

CAA112(r) INSPECTION REPORT

Name: Southwest Iowa Renewable Energy	
Address: 10868 189th Street, Council Bluffs, Iowa 51503	Date of Inspection: August 13-14, 2024
County: Pottawattamie	Case No: 24IA0814
Phone: (712) 352-5002	RMP No: 100000210979
High Risk: Yes	FRS No: 110030490626
CAA Title V: Yes	Program Level: 3
Registered Agent Mailing/Email Address: Ann Reis, 10868 189th Street, Council Bluffs 51503 ann.reis@sireethanol.com	
Process: 325193, Ethyl Alcohol Manufacturing	

SUMMARY OF OBSERVATIONS

A review of the Southwest Iowa Renewable Energy, or SIRE documents and facility revealed the following deficiencies:

1. SIRE failed to calculate the worst-case scenario based on the entire quantity of the denaturant vessel as required by 40 CFR 68.25(b)(1) [Regulations cited on preliminary findings form corrected after inspection].
2. SIRE failed to ensure and document that the process is designed and maintained in compliance with recognized and generally accepted good engineering practices as is required by 40 CFR 68.65(d)(2). [Identified during inspection. Added after the inspection.]
3. SIRE failed to update and revalidate (2022) PHA every 5 years (10 months late) as required by 40 CFR 68.67(f).
4. SIRE failed to include each operating phase, operating limits, safety, and health considerations, & safety systems & functions as required by 40 CFR 68.69(a).
5. SIRE failed to annually certify their operating procedures as required by 40 CFR 68.69(c).
6. SIRE failed to establish and implement written procedures to maintain the on-going integrity of the process equipment as required by 40 CFR 68.73(b). [Identified during inspection. Added after the inspection.]
7. SIRE failed to certify the 2019 and 2022 compliance audits as required by 40 CFR 68.79(a).
8. SIRE failed to document audit findings in 2022 compliance audit (PHA section was blank) as required by 40 CFR 68.79(c).
9. SIRE failed to document responses to findings and document deficiency corrections as required by 40 CFR 68.79(d).

10. SIRE failed to include incident investigation start dates in incident investigations as required by 40 CFR 68.81(d)(2).
11. SIRE failed to report two hazardous chemicals (Trimeta Shield and CORRPRO NT) for which an SDS is required under OSHA HCS that was present, equal, or greater above threshold (2023 Tier II) as required by 40 CFR 370.12(a).

INTRODUCTION

I, Lynelle Ladd and Christina Gallick Compliance Inspectors with the U.S. Environmental Protection Agency, Region VII, along with Omari Pettway, Compliance Inspector-in-Training, inspected Southwest Iowa Renewable Energy, or SIRE on August 13-14, 2024. The facility is in Council Bluffs, Iowa, in the county of Pottawattamie. 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 flammables such as natural gasoline.

Additionally, SIRE was selected for inspection because of a chemical accident and fire at the facility on October 7, 2016, that resulted in a fatality.

I arranged for the inspection on August 9, 2024, with Mr. Mike Jerke, via a phone call at 11:03 a.m. I briefly explained the purpose of the inspection and that we intended to perform the inspection starting on August 13, 2024. I asked what time we should arrive at the facility on August 13, 2024, and we agreed upon 8:30 a.m. I followed up this conversation with an email to Mr. Jerke. In this email (Appendix 3) I provided some information on CAA 112(r) and EPCRA non-313, as well as some details about the inspection focus.

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

The Clean Air Act 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 (29 C.F.R. 1903.8). Based on this, I explained that they should notify the employee 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.

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

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 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.

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.

HISTORY OF BUSINESS

SIRE is an ethanol manufacturing facility that was built in 2009 and has a 130,000,000 gallon per year production rate. Most of the 200-proof ethanol produced is denatured for fuel usage and less than 10% is 190 proof undenatured ethanol. The other marketed by-product from their production is dried distillers' grains. Natural gasoline, also known as the denaturant, is the product used to denature the ethanol. It is received by truck. Prior to 2018 it was also received by rail.

The denatured ethanol is shipped by rail and mixed at the rail loadout through a new blending skid that was installed in June 2023 and in full use by September 27, 2023. The rail skid uses two meters: one set for denaturant, one set for 200 proof ethanol. Both products are delivered to the railcar, each having a 2,850-gallon capacity. Ethanol is added then mixed with denaturant. The rail skid is automated and the percentage of ethanol versus denaturant is controlled by the automated system.

The company operates under a primary North American Industry Classification System 325193, Ethyl Alcohol Manufacturing. SIRE is located at 10868 189th Street, Council Bluffs. SIRE operates 24 hours a day, seven days per week and employs approximately 70 employees. They operate on 4 shifts. Production operates on 12-hour shifts. Maintenance works Monday through Friday, 7 a.m. to 3 p.m. Night shift operates on four days on, four days off schedule. Day shift operates on three days on, two days off schedule.

Based on the 2020 U.S. Census there are 672,792 residents in Council Bluffs, Pottawatomie County, Iowa.

Maximum Intended Inventory	Amount of Anhydrous Ammonia in Pounds
Quantity On-site at Time of Inspection	716,180 (110,732 gallons)*
Quantity Listed in RMP	1,520,485
Maximum Daily Quantity per Tier II Forms	
--2021	1,071,036
--2022	1,034,145
--2023	1,070,440

*Based on email correspondence on August 22, 2024.

OPENING CONFERENCE

On August 13, 2024, I, Christina Gallick, and Omari Pettway arrived at the SIRE facility at approximately 8:15 a.m. We drove through the security gates and parked in front of the SIRE administration building. We entered the building and were shown to a conference room. I began the opening conference at 8:32 a.m. and introductions were made. I passed around the Opening Meeting Sign-in Sheet for SIRE attendees to sign.

PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES

Name	Title
Dan Velasquez	Safety Manager
Larry Seefus	Engineering Manager
Brett Schulte	Lab/Environmental
Mike Jerk	CEO
Ben Parsley	Director of Operations
Adam Johns	Plant Specialist
Joe Williams	Plant Manager

I provided a copy of the [United States EPA CBI Notice of Questions and Answers](#) and explained their right to claim Confidential Business Information. 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 the covered 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/or records and provided them with a copy of those sections of US code.

I asked about how they had notified employees of the inspection or if they had posted the email information I had sent about the inspection. We were told the facility is non-union, so they do not have a specific employee representative. They stated that they posted the email on the employee bulletin board and announced that an inspection would be occurring during shift changes.

I asked who would be signing the documents for SIRE and Brett Schulte stated that she would be signing the Notice of Inspection.

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

FIELD TOUR

We started the field tour at approximately 9:30 a.m. We started at the ethanol and denaturant tank storage farm. I observed and took a digital image of the grain storage area of the plant located in the southwest corner of the property (Appendix 1, digital image IMG_0253.JPG). I observed and took digital image of the truck unloading area where denaturant is unloaded from trucks and stored. I also observed and took digital images of the 190- and 200-proof alcohol and undenatured ethyl alcohol storage and new truck loadout. This is also the area where the October 7, 2016, accidental fire occurred (Appendix 1, digital images IMG_0254.JPG through IMG_0256.JPG). I observed the truck loadout operator building and its safety features, as well as the eye wash station and fire cannons located in the area (Appendix 1, digital images IMG_0257.JPG and IMG_0258.JPG).

We then proceeded to enter the tank farm area to observe the denaturant tank. This tank is a 188,000-gallon storage tank for natural gasoline. I observed and took digital images of the tank and its data plate. I also observed and documented by digital image that the denature tank was not labeled for its contents nor with a National Fire Protection Association, or NFPA, diamond that would indicate the hazards of the material stored. (Appendix 1, digital images IMG_0259.JPG through IMG_0259.JPG). This is discussed further in the **Process Safety Information** section of this report.

We next proceeded to the area where the facility maintains its emergency response equipment and fire suppressant foam that can be connected to the firefighting system installed at the plant. I observed and took digital images of the firefighting foam storage and the firefighting connections to the fire hydrant (Appendix 1, digital images IMG_0263.JPG and IMG_0264.JPG).

Next, we toured the grain and DDG storage area, and the new railcar loading for denatured ethanol occurs (Appendix 1, digital images IMG_0265.JPG and IMG_0266.JPG).

I asked if we could tour areas of the plant where other chemicals, reported in their Tier IIs are stored. We went through the production area of the plant where I observed and took digital image of totes containing chemicals used in ethanol production (Appendix 1, digital images IMG_0267.JPG through IMG_0269.JPG). We went outside and I observed the bulk chemical unloading rack and that fill lines were capped as well as the valves locked (Appendix 1, digital images IMG_0270.JPG and IMG_0271.JPG). We were taken to the operations room to see where the keys to the fill line valve locks were maintained and told that delivery drivers have to come to the operations room to get the correct key. Also, outside I took a digital image of the bulk sulfuric acid tank and the anhydrous ammonia tank that is no longer in use (Appendix 1, digital images IMG_0273.JPG and IMG_0274.JPG).

I had asked if they facility used sodium hypochlorite and we toured the water treatment plant where the sodium hypochlorite is stored and used (Appendix 1, digital images IMG_0275.JPG through IMG_0277.JPG).

This completed the field tour at approximately 11:16 a.m. and we returned to the conference room.

GENERAL APPLICABILITY OVERVIEW

Prior to the inspection, I reviewed the Risk Management Program (Appendix 4) that was in EPA's [Central Data Exchange](#). I noted that the facility had the single flammable mixture covered process and that the facility listed itself as Program 3 eligible and as well as subject to OSHA's Process Safety Management or PSM.

It was observed in their most recent RMP, the facility continued to list the October 7, 2016, fatality fire that occurred in the ethanol loading area of the plant. The current RMP renewal (Appendix 5) was submitted on January 5, 2023, and with no other accidents to report in the 5-year accident history, the 2016 accident could have been removed from the 2023 RMP submittal. I talked to the SIRE team about this and stated that they could remove that accident from the RMP.

GENERAL MANAGEMENT SYSTEM

I asked if SIRE had assigned anyone to oversee the RMP program and I was provided with a copy of their written RMP Program (Appendix 4). The document details the program development, implementation and assigns responsibility to qualified persons and/or positions as required by 40 CFR 68.15.

HAZARD ASSESSMENT

Prior to the inspection I reviewed the January 5, 2023, and January 5, 2018, RMPs that had been submitted by SIRE to EPA's Central Data Exchange. I asked if they maintained documentation of the basis for determining the most recent RMP submittal with analysis of the offsite worst-case and alternative case scenarios for the release of the flammable mixture being reported.

Ms. Schulte provided me with the RMP*Comp document that had been used to determine the distance to end point and a USGS map of the area for environmental receptors within the distance to endpoint (Appendix 6).

As I reviewed the information, it was observed that the total quantity used to calculate the worst-case scenario was based on the average of the range of percent concentration for pentane, isopentane and butane (Appendix 6). Ms. Schulte stated that because the SDS listed a range of concentrations for each of the chemicals, she used a mid-range value to calculate individual pounds of each reportable flammable in the mixture. Based on the SDS there are three chemicals that are listed in 40 CFR Part 68 as regulated flammables. The SDS lists nine other chemicals as part of the denaturant. SIRE did not use those quantities to calculate the distance to end point for the worst-case scenario. I explained that EPA has guidance for calculating flammable mixtures and provided Ms. Schulte with the link to EPA's website guidance at <https://www.epa.gov/rmp/worst-case-scenario-flammable-mixtures>. As stated in this guidance, "where the concentration of the regulated flammable substance in the mixture is one percent or more by weight of the mixture, the entire weight of the mixture must be applied toward the 10,000-pound threshold quantity for the flammable substance unless the owner or operator can demonstrate that the mixture itself does not have an NFPA flammability hazard rating of 4". A review of the SDS indicates that the total mixture has an NFPA flammability rating of 4 (Appendix 7).

The tank has a design capacity of 188,000 gallons. The SDS lists the relative density/specific gravity for the mixture as 0.60 – 0.775. Using 0.775, the pound per gallon conversion factor would be 6.46769. Multiplying 6.46769 pounds per gallon with 188,000 gallons results in a total pound weight of 1,215,925. SIRE had used 418,995.6 pounds to determine worst-case scenario.

- 1. SIRE failed to calculate the worst-case scenario based on the entire quantity of the denaturant vessel as required by 40 CFR 68.25(b)(1) [Regulations cited on preliminary findings form corrected after inspection].**

Once the worst-case scenario is corrected, SIRE should update all other related hazard assessment information, including population impacted and environmental receptors data.

PROCESS SAFETY INFORMATION (PSI)

I asked the facility how they document the process safety information for the covered process and was provided with a copy of the SDS for the denaturant (Appendix 7). I reviewed the information that they had and took examples of the energy and material balance, the electrical classification map, the new loading skid design specifications, and process information for the storage vessels which included applicable industry standards (Appendix 8).

As discussed in the **Field Tour** section of the report, we observed and I documented by digital image that the denaturant tank had no labeling, such as the contents of the tank or an NFPA diamond to identify the hazard of the material stored in the tank.

The National Fire Protection Association or NFPA 704, Identification of Hazards of Materials for Emergency Response, 2022, standard applies to industrial, commercial, and institutional facilities that manufacture, process, use or store hazardous materials (Chapter 1, 1.3.1). The denaturant used in the process, is a flammable mixture containing the 40 CFR Part 68 regulated substances, butane, pentane and isopentane.

NFPA 704, Chapter 4, 4.1.1. through 4.1.4, states that *“a system of marking shall identify the hazards of a material in terms of three principal categories: Health, Flammability, and Instability, and include the degree of severity by a numerical rating ranging from 4, indicating a severe hazard to 0, indicating a minimal hazard. The information shall be presented in a spatial arrangement, commonly referred to as a diamond, and color-coded with blue for health hazard, red for flammability hazard and yellow of instability hazard.”*

Mr. Velasquez stated that the placards had been removed so that the tanks could be painted. Mr. Velasquez replaced the placard during the inspection and provided a photo of the change (Appendix 9), however the placard installed on the tank did not match the NFPA ratings listed in the SDS for the denaturant, i.e. the hazard rating for flammability in the SDS is a 4 and the placard Mr. Velasquez installed during the inspection had a flammability rating of 3 in the diamond (Appendix 9). I alerted Mr. Velasquez and SIRE team to the discrepancy.

Also, during the inspection, I asked if SIRE had a record of last pressure safety valve changes for the railcar loadout process. I asked if SIRE staff could take pictures of the pressure relief valves so I could observe the manufacture or expiration dates. I was provided with a document that had workorders for PRV change-outs (Appendix 10). Pressure relief valve with the serial number 068128-1 was dated June 2018. The pressure relief valve with the serial number 077803-1 was dated March 2019. Both PRVs were over five years old on the day of the inspection.

The *API Recommended Practice 576, Inspection of Pressure-relieving Devices, Fourth Edition, April 2017* references API 510's subsection on pressure-relieving devices which states the following for pressure-relieving device inspection intervals: “Unless documented experience and/or an RBI assessment indicates that a longer interval is acceptable, test and inspection intervals for pressure-relieving devices in typical process services should not exceed 5 years for typical process services”. SIRE's documentation did not demonstrate that the pressure relief devices had been inspected within five years to determine their fitness for continued service or need for replacement.

For these reasons, I have identified the following finding:

- 2. SIRE failed to ensure and document that the process is designed and maintained in compliance with recognized and generally accepted good engineering practices as is required by 40 CFR 68.65(d)(2). (Identified after the inspection)**

Following recognized and generally accepted good engineering practices, also known as RAGAGEP, is essential to the design and maintenance of a safe facility.

PROCESS HAZARD ANALYSIS

Christina discussed SIRE's PHAs with Mr. Seefus. SIRE had PHAs from 2008, 2012, February 16-17, 2017, and December 28-29, 2022 (Appendix 11). She noted that it was a 5-year, 10-month interval between the two most recent PHAs. 40 CFR 68.67(f) states, "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."

Therefore, I identified the following finding:

3. SIRE failed to update and revalidate (2022) PHA every 5 years (10 months late) as required by 40 CFR 68.67(f).

Christina reviewed the nodes of the covered process in the 2022 PHA. SIRE used the HAZOP method to conduct the PHA. The team included a contractor as the facilitator, maintenance supervisor, plant trainer, and many different managers. Incidents were considered within the node they occurred. Stationary source siting and human factors were also considered within nodes. Christina explained that the rule was amended and that in the future the facility would need to consider environmental hazards in their next PHA as required by 40 CFR 68.67(c)(8). She also explained that the facility would be required to complete a safer technology and alternative risk management with their next PHA by 40 CFR 68.67(c)(9) because their NAICS code is 325. She noticed that the HAZOP sheet did not include a column for 'scenario'. Because of this the PHA did not mention what equipment would fail in most of the items. Safeguards were often vague mentioning 'training' and 'SOPs', but not specifying a particular SOP or training. Some of the safeguards listed were not actually safeguards because their failure was listed as a cause for an event. Item 21.4 states controller failure as a cause but lists control in system as a safeguard. Items 18.1 and 17.1 both list LT (level transmitter) failure as a cause and LT-8414 and LT-8422 as safeguards respectively.

PHA findings are tracked on a spreadsheet. They are being moved to a CMMS system. SIRE communicates actions from recommendations in PSM training and discuss big changes in shutdown.

She noticed that there was no discussion of the new blending skid in the PHA. She asked Mr. Seefus if there was a PHA for the blending skid. He provided a June 13, 2023, PSSR and PHA for the blending skid. There was no formal PHA procedure used. Mr. Seefus stated that they would have discussed the node in the meeting but had no documentation of such.

OPERATING PROCEDURES

I asked to review SIRE's operating procedures and was provided with a written program, dated March 2018, which outlines how SIRE complies with the requirement to develop operating procedures (Appendix 12). This document contained an SOP for the denaturant truck offload, but it had not been signed or certified annually, and wasn't being used as the current operating procedure.

I asked for the operating procedures currently being used and was provided with SOPs for tank farm shipping and receiving and railcar loading. These procedures were dated July 18, 2019. I also received an SOP titled logistics SOP dated August 7, 2024.

I explained that the elements required to be contained in an operating procedure are described in 40 CFR 68.69 and that each covered process should have an operating procedure that addresses those elements, and that is certified annually to ensure that the procedures are up to date. The most recent SOPs did not address elements that are required to be contained in an SOP, such as initial startup, normal operations, temporary operations, emergency shutdown, emergency operations, normal shutdown and startup following a turnaround or emergency shutdown.

For these reasons, I identified the following findings:

4. **SIRE failed to include each operating phase, operating limits, safety, and health considerations, & safety systems & functions as required by 40 CFR 68.69(a).**
5. **SIRE failed to annually certify their operating procedures as required by 40 CFR 68.69(c).**

TRAINING

I asked how employees working on the covered process are trained on the hazards of the covered process and was provided with examples of training which I reviewed. I also took some examples of training that is provided to employees (Appendix 13). According to Ms. Schulte, only one employee works on the truck denaturant unloading covered process.

Based on what was reviewed, SIRE appeared to comply with 40 C.F.R. 68.71.

MECHANICAL INTEGRITY

I asked how SIRE ensures that the mechanical integrity of the covered process is maintained, and I was provided with a copy of their mechanical integrity written program. I was also provided a copy of their most recent mechanical integrity testing which included ultrasonic thickness testing on process equipment. This included tank inspections and findings from the inspections performed on April 28, 2024 (Appendix 14). Within this documentation there was a schedule for future mechanical integrity testing and inspections.

However, it did not appear that the pressure safety devices discussed in the **Process Safety Information** section of this report were included in the most recent mechanical integrity inspections performed on April 28, 2024.

SIRE's mechanical integrity written program states that the PSVs should be inspected annually and tested to ensure that they are fit for service. This program states that this is performed in the spring by a consultant. This appears to deviate from SIRE's mechanical integrity written procedure implementation.

For this reason, I have identified the following finding:

6. **SIRE failed to establish and implement written procedures to maintain the on-going integrity of the process equipment as required by 68.73(b). [Identified during inspection. Added after the inspection.]**

MANAGEMENT OF CHANGE

I asked to review a recent management of change document that would demonstrate how SIRE assesses a change that is occurring in their processes. I was provided with a copy of a document dated March 13, 2024, for a project identified as a MOC for ethanol truck loadout gasket change for the 200-proof ethanol (Appendix 15).

A preliminary finding at the time of inspection was that SIRE had failed to include and assess the impact of the change on safety and health as required by 40 CFR 68.75(b)(2). After further review, this finding will not be included in this report because the 200-proof ethanol is not a covered process for RMP, although it is a covered process for OSHA PSM. I did not have the opportunity to review an MOC document related directly to the RMP covered process.

Based on what was provided, I would like to encourage SIRE to be more complete in their MOC descriptions. In this case, what I observed was a lack of detail on the change's impact on health and safety. While a release during the change is what could occur, a description of how SIRE ensures employees are protected during the change is what should be described in the MOC document.

PRE-STARTUP SAFETY REVIEW

I requested to review SIRE's pre-startup safety review procedures and was provided with the new blending skid PSSR dated May 25, 2023. I also reviewed the updated process identification and diagram that was created for the change (Appendix 16). As discussed in the **Process Hazard Analysis** section of this report, the PSSR also ensured that a new PHA was performed for the process change prior to startup.

Based on what was reviewed, PSSR appeared to comply with 40 C.F.R. 68.77.

COMPLIANCE AUDITS

Brett Schulte provided Omari Pettway with the two most recent compliance audit for the Southwest Iowa Renewable Energy facility, and they went over them together. I first noticed that both the 2019 and 2022 compliance audits did not have a letter of certification attached (Appendix 17). I asked Brett if there were any additional letters of certification that came attached to this documentation. She stated that there was no additional documentation. We identified the following finding:

7. **SIRE failed to certify the 2019 and 2022 compliance audits as required by 40 CFR 68.79(a).**

While going over the documents I noticed there were multiple sections left entirely blank within the documentation. I asked Brett about it. She expressed that she did not know why they had been left blank at that time. In particular, the PHA section of the 2022 compliance audit was left entirely blank. I observed all the sections that were left blank had Justin Schultz's initials on them.

I identified the following finding:

- 8. SIRE failed to document audit findings in 2022 compliance audit (PHA section was blank) as required by 40 CFR 68.79(c).**

After further review I noticed that the documents did not include a list of findings and did not document any of the corrections made in response to the findings. I asked Brett if there were any additional tables or documents they had for their responses. Brett expressed that they were still developing their compliance audit process.

As a result of the lack of documentation I identified the following finding:

- 9. SIRE failed to document responses to findings and document deficiency corrections as required by 40 CFR 68.79(d).**

INCIDENT INVESTIGATION

Christina discussed how SIRE investigates incidents with Mr. Velasquez. She reviewed the incident investigation policy (Appendix 18). Mr. Velasquez explained that incidents are investigated if there is a question on how or why something happened. He stated that incident investigations start immediately most of the time, but time for starting the investigation is not mentioned in the policy. Mr. Velasquez leads all investigations and engages people involved with the incident and may reach out to managers.

Reports are prepared for all investigations using a standard form. This form included all required information except the date the investigation began which is required by 40 CFR 68.81(d)(2).

We identified the following finding:

- 10. SIRE failed to include incident investigation start dates in incident investigations as required by 40 CFR 68.81(d)(2).**

Recommendations are sometimes entered into MAPCON. Some recommendations trigger procedural change. Investigation reports are sent to all SIRE employees unless they contain CBI. Investigation results are also communicated during shift exchange meetings. All investigation reports have been retained since the facility began operating.

EMPLOYEE PARTICIPATION

I asked how SIRE ensures employees participate in the risk management program and was provided with a copy of SIRE's written program (Appendix 19). Mr. Seefus and Ms. Schulte stated that SIRE maintains documents on their internal drive that all employees can access, which include the SOPs, PSM documents, SDS for chemicals, management of change documents, mechanical integrity information and written safety programs. They stated that they have a safety committee. The safety committee is currently made-up of employees from management, operations, administration, human resources, and grains. Safety meetings are held monthly in between shifts. Emails are sent out to all employees. Employees have access to an online bulletin board where safety information and meeting information is posted desire also has a suggestion box for anonymous safety suggestions or alerts.

Employee participation appeared to comply with 40 C.F.R. 68.83.

HOT WORK PERMIT

Omari Pettway discussed the facility's hot work permitting process with Mr. Velasquez. Mr. Velasquez provided Omari with a copy of their hot work permit policy (Appendix 20). Mr. Velasquez then provided a blank copy of a hot work permit and pre-job checklist. Mr. Velasquez went into the process of how permitting is handled by SIRE. Mr. Velasquez then stated that upon completion of the pre-job checklist, their systems will generate a Hot work Permit to be signed by an overseeing employee. Mr. Velasquez also provided some of the previously completed Hot Work permits completed for various projects across the facility. Mr. Velasquez was able to provide information to support the observation that SIRE has appeared to comply with the requirements of 40 CFR 68.85.

CONTRACTORS

I asked how SIRE managed the hiring and training of contractors that work on the covered process. Mr. Seefus stated that they keep a list of contractors that have been used successfully in the past. These contractors are trained on the hazards of the covered process. SIRE provides training for the contractors, tests the contractors on the training provided and tracks which contractor employees are onsite (Appendix 21). Contractors must pass the training and wear a sticker on their hardhats which identify them as training contractors. SIRE trains the contractors on the onsite emergency response and emergency notification system, including releases, fires, or weather. All contractors must check in. SIRE employees have been trained to report any contractors that are not wearing a sticker on their hardhat, so that the contractor can be identified as needing training. Site obtains copies of the certifications for contractors working on site so that SIRE can ensure trained personnel are working on the projects. SIRE performs a formal audit on the performance of the contractors. Contractors that fail to perform successfully are not rehired.

SIRE appeared to comply with the requirements of 40 CFR 68.87.

EMERGENCY RESPONSE PLAN

Christina discussed the facility's emergency response program with Mr. Velasquez. SIRE is not a responding source. Employees are trained annually on the emergency response plan (Appendix 22). The emergency response plan includes mechanisms to notify emergency responders. The facility process building control room serves as a tornado shelter. Mr. Velasquez explained that employees have been trained on flooding in the past. The facility was able to prevent 2019 flood waters from reaching the facility.

SIRE annually brings two fire departments on site. Lewis Township is the local volunteer fire department that would initially respond to a call. Lewis Township would defer to Council Bluffs fire department for large events. Both fire departments visited SIRE on March 7, 2024. I saw emails documenting attendance and recommended the use of a sign-in sheet to record attendance in the future due to the potential difficulty of finding emails. During the coordination it was noted that the pressure of the hydrants on site is not compatible with the fire departments equipment. The facility and fire department are working together to find pressure reducing valves to make the pressure safe for the fire department equipment. She observed emails of this coordination.

SIRE has made phone calls that meet the requirements of the annual notification exercises required under 40 CFR 68.96(a) that must be made by December 19, 2024, by calling to have confined space work supervised and testing dialing 911 from desk phones. Christina recommended that the facility develops a way to track the annual notification exercise call.

Mr. Velasquez explained that the foam in totes near the truck loadout (Appendix 1, digital image IMG_0263.JPG) was non PFAS, but the foam in the rail loadout had PFAS and they were trying to phase it out. We explained that some PFAS/PFOA chemicals have been added to the CERCLA 103 / EPCRA 304 release reporting requirements. If the PFAS in SIRE's foam is listed, they will have to complete the release reporting requirements if the foam is deployed above the threshold quantity of PFAS.

SIRE is part of the Council Bluffs LEPC. They attend meetings, but the LEPC is in between coordinators so there haven't been recent meetings. Ms. Schulte provided a coordination email with the LEPC dated December 29, 2022 (Appendix 23). The facility mails their Tier II to the fire department. It is automatically sent to the LEPC through Iowa's system. Christina called the District 4 LEPC on September 20, 2024, and spoke to Doug Reed. He explained that the LEPC talks with SIRE regularly. The LEPC has copies of SIRE's Tier II and Emergency Action Plan. SIRE is part of the community emergency response plan.

RISK MANAGEMENT PLAN

In preparation for this inspection, I reviewed SIRE's most recent two risk management plans. At the time of the inspection no findings were noted related to the requirements of 40 CFR Sections 68.150 through 195.

Starting in December 2023, the US EPA CDX is emailing notifications to the preparer and certifier at least two months in advance of when the RMP renewal is due for submission. Mailed notifications will only occur if all emails that are provided in the previous RMP bounce as undeliverable. Best practice is to utilize an electronic calendar reminder to alert you of upcoming deadlines.

EPCRA TIER II REPORTING

Christina discussed Tier II reporting with Brett Schulte. Accounting sends a spreadsheet of chemicals ordered and it is compared to the EPA List of Lists. Ms. Schulte provided a copy of the 2021 through 2023 spreadsheets for her to review (Appendix 24). To determine the max and average fill information, SIRE uses the control system data. Grain dust quantity is determined using a calculation. I asked if SIRE includes chemicals defined as hazardous by the Occupational Health and Safety Act (chemicals that the facility must maintain an SDS for) stored at over 10,000 pounds on their SDS. I explained that this threshold was for the amount of chemicals onsite at one point in time, not the total amount of chemicals ordered for a year. Brett Schulte was unaware of this requirement. We looked through the chemical inventory of 2023. I was told that none of the enzymes the facility used were hazardous. I noticed that there was on Trimeta Shield invoice for over 10,000 pounds (1,216 gallons * maximum density of 9.33 lbs/gal = 11,344 pounds). Trimeta Shield is flammable, oxidizing, toxic, corrosive, and can cause eye damage. Both CorrPro NT invoices were over 10,000 pounds (12,850 and 11,860 pounds). CorrPro NT is flammable, toxic, corrosive, toxic, and can cause eye damage. In reviewing the 2023 spreadsheet after the inspection I noticed that Trimeta Phreed was corrosive to skin and can cause serious eye damage. All but one invoice for Trimeta Phreed was over 10,000 pounds.

CorrPro NT also had an invoice for over 10,000 pounds in 2022 and two in 2021. Trimeta Shield had two invoices over 10,000 pounds in 2022. Trimeta Phreed had 15 invoices over 10,000 pounds in 2022 and 14 invoices over 10,000 pounds in 2021.

- 11. SIRE failed to report two hazardous chemicals (Trimeta Shield, Trimeta Phreed, and CORRPRO NT) for which an SDS is required under OSHA HCS that was present, equal or greater above threshold (2023 Tier II) as required by 40 CFR 370.12(a).**

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

CLOSING CONFERENCE

The closing conference was conducted on August 14, 2024, at 2:18 p.m. I sent around the Close Out Meeting Sign-in Sheet (Appendix 2). I thanked everyone for their cooperation and asked Mr. Jerke 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. Jerke 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. Jerke with the Receipt of Samples and Documents form and we both signed the document (Appendix 2), and Mr. Jerke 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 and that there were some items I would be researching once I was back in the office, such as pressure safety valves. 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. Jerke 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. Jerke and I signed the Notice of Preliminary Findings (Appendix 2) and I provided Mr. Jerke with a yellow copy.

LYNELLE
LADD

Digitally signed by
LYNELLE LADD
Date: 2024.11.08
14:08:16 -06'00'

Lynelle Ladd
Compliance Inspector

Hensley,
Dave

Digitally signed by
Hensley, Dave
Date: 2024.11.08
14:25:33 -06'00'

Dave Hensley
Chemical Accident Prevention
Section Chief

APPENDICES

- 1 – Photo Log and Site Map
- 2 – EPA Inspection Forms
- 3 – Inspection Notice Email
- 4 – SIRE RMP Program and Maximum Intended Inventory
- 5 – CDX RMPs
- 6 – SIRE Population and Environmental Receptors
- 7 – Denaturant SDS
- 8 – Process Safety Information
- 9 – NFPA Label Photo
- 10 – PSI Data Plate and PSV Photos
- 11 – Process Hazard Analysis
- 12 – Operating Procedures
- 13 – Training
- 14 – Mechanical Integrity
- 15 – Management of Change
- 16 - Pre-Startup Safety Review
- 17 - Compliance Audits
- 18 - Incident Investigation
- 19 - Employee Participation
- 20 - Hot Work Permit
- 21 - Contractors
- 22 - Emergency Response Plan
- 23 – SIRE LEPC Email
- 24 – EPCRA/Tier II spreadsheets

NOTICE OF PRELIMINARY FINDINGS

Page 1 of 2

FIRM NAME: Southwest Iowa Renewable Energy

RMP/TRI NO: 100000210979

FIRM ADDRESS: 10868 189th Street

Council Bluffs, IA 51503

INSPECTOR: Lynelle Ladd

DATE: 8/14/2024

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 40 CFR 68.25(b)(2) & 68.25(f)(i)	Failed to calculate the worst-case scenario based on the entire quantity of the denaturant vessel.
2 40 CFR 68.67(f)	Failed to update and revalidate (2022) PHA every 5 years (10 months late).
3 40 CFR 68.69(a)	Operating Procedures: Failed to include each operating phase, operating limits, safety and health considerations, & safety systems & functions.
4 40 CFR 68.69(c)	Operating Procedures: Failed to certify annually
5 40 CFR 68.75(b)(2)	MOC - Failed to include and assess the impact of change on safety and health.

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

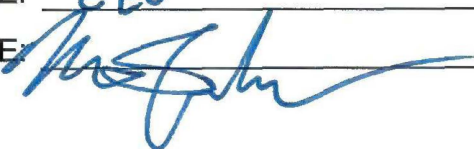
U.S. Environmental Protection Agency
11201 Renner Blvd.
Lenexa, Kansas 66219

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: Mike Jerke

TITLE: CEO

SIGNATURE: 

DATE: 8/14/2024

NOTICE OF PRELIMINARY FINDINGS

Page 2 of 2

FIRM NAME: Southwest Iowa Renewable Energy

RMP/TRI NO: 100000210979

FIRM ADDRESS: 10868 189th Street

Council Bluffs, IA 51503

INSPECTOR: Lynelle Ladd

DATE: 8/14/2024

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
6 40 CFR 68.79(a)	Failed to certify the 2019 and 2022 Compliance Audits
7 40 CFR 68.79(c)	Failed to document audit findings in 2022 Compliance Audit (PHA section was blank)
8 40 CFR 68.79(d)	Failed to document responses to finding and document deficiency corrections.
9 40 CFR 68.81(d)(2)	Failed to include incident investigation start date in incident investigations
10 40 CFR 310.12(a)	Failed to report two hazardous chemicals (Trimethyl Shield and CORRENT) for which an SDS is required under OSHA HCS that was present, equal or greater above threshold (2023 Triad)

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

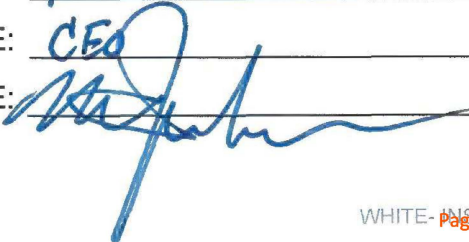
U.S. Environmental Protection Agency
11201 Renner Blvd.
Lenexa, Kansas 66219

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: Mike Jerke

TITLE: CEO

SIGNATURE: 

DATE: 8/14/2024