

**US EPA REGION 6
CLEAN AIR ACT SECTION 112(r)
INSPECTION REPORT**

Stationary Source Facility	TPC Group - Port Neches Operations	
Dates of Inspection	May 10-11, 2023	
USEPA Contact	Clarissa H. Mills, U.S. EPA Region 6	
Stationary Source Information		
FRS Number	110000504801	
USEPA RMP Facility ID #	1000 0011 5314	
Most Recent RMP Submission	14 December 2022	
Facility Location	2102 Spur 136 Port Neches, Texas 77651	
Latitude / Longitude	29.978056, -93.9453	
Number of Employees	64	
Description of Surrounding Area	The facility is located in an industrial area.	
Description of Activities	Inspection included the following activities: • Opening conference with facility representatives • On-site document review • Field verification of Piping and Instrumentation Diagrams (P&IDs) and other field observations • Personnel interviews • Closing meeting with facility representatives	
Inspection Participants	Eastern Research Group, Inc. (ERG) • Anthony Gaglione • Zachary Good	
Facility Participants	Guy Burnaman, Terminal Director Heather Wyble, Terminal Superintendent Christina Clifton, EHSS Manager Vikki Marsh, Senior Counsel Charmaine Henderson, Process Engineer Christina Oatman, Inspection Supervisor Luther Bradley, EHSS Chad Keys, Reliability Engineer Hannah Roskey, Attorney (Baker Botts L.L.P.)	
EPA Lead Inspector Signature/Date		
	Anthony Gaglione, ERG	Date
EPA Section Chief Signature/Date		
	Samuel Tates	Date

FACILITY BACKGROUND AND PROCESS DESCRIPTION

The TPC Port Neches Operations (PNO) is a 218-acre terminal facility located in an industrial area in Port Neches, Texas just south of the Neches River.¹ The PNO facility reports in its most recent risk management plan (RMP) a single program level 3 covered process.² The PNO facility has reported in its RMP that 64 full-time employees work on site and has elsewhere estimated more than 70 full-time employees.¹ The PNO facility also includes contract employees. TPC employees are represented by the United Steelworkers (USW) union.

The facility began operations in 1944 as the Neches Butane Products Company to produce 1,3-butadiene (BD) for the production of rubber during World War II. The facility was temporarily placed in “standby” operations in 1947 and then restarted in 1950 in support of efforts surrounding the Korean War. The PNO facility was purchased by Texas-U.S. Chemical Company and Goodrich-Gulf Chemicals in 1955 and has undergone a series of operational expansions since then. The facility was purchased by Texaco Chemical Company in 1980 and then by Huntsman Corporation in 1994. Texas Petrochemical purchased the facility in 2006, and Texas Petrochemical subsequently underwent a name change to TPC Group in 2010.³

The PNO facility receives, stores, and ships BD, crude C4 (i.e., mixed four-carbon olefins), and raffinate. The terminal is divided into 21 blocks. Blocks 1 through 19 constitute the facility’s primary fenceline located west of Highway 136 and north of Highway 366. The terminal includes tankage operations, administrative buildings, maintenance buildings, laydown yards, contractor staging areas, and the out-of-service north flare. Block 20 is approximately 0.5 miles to the north of the rest of the PNO facility along the Neches River. Block 20 includes two marine unloading/loading docks and a flare co-owned by TPC and Lion Elastomers. TPC operates the docks. Block 21 is south of Highway 366 and west of Highway 136 within a separate property controlled by Indorama Ventures. Block 21 includes four TPC owned-and-operated railcar loading racks, and the TPC-owned south flare, which is out of service. Block 21 also includes the joint wastewater treatment plant (JWWTP), which is jointly owned by TPC Group, Lion Elastomers, Inc., and Indorama Ventures.

The TPC PNO terminal receives and ships out via pipeline crude C4, BD, and raffinate. PNO receives and ships out crude C4, BD, and raffinate via marine docks, and unloads styrene for shipment to Lion Elastomers. PNO mainly unloads crude C4 at the railcar racks, although the racks can also unload and load raffinate and load BD.

The PNO facility currently maintains the following storage tanks, which are also depicted visually on the PNO Facility Terminal Coverage General Arrangement Plant Map (Bates TPC-PNO-EPA2-000044):

- Tanks that are in service and currently in use include: 20 tanks owned and operated by TPC used for the storage of BD, crude C4, and raffinate; two methanol atmospheric storage tanks

¹ Contact; TPC Group; <https://www.tpcgrp.com/contact> (accessed May 24, 2023).

² Risk Management Plan Re-submission; Plan Sequence Number 1000103622; Texas Petrochemicals, LLC; Completeness Check December 14, 2022.

³ TPC Group Timeline; TPC Group; <https://www.tpcgrp.com/about/history> (accessed May 24, 2023).

owned by Indorama but operated by TPC; and, six methyl *tert*-butyl ether (MTBE) tanks, some owned by TPC and some owned by Indorama, but all operated by TPC.

- Tanks that have been emptied and degassed and are not currently in use comprising 27 tanks.
- Tanks emptied but not degassed and not currently in use comprising 18 tanks.
- Tanks that are out of service comprising 21 tanks.

Blocks 10, 12, 16, and 19 are entirely out of service. Blocks 16 and 19 have been out of service for at least 25 years and were abandoned in place by prior owner Texaco Chemical Company. Blocks 10 and 12 have been out of service since the November 27, 2019, incident. Block 12 was partially in use at the time of the incident and Block 10 was the site of the incident.

On November 27, 2019, PNO experienced a series of explosions and resulting fires in the South Group processing area located within Block 10. At the time of the incident, PNO produced BD from the extraction and distillation of crude C4. High-purity BD had undergone polymerization to form popcorn polymer in a “dead leg” (i.e., zone of stagnant flow) that was formed when the Final Fractionator Primary Pump was brought out of service. The popcorn polymer grew and expanded over the 114-day period the Primary Pump was out of service, rupturing the piping and resulting in the release of a vapor cloud that ignited and initiated a series of explosions and fires. Block 10 was severely damaged and Block 5 also experienced damage. The fires were extinguished on January 4, 2020.^{4,5}

After extinguishing the fires, TPC inspected piping to ensure it was fit for service for de-inventorying and then de-inventoried all process vessels and tanks at the facility through July 2020. TPC conducted a series of process hazard analyses (PHAs) and issued a series of management of change (MOC) reviews for bringing the facility back online to operate only as a terminal. The terminal was brought online in stages, beginning with the docks for unloading raffinate directly into the pipeline. Facility tanks were then returned to service for receiving and blending raffinate received from the dock unloading/loading operations. Subsequent phases returned tanks to service for storage of crude C4 and BD, respectively, and initiated operational changes to increase facility storage capacity. During the inspection, facility personnel indicated that, before any tanks were brought into service, TPC conducted a turnaround and inspection (T&I) on each tank and implemented improvements to meet current design and construction standards. According to facility personnel, the completion date of the recommissioning T&I conducted for each active and in-service tank reset the baseline date for determining the next regular mechanical integrity inspection dates.

The PNO facility has five fenceline monitors that monitor for BD, one of which is on the north side of the facility that also monitors for styrene emissions from the Lion Elastomers facility.

⁴ *South 4 Group Fire at PNO*; TPC Group LLC; August 5, 2020; Bates TPC-PNO-EPA-000911-001510.

⁵ *Popcorn Polymer Accumulation, Pipe Rupture, Explosions, and Fires at TPC Group Chemical Plant Butadiene Unit*; No. 2020-02-I-TX; U.S. Chemical Safety and Hazard Investigation Board; December 2022; <https://www.csb.gov/tpc-port-neches-explosions-and-fire/>.

PURPOSE OF THE INSPECTION

EPA inspected the TPC PNO facility from May 10, 2023, through May 11, 2023, to evaluate compliance with the requirements of the Clean Air Act (CAA) § 112(r), the Emergency Planning and Community Right-to-Know Act (EPCRA) §§ 302-312, and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) § 103. While at the Facility, the inspection team focused on the Facility's implementation of and compliance with the requirements of the Chemical Accident Prevention Provisions of Title 40 of the Code of Federal Regulations (CFR) Part 68 under CAA § 112(r). The inspection team further focused on:

- Equipment currently in high-purity 1,3-butadiene (BD) service;
- Areas where idle or out-of-service equipment had been blinded and/or air-gapped from in-service equipment;
- Areas where idle or out-of-service equipment was known to have an active connection and/or common tie-in with in-service equipment;
- Mechanical integrity task tracking; and
- BD dead leg administrative task tracking.

In preparation for the inspection, Clarissa Howley Mills of U.S. EPA Region 6 verbally informed and sent an electronic notice of inspection and preparatory request for information (RFI) to Scott Elliot and Scott Janoe with Baker Botts L.L.P, external counsel for TPC, on May 5, 2023. The RFI included an initial list of documentation that the inspection team intended to review upon their arrival at the Facility on May 10, 2023, and additionally informed TPC that the EPA inspection team intended to request additional documentation for off-site review in follow-up to the on-site inspection. Mr. Elliot confirmed receipt of the notice of inspection on behalf of the TPC Group – Port Neches Operations Facility on May 5, 2023, during a meeting held with U.S. EPA Region 6.

OPENING MEETING

The EPA inspection team held an in-person opening meeting with Facility personnel at 8:30 am CDT on May 10, 2023, in the administrative building in Block 1 of the Facility. Inspectors Gaglione and Good presented their credentials and Facility personnel introduced themselves. The inspection team viewed a safety presentation presented by Facility personnel. Inspector Gaglione stated that the scope of the inspection was the Facility's implementation of and compliance with the requirements of CAA § 112(r), EPCRA §§ 302-312, and CERCLA § 103. He presented the Facility with the notice of inspection form and the notice of right to claim confidentiality form for the Facility's representatives to review and sign. Inspector Gaglione informed the Facility of the right of employees and their representatives to participate in the inspection per CAA § 112(r)(6)(L). Facility personnel stated that Facility employees are represented by the United Steelworkers (USW) union and the Facility's USW chair was informed of the EPA inspection being conducted.

INSPECTION OVERVIEW

While at the Facility, the inspection team performed field walk-throughs of Blocks 3, 8, 10, and 12 of the Facility, conducted interviews with Facility personnel, and requested documents for off-site review.

While on-site, the inspection team requested additional documentation to support the Facility's implementation of CAA § 112(r) RMP requirements. The Document Review/Request List (see Attachment 1) recorded each document identified for further review by the inspection team. The inspection team provided a copy of the document request list to TPC at the conclusion of the inspection and a hardcopy was signed.

EPA received the first document production in response to the document request from TPC on May 26, 2023.

FIELD OBSERVATIONS

On May 10, 2023, Facility representatives escorted the inspection team to Blocks 3, 8, and 12 of the Facility. On May 11, 2023, Facility representatives escorted the inspection team to Block 10 of the Facility. Over the course of the facility walk-throughs conducted on May 10, 2023, and May 11, 2023, the inspection team took a total of 37 photographs of process equipment. These photographs and a photograph log are provided as Attachment 2.

Observations made during the walkthrough of the processing units include:

- EPA notes that TPC updated its pipe labeling procedure in March 2022. However, during the walk-through of Blocks 3 and 8 conducted on May 10, 2023, the EPA inspection team observed a lack of consistent pipe labeling practices for piping containing BD. The EPA inspection team also observed that, in some instances, process piping lacked labeling. Examples of observations associated with such conditions can be found in photographs Bates TPCEPAERG_0012, TPCEPAERG_0013, TPCEPAERG_0014, TPCEPAERG_0015, and TPCEPAERG_0024.

The provisions of National Fire Protection Association (NFPA) 1 (Section 60.5.1.6.2(2); 2012), NFPA 400 (Section 21.3.1.4.4.1; 2016), and American Society of Mechanical Engineers (ASME) A13.1 (Section 3.1; 2015) state that process piping should be marked in a consistent and legible manner to indicate contents, direction of flow, and physical state (e.g., pressure and temperature) so as to appropriately identify any hazards associated with pipe contents.

- The EPA inspection team made the following observations related to the labeling of BD dead legs (BDDLs) at the facility:
 - Piping and instrumentation diagram (P&ID) drawing number F-O-1-28701 (Bates TPC-PNO-EPA2-000007) shows the BD dead leg on the suction side of pump 6-G-271B to be labeled as BDDL 5.10. However, the inspection team observed the placard affixed to the piping to be labeled as 5.1, although the painted pipe label was identified as 5.10 (see photograph Bates TPCEPAERG_0018).

- P&ID drawing number F-O-1-25869 (Bates TPC-PNO-EPA2-000015) shows BD dead leg BDDL 3.15 is defined as the stagnant line formed between the 8-inch manual block valve and the tee on the high suction line to pump 6-G-97 (line number P-8”-PN01CS1S85-4367-NI), when the block valve is closed when tank 6-TK-101 is brought out of service. However, the inspection team observed that this section of the pipe did not have a BD dead leg label or placard in the field (see photographs Bates TPCEPAERG_0024).
- The EPA inspection team observed differences between information contained in P&IDs and the actual equipment observed in the field, specifically:
 - Block 3 Tank 6-TK-109, P&ID drawing number F-O-1-22421 (Bates TPC-PNO-EPA2-000001):
 - Local pressure indicators (PI) PI-138 and PI-139 at grade were not labeled and were not readily identifiable (see photographs Bates TPCEPAERG_0001 and TPCEPAERG_0002).
 - Local PI-00109A on the top of tank 6-TK-109 was observed to be broken.
 - Inspectors observed exposed wiring in an open electrical junction box on the top of tank 6-TK-109 (see photograph Bates TPCEPAERG_0004).
 - Block 3, 6-F-217 / 6-F-218, P&ID drawing number F-O-1-25857 (Bates TPC-PNO-EPA2-000006):
 - The P&ID shows a car-sealed open 1-inch manual block valve between the outlet of pressure relief valve 6RV-640 and a tee junction on the relief line. However, the inspection team observed the car-sealed 1-inch manual block valve to be downstream of the tee junction (see photographs Bates TPCEPAERG_0015 and TPCEPAERG_0017).
 - Block 8, 6-TK-101/104, P&ID drawing number F-O-1-25869 (Bates TPC-PNO-EPA2-000015):
 - The P&ID shows a spectacle blind installed on the upstream side of the 8-inch manual block valve on the high suction line from 6-TK-101 (line P-8”-PN01CS1S85-4367-NI). However, the inspection team did not observe a spectacle blind installed in the field (see photograph Bates TPCEPAERG_0024).
 - The P&ID shows a 1-inch bleeder valve installed upstream of the 8-inch manual block valve on the low suction line from 6-TK-101 (line P-8”-PN01CS1S85-4368-NI). However, the inspection team did not observe this bleeder valve in the field.

DOCUMENTATION REVIEW

In response to the EPA inspection team’s document request provided to facility personnel on May 11, 2023, TPC provided an initial set of responsive documentation to EPA on May 26,

2023. At the time of this inspection report, the EPA inspection team was awaiting a full response to the May 11 2023, inspection information document request. The EPA inspection team notes that TPC has since provided a full set of responsive documentation to EPA as of June 8, 2023.

The following provides a summary of EPA's review of the documentation received at or prior to the time of this inspection report.

40 CFR § 68.10 – Applicability

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.15 - Management Systems

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.22 - Offsite Consequence Analysis

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.42 – Five Year Accident History

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.65 - Process Safety Information (PSI)

The EPA inspection team requested pressure relief valve (PRV) sizing and design basis documentation for the PRVs installed for over-pressurization protection of Tank 101 (6-TK-101) and Tank 109 (6-TK-109). In response to this request, the TPC PNO facility provided Pressure Relief/Safety Valve Specification information for the PRVs associated with 6-TK-101 and 6-TK-109.

6-TK-109 is a refrigerated BD tank located in Block 3 at the facility. The tank is protected by two PRVs, 7RV138 and 7RV139, each of which are rated at a set pressure of 50 pounds per square inch, gauge (psig). 7RV138 and 7RV139 are located at the top of the refrigerated BD sphere and are sized such that the two PRVs working together are sized adequately to protect 6-TK-109 from over-pressure events (Bates TPC-PNO-EPA2-000970). However, the P&ID F-O-1-22421 for 6-TK-109 includes a note that states, “Only one RV required to be in service. Carseal only required for current online RV (“138” or “139”)” (TPC-PNO-EPA2-000001). This note is in direct contradiction to the PRV design information for both 7RV138 and 7RV139, which states that the “... existing relief device is adequately sized to handle all scenarios when working in conjunction with [7RV138/7RV139] to protect 6TK109” (Bates TPC-PNO-EPA2-000976 and TPC-PNO-EPA2-001005). Therefore, the P&ID F-O-1-22421 provides an incorrect statement regarding how PRVs 7RV138 and 7RV139 were designed and intended to operate.

40 CFR § 68.67 - Process Hazard Analysis (PHA)

PHAs at the TPC PNO facility are conducted in accordance with a TPC Group Level 1 Procedure, specifically *Process Hazard Analysis – EHS-PSM-ALL-1210* (Bates TPC-PNO-EPA2-000758 through TPC-PNO-EPA2-000792). Generally, PHAs at the TPC PNO facility are

conducted using the HAZOP methodology with additional Layers of Protection Analyses (LOPAs) conducted as appropriate throughout the PHA process when evaluating specific hazard scenarios, consequences, and any associated safeguards.

Facility personnel reported that they initiated the Management of Change (MOC) and Pre-Startup Safety Review (PSSR) processes, and conducted project-specific PHAs, prior to restarting active operation of the following current product transfers after the November 27, 2019, incident: Crude C4 unloading/loading and tank storage; BD unloading/loading and storage; and, raffinate unloading/loading and storage.

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.69 - Operating Procedures

The TPC PNO facility provided copies of operating procedures for normal operations and emergency shutdown operations at the marine loading/unloading dock for equipment in high-purity BD service. Procedures for spray loading of finished BD, crude BD, and raffinate through the #2 Dock (SOP #228, *Loading Cargo on a Barge – Spray Loading Thru a Liquid Spray Line*, Bates TPC-PNO-EPA2-000902 through TPC-PNO-EPA2-000906) and spray loading of finished BD, crude BD, raffinate, and isobutylene through the #3 Dock (SOP #327, *No. 3 Dock Loading Cargo on a Barge – Spray Loading Thru a Liquid Spray Line*, Bates TPC-PNO-EPA2-000920 through TPC-PNO-EPA2-000924) were provided, which list the Purpose, Safety & Health Considerations, Safety Systems & Their Functions, and Procedure Steps relevant to each operation.

While SOP #228 and SOP #327 provide narrative descriptions of the Safety & Health Considerations and Safety Systems & Their Functions associated with spray loading of liquid via the #2 Dock and #3 Dock, these narrative descriptions only provide generalized references to other resources not included in these specific procedures. For example, both SOP #228 (refer to Bates TPC-PNO-EPA2-000902) and SOP #327 (refer to Bates TPC-PNO-EPA2-000920) include the following statements in the Safety & Health Considerations sections of each procedure:

“Personal protective equipment is required to enter the area and specialized equipment may be required when performing certain tasks. For more specific information regarding sources of hazards and/or precautions that may apply, see applicable: Process Description(s), Operating Guideline(s), Process hazard analyses, Electrical classification plot plan(s), Site and area/plant safety and health procedures, and/or Material safety data sheets.”

Additionally, SOP #228 (refer to Bates TPC-PNO-EPA2-000902) and SOP #327 (refer to Bates TPC-PNO-EPA2-000920) also include the following statements in the Safety Systems & Their Functions sections of each procedure:

“Safety systems for this equipment system are described in the applicable: Process Description(s), Operating Guideline(s), Process hazard analyses, Pressure relief devices design database, and/or Fire protection equipment plot plan(s).”

SOP #228 and SOP#327 do not include: specific operating limits, consequences of deviation and steps to correct and/or avoid deviation; properties of or hazards presented by the chemicals that the TPC PNO facility spray loads at the #2 Dock and #3 Dock; specific personal protective equipment (PPE) requirements; or, any safety systems associated with the #2 Dock and #3 Dock spray loading operations. As such, the TPC PNO facility has not consistently developed and implemented operating procedures that include the all the necessary information to meet requirements of 40 CFR § 68.69(a)(2)-(4) for #2 Dock and #3 Dock spray loading operations.

40 CFR § 68.71 - Training

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.73 - Mechanical Integrity

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.75 - Management of Change (MOC)

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.77 - Pre-Startup Safety Review (PSSR)

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.79 - Compliance Audits

The TPC PNO facility conducted its most recent three-year compliance audit in April 2021. The final report was issued by the Facility's third-party consultant, Applied Engineering Solutions, Inc. (aeSolutions) on June 8, 2021 (Bates TPC-PNO-EPA2-000604 through TPC-PNO-EPA2-000719). The 2021 Compliance Audit was certified by the TPC PNO facility on July 12, 2021 (Bates TPC-PNO-EPA2-000604), and was the first three-year compliance audit conducted after the November 27, 2019 incident (Bates TPC-PNO-EPA2-000608).

The 2021 audit team consisted of three team members, all of which were employed by the TPC PNO facility's third-party consultant, aeSolutions. The audit team reviewed RMP program documentation for all applicable program elements, as well as associated supporting documentation. The audit team also conducted interviews with 27 individuals employed by TPC and other third-party contractors. The 2021 Compliance Audit resulted in 21 findings across nine (9) different program elements, which were summarized in Table 3-2 of the 2021 Compliance Audit (Bates TPC-PNO-EPA2-000617 through TPC-PNO-EPA2-000622).

Findings identified in the 2021 Compliance Audit do not appear to have been promptly responded to and/or corrected, as the EPA inspection team noted that conditions observed and identified as findings in the 2021 Compliance Audit were still present and not corrected at the time of this inspection. Specifically, Finding Number 7 (PSI) from the 2021 Compliance Audit states, "... three out of five electronic P&IDs reviewed did not match current redlined as built P&IDs, nor provide indication that an update was in progress in the master set of P&IDs (Bates TPC-PNO-EPA2-000619)."

Supporting information provided in support of this finding does not clearly identify each of the P&IDs for which the audit team identified inconsistencies between electronic and redlined as-built versions of this documentation (Bates TPC-PNO-EPA2-000658). However, as identified by the EPA inspection team in the **FIELD OBSERVATIONS** section of this report, inconsistencies were also observed at the time of the inspection between electronic P&IDs and equipment installed in the field.

The EPA inspection team notes that the 2021 Compliance Audit also identified as a finding that the TPC PNO facility had not closed out 17 of 35 findings from the 2018 Compliance Audit (Finding 19; Bates TPC-PNO-EPA2-000622). Based on documentation received by the EPA inspection team at the time this report was drafted, it is unclear if and/or when these 17 outstanding findings from the 2018 Compliance Audit were completed and closed out.

As such, the TPC PNO facility has not promptly determined and documented appropriate responses to each of the findings from either the 2021 or 2018 Compliance Audits, or documented that deficiencies have been corrected, as required under 40 CFR § 68.79(d).

40 CFR § 68.81 - Incident Investigation

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.83 - Employee Participation

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.85 - Hot Work Permits

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.87 – Contractors

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

40 CFR § 68.95 - Emergency Response

The TPC PNO facility's emergency response procedures (*Testing Inspection and Maintenance Requirements for Emergency Response Equipment*, Bates No. TPC-PNO-EPA2-000752 through TPC-PNO-EPA2-000757) establish testing requirements for all fire protection and emergency response systems in accordance with the provisions of NFPA 25. Specifically, Self-Contained Breathing Apparatus (SCBA) equipment must be inspected visually on a monthly basis by TPC personnel and annually by a third-party contractor in accordance with the requirements of NFPA 1852 (Bates TPC-PNO-EPA2-000753). The EPA inspection team observed an SCBA in the 6-TK-109 area during the Facility walk-through on May 10, 2023, for which the most recent inspections conducted were on November 10, 2021, and November 9, 2022. The inspections consisted of breathing air quality checks (see photograph Bates TPCEPAERG_0022).

40 CFR § 68.195 - Risk Management Plan

The EPA inspection team does not have any areas of concern at this time pending receipt of additional documentation from the TPC PNO facility and further document review.

CLOSE OUT MEETING

Inspector Gaglione conducted the close out meeting at 11:00 AM CDT on May 11, 2023. The close out meeting included facility personnel that participated in the inspection and additional participants on the phone. Inspector Gaglione summarized the inspection activities. He stated that the inspection team did not have any areas of concern to share at the time of the close out meeting pending receipt and review of all requested documents. The inspection team shared minor P&ID discrepancies the inspection team observed during the field walk-through portion of the inspection. The inspection team summarized the next steps and timeframe for completion of EPA's inspection report that will be shared with TPC, and the expected coordination between EPA and TPC. The inspection team thanked the facility for their cooperation and accommodation and then ended the meeting and phone call. Immediately following the conclusion of the close out meeting with the conference call participants, Inspector Good reviewed the written document request list with the TPC personnel present, and a hard copy of the request was printed and signed by TPC.

AREAS OF CONCERN

1. AOC 1, 40 CFR § 68.65(d)(1)(ii) – *Information pertaining to the equipment in the process shall include: Piping and instrument diagrams (P&ID's).*

- P&ID drawing number F-O-1-25857 (Bates TPC-PNO-EPA2-000006) shows a car-sealed open 1-inch manual block valve between the outlet of pressure relief valve 6RV-640 and a tee junction on the relief line. However, the inspection team observed the car-sealed 1-inch manual block valve to be downstream of the tee junction. Therefore, the P&ID drawing number F-O-1-25857 did not accurately match the equipment as built.
- P&ID drawing number F-O-1-25869 (Bates TPC-PNO-EPA2-000015) shows a spectacle blind installed on the upstream side of the 8-inch manual block valve on the high suction line from 6-TK-101 (line P-8"-PN01CS1S85-4367-NI). However, the inspection team did not observe a spectacle blind installed in the field. Therefore, the P&ID drawing number F-O-1-25869 did not accurately match the equipment as built.
- P&ID drawing number F-O-1-25869 (Bates TPC-PNO-EPA2-000015) shows a 1-inch bleeder valve installed upstream of the 8-inch manual block valve on the low suction line from 6-TK-101 (line P-8"-PN01CS1S85-4368-NI). However, the inspection team did not observe this bleeder valve in the field. Therefore, the drawing number P&ID F-O-1-25869 did not accurately match the equipment as built.
- P&ID drawing number F-O-1-22421 (Bates TPC-PNO-EPA2-000001) includes a note that states "*Only one RV required to be in service. Carseal only required for current online RV ("138" or "139")*". However, PRV design basis documentation for 7RV138 (Bates TPC-PNO-EPA2-000967 through TPC-PNO-EPA2-000988) and 7RV139 (Bates TPC-PNO-EPA2-000989 through TPC-PNO-EPA2-001010) contradicts this statement in

the P&ID and specifically states that the existing relief devices are only adequately sized to protect 6-TK-109 when both are in-service together. Therefore, the P&ID drawing number F-O-1-22421 provides an incorrect note regarding PRVs 7RV138 and 7RV139.

2. AOC 2, 40 CFR § 68.65(d)(2)-(3) – Information pertaining to the equipment in the process.

(2) The owner or operator shall document that equipment complies with recognized and generally accepted good engineering practices.

(3) For existing equipment designed and constructed in accordance with codes, standards, or practices that are no longer in general use, the owner or operator shall determine and document that the equipment is designed, maintained, inspected, tested, and operating in a safe manner.

- During the walk-through of Blocks 3 and 8 conducted on May 10, 2023, the EPA inspection team observed a lack of consistent pipe labeling practices for piping containing BD. The EPA inspection team also observed that, in some instances, process piping lacked labeling. Examples of observations associated with such conditions can be found in photograph Bates TPCEPAERG_0012, TPCEPAERG_0013, TPCEPAERG_0014, TPCEPAERG_0015, and TPCEPAERG_0024.

The provisions of NFPA 1 (Section 60.5.1.6.2(2); 2012), NFPA 400 (Section 21.3.1.4.4.1; 2016), and ASME A13.1 (Section 3.1; 2015) state that process piping should be marked in a consistent and legible manner to indicate contents, direction of flow, and physical state (e.g., pressure and temperature) so as to appropriately identify any hazards associated with pipe contents.

3. AOC 3, 40 CFR § 68.69(a)(2)-(4) – The owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address at least the following elements.

(3) Safety and health considerations:

(i) Properties of, and hazards presented by, the chemicals used in the process;

(ii) Precautions necessary to prevent exposure, including engineering controls, administrative controls, and personal protective equipment;

(4) Safety systems and their functions.

- SOP #228 (Bates TPC-PNO-EPA2-000902 through TPC-PNO-EPA2-000906) and SOP#327 (Bates TPC-PNO-EPA2-000920 through TPC-PNO-EPA2-000924) do not include: specific operating limits, consequences of deviation and steps to correct and/or avoid deviation; properties of and hazards presented by the chemicals the TPC PNO facility spray loads at the #2 Dock and #3 Dock; specific personal protective equipment (PPE) requirements; or, any safety systems and their functions associated with the #2 Dock and #3 Dock spray loading operations.

4. AOC 4, 40 CFR § 68.73(e) – Equipment deficiencies. 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.

- Local PI-00109A on the top of 6-TK-109 was observed to be broken. Therefore, the facility failed to correct equipment deficiencies before further use.

5. AOC 5, 40 CFR § 68.79(d) – *The owner or operator shall promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected.*

- Several of the findings identified in the 2021 Compliance Audit do not appear to have been promptly responded to and/or corrected, as the EPA inspection team noted that conditions observed and identified as findings in the 2021 Compliance Audit were still present and not corrected at the time of the inspection. Specifically, issues identified as part of Finding 7 (PSI) from the 2021 Compliance Audit were still present and not corrected at the time of the inspection. The 2021 Compliance Audit also identified a finding (Finding 19) which stated that the TPC PNO facility had not closed out 17 of 35 findings from the 2018 Compliance Audit at the time of the 2021 Compliance Audit.

POST INSPECTION FOLLOW UP

After the inspection, EPA received additional information from TPC on July 12, 2023, noting follow up actions and clarifications related to several of the areas of concern.

LIST OF ATTACHMENTS

Attachment 1: Document Review/Request List

Attachment 2: Photographs and Photograph Log