

**Region 6 - Enforcement & Compliance Assurance Division**  
**INSPECTION REPORT**

|                                        |                                                                                                                                                          |                                    |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Inspection Date(s):                    | August 2, 2022 – August 5, 2022                                                                                                                          |                                    |
| Media Program:                         | Air                                                                                                                                                      |                                    |
| Regulatory Program(s)                  | Clean Air Act Section 112(r) and 40 Code of Federal Regulations (C.F.R.) Part 68 Chemical Accident Prevention Provisions – Risk Management Program (RMP) |                                    |
|                                        |                                                                                                                                                          |                                    |
| Company Name:                          | INEOS Americas, LLC                                                                                                                                      |                                    |
| Facility Name:                         | INEOS Phenol, Pasadena                                                                                                                                   |                                    |
| Facility Physical Location:            | 3503 Pasadena Freeway                                                                                                                                    |                                    |
| (city, state, zip code)                | Pasadena, Texas 77503                                                                                                                                    |                                    |
| Mailing address:                       | P.O. Box 1959                                                                                                                                            |                                    |
| (city, state, zip code)                | Pasadena, Texas 77501                                                                                                                                    |                                    |
| County/Parish:                         | Harris County                                                                                                                                            |                                    |
| Facility Phone Number                  | 713.920.4300                                                                                                                                             |                                    |
| Facility Contact:                      | Amy Narvaez, Site Manager                                                                                                                                |                                    |
|                                        | <a href="mailto:Amy.narvaez@ineos.com">Amy.narvaez@ineos.com</a>                                                                                         |                                    |
|                                        |                                                                                                                                                          |                                    |
| RMP ID:                                | 100000131582                                                                                                                                             |                                    |
| Identification/Permit Number:          | N/A                                                                                                                                                      |                                    |
| FRS:                                   | 110000462623                                                                                                                                             |                                    |
| NAICS:                                 | 32511 Petrochemical Manufacturing                                                                                                                        |                                    |
| SIC:                                   | N/A                                                                                                                                                      |                                    |
|                                        |                                                                                                                                                          |                                    |
| Personnel participating in inspection: |                                                                                                                                                          |                                    |
| Charese Simpson                        | EPA Region 6                                                                                                                                             | Inspector                          |
| Amy Narvaez                            | INEOS Americas LLC                                                                                                                                       | Site Manager                       |
| Pedro Hernandez                        | INEOS Americas LLC                                                                                                                                       | Sr. Health and Safety Professional |
|                                        |                                                                                                                                                          |                                    |
|                                        |                                                                                                                                                          |                                    |
|                                        |                                                                                                                                                          |                                    |
|                                        |                                                                                                                                                          |                                    |
|                                        |                                                                                                                                                          |                                    |
|                                        |                                                                                                                                                          |                                    |
|                                        |                                                                                                                                                          |                                    |
|                                        |                                                                                                                                                          |                                    |
|                                        |                                                                                                                                                          |                                    |
|                                        |                                                                                                                                                          |                                    |
|                                        |                                                                                                                                                          |                                    |
| EPA Lead Inspector<br>Signature/Date   |                                                                                                                                                          | 9/21/2022                          |
|                                        | Charese Simpson                                                                                                                                          | Date                               |
|                                        |                                                                                                                                                          |                                    |
| Supervisor<br>Signature/Date           |                                                                                                                                                          |                                    |
|                                        | Samuel Tates                                                                                                                                             | Date                               |

## **Section I – INTRODUCTION**

### **PURPOSE OF THE INSPECTION**

I, Charese Simpson, United States Environmental Protection Agency (EPA) Region 6 inspector arrived at the INEOS Americas, LLC (INEOS) facility at 9:00 AM on Tuesday August 2, 2022, for an announced inspection. I met with Amy Narvaez and Pedro Hernandez for an opening meeting. I presented my credentials and informed INEOS personnel that this was an EPA inspection to determine compliance with the federal Chemical Accident Prevention Program. The scope of the inspection was a partial compliance evaluation (PCE), which included an evaluation of the facility's compliance with the Clean Air Act (CAA) Section 112(r) and the Chemical Accident Prevention Provisions in 40 C.F.R. Part 68 and the General Duty Clause. INEOS's Risk Management Plan (RMP) is listed as a Program Level Three (3), Non-Title V facility. I inquired if an employee representative was available pursuant to Section 112(r)(6)(L) of the CAA to participate in this inspection and was informed that the INEOS plant is a non-union facility.

### **FACILITY DESCRIPTION**

INEOS Americas, LLC facility is located at 3503 Pasadena Freeway in Pasadena, Texas 77503. The facility's primary activities are the manufacture of cumene. INEOS receives and stores propylene and propane together as a mixture (P/P mix). Both chemicals are covered together as a flammable mixture for purposes of the risk management plan. The propylene in the P/P mix is used to produce cumene, while the propane passes through their process and is sold. INEOS brings in the P/P mix by tank truck, railcar, and pipeline. Propane is shipped from the facility primarily by pipeline but can also be exported via tank truck. INEOS's regulated process includes one RMP-Covered Unit: Cumene Process. INEOS handles a flammable mixture that consists of two regulated flammable chemicals under the Risk Management Program – Propylene [1-Propene] (CAS# 115-07-1); Propane (CAS# 74-98-6). Approximately 48 full time employees work at the site, in addition to the independent contractors that work at the plant.

## **Section II – OBSERVATIONS**

On Thursday August 4, 2022, I was accompanied by INEOS's personnel to conduct a tour of the site. I observed the process unit and control room. I concluded to focus this inspection on the Cumene Unit. I also interviewed operators and discussed how operators access standard operating procedures (SOPs) electronically through INEOS's database, and SharePoint. In addition, I asked operators questions about their Management of Change (MOC) process and how to access an MOC when a change is made. Prior to the tour, I was provided with piping and instrumentation drawings (P&IDs) of the process unit that assisted in the tour. In addition, INEOS provided me with the facility overview and a safety orientation video prior to making entry to the site.

### **Subpart A – General**

**40 C.F.R. § 68.10 Applicability** – INEOS Americas is the owner/operator of a stationary source that has more than threshold quantities of a flammable mixture that consists of two regulated flammable substances (propylene [1-Propene] and propane) in the covered process, as listed in 40 C.F.R. § 68.130, and, as such, is subject to the Chemical Accident Prevention Provisions. INEOS is a Non-Title V facility. INEOS is subject to the Occupational Safety and Health Administration (OSHA) process safety management (PSM) standard, 29 C.F.R. § 1910.119, and has one (1) Program Level Three (3) process

under OSHA PSM.

**40 C.F.R. § 68.10 Program Eligibility** – I reviewed INEOS’s RMP registration submitted on June 12, 2019, which lists one process that consists of a flammable mixture. INEOS determined that this process met the requirements of Program Level Three. For the five years prior to the current RMP registration, the facility has not had an accidental release of a regulated substance that resulted in death, injury, or off-site response at an environmental receptor, per § 68.10(g)(1). Since the distance to a flammable endpoint for worst-case release assessments conducted under subpart B and § 68.25 includes public receptors, the facility does not meet the criteria to be a Program Level One facility.

**40 C.F.R. § 68.15 Management** – INEOS developed a management system to oversee the implementation of risk management program elements, documented persons responsible for implementing the individual requirements of the risk management program and defined the lines of authority using its RMP Management Organizational Chart which lists responsibilities.

#### **Subpart B – Hazard Assessment**

**40 C.F.R. § 68.20 Applicability** – INEOS has one (1) Program Level Three process subject to this subpart. The facility is required to prepare an off-site consequence analysis and complete the five-year accident history.

**40 C.F.R. § 68.22 Off-Site Consequence Analysis Parameters** – INEOS used parameters required in this part to calculate flammable worst-case and alternative release scenarios. INEOS used RMP\*Comp™ and Google Earth as the technique for modeling the release scenarios. For both the worst-case and alternative case scenarios involving flammables, the facility used the endpoints provided in Appendix A of 40 C.F.R. Part 68, appropriate wind speeds and stability classes, ambient temperatures and humidity values, values for height of the release, and surface roughness values for the release scenario analyses.

**40 C.F.R. § 68.25 Worse-Case Release Scenario Analysis** – During the inspection, I reviewed documentation from INEOS regarding the worst-case release scenario analysis for the one flammable process. This analysis used the RMP\*Comp™ and Google Earth Model. INEOS analyzed and reported in the RMP one worst-case release scenario, estimated to create the greatest distance to endpoint, and resulting from an accidental release of a regulated flammable substance from a covered process under worst-case conditions. The worst-case release quantity was determined by the greatest amount held in a single vessel, considering administrative controls that limit the maximum quantity released.

**40 C.F.R. § 68.28 Alternative Release Scenario Analysis** – INEOS identified and documented the alternative release scenario to represent all flammable substances held in a covered process, using a scenario that is likely to occur. The flammable alternative case scenario listed is related to a release in the Cumene Unit. INEOS utilizes the RMP\* Comp™ software, Google Earth, and off-site consequences guidance calculations. They maintain aerial photos showing the alternative release scenario endpoint distance radius and a circle centered on the approximate location of the unit that is considered in the alternative release scenario, thus meeting the requirements of the regulation.

**40 C.F.R. § 68.30 Defining Off-Site Impacts - Population** – INEOS used the most current (2010) Census Bureau population data and the distances to endpoints, as specified in the regulation, to calculate the population numbers reported in their RMP. In addition, INEOS utilizes Google Earth mapping program to define the affected off-site population.

**40 C.F.R. § 68.33 Defining Off-Site Impacts - Environment** – INEOS identified environmental receptors in the distance to the endpoint or in the vicinity of the facility, as appropriate, in the area maps used for the modeling.

**40 C.F.R. § 68.36 Review and Update** – INEOS reviewed and updated the off-site consequence analyses at least once every five years, as required by this subpart.

**40 C.F.R. § 68.39 Documentation** – INEOS maintained records of the offsite consequence analyses in accordance with this subpart. These records included:

- documentation of vessels or pipelines;
- substances selected for worse case and alternative release scenarios;
- documentation of estimated quantity released, release rate, and duration of release;
- methodology used to determine distance to endpoint; and,
- data used to estimate population and environmental receptors

**40 C.F.R. § 68.42 Five-year accident history** – I reviewed INEOS’s five-year accident history and OSHA 300 Logs from 2017 to present. I did not identify any accidental releases from the covered process that resulted in one or more of the following: on-site deaths, injuries, significant property damage on-site, known off-site deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage in its accident history.

#### **Subpart D – Program 3 Prevention Program**

**40 C.F.R. § 68.65 Process Safety Information** – INEOS compiled written process safety information, which includes information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process. Safety Data Sheets (SDSs) for the process chemicals were provided, and detailed process safety information was provided that contains the following data for the hazards of the substances used: toxicity information, permissible exposure limits, physical data, reactivity data, corrosivity data, thermal and chemical stability data, and the hazardous effects of inadvertent mixing of materials that could foreseeably occur. I reviewed documentation concerning the technology of the process, which included a block flow diagram, process chemistry, maximum intended inventory, safe upper and lower limits for such items as temperatures, pressures, flows, or compositions and, an evaluation of the consequences of deviation for each covered process. I reviewed documentation pertaining to the equipment of the process including: materials of construction, piping and instrumentation diagrams (P&IDs), electrical classification, relief system design and design basis, ventilation system design, design codes and standards employed, material and energy balances, and safety systems.

**40 C.F.R. § 68.67 Process hazard analysis (PHA)** – I reviewed INEOS’s PHA procedure. INEOS performed PHAs that identified, evaluated, and controlled the hazards involved in the processes. The facility completes each PHA based on the five-year cycle from the previous PHA. INEOS conducts PHAs using the Hazard and Operability Study (HAZOP) technology but may supplement with the “What-if” checklist technology, depending on the scope and process covered by the PHA.

Each PHA I reviewed addressed the hazards of the process and included: identification of any incident that had a likely potential for catastrophic consequences; engineering and administrative controls applicable to hazards and their interrelationships; consequences of failure of engineering and

administrative controls; stationary source siting factors; human factors; and, an evaluation of a range of the possible safety and health effects of failed controls.

INEOS established a system, Training Mine, to track and promptly address the team's findings and recommendations. INOES failed to assure the recommendations were implemented in a timely manner, and to ensure that the resolutions were documented (*Figure #1*) [AOC #1 - 68.67(e)]. The facility developed a written schedule for action completion. They communicated the actions to operations, maintenance and other employees, whose work assignments are within the process and who may be affected by action recommendations. The findings and recommendations for each PHA were documented.

The PHAs were performed by a team with expertise in engineering and process operations. The team included appropriate personnel from INEOS and in house contractors with knowledge of the facility and in the specific PHA methodology used.

**Figure 1.**

| <b>2019 PHA Revalidation Recommendations</b> |                                  |                 |
|----------------------------------------------|----------------------------------|-----------------|
| <b>Action Item #</b>                         | <b>Action Date of completion</b> | <b>Due Date</b> |
| #11                                          | 6/2/20                           | 2/27/20         |
| #14                                          | 7/13/21                          | 1/27/21         |
| #19                                          | 7/13/21                          | 1/27/21         |
| #21                                          | 7/13/21                          | 1/27/21         |
| #23                                          | 5/21/20                          | 2/27/20         |
| #27                                          | 7/13/21                          | 1/27/21         |
| #28                                          | 7/13/21                          | 1/27/21         |
| #3                                           | 7/13/21                          | 1/27/21         |
| #41                                          | 7/13/21                          | 1/27/21         |
| #49                                          | 3/30/21                          | 1/27/21         |
| #65                                          | 3/16/20                          | 2/27/20         |
| #66                                          | 7/13/21                          | 1/27/21         |
| #8                                           | 3/10/21                          | 1/27/21         |

**40 C.F.R. § 68.69 Operating Procedures** – INEOS developed and implemented written operating procedures that provide instructions or steps for conducting activities associated with each covered process, consistent with the safety information. The operating procedures EPA reviewed addressed: the steps for each operating phase (initial and normal startup, normal operations, temporary operations, emergency operation and shutdown, normal shutdown, and startup following a turnaround or after emergency shutdown); the consequences of deviation and mechanisms to correct and/or avoid deviation; safety and health considerations; the properties of, and hazards presented by, chemicals used in the process; the precautions necessary to prevent exposure; quality control for raw materials; and, the safety systems and their functions. The covered unit has a shared drive where operating procedures are stored electronically. In addition, hard copies of the operating procedures are kept in the control room and are accessible to process operators. During the inspection, I reviewed INEOS's safe work procedures, including lock out/tag out procedures and confined space entry procedures. The company utilizes confined space and safe work permits which is required prior to any contractor entering a

confined space. INEOS is required to annually certify that operating procedures are current and accurate. INEOS provided operating procedure certifications from the years 2017-2021. The operating procedures are deemed current and accurate.

**40 C.F.R. § 68.71 Training** – I reviewed INEOS’s training program procedure and employee training records. The facility’s training program ensured that each employee presently operating a covered process, and each employee newly assigned to a covered process trained or tested to qualify as competent in an overview of the process and in the operating procedures that pertain to their duties. In addition, INEOS’s operators must go through a training program which includes the following: On the job training, testing process that is computer based, and a series of field demonstration tests. Newly hired employees must complete the following trainings: Houston Safety Council training, site specific safety videos, site environmental, health, and safety training, and security training. Training Mine is INEOS’s online training system to house training documents including verification that operators understood the training. INEOS also ensured that operators are completing their refresher training within a three-year period.

**40 C.F.R. § 68.73 Mechanical Integrity** – I reviewed the written procedures INEOS established and implemented to maintain the ongoing integrity of its process equipment. I spoke with INEOS’s Maintenance Manager who explained the facility’s mechanical integrity program and procedures. I reviewed INEOS’s inspection records for RMP covered equipment. INEOS did not have any overdue inspection or testing on fixed or rotating equipment. INEOS’s uses third-party contractors, Turner Industries and Mistras, who conducts INEOS’s mechanical integrity inspection and testing. INEOS houses records of scheduled, completed, and future inspection, preventative maintenance tasks, and mechanical integrity training. During the inspection, INEOS provided training records of personnel who are American Petroleum Institute (API) certified. I reviewed INEOS ultrasonic thickness (UT) and external visual inspection reports for several Class 2 piping circuits. In accordance with API 570: Piping Inspection Code: In-service Inspection, Rating, Repair, and Alteration of Piping Systems, Section 6.3.3, Class 2 circuits visual external inspections are every five-years (Table 1). INEOS failed to ensure that Class 2 piping circuits received visual external inspections every five-years for the following piping circuits: 6-H-1860-11 and 6-H-1006-39 (*Figure 2*) [AOC #2 - 68.73(d)(2)].

**Figure 2.**

| Piping Circuit                                                                                     | External Inspection Date            | Duration                                      |
|----------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------|
| 6-H-1860-11                                                                                        | 8/3/2013                            | -----                                         |
|                                                                                                    | (No external inspection identified) | No external inspection for 2018               |
|                                                                                                    | 10/9/2019                           | One (1) year late for external inspection     |
|                                                                                                    |                                     |                                               |
| 6-H-1006-39                                                                                        | 7/7/2014                            | -----                                         |
|                                                                                                    | 10/10/2019                          | Three (3) months late for external inspection |
| *Note: Refer to the table below for Class 2 circuit inspection frequency for external inspections. |                                     |                                               |

**API 570, Section 6.3.3, Table 1**

| Type of Circuit | Thickness Measurements | Visual External |
|-----------------|------------------------|-----------------|
| Class 1         | 5 years                | 5 years         |
| Class 2         | 10 years               | 5 years         |
| Class 3         | 10 years               | 10 years        |

**40 C.F.R. § 68.75 Management of Change (MOC)** – I reviewed INEOS’s MOC procedure. The written MOC procedure assured the facility managed changes to process chemicals, technology, equipment, procedures, and changes to stationary sources that effect a covered process. The procedure assured that the following considerations were addressed prior to any change: technical basis for change, impact of change on safety and health, modifications to operating procedures, necessary time period for the change, and authorization requirements for a proposed change. At the time of the inspection, I reviewed several MOCs. Employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change were not always trained prior to start up, according to the following MOCs reviewed: MOC #: PAS-PRD-4-2021-20 and PAS-PRD-4-2021-33 **[AOC #3 - 68.75(c)]**. If a change resulted in a change to safety information, this subpart requires such information be updated accordingly.

**40 C.F.R. § 68.77 Pre-startup Safety Review (PSSR)** – I reviewed INEOS’s selected pre-startup safety reviews for the associated MOCs. The PSSRs documented that, when the facility installed a new stationary source, or significantly modified an existing source, a review was conducted prior to the introduction of a regulated substance into the process, the construction and equipment design were completed in accordance with design specifications, required safety, operating, and maintenance procedures, with adequate emergency procedures in place, and training.

**40 C.F.R. § 68.79 Compliance Audits** – INEOS provided their most recent certified RMP Compliance Audits conducted in December 2016 and December 2021. INEOS failed to certify and complete a compliance audit every 3 years. The most two recent compliance audits were December of 2016 (certification date: December 27, 2016) and December of 2021 (certification date: December 17, 2021). There should have been a compliance audit conducted and certified in December 2019 **[AOC #4 - 68.79(a)]**. INEOS’s compliance audit was conducted by at least one person knowledgeable in the processes and they developed a report of the audit findings. INEOS is required to promptly determine and document an appropriate response to each of the findings of the compliance audit, however, INEOS failed to document those deficiencies were corrected promptly **[AOC #5 - 68.79(d)]**. INEOS had several repeat findings from their 2016 audit that are in their 2021 audit. The findings from the 2016 audit were not resolved promptly. In addition, INEOS had an action item (11-C-21) that had a due date of July 7, 2022, but the completion date is July 14, 2022. Regarding this area of concern, INEOS did state that they are working towards improving their system notifying management when compliance audits and action items are coming due.

**40 C.F.R. § 68.81 Incident Investigation** – INEOS provided a list of all incident investigations that occurred within the past five years. Of those reviewed, the incident investigation team consisted of at least one person knowledgeable in the process involved. INEOS has an incident management standard work practice procedure for both near-miss and incident reporting. INEOS investigated each incident that resulted in, or could reasonably have resulted in, a catastrophic release of a regulated substance. During the inspection, I reviewed several RMP related incident investigation reports. INEOS incident investigation reports do not demonstrate a date where incidents are initiated as promptly as possible. According to INEOS incident investigation procedure, “An investigation of incidents will commence

within 48 hours of the incident by a team designated by the Department Manager.” [AOC #6 - 68.81(b)]. In addition, several action items in INEOS’s incident investigation reports were not promptly addressed and were late in being completed. (Figure 3) [AOC #7 – 68.81(e)].

Figure 3.

| Action Item                                                                             | Action Item Due Date | Action Item Completion Date |
|-----------------------------------------------------------------------------------------|----------------------|-----------------------------|
| Communicate incident and learnings...                                                   | 6/27/2019            | 7/9/2019                    |
| Consider installing a block valve for a double block and bleed on high pressure side... | 8/26/2019            | 9/9/2019                    |
| Final review of event...                                                                | 6/12/2019            | 4/21/2020                   |
| Survey other INEOS plants to survey potential solution...                               | 8/26/2019            | 4/20/2020                   |

**40 C.F.R. § 68.83 Employee Participation** – INEOS developed a written plan of action regarding the implementation of the employee participation required by this section, which is integrated into the program elements. INEOS’s written plan describes how they consult with employees on the performance and development of process hazard analyses, and on the development of the other elements of process safety management regarding under the rule. The action plan provides employees access to process hazard analyses and to all other information that must be developed under this rule.

**40 C.F.R. § 68.85 Hot Work Permit** – INEOS provided their hot work and safe work procedure (PHSP-202 and PHSP-200) that detailed guidance for hot work/safe work activities at the site. INEOS has two grades of hot work: spark producing (cutting, welding, and grinding) and non-spark producing. I reviewed a sample of reports that consisted of spark producing work (welding/cutting). Each permit I reviewed documented that fire prevention and protection requirements were implemented prior to beginning hot work operations. The permits I reviewed indicated the dates authorized for hot work. In addition, INEOS conducts a fire watch after hot work ends.

**40 C.F.R. § 68.87 Contractors** – I reviewed INEOS’s contractor procedure. INEOS utilizes the ISNetWorld (ISN) contractor database to evaluate information regarding a contractor’s safety performance and programs. Contractors subscribing to the ISNetWorld system are graded on the following components within the database: OSHA log verification status, verification status, OSHA citation verification status, insurance verification status, and deficiencies. All contractor work performed onsite must be permitted by INEOS. The INEOS site implements safe work practices consistent with § 68.69 (d), to control the entrance, presence and exit of the contractor owner or operator and contract employees via the security gate and badging system.

## Subpart E – Emergency Response

**40 C.F.R. § 68.90 Applicability** – INEOS is designated as a “responding” stationary source in case of an accidental release of a regulated substance, therefore, the facility shall comply with the requirements of part 68.95.

**40 C.F.R. § 68.93 Emergency Response Coordination Activities** – INEOS coordinates with Harris County Fire Department and Local Emergency Planning Committee (LEPC). During the time of the inspection, INEOS provided a document of coordination with local authorities that included the names of the

individuals involved, their contact information, and the nature of the coordination for the recent coordination activities that took place on June 14, 2022.

**40 C.F.R. § 68.95 Emergency response program** – I reviewed INEOS’s emergency response plan. The plan included: procedures for informing the public and local emergency response agencies about accidental releases and procedures and measures for emergency response after an accidental release of a regulated substance. INEOS’s plan failed to include proper documentation of first aid and emergency medical treatment necessary to treat accidental human exposures for propylene or cumene [**AOC #8 – 68.95(a)(1)(ii)**]. The emergency response plan included procedures for the use of emergency response equipment, and for its inspection, testing, and maintenance in relevant emergency response procedures.

**40 C.F.R. § 68.96 Emergency Response Exercises** – As part of coordination with local emergency response officials required by §68.93, INEOS consulted with officials to establish an appropriate frequency for field exercises.

### **Subpart G – Risk Management Plan**

**40 C.F.R. § 68.190 Updates** – INEOS’s RMP was re-submitted on June 12, 2019.

**40 C.F.R. § 68.195 Required corrections** – INEOS’s next RMP registration re-submission is due by June 12, 2024, unless an update or correction is required by 40 C.F.R. § 68.190 or 40 C.F.R. § 68.195 prior to the five-year renewal deadline.

### **Section III – AREAS OF CONCERN**

#### **AOC 1 – 40 C.F.R § 68.67(e) Process Hazard Analysis (PHA)**

“(e) The owner or operator shall establish a system to promptly address the team's findings and recommendations; assure that the recommendations are resolved in a timely manner and that the resolution is documented.”

INEOS failed to assure the recommendations were implemented in a timely manner, and to ensure that the resolutions were documented. (*Refer to Figure 1*)

#### **AOC 2 – 40 C.F.R § 68.73(d)(2) Mechanical Integrity**

“(d) Inspection and testing. (2) Inspection and testing procedures shall follow recognized and generally accepted good engineering practices.”

INEOS failed to ensure that Class 2 piping circuits received visual external inspections every five-years for the following piping circuits: 6-H-1860-11 and 6-H-1006-39. In accordance with API 570, Section 6.3.3, Class 2 circuits visual external inspections are every five-years. (*Refer to Figure 2 and Table 1*)

#### **AOC 3 – 40 C.F.R § 68.75(c) Management of Change (MOC)**

“(c) Employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process shall be informed of, and trained in, the change prior to

start-up of the process or affected part of the process.”

Employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change were not always trained prior to start up, according to the following MOCs reviewed: MOC #: PAS-PRD-4-2021-20 and PAS-PRD-4-2021-33.

#### **AOC 4 – 40 C.F.R § 68.79(a) Compliance Audits**

“(a) The owner or operator shall certify that they have evaluated compliance with the provisions of this subpart at least every three years to verify that procedures and practices developed under this subpart are adequate and are being followed.”

INEOS failed to certify and complete a compliance audit every 3 years. The most two recent compliance audits were December of 2016 (certification date: December 27, 2016) and December of 2021 (certification date: December 17, 2021). INEOS should have certified and completed a compliance audit in December 2019.

#### **AOC 5 – 40 C.F.R § 68.79(d) Compliance Audit**

“(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.”

INEOS is required to promptly determine and document an appropriate response to each of the findings of the compliance audit, however, INEOS failed to document those deficiencies were corrected. INEOS had several repeat findings from their 2016 audit that are in their 2021 audit. The findings from the 2016 audit were not resolved promptly. In addition, INEOS had an action item (11-C-21) that has a due date of July 7, 2022, but the completion date is July 14, 2022.

#### **AOC 6 – 40 C.F.R § 68.81(b) Incident Investigation**

“(b) An incident investigation shall be initiated as promptly as possible, but not later than 48 hours following the incident.”

INEOS incident investigation reports do not demonstrate a date where incidents are initiated as promptly as possible. According to INEOS incident investigation procedure, “An investigation of incidents will commence within 48 hours of the incident by a team designated by the Department Manager.”

#### **AOC 7 – 40 C.F.R § 68.81(e) Incident Investigation**

“(e) The owner or operator shall establish a system to promptly address and resolve the incident report findings and recommendations. Resolutions and corrective actions shall be documented.”

Several action items in INEOS’s incident investigation reports were not promptly addressed and were late in being completed. *(Refer to Figure 3)*

#### **AOC 8 – 40 C.F.R § 68.95(a)(1)(ii) Emergency Response Program**

“(a) The owner or operator shall develop and implement an emergency response program for the purpose of protecting public health and the environment. Such program shall include the following elements: (1) An emergency response plan, which shall be maintained at the stationary source and contain at least the following elements: (ii) Documentation of proper first-aid and emergency medical treatment necessary to treat accidental human exposures.”

INEOS’s emergency response plan failed to include proper documentation of first aid and emergency medical treatment necessary to treat accidental human exposures for propylene or cumene.

**Closing Meeting** – I conducted a closing conference at INEOS Americas, LLC on August 5, 2022. During the closing conference, I reviewed the Areas of Concern noted during the inspection.

#### **Section IV – FOLLOW UP**

Documents received on August 8, 2022, were emergency response records reviewed during the inspection.

#### **Section V – LIST OF APPENDICES**

There are no photos, videos, or other appendices to this report.