



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
25063 CENTER RIDGE ROAD
WESTLAKE, OHIO 44145

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Crossroad Farms Dairy Inc., Indianapolis, Indiana

FROM: Danny Nguyen, Risk Management Program (RMP) Inspector
WECAB, Multimedia Section

THRU: Mr. Brooke Furio, Section Supervisor
WECAB, Multimedia Section

TO: File

BASIC INFORMATION

Facility Name: Crossroad Farms Dairy Inc.

Facility Location: 400 South Shortridge Road, Indianapolis, Indiana 46219

Date of Inspection: May 15, 2024

EPA Inspector(s):

1. Danny Nguyen, Lead RMP Inspector, EPA Region 5
2. Erin DuMontelle, RMP Inspector, EPA Region 5

Other Attendees:

1. Herman Gunawan, Plant Engineer, Crossroad Farms Dairy Inc.
2. Brian Moore, Engine Room Lead, Crossroad Farms Dairy Inc.
3. Scott Basney, Site Leader, Crossroad Farms Dairy Inc.
4. Jeff Dolby, Safety and Regulatory Manager, Crossroad Farms Dairy Inc.

Contact Email Address: herman.gunawan@kroger.com

Purpose of Inspection: Compliance with the prevention of accidental release provisions found in Section 112(r) of the Clean Air Act (CAA), 42 U.S.C. §§7414(r)

Facility Type: Fluid Milk Manufacturing

Regulations Central to Inspection: The Chemical Accident Prevention Provisions at 40 C.F.R. Part 68

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Arrival Time: 8:30 AM Eastern

Departure Time: 6:00 PM Eastern

Inspection Type:

- ☐ Unannounced Inspection
- ☒ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☐ Provided Small Business Resource Information Sheet
- ☒ Small Business Resource Information Sheet not provided. Reason: Not a small business
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Crossroad Farm Dairy Inc.'s (Crossroad) representatives unless otherwise noted.

Process Description:

Crossroad Farms Dairy Inc. (Crossroad) was built in 1972 and is a subsidiary The Kroger Company. The facility specializes in manufacturing of fluid milk, ice cream, and novelties. The facility includes one building that is approximately 250,000 square feet under roof and the whole site is approximately 22 acres.

Staff Interview:

The facility has approximately 400 employees that operate three eight hour production shifts Monday through Friday and two ten hour shifts on Tuesdays and Thursdays. Maintenance, receiving, and distribution operate on the weekends. There were currently eighteen active production lines at the time of the inspection. Mr. Gunawan stated that one production line was removed in 2023. There are five on-site ammonia refrigeration technicians who conduct the maintenance and mechanical integrity program. The refrigeration operators record leaks in a logbook that notes the details of what was fixed by who and how it was completed. The operators are the only ones allowed to shut down the refrigeration system, and there are no E-stops within the production areas.

Crossroad reports as Program Level 3 RMP facility with ammonia (anhydrous) as the process chemical. The ammonia is used for refrigeration of ingredients and product in the production lines, storage warehouses, load/unloading docks.

Crossroad has 20 trained Hazardous Materials (HAZMAT) emergency responders for ammonia emergencies. Crossroad is considered a responding stationary source. Mr. Gunawan stated that the

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covered process is manned by backup ammonia personnel for emergencies on 3rd shift on Fridays and 2nd shift on Saturdays and Sundays when primary ammonia technicians are not working. Mr. Gunawan also noted that during an emergency, the Indianapolis Fire Department would be notified.

Records Review:

The following observations were made during the records review process:

Management:

- Crossroad did not provide documentation describing or outlining a management system to oversee implementation of the RMP elements.
- Crossroad did not provide documentation outlining other persons responsible for implementing individual requirements of the RMP and defined the lines of authority through an organization chart or similar document.

Process Safety Information (PSI):

- The Piping and Instrumentation Diagram drawing number R1.1 showed process equipment EC-1 was in the incorrect position compared to actual location on the roof.
- EPA noted that the Facility does not have a backup power supply in the case of power loss to keep the refrigeration system and emergency safety controls running.

Process Hazard Analysis (PHA):

- EPA reviewed the 2016 and 2021 PHAs as well as the resulting findings and recommendations.
- There were open action items from the 2021 PHA findings and recommendations.

Operating Procedures (OPs):

- Several OPs reviewed were stated to be obsolete.
- Several OPs did not have annual 2023 certification of accuracy and currency within the process.

Training:

- Initial training did not emphasize safety and health hazards, emergency operations including shutdown, and safe work practices applicable to employee's job tasks.
- No documentation was provided of initial training in overview of process and in operating procedures for backup ammonia technicians operating the process on the weekend shifts.

Mechanical Integrity (MI):

- No written procedures were provided for maintaining the on-going integrity of the process equipment.

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- No documentation was provided of training of employees involved in maintaining the on-going integrity of process equipment.
- No documentation or certification was provided of following recognized and generally accepted good engineering practices for inspections and testing of process equipment.
- Contracted welder qualifications were not verified prior to welding on process equipment and piping. Only basic contractor review was documented.

Management of Change (MOC):

- The Facility's MOC procedure requires the completion of a Pre-Startup Safety Review (PSSR) prior to operating new equipment unless the new equipment is a replacement-in-kind.
- The Facility does not have a requirement or procedure to ensure a final inspection of replacement-in-kind of process equipment prior to operation.

Incident Investigation:

- The Facility did not have an incident investigation procedure, report forms, a system to review incidents and follow-up recommendations, or any documentation to ensure meeting requirements in the prevention program for future incidents.
- Facility representatives noted they had not had any reportable incidents in their past.

Emergency Response (ER):

- The Facility stated they work with the local fire department and have completed HAZMAT training with them.
- No documentation was provided of coordination with local emergency planning committee (LEPC), and there was no documentation that the Emergency Response Plan had been sent.
- No documentation was provided for the exercises conducted or their follow-up evaluation with local fire department and emergency response personnel.
- The Facility completes regular drills for fire and tornado with all employees, but they do not currently drill for emergencies regarding an ammonia release.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Photos and/or Videos: were taken during the inspection. EPA used a NIKON COOLPIX W300 camera and took photos only.

Field Measurements: were not taken during this inspection.

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Tour observations:

- The north end of the Engine Room is separated from the maintenance area and refrigeration office by a wall that has an egress door and a roll door. The egress door has a turn knob and is not fire rated or able to be sealed off between the Engine Room and the maintenance area.
- There is an exit door on the north end of the maintenance area (North Door).
- Based on the observed evacuation map for the maintenance area, the North Door is not the primary route for egress; the primary route is through the Engine Room and out the south end door.
- The north door has panic hardware.
- No windsock was visible when exiting the north door.
- No portable or stationary eye wash station was seen on the north end of the engine room.
- Emergency Stop (E-stop) button is on the outside on the north door but not immediately outside the engine room.
- The south end of the engine room is connected with the sump area and loading dock. The entrance to the engine room has a gated doorway into the area that contains the refrigeration equipment and is not able to be entirely isolated from the sump and loading dock areas.
- Loading dock contained an egress doorway (South Door) and a roll door.
- Route between the gated entry of the engine room and the south end exit door was partially blocked by deliveries and equipment.
- Corroded and non-insulated ammonia piping on ceiling next to the receiving vessel (built in 1972).
- Missing pipe insulation and water leaks causing corrosion to the floor were observed in the engine room.
- The "Safe Work Practices" document hanging in the engine room expired the following day.
- Main water line was indistinguishable from the ammonia lines in the sump area.
- No system shutoff capability with ammonia pipes to ice cream freezer barrel in filler production area.
- No visual alarms for ammonia were seen in the production area.
- Evaporators 9, 10, and 11 in ice cream storage had no guard against contact with product that are stacked at the same height. Forklifts can reach the same height of product storage and evaporators.
- Missing or peeling ammonia pipe labels on the roof.

INSPECTION DOCUMENTS

The following records were provided by the Crossroad representatives electronically prior to the inspection and are filed on a secure One Drive folder provided by EPA Inspector Danny Nguyen under the folder "Crossroad Farms Dairy Document Folder":

1 - Compliance Audit Report - Crossroad Farms Dairy_Aug. 17-18__2023.pdf

1B - Compliance Audit Sign-ins.pdf

2 - Compliance Audit Findings - Crossroad Farms Dairy_Aug. 17-18__2023.xlsx

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3A - Compliance Audit Worksheets_Crossroad Farms Dairy_Aug. 2023.pdf
3B - IIAR9 Minimum System Requirements_Crossroad Farms Dairy_Aug. 2023.pdf
4 - CA interview questions_Crossroad Farms Dairy_Aug. 2023.pdf
5 - Auditor Resume.pdf
Design Codes & Standards_rev 2023.pdf
PHAs before 2005 memo_8-24-2023 SIGNED.pdf
Contractor List.pdf
CQ1 - CQ3 Sample - WMI 2023.pdf
Tab 00 2023 MII Report Crossroads Index.pdf
tab 01 letter crossroads.pdf
Tab 02 Equipment list.pdf
Tab 03 Detailed equipment listing.pdf
Tab 04 Crossroads detailed report title pages.pdf
tab 05 photos crossroads.pdf
Tab-06 2023 MII Deficiency Log + Crossroads.pdf
2024 MOC Log.pdf
MOC Sample - Cone HVAC 2024.pdf
Prestartup Sample - Cone HVAC 2024.pdf
2023 RMP Date updates_.pdf
Tab 0 Crossroad Farms - Indy RMP Index.pdf
Tab 01 Crossroad Farms - Indy RMP Updates Log.pdf
Tab 02 Crossroad Farms - Indy RMP Letter Describing WCS and ACS.pdf
Tab 03 Crossroad Farms - Indy RMP Submittal.pdf
Tab 04 Crossroad Farms - Indy WCS Aloha Heavy Gas Model Report.pdf
Tab 05 Crossroad Farms - Indy WCS Aloha Heavy Gas Model Threat Zone Chart.pdf
Tab 06 Crossroad Farms - Indy WCS Aloha Heavy Gas Model Map.pdf
Tab 07 Crossroad Farms - Indy WCS Aloha Gaussian Model Report.pdf
Tab 08 Crossroad Farms - Indy WCS Aloha Gaussian Model Threat Zone Chart.pdf
Tab 09 Crossroad Farms - Indy WCS Aloha Gaussian Model Map.pdf
Tab 10 Crossroad Farms - Indy ACS Aloha Heavy Gas Model Report.pdf
Tab 11 Crossroad Farms - Indy ACS Aloha Heavy Gas Model Threat Zone Chart.pdf
Tab 12 Crossroad Farms - Indy ACS Aloha Heavy Gas Model Map.pdf
Tab 13 Crossroad Farms - Indy ACS Aloha Gaussian Model Report.pdf
Tab 14 Crossroad Farms - Indy ACS Aloha Gaussian Model Threat Zone Chart.pdf
Tab 15 Crossroad Farms - Indy ACS Aloha Gaussian Model Map.pdf
Tab 16 Crossroad Farms - Indy RMP Executive Summary.pdf
Tab 17 Crossroad Farms - Indy RMP Submittal-Redline.pdf
Hazmat Certificates.pdf
Bobby K - Operator 1 2023.pdf
James G - Operator 2 2023.pdf
Marcus S - Operator 1 2023.pdf
Block Flow.pdf
Consequences and Deviations 2020.doc
Crossroad Farms Ventilation Study 4-26-18.pdf

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Emergency Procedures 2023.pdf

Employee Participation Sample - Full Notes in Binder 1.pdf

Hot Work Sample.pdf

Incident Investigation - Small Release Report Sample.pdf

Intended Inventory Nh3 pdf

Line Break Sample.pdf

Mass Energy Balance Crossroad Farms 08212018 - L-B-.pdf

Materials of Construction 2020.doc Closing Conference

P&ID CROSSROADS SET.pdf

PHA 11-2-21 and 12-14-21.pdf

PSM team member.docx

Relief Header V - Existing.pdf

SDS NH3.PDF

SOP - Overview with Safety Systems_NEW_ASM UPDATE 8-30-2022.doc

SOP Sample - Condenser EC-1 - UPDATE 12-06-2022.docx

Ammonia Sensor Calibration 2022.pdf

Annual SPK 9-2023.pdf

Compliance Audit Findings - Crossroad Farms Dairy Aug 24-25_2020_updated 11-2-2021.xlsx

Compliance Audit Report 8-25-2020.pdf

Compliance Audit Results - Crossroad Farms Dairy Aug 24-25_2020.pdf

Crossroad Farms Dairy PHA Recommendations_11-2-21 and 12-14-21_updated 8-17-2023.xls

NH3 Sensor Calibration 2024.pdf

Relief Valves 5 yr Replacement.xlsx

SOP Table of Contents (PRIORITIZED)_updated by ASM 2-24-2023 IN PROGRESS.xlsx

☒ Provided EPA point of contact to the facility

Areas of Concern:

- All observations identified above in the 'Records Review' section.
- North end blue egress door from the engine room into another part of engine room has a turn knob and not panic hardware. Based on evacuation map, the egress point is not primary egress point out of the engine room. The most northern egress door does include panic hardware but would require going through the non-panic hardware installed blue egress door.
- No portable or stationary eye wash station on the north end of engine room.
- The E-stop button is on the outside on the north end egress point of the facility but not immediately outside the engine room.
- South end entrance/egress point to engine room is open and not isolated with loading/unloading dock and glycol chillers.
- Corroded and non-insulated ammonia piping on ceiling next to referred to 1972 vessel.
- Missing pipe insulation and water leak from pipe to floor in engine room was observed.
- No system shutoff capability with ammonia pipes to ice cream freezer barrel in filler production area.

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- Evaporators 9, 10, and 11 in ice cream storage had no guard against contact with product that are stacked at the same height where forklifts can reach.
- Missing or peeling ammonia pipe labels on the roof.
- Based on statement from Crossroad representatives, there is not backup power in case of power loss. Ammonia sensors and emergency systems would not work.

POST INSPECTON DOCUMENTS

The following documents were provided by the Facility representatives electronically (uploaded to OneDrive folder) to EPA after the inspection:

Example - Correctivefollow up work order on NH3 Comp6.pdf (5/23/2024 email from Mr. Gunawan)

Example - ServicePM work order on NH3 compressor 6.pdf (5/23/2024 email from Mr. Gunawan)

Example of welding job hot work.pdf (5/23/2024 email from Mr. Gunawan)

NH3 Sensors Calibration 2023.pdf (5/23/2024 email from Mr. Gunawan)

Relief Valves 5 yr Replacement.xlsx (5/23/2024 email from Mr. Gunawan)

POST INSPECTON COMMUNICATION

Communication Log (Post Inspection):

- 5-23-2024 Email: Mr. Gunawan provided documents requested during the inspection.

DIGITAL SIGNATURES

Report Author: _____

DANNY NGUYEN Digitally signed by DANNY NGUYEN
Date: 2024.07.11 10:37:44 -04'00'

Section Supervisor: _____

BROOKE FURIO Digitally signed by BROOKE FURIO
Date: 2024.07.11 10:48:46 -04'00'

Appendices and Attachments

Appendix A: Participant List

Appendix B: Digital Image Log

Facility Name: Crossroad Farms Dairy Inc.

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APPENDIX A: PARTICIPANT LIST

MEETING SIGN-IN SHEET			
Project:	CROSSROAD FARMS DAIRY	Meeting Date:	5/15/24
Lead Inspector:	DANNY NGUYEN	Address:	

Name	Title	Phone	E-Mail
BRIAN P. MOORE	ENGINE ROOM LEAD	317-260-9189	BRIAN.MOORE@KROGER.COM
Scott Bagney	Site Leader	765-714-3166	Scott.Bagney@Kroger.com
Herman Gunawan	Plant Engineer	765-404-3151	herman.gunawan@Kroger.com
Jeff Dolby	mgr. safety + Reg	260-224-3272	jeffrey.dolby@Kroger.com
Erin Dumontelle	USEPA Inspector	312-353-0826	Dumontelle.Erin@epa.gov
DANNY NGUYEN	USEPA	646-250-1709	nguyen.danny@epa.gov

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APPENDIX B: DIGITAL IMAGE LOG

1. Inspector Name: Danny Nguyen	2. Archival Record Location: <i>OneDrive/Desktop/Multimedia Section/112(r)/Inspections/Crossroad Farms Dairy Inc. 15 May 2024/Photos</i>
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Image Number	File Name	Date and Time (incl. Time zone and DST)	Description of Image
1	DSCN0757.jpg	5/15/2024 / 1:50PM Eastern	Exit door out of main engine room
2	DSCN0758.jpg	5/15/2024 / 2:02PM Eastern	Corroded ammonia piping
3	DSCN0759.jpg	5/15/2024 / 2:03PM Eastern	Water leak from piping in the ceiling
4	DSCN0760.jpg	5/15/2024 / 2:03PM Eastern	Water leak to floor in the engine room
5	DSCN0761.jpg	5/15/2024 / 2:05PM Eastern	Overview of water leak on the floor in the engine room
6	DSCN0762.jpg	5/15/2024 / 2:06PM Eastern	South egress door from the engine room
7	DSCN0763.jpg	5/15/2024 / 2:17PM Eastern	Vibrating water line near ammonia line
8	DSCN0764.jpg	5/15/2024 / 2:19PM Eastern	South entrance to the engine room
9	DSCN0765.jpg	5/15/2024 / 2:19PM Eastern	Pallets of material and equipment outside of south egress door
10	DSCN0766.jpg	5/15/2024 / 2:37PM Eastern	Evaporators in ice cream storage room
11	DSCN0767.jpg	5/15/2024 / 2:38PM Eastern	Evaporators 9-10-11 in ice cream storage room
12	DSCN0768.jpg	5/15/2024 / 2:38PM Eastern	Evaporators in ice cream storage room
13	DSCN0769.jpg	5/15/2024 / 3:05PM Eastern	North egress door from engine room
14	DSCN0770.jpg	5/15/2024 / 6:07PM Eastern	Corroded pipe near ammonia vessel in engine room
15	DSCN0771.jpg	5/15/2024 / 6:08PM Eastern	Corroded pipe near ammonia vessel in engine room