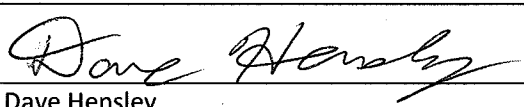
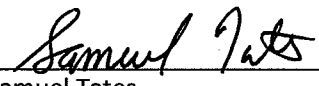




Region 6 Compliance Assurance and Enforcement Division
INSPECTION REPORT

Inspection Date(s):	12/01-03/2015		
Media:	Air		
Regulatory Program(s)	Clean Air Act Section 112(r) and Chemical Accident Prevention Provisions (40 C.F.R. Part 68)		
Company Name:	INEOS Nitriles USA LLC.		
Facility Name:	INEOS Nitriles USA LLC.		
Facility Physical Location:	13050 Texas Hwy 185		
(city, state, zip code)	Port Lavaca, TX 77979		
Mailing address:	PO Box 659		
(city, state, zip code)	Port Lavaca, TX 77979		
County/Parish:	Calhoun County		
Facility Contact:	Edgardo A Cruz Diaz	PSM/Quality Coordinator	
	edgardo.cruzdiaz@ineos.com		
FRS Number:	110000502867		
Identification/Permit Number:	Title V Air Operating Permit ID: 01284		
Media Number:	EPA RMP Facility Identifier: 1000 0006 2095		
NAICS:	325199 - All Other Basic Organic Chemical Manufacturing		
Personnel participating in inspection:			
Edgardo A. Cruz Diaz	INEOS Nitriles USA LLC.	PSM/Quality Coordinator	(361) 552-8216
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Dave Hensley	US EPA Region 6	Physical Scientist (Environmental)	(214) 665-6739
EPA Lead Inspector Signature/Date			01/19/2016
	Dave Hensley		Date
Supervisor Signature/Date			1/19/2016
	Samuel Tates		Date

Section I - INTRODUCTION

PURPOSE OF THE INSPECTION

Environmental Protection Agency Region 6 (EPA) inspector Dave Hensley arrived at the INEOS Nitriles USA LLC. (INEOS) at 9:00 AM on December 1, 2015, for an announced inspection. I met with Malanie Brewer, Chief Inspector; Karleen James, SHE Manager; Robert Weaver, Emergency Response; Michael Leger, Environmental Engineer Air Quality; Jennifer Gibbs, Environmental Lead; Edgardo A. Cruz Diaz, PSM/RMP Safety; Bob Veronneau, Operations Manager; Paul Wachtendorf, Site Director; and Kevin Collins, Attorney. I presented my credentials to those present and informed them that this was an EPA inspection to determine compliance with the Clean Air Act Section 112(r) and the Chemical Accident Prevention Provisions 40 CFR Part 68. The scope of the inspection is a partial compliance evaluation (PCE) and includes evaluation of the compliance of the facility with Clean Air Act Section 112(r) and the Chemical Accident Prevention Provisions 40 CFR Part 68. I sent an announcement email to INEOS, on November 4, 2015, letting them know I would be conducting an inspection November 16 – 20, 2015. I attached a list of documents for INEOS to gather for my review during the inspection. INEOS responded requesting postponement of the inspection until the week of November 30, due to INEOS personnel not being available. I granted this request. INEOS is a non-union facility, however notice of the inspection was posted and sent to all employees by email.

FACILITY DESCRIPTION

INEOS is an organic chemical manufacturer that produces Acrylonitrile. The site is near Green Lake to the west of Port Lavaca. INEOS's website states that "*Green Lake in Texas is the largest and most efficient plant in the world*" (<http://www.ineos.com/businesses/INEOS-Nitriles>). The site has one hundred fifteen full time employees and operates twenty four hours, seven days a week. INEOS has eight EPA Risk Management Program regulated substances present at their facility above the threshold quantity. These substances include: Acrylonitrile, Ammonia, Butane, Propylene, Propane, Chlorine, Sulfur Dioxide, and Hydrogen Cyanide. Acrylonitrile is the end product of the process. Ammonia (anhydrous) and Propylene are utilized as raw materials in the production of Acrylonitrile. Propane is an impurity in the Propylene. Butane is utilized in catalyst activation. Chlorine is utilized in water purification. Sulfur Dioxide is utilized as an inhibitor. A by-product of the Acrylonitrile process is Hydrogen Cyanide. Hydrogen Cyanide is processed into Acetone Cyanohydrine for shipment. Acetone Cyanohydrine is not a listed chemical by the EPA Risk Management Program.

Section II - OBSERVATIONS

40 C.F.R. Part 68 – CHEMICAL ACCIDENT PREVENTION PROVISIONS

Subpart A – General

40 C.F.R. § 68.10 Applicability - I observed that INEOS is a stationary source that has Air Operating Permit 01284 and more than a threshold quantity of a regulated substances in one processes; Acrylonitrile Manufacturing; therefore, these regulations are applicable. INEOS submitted a Risk Management Plan (RMP) that describes this process containing toxic and flammable chemicals held at more than a threshold quantity. The process is Program three due to the fact that facility is subject to OSHA's Process Safety Management Standard (29 CFR 1910.119).

40 C.F.R. § 68.12 General requirements – I reviewed the Risk Management Plan submitted by INEOS on March 1, 2013, that listed seven toxic and flammable chemicals in one processes, as detailed below.

Table 1: INEOS USA LLC. Port Lavaca RMP Chemicals and Processes

Process	Program Level	Chemical Name	CAS Number	Quantity (lbs)	Flammable/ Toxic
Acrylonitrile Mfg	3	Butane	106-97-8	133,000	Flammable
Acrylonitrile Mfg	3	Chlorine	7782-50-5	26,000	Toxic
Acrylonitrile Mfg	3	Acrylonitrile [2-Propenenitrile]	107-13-1	61,000,000	Toxic
Acrylonitrile Mfg	3	Flammable Mixture	00-11-11	25,000,000	Flammable
Acrylonitrile Mfg	3	Hydrocyanic acid	74-90-8	1,700,000	Toxic
Acrylonitrile Mfg	3	Sulfur dioxide (anhydrous)	9-5-7446	75,000	Toxic
Acrylonitrile Mfg	3	Ammonia (anhydrous)	7664-41-7	23,000,000	Toxic

(RMP)

40 C.F.R. § 68.15 Management – INEOS has developed a management system to oversee the implementation of the risk management program elements. This system assigned qualified persons or positions overall responsibility for the development, implementation, and integration of the Risk Management Program elements.

Subpart B – Hazard Assessment

40 C.F.R. § 68.20 Applicability - INEOS prepared a worst-case release scenario analysis and completed the five-year accident history. Since INEOS has a program three process, they must comply with all sections in this subpart.

40 C.F.R. § 68.22 Offsite consequence analysis parameters – I observed that INEOS used the parameters required in this part to calculate toxic and flammable worst-case and alternative case release scenarios.

40 C.F.R. § 68.25 Worst-case release scenario analysis – I reviewed documentation and had discussions with INEOS during the inspection regarding the worst-case release scenario analysis. It showed that INEOS analyzed and reported a worst-case toxic release and flammable releases in its Risk Management Plan. This analysis was done using a third party contractor and RMP*Comp.

40 C.F.R. § 68.28 Alternative release scenario analysis – INEOS analyzed and reported seven alternate release scenarios, one for each toxic substance, in their Risk Management Plan.

40 C.F.R. § 68.30 Defining offsite impacts – Population – I talked with INEOS about the offsite consequences analysis done. INEOS used the Census Bureau population data current at the time of analysis and the distance to endpoints, as specified in these regulations, to calculate the population numbers reported in their Risk Management Plan.

40 C.F.R. § 68.33 Defining offsite impacts – Environment – Discussions with INEOS showed me that USGS Data was used to determine the environmental receptors and the distance to endpoints.

40 C.F.R. § 68.36 Review and update – I reviewed INEOS’s documentation that illustrated reviews and updates regarding the offsite consequences are occurring at least every five years. INEOS staff told me that there is a mechanism in the change management system that will flag the need for revisions if the maximum intended inventory of any Risk Management Plan chemical changes.

40 C.F.R. § 68.39 Documentation – I was provided documentation of the offsite consequence analyses. For worst-case and alternative case scenarios, a description of the vessel or pipeline, the substance selected as worst-case, the assumptions and parameters used, and the rationale for selection was included; likewise, assumptions included use of any administrative controls and any passive mitigation that were assumed to limit the quantity that could be released, estimated quantity released, release rate, and duration of release. The methodology used to determine distance to endpoints was documented by the facility. The data used to estimate population was provided in the form of USGS Maps that had the distance to endpoint labeled with a circle from the emissions point. Documentation of the environmental receptors potentially affected by the worst case toxic release was not in the document I was given to review. INEOS was able to provide documentation of the environmental receptors within twenty four hours.

40 C.F.R. § 68.42 Five year accident history – INEOS had no reported accidental releases in their Risk Management Plan as of March 1, 2013. I reviewed the National Reporting Center (NRC) and State of Texas Environmental Electronic Reporting System (STEERS) for additional incidents that may have required addition to INEOS’s five year accident history. The only incident that may require a five year accident history entry was a June 10, 2015 incident. There was a release at INEOS that resulted in the death of a worker, on June 10, 2015. INEOS and I discussed whether this would trigger five year accident history. Qualifications for a five year accident history are covered in 40 C.F.R. § 68.42 (a). It states that; *“The owner or operator shall include in the five-year accident history all accidental releases from covered processes that resulted in deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage”*. The question whether this release was from a covered process was raised. The equipment where the release occurred was disconnected from the process at the time of the release. If this incident is added to this accident history, it is required within six months from the accident, by December 10, 2015. INEOS stated that they would consult with their legal adviser and make the determination if the June 10, 2015 incident requires a five year accident history entry. INEOS submitted information to add the June 10, 2015, incident to their Risk Management Plan on December 8, 2015.

Subpart D – Program 3 Prevention Program

40 C.F.R. § 68.65 Process safety information – I requested and reviewed a selection of process safety information for Risk Management Plan units at INEOS. The process safety information was maintained in an organized manner with binders for process units. I reviewed one of these binders during the inspection and found it met the requirements of this part.

40 C.F.R. § 68.67 Process hazard analysis (PHA) – I requested and reviewed two PHAs for the Risk Management Plan process. The process was broken down into manageable sections within the process to conduct PHAs. I reviewed a schedule of all PHAs done at INEOS. All the PHAs were done within the required five year timeframe, and INEOS has a system to ensure all PHAs are done and the report issued prior to five years from the last report date.

40 C.F.R. § 68.69 Operating procedures – I reviewed several operating procedures, which appeared to meet the requirements. 40 C.F.R. 68.69(c) states; *“...The owner or operator shall certify annually that*

these operating procedures are current and accurate". INEOS provided me with a single certification statement that the operating process are correct and accurate that had been signed by the Site Director for 2012, 2013, 2014, and 2015.

The June 10, 2015, incident raised the question of if INEOS's safe work practices were developed and implemented properly according to 40 C.F.R. § 68.69 (d); *"The owner or operator shall develop and implement safe work practices to provide for the control of hazards during operations such as lockout/tagout; confined space entry; opening process equipment or piping; and control over entrance into a stationary source by maintenance, contractor, laboratory, or other support personnel. These safe work practices shall apply to employees and contractor employees"*. According to the incident report reviewed during this inspection (bates number RMP GL 0005 - RMP GL 0008), the safe work practices were followed. The fatally injured individual was wearing personal protective equipment specified for the job task being performed. Atmospheric testing was occurring during the activity. As a result of the incident, INEOS is changing these procedures to require supplied air for this activity.

40 C.F.R. § 68.71 Training – I requested and was provided the training files for four individuals, one from each shift. In my review, I found no issues associated with these training files. We discussed the programs in place to insure compliance with the initial training and three year refresher training. INEOS has a computerized system to ensure initial and three year trainings occur on time. INEOS has an electronic and hardcopy system to maintain training documentation.

40 C.F.R. § 68.73 Mechanical integrity – I requested and was provided mechanical integrity records for randomly selected inspections of Risk Management Program covered equipment, and the written procedure for maintaining the integrity of the process. I found no issues with this documentation. I met with the Chief of Inspections and discussed how the mechanical integrity program works. I asked if there were any overdue inspections. There were three vessels that are overdue for inspection. All three of these had variance documentation with an engineering analysis to determine that it is safe to continue to operate. These vessels are scheduled to be inspected at the next facility turn around.

40 C.F.R. § 68.75 Management of Change – I asked for and was given a list of the management of changes (MOC) done in Risk Management Plan units at the facility for the last year (November 1, 2014, to November 1, 2015) and the written procedure for MOC. I reviewed five MOC documentation packages for changes occurring in covered processes.

40 C.F.R. § 68.77 Pre-startup review – Pre-startup review was included with the MOC documentation that I reviewed, which met the requirements.

40 C.F.R. § 68.79 Compliance audits – I requested the last two Risk Management Program compliance audits. On arrival, I was provided copies of audits that documented the review of all the elements of the Risk Management Program.

40 C.F.R. § 68.81 Incident investigation – Prior to the inspection, I requested the incident investigations for the following releases: March 11, 2011; a release of ammonia from a storage tank, and June 10, 2015; fatal exposure to cyanide. I requested a list of Incident Reports/Investigations for all incidents which resulted in, or could reasonably have resulted in, a catastrophic release of a regulated substance over the last three years. I selected, requested, and reviewed five additional the incident investigations. The June 10, 2015 incident report did not contain the date the investigation began. INEOS was able to

show that the investigation began within forty eight hours of the incident. The rest of the investigations were appropriate to this incident investigation regulation.

40 C.F.R. § 68.83 Employee participation – I reviewed the employee participation plan during this inspection. It meets the regulation; however, it could be further developed to become a better tool to improve management/employee relations, and safety.

40 C.F.R. § 68.85 Hot work permit – While onsite, I reviewed several hot work permits that met the requirements of this regulation.

40 C.F.R. § 68.87 Contractors – I observed that contractors and visitors were required to watch a safety video prior to entering the facility. We discussed contractor selection and training requirements. INEOS utilizes a commercial contract selection system that provides initial screening of contractor safety records and training. INEOS requires site specific training for all contractors, and job specific training to ensure that all contractors are trained on the potential hazards of the process.

Subpart E – Emergency Response –

40 C.F.R. § 68.90 Applicability – INEOS employees are first responders that respond to fires and releases onsite.

40 C.F.R. § 68.95 Emergency response program – I requested and was provided the Emergency Response Plan for INEOS. I reviewed this plan onsite and again in the office post-inspection. The plan was developed to meet the requirements of this subpart.

40 C.F.R. § 68.195 Required corrections – The original Risk Management Plan for this facility was submitted on June 18, 1999. There have been nine resubmissions since then, which were all within the five year timeframe. The most recent correction was March 1, 2013, due to voluntary update. The next Risk Management Plan submission is due March 1, 2018, unless an update or correction is required by 40 C.F.R. § 68.190 & 195.

CAA Section 112(r)(1) – There was a release at INEOS, on June 10, 2015, that resulted in the death of one contract employees. The CAA 112(r)(1) known as the General Duty Clause states that:

“Prevention of Accidental Releases (1) Purpose and General Duty- It shall be the objective of the regulations and programs authorized under this subsection to prevent the accidental release and to minimize the consequences of any such release of any substance listed pursuant to paragraph (3) or any other extremely hazardous substance. The owners and operators of stationary sources producing, processing, handling or storing such substances have a general duty, in the same manner and to the same extent as section 654, title 29 of the United States Code, to identify hazards which may result from such 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.”

I looked at if INEOS designed and maintained a safe facility taking such steps as are necessary to prevent releases. INEOS had designed process to address lockout/tagout and mechanical integrity. In this incident, those procedures did not prevent the release. I investigated how the facility minimized the consequences of the accidental release that occurred on June 10, 2015. I noted that the facility had procedures in place to monitor for potential hazardous atmospheres

during activities that could cause them, and that procedures called for the use of personal protective equipment during certain activities. We discussed the use of personnel monitors for hydrogen cyanide, and the use of supplied air respirators as a potential better practices. I discussed with INEOS what other acrylonitrile plants do to address these hazards. They explained that they had worked with other industry peers and were able to provide more improvements to other's systems than they were able to generate improvements to their own systems.

Section III – AREAS OF CONCERNS (AOC)

AOC 1: 40 C.F.R. § 68.69 (d) The owner or operator shall develop and implement safe work practices –

40 C.F.R. § 68.69 (d) states that *"The owner or operator shall develop and implement safe work practices to provide for the control of hazards during operations such as lockout/tagout; confined space entry; opening process equipment or piping; and control over entrance into a stationary source by maintenance, contractor, laboratory, or other support personnel."* The safe work practices that INEOS implemented did not control the hazards during lockout/tagout and opening process equipment on June 10, 2015, when a release caused the death of a contract employee at INEOS. This incident and procedures are discussed in the incident report for the June 10, 2015, incident (bates number RMP GL 0005 - RMP GL 0008).

AOC 2: 40 C.F.R. 68.39 (e) Offsite Consequence Analysis Documentation –

INEOS maintained documentation of the offsite consequences analysis in a binder that was reviewed and discussed during the inspection. In review of this binder, I did not find documentation of the environmental receptors potentially affected by INEOS's worst case toxic release. 40 C.F.R. 68.39 specifies what documentation of the offsite consequences analysis a facility is required to maintain. Paragraph (e) states; *"Data used to estimate population and environmental receptors potentially affected"*. INEOS was able to provide me with documentation of the potential environmental receptors identified during the offsite consequences analysis, during the inspection (bates numbers RMP GL 0001 - RMP GL 0004).

AOC 3: 40 C.F.R. 68.60 (c) (2) Incident investigation Report –

In review of the incident report for the June 10, 2015, incident (bates number RMP GL 0005 - RMP GL 0008), it was noticed that the date the investigation began was not listed. In discussion with INEOS it is evident that the investigation began less than 48 hours from the time on the incident. 40 C.F.R. 68.60 (c) states; *"A summary shall be prepared at the conclusion of the investigation which includes at a minimum: (1) Date of incident; (2) Date investigation began; (3) A description of the incident; (4) The factors that contributed to the incident; and, (5) Any recommendations resulting from the investigation"*.

Section IV – FOLLOW UP

On December 11, 2015, I checked the electronic repository for Risk Management Plans (RMP*INFO) and observed that INEOS submitted information to add the June 10, 2015, incident to their Risk Management Plan on December 8, 2015.

On, December 15, 2015 EPA received the documentation of the environmental receptors potentially affected by INEOS's worst case toxic release and June 10, 2015, incident report that I requested during

the inspection (bates labeled RMP GL 0001 - RMP GL 0008). This documentation is claimed confidential business information and was logged in as such and maintained according to all applicable regulations.