

CAA112(r) INSPECTION REPORT

Name: Glycerin Traders	
Address: 419 Exchange Street	Date of Inspection: 11/19-20/2024
County: Lee	Case No: 25IA1120
Phone: (219)369-1066	RMP No: None
High Risk: No	FRS No: 110071453029
CAA Title V: No	Program Level: NA
Mailing Address: 3522 State Road 104, La Porte, IN 46350	
Registered Agent: Registered Agents, Inc., 315 East 15 th , Ste 202, Waterloo, IA 50703	
Process: NAICS 325611-03, Glycerin Manufacturing	

SUMMARY OF OBSERVATIONS

A review of the Glycerin Traders – Keokuk documents and facility revealed the following deficiencies:

1. Glycerin Traders failed to identify hazards which may result from releases using appropriate hazard assessment techniques, as is required by the CAA 112(r)(1), General Duty Clause.
2. Glycerin Traders failed to design and maintain a safe facility by taking such steps as are necessary to prevent releases, as required by the CAA 112(r)(1), General Duty Clause, that included the following:
 - a. Failed to maintain documentation on an area classification drawing or other associated document that identifies areas inside the facility that are hazardous (classified) locations or areas determined to be unclassified, as required by the National Fire Protection Association, or NFPA 70, National Electrical Code or NEC, Chapter 5, Article 500.4. (Identified after the inspection.)
 - b. Failed to follow protection techniques for electrical equipment in hazardous (classified) locations as required by NFPA 70, NEC, Chapter 5, Article 500.7 and Article 501.10 (A) and (B) regarding wiring methods. (Identified after the inspection.)
 - c. Failed to use existing fixed wiring to power electrical sump/pump equipment used to syphon chemical spills in the truck loading area, but instead used a power supply cord as a substitute, as prohibited by NFPA 70, NEC, Chapter 4, Article 400.12 (Identified after the inspection.)

- d. **Failed to implement the minimum requirements for an impairment program when performing repairs to the water fire suppression system, which includes notifications to the local fire department when making planned or emergency impairment corrections, as is required by NFPA 25, Standard for Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, Chapter 15. (Identified after the inspection.)**

INTRODUCTION

I, Lynelle Ladd, and Christina Gallick, Compliance Inspectors with the U.S. Environmental Protection Agency, or EPA, Region VII, inspected Glycerin Traders on November 19 through 20, 2024. The facility is in Keokuk, IA, in the county of Lee.

The inspection was part of EPA's National Compliance and Enforcement Initiative for 2024 – 2027, focusing on Chemical Accident Risk Reduction which includes facilities manufacturing, processing, using, or storing flammable chemicals.

Additionally, Glycerin Traders was selected for inspection through a complaint referral from the Iowa Department of Natural Resources.

I arranged for the inspection on November 15, 2024, with the company owner, Mr. Dennis Zeedyk, via a phone call. I followed up this conversation with an email to Mr. Zeedyk. In this email (Appendix 3) I provided some information on CAA 112(r) and EPCRA 304, 311, and 312, as well as some details about the inspection focus. Mr. Zeedyk stated that we would be assisted by his interim plant manager, Mr. Jeff Weible at the facility.

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

The CAA Section 112(r)(6)(L) provides facility employees and employee representatives with the right to participate in the physical inspection of any workplace conducted pursuant to CAA Section 112(r) as provided in the Occupational Safety and Health Act, or OSHA (29 C.F.R. 1903.8). Based on this, I explained that they should notify the employees and representative(s), if any, of the date and time of the on-site inspection and provide them a copy of this email notice. I recommended they post a copy of this email, upon receipt, in the area subject to the inspection. During inspection, we observed the email posted in the operations control room.

I conducted the inspection to determine if the facility complies with Section 112(r) of the CAA, as amended in 1990. The inspection also included reporting provisions of the EPCRA and the release reporting provisions of 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) and Parts 355, 370, and 372 (EPCRA).

The law and the implementing regulations of 40 C.F.R. 68, Chemical Accident Prevention Program require that the facilities must submit a complete Risk Management Plan, or RMP, to the EPA for those regulated chemicals processed in amounts above the applicable threshold quantities after June 21, 1999, and to implement the program described in the RMP.

EPA has published a document, "Guidance for Implementation of General Duty Clause Clean Air Act Section 112(r)(1)" (EPA 550-B00-002 dated May 2000). This publication is intended solely for the guidance of government personnel but is available to the public at the EPA's website. As explained at the time of the inspection, due to the size of most inspection reports, only the finalized inspection report as well as the photos and facility diagram (Appendix 1) will be transmitted via mail or e-mail to the registered agent of record and an e-mail copy will be sent to the facility owner/operator. A copy of this inspection report, documents obtained, photographs taken during the inspection, checklists and completed forms will be maintained in the EPA facility file. To receive all appendices referenced in this report, please contact Lynelle Ladd at lladd.lynelle@epa.gov.

HISTORY OF BUSINESS

Glycerin Traders is a glycerin processing facility. The facility is situated in downtown Keokuk two blocks from Main Street, on Exchange Street between 4th and 5th Streets. The area near the facility is a mix of retail, industrial and residential. The facility was formerly owned by another company and operated as a biodiesel manufacturing facility. Glycerin Traders purchased and began operating the facility in 2018. Mr. Weible provided us a process flow chart that describes the process (Appendix 4). They receive raw glycerin mixed with vegetable oil containing approximately 20% methanol from biodiesel manufacturers. This material is received via trucks. Hydrochloric acid at 22-28% is added to the raw glycerin to initiate the separation of the soybean oil, which includes a fiber component called "frag" with the veg oil. The glycerin is sent through the glycerin columns to separate the methanol from the glycerin. This methanol is called "wet methanol" due to the water content. The methanol is processed through distillation columns to remove water resulting in a 99.95% methanol product. The finished glycerin and finished methanol are stored in designated storage for shipping. Methanol, glycerin, and vegetable oil are sold and shipped out via trucks. The company operates under a primary North American Industry Classification System number, or NAICS, 325611-03, Glycerin Manufacturing. Glycerin Traders is privately owned or operated by Mr. Zeedyk who is the founder and CEO of the company.

The facility operates seven days per week from 7:00 a.m. to 7:00 p.m. Mr. Weible stated that the facility in Keokuk currently has 6 employees working at this location but needs 10 to be fully staffed. Mr. Weible stated that there had been a complete turnover of employees in the past month. He indicated that the previous plant manager left, and he believes that he took many of the companies records with him.

Based on the 2020 U.S. Census there are 9,900 residents in Keokuk, which is in Lee County in Iowa. There are an estimated 4,447 residents that live within one mile of the Glycerin Traders facility.

Maximum Intended Inventory	Amount of Methanol in Pounds
Quantity On-site at Time of Inspection	70,308*
Quantity Listed in RMP	Not Applicable
Maximum Daily Quantity per Tier II Forms	
--2022	160,000
--2023	160,000

*Estimated based on the finished methanol tank volume. The operations panel indicated the tank was 90% full. The tank is a 12,000-gallon methanol tank. The conversion factor used is 6.51 pounds/gallon. This quantity does not include the amounts of wet methanol, or the methanol contained in the raw glycerin received.

OPENING CONFERENCE

Christina Gallick and I arrived at the Glycerin Traders facility at approximately 8:31 a.m. We parked on 5th Street and walked into the plant alongside the truck loading driveway. We entered a door that was to the administration office, but no one was inside. We exited and saw employees outside of the plant and walked over to that area. Mr. Weible was one of the employees and we introduced ourselves and showed Mr. Weible our credentials. I asked Mr. Weible where we could set up for the meeting. Mr. Weible suggested an outdoor picnic table, but I explained that we would need a place, preferable indoors, because we would be spending most of the inspection reviewing documents and would need a place to plug in our laptops and scanners. He escorted us back to the administrative office building.

Once inside the office, I asked about parking because the available street parking on 5th street put our federal vehicle close to the entrance of the truck loadout driveway and possibly in the way of vehicles entering the facility. Mr. Weible suggested that we pull onto the property and park behind a pick-up truck near the office. We moved the vehicle to the suggested parking location on the property and retrieved our equipment for the inspection.

I started the opening conference at 8:52 a.m. I asked Mr. Weible to sign the Opening Conference Sign-in Sheet (Appendix 2). We explained that we'd want to perform a tour of the facility and to review records about their processes.

I provided a copy of the United States EPA CBI Notice of Questions and Answers and explained their right to claim Confidential Business Information, or CBI. I showed them the United States Environmental Protection Agency Proprietary and Confidential Business Information Form and explained that I would be scanning documents and taking digital images of facility process and safety equipment. I explained that any document or photo I take during the inspection that they deem as CBI will be noted at the end of the inspection on the CBI form, of which they would receive a copy.

I explained that for any documents scanned or images taken that are not CBI, I would document those on a receipt for those documents. I showed the EPA Receipt for Samples and Documents form that I would complete.

I explained that at the end of the inspection there would be a closing conference and at that time I would provide them with the preliminary findings from the inspection.

I explained that these findings are preliminary and additional findings may be added to the inspection report or the preliminary findings may be changed after I have had more opportunity to perform an additional review of the documents taken during the inspection.

I explained the United States Code Title 18, Section 1001 and 1002 concerning the criminality of falsifying statements and records and provided them with a copy of those sections of US code.

I and Mr. Weible signed the Notice of Inspection Form (Appendix 2), and Mr. Weible received a yellow copy of the signed form.

PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

Name	Title/Position
Jeff Weible	Interim Plant Manager/Maintenance
Dennis Zeedyk	Owner/Chief Executive Officer

FIELD TOUR – November 19, 2024

At approximately 1:55 p.m. we began the tour of the facility. We started at a storage building, called the east pole building, located on the south-southeast corner of the property, or at the property edge of 4th and Exchange Streets. In this building we observed, and I documented by digital image, 12 - 275-gallon totes of Tsunami 100, an EPA registered organic peroxide that Glycerin Traders had purchased and was storing for approximately 2 months. Mr. Weible stated that they do not have a use for the material and will be selling it (Appendix 1, digital images IMG_0459.JPG and IMG_0460.JPG), but then later when speaking to Mr. Zeedyk, he stated that the material was going to be used in the process. I observed and took digital image of the material information sheet on one of the totes (Appendix 1, digital image IMG_0461.JPG). In addition to full totes, there were empty totes being stored in the building (Appendix 1, digital image IMG_0462.JPG).

Outside of the east pole building was a storage vessel that was no longer in use (Appendix 1, digital image IMG_0463.JPG). Mr. Weible said this tank was on-site prior to the purchase of the facility from the prior owners.

In this same area of the property is raw glycerin receiving. Trucks back onto the property from Exchange Street to unload the raw glycerin that is the main ingredient in the process. We observed and I documented by digital image evidence of past chemical spills (Appendix 1, digital image IMG_0464.JPG). In the unloading area there is an open stormwater drain that goes directly to the city's stormwater system.

We observed and I documented by digital image evidence to chemical spill staining on the cement leading directly the stormwater drain (Appendix 1, digital image IMG_0465.JPG).



IMG_0465.JPG: Stormwater Drain – Goes directly to city stormwater system.

We entered the building where the pump for the raw glycerin is located. Mr. Weible stated that the building was used as a warehouse and to house the raw glycerin tank farm. We observed and I took a digital image of the pump that is used to move unloaded glycerin to tanks in the receiving tank farm (Appendix 1, digital image IMG_0466.JPG). On a platform above the pump, I observed and documented a tote and a tank (Appendix 1, digital image IMG_0467.JPG). I asked how those were used. Mr. Weible stated that the tote was a control for the vapors that come from the hydrochloric acid tank and that the tank next to the tote was not in use. However, when we observed the hydrochloric acid tank, it appeared that the tank vent was connected to tote located on the ground-level next to the tank, not to the tank on the platform (Appendix 1, digital image IMG_0468.JPG). Mr. Weible stated that the hydrochloric acid is added to the raw glycerin to facilitate the separation of the glycerin from “crude oil” or the vegetable oil containing fiber or the “rag” layer. He stated that this process used to be automatic when the raw glycerin was received, hydrochloric acid would be added as the raw glycerin was pumped in and moved to storage but that the pump on the hydrochloric acid tank no longer worked.

In the immediate area of the hydrochloric acid tank, we observed nine totes, that can be seen in digital images IMG_0468.JPG through IMG_0470.JPG. I asked about the content of the totes and noticed residue of chemicals on the floor in the area from the tote either because it was actively leaking or a spill had not been adequately cleaned up (Appendix 1, digital image IMG_0471.JPG). Mr. Weible stated that this was raw glycerin that had spilled and was collected via a sump pump and stored in the totes so that it could be recycled into the process. This pump (Appendix 1, digital image IMG_0469.JPG) was setup to collect spills from the floor drain. Material pumped from this floor drain was captured in totes as seen in the image. At the time of the inspection there was fluid in the floor drain.



IMG_0469.JPG: Pump for pumping spills to a tote. Entire floor area is covered in residue from spills and chemicals puddles on the floor and evidence of acid etching of cement flooring.

We continued walking toward the west part of the warehouse area through a doorway (seen at the far end of Image IMG_0469.JPG) and down an incline. We observed and I documented by digital image the presence of numerous totes stacked and stored in the area. Mr. Weible stated that there were approximately 125 totes and that the totes contained materials that had been sump-pumped from the spills that had occurred in the truck loadout area and from spills inside the warehouse (Appendix 1, digital images IMG_0472.JPG through IMG_0474.JPG). Mr. Weible stated that the previous plant manager had a habit of accumulating these totes and not processing them but that the material would be processed.

We went back to the room housing the hydrochloric acid tank and then entered the room located on the southside of the warehouse building that housed the raw glycerin storage tanks. We observed and I took digital images of the various tanks. Mr. Weible stated that Tanks A and B were 21,000-gallon raw glycerin tanks with a stainless-steel liner (Appendix 1, digital image IMG_0475.JPG).

From the vantage point of standing next to Tank B, we observed, and I took a digital image of the tanks, looking toward the southeast end of the warehouse building (Appendix 1, digital image IMG_0476.JPG). From this viewpoint I could see tank C through tank I. Mr. Weible stated that tank D is a 15,000-gallon heated tank and that tank F is a 6,000-gallon tank. Mr. Weible stated that tanks F through I were each 5,500-gallon capacity. I took a digital image of tank C, which Mr. Weible said is a 5,500-gallon raw glycerin feed tank (Appendix 1, digital image IMG_0477.JPG). None of these tanks had placards identifying content or the hazards of the contents, such as an NFPA diamond. While in the tank farm area Ms. Gallick observed a raw glycerin leak. An employee still had a bleeder valve open when the other employee opened a valve to drain glycerin. This resulted in raw glycerin escaping through the bleeder valve for a few seconds.

From the warehouse we crossed the product truck loading driveway. I took an image of a tank that was located outside, a truck that had arrived for product, and the view of the pit located inside the building through the rollup door, where spills that occur in the truck loading area were being pumped (Appendix 1, digital image IMG_0478.JPG).

When zoomed in on the image beyond the rollup door where hoses are located on the ground, the pit floor had a brown-colored chemical staining some of the concrete. The tank labeled T-36 was also stained with brown-colored chemical. Please see the **Hazard Review** section of this report for additional discussion.

Mr. Weible stated that the tank seen in digital image IMG_0478.JPG and the one we observed and documented in Appendix 1, digital image IMG_0479.JPG were recent purchases that will be moved inside to be used.

We then entered the process building through the operations control/quality lab and we observed several documents posted, including density conversions for Glycerin Traders raw chemicals and products (Appendix 1, digital image IMG_0480.JPG), color codes for process flowlines, an outdated Glycerin Traders management chart, and a bucket of raw material for sampling (Appendix 1, digital image IMG_0481.JPG). We observed and I documented by digital image a "No Smoking" sign and employee notice of required work attire, also in the background was a tank with an NFPA diamond (Appendix 1, digital image IMG_0482.JPG). We observed and I documented by digital image that the email I had sent to Mr. Zeedyk was posted near employee OSHA workplace posters (Appendix 1, digital image IMG_0483.JPG).

We exited the operations control room/quality lab area and entered the production area. We observed and I documented by digital image three totes containing material from spill cleanups and poly tanks that Mr. Weible stated were for the wastewater that was extracted during the raw glycerin processing (Appendix 1, digital image IMG_0484.JPG). It was noted that the large poly container said to be containing wastewater was labeled with an NFPA diamond which Mr. Weible stated was inaccurate. Mr. Weible stated that 80% of the wastewater is recycled and the rest of the wastewater is picked up via truck. However, Mr. Weible also said that the wastewater was discharged to the sewer up to 50 gallons per day. He provided us with a copy of an October 2024 water testing report (Appendix 5).

We observed and documented by digital image a frac tank. Mr. Weible stated that this tank contains acidified glycerin from tank storage that is further processed to extract the final glycerin (Appendix 1, digital image IMG_0485.JPG). Mr. Weible stated that the tank farm and methanol tank was ahead, and I turned to the opposite direction and observed the boiler, maintenance area and more totes containing spill cleanup (Appendix 1, digital image IMG_0486.JPG). Mr. Weible stated that the extraction columns were in the room that can be seen behind the forklift. At this point, Mr. Weible asked if I could hear a leak. I stated that I could not, and he ran over toward the tank farm.

Christina and I remained where we were standing until Mr. Weible returned. He stated that a sample port had been left open or was knocked open by the contractors and was leaking glycerin into the tank farm containment.

We walked through the tank farm area. There are ten tanks in this area. Tank 11 was opened for liner repair (Appendix 1, digital images IMG_0487.JPG and IMG_0488.JPG). We also observed and took digital image of the emergency shower/eyewash station in the area (Appendix 1, digital image IMG_0489.JPG).

Mr. Weible then showed us the explosion proof room for the methanol tank. He stated that the electrical for the room did not work so he could not turn on the light for us. As a result, I was unable to get a clear image of the tank (Appendix 1, digital images IMG_0490.JPG and IMG_0491.JPG). I also documented by digital image the light switch and the emergency fire alarm next to the methanol tank storage room (Appendix 1, digital image IMG_0492.JPG). The electrical in the area had original design features that would meet electrical classification. However, upon closer inspection of the fire alarm light, it appeared to be damaged and open (Appendix 1, digital image IMG_0493.JPG).



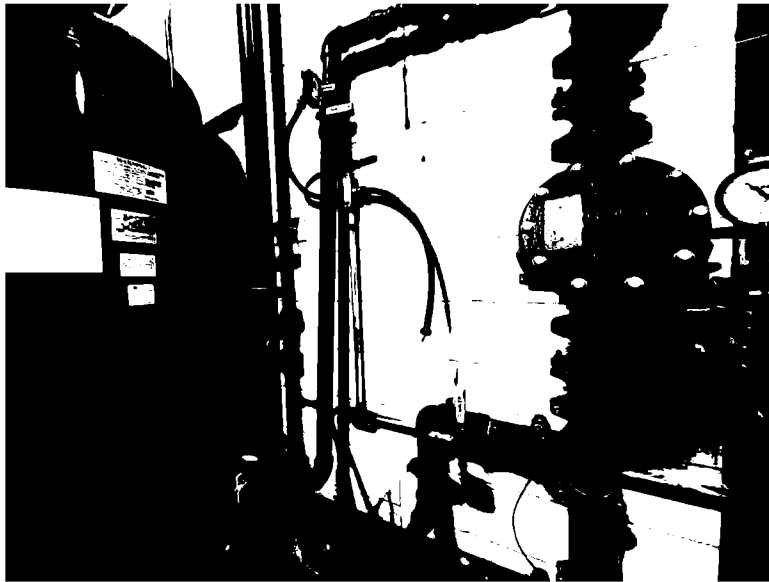
IMG_0493.JPG: Side view of fire alarms in the area around the methanol room. Alarm to the left was said to be functional but appears to be broken.

We also observed and I documented by digital image that an emergency stop button for the methanol storage room was snapped at the conduit junction and dangling by the wiring (Appendix 1, digital image IMG_0494.JPG). We also observed and I documented by digital image a fire extinguisher maintained in the area (Appendix 1, digital image IMG_0495.JPG).



IMG_0494.JPG: Emergency shut off for the methanol pump. Functionality unknown. Button is hanging by its wires outside of the conduit in an area designed for electrical classification and fire/explosion prevention.

Directly on the east side of the methanol storage tank room was the building's foam and water suppressant system. We observed and I documented by digital image the Ahern fire suppression system (Appendix 1, digital image IMG_0496.JPG). However, upon closer inspection, it was evident that parts of the system had been disabled, including disconnected electrical conduit with exposed wiring and valves in the off position (Appendix 1, digital image IMG_0497.JPG).



IMG_0497.JPG: Close-up of system – electrical is disconnected and hanging with exposed wires, valves along the water line in closed positions. Water pressure gauge indicates pressure however, part of the system has been disabled and was told that the foam tank is not used.

During some of the earlier discussions about plant processes, Mr. Weible indicated that contractors were on-site to replace some of the process piping. I had asked if there were any drawings or details regarding the materials being installed. At this point of the tour, the contractor hired by Glycerin Traders for that work approached us and showed me a drawing of the work that was being performed on the piping on the fats line. I asked if I could take a digital image of the drawing and the contractor allowed me to document by digital image the drawing he had made (Appendix 1, digital image IMG_0498.JPG).

On the far east side of the plant, we observed, and I documented by digital image an exit door that was located near the methanol storage tank room. Near the door is an emergency stop button, fire alarm, fire extinguisher and emergency warning lights. Additionally, I observed that the connection elbow for the part of the fire suppression system that would allow external water addition to the system had been removed (Appendix 1, digital image IMG_0499.JPG). The exterior part of this fire water connection can be seen in digital images IMG_0524.JPG through IMG_0526.JPG.

We viewed the area opposite of the tank farm and that was once used by the previous owners for biodiesel production. Mr. Weible stated that the pit area (below the upper walkway) is now used to capture the spills from the truck unloading area (Appendix 1, digital image IMG_0500.JPG). The lighting in this area was low but the fluids on the pit floor can be seen at the far end where the rollup door seen in digital image IMG_0478.JPG is located (Appendix 1, digital image IMG_0501.JPG).

As we walked back toward the operations control/quality lab room, we stopped to observe and I took digital image of where the leak from a sample port had occurred at the start of our field tour (Appendix 1, digital images IMG_0502.JPG and IMG_0503.JPG). I observed disconnected valves and disconnected electrical conduit in the area, along with evidence that the material had splashed onto the tank farm containment wall and outside of the containment onto the floor (Appendix 1, digital image IMG_0504.JPG).

We went to the area where the distillation columns are located (Appendix 1, digital image IMG_0505.JPG). We viewed new storage tanks for the wet methanol or methanol that contains a high percentage of water (Appendix 1, digital image IMG_0507.JPG).

Outside of the distillation room was a laundry area and an emergency eyewash/shower station (Appendix 1, digital image IMG_0508.JPG).

We went back into the operations control/quality lab office, and we observed emergency stops for loadout, plant, and the boiler. I also observed the emergency fire alarm system which appeared to be off. Mr. Weible stated that an insurance company inspection had identified that sprinkler heads in some areas of the plant were corroded and needed replaced. He stated that a contractor was on-site removing fire suppression system piping and replacing the piping and sprinkler heads (Appendix 1, digital images IMG_0509.JPG and IMG_0510.JPG).

We also observed the control system display which indicates which units are operating. The images show the glycerin tanks and methanol tank storage levels. The display indicated that the methanol tank was full, and that glycerin processing was occurring at the time of the inspection (Appendix 1, digital image IMG_0511.JPG). We also observed and documented by digital image the pump shutoffs for wastewater and methanol loadout (Appendix 1, digital image IMG_0512.JPG).

This ended our facility tour on November 19, 2024, at approximately 3:35 p.m.

FIELD TOUR – November 20, 2024

When we returned to the facility on November 20, 2024, at 7:30 a.m., and asked to view some additional areas of the facility. We started in the truckload out driveway, and we observed, and I documented by digital image the evidence of residue from spills that have been inadequately cleaned up (Appendix 1, digital image IMG_0513.JPG). See the **Hazard Review** section of this report for additional discussions.



IMG_0513.JPG: Trucks that will be loaded with methanol, glycerin, or vegoil, enter from the east or from the 5th street side of the facility and pull up to the loadout areas located on the processing buildings south wall. The grate running through the driveway is where spills from truck loading are captured and then pump via sump pump into the pit as seen in Images 42 and 43.

Also seen in this image is the sump pump that is powered via an extension cord and is left running to suction any spills that could occur. The residue of any spill is pumped into the pit area documented in images IMG_0478.JPG, IMG_0500.JPG and IMG_0501.JPG. We observed and I took a digital image of the sump pump in the drain, the hose running through the wall to the pit and the extension cord powering the sump pump (Appendix 1, digital images IMG_0514.JPG and IMG_0515.JPG).



IMG_0515.JPG: Image of sump pump, extension cord, and hose going through a hole in the facility wall to the pit that is located on the other side of the wall.

We observed and I took digital images of the different load out stations. I took a digital image of the Processed Glycerin Truck Loading (Appendix 1, digital image IMG_0516.JPG) and an emergency stop located between the Processed Glycerin Truck Loading and the VegOil Truck Loading (Appendix 1, digital image IMG_0517.JPG). I took a digital image of the VegOil Truck Loading station (Appendix 1, digital image IMG_0518.JPG) where evidence of spilled vegetable oil has occurred. Also visible in this image is a fire extinguisher and another emergency stop that is located between the VegOil Truck Loading station and the Methanol Truck Loading station.

We observed and I documented by digital image the Methanol Truck Loading area which included a fire extinguisher, a fire water connection, grounding wires and loading piping (Appendix 1, digital image IMG_0519.JPG). The rusted piping seen in the image was said to be unused and from the former biodiesel production activities. We observed and I documented the methanol tank pressure relief pipe vents (Appendix 1, digital image IMG_0520.JPG). I took an image of the truck loading driveway looking west where trucks enter from the street (Appendix 1, digital image IMG_0521.JPG). This image also captures the awning that protects the truck loading area from weather (Appendix 1, digital image IMG_0522.JPG).

We then observed and I documented by digital image the two new tanks that Mr. Weible stated would be moved inside prior to use although a hose was connected to the red tank and appeared to be in use. Also in the image is the boiler that had been purchased to replace the current boiler, but Mr. Weible stated that it had been dropped from the delivery truck and damaged and would be unable to be used (Appendix 1, digital image IMG_0523.JPG). Mr. Weible stated that the boiler was purchased to increase capacity. He stated the current boiler is 125 to 130 horsepower and they want to increase to 300 horsepower so that they can operate all parts of the plant at the same time. Currently the operations are a batch operation because they do not have enough steam to operate all equipment in the steps of the process.

This ended the tour of the facility performed on November 20, 2024.

After leaving the facility at 9:45 a.m. following the Closing Conference on November 20, 2024, Christina Gallick and I made observations from the public street. I took digital images of the street where trucks leave the Glycerin Traders facility. The images document that chemical spills from the truck loading driveway are being tracked out of the facility onto the public street. Also in the images, the external fire connection that has been disconnected inside the building is visible (Appendix 1, digital images IMG_0524.JPG through IMG_0526.JPG). See the discussion in the **Hazard Review** section of this report for more information.



IMG_0524.JPG: This image was taken from 4th Street that shows how the trucks track spilled glycerin or Veg Oil onto the public roadway. Also shows the fire water connection on the street side that was discussed in Image 41.

GENERAL DUTY CLAUSE OBLIGATIONS

Section 112(r)(1) of the Clean Air Act, also known as the General Duty Clause, requires “owners and operators of stationary sources producing, processing, handling, or storing such substances [i.e., a chemical in 40 C.F.R. part 68 or any other extremely hazardous substance] have a general duty [in the same manner and to the same extent as the general duty clause in the Occupational Safety and Health Act or OSHA] 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.”

GENERAL MANAGEMENT SYSTEM

I asked Mr. Weible if Glycerin Traders had assigned anyone to be responsible for oversight on the processing, handling, and storage of methanol and who would also be responsible to train employees that handle, use and work with methanol, to develop written procedures for the safe use and handling of methanol and to ensure the proper operation and maintenance of the system. Mr. Weible stated that person would have been the former plant manager who had just retired. He stated that he was only acting as the interim plant manager until a new person could be hired. He stated that he and Mr. Zeedyk had interviewed several people for the position and were prepared to offer one person the position.

GENERAL APPLICABILITY OVERVIEW

Methanol, chemical abstract system, or CAS, number 67-56-1 is a hazardous substance listed in CERCLA Section 103, with a reportable release quantity of 5,000 pounds. Methanol is a flammable material with an NFPA rating of 3 and an NFPA health rating of 1.

I asked Mr. Weible whether the facility was subject to the U.S. Occupational Safety and Health Administration, or OSHA, Process Safety Management, also known as the PSM regulation, in 29 C.F.R. 1910.119. He stated that he did not know if they were subject but hadn't been told that they were subject.

Prior to the inspection, I reviewed the chemicals in the most recent Tier II submittals. Based on that information, I determined that Glycerin Traders did not store, process, or manufacture chemicals listed in 40 C.F.R. Part 68. However, processing raw glycerin and methanol would be subject to the requirements of the CAA Section 112(r)(1), General Duty Clause.

HAZARD IDENTIFICATION

HAZARD REVIEW

I asked if Glycerin Traders had assessed the hazards of their process or identified the impact of releases of their chemicals. Mr. Weible stated that they did not have documentation that describes how a release of the products they receive, process and ship, such as the crude oil, raw glycerin, and methanol would impact the surrounding off-site community if they were to have a release, or a fire or explosion related to the methanol.

Mr. Weible stated that most of the spills occur due to transport drivers failing to secure valves and ports on their trucks during or after loading. He stated the facility has implemented a truck loading checklist to ensure all valves, sample ports and dome lids are closed after loading and before leaving the property (Appendix 6). Mr. Weible stated that the company did not currently have a Spill Prevention, Control and Countermeasures, or SPCC plan. Mr. Weible stated that a consultant was working on an SPCC plan for the La Porte, Indiana and Defiance, Ohio facilities and the plan was to have this consultant work on the Keokuk SPCC plan next.

As seen in several digital images taken during the inspection, including IMG_0465.JPG, IMG_0513.JPG and IMG_0524.JPG, spills that have occurred have not been adequately addressed when they happen and are not adequately contained on-site. The hazards of spilled chemicals that are currently being pumped and directed to an open pit area, as seen in digital image IMG_0478.JPG, as well as spill residues being tracked off the property onto the public streets, or flowing into the stormwater drain, had not been assessed and had not been prevented.

PROCESS SAFETY INFORMATION

I asked how Glycerin Traders identified and maintained process safety information. I asked to review design specifications for the equipment, such as size or volume, safe operating parameters, including upper and lower pressures and temperatures, and the material of construction for the tanks, distillation vessels and piping that is installed in the facility. Mr. Weible stated that he was unable to find that information at the facility and stated that the information could be at their headquarters offices.

I asked if they maintain safety data sheets for the chemicals in use at the facility. Mr. Weible provided me with copies of Material Safety Data Sheets, or MSDS (Appendix 7). I was provided an MSDS for Soybean Oil, dated May 6, 2006, that had document header for the ADM company, but Glycerin Traders handwritten into the Manufacturer's Name field and an address of 4666 Faries Parkway, Decatur, Illinois. I was provided an MSDS for Hydrochloric Acid Solution, <37% content, from the Manufacturer named Trans Chem, Inc. that was dated as revised on December 3, 2003. Mr. Weible stated that the hydrochloric acid in use at the facility was around 22% - 26%. I was provided an MSDS for Glycerin, dated August 22, 2012, that listed W2Fuel LLC as the manufacturer with an address in Beaverton, Oregon. I was provided an MSDS for Methanol listing the manufacturer as EMD Chemicals, Inc. in Gibbstown, NJ that is dated September 22, 2006.

The MSDS provided on-site were not prepared by Glycerin Traders for the products processed, used, stored, or sold by Glycerin Traders. Additionally, the MSDS being maintained on-site do not appear to adhere to the U.S. Occupational Safety and Health Administration's Hazard Communication Standard in 1910.1200, which was revised in 2012 to align with Global Harmonization. This change required all MSDS to align with the new Safety Data Sheet, or SDS, requirements, as outlined in this [OSHA Brief](#).

I was told by Mr. Zeedyk to review the SDS that are maintained on the [company website](#), which included SDS for fatty acids, crude glycerin, reclaimed methanol, wet methanol, and hydrochloric acid (26 – 37%). These SDS were created in 2015. The SDS for crude glycerin does not list methanol as a component of the product, the crude glycerin received at the facility does contain methanol at 20%, according to Mr. Weible. Additionally, the hydrochloric acid SDS on the website does not match the concentration information provided by Mr. Weible, who stated that the hydrochloric acid was 22% - 26%. If the acid in use at Glycerin Traders has a concentration equal to or greater than 37%, then 40 C.F.R. Part 68 would apply.

The hydrochloric acid SDS on Glycerin Trader's website reports a pound per gallon conversion of 9.61. For a 6,000-gallon tank filled to 90% capacity, the full quantity of hydrochloric acid would be 51,894 pounds. When based on concentration of 37% HCl, the amount would equate to 19,200 pounds. The regulated threshold quantity for hydrochloric acid equal to or above 37% is 15,000 pounds.

We were provided with a different material safety data sheet for methanol that had specific safety process safety information highlighted in yellow (Appendix 8).

An SDS for Tsunami 100, was not available on on-site or on the company's website.

Identifying and understanding the hazards of the facility's chemicals and processes, as well as the on-site and off-site hazards posed by releases of chemicals from facility processes are minimum hazard assessment actions. Ensuring employees have access to the most recent SDSs as opposed to numerous versions that contain different information, and having the equipment process safety information available on-site to ensure safe operations will reduce the impacts of releases and help prevent releases from occurring.

For this reason, I have identified the following deficiency:

- 1. Glycerin Traders failed to identify hazards which may result from releases using appropriate hazard assessment techniques, as is required by the CAA 112(r)(1), General Duty Clause.**

FACILITY DESIGN AND MAINTENANCE

DESIGN CODES AND STANDARDS

I asked Mr. Weible if Glycerin Traders followed industry standards for the equipment and operations and if he had any documentation regarding how the facility was designed and whether it met specific industry standards for compatible material usage or designation of electrical classifications. Mr. Weible stated that he wasn't aware of any document that listed the electrical classification for the areas of the plant.

For this reason, I identified the following deficiency:

- 2. Glycerin Traders failed to design and maintain a safe facility by taking such steps as are necessary to prevent releases, as required by the CAA 112(r)(1), General Duty Clause, that included the following:**
 - a. Failed to maintain documentation on an area classification drawing or other associated document that identifies areas inside the facility that are hazardous (classified) locations or areas determined to be unclassified, as required by the NFPA 70, National Electrical Code or NEC, Chapter 5, Article 500.4. (Identified after the inspection.)**

As discussed in the **Field Tour** section of this report, I identified several electrical concerns as follows:

- No power to the methanol tank explosion proof room (Appendix 1, digital images IMG_0490.JPG and IMG_0491.JPG).
- The fire alarm light near the methanol tank storage room was damaged and open (Appendix 1, digital image IMG_0493.JPG).
- The emergency stop button for the methanol storage room that was snapped away from the conduit junction and dangling by the wiring (Appendix 1, digital image IMG_0494.JPG).

- Disconnected electrical conduit with exposed wiring on the facility water suppression system (Appendix 1, digital image IMG_0497.JPG).
- Disconnected electrical conduit where the active leak occurred during the inspection (Appendix 1, digital image IMG_0504.JPG).

For these reasons, I have identified the following deficiency:

2. Glycerin Traders failed to design and maintain a safe facility by taking such steps as are necessary to prevent releases, as required by the CAA 112(r)(1), General Duty Clause, that included the following:

- b. Failed to follow protection techniques for electrical equipment in hazardous (classified) locations as required by NFPA 70, NEC, Chapter 5, Article 500.7 and Article 501.10 (A) and (B) regarding wiring methods. (Identified after the inspection.)**

I asked Mr. Weible if Glycerin Traders followed any specific industry standards for any of the processes. He produced a document titled "Methanol safe storage and handling" (Appendix 9) as well as a document titled "Technical Information & Safe Handling Guide for Methanol" dated October 2002 (Appendix 10).

I asked Mr. Weible if I could review a Process and Instrumentation Diagram, or P&ID, for the facility operations. Mr. Weible stated that he had been unable to find one. During the closing conference, Mr. Weible got Mr. Zeedyk on the phone. Mr. Zeedyk stated that he had a copy of the P&IDs and could provide those. I sent Mr. Zeedyk a link to a OneDrive file so he could upload any documents, such as the P&ID, that he had access to that Mr. Weible did not have on-site. Mr. Zeedyk stated that he would have his consultant upload documents in a few days. As of January 6, 2025, I had not received any documents from Mr. Zeedyk or his consultant.

As described in the **Field Tour** section of this report, we observed and documented by digital images the presence of a sump pump in the drain located in the truck loading driveway to capture spills that occur. I noted and documented by digital image that the sump pump was plug into an extension cord and was operating unsupervised. Mr. Weible stated that they leave it plugged in and operating to ensure that any leaks are immediately syphoned and directed to the pit. Mr. Weible stated that the sump pump had previously been plugged directly into a GFCI outlet on the opposite side of the drive. Mr. Weible stated that at that time, any materials spilled and syphoned from the drain were dispensed directly into a tote. He stated that when a tote was full it was replaced with an empty tote and the full tote was moved to the warehouse where Ms. Gallick and I had previously observed and documented by digital image the accumulation of totes containing spill cleanup. Mr. Weible stated that he decided to change the configuration of the sump pump location for the drain in the loading driveway made following the spill of glycerin that occurred on November 14, 2024.

Following the inspection, I reviewed the digital images that were taken during an EPA RCRA inspection of Glycerin Traders on May 15, 2024. Images DCSN0198 and DCSN0199 from the EPA RCRA Inspection Report 240515 show the prior configuration and location of the sump pump on the opposite side of the truck loading driveway and its hose dispensing into a tote nearby.

For this reason, I have identified the following deficiency:

2. **Glycerin Traders failed to design and maintain a safe facility by taking such steps as are necessary to prevent releases, as required by the CAA 112(r)(1), General Duty Clause, that included the following:**
 - c. **Failed to use existing fixed wiring to power electrical sump/pump equipment used to syphon chemical spills in the truck loading area, but instead used a power supply cord as a substitute, as prohibited by NFPA 70, NEC, Chapter 4, Article 400.12 (Identified after the inspection.)**

As discussed in the **Field Tour** section of the report, we observed, and it was brought to our attention that the fire suppression system was disabled for repairs. Mr. Weible stated that the insurance company had performed an inspection the week prior, and several deficiencies were noted, including expired fire extinguishers and the corrosion of sprinkler heads in the building sprinkler system. Mr. Weible stated that Glycerin Traders had hired a contractor to remove and replace corroded sprinkler system piping and sprinkler heads.

When reviewing the Emergency Preparedness document (Appendix 11), which is also discussed below in the **Emergency Response Planning** section of this report, I looked for information regarding actions the facility would take to prevent a fire in case when the emergency fire suppression system was inoperable, particularly whether the facility took fire watch actions into account under any specific conditions. On the Fire Inspection Checklist contained in the Emergency Response Plan, it states that the company would make fire watch assignments when welding or cutting is performed in locations where serious fire might develop. The plan does not account for situations when the emergency fire suppression system may be under repair and inoperable.

The NFPA 25, Standard for Inspection, Testing and Maintenance of Water-based Fire Protection Systems, Chapter 15, lists the minimum requirements for planned and emergency fire protection system impairment programs. At the time of the inspection, it was observed that parts of the fire protection system were disabled and not in place. The impairment was in place for longer than 10 hours in a 24-hour period.

I reached out to the Keokuk Fire Chief Gabe Rose on December 9, 2024, and asked if Glycerin Traders had notified them that they were performing repairs to the sprinkler systems and that the system was impaired. He stated that he had not had notification of their work on the sprinkler system. According to NFPA 25, Chapter 15.5.2(5), fire department notification is required to be performed before authorization is given for an impairment event.

For this reason, I identified the following deficiency:

2. **Glycerin Traders failed to design and maintain a safe facility by taking such steps as are necessary to prevent releases, as required by the CAA 112(r)(1), General Duty Clause, that included the following:**
 - d. **Failed to implement the minimum requirements for an impairment program when performing repairs to the water fire suppression system, which includes notifications to the local fire department when making planned or emergency impairment corrections, as is required by NFPA 25, Standard for Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, Chapter 15. (Identified after the inspection.)**

I asked whether Glycerin Traders had a preventative maintenance and Mr. Weible stated that he maintained a record of maintenance he sees needing performed on his cell phone and that they have a daily checklist for some items and provided me with an example of the daily checklist for November 16, 2024 (Appendix 12). He stated that they did not have a formal preventative maintenance program that listed schedules for equipment inspections or part replacements. Mr. Weible provided his maintenance checklist for November 20, 2024 (Appendix 13).

TRAINING

As previously stated in the **History of the Business** section of this report there had been a complete turnover of employees within the past month this inspection and that not all employees had been trained. Mr. Weible stated that the employees will be trained by the new plant manager, Mr. Zeedyk or his consultant. Mr. Weible stated that normally employees are trained upon hire for emergency response plan. Mr. Weible stated that other training is a computer training. New employees are trained during the first week on OSHA safety. Second week is on processes and employees are taught one process at a time. Mastery is assessed through computer testing and on the job observations and job-shadowing. Mr. Weible provide me with a Methanol grounding checklist and training “tool talk” as well as training records for May 2024 and August 2024 (Appendix 14).

INCIDENT INVESTIGATIONS

Mr. Weible stated that there hasn’t been consistent documentation of incidents, including releases or near-misses. He provided an example investigation that involved a pump over-pressurization which occurred on May 23, 2024 (Appendix 15).

Mr. Weible also stated that they have performed safety meetings after near misses but did not have documentation of those meetings.

As discussed in the **Field Tour** section of this report and seen in digital images IMG_0502.JPG and IMG_0503.JPG, there was a release during this inspection that was contained in the tank farm containment area. Mr. Weible stated that approximately 20 – 50 gallons was released when that a sample port had been left open or was knocked open by the contractors and leaking glycerin into the tank farm containment.

SELF-AUDITS

I asked if self-audits are performed or are there any audits performed by a third party. Mr. Weible stated that they had a recent inspection performed by their insurance company. He stated the inspection identified problems with the fire suppression system and corrosion on sprinkler heads due to acid vapors. Mr. Weible then informed us that a contractor was on site to remove, repair and replace the sprinkler piping and damaged sprinkler heads.

I asked to see a copy of the insurance company audit. Mr. Weible said he did not have access to the report to provide to us.

As discussed in the **Field Tour** section of this report we observed that the sprinkler system was disconnected in several areas of the plant and we observed and documented that the main system alarms appeared to be shut off, as seen in digital images IMG_0509.JPG and IMG_0510.JPG.

CONSEQUENCE MINIMIZATION

EMERGENCY RESPONSE PLANNING

I asked if they had an emergency response plan and Mr. Weible provided me with a copy of an Emergency Response Employee Handbook (Appendix 16) and an Emergency Response Plan that was developed for W2Fuel (Appendix 11). The Emergency Response Employee Handbook was generic and not site specific. The Emergency Response Plan listed job titles and responsibilities. The document includes documents that were designed to be completed and included in the plan, such as a list of the emergency equipment and locations in the facility, as well as inspection checklist for fire equipment. I asked to see records that inspections were being performed using the forms in the emergency response plan. Mr. Weible stated he had not found any records.

COORDINATION WITH EMERGENCY RESPONDERS

During the inspection, I asked Mr. Weible about the last coordination activities with the fire department. Mr. Weible stated he had called the Keokuk Fire Department due to a spill of glycerin that occurred on November 14, 2024. He stated the fire department performed a walkthrough of the facility due to the spill from the truck loading.

As indicated above, I spoke with the Keokuk Fire Chief Rose and he stated that under the previous plant manager, Glycerin Traders and the local fire department had a good relationship. He stated that the former plant manager responded positively to complaints the fire department had received about chemical spills migrating to the street. However, he indicated that the recent departure of the previous plant manager had changed that relationship. Glycerin Traders does not maintain a record of coordination activities with the local fire department. I was unable to determine to what extent the facility has worked with local fire authorities on planned coordination activities outside of contact resulting from community complaints or spills.

EPCRA TIER II REPORTING

Before the closing conference, Mr. Weible reached out to Mr. Zeedyk and got him on his cellphone to talk with me. I asked Mr. Zeedyk about the 12 - 275-gallon totes of Tsunami 100 organic peroxide that was stored in the east pole building and how long those had been on-site. Mr. Zeedyk stated that they had been on-site for approximately 2 months. I discussed the requirements of EPCRA Section 311 concerning providing the fire department with an SDS for those products once they had been on-site for 3 months or more. I also explained the requirements to report the organic peroxide on the 2024 Tier II report. Mr. Zeedyk stated that the material would be used in the process but be gone by the end of the year. I explained that any chemical that has been on-site in quantities greater than the reporting threshold are required to be reported, even if they were only on-site for 24 hours.

We were provided with the total chemicals for 2023 and as of current for 2024 (Appendix 17).

As stated above, I received copies of the SDS that were not in the current required OSHA format, all of which were older than 2018 when Glycerin Traders had purchased the operations and were not prepared by Glycerin Traders nor based off the actual chemical composition of products processed, used, stored, or sold by Glycerin Traders. Additionally, an SDS was not available for the Tsunami 100.

For more details about EPCRA requirements, please visit EPA's [EPCRA Hazardous Chemical Inventory Reporting](#).

CLOSING CONFERENCE

The closing conference was conducted on November 20, 2024, at 9:35 a.m. I sent around the Close Out Meeting Sign-in Sheet (Appendix 2). I thanked Mr. Weible for his cooperation and asked if he had a chance to review the US EPA CBI Notice of Questions and Answers and he answered affirmatively. I asked if any of the documents or images would need to be considered CBI. He answered that there were none. I handed Mr. Weible the United States Environmental Protection Agency Proprietary and Confidential Business Information Form and asked him to complete it and indicate that they were claiming no CBI (Appendix 2). I then presented Mr. Weible with the Receipt of Samples and Documents form and we both signed the document (Appendix 2) and Mr. Weible received a yellow copy.

Next, I went over the Preliminary Findings written on the Preliminary Findings form and discussed next steps in our process. I explained the report issuance timeline. I explained that I would also continue my review of the documents and photos that I had taken, and that additional findings could be added in the report or some of the preliminary findings could change. I encouraged them to start on items that could be corrected. I asked that they send correspondence of those corrections to me as soon as possible and I would include the information in the report. I explained that I would email the report to Mr. Zeedyk and that the report would also be mailed to the Registered Agent for the company based on information obtained from the Iowa Secretary of State's Office.

I asked if there were any additional questions for me. After no further questions, Mr. Weible and I signed the Notice of Preliminary Findings (Appendix 2) and I provided Mr. Weible with a yellow copy.

LYNELLE
LADD

Digitally signed by
LYNELLE LADD
Date: 2025.01.14
09:31:59 -06'00'

Lynelle Ladd
Compliance Inspector

Hensley,
Dave

Digitally signed by
Hensley, Dave
Date: 2025.01.14
15:22:56 -06'00'

Dave Hensley
Chemical Accident Prevention
Section Chief

APPENDICES

1. – Photo Log and Site Map
2. – EPA Inspection Forms
3. – Inspection Notice
4. – Process Flow Chart
5. – 2024 Wastewater Test Results
6. – Truck Loading Checklist
7. – Material Safety Data Sheets
8. – Methanol Material Safety Data Sheet
9. – Methanol Safe Storage and Handling Guidance
10. – Technical Information on Methanol
11. – Emergency Response Plan
12. – Daily Maintenance Checklist
13. – November 20, 2024, Maintenance Checklist
14. – Training Records
15. – May 24, 2024, Incident Statements
16. – Employee Emergency Response Handbook
17. – Annual Chemical Quantities for 2023 and 2024

NOTICE OF PRELIMINARY FINDINGS

FIRM NAME: Glycerin Traders LLC RMP/TRI NO: NONE
FIRM ADDRESS: 419 Exchange Street
Keokuk, IA 52632
INSPECTOR: Lynelle Ladd DATE: 11/20/2024

An inspection of the above facility has just been completed. The purpose of the inspection was to determine compliance with the requirements of the Clean Air Act Section 112r and Emergency Planning Community Right-to-Know Act. The following potential violations were identified:

CITATION	DESCRIPTION
1 <u>CAA 112(r)(1)</u>	<u>Failed to design and maintain a safe facility taking such steps to prevent releases.</u>
2 <u>CAA 112(r)(1)</u>	<u>Failed to identify hazards which may result from releases by using appropriate hazard assessments.</u>

This Notice is provided to call your attention to those areas of potential noncompliance at the earliest possible time. This Notice does not constitute a Notice of Violation, Order, or Civil Action pursuant to the Emergency Planning Community Right-to-Know Act of 1986 (SARA Title III) or Section 113 of the Clean Air Act (CAA), and may not be a complete listing of all violations which may be identified as a result of this inspection.

You are encouraged to take corrective action to address these preliminary findings. Please submit the actions you take and/or a schedule of the actions to EPA in writing as soon as possible.

Lynelle Ladd

Phone: (913) 551-7138

U.S. Environmental Protection Agency
11201 Renner Blvd.
Lenexa, Kansas 66219

Corrective actions you have taken may be considered in any subsequent U.S. EPA enforcement follow-up, to the extent allowed by Agency regulations, guidance, and policies.

The undersigned hereby acknowledges receipt of a copy of this Notice.

PRINTED NAME: Jeff Weible
TITLE: Maintenance
SIGNATURE: [Signature] DATE: 11-20-24