



1206 San Antonio Street
Austin TX, 78701
512-637-9477
www.environmentalintegrity.org

April 21, 2023

Earthea Nance, PhD, PE, Administrator
Cheryl Seager, Dir. Of Enforcement
US EPA Region 6
1201 Elm Street, Suite 500
Dallas, TX 75270

Re: Comments on Administrative Order Regarding Accident Risk at TPC Group Houston Plant

Dear Administrator Nance and Director Seager:

We write to call your attention to ongoing health and environmental threats posed by TPC's petrochemical plant in Houston, Texas. On August 23, 2022, EPA and TPC concluded an Administrative Order on Consent to resolve the Houston plant's failure to comply with Clean Air Act Section 112r risk management and accident prevention requirements. The AOC identified certain operating defects at the Houston plant that closely resemble those linked to the devastating explosion at the TPC plant in Port Neches in November 2019.

We write to respectfully request that EPA make public all documents that confirm that TPC has taken the corrective actions required to ensure the safe operation of the Houston plant, and that EPA take the additional measures outlined below.

The 2019 Port Neches Explosion Was an Avoidable Disaster

On November 27, 2019, TPC Group's (TPC) Port Neches Operations facility exploded after highly flammable butadiene leaked from a malfunctioning process unit. The series of explosions caused a process tower to propel through the air and land within the facility, extensive facility damage, and fires that burned for more than a month. Jefferson County officials declared the county to be in a state of disaster and issued a mandatory four-mile radius evacuation order that affected people in the cities of Port Neches, Groves, Nederland, and a portion of Port Arthur.¹

The U.S. Chemical Safety and Hazard Investigation Board investigated the incident and found that a dangerous substance known as popcorn polymer, which is prone to forming in processes with high-purity butadiene, accumulated in a temporary dead leg that was created when a process pump was taken out of service for maintenance. Popcorn polymer is dangerous because once it forms, its

continued growth and expansion can generate high pressures that ultimately rupture equipment. The pump that was taken out of service remained offline for 114 days. During this extensive offline period, the popcorn polymer developed and exponentially expanded in the dead leg piping section until the internal piping pressure increased to the point that the piping ruptured, releasing butadiene from the process unit.²

TPC's Houston Plant Has the Same Problems that Led to the Port Neches Disaster

After the 2019 Port Neches disaster, EPA wisely decided to investigate the company's similar Houston operations. Nearly 8,000 people live within a mile of the Houston plant, and 129,000 people live within three miles. These communities are 94 percent people of color, mostly Latino. The population around the Houston plant is significantly larger than the number of people living near the Port Neches plant, and so an accident at the Houston plant could be disastrous.

As the following excerpts from your Agency's August 2022 administrative order illustrate, the safety hazards identified by EPA appear to be the same ones that the Chemical Safety Board determined caused the Port Neches explosion.³

Excerpts from EPA findings in 8/23/2022 Administrative Order on Consent:

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

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

43. The design of the facility includes at least 63 dead legs.

44. At least 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 release.

45. TPC was unable to identify the status of at least 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 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.⁴

Conclusion and Request for EPA Action

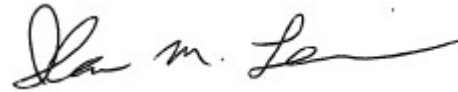
Based on the EPA's findings at the Houston Plant, it appears that TPC may not yet have learned how to avoid problems that led to one of the biggest industrial accidents in recent years. Already this year, 5,472 pounds of butadiene was released in just half an hour due to a January 12th tank failure.⁵

We call on EPA to take all available measures to ensure that TPC addresses the problems the Agency identified in its investigation. In addition, we respectfully request your response to these questions:

- Will EPA seek a penalty for TPC's failure to comply with Risk Management Plan accident prevention rules and other relevant Clean Air Act requirements given the company's obvious failure at the Houston plant to address the problems that caused the Port Neches explosion?
- Will EPA confirm publicly that TPC has addressed all of the issues identified in the Administrative Order (Houston plant) and CSB investigation (Port Neches plant), and will TPC's remedial actions be publicly identified?
- Is EPA willing to schedule a public meeting to address concerns about the safety hazards that EPA has found at the Houston plant, and the steps EPA plans to take to assure that the Houston plant continues to operate the Houston plant in a safe manner after its initial compliance with the AOC requirements?
- Will EPA require fence line monitoring of butadiene at TPC sites, and will EPA make the information publicly available?

We look forward to your responses. Thank you for your attention to this matter.

Sincerely,



Ilan Levin
Environmental Integrity Project
1206 San Antonio Street
Austin, Texas 78701
ilevin@environmentalintegrity.org
(512) 619-7287

Eric Schaeffer
Environmental Integrity Project
1000 Vermont Ave., NW, Ste. 1100
Washington, DC 20005
eschaeffer@environmentalintegrity.org
(202) 664-9954

CC: Delia Iris Gonzalez, Chief of Staff to Dr. Nance, Gonzalez.Delia@epa.gov