

CAA112(r) INSPECTION REPORT

Name: Foam Supplies, Inc.	
Address: 4387 N Rider Trail Earth City, MO 63045	Date of Inspection: June 10, 2021
County: St. Louis	Case No: 21MO0610
Phone: 314-344-5122	RMP No: None
High Risk: No	FRS No: 110000440390
CAA Title V: No - Minor: General Permit Covered Facility	Program Level: Program 3 or 1
Mailing Address: 113389 Lakefront Dr. Earth City, MO 63045	
Process: 325991 - Custom Compounding of Purchased Resins	

SUMMARY OF OBSERVATIONS

A review of the Foam Supplies, Inc. documents and facility revealed the following deficiencies:

- 1. Foam Supplies, Inc. failed to submit a Risk Management Plan per 40 C.F.R. § 68.12(a) and Subpart G.**
- 2. Foam Supplies, Inc. failed to prepare a hazard assessment per 40 C.F.R. § 68 Subpart B.**

INTRODUCTION

I, Dave Hensley, and Mr. Lorenzo Sena, Compliance Inspectors with the U.S. Environmental Protection Agency (EPA), Region VII, inspected Foam Supplies, Inc. located in Earth City, Missouri on June 10, 2021.

I arranged for the inspection, via a phone call, on June 9, 2021 with Mr. Todd Keske, CEO. I followed up with an email to Mr. Keske shortly after the phone call. I provided some information on the programs associated with this inspection and asked that employees be notified of the inspection and informed that they are allowed to participate. Foam Supplies, Inc. was selected for inspection because during review of EPCRA Tier II Emergency and Hazardous Chemicals Inventory Reports it appeared it had a Section 112(r) listed chemical above threshold with no Risk Management Plan submitted.

We conducted the inspection to determine if the facility complies with Section 112(r) of the Clean Air Act (CAA), as amended in 1990. The inspection also included reporting provisions of the Emergency Planning and Community Right to Know Act (EPCRA) and the release reporting provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

EPA's regulations describing how these laws are to be implemented are found in the Code of Federal Regulations, Title 40, Part 68 (CAA 112(r)) 355, 370, 372 (EPCRA), and 302 (CERCLA). The law (CAA 112(r)) and the implementing regulations at 40 C.F.R. Part 68, require subject facilities to submit a complete Risk Management Plan (RMP) to the EPA for those regulated chemicals they process in amounts above the applicable threshold quantities after June 21, 1999 and to implement the program described in the RMP.

HISTORY OF BUSINESS

Foam Supplies, Inc. offers various polyurethane systems, including rigid, spray, flexible and CASE products. They have been in operation since 1972. Foam Supplies is located in Earth City, Missouri an unincorporated community located in St. Louis County, Missouri, along Interstate 70, near the Missouri River. Per the 2010 U.S. Census there are 34,303 residents within 3 miles of the facility. Foam Supplies, Inc. handles methyl formate a regulated substance per 40 C.F.R. § 68.130.

PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

Name	Title
Todd Keske	CEO
Ronald E Thomas	CFO
Mark Denby – post inspection	Facilities & Operations Manager

Table. 1 Persons Interviewed

OPENING CONFERENCE

Mr. Sena and I arrived at Foam Supplies, Inc's office at 113389 Lakefront Drive, Earth City, Missouri before 9:00 AM. At 9:00 we entered the front doors and were met by Mr. Keske who showed us to a conference room where we met Mr. Thomas. We each introduced ourselves then proceeded with an opening conference. I discussed the CAA 112(r)/EPCRA non-313 requirements in general. I provided a notice of inspection form that Mr. Keske and I signed (Attachment #1). We discussed confidential business information (CBI). Mr. Keske did claim certain documents as CBI and those documents are noted in this report.

EPCRA TIER II

Foam Supplies, Inc. submitted two 2020 EPCRA Tier II Emergency and Hazardous Chemicals Inventories (EPCRA Tier II reports). One for a 4387 Rider Trail N location and one for a 4135 Galley Ct. The 4387 Rider Trail North location is the main production facility and the 4135 Galley Ct location is a secondary location. The 2020 EPCRA Tier II reports were signed and submitted on February 24, 2021 prior to the March 1, 2021 due date. After the inspection, on June 14, 2021, Mr. Keske provided the 2019 EPCRA Tier II report for the 4387 Rider Trail N location via email. The contents of the reports are listed in Table 2. The EPCRA Tier II reports are in Attachment #2).

2019 EPCRA Tier II Inventories

Facility Name	Facility Street	Chemical Name	Max Daily (pounds)		Avg. Daily (pounds)	
Foam Supplies, Inc. - Main	4387 North Rider Trail	PMDI	500,000	999,999	100,000	499,999
Foam Supplies, Inc. - Main	4387 North Rider Trail	Methyl Formate	100,000	499,999	75,000	99,999
Foam Supplies, Inc. - Main	4387 North Rider Trail	Tris(2-chloro-1-methylethyl) phosphate	100,000	499,999	50,000	74,999
Foam Supplies, Inc. - Main	4387 North Rider Trail	Ethane, 1,1,1,2-tetrafluoro	50,000	74,999	100,000	499,999
FSI - Galley	4135 Galley Court	PMDI	100,000	499,999	100,000	499,999
FSI - Specialties	13757 Rider Trail North	Methylenediphenyl diisocyanate (MDI)	50,000	74,999	50,000	74,999
FSI - Specialties	13757 Rider Trail North	PMDI	25,000	49,999	50,000	74,999
FSI - Specialties	13757 Rider Trail North	4-4'-Diphenylmethane Diisocyanate (MDI)	25,000	49,999	50,000	74,999
FSI - Specialties	13757 Rider Trail North	4-4'-Diphenylmethane Diisocyanate (MDI)	25,000	49,999	50,000	74,999
FSI - Specialties	13757 Rider Trail North	Diphenylmethane Diisocyanate (MDI) Homopolymer	10,000	24,999	10,000	24,999
FSI - Specialties	13757 Rider Trail North	toluene-diisocyanate (TDI)	10,000	24,999	1,000	4,999
FSI - Specialties	13757 Rider Trail North	2,4'-Diphenylmethane Diisocyanate	25,000	49,999	10,000	24,999

2020 EPCRA Tier II Inventories

Facility Name	Facility Street	Chemical Name	Max Daily (pounds)		Avg. Daily (pounds)	
Foam Supplies, Inc. - Main	4387 North Rider Trail	polymeric diphenyl methane diisocyanate (pMDI)	1,000,000	9,999,999	500,000	999,999
Foam Supplies, Inc. - Main	4387 North Rider Trail	Tris(2-chloro-1-methylethyl) phosphate	100,000	499,999	100,000	499,999
Foam Supplies, Inc. - Main	4387 North Rider Trail	4,4-methylenediphenyl diisocyanate	75,000	99,999	25,000	49,999
Foam Supplies, Inc. - Main	4388 North Rider Trail	trans-1-Chloro-3,3,3-trifluoropropene	25,000	49,999	10,000	24,999
Foam Supplies, Inc. - Main	4389 North Rider Trail	toluene-diisocyanate (TDI)	0	99	0	99
Foam Supplies, Inc. - Main	4390 North Rider Trail	formic acid	10,000	24,999	10,000	24,999
Foam Supplies, Inc. - Main	4391 North Rider Trail	1,2-ethanediamine (PMDETA)	10,000	24,999	5,000	9,999
Foam Supplies, Inc. - Main	4392 North Rider Trail	Methyl Formate	100,000	499,999	50,000	74,999
Foam Supplies, Inc. - Main	4393 North Rider Trail	diphenylmethane diisocyanate (MDI) homopolymer	25,000	49,999	25,000	49,999
Foam Supplies, Inc. - Main	4394 North Rider Trail	2,4-methylenediphenyl diisocyanate blend	50,000	74,999	25,000	49,999
Foam Supplies, Inc. - Main	4395 North Rider Trail	Nitrogen	25,000	49,999	25,000	49,999
FSI - Galley	4135 Galley Court	polymeric diphenyl methane diisocyanate (pMDI)	100,000	499,999	100,000	499,999

Table 2: EPCRA Tier II Inventories

APPLICABILITY

An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under §68.115, shall comply with the requirements of the CAA 112(r).

Foam Supplies, Inc. owns a stationary source with a CAA Minor Operating Permit (MO00000029189C0001) at 4387 Rider Trail N.

Methyl formate, and toluene-diisocyanate are listed in 40 C.F.R. § 68.130 as regulated substances. Methyl formate is listed as a regulated flammable substance with a threshold quantity of 10,000 pounds. Toluene diisocyanate is listed as a regulated toxic substance with a threshold quantity of 10,000 pounds. The 4387 Rider Trail N. 2019 EPCRA Tier II report listed methyl formate at between 100,000 and 499,999 pound daily maximum and 75,000 and 99,999 pounds daily average. The 4387 Rider Trail N. 2020 EPCRA Tier II report listed methyl formate at quantity between 100,000 and 499,999 pounds daily maximum, and 50,000 and 74,999 pounds daily average. I asked for a chemical inventory as of December 31, 2020. Mr. Thomas provide a copy of an inventory that was claimed CBI (not attached to this report, but in a CBI folder). The inventory provided also listed methyl formate over 10,000 pounds. The 4387 Rider Trail N. 2020 EPCRA Tier II report listed toluene diisocyanate at a maximum daily quantity between 0 and 99 pounds, and an average daily quantity of between 0 and 99 pounds. The CBI inventory did not list toluene diisocyanate. Mr. Thomas said they likely did not have any toluene diisocyanate on site, but it was also probable that the lab or research and development had some onsite at some time in 2020 but it wasn't included in the December 31, 2020 inventory.

RISK MANAGEMENT PLAN (RMP)

I had reviewed RMP*Info the database storage of RMPs and didn't locate one for Foam Supplies, Inc. in Earth City, Missouri. I asked if they had submitted an RMP. Mr. Thomas and Mr. Keske said they thought they had. However, Mr. Denby, who monitors Foam Supplies, Inc's compliance with OSHA's PSM program would most likely have been the one to submit it and he was not available the day of the inspection I did not received proof of submission of an RMP after the inspection.

- 1. Foam Supplies, Inc. failed to submit a Risk Management Plan per 40 C.F.R. § 68.12(a) and Subpart G.**

HAZARD ASSESSMENT

I asked if they had done a hazard assessment and discussed what a hazard assessment is. Foam Supplies, Inc. had not done a hazard assessment per Subpart B of 40 C.F.R. § 68, subpart B.

- 2. Foam Supplies, Inc. failed to prepare a hazard assessment per 40 C.F.R. § 68 Subpart B.**

Methyl formate is stored in two 4,000-gallon bulk storage cylinders outside of the main process building.

Post inspection, I went to <https://cdxnodengn.epa.gov/cdx-rmp-maintain/action/rmp-comp>, and performed an RMP*Comp worst case scenario (WCS) run using 4,000 gallons at 70° F with no mitigation and obtained a distance to a 1 psi pressure wave end point from a vapor cloud explosion of 0.2 miles. I put that 0.2 miles on a MARPLOT map centered at the approximate

location of one of the methyl formate tanks, as shown below. This WCS run did not show residential population receptors but did show some non-residential receptors including Missouri Greenway: Riverwoods Trailhead, Byrne & Jones Construction, VPC, and UPS Customer Center.

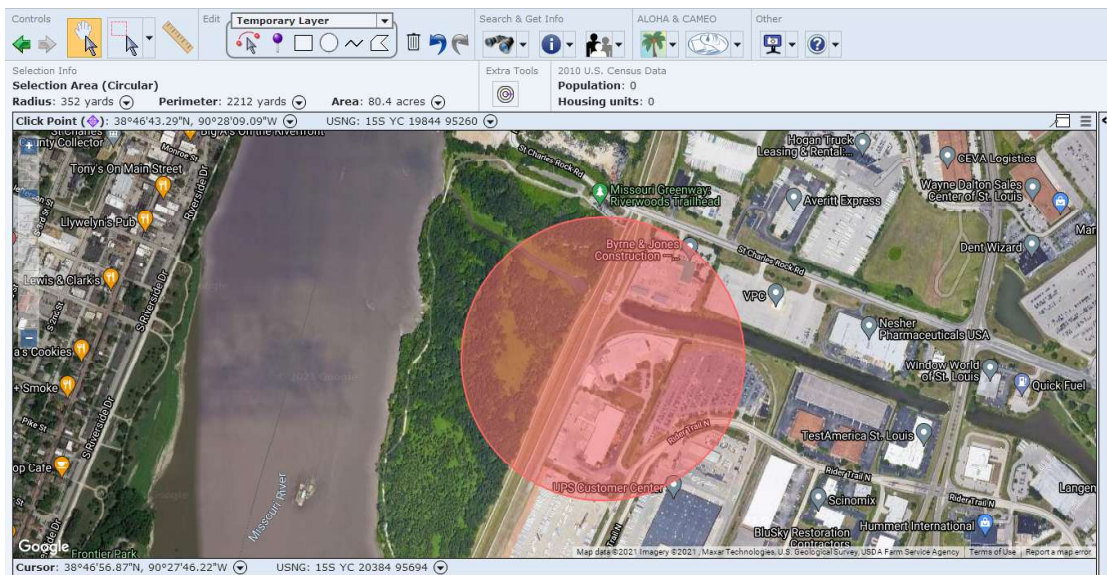


Figure 1: WCS MARPLOT map done by EPA

Methyl formate is a volatile flammable liquid. Because the WCS analysis requirements at 40 C.F.R. § 68.25 allows the use of passive mitigation in the determination of the worst-case release scenario, and because Foam Supplies, Inc. has passive mitigation around the methyl formate bulk tanks, seen in Photographs 1-4, I completed another run with passive mitigation.¹ I estimated the size of the passive mitigation secondary containment from an aerial photograph as being 17.7 feet by 26.1 feet equalling 462 square feet. Based on my observations on site, I assumed it was 2 feet deep in the WCS run. Using these figures, the WCS run resulted in a distance to end point of 0.05 miles, shown in Figure 2. This WCS run did not show residential population receptors or non-residential receptors.

¹ “Passive mitigation systems may be considered for the analysis of worst case provided that the mitigation system is capable of withstanding the release event triggering the scenario and would still function as intended.” (40 C.F.R. 68.25(h)).

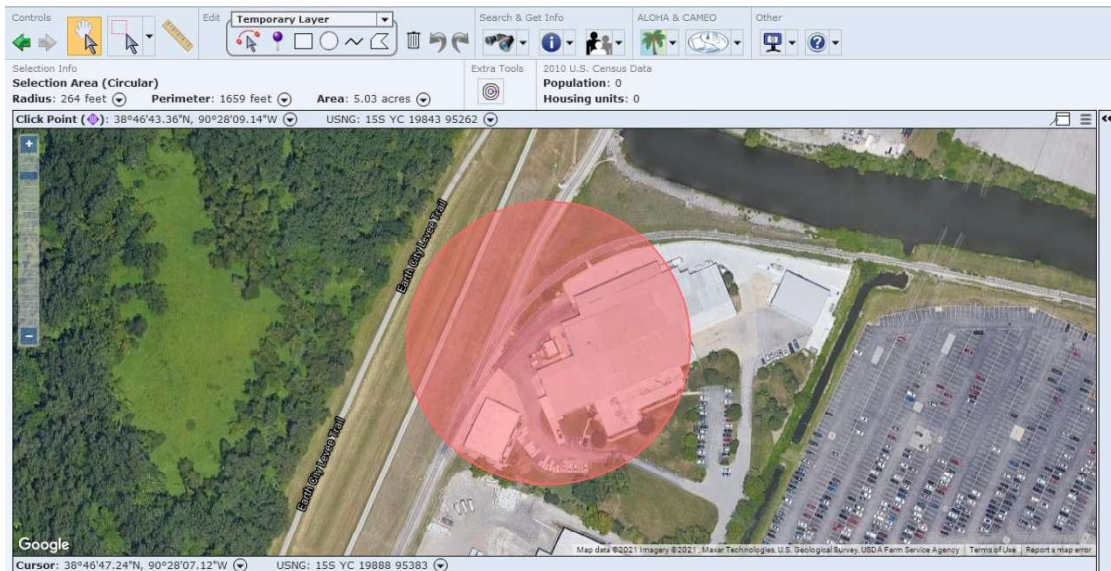


Figure 2: WCS with mitigation map done by EPA

PROGRAM LEVEL

Prevention program level is determined by 40 C.F.R. §68.10 (g), (h), and (i). A table from General RMP Guidance - Chapter 2: Applicability of Program Levels, copied below as Figure 3.

EVALUATE PROGRAM LEVELS FOR COVERED PROCESS

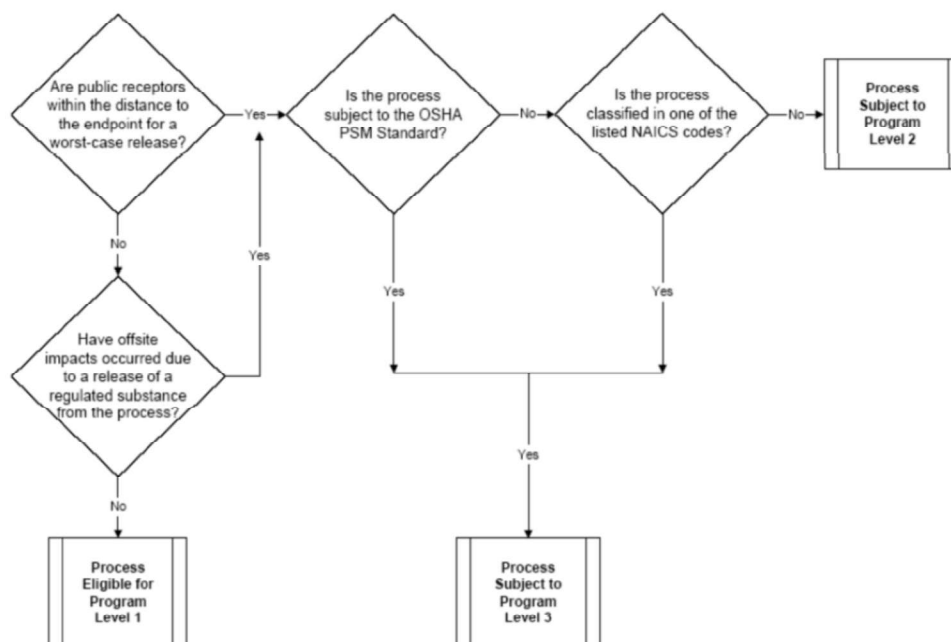


Figure 3: Prevention Program Level Flow Chart

Foam Supplies, Inc. said it was subject to the Occupational Safety and Health Administration's Process Safety Management (PSM) program. Foam Supplies, Inc's prevention program level depends on if public receptors are within the WCS distance to endpoint. Program Level 1 eligibility requirements are as follows:

“(g) Program 1 eligibility requirements. A covered process is eligible for Program 1 requirements as provided in §68.12(b) if it meets all of the following requirements:

(1) For the five years prior to the submission of an RMP, the process has not had an accidental release of a regulated substance where exposure to the substance, its reaction products, overpressure generated by an explosion involving the substance, or radiant heat generated by a fire involving the substance led to any of the following offsite: (i) Death; (ii) Injury; or (iii) Response or restoration activities for an exposure of an environmental receptor;

(2) The distance to a toxic or flammable endpoint for a worst-case release assessment conducted under subpart B and §68.25 is less than the distance to any public receptor, as defined in §68.3; and

(3) Emergency response procedures have been coordinated between the stationary source and local emergency planning and response organizations.”

PROCESS SAFETY INFORMATION (PSI)

I asked for a safety data sheet (SDS) and process safety information (PSI) for methyl formate. During the inspection Mr. Keske emailed me links to an April 2, 2020 Ecomate SDS. Ecomate is a product name for a mixture of methyl formate with a small amount of methyl alcohol. Mr. Keske's email also provided product handling, storage and handling documents, and a link to <https://ecomatetechnology.com/>. These documents can be seen in Attachment #3. The SDS provided information pertaining to the hazards of the regulated substances in the process. The remaining documents appear to provide the required PSI.

PROCESS HAZARD ANALYSIS (PHA)

I asked if Foam Supplies, Inc., had done a process hazard analysis for the methyl formate process. Mr. Thomas and Keske thought they had but were unable to locate it during the inspection. On June 16, 2021, Mr. Keske emailed me a document- “Process Hazards Analysis 2005.pdf“(Attachment #4).

This PHA appears to meet the requirements with the exceptions of 40 C.F.R. §68.67 (e) and (f).

“(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; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed; communicate the actions to operating, maintenance and other

employees whose work assignments are in the process and who may be affected by the recommendations or actions.”

On page 22, Table 5 is a *Recommendation List* containing 36 recommendations. 35 recommendations are listed with a date required of “Prior to Startup”. One is listed with a date required of 3 months after startup. The table has a “Date Completed” column but no recommendations have anything in this column.

“(f) At least every five (5) years after the completion of the initial process hazard analysis, the process hazard analysis shall be updated and revalidated by a team meeting the requirements in paragraph (d) of this section, to assure that the process hazard analysis is consistent with the current process. Updated and revalidated process hazard analyses completed to comply with 29 CFR 1910.119(e) are acceptable to meet the requirements of this paragraph.”

The PHA provided is dated May 3, 2005. PHAs need to be updated and revalidated every five years. It should show 3 revalidations, as of May 2020.

If Prevention Program Level 3:

Foam Supplies, Inc. failed to document the resolutions to PHA recommendations, per 40 C.F.R. §68.67 (e).

Foam Supplies, Inc. failed to update and/or revalidate their PHA at least every five years, 40 C.F.R. §68.67 (f).

STANDARD OPERATING PROCEDURES (SOPs)

I asked if Foam Supplies, Inc. had SOPs for handling the methyl formate. It was indicated they do have and follow SOPs but did not provide them. During the field tour an operations supervisor walked me through the process.

The May 3, 2005 PHA had a couple of findings associated with SOPs. Finding 9 of the PHA is “Develop tanker unloading procedure and train operators and supervision.” Finding 28 is “Develop a hose inspection procedure for the hoses used in the Day Tank area.”

If Prevention Program Level 3:

Foam Supplies, Inc. failed to develop and implement written operating procedures, per 40 C.F.R. §68.69 (a).

TRAINING

I requested training records for 5 operators. None has been provided.

If Prevention Program Level 3:

Foam Supplies, Inc. failed to ascertain that each employee involved in operating a process has received and understood the training required, per 40 C.F.R. §68.71(c).

MECHANICAL INTEGRITY

I requested the last inspection of the methyl formate tanks. None has been provided. During the tour of the facility I noticed some rust on one of the methyl formate tanks, as can be seen in Photographs 1 and 2 in Attachment #5. I pointed it out. On June 14, 2020, Mr. Keske emailed that they started repair to this minor rust on the tank. 40 C.F.R. § 68.73(b) requires a written procedure to maintain the on-going integrity of process equipment. 40 C.F.R. § 68.73 (d)(4) requires documentation of each inspection and test that has been performed on process equipment.

If Prevention Program Level 3:

Foam Supplies, Inc. failed document each inspection and test performed on process equipment per 40 C.F.R. § 68.73(d)(4).

MANAGEMENT OF CHANGE (MOC)

I requested the MOC procedure. None has been provided.

If Prevention Program Level 3:

Foam Supplies, Inc. failed to establish and implement a written procedures to manage changes to process chemicals, technology, equipment, and procedures and changes to stationary sources that affect a covered process, per 40 C.F.R. §68.75 (a)

COMPLIANCE AUDIT

I asked for any RMP/PSM audits done in the last 5 years. On June 16, 2021, Mr. Keske emailed me a document-PSM Review May 2020.pdf (Attachment #6). This document does look similar to a PSM/RMP audit however it more lays out the PSM regulations than it audits Foam Supplies, Inc.'s PSM program. No certification statement was included and signed. They should have had an audit done in May of 2017.

If Prevention Program 3:

Foam Supplies, Inc. failed to certify that they have evaluated compliance with the provisions of this subpart at least every three years, per §68.79(a).

INCIDENT INVESTIGATION

I requested Foam Supplies, Inc.'s incident investigation procedure. None has been provided. I found no evidence of incidents that would trigger an investigation.

EMPLOYEE PARTICIPATION

I asked for an employee participation document. None has been provided.

If Prevention Program Level 3:

Foam Supplies, Inc. failed to develop a written plan of action regarding the implementation of the employee participation, per 40 C.F.R. § 68.83(a).

HOT WORK PERMIT

I asked an operations manager if they do hot work permits during the field tour when I observed some lock out tag out equipment and he said they did.

EMERGENCY RESPONSE

I requested Foam Supplies, Inc's Emergency Response Plan. None has been provided.

I asked if they coordinated with the fire department or local emergency planning committee. Mr. Thomas said they did, and the fire department has visited the site.

CLOSING CONFERENCE

On June 10, 2021, at the conclusion of the inspection, I summarized our findings and recommendations during a closing conference. Participants included Mr. Ronald Thomas, Mr. Sena and me. I provided a "Receipt for Samples and Documents" recording the 5 documents that I collected during the inspection. Mr. Thomas and I signed it. I went over the remaining requested documents:

1. Process Hazard Analysis
2. Standard operation procedures for methyl formate
3. Training records for 5 operators
4. Last inspection of methyl formate tanks
5. Management of change procedure
6. Any RMP or PSM audits done in the last 5 years
7. Incident Investigation procedure
8. Employee participation document
9. Emergency response plan
10. Foam Supplies, Inc. – Main, 4387 North Rider Trail 2019 EPCRA Tier II.

I provided a Notice of Preliminary Findings (See Attachment #1), with our findings, "not submitting a risk management plan for methyl formate storage above 10,000 pounds". Mr. Thomas and I signed this. I provided a Confidentiality Notice, and we discussed what CBI was. Mr Thomas claimed the 38 page inventory document as CBI. I asked if he wanted to mark it CBI. He said he would and send it to me. I returned the copy provided during the inspection and

received an identical copy marked “Confidential Business Information” on June 29, 2021 via email. I provided a Notice and Opportunity to Substantiate Confidential Business Information Claim. Mr. Thomas and I signed this. I received a substantiation on June 24, 2021 via email. Mr. Sena and I thanked Mr. Thomas for his cooperation and time and left the facility. Inspection forms are in Attachment #1. Email correspondence is Attachment #7.

Hensley,
Dave

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Hensley, Dave
Date: 2021.08.24
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Dave Hensley
Compliance Inspector

TRACEY CASBURN

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TRACEY CASBURN
Date: 2021.08.24
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Tracey Casburn
Air Branch Chief

ATTACHMENTS

1. Inspection Forms
2. EPCRA Tier IIs
3. Process Safety Information
4. Process Hazard Analysis
5. Photo Log
6. Compliance Audit
7. E-mail Correspondence