

Clean Air Act 112(r), Risk Management Program Inspection Report

Advanced Technical Ceramics Company

Chattanooga, Tennessee

March 30, 2022

1.0 Introduction

The U.S. Environmental Protection Agency's efforts to reduce the likelihood and severity of chemical accidents includes planning and legislative initiatives such as the National Contingency Plan, the Emergency Planning and Community Right-to-Know Act (EPCRA), and the Accidental Release Prevention requirements under Section 112(r) of the Clean Air Act (CAA), as amended in 1990. This report outlines an inspection of the Risk Management Program (RMP) as mandated by Section 112(r)(7) of the CAA.

The focus of this inspection was to assess the RMP for the ammonia storage and usage process at the Advanced Technical Ceramics Company (Company) located in Chattanooga, Hamilton County, Tennessee. Past three years of EPCRA Tier II and TRI forms from the facility were noted to have been submitted online and reviewed. The inspection consisted of an examination of program documentation as well as site review of facility operations utilizing ammonia or its component gases namely nitrogen and hydrogen. Environmental Health and Safety (EHS) Coordinator and the Chief Operating Officer (COO) of the company and the Human Resource (HR) Manager from the facility participated throughout the inspection. This report will provide background information about the facility and a list of observations.

2.0 Background

The Advanced Technical Ceramics Company (Company) is a standalone company that is not a union shop/facility. Technicorp International II, Inc., is the parent company. The Chattanooga facility was built in the 1950s and modification/additions were made in the 1980s. The Advanced Technical Ceramics Company has been in operation in Chattanooga, TN for over seventeen (17) years and operates under the NAICS code: 33419 – Other Electronics Component Manufacturing. The Company has approximately 125 full time and 10 part time employees. The Company is a manufacturer of multilayer co-fired ceramics electronic packages.

The Company has a process by which the anhydrous ammonia is “dissociated” into its component parts i.e., Nitrogen and Hydrogen. This dissociated ammonia (DA) gas is used as process gas for kilns and furnaces in a controlled reducing atmosphere free of oxidation.

The anhydrous ammonia is supplied by tanker trucks through liquid fill connection. The anhydrous ammonia is stored in a 12,000-gallon stationary, horizontal, cylindrical pressure vessel. The storage vessel is sized to provide approximately 90 days of continuous supply of dissociated ammonia gas before requiring refilling. The anhydrous ammonia storage vessel is monitored for temperature, pressure, and liquid level. There are local gauges and an electronic telemetry unit deployed for such monitoring. The Company has an alarm system including an audible alarm installed for leak detection and out of tolerance pressure conditions.

There are three (3) dissociator vessels used to dissociate anhydrous ammonia vapor that is piped from the top of the anhydrous storage vessel. The pressure is reduced from 125 psig to 40 psig to allow for constant pressure feed to the dissociator vessels. At each of the three (3) dissociator vessels the ammonia vapor is again reduced to 12 psig for introduction into the pre-heater. The ammonia vapor is then piped into the catalyst chamber and heated. The DA gas is then piped into the plant for use in the kilns and furnaces as process gas.

The Company is subject to the RMP requirements of 40 C.F.R. Part 68 and to EPCRA Sections 302, 311, 312 and 313. The background specifics are summarized in Table 1 presented below.

TABLE 1: Inspection Information Summary

Inspection Team

Lead/Inspector in training: Chetan Gala, EPA
Inspector: Jordan Noles, EPA

Date of Facility Visit: March 30, 2022

Facility Identification

Name: Advanced Technical Ceramics Company
Street Address: 511 Manufacturers Road
City: Chattanooga County: Hamilton State: Tennessee Zip: 37405
EPA Facility ID No: 1000 0013 6266
Latitude: 35.062797
Longitude: -85.31556

Name of corporate parent company: Technicorp International II, Inc.

Name, title, and email of the person responsible for 40 C.F.R. Part 68 implementation:

Name: Jimmy Welch
Title: Engineer, RMP Manager
Email: Jimmy.welch@adtechceramics.com

Name and title of emergency contact:

Name: Pam McElroy
Title: EHS Coordinator
Day phone: (423) 755-5400
24-hour Phone: (423) 755-5472
Email: Pam.mcelroy@adtechceramics.com

Name and titles of stationary source personnel involved in site inspection (*accompanied site tours, provided documents and explanations*):

Name	Title	Phone	Email
Pam McElroy	EHS Coordinator	(423) 755-5472	Pam.mcelroy@adtechceramics.com

Charlotte Laney	HR Manager	(423) 755-5414	Charlotte.laney@adtechceramics.com
David Verneti	Chief Operating Officer	(423) 755-5510	David.cernetti@adtechceramics.com

Note: Not a union facility

Date and Program Levels of Submitted Risk Management Plan

Date of initial submission: June 23, 1999 when the facility was owned/operated by Coors Ceramics Company – Chattanooga Operation. The initial submission under Advanced Technical Ceramics Company name was on May 4, 2004.

Date of recent submission: June 18, 2019

Process ID	Process Description	Process Chemical ID	Process Program Level	Chemical Name	Quantity (lbs)	NAICS code	Flammable/ Toxic
1000054923	Ammonia	1000066884	Level 3	Ammonia (anhydrous) CAS # 7664-41-7	46,350 - 55,620 (10K-12K gals.)	33419 – Other Electronics Component Manufacturing	Toxic

3.0 Observations

The inspection of the facility evaluated compliance with various sections of the RMP regulations (40 C.F.R. Part 68, Program Level 3). The inspection involved discussions with the facility representatives of issues related to its ammonia storage and its use, the facility's RMP, a review of paperwork associated with the facility's most recent Risk Management Plan (RMPlan), and a walkthrough of the facility. Inspection in-brief and out-brief conferences were conducted. Observations from the RMP inspection at the facility are presented below:

1. 40 C.F.R. § 68.73(d)(3) requires the frequency of inspections and tests of process equipment to be consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience.
 - The mechanical integrity (MI) inspection/testing, although initiated, was not completed within five (5) years of previously completed (MI) inspection/testing.
 - API 510-section 6.4.1 [2006] states “Unless justified by an RBI assessment, each aboveground vessel shall be given a visual external inspection at an interval that does not exceed the lesser of five years or the required internal/on-stream inspection. It is preferred to perform this inspection while the vessel is in operation. The interval is established by the inspector or engineer in accordance with the owner/user's quality assurance system.”
2. 40 C.F.R. § 68.93(a) requires the owner/operator of a stationary source to conduct the annual emergency response coordination activities.
 - Emergency response planning and coordination documentation for 2018 and 2019 was not available for review. The Company must coordinate response needs with local emergency

planning and response organizations to determine how the stationary source is addressed in the community emergency response plan and to ensure that local response organizations are aware of the regulated substances at the stationary source, their quantities, the risks presented by covered processes, and the resources and capabilities at the stationary source to respond to an accidental release of a regulated substance.

Inspection Report,

Prepared by:

Gala, Chetan

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Chetan Gala, Lead/Inspector in training
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South Air Enforcement Section
Air Enforcement Branch

Date

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Jordan Noles, Inspector
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**Groendyke,
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Todd Groendyke, Chief
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South Air Enforcement Section
Air Enforcement Branch

Date