CLEAN AIR ACT (CAA) § 112(r)(7)
&
EMERGENCY PLANNING, COMMUNITY RIGHT-TO-KNOW ACT (EPCRA) § 312
INSPECTION REPORT

Sterling Production Plant

Facility Name and Address: Sterling Production Plant 20313 Riverside Drive Sterling, Colorado 80751 **Contact/Telephone:** 308-345-2280 **Mailing Address:** PO Box 1748 McCook, NE 69001-1748	**Date of Inspection:** 5/24/2023 **RMP EPA ID #:** 1000 0001 4842 • **Program Level:** 3 • **Covered Substances:** o Anhydrous Ammonia **TRIFID #:** NA **NAICS:** 32531 **# Employees at this location:** 4

INTRODUCTION

This report presents the observations of the CAA section 112(r)(7) and EPCRA section 312 inspection conducted by EPA Region 8. The purpose of this inspection was to determine compliance with the Risk Management Plan (RMP) requirements of CAA section 112(r)(7) and the Tier II reporting requirements of EPCRA section 312.

Sterling Production Plant (SPP) uses, handles, and/or stores more than a threshold quantity of Anhydrous Ammonia. Anhydrous Ammonia is regulated, as specified at 40 C.F.R. §§ 68.115 and 68.130.

CAA 112(r)(7) Program Elements Reviewed:

1. Applicability [68.10]
2. OCA/ACS [68.20 – 68.39]
3. Process Safety information [68.65]
4. Process Hazard Analysis [68.67]
5. Operating procedures [68.69]
6. Training [68.71]
7. Mechanical Integrity [68.73]
8. Management of Change [68.75]
9. Pre-startup Safety Review 68.77]
10. Compliance audits [68.79]
11. Incident investigation [68.81]
12. Employee Participation [68.83]
13. Hot work Permit [68.85]

14. Contractors [68.87]
15. Emergency Response [68.90 – 68.95]
16. Risk Management Plan [40 CFR 68.190 – 68.195]

Nature of Business:
SPP manufactures fertilizer. Ammonia is a key ingredient in many of the manufactured fertilizers.

OBSERVATIONS

CAA § 112(r)(7) (RMP):

1. **Requirement found at Subpart D – Process Safety Information [40 CFR 68.65(d)(1)(i)]:** The Process Safety information shall contain materials of construction.

    - *Materials of construction were not available for SPP's two ammonia pressure vessels*
    - *ASME U-1 forms, or U-1A forms, are generally used to document the materials of construction for pressure vessels*
    - *However, neither U-1 forms, nor U-1A forms, were available*
    - *SPP should obtain the U1 forms, U-1A forms, or similar Manufacturer Data Reports. The following sources might be able to provide the forms/reports:*
        - *The installing contractor(s)*
        - *The manufacturer(s)*
        - *The Jurisdiction or Building Department*
        - *The engineering firm that designed SSP's ammonia system*
        - *SPP's insurance carrier*
        - *The National Board of Boiler and Pressure Vessel Inspectors*
        - *Previous owners of SPP, if applicable.*

2. **Requirement found at Subpart D – Process Safety Information [40 CFR 68.65(d)(1)(vi)]:** The Process Safety Information shall contain codes and standards employed.

    - *SPP's list of codes-and-standards-employed does not include:*
        - *<u>ASME Boiler and Pressure Vessel Code</u>*
        - *<u>API 510, Pressure Vessel Inspection Code</u>*
    - *SPP should become familiar with these codes, and then add them to their list of codes-and-standards-employed.*

3. **Requirement found at Subpart D – Process Safety Information [40 CFR 68.65(d)(2)]:** The owner or operator shall document that equipment complies with recognized and generally-accepted good engineering practices (RAGAGEP).

    - *SPP has not adequately documented that their two ammonia pressure vessels comply with RAGAGEP*
    - *ASME U-1 forms, or U-1A forms, are generally used to document that pressure vessels comply with RAGAGEP*
    - *However, neither U-1 forms, nor U-1A forms, were available*

- *SPP should obtain the U1 forms, U-1A forms, or similar Manufacturer Data Reports. The following sources might be able to provide the forms/reports:*
    - *The installing contractor(s)*
    - *The manufacturer(s)*
    - *The Jurisdiction or Building Department*
    - *The engineering firm that designed SPP's ammonia system*
    - *SPP's insurance carrier*
    - *The National Board of Boiler and Pressure Vessel Inspectors*
    - *Previous owners of SPP, if applicable.*

    Note:
    SPP's ammonia pressure vessels were recently inspected by a third party.

    The third party made assumptions about the construction of the pressure vessels because "U-1" forms, and engineering/construction drawings, were not available.

    One of the assumptions was that the pressure vessels were comparable to pressure vessels at other sites which are operated by SPP's owners.

    The owners of SPP operate multiple fertilizer-manufacturing plants. Some of these plants contain pressure vessels which were built by the same manufacturer as those at SPP. Drawings also exist for these vessels.

    The third party used some of these drawings, as references, to analyze SPP's pressure vessels.

    Nevertheless, the third party noted that joint efficiencies for SPP's ammonia pressure vessels would need to be verified before the vessels could be deemed fit-for-service.

    U1 forms document some of these efficiencies.

4. **Requirement found at Subpart D – Mechanical Integrity [40 CFR 68.73(d)(2)]:** The owner or operator shall follow recognized and generally-accepted good engineering practices (RAGAGEP) for inspections and testing procedures.

- *SPP has never arranged for internal inspections to be conducted on their two ammonia pressure vessels*
- *However, internal inspections are required by the <u>API 510, Pressure Vessel Inspection Code</u>*
- *<u>API 510</u> applies to all chemical process vessels, unless specifically excluded in Section 1.2.2. (Section 1.2.2 does not apply to SPP.)*
- *Fertilizer manufacturing is a chemical process, and SPP is a fertilizer manufacturer. Therefore, SPP is required to comply with <u>API 510</u>.*
- *According to Section 6.5.1.1 of <u>API 510</u>, internal inspections shall be conducted every 10 years, or less, depending upon the age and condition of the pressure vessel(s)*
- *According to the same section, it is the responsibility of the inspector or engineer to establish the interval between internal inspections. The section also specifies that the interval shall comply*

with the owner/user's Quality Assurance program.

- *Because SPP's ammonia pressure vessels do not contain manway hatches (although they do contain nozzles of various diameters), internal inspections may not be possible*
- *If this is the case, then Section 6.5.2, entitled "On-stream Inspection in Lieu of Internal Inspections", may apply*
- *According to Section 6.5.2, an on-stream inspection may be substituted for the internal inspection if entering the pressure vessel is not physically possible, and if the inspector authorizes the substituted inspection*
- *At any rate, SPP should be conducting pressure-vessel inspections per API 510. These inspections might be internal or on-stream, depending upon the accessibility of the vessel's interior, and upon the inspector's recommendations.*
- *SPP should consult with an authorized inspector to determine how to comply with API 510 and then act accordingly. The inspections should also be completed at the intervals specified by the inspector.*

5. **Requirement found at Subpart D – Compliance Audits [40 CFR 68.79(a)]:** The owner or operator shall certify that the stationary source has evaluated compliance with the provisions of the prevention program at least every three years to verify that the developed procedures and practices are adequate and being followed.

- *SPP completed Compliance Audits (CA's) on 11/27/2018 and 10/25/2022*
- *These CA's were conducted approximately 3 years and 11 months apart.*

Note:
The Safety & Compliance Director, who usually scheduled the CA's, became critically ill and eventually passed away on 3/8/2021. A suitable replacement for this employee could not be found until 4/22/2022.

The above-noted circumstances contributed to the overdue 2022 CA.

6. **Requirement found at Subpart G – Risk Management Plan [40 CFR 68.195(b)]:** If the emergency contact information required at 68.160(b) has changed since June 21, 2004, the owner or operator shall submit corrected information within thirty days of the change.

- *SPP's emergency contact information changed on, or before, 3/8/2021*
- *However, the contact information was not changed until 5/4/2023*
- *Therefore, the corrected information was submitted approximately 26 months after the change.*

Note:
The Safety & Compliance Director, who was the designated emergency contact before 3/8/2021, became critically ill and eventually passed away on 3/8/2021. A suitable replacement for the Director could not be found until 4/22/2022.

The above-noted circumstances contributed to the overdue submission of the corrected contact information.

ITEMS OF NOTE

1. **Many sections of SPP's ammonia piping are not labeled.**
   The EPA recommends that SPP label the ammonia piping per *ANSI/ASME A13.1*, or a similar standard.

EPCRA § 312:

Nothing of note from observations.

INSPECTION REPORT REVIEW RECORD		
		Date:
Author:	*Toxics and Pesticides Enforcement Section Inspector*	*8/12/2023*
Final Reviewer:	*Section Supervisor*	*8/18/2023*