A | Pipe | 11/30/2012 |
| H2O-FRFR | H2OF-C0260A | Pipe | 11/30/2012 |

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| H20-FRFRL | H2OF-C0370A | Pipe | 11/30/2012 |
| LN | LN-C0090B | Pipe | 11/30/2012 |
| H20-FRFRL | H2OF-C0270A | Pipe | 11/29/2012 |
| H20-FRFRL | H2OF-C0140F | Pipe | 11/28/2012 |
| H20-FRFRL | H2OF-C0310A | Pipe | 11/28/2012 |
| H20-FRFRL | H2OF-C0310C | Pipe | 11/28/2012 |
| H20-FRFRL | H2OF-C0110D | Pipe | 11/27/2012 |
| H20-FRFRL | H2OF-C0120A | Pipe | 11/27/2012 |
| H20-FRFRL | H2OF-C0240A | Pipe | 11/27/2012 |
| H20-FRFRL | H2OF-C0080B | Pipe | 11/26/2012 |
| H20-FRFRL | H2OF-C0120B | Pipe | 11/26/2012 |
| H20-FRFRL | H2OF-C0140E | Pipe | 11/26/2012 |
| H20-FRFRL | 0080A XTML | Pipe | 11/20/2012 |
| H20-FRFRL | H2OF-C0080C | Pipe | 11/20/2012 |
| H20-FRFRL | H2OF-C0090B | Pipe | 11/20/2012 |
| H20-FRFRL | H2OF-C0110F | Pipe | 11/20/2012 |
| H20-FRFRL | H2OF-C0340B | Pipe | 11/20/2012 |
| H20-FRFRL | H2OF-C0340C | Pipe | 11/20/2012 |
| H20-FRFRL | H2OF-C0370D | Pipe | 11/20/2012 |
| H20-FRFRL | H2OF-C0380A | Pipe | 11/20/2012 |
| H20-FRFRL | H2OF-C0090A | Pipe | 11/19/2012 |
| H20-FRFRL | H2OF-C0140C | Pipe | 11/19/2012 |
| H20-FRFRL | H2OF-C0350A | Pipe | 11/19/2012 |
| H20-FRFRL | H2OF-C0370B | Pipe | 11/19/2012 |
| H20-FRFRL | H2OF-C0370C | Pipe | 11/19/2012 |
| C5 | C5-C0060B | Pipe | 11/16/2012 |
| H20-FRFRL | H2OF-C0280C | Pipe | 11/16/2012 |
| H20-FRFRL | H2OF-C0230A | Pipe | 11/15/2012 |
| H20-FRFRL | H2OF-C0320B | Pipe | 11/15/2012 |
| C5 | C5-C0130A | Pipe | 11/13/2012 |
| H20-FRFRL | H2OF-C0100F | Pipe | 11/12/2012 |
| H20-FRFRL | H2OF-C0100G | Pipe | 11/12/2012 |
| H20-FRFRL | H2OF-C0130B | Pipe | 11/12/2012 |
| H20-FRFRL | H2OF-C0340A | Pipe | 11/12/2012 |
| H20-FRFRL | H2OF-C0390A | Pipe | 11/12/2012 |
| H20-FRFRL | H2OF-C0320F | Pipe | 11/9/2012 |
| H20-FRFRL | H2OF-C0360A | Pipe | 11/9/2012 |
| LN | LN-C0060B | Pipe | 11/9/2012 |
| C5 | C5-C0010C | Pipe | 11/5/2012 |
| C5 | C5-C0010A | Pipe | 11/1/2012 |

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| C5 | C5-C0140A | Pipe | 11/1/2012 |
| C5 | C5-C0050B | Pipe | 10/31/2012 |
| C5 | C5-C0200B | Pipe | 10/31/2012 |
| H20-FRFRL | H20F-C0310E | Pipe | 10/30/2012 |
| H20-FRFRL | H20F-C0320A | Pipe | 10/30/2012 |
| H20-FRFRL | H20F-C0100C | Pipe | 10/29/2012 |
| H20-FRFRL | H20F-C0290B | Pipe | 10/29/2012 |
| H20-FRFRL | H20F-C0290C | Pipe | 10/29/2012 |
| H20-FRFRL | H20F-C0330A | Pipe | 10/29/2012 |
| H20-FRFRL | H20F-C0100D | Pipe | 10/25/2012 |
| H20-FRFRL | H20F-C0320D | Pipe | 10/25/2012 |
| H20-FRFRL | H20F-C0140G | Pipe | 10/24/2012 |
| H20-FRFRL | H20F-C0100B | Pipe | 10/23/2012 |
| NM | NM-C0200B | Pipe | 10/10/2012 |
| NM | NM-C0160B | Pipe | 10/9/2012 |
| NM | NM-C0100A | Pipe | 10/1/2012 |
| NM | NM-C0100B | Pipe | 10/1/2012 |
| NM | NM-C0200C | Pipe | 10/1/2012 |
| NM | NM-C0180A | Pipe | 9/26/2012 |
| NM | NM-C0200A | Pipe | 9/26/2012 |
| NM | NM-C0160A | Pipe | 9/20/2012 |
| HONWTR | HONWTR-C0220F | Pipe | 9/18/2012 |
| HONWTR | HONWTR-C0220M | Pipe | 9/18/2012 |
| HONWTR | HONWTR-C0220G | Pipe | 9/17/2012 |
| HONWTR | HONWTR-C0220L | Pipe | 9/17/2012 |
| HONWTR | HONWTR-C0220B | Pipe | 9/14/2012 |
| HONWTR | HONWTR-C0220H | Pipe | 9/14/2012 |
| HONWTR | HONWTR-C0220K | Pipe | 9/14/2012 |
| FLR | FLR-C0940A | Pipe | 9/12/2012 |
| FLR | FLR-C0500T | Pipe | 9/11/2012 |
| HONWTR | HONWTR-C0220A | Pipe | 9/11/2012 |
| FLR | FLR-C0880D | Pipe | 8/27/2012 |
| FLR | FLR-C0880G | Pipe | 8/16/2012 |
| FLR | FLR-C0880J | Pipe | 8/10/2012 |
| FLR | FLR-C0480A | Pipe | 8/9/2012 |
| FLR | FLR-C0380C | Pipe | 7/26/2012 |
| HCSLOP | HCSLOP-C0100D | Pipe | 7/26/2012 |
| HCSLOP | HCSLOP-C0100E | Pipe | 7/20/2012 |
| HCSLOP | HCSLOP-C0100C | Pipe | 7/19/2012 |
| FLR | FLR-C0860H | Pipe | 7/10/2012 |

In the Matter of TPC Group, LLC
Docket No. CAA-06-2022-3364

| | | | |
|-------------|-------------|------|-----------|
| FLR | FLR-C0170B | Pipe | 7/9/2012 |
| FLR | FLR-C0530A | Pipe | 7/5/2012 |
| FLR | FLR-C0870A | Pipe | 7/5/2012 |
| FLR | FLR-C0060B | Pipe | 4/3/2012 |
| RAFF PIPING | RAFF-C0052 | Pipe | 3/20/2012 |
| FRFRL | FRFRL-C0127 | Pipe | 3/14/2012 |
| BD PIPING | BD-C0379 | Pipe | 3/2/2012 |
| BD PIPING | BD-C0358 | Pipe | 3/1/2012 |
| RAFF PIPING | RAFF-C0059 | Pipe | 2/21/2012 |
| BD PIPING | BD-C0035 | Pipe | 2/14/2012 |
| PIB | PIB-C0001 | Pipe | 9/30/2011 |

Appendix B: Letter of No Objection from the GUC Trust

TPC GUC Trust
C/O Ed Gentle, Trustee
501 Riverchase Pkwy East, Suite 100
Hoover, AL 35244
Tollfree - (800) 349-0837
Main - (205) 716-3000
Email tpcguctrust@tpcguctrust.com

February 6, 2024

Scott R. Bowling
Baker Botts L.L.P.
30 Rockefeller Plaza
New York, New York 10028
scott.bowling@bakerbotts.com

Re: *In re TPC Group Inc., et al.*, Ch. 11 Case No. 22-10493 *et seq.* (CTG)

Dear Mr. Bowling:

I serve as the Trustee of the TPC GUC Trust, which was established pursuant to the *Modified Second Amended Joint Chapter 11 Plan of TPC Group, Inc. and Its Debtor Affiliates* [D.I. 1281-1] (the “**Plan**”) in the above-referenced chapter 11 cases. Capitalized terms used but not defined herein have the meanings assigned to such terms in the Plan.

As you and I have discussed, the United States Environmental Protection Agency (the “**EPA**”) filed proof of claim number 40198 against TPC Group LLC (“**TPC Group**”) asserting an unsecured claim for civil penalties in an unliquidated amount (the “**EPA Claim**”). Under paragraph 67 of the Confirmation Order, “any Claim asserted by the EPA in the Chapter 11 Cases shall be reconciled by the Reorganized Debtors, subject, solely to the extent such reconciliation results in an Allowed General Unsecured Claim, to the consent of the GUC Trustee, which consent shall not be unreasonably withheld, conditioned, or delayed.”

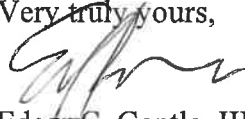
You have represented that the Debtors (or the Reorganized Debtors, as applicable) and the EPA engaged in negotiations to reconcile the EPA Claim and that, based on those negotiations, the Reorganized Debtors and the EPA agreed to settle the EPA Claim in a manner that includes, among other things, an Allowed Class 4 General Unsecured Claim against TPC Group in the amount of \$4,840,000.00, which is attributable to civil penalties in connection with TPC Group’s facility in Port Neches, Texas (the “**Settled Class 4 Claim**”) and an Allowed Class 6 Subordinated Claim against TPC Group in the amount of \$7,260,000, which is attributable to civil penalties in connection with TPC Group’s facility in Houston, Texas (the “**Settled Subordinated Claim**”). You have requested that the GUC Trustee consent solely to the allowance of the Settled Class 4 Claim in accordance with paragraph 67 of the Confirmation Order but have not requested that the GUC Trustee take a position on the Settled Subordinated Claim or any other agreement(s) that the Reorganized Debtors may have with the EPA. This letter serves to confirm that, as GUC Trustee, I consent to the allowance of the Settled Class 4 Claim and take no position on the Settled Subordinated Claim or any other agreement(s) that the Reorganized Debtors may have with the EPA.

February 6, 2024

Page 1

It should be noted that the TPC GUC Trust has assets totaling approximately \$30 million, and the amount of claims against the TPC GUC Trust is estimated to be between \$700 million and \$1 billion. Therefore, payment of the Settled Class 4 Claim is estimated to be at the rate of three to four cents on the dollar.

Very truly yours,

A handwritten signature in black ink, appearing to read "Edgar C. Gentle, III". The signature is fluid and cursive, with a prominent initial "E".

Edgar C. Gentle, III
Trustee, TPC GUC Trust

Appendix C:KPI Spreadsheet

| | A | B | C |
|----|----------------------|--|--|
| 1 | KPI - Category | KPI Name | KPI Description |
| 2 | PHA | # of PHA Corrective Actions Open | Total Number of PHA Open Corrective Actions with the Corrective Action Database |
| 3 | | # of PHA Revalidations past due | |
| 4 | | % of PHA reviews that included communication of action item resolution with applicable operations and maintenance employees. | |
| 5 | | | |
| 6 | Training | # of Overdue Refresher Training Course for Operators | Number of Refresher Training Courses past the required refresher date |
| 7 | | % of Operators Receiving Refresher Training with Documentation that they Understood the Training Received. | |
| 8 | | % of Initial Training for New Operators with Documentation that they Understood the Training Received. | |
| 9 | Operating Procedures | # of Overdue Operating Procedure Reviews Past Annual Review Period | Number of Overdue Critical Operating Procedures past Annual Review Period. |
| 10 | Training | # of Operator Training Certification or Recertifications Past Due | Number of TPC Operator Training certifications or recertifications past their 3-year due date |
| 11 | MOC | # OPEN POST STARTUP ACTION ITEMS Older Than 1 Year - Non PSI | KPI to track the number of Post Startup Action Items that are not PSI related that are older than 1 year |
| 12 | MOC | # OPEN POST STARTUP ACTION ITEMS Older Than 6 Months - PSI | KPI to track the number of Post Startup Action Items that are PSI related that are older than 6 year |
| 13 | MOC | # MOCs IN-PROGRESS AND NOT AUTHORIZED FOR S/U or in INITIAL AUTHORIZATION STATUS FOR MORE THAN 1 YEAR | KPI is to track potentially stagnate MOCs that are still in the MOC system for more than 1 Year and have not progressed to the Initial Authorization Status, Physical Construction Started, or Authorized for S/U |
| 14 | MOC | # MOC s WITH DEFICIENCIES - TPC MOC Audits | Audit of All TPC MOCs closed during the Quarter that have deficiencies as defined by the requirement of the Consent Decree. Consent Decree has specific reporting for Audit Questions: 1) S&H Documentation 2) Authorization Requirements Met 3) Training Conducted Prior to S/U 4) Change Completed as described in MOC |
| 15 | MOC | # MOCs NOT CLOSED WITHIN 12 MONTHS OF APPROVAL TO STARTUP - TPC | TPC MOCs that have been approved for startup and not closed within 12 months of that approval |
| 16 | | % of MOC reviews that included communication of change with applicable operations and maintenance employees. | |
| 17 | | # of temporary changes that exceeded the authorized time duration. | |

| | A | B | C |
|----|-------------------------|---|--|
| 18 | Management Systems | Corrective Actions Items Past Due | Past due Corrective Actions tracked per the Corrective Action Standard |
| 19 | Compliance Audits | # of Compliance Audit Corrective Actions Overdue | The number of corrective actions that are overdue from a Compliance Audit at a TPC Site |
| 20 | | # of Compliance Audits past 3-Year Due Date | |
| 21 | Incident Investigations | # of Events that Could Result in a Catastrophic Event | The number of potentially catastrophic events at a TPC Site as defined in the Consent Decree with the EPA |
| 22 | Incident Investigations | % Compliance with Consent Decree Notification Requirements | The % compliance with the Incident Investigation Section of the EPA Consent Decree notification requirements |
| 23 | Incident Investigations | % Compliance with Consent Decree Corrective Action Requirements | The % compliance with the Incident Investigation Section of the EPA Consent Decree notification requirements |
| 24 | MI | Overdue MI Compliance Inspections | Total Number of Compliance Required MI Inspections past required inspection date |
| 25 | | Number of of MI inspections and tests found to be outside expected ranges which required a shutdown or other measures to allow for continued safe operation | |
| 26 | | # of MI inspections and tests that required an extended completion date for any reason. | |

Appendix D: Risk Ranking Program Summary and Definitions

Appendix D

The Action Item Prioritization Tables and related requirements found in Appendix A to TPC's Corrective Action Management Procedure (EHS-GEN-ALL-1103) are attached to this Consent Decree as Appendix D.

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Appendix A – Corrective Action Prioritization Tables

| System in place and partially effective | System in place and ineffective OR System NOT in place | ACTION ITEM PRIORITIZATION | | | | | | |
|---|--|--|---|--|---|---|---|--|
| | | Illustrative Possible Effects Corresponding to the Severity Values if Finding/Gap is not corrected | | | | | | |
| | | SAFETY | SECURITY | ENVIRONMENTAL | REGULATORY | COMMUNITY/PUBLIC RELATIONS | BUSINESS | FINANCIAL IMPACT |
| | | <ul style="list-style-type: none"> Multiple fatalities (on site) Multiple permanently disabling injuries (on site) Single offsite injury (to public) Transportation/pipeline related fatality | <ul style="list-style-type: none"> Any security incident resulting in priority 5 Safety, Environmental, Community, Business, Regulatory, or financial consequence. | <ul style="list-style-type: none"> Catastrophic (irreparable) off-site environmental damage Very heavy contamination, widespread effects of extended duration | <ul style="list-style-type: none"> Restrictions placed by state/federal regulatory authorities Major SEC disclosure issue | <ul style="list-style-type: none"> National public concern Extensive coverage by national media Plant evacuation Community evacuation Internal Fraud | <ul style="list-style-type: none"> Total Plant shutdown > 10 days Repair/remedial activities (> \$500,000) Loss of 10% of customer business (> 3 months) Loss of 10% of supplier business (> 3 months) Delay of major strategic project construction phase (> 1 month) Operating cash flow or EBITDA impact (>20%) | <ul style="list-style-type: none"> More than \$10,000,000 (e.g., revenue loss, equipment damage, theft or loss of company property, repair costs, production loss, etc.) |
| | | <ul style="list-style-type: none"> Hospitalization of 1 or more workers Amputation or Loss of Sight Single fatality (on site) Transportation/pipeline related injury | <ul style="list-style-type: none"> Workplace violence or other incident resulting in a fatality Theft with priority 4 financial impact Loss of critical intellectual property Any security incident resulting in a Priority 4 Safety, Environmental, Community, Business, or Regulatory consequence. | <ul style="list-style-type: none"> Significant off-site environmental damage (e.g. substantial harm to wildlife) Heavy contamination, localized effects of extended duration | <ul style="list-style-type: none"> State or federal attention and sanctions - large fine Material Weakness disclosure | <ul style="list-style-type: none"> Regional public concern Prolonged local media attention and mention on national news Community Activated Shelter in place External Fraud | <ul style="list-style-type: none"> Loss of 13,000,000 lbs. to 25,000,000 lbs. of production or 10 days total loss production Repair/remedial activities (\$100k to \$500k) Loss of 10% of customer business for < 3 months Loss of 10% of supplier business for < 3 months Delay of major strategic project construction phase < 1 month Major loss of competitive advantage (i.e. Leak of Business intelligence or Technical Knowledge) Operating cash flow or EBITDA impact 10% to < 20% | <ul style="list-style-type: none"> More than \$1,000,00 but less than \$10,000,000 (e.g., revenue loss, equipment damage, theft or loss of company property, repair costs, production loss, etc.) |
| | | <ul style="list-style-type: none"> Multiple Medical Case Recordable Injuries from a single event Single Lost Time Recordable Injury Single Restricted Duty/Job Transfer Recordable Injury/Illness Tier 1 Process Safety Event Transportation/pipeline related First Aid | <ul style="list-style-type: none"> Theft with priority 3 financial impact Any security incident results in Priority 3 Safety consequence. Any unauthorized access to a Restricted Area of a facility. An unauthorized entry to Company property with the perceived intent to cause physical damage to equipment or other key assets; or with the perceived intent to cause harm to people. Theft of on-site chemicals | <ul style="list-style-type: none"> Off-site release causing minimal environmental damage with quick clean up On-site release requiring containment and costly clean up by emergency personnel Simple contamination, widespread effects of extended duration Significant effects on water quality Major damage to an ecosystem (e.g. significant impact on fish population) Longer term closure of potable water extractors Significant reduction in amenity value Significant impact on Man Significant damage to agriculture or commerce | <ul style="list-style-type: none"> Outside regulatory agency involvement beyond notification Verbal mention by local government - small fine Financial re-statement required | <ul style="list-style-type: none"> Regional political attention Local media attention Community concern Financial Stakeholder concern | <ul style="list-style-type: none"> Loss of 1,300,000 lbs. to 13,000,000 lbs. of production or 5-day total loss production Potential revenue impact \$100,000 to \$1,000,000 Supply Chain delay causing significant impact to customer Leak of Proprietary Technical Information Minor Loss of competitive advantage (i.e. Leak of Business intelligence or Technical Knowledge) Operating cash flow or EBITDA impact 5% to < 10% | <ul style="list-style-type: none"> More than \$100,000 but less than \$1,000,000 (e.g., revenue loss, equipment damage, theft or loss of company property, repair costs, production loss, etc.) |
| | | <ul style="list-style-type: none"> Single Medical Case Recordable Injury/Illness Multiple minor injury/First Aid cases Tier 2 Process Safety Event | <ul style="list-style-type: none"> Theft with priority 2 financial impact. Any Security event that requires summoning local law enforcement for immediate action. Any unauthorized access to a Secure Area of a facility. Tampering of any inbound or outbound transportation equipment or materials (truck, rail, barge, or pipeline). Any security threat or event resulting in a deviation from planned operation or transportation activities. | <ul style="list-style-type: none"> On-site release requiring containment and Minimal clean up by emergency personnel Simple contamination, localized effects of short duration Local, limited impact to water, land and air Notification to, and short term closure of, potable water extractors required | <ul style="list-style-type: none"> On-site RQ release through environmental control device | <ul style="list-style-type: none"> Community is aware of event and some concern Media attention with small impact to company operations | <ul style="list-style-type: none"> Loss of 110,000 lbs. to 1,300,000 lbs. of production or 12 hour total loss production Supply chain delay (1-4 days) Complaints from several different customers Operating cash flow or EBITDA impact 2% to < 5% | <ul style="list-style-type: none"> More than \$10,000 but less than \$100,000 (e.g., revenue loss, equipment damage, theft or loss of company property, repair costs, production loss, etc.) |
| | | <ul style="list-style-type: none"> First aid Report only medical event | <ul style="list-style-type: none"> Theft with priority 1 financial impact Any security related issue that does not meet the threshold of a Priority 2 event | <ul style="list-style-type: none"> Slight impact on site No contamination, localized effects Minor effect on air quality as evidenced by dust or odor complaint(s) Emission Level Value (ELV) Exceedance | <ul style="list-style-type: none"> Title V Permit Exceedance | <ul style="list-style-type: none"> Local community is aware of event | <ul style="list-style-type: none"> Loss of < 110,000 lbs. of production or less than 1 hour total loss production Repair/remedial activities of (<\$10k) Supply Chain delay (≤ 24 hours) Not delivering due to off spec material Formal customer complaint Operating cash flow or EBITDA impact <1% | <ul style="list-style-type: none"> Less than \$10,000 impact (e.g., revenue loss, equipment damage, theft or loss of company property, repair costs, production loss, etc.) |

Appendix E: Items Through 9/30/23

| | A | B |
|----|---------------------------------|------------------|
| 1 | Corrective Action Number | Risk Rank |
| 2 | 10021 1 | Orange |
| 3 | 10022 1 | Orange |
| 4 | 10728 1 | Green |
| 5 | 10735 1 | Orange |
| 6 | 1596 1 | Orange |
| 7 | 1659 1 | Yellow |
| 8 | 1692 1 | Yellow |
| 9 | 17403 1 | Orange |
| 10 | 17404 1 | Yellow |
| 11 | 17407 1 | Orange |
| 12 | 21067 1 | Yellow |
| 13 | 21070 1 | Yellow |
| 14 | 21075 1 | Yellow |
| 15 | 21078 1 | Green |
| 16 | 21081 1 | Orange |
| 17 | 21092 1 | Yellow |
| 18 | 21094 1 | Orange |
| 19 | 21097 1 | Yellow |
| 20 | 21098 1 | Orange |
| 21 | 21099 1 | Yellow |
| 22 | 21100 1 | Orange |
| 23 | 21106 1 | Orange |
| 24 | 21111 1 | Yellow |
| 25 | 21112 1 | Yellow |
| 26 | 21187 1 | Yellow |
| 27 | 21192 1 | Orange |
| 28 | 21195 1 | Yellow |
| 29 | 21196 1 | Yellow |
| 30 | 21197 1 | Yellow |
| 31 | 21198 1 | Yellow |
| 32 | 21330 1 | Orange |
| 33 | 21334 1 | Green |
| 34 | 21710 1 | Yellow |
| 35 | 21816 1 | Orange |
| 36 | 21817 1 | Yellow |
| 37 | 21822 1 | Green |
| 38 | 24318 1 | Green |
| 39 | 24321 1 | Orange |
| 40 | 24328 1 | Orange |
| 41 | 24329 1 | Orange |
| 42 | 24331 1 | Orange |
| 43 | 24332 1 | Orange |

| | A | B |
|----|---------|--------|
| 44 | 24333 1 | Yellow |
| 45 | 24390 1 | Orange |
| 46 | 24505 1 | Orange |
| 47 | 24512 1 | Green |
| 48 | 25811 1 | Yellow |
| 49 | 25815 1 | Orange |
| 50 | 25821 1 | Orange |
| 51 | 25822 1 | Orange |
| 52 | 25871 1 | Orange |
| 53 | 25872 1 | Orange |
| 54 | 25873 1 | Orange |
| 55 | 25886 1 | Orange |
| 56 | 25887 1 | Orange |
| 57 | 25888 1 | Orange |
| 58 | 25889 1 | Orange |
| 59 | 25890 1 | Orange |
| 60 | 25891 1 | Orange |
| 61 | 25892 1 | Orange |
| 62 | 25893 1 | Orange |
| 63 | 25894 1 | Orange |
| 64 | 25895 1 | Orange |
| 65 | 25897 1 | Orange |
| 66 | 25898 1 | Orange |
| 67 | 25899 1 | Orange |
| 68 | 25900 1 | Orange |
| 69 | 25901 1 | Yellow |
| 70 | 25902 1 | Orange |
| 71 | 25911 1 | Orange |
| 72 | 25912 1 | Orange |
| 73 | 25913 1 | Orange |
| 74 | 25916 1 | Yellow |
| 75 | 25920 1 | Yellow |
| 76 | 25921 1 | Orange |
| 77 | 25924 1 | Orange |
| 78 | 25925 1 | Yellow |
| 79 | 25926 1 | Orange |
| 80 | 25927 1 | Orange |
| 81 | 25928 1 | Yellow |
| 82 | 25952 1 | Yellow |
| 83 | 25953 1 | Orange |
| 84 | 25956 1 | Yellow |
| 85 | 25957 1 | Yellow |
| 86 | 25958 1 | Yellow |

| | A | B |
|-----|---------|--------|
| 87 | 25959 1 | Yellow |
| 88 | 26199 1 | Orange |
| 89 | 26201 1 | Orange |
| 90 | 2877 1 | Orange |
| 91 | 29057 1 | Green |
| 92 | 29058 1 | Yellow |
| 93 | 29059 1 | Yellow |
| 94 | 29060 1 | Yellow |
| 95 | 29082 1 | Yellow |
| 96 | 29083 1 | Green |
| 97 | 29084 1 | Yellow |
| 98 | 30478 1 | Green |
| 99 | 30497 1 | Yellow |
| 100 | 30498 1 | Yellow |
| 101 | 30504 1 | Yellow |
| 102 | 30506 1 | Yellow |
| 103 | 30509 1 | Orange |
| 104 | 30514 1 | Orange |
| 105 | 30516 1 | Orange |
| 106 | 30550 1 | Yellow |
| 107 | 30551 1 | Orange |
| 108 | 30552 1 | Yellow |
| 109 | 30553 1 | Orange |
| 110 | 30555 1 | Yellow |
| 111 | 30556 1 | Yellow |
| 112 | 30557 1 | Yellow |
| 113 | 30558 1 | Orange |
| 114 | 30559 1 | Yellow |
| 115 | 30561 1 | Orange |
| 116 | 30562 1 | Orange |
| 117 | 30564 1 | Orange |
| 118 | 30565 1 | Yellow |
| 119 | 30566 1 | Orange |
| 120 | 30567 1 | Orange |
| 121 | 3101 1 | Yellow |
| 122 | 3106 1 | Orange |
| 123 | 3136 1 | Yellow |
| 124 | 3156 1 | Yellow |
| 125 | 3159 1 | Yellow |
| 126 | 3160 1 | Yellow |
| 127 | 3166 1 | Yellow |
| 128 | 3203 1 | Yellow |
| 129 | 3204 1 | Orange |

| | A | B |
|-----|---------|--------|
| 130 | 3205 1 | Yellow |
| 131 | 3206 1 | Orange |
| 132 | 3207 1 | Orange |
| 133 | 3222 1 | Green |
| 134 | 35515 1 | Orange |
| 135 | 35516 1 | Yellow |
| 136 | 35517 1 | Yellow |
| 137 | 35519 1 | Yellow |
| 138 | 35520 1 | Yellow |
| 139 | 35521 1 | Yellow |
| 140 | 35522 1 | Yellow |
| 141 | 35523 1 | Yellow |
| 142 | 35524 1 | Yellow |
| 143 | 35525 1 | Yellow |
| 144 | 35526 1 | Green |
| 145 | 35527 1 | Green |
| 146 | 35528 1 | Green |
| 147 | 35533 1 | Yellow |
| 148 | 35534 1 | Yellow |
| 149 | 35535 1 | Yellow |
| 150 | 35536 1 | Yellow |
| 151 | 35537 1 | Orange |
| 152 | 35538 1 | Yellow |
| 153 | 35539 1 | Orange |
| 154 | 35540 1 | Orange |
| 155 | 35541 1 | Yellow |
| 156 | 35542 1 | Yellow |
| 157 | 35543 1 | Orange |
| 158 | 35544 1 | Orange |
| 159 | 35545 1 | Orange |
| 160 | 35546 1 | Orange |
| 161 | 35547 1 | Orange |
| 162 | 35548 1 | Orange |
| 163 | 35549 1 | Orange |
| 164 | 35550 1 | Orange |
| 165 | 35551 1 | Yellow |
| 166 | 35552 1 | Yellow |
| 167 | 35553 1 | Yellow |
| 168 | 35554 1 | Yellow |
| 169 | 35555 1 | Yellow |
| 170 | 35556 1 | Yellow |
| 171 | 35557 1 | Orange |
| 172 | 35558 1 | Orange |

| | A | B |
|-----|---------|--------|
| 173 | 35559 1 | Orange |
| 174 | 35560 1 | Orange |
| 175 | 35561 1 | Yellow |
| 176 | 35562 1 | Yellow |
| 177 | 35563 1 | Yellow |
| 178 | 35564 1 | Yellow |
| 179 | 35566 1 | Yellow |
| 180 | 35567 1 | Yellow |
| 181 | 35568 1 | Yellow |
| 182 | 35569 1 | Yellow |
| 183 | 35571 1 | Orange |
| 184 | 35576 1 | Yellow |
| 185 | 35577 1 | Yellow |
| 186 | 35580 1 | Yellow |
| 187 | 35581 1 | Yellow |
| 188 | 35584 1 | Yellow |
| 189 | 35585 1 | Yellow |
| 190 | 35592 1 | Yellow |
| 191 | 35593 1 | Yellow |
| 192 | 35594 1 | Yellow |
| 193 | 35595 1 | Yellow |
| 194 | 35596 1 | Yellow |
| 195 | 35597 1 | Yellow |
| 196 | 35598 1 | Yellow |
| 197 | 35599 1 | Yellow |
| 198 | 35600 1 | Yellow |
| 199 | 35601 1 | Orange |
| 200 | 35602 1 | Orange |
| 201 | 35603 1 | Orange |
| 202 | 35604 1 | Orange |
| 203 | 35605 1 | Yellow |
| 204 | 35606 1 | Yellow |
| 205 | 35607 1 | Yellow |
| 206 | 35608 1 | Yellow |
| 207 | 35611 1 | Orange |
| 208 | 35616 1 | Orange |
| 209 | 35617 1 | Orange |
| 210 | 35621 1 | Yellow |
| 211 | 35622 1 | Yellow |
| 212 | 35623 1 | Orange |
| 213 | 35624 1 | Orange |
| 214 | 35626 1 | Orange |
| 215 | 35627 1 | Green |

| | A | B |
|-----|---------|--------|
| 216 | 35628 1 | Green |
| 217 | 35629 1 | Green |
| 218 | 35640 1 | Orange |
| 219 | 35641 1 | Orange |
| 220 | 35642 1 | Orange |
| 221 | 35643 1 | Orange |
| 222 | 35644 1 | Orange |
| 223 | 35645 1 | Orange |
| 224 | 35646 1 | Yellow |
| 225 | 35647 1 | Yellow |
| 226 | 35648 1 | Orange |
| 227 | 35649 1 | Orange |
| 228 | 35650 1 | Orange |
| 229 | 35651 1 | Orange |
| 230 | 35652 1 | Orange |
| 231 | 35653 1 | Orange |
| 232 | 35654 1 | Orange |
| 233 | 35655 1 | Orange |
| 234 | 35656 1 | Orange |
| 235 | 35662 1 | Orange |
| 236 | 35663 1 | Orange |
| 237 | 35664 1 | Orange |
| 238 | 35668 1 | Yellow |
| 239 | 35669 1 | Yellow |
| 240 | 35670 1 | Yellow |
| 241 | 35671 1 | Yellow |
| 242 | 35672 1 | Yellow |
| 243 | 35675 1 | Yellow |
| 244 | 35676 1 | Yellow |
| 245 | 35680 1 | Orange |
| 246 | 35681 1 | Orange |
| 247 | 35682 1 | Orange |
| 248 | 35683 1 | Orange |
| 249 | 35685 1 | Yellow |
| 250 | 35686 1 | Yellow |
| 251 | 35687 1 | Yellow |
| 252 | 35688 1 | Yellow |
| 253 | 35690 1 | Orange |
| 254 | 35692 1 | Orange |
| 255 | 35693 1 | Yellow |
| 256 | 35694 1 | Yellow |
| 257 | 35695 1 | Orange |
| 258 | 35696 1 | Orange |

| | A | B |
|-----|---------|--------|
| 259 | 35697 1 | Orange |
| 260 | 35698 1 | Orange |
| 261 | 35699 1 | Orange |
| 262 | 35708 1 | Orange |
| 263 | 35709 1 | Orange |
| 264 | 35710 1 | Orange |
| 265 | 35714 1 | Green |
| 266 | 35715 1 | Green |
| 267 | 35716 1 | Orange |
| 268 | 35719 1 | Orange |
| 269 | 35720 1 | Orange |
| 270 | 35721 1 | Yellow |
| 271 | 35722 1 | Yellow |
| 272 | 35723 1 | Yellow |
| 273 | 35724 1 | Yellow |
| 274 | 35725 1 | Green |
| 275 | 35726 1 | Green |
| 276 | 35728 1 | Orange |
| 277 | 35729 1 | Orange |
| 278 | 35730 1 | Yellow |
| 279 | 35731 1 | Yellow |
| 280 | 35742 1 | Orange |
| 281 | 35743 1 | Orange |
| 282 | 35744 1 | Orange |
| 283 | 35745 1 | Yellow |
| 284 | 35746 1 | Yellow |
| 285 | 35747 1 | Yellow |
| 286 | 35750 1 | Yellow |
| 287 | 35752 1 | Yellow |
| 288 | 35753 1 | Yellow |
| 289 | 35754 1 | Yellow |
| 290 | 35755 1 | Yellow |
| 291 | 35756 1 | Yellow |
| 292 | 35757 1 | Yellow |
| 293 | 35758 1 | Orange |
| 294 | 35759 1 | Orange |
| 295 | 35760 1 | Orange |
| 296 | 35761 1 | Orange |
| 297 | 35762 1 | Yellow |
| 298 | 35764 1 | Yellow |
| 299 | 35765 1 | Yellow |
| 300 | 35766 1 | Yellow |
| 301 | 35767 1 | Yellow |

| | A | B |
|-----|---------|--------|
| 302 | 35768 1 | Yellow |
| 303 | 35769 1 | Yellow |
| 304 | 35770 1 | Orange |
| 305 | 35771 1 | Orange |
| 306 | 35772 1 | Orange |
| 307 | 35773 1 | Yellow |
| 308 | 35774 1 | Yellow |
| 309 | 35775 1 | Yellow |
| 310 | 35776 1 | Yellow |
| 311 | 35805 1 | Orange |
| 312 | 36627 1 | Orange |
| 313 | 36628 1 | Orange |
| 314 | 36757 1 | Orange |
| 315 | 36759 1 | Yellow |
| 316 | 36763 1 | Yellow |
| 317 | 36764 1 | Orange |
| 318 | 36774 1 | Orange |
| 319 | 36775 1 | Green |
| 320 | 36776 1 | Orange |
| 321 | 36779 1 | Orange |
| 322 | 36782 1 | Yellow |
| 323 | 36784 1 | Green |
| 324 | 36785 1 | Yellow |
| 325 | 36786 1 | Yellow |
| 326 | 36952 1 | Orange |
| 327 | 36953 1 | Orange |
| 328 | 36954 1 | Orange |
| 329 | 36955 1 | Orange |
| 330 | 36956 1 | Orange |
| 331 | 36957 1 | Orange |
| 332 | 36958 1 | Orange |
| 333 | 36959 1 | Orange |
| 334 | 37035 1 | Yellow |
| 335 | 37042 1 | Yellow |
| 336 | 37081 1 | Yellow |
| 337 | 37082 1 | Yellow |
| 338 | 37083 1 | Yellow |
| 339 | 37084 1 | Yellow |
| 340 | 37085 1 | Yellow |
| 341 | 37086 1 | Yellow |
| 342 | 37090 1 | Yellow |
| 343 | 37091 1 | Green |
| 344 | 37095 1 | Yellow |

| | A | B |
|-----|---------|--------|
| 345 | 37099 1 | Yellow |
| 346 | 37104 1 | Green |
| 347 | 37215 1 | Yellow |
| 348 | 37216 1 | Orange |
| 349 | 37218 1 | Yellow |
| 350 | 37260 1 | Green |
| 351 | 37271 1 | Green |
| 352 | 37348 1 | Orange |
| 353 | 37351 1 | Orange |
| 354 | 37352 1 | Orange |
| 355 | 37355 1 | Orange |
| 356 | 37476 1 | Yellow |
| 357 | 37478 1 | Yellow |
| 358 | 37479 1 | Yellow |
| 359 | 37480 1 | Yellow |
| 360 | 37481 1 | Yellow |
| 361 | 37518 1 | Yellow |
| 362 | 37519 1 | Yellow |
| 363 | 37520 1 | Yellow |
| 364 | 37521 1 | Yellow |
| 365 | 37522 1 | Orange |
| 366 | 37523 1 | Orange |
| 367 | 37524 1 | Orange |
| 368 | 37536 1 | Green |
| 369 | 37663 1 | Yellow |
| 370 | 37664 1 | Green |
| 371 | 37665 1 | Green |
| 372 | 37666 1 | Green |
| 373 | 37668 1 | Orange |
| 374 | 37669 1 | Orange |
| 375 | 37805 1 | Yellow |
| 376 | 37806 1 | Yellow |
| 377 | 37807 1 | Yellow |
| 378 | 37809 1 | Yellow |
| 379 | 37812 1 | Yellow |
| 380 | 37814 1 | Green |
| 381 | 37815 1 | Yellow |
| 382 | 37816 1 | Yellow |
| 383 | 37824 1 | Orange |
| 384 | 37827 1 | Orange |
| 385 | 37830 1 | Yellow |
| 386 | 37841 1 | Orange |
| 387 | 37843 1 | Yellow |

| | A | B |
|-----|---------|--------|
| 388 | 37846 1 | Yellow |
| 389 | 37847 1 | Yellow |
| 390 | 37848 1 | Green |
| 391 | 37941 1 | Yellow |
| 392 | 37942 1 | Yellow |
| 393 | 37943 1 | Yellow |
| 394 | 38035 1 | Green |
| 395 | 38160 1 | Green |
| 396 | 38161 1 | Green |
| 397 | 38162 1 | Yellow |
| 398 | 38163 1 | Yellow |
| 399 | 38164 1 | Green |
| 400 | 38165 1 | Green |
| 401 | 38166 1 | Green |
| 402 | 38167 1 | Yellow |
| 403 | 38168 1 | Yellow |
| 404 | 38169 1 | Green |
| 405 | 38170 1 | Green |
| 406 | 38171 1 | Yellow |
| 407 | 38199 1 | Yellow |
| 408 | 38200 1 | Green |
| 409 | 38278 1 | Green |
| 410 | 38279 1 | Green |
| 411 | 38285 1 | Green |
| 412 | 4009 1 | Yellow |
| 413 | 4047 1 | Yellow |
| 414 | 4050 1 | Yellow |
| 415 | 4054 1 | Yellow |
| 416 | 4068 1 | Yellow |
| 417 | 4074 1 | Orange |
| 418 | 4075 1 | Yellow |
| 419 | 4189 1 | Yellow |
| 420 | 4192 1 | Yellow |
| 421 | 4202 1 | Yellow |
| 422 | 4203 1 | Yellow |
| 423 | 4205 1 | Yellow |
| 424 | 4210 1 | Orange |
| 425 | 4214 1 | Orange |
| 426 | 4215 1 | Orange |
| 427 | 4222 1 | Green |
| 428 | 4583 1 | Yellow |
| 429 | 4585 1 | Yellow |
| 430 | 4592 1 | Yellow |

| | A | B |
|-----|----------|--------|
| 431 | 4606 1 | Orange |
| 432 | 4609 1 | Yellow |
| 433 | 4611 1 | Green |
| 434 | 4612 1 | Green |
| 435 | 4613 1 | Orange |
| 436 | 4627 1 | Yellow |
| 437 | 4629 1 | Yellow |
| 438 | 4630 1 | Orange |
| 439 | 4635 1 | Yellow |
| 440 | 4640 1 | Yellow |
| 441 | 4641 1 | Yellow |
| 442 | 4643 1 | Yellow |
| 443 | 4648 1 | Yellow |
| 444 | 4649 1 | Yellow |
| 445 | 4653 1 | Orange |
| 446 | 4654 1 | Yellow |
| 447 | 4658 1 | Orange |
| 448 | 4659 1 | Yellow |
| 449 | 4663 1 | Yellow |
| 450 | 4665 1 | Yellow |
| 451 | 4666 1 | Yellow |
| 452 | 4670 1 | Yellow |
| 453 | 4674 1 | Yellow |
| 454 | 4675 1 | Yellow |
| 455 | 4679 1 | Yellow |
| 456 | 4684 1 | Green |
| 457 | 4686 1 | Yellow |
| 458 | 4689 1 | Yellow |
| 459 | 5215 1 | Yellow |
| 460 | 5220 1 | Orange |
| 461 | 5693 1 | Yellow |
| 462 | 5694 1 | Orange |
| 463 | 5698 1 | Orange |
| 464 | 5702 1 | Yellow |
| 465 | 5705 1 | Yellow |
| 466 | 5706 1 | Orange |
| 467 | 5707 1 | Orange |
| 468 | 5709 1 | Yellow |
| 469 | 5711 1 | Yellow |
| 470 | 5712 1 | Yellow |
| 471 | 5716 1 | Yellow |
| 472 | 5726 1 | Orange |
| 473 | 6488 1 | Orange |

| | A | B |
|-----|----------|--------|
| 474 | 6497 1 | Orange |
| 475 | 6501 1 | Yellow |
| 476 | 6504 1 | Orange |
| 477 | 7563 1 | Orange |
| 478 | 7994 1 | Green |
| 479 | 7997 1 | Green |
| 480 | 8009 1 | Yellow |
| 481 | 8025 1 | Orange |
| 482 | 8027 1 | Yellow |
| 483 | 8029 1 | Orange |
| 484 | 8030 1 | Yellow |
| 485 | 8039 1 | Green |
| 486 | 8050 1 | Yellow |
| 487 | 8064 1 | Yellow |
| 488 | 8090 1 | Yellow |
| 489 | 8100 1 | Yellow |
| 490 | 8415 1 | Yellow |
| 491 | 8652 1 | Yellow |
| 492 | 8654 1 | Yellow |
| 493 | 8656 1 | Yellow |
| 494 | 8660 1 | Orange |
| 495 | 8662 1 | Orange |
| 496 | 9050 1 | Yellow |
| 497 | 9054 1 | Orange |
| 498 | 9058 1 | Yellow |
| 499 | 9060 1 | Yellow |
| 500 | 9061 1 | Orange |
| 501 | 9062 1 | Orange |
| 502 | 9063 1 | Yellow |
| 503 | 9066 1 | Orange |
| 504 | 9073 1 | Orange |
| 505 | 9345 1 | Yellow |
| 506 | 9905 1 | Yellow |
| 507 | 9911 1 | Yellow |

Appendix F: Air Monitoring Table

Appendix F

Warning and Action Levels for Air Monitors

| Table 1 | | |
|------------------|--------------|--|
| Pollutant | Level | 15-minute Average Concentration |
| 1,3-Butadiene | Warning | 25 ppb |
| Isobutylene | Warning | 150 ppb |

| Table 2 | | |
|------------------|--------------|---|
| Pollutant | Level | 15-minute Average Concentration |
| 1,3-Butadiene | Action | 1,700 ppb |
| Chlorine | Action | Any detection at fence line above 0.5 ppm |
| Isobutylene | Action | 78,000 ppb |

Appendix G: PNO Administrative Order on Consent Requirements

Appendix G

The compliance obligations contained in paragraph 72 of the AOC are amended as follows:

72. The EPA and Respondent agree that Respondent shall complete the following actions (“Compliance Actions”) at the PNO Facility:

a. Fixed Equipment (Vessels and Piping):

- i. Remaining Life Calculations: Within sixty (60) days of the effective date of this Order, identify all fixed equipment that requires a remaining life calculation pursuant to RAGAGEP and does not have a recorded remaining life calculation. Within one hundred twenty (120) days of the effective date of this Order, calculate and record remaining life calculations as required for all fixed equipment consistent with RAGAGEP.
- ii. Damage Mechanism Reviews: Within one (1) year of the effective date of this Order, Respondent shall complete the actions described in the Damage Mechanism Review Audit Plan submitted by Respondent to EPA on October 13, 2022 and submit a summary of and schedule for preparing any new damage mechanism review/control studies or otherwise address any observations, findings, and recommendations.
- iii. Inspection Plans: Within one (1) year of the effective date of this Order, Respondent shall complete the actions described in the Inspection Plans and Policies audit Plan submitted by Respondent to EPA on October 13, 2022, and provide a summary of and schedule for addressing any observations, findings, and recommendations.

- iv. Overdue Inspections: Within thirty (30) days of the effective date of this Order, identify all fixed equipment with inspections that were overdue on the effective date of this Order. Within ninety (90) days of the effective date of this Order, unless otherwise agreed by the EPA in writing, conduct all overdue inspections on fixed equipment. Within one hundred twenty (120) days of the effective date of this Order, based on the results of overdue inspections: (i) evaluate and update inspection plans and policies; (ii) ensure inspection schedules are up-to-date and compliant with the inspection plans, policies, and RAGAGEP; (iii) update and record remaining life calculations as required by RAGAGEP; and (iv) correct any equipment deficiencies identified consistent with 40 C.F.R. § 68.73(e). Within one hundred twenty (120) days of the effective date of this Order, submit, as provided herein, a summary of the corrective actions taken pursuant to this paragraph, including documentation that any inspection observations, findings, and recommendations and equipment deficiencies were addressed.
- v. Materials of Construction: Within one (1) year of the effective date of this Order complete the actions described in the Materials of Construction Audit Plan submitted by Respondent to EPA on September 21, 2022, and submit, as provided herein, a list of equipment with unknown, incompatible or inadequate materials of construction. Within six months of identifying the list of equipment, unless otherwise agreed by EPA in writing, Respondent shall take action to: (a) identify any unknown

materials of construction and incorporate the information into damage mechanism reviews/corrosion studies and inspection plans and policies; and (b) replace any incompatible or inadequate materials of construction with those that are compatible or adequate.

b. Rotating Equipment (Pumps and Compressors):

- i. Criticality Risk Ranking: Within one hundred eighty (180) days of the effective date of this Order complete the actions described in the Rotating Equipment Criticality Risk Ranking plan submitted by Respondent to EPA on October 21, 2022, and submit a summary and schedule for addressing any observations, findings, and recommendations.
- ii. ITPM Plans: Within one hundred eighty (180) days of the effective date of this Order complete the actions described in the Rotating Equipment ITPM submitted by Respondent to EPA on October 21, 2022, and a summary of and schedule for addressing any observations, findings, and recommendations.
- iii. ITPM Schedules: Within one hundred eighty (180) days of the effective date of this Order, complete the actions described in the Rotating Equipment ITPM Schedules plan submitted by Respondent to EPA on October 21, 2022. Within one (1) year the effective date of this Order provide a list of overdue ITPM tasks. Within thirty (30) days of submitting the list of overdue ITPMs tasks, unless otherwise agreed by EPA in writing: (a) complete all overdue ITPMs tasks; (b) take action to ensure future schedules are up-to-date and compliant with the ITPM plans; and

(c) submit, as provided herein, a summary of the actions taken to address the overdue ITPM tasks and correct any future schedules.

iv. Deficiencies: Within one (1) year of the effective date of this Order, complete the actions described in the Rotating Equipment Deficiencies plan submitted by Respondent to EPA on October 13, 2022, Within sixty (60) days of the effective date of this Order, correct the deficiencies in rotating equipment identified before further use of the equipment or submit, as provided herein, a plan to EPA for correcting deficiencies in a safe and timely manner when necessary means are taken to assure safe operation.

c. Instrumentation and Safety Systems:

- i. Within one hundred eighty (180) days of the effective date of this Order, compile a list or lists of safety systems (see 40 C.F.R. § 68.65(d)(1)(viii)), and audit the list(s) to ensure the list is accurate, complete, and current. Submit, as provided herein, a summary of Respondent's process for identifying safety systems, and the compiled the list of safety systems.
- ii. Within one (1) year of the effective date of this Order, perform an audit of the hazard and risk assessments ("H&RA") conducted for all safety instrumented systems ("SIS") to ensure they are accurate, complete, and compliant with Respondent's corporate and Facility specific programs and policies and established RAGAGEP (e.g. ANSI/ISA 61511). Submit, as provided herein, a summary of and schedule for addressing any observations, findings, and recommendations.

- iii. Within one (1) year of the effective date of this Order, perform an audit of the safety requirements, design, and safety integrity level (“SIL”) and/or risk reduction factor (“RRF”) designations for all safety instrumented systems (“SIS”) to determine whether they are accurate, current, and consistent with the latest H&RAs. Submit, as provided herein, a summary of Respondent’s process for auditing the SIS.
 - iv. Within one (1) year of the effective date of this Order, complete the actions described in the Instrumentation and Safety Systems: ITPM Audit Response plan submitted by Respondent to EPA on December 20, 2022 and submit a summary of and schedule for addressing any observations, findings, and recommendations.
 - v. Within sixty (60) days of the effective date of this Order identify all overdue instrumentation and safety system ITPM tasks and submit, as provided herein, the list of overdue ITPM tasks to EPA. Within ninety (90) days of the effective date of this Order, unless otherwise agreed by EPA in writing, conduct all overdue ITPMs tasks and ensure schedules are up-to-date and compliant with the ITPM plans.
 - vi. Within one hundred twenty (120) days of the effective date of this Order, Respondent shall identify all instrumentation and safety system deficiencies and correct deficiencies before further use or submit, as provided herein, a plan to EPA for correcting deficiencies in a safe and timely manner when necessary means are taken to assure safe operation.
- d. Water on Pumps: Within sixty (60) days of the effective date of this Order:

the plan to complete the work. Submit, as provided herein, a summary of the audit conducted of the Maximo maintenance work process software.

- k. Housekeeping Standard: Within sixty (60) days of the effective date of this Order implement a housekeeping standard consistent with the standard in place at the HNO facility.

Appendix H: HNO Service Requests and Work Orders (Updated)

Appendix H

Service Request Completion Dates

| SR Number | Estimated Completion Date |
|------------------|----------------------------------|
| SR52951 | 5/31/2024 |
| SR59987 | 6/31/2024 |
| SR57962 | 12/31/2024 |
| SR59943 | 12/31/2024 |
| SR59946 | 12/31/2024 |
| SR55776 | 5/31/2024 |

Work Order Completion Dates

| WO Number | Estimated Completion Date |
|------------------|----------------------------------|
| 994682 | 4Q2025 |
| 1002296 | 3Q2025 |
| 1048248 | 2Q2027 |
| 7223787 | 4Q2024 |
| 7200733 | 2Q2024 |