



**U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 1 – NEW ENGLAND
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BOSTON, MASSACHUSETTS 02109-3912**

CAA 112 (r), Risk Management Plan (RMP), CAA § 112(r)(1) General Duty Clause (GDC), CERCLA § 103, and EPCRA §§ 302-313 Compliance Evaluation Inspection of:

**Dee Zee Ice, Inc.
93 Industrial Drive
Southington, CT 06489**

4/5/2023
Date of Inspection

Len Wallace
Waste and Chemical Compliance Section

9/25/2023
Date Inspection Report Approved

Mary Jane O'Donnell, Manager
Waste and Chemical Compliance Section

9/25/2023
Date Inspection Report Finalized

9/26/2023
Date Inspection Report Transmitted to Facility

Disclaimer: Unless otherwise noted, this report describes conditions at the facility/property as observed by EPA inspector(s), and/or through records provided to and/or information reported to EPA inspector(s) by facility representatives and as understood by the inspector(s). This report may not capture all operations or activities ongoing at the time of the inspection. This report does not make final determinations on potential areas of concern. Nothing in this report affects EPA's authorities under federal statutes and regulations to pursue further investigation or action

U.S. ENVIRONMENTAL PROTECTION AGENCY

Region 1

EPCRA and CAA § 112(r) Inspection Report

Date: September 25, 2023
From: Leonard Wallace and Andrew Meyer USEPA Inspectors
Through: Mary Jane O'Donnell, Chief
Waste and Chemical Compliance Section
To: File
Subject: Chemical Accident Investigation and Inspection, under Clean Air Act (CAA) Risk Management Plan (RMP) Section 112(r) and General Duty Clause (GDC) 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) Section 103 of Dee Zee Ice, LLC in Southington, CT.

I. GENERAL INFORMATION

Facility Name: Dee Zee Ice, LLC

Dun and Bradstreet Number: 019284793

RMP Number: NA

Address: 93 Industrial Drive
Southington, CT, 06489

Inspector Names: Tyler Diercks, U.S. Environmental Protection Agency (EPA) Region 1
Andrew Meyer, U.S. EPA Region 1
Leonard Wallace, U.S. EPA Region 1
Brook McKeown, ERG
John Burton, Weston Solutions

Inspection Date: April 5, 2023

Type of Inspection: Risk Management Plan (RMP) CAA § 112(r)(1) General Duty Clause (GDC), CERCLA § 103, and EPCRA §§ 302-313 Compliance Evaluation Inspection

Purpose of Inspection: This inspection was conducted as a routine EPA CAA § 112(r)(1)/EPCRA compliance evaluation inspection. The Dee Zee Ice facility in Southington, CT was selected for inspection because the facility's Reporting Year (RY) 2022 EPCRA § 312 Tier II report indicates

that it stores extremely hazardous substances, including anhydrous ammonium and sulfuric acid in lead-acid batteries and had ammonia release on July 11, 2021.

Current Owner: Dee Zee Ice, LLC

Current Operator: Dee Zee Ice, LLC

Primary NAICS codes: 312113 (Ice Manufacturing and Cold Storage)

Number of full-time employees: 46

Estimated Annual Sales: \$740,000

Relationship to other firms, parent corporation, subsidiaries, and location of off-site facilities:
Dee Zee Ice, LLC produces and manufactures products marketed as Diamond Ice Cold.

II. GENERAL FACILITY DESCRIPTION

Dee Zee Ice, LLC is located at 93 Industrial Drive in Southington, CT (DZI, or the Facility). The Facility manufactures and packages ice cubes and block ice for commercial sale and distribution and has been operating for approximately 12-years at the current location. The production room contains ice manufacturing equipment and ammonia machinery room (AMR) equipment such as the high-pressure receiver (HPR) and compressors. Processing operations and warehousing (cold storage) occur in a single-story aluminum-sided building. The lot is bordered by mixed use commercial and industrial properties. The closest residential property is located approximately 300 feet to the west of the Facility.

The Facility uses an ammonia refrigeration system to chill a cold storage area and maintain processing temperatures for two ice cube machines. The main system contains approximately 6,000 pounds (lb) of anhydrous ammonia. The AMR for the main system is located within the production room on the southwestern side of the site building. The facility also operates a glycol chiller to cool water. The facility's delivery trucks are refueled on-site at the eastern side of the property.

The Facility's RY2021 and RY2022 EPCRA § 312 Tier II reports indicate that its refrigeration systems contain a maximum quantity of anhydrous ammonia ranging from 6,000 to 6,500 lbs. The Facility also stores lead acid batteries (4,413 lb), which contain sulfuric acid (882.6 lb), for its mobile equipment.

At the time of the site visit, the Facility had approximately 19 full time employees. Attachment 1 is a Google Earth aerial photograph of the DZI facility in Southington, CT.

III. IN-BRIEF/OPENING CONFERENCE

The USEPA inspection team, consisting of Leonard Wallace, Tyler Diercks and Andrew Meyer (USEPA Region 1), Brook McKeown (USEPA contract inspector), and John Burton (USEPA air monitoring contractor), entered the Facility at approximately 9:00 a.m. The USEPA inspection team presented identification to Carl Verderame III, Senior Member, Dee Zee Ice. Inspector Wallace conducted the opening meeting and explained the reason and scope of the inspection. Inspector Wallace presented the EPCRA Notice of Inspection to Mr. Verderame, who signed as the Recipient of the Notice. Mr. Verderame did not attempt to deny Facility entry to the inspectors, nor did he invoke any claims of Confidential Business Information (CBI) for purposes of the inspection.

Following, is a summary of an ammonia release from the Diamond Ice Incident Investigation Ammonia Release Report.

On July 11th, 2021, at approximately 20:00 hours, an accidental release of anhydrous ammonia took place at the Diamond Ice facility. Carl Verderame was contacted by the local authorities that there was an incident at his ice plant. Upon review from the responding ARC technician, it was learned that the excessive vibration and a shaft seal break caused a failure of Compressor #4, which led to the release of over 6,000 lbs. of ammonia. Local responders took command of the scene and activated the CT Hazmat team and the CT Department of Energy and Environmental Protection (DEEP). The CT Hazmat team made entry into the facility's ammonia machinery room and was able to manually close the High Pressure Receiver's (HPR) King valve, which served to secure any remaining ammonia charge in the HPR. Local responders used ammonia meters to read ammonia levels, until safe ammonia levels were measured.

During the EPA inspection, the inspection team observed Compressor #4, which was the piece of equipment that failed and caused the ammonia release.

Facility Representatives:

Name	Title/Company	Phone Number	E-mail
Carl Verderame III	Senior Member	860-276-3500	Carl@diamondicecold.com
David Sisk	Manager	860-573-7410	davidsisk1999@gmail.com
Robert McGrann	HCG Associates	508-944-5828	rmcgrann@hcgassoc.com
Lydia Ortiz	HCG Associates	774-365-7842	lortiz@hcgassoc.com
James Tringale	HCG Associates	508-209-3620	jtringale@hcgassoc.com

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 of the refrigeration process and chemical storage areas. He also stated that the inspection team would be taking photographs of items and areas of interest and a copy of all photographs would be provided to the Facility representative after the inspection.

IV. PHYSICAL INSPECTION

The EPA inspection team conducted a walk-through of the following areas at the Facility:

- Facility exterior

- Production Room (contains Ammonia Machinery Room (AMR))
- Glycol storage room
- Cold storage warehouse

Inspector Wallace took 103 digital photographs during the inspection to document observed conditions. These photographs are referenced throughout the inspection report. The following sections discuss areas of concern identified in each area during the physical inspection.

Facility Exterior

DZI stores diesel fuel in a 1,000-gallon aboveground storage tank (AST) and diesel exhaust fluid (DEF) in a plastic tote on the eastern side of the building exterior. A freon evaporative condenser is also located on the eastern side of the building. Condenser drains with associated heat trace system components were observed penetrating the building wall on the northern side of the site building. A secondary Ammonia Machinery Room (AMR) door is present on the western side of the site building, in addition to two air intake ventilation points. Four ammonia evaporative condensers (EC-1 through EC-4) and associated piping are present on the southern side of the site building. A transformer is also located to the south of the site building. EPA inspectors identified the following area of concern based on a tour of the area:

- National Fire Protection Association (NFPA) diamonds were not present on the bulk diesel storage tank located at the rear of the facility (see photographs P1120223, P1120224 and P1120226).
- The DEF tote was not labeled as to its contents (see photographs P1120225 and P1120226).
- The diesel hose and DEF hose did not have unique identifiers to show they are managed in accordance with a hose maintenance program (see photographs P1120223, P1120225, and P1120226).
- Extension cords were used to operate pumps. This permanent equipment was not hard wired (see photographs P1120223 and P1120224).
- An NFPA diamond was not present on the Freon condenser at the rear of the facility (see photographs P1120227 and P1120228)
- Piping exiting the rear of the building associated with the Freon condenser was not labeled as to its contents and direction of flow (see photograph P1120228).
- Pesticide boxes located around the external perimeter of the building were not chained or weighed down (see photograph P1120230).
- The Diesel tank and tote containing DEF were not properly secured (see photographs P1120223, P1120228 and P1120232).
- Electrical wiring associated with the heat tracing in condensate drain lines was not labeled (see photographs P1120233 through P1120236).
- The ammonia alarm label was too far from the alarm beacon such that the function of the alarm beacon was unclear (see photograph P1120238 and P1120240)
- AMR signage (Emergency Response Phone List, Site Plan, and Emergency Shut-down Procedure) adjacent to the AMR door on the western side of the site building was not permanently installed. Inspectors observed this signage was secured with tape at the time of the inspection (see photographs P1120238, P1120239 and P1120241 through P1120244).

- Make-up air supply locations were located above the exterior ammonia room door frame and were not positioned to prevent short-circuiting of AMR ventilation system (see photographs P1120238, P1120258, and P1120259).
- There was no button adjacent to the secondary AMR door on the western side of the facility building to engage the AMR emergency ventilation system (see photographs P1120239 and P1120243).
- Exterior piping associated with the ammonia condensers on the southern side of the facility was not labeled as to its content and flow direction (see photograph P1120245).
- The exterior and interior piping associated with the ammonia system has pipes painted using blue, yellow, and orange colors (see photographs P1120255, P1120267 and P1120276).
- Condensers EC-1, EC-2, EC-3, and EC-4 were not properly secured to supports (see photographs P1120249 through P1120252).
- Condensers EC-3 and EC-4 were not properly grounded or bonded (see photographs P1120253 and P1120254 for grounding and bonding of EC-1 and EC-2 observed during the inspection).
- Corrosion protection paint was not applied to portions of ammonia piping at point of piping support (see photograph P1120255 through P1120258).
- The transformer did not have a label to state if it was polychlorinated biphenyl (PCB) free or not (see photograph P1120220).

Production Room/Ammonia Machinery Room (AMR)

The Facility has an area within the building that contains both ammonia refrigeration equipment and ice production equipment, which is referred to both as the Production Room and the AMR. The primary entrance to the AMR is located on the eastern side of the AMR and leads into the maintenance room. The AMR houses the compressors, the HPR, four Vogt tube ice machines and associated vaporizers, and associated piping and valves for the Facility's ammonia refrigeration loops that manufacture the ice and serve the Facility's cold storage areas. EPA inspectors identified the following areas of concern based on a tour of the area:

- Emergency stop and emergency ventilation buttons were not located adjacent to the exterior AMR door or other exterior openings near the interior primary AMR entry/egress door (see photographs P1120259 and P1120260).
- Equipment, including a work bench, restricts the movement of the primary AMR door to swing open all the way (see photographs P1120260 through P1120262).
- Ammonia fill line piping into the HPR was not properly labeled as to its contents and flow direction (see photographs P1120279 through P112028).
- Tape covering the ammonia fill line piping opening into the AMR had an unknown fire-rating (see photograph P1120281).
- The interior emergency stop button on the western wall of the AMR was not clearly labeled. At the time of the inspection, the EPA inspection team observed that it was not obvious which button is the emergency stop button based on the location of the signage (see photograph P1120285).
- Chemicals present in the AMR were not stored within secondary containment (see photograph P1120286).

- Openings in the AMR walls for piping were not tight-fitting (see photographs P1120299 through P1120302). Specifically, the air-line to the production room was not properly sealed.
- The location of the exhaust ventilation pick-ups in the AMR were not flush with the ceiling, creating the potential for the existence of a short-circuit area in the space between the ceiling and pick-up points (see photograph P1120299 and P1120300).

Glycol Storage Room

A glycol-based water-cooling system was observed inside the site building. EPA inspectors identified the following area of concern based on a tour of the area:

- The piping for the glycol system was not labeled with chemical name and flow direction points (see photographs P1120308 and P1120312).

Cold Storage Warehouse

The finished product was stored in the cold storage warehouse. Evaporators were not adequately protected against impacts (see photographs P1120313 and P1120314).

OUT-BRIEF/CLOSING CONFERENCE

Due to COVID 19, an in-person out-brief/closing conference was not conducted at the conclusion of the on-site inspection. Inspector Wallace emailed a copy of the preliminary areas of concern identified during the April 5, 2023, inspection to Mr. Verderame on May 17, 2023 and conducted a virtual closeout meeting on May 24, 2023.

The following is a list of the preliminary areas of concern identified during the inspection at the Facility:

1. NFPA diamonds were not present on the bulk diesel storage tank located at the rear of the facility (see photographs P1120223, P1120224 and P1120226).
2. DEF tote was not labeled as to its contents (see photographs P1120225 and P1120226).
3. The Diesel hose and DEF hose did not have unique identifiers to show they are in a hose maintenance program (see photographs P1120223, P1120225, and P1120226).
4. Extension cords to operate pumps not hard wired (see photographs P1120223 and P1120224).
5. NFPA diamond was not present on the Freon condenser at the rear of the facility (see photographs P1120227 and P1120228)
6. Piping exiting the rear of the building associated with the Freon condenser was not labeled as to its contents and direction of flow (see photograph P1120228).
7. Pesticide boxes located around the external perimeter of the building were not chained or weighed down (see photograph P1120230).
8. Diesel tank and tote containing DEF were not properly secured (see photographs P1120223, P1120228 and P1120232).
9. Electrical wiring associated with the heat tracing in condensate drain lines was not labeled (see photographs P1120233 through P1120236).
10. The ammonia alarm label was too far from the alarm beacon such that the function of the alarm beacon was unclear (see photograph P1120238 and P1120240)
11. AMR signage (Emergency Response Phone List, Site Plan, and Emergency Shut-down Procedure) adjacent to the AMR door on the western side of the site building was not permanently installed. Inspectors observed this signage was secured with tape at the time of the inspection (see photographs P1120238, P1120239 and P1120241 through P1120244).
12. Make-up air supply locations were located above the ammonia room door frame and were not positioned to prevent short-circuiting of AMR ventilation system (see photographs P1120238, P1120258, and P1120259).

13. There is no button adjacent to the secondary AMR door on the western side of the facility building to engage the AMR emergency ventilation system (see photographs P1120239 and P1120243).
14. Exterior piping associated with the ammonia condensers on the southern side of the facility was not labeled as to its content and flow direction (see photograph P1120245).
15. The exterior and interior piping associated with the ammonia system has pipes painted using blue, yellow, and orange colors (see photographs P1120255, P1120267 and P1120276).
16. Condensers EC-1, EC-2, EC-3 and EC-4 were not properly secured to supports (see photographs P1120249 through P1120252).
17. Condensers EC-3 and EC-4 were not properly grounded or bonded (see photographs P1120253 and P1120254 for grounding and bonding of EC-1 and EC-2 observed during the inspection).
18. Corrosion protection paint was not applied to portions of ammonia piping at point of piping support (see photograph P1120255 through P1120258).
19. Emergency stop and emergency ventilation buttons were not located adjacent to the exterior AMR door or other exterior openings near the interior primary AMR (see photographs P1120259 and P1120260).
20. Equipment, including a work bench, restricts the movement of the primary AMR door to swing open all the way (see photographs P1120260 through P1120262).
21. Ammonia fill line piping into the HPR was not properly labeled as to its contents and flow direction (see photographs P1120279 through P112028).
22. Tape covering the ammonia fill line piping opening into the AMR was not fire-rated (see photograph P1120281).
23. The interior emergency stop button on the western wall of the AMR was not clearly labeled. At the time of the inspection, the EPA inspection team observed that it was not obvious which button is the emergency stop button based on the location of the signage (see photograph P1120285).
24. Chemicals present in the AMR were not stored within secondary containment (see photograph P1120286).
25. Openings in the AMR walls for piping were not tight-fitting (see photographs P1120299 through P1120302). Specifically, the air-line to the production room was not properly sealed.
26. The location of the exhaust ventilation pick-ups in the AMR were not flush with the ceiling, creating the potential for the existence of a short-circuit area in the space between the ceiling and pick-up points (see photograph P1120299 and P1120300).
27. The transformer did not have a label to state if it was PCB free or not (see photograph P1120220).
28. The piping for the glycol system was not labeled with chemical name and flow direction points (see photograph P1120308 and P1120312).

VI. FACILITY COMPLIANCE STATUS AND ELEMENTS OF PROOF - EPCRA

EPCRA § 302

(1) Does facility have on-site, at any one time, extremely hazardous substances (EHS) at or above the TPQ? Yes, anhydrous ammonia and sulfuric acid.

(2) List or obtain documentation: Inspectors' observations; RY 2018-2022 Tier II reports.

(3) How was maximum quantity on-site determined or calculated? Equipment operating information and/or ammonia shipment records for the anhydrous ammonia refrigeration system. Chemical inventory data for other onsite chemicals.

EPCRA § 303

(1) Facility Coordinator identified per Sec. 303 and date LEPC was notified? The Facility's Tier II report identifies Carl Verderame III, Senior Member, as the Emergency Planning Coordinator. Date LEPC notified, unknown.

EPCRA § 311

(1) Is facility required to maintain SDSs under the OSHA Hazard Communication Standard 29 CFR 1910.1200.? Yes

(2) Has the facility conducted a comprehensive audit to identify SDS 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? Equipment operating information and/or ammonia shipment records for the anhydrous ammonia refrigeration system. Chemical inventory data for other onsite chemicals.

(5) Section 311 info supplied to the:

SERC (Y/N): Unknown

LEPC (Y/N): Unknown

Local Fire Department(Y/N): Unknown

Date: Unknown

Chemical List: Available

SDSs: Yes

(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 SDSs? Unknown

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

(1) Was Tier II form submitted for all required chemicals? Yes.

(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? Unknown.

(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? No. 2023 chemical inventory data was provided for review following inspection.

(5) Table of EPCRA 312 Extremely Hazardous Substances

CAS #	Chemical	Approx. Max. Wt. on Site (Lbs.)	TPQ (Lbs.)	Approx. Ratio (Actual/TPQ)
7664-41-7	Ammonia	6,000	500	12
7664-93-9	Lead Acid Battery	882.6	1,000/500	0.88/1.7
7439-92-1	Sulfuric Acid	2,427.15	10,000	.24

Based on the RY 2022 EPCRA Tier II Report

VII. ENFORCEMENT HISTORY

A search of EPA's ECHO database found no compliance or enforcement actions for the Dee Zee Ice, LLC (Diamond Ice Cold) Facility located at 93 Industrial Drive in Southington, CT.

VIII. ENVIRONMENTAL JUSTICE

The environmental justice report for the communities surrounding the Dee Zee Ice, LLC (Diamond Ice Cold) indicates that the Facility is not located in an Environment Justice area.

Attachment 1

Google Earth Image of Dee Zee Ice Facility