

# U.S. ENVIRONMENTAL PROTECTION AGENCY

## Region 1

### EPCRA, CERCLA, and CAA § 112(r) Inspection Report

**Date:** November 15, 2021

**From:** Leonard B. Wallace, IV, Tyler Diercks, and Andrew Meyer, USEPA Enforcement Officers

**Through:** Mary Jane O'Donnell, Chief

Waste and Chemical Compliance Section

**To:** File

**Subject:** Chemical Accident Investigation and Inspection, under Clean Air Act (CAA) Section 112(r) and Section 112 (r) (1) and Emergency Planning and Community Right-To-Know Act (EPCRA) Sections 302-312, and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 103 of Kate's Homemade Butter, Inc., Arundel, ME

#### I. GENERAL INFORMATION

Facility Name: Kate's Homemade Butter, Inc.

DUNS Number: 10-818-0910

EPA Facility Identifier: FRS ID: 110070888246

Address: 24 Dairy Lane, Arundel, ME 04046

Inspector Names: Leonard B. Wallace, IV, EPA Region 1

Tyler Diercks, EPA Region 1

Andrew Meyer, EPA Region 1

Andrew Loll, Eastern Research Group, Inc. (ERG)

Inspection Date: August 5, 2021

Type of Inspection: CAA § 112(r)/EPCRA/CERCLA Compliance Evaluation Inspection

Purpose of Inspection: Inspection of the Kate's Homemade Butter, Inc. facility for compliance with EPA CAA § 112(r)(1) General Duty Clause (GDC), CERCLA § 103, and EPCRA §§ 302-312. The facility was selected because it operates an ammonia refrigeration system and has been late submitting Tier 2s.

Current Owner: Nathan Dunham

Current Operator: Daniel Patry

Primary NAICS codes: 311512, Creamery Butter Manufacturing

Number of full-time employees: 6 FTEs

Estimated Annual Sales: \$1.1MM

Relationship to other firms, parent corporation, subsidiaries, and location of off-site facilities: Kate's Homemade Butter is privately held and independently owned and operated.

## **GENERAL FACILITY DESCRIPTION**

The Kate's Homemade Butter, Inc. facility (Kate's Homemade Butter or Facility) is located in Arundel, ME and manufactures butter sticks, spreadable butter, and buttermilk products. According to Facility representatives, the Facility was built around 2010 and the current ammonia refrigeration system was installed in 2014 or 2015. The Facility employs approximately 6 full time employees.

All production operations and administrative offices are in a two story 4,161 square-foot barn-style building located at 24 Dairy Ln, Arundel, ME. The administrative offices are located at the front of the building on the south end. Production and packaging operations are in the middle of the building. Dry and refrigerated warehouse spaces are located at the north end of the building on the west side. The ammonia refrigeration room and boiler room are in the northeast corner of the building. The ammonia high pressure receiver, condenser, propane bullet tanks, and Facility emergency generator are located outside the building at the northeast corner. Vehicle parking, access drive, and truck bays are located along the west and north sides of the building. Outfalls from the building and parking lot stormwater collection system drain to a stormwater retention pond and stormwater swale located down gradient on the west side of the property. The Facility does not contain security fencing and is open to public access. The Facility property is in a rural location with residential homes and farms nearby.

According to the Kate's Homemade Butter Reporting Year (RY) 2020 Tier II report, the Facility stores 2,499 lbs of anhydrous ammonia, an EPCRA extremely hazardous substance (EHS), in excess of its 500-lb threshold planning quantity (TPQ) under EPCRA section 302.

## **II. IN-BRIEF/OPENING CONFERENCE**

The EPA inspection team comprising Leonard Wallace, Tyler Diercks, and Andrew Meyer, EPA inspectors, and Andrew Loll, Eastern Research Group, Inc. (ERG), contract inspector, entered the Facility at approximately 9:00 a.m. Roger Hooper, York County Emergency Management Agency (EMA); Matthew Fournier and Faith Staples, Maine EMA/SERC; and Jerry Beaulieu and Renald Tardif, Arundel Fire Department, also participated in the inspection. The inspection team presented identification to Daniel Patry, President and Chris Patry, Engineer for Kate's Homemade Butter, during the opening conference in the administrative office area. Inspector Wallace conducted the opening meeting and explained the

reason and scope of the inspection. Daniel Patry, President did not participate in the rest of the inspection.

Inspector Wallace presented the EPCRA Notice of Inspection to Chris Patry, who signed as the Recipient of the Notice. Chris Patry did not attempt to deny facility entry to the inspectors. Chris Patry did not claim any information as Confidential Business Information (CBI). Facility employees are not represented by a union.

Facility Representative:

Name	Title/Company	Phone Number	E-mail
Chris Patry	Engineer/ Kate's Homemade Butter	207-730-3528	<a href="mailto:ChrisPatry@Kateshomemadebutter.Com">ChrisPatry@Kateshomemadebutter.Com</a>
Daniel Patry	President	207-229-0974	<a href="mailto:DanielPatry@Kateshomemadebutter.Com">DanielPatry@Kateshomemadebutter.Com</a>  <a href="mailto:dsrpatry@maine.rr.com">dsrpatry@maine.rr.com</a>

Inspector Wallace shared the following guidance documents with facility representatives:

1. Guide to the Emergency Planning and Community Right-to-Know Act (Fall 2020)
2. EPCRA Quick Reference Fact Sheet (Fall 2020)
3. List of Lists (EPA 550-B-20-001, August 2020)
4. Small Business Resource Information Sheet (February 2020, EPA-300-F-20-002)
5. *National Response Center Oil and Chemical Spill Reporting* flyer
6. *Chemicals in Your Community* brochure (EPA 550-K-99-001, December 1999)
7. Safety Standards for Ammonia Refrigeration

Inspector Wallace stated that after the opening meeting, the inspectors would do a walk-through inspection of the Facility's covered process and all other facility areas. He stated that the inspection team would be taking photographs of items and areas of interest and a copy of all photographs taken would be sent to the Facility representative after the inspection.

### III. PHYSICAL INSPECTION

The EPA inspection team conducted a walk around of the following areas at Kate's Homemade Butter:

1. Building Perimeter
2. Interior Truck Bay
3. Utility and Ammonia Machinery Rooms
4. Warehouse Rooms

Inspector Wallace took a total of 459 digital photographs during the one-day inspection to provide reference documentation of conditions observed. The photographs are referenced throughout the document.

#### Building Perimeter

The EPA inspection team toured the perimeter of the building. The main entrance for the building was on the south side of the building. Employee and guest parking was located along the west side of the building. An access drive ran around the west and north sides of the building and truck bays and access doors to the warehouse rooms were located at the northwest corner of the building. An interior truck bay used for loading/unloading dairy products was located on the north side of the building next to the ammonia machinery room (AMR) in the northeast corner of the building. Four propane tanks, a diesel-powered emergency generator, and the ammonia system high pressure receiver (HPR) and evaporative condenser were located on the east side of the building at the northeast corner. Truck fleet parking was located north of the building. A stormwater retention pond and a stormwater swale were located west of the parking lot and access drive. Based on a tour of the area, the inspection team identified the following areas of concern:

- There were no windsocks around building or near the bulk storage and load/unload stations (see Photographs 18 and 145).
- Empty drums outside north side of building were not labeled as empty (see Photograph 25).
- None of the exterior entrances to the building contained NFPA hazard diamonds (see Photographs 48 and 167 for examples).
- There were no NFPA diamonds or labels identifying the contents and hazards of the materials stored in the propane tanks, Emergency Generator Diesel Fuel Tank, and ammonia HPR (see Photographs 56, 60 and 140).
- The Emergency Generator Diesel Fuel had a drum of oil next to it and it was not in secondary containment. (See Photograph 60)
- The propane tanks and associated piping did not contain physical protection from vehicular traffic (see Photograph 56).
- The propane tanks had vegetation within 10 feet of the tanks (see Photograph 56).
- The propane piping was not labeled to indicate content and direction of flow (see Photographs 56 and 145).

- The small-diameter piping on the north and south ends of the HPR was not supported to prevent damage in the event of physical contact (see Photographs 76 and 81).
- The isolation valve(s) (i.e., King valve) were not labeled (see Photograph 92).
- There was no emergency eyewash/safety shower outside the designated primary entrance to the AMR or near the HPR (see Photograph 167).
- The HPR was not secured to the cement pad it was resting on. (See Photographs 73,76, and 81).
- The approach and egress around designated primary entrance to the AMR from the exterior of the building was obstructed by materials stored around the door (see Photographs 167 and 171).
- Inspectors observed a self-contained breathing apparatus (SCBA) tank outside the AMR that was free standing and unsecured (see Photograph 171).
- The designated primary entrance to the AMR from the exterior of the building was missing signs to restrict access and to identify the presence of ammonia inside (see Photograph 171).
- The designated primary entrance to the AMR from the exterior of the building was missing an audible and visual ammonia alarm (see Photograph 171).
- The Emergency Control switches were not clearly identified (See Photographs 170 and 175).
- Mr. Patry could not tell us the fire rating of the Roll up door (See Photograph 163).
- A drum labeled as hydrogen peroxide was identified as being used to collect used oil (see Photograph 171).
- Also, there was universal waste (Lead Acid Battery) being stored on the same secondary containment as the waste oil (See Photographs 156 and 171).
- Entry inside and outside doors into the AMR were not furnished with emergency shutdown documentation for the ammonia system, a pipe and instrumentation diagram (P&ID) of the system with critical valves marked, name and telephone numbers for refrigeration staff and emergency responders, and the names and telephone numbers of all corporate, local, state, and federal agencies to be contacted as required in the event of a reportable incident (See Photographs 167,239, and 361).

#### Interior Truck Bay

The EPA inspection team toured the interior truck bay room located on the north side of the building. the truck bay is accessed via a roll-up garage door. The room included storage racks for parts and chemicals, a chemical drum station for cleaning agents with drum/dispensing pumps, and stainless-steel tanks and piping along the west wall. The east wall contained several residential double-hung windows that open into the utilities room and AMR. The room floor sloped to a trench and underground storage tank. Based on a tour of the area, the EPA inspection team identified the following area of concern:

- The emergency eyewash/safety shower in the truck bay was blocked by equipment during the inspection and there was limited access when a truck was parked in the bay (see Photographs 182 and 186).
- Some of the windows in the wall between the AMR and the Truck Bay were open and air from the truck bay was flow into the AMR (See photographs 223, 227, 231, and 234).
- Mr. Patry could not tell us the fire rating of the widows between the AMR and Truck Bay.
- There were a lot of different chemical mixtures in the Truck Bay area on a racking system, on the floor of the Truck Bay and connected to pumping systems. None of the chemical mixture containers were in secondary containment and were not protected from a truck backing into them. (See Photographs 178, 182, 186, 190, 195, 199, and 204).
- The ammonia piping running through the Truck bay was not properly labeled (See Photographs 214, 217, and 220).
- Not all the ammonia pipes penetrating the Truck Bay wall were sealed (See Photograph 220).

#### Utility and Ammonia Machinery Rooms

The EPA inspection team toured the utility room containing air compressor and boiler equipment and the AMR. The utility room was accessed from a door in the interior truck bay. In addition to the air compressor and boilers, the utility room included shelving for parts and equipment and electrical panels. The AMR was accessed from the building interior by a set of double doors at the north end of the utility room and from the exterior of the building by a person door and garage door at the north end of the AMR. The AMR included two screw compressors, pressure vessels, pumps, and ammonia piping. A culture freezer, a sandblaster unit, and spare part racks were positioned along the east wall. A gas-powered snowblower was parked between equipment during the inspection. Based on a tour of the areas, the EPA inspection team identified the following areas of concern:

- The AMR and the whole building had no Fire Detection System and did not have any Fire Suppression system including a Fire Sprinkler system.
- There was no safety shower inside the AMR or utility room.
- There was no emergency shutdown documentation (schematics or signage) provided at the facility and readily available to trained refrigeration system staff and emergency responders including:
  1. Instructions with details and steps for shutting down the system in an emergency.
  2. The name and telephone numbers of the refrigeration operating, maintenance, and management staff, emergency responders, and safety personnel.
  3. The names and telephone numbers of all corporate, local, state, and federal agencies to be contacted as required in the event of a reportable incident.

4. Quantity of ammonia in the system.
  5. Type and quantity of refrigerant oil in the system.
  6. Field test pressures applied.
- The piping and instrumentation diagram (P&ID) posted on the wall in the AMR did not clearly and uniquely identify the valves required for emergency shutdown (e.g., King valve) (see Photograph 296).
  - None of the doors into the utility room or AMR contained NFPA diamonds (see Photograph 237).
  - The entrance to the AMR from the utility room was missing an audible and visual ammonia alarm (see Photograph 241).
  - The interior entrance doors to the AMR from the utility room were propped open by an air hose attached to the sandblaster located in the AMR. Additionally, the doors open into the AMR (see Photograph 241).
  - The emergency remote controls (E-Stop, ventilation) for the ammonia system in the boiler room were obstructed by parts shelving and not clearly labeled (see Photograph 361).
  - The ventilation air intake and two exhaust fans were located in the east wall of the AMR and were not separated by at least 20 feet. The exhaust fans discharged horizontally towards the HPR and condenser equipment, potentially exposing individuals working in this area in the event of an ammonia release in the AMR (see Photographs 139 and 249). The air intake may draw in contaminated air from a release around the HPR or from discharge of the exhaust fans in the event of a release in the AMR.
  - The electrical equipment in the AMR (sandblaster, culture freezer) may not be appropriately designed for the electrical classification of the room, depending on the design and operation of the ventilation system.
  - The AMR had multiple non-fire rated windows between the truck bay and the AMR and at least one window was open during the inspection (see Photographs 218, 233, and 234). The garage door into the AMR does not appear to be fire-rated (see Photograph 249).
  - Inspectors observed on section of small diameter ammonia piping with peeling paint and evidence of surface corrosion (see Photograph 315). Additionally, the suction piping flange for one of the compressors showed evidence of surface corrosion (see Photographs 292 and 328).
  - The AMR alarm high setpoints were set at 35ppm and not 25ppm per IIAR 2-2014 (see Photograph 341).
  - The ammonia detection system appears to not have been calibrated and tested per manufacturer's recommendations – i.e., every 6 months. The AMR sensor has a label indicating the sensor was last calibrated in June 2014 (see Photograph 351).

- Not all the piping which included ammonia piping, glycol piping and water piping in the AMR were properly labeled (See Photographs 253, 264, 287, 314, 319, 323, and 328).
- Refrigeration Oil in the AMR not in secondary containment (See Photograph 264).

### Warehouse Rooms

The EPA inspection team toured the warehouse rooms at the Facility which included a dry warehouse room in the northwest corner of the building and a cooler room adjacent to and accessed from the dry warehouse room. The dry warehouse room contained racks for storing packaging materials, ingredients, chemicals, equipment, and parts. The cooler room stored finished butter and buttermilk products and contained multiple ceiling mounted evaporators. Based on a tour of the rooms, the EPA inspectors identified the following areas of concern:

- Two compressed gas cylinders in the warehouse that were free standing and unsecured (see Photograph 379).
- At least one fire extinguisher in the warehouse were missing a location sign (see Photograph 387).
- Multiple open chemical drums were being stored in the warehouse room without secondary containment (see Photographs 376 and 409).
- Incompatible acid and base chemicals stored next to each other in the warehouse area (see Photograph 423).
- Two of the evaporators and associated piping in the cooler were located above pallet racks and were not protected from physical damage (see Photographs 437, 440, and 449).
- One of the evaporators had ice buildup and the associated insulated piping had ice buildup (See Photograph 457).

## **IV. OUT-BRIEF/CLOSING CONFERENCE**

Inspector Wallace scheduled and concluded the inspection with a virtual out-brief Microsoft Teams meeting with facility representatives on August 31, 2021 and discussed the preliminary areas of concern identified during the inspection.

The following areas of concern were identified during the out brief and sent to the Facility via e-mail on August 31, 2021:

1. Lack of NFPA hazard diamonds on entrances to building and areas storing hazardous chemicals in the building including the ammonia machinery room (AMR).
2. No NFPA diamonds or labels identifying the contents and hazards of the materials stored in the propane tanks and ammonia high pressure receiver (HPR).
3. No windsocks around building or near the bulk storage and load/unload stations.

4. The propane tanks do not contain physical protection from vehicular traffic.
5. Vegetation was growing around the tanks.
6. The propane piping was not labeled to indicate content and direction of flow.
7. The small-diameter piping on the north and south ends of the HPR were not supported to prevent damage in the event of physical contact.
8. Empty drums outside north side of building were not labeled as empty. A drum labeled as hydrogen peroxide was being used to collect used oil.
9. The isolation valve(s) (e.g., King valve) were not labeled.
10. No emergency eyewash/safety shower outside the outside primary door or near the HPR.
11. The emergency eyewash/safety shower in the truck bay is blocked by equipment and there is limited access when a truck is parked in the bay.
12. The approach and egress around designated primary entrance to the AMR from the exterior of the building was obstructed by materials stored around the door.
13. There was no safety shower outside or inside the AMR.
14. No sign observed showing amount of Ammonia, oil (type) in the system and the pressure tests for the ammonia system.
15. No Emergency contacts or the Emergency Procedures along with the Piping and Instrumentation Diagram (P&I) showed the critical emergency valves clearly identified on it.
16. There was no audible/visual ammonia alarms outside the entrances to the AMR or the cooler room.
17. The interior entrance doors to the AMR from the boiler room were propped open by an air hose attached to the sandblaster located in the AMR. Additionally, the doors open into the AMR.
18. The emergency remote controls for the ammonia system in the boiler room were obstructed by parts shelving.
19. The ventilation air intake and two exhaust fans were located in the east wall of the AMR and are not separated by at least 20 feet. The exhaust fans discharge horizontally towards the HPR and condenser equipment, potentially exposing individuals working in this area in the event of an ammonia release in the AMR. The air intake may draw in contaminated air from a release around the HPR or from discharge of the exhaust fans in the event of a release in the AMR.
20. The electrical equipment in the AMR may not be appropriately designed for the electrical classification of the room, depending on the design and operation of the ventilation system.
21. The AMR had multiple non-fire rated windows between the truck bay and the AMR and at least one window was open during the inspection. The garage door into the AMR does not appear to be fire-rated.

22. Inspectors observed on section of small diameter ammonia piping with peeling paint and evidence of surface corrosion. Additionally, the suction piping flange for one of the compressors showed evidence of surface corrosion.
23. The AMR alarm high setpoints were set at 35ppm and not 25ppm per IIAR 2-2014.
24. The ammonia detection system appeared to not have been calibrated and tested per manufacturer's recommendations. The AMR sensor has a label indicating the sensor was last calibrated in June 2014.
25. Two of the evaporators and associated piping in the cooler were located above pallet racks and were not protected from physical damage.
26. Inspectors observed a SCBA tank outside the AMR and two compressed gas cylinders in the warehouse that were free standing and unsecured.
27. At least one fire extinguisher in the warehouse was missing a location sign.
28. Multiple open chemical drums were being stored in the warehouse room without secondary containment.
29. Incompatible chemicals stored next to each other in the warehouse area.

#### **V. FACILITY COMPLIANCE STATUS AND ELEMENTS OF PROOF – EPCRA**

The Maine State Emergency Response Commission (SERC) and York Local Emergency Planning Committees (LEPC) have had to communicate to Kate's Homemade Butter, Inc., that they are in noncompliance with Emergency Planning and Community Right-to-Know Act (EPCRA) over the last few years.

Tier 2 Reporting history:

2017 report received 9/4/2018

2018 report received 3/20/2019

The Maine SERC had to send a certified order on October 14, 2020 to Kate's Homemade Butter, Inc., to have them submit their 2019 Tier 2 information by November 20, 2020.

2019 report received 11/18/2020

2020 report received 2/17/2021

The current Tier 2 submitted for 2020 if not currently filled out correctly, an example Propane did not have the Chemical Abstracts Service (CSA) number on the form.

Also missing from the 2020 Tier 2 form was the Lead Acid Batteries (Sulfuric Acid an EHS and Lead). The equipment that had Lead Acid Batteries in them and were observed during the inspection include 9 pallet jacks, 3 Counterbalance forklifts, floor cleaner and Emergency Generator (See photographs 60, 380, 383, 406, 414, and 429).

**EPCRA Section 302**

(1) Does facility have on-site, at any one time, extremely hazardous substances (EHSs) at or above the TPQ? Yes, ammonia was reported in RY2020 above the TPQ. They should also be reporting Sulfuric Acid from Lead Acid Batteries.

(2) List or obtain documentation: Inspectors' observations; 2020 Tier II report

(3) How was maximum quantity on-site determined or calculated? Unknown

**EPCRA Section 303**

(1) Facility Coordinator identified per Sec. 303 and date LEPC was notified? Facility coordinator identified in RY 2020 Tier II is Daniel Patry.

**EPCRA Section 311**

(1) Is facility required to maintain MSDSs under the OSHA Hazard Communication Standard 29 CFR 1910.1200 (no specific chemical list)? Yes

(2) Has the facility conducted a comprehensive audit to identify MSDS chemicals on-site and to determine if 500 lb./10,000 lb./TPQ thresholds were exceeded? Unknown.

(3) List of OSHA chemicals manufactured, processed, used/stored, and obtained? Unknown

(4) How were the maximum amounts determined? Unknown

(5) Section 311 info supplied to the:

SERC (Y/N): Unknown. Did not evaluate

LEPC (Y/N): Unknown. Did not evaluate

Local Fire Department(Y/N): Unknown. Did not evaluate

Date Unknown. Did not evaluate

Chemical List Unknown. Did not evaluate

MSDSs Unknown. Did not evaluate

(6) Have any new hazardous chemicals, mixtures, or substances been introduced into the facility in the last 5 years? Unknown.

(7) If yes, has the facility submitted updated lists or MSDSs? Unknown. Did not evaluate

**EPCRA Section 312** (due March 1 of year following reporting calendar year)

(1) Was Tier II form submitted for all required chemicals? Ammonia and propane submitted for RY 2020.

(2) What procedures are used to update Section 312 information for annual submittal and to ensure additional or new chemical data is submitted within 90 days? Facility has previously submitted Tier II reports to LEPC annually via electronic submission.

(3) Was facility aware of annual reporting requirements under Section 312? Yes.

(4) Had the facility completed and signed a list of all reportable chemicals on site on date of the inspection? Unknown.

(5) Table of EPCRA 312 Reportable Substances - RY 2020:

CAS #	Chemical	Approx. Max. Wt. on Site (Lbs.)	TPQ (Lbs.)	Approx. Ratio (Actual/TPQ)
7664-41-7	Ammonia, anhydrous	2,499	500	5.0
74-98-6	Propane	13,440	10,000	1.3

## VII. ENFORCEMENT HISTORY

There has been no enforcement history at the Kate's Homemade Butter, Inc. facility in Arundel, ME in the past five years according to EPA's Enforcement and Compliance History Online (ECHO) System.

## VIII. ENVIRONMENTAL JUSTICE

EPA's ECHO indicates that the Facility is not located in an area of Environmental Justice interest.