

RCRA Inspection Report

1) Inspector and Author of Report

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2) Facility Information

Milliken Chemical – Dewey Plant
1440 Campton Road
Inman, South Carolina 29349-0817

Postal Address:
P. O. Box 817
Inman, South Carolina 29349

EPA ID No.: SCD069314045

NAICS: 325199 – All Other Basic Organic Chemical Manufacturing

3) Responsible Official

Kairas Parvez, Environmental Manager
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4) Inspection Participants

Jennifer Reid	Milliken Chemical – Dewey Plant
Kairas Parvez	Milliken Chemical – Dewey Plant
Lisa Luna	Milliken Chemical – Dewey Plant
Allison Hundley	Milliken Chemical – Dewey Plant
Richard Plumley	Milliken Chemical – Dewey Plant
Blake Herring	Milliken Chemical – Dewey Plant
Cassidy Carlile	Milliken Chemical – Dewey Plant
Kristyn Mullinax	Milliken Chemical – Corporate Headquarters
Christopher Cusack	S.C. Department of Health and Environmental Control
Alaina Holst	S.C. Department of Health and Environmental Control
Javier García	U. S. EPA, Region 4

5) Date of Inspection

June 9, 2021

6) Applicable Regulations

South Carolina Hazardous Waste Management Act, S.C. Code Ann. § 44-56-10 et seq., [Resource Conservation and Recovery Act (RCRA) Sections 3002 (42 U.S. Code – Annotated U.S.C.A. 6925 and 6927)], and South Carolina Hazardous Waste Management Regulations (SCHWMR), 25 S.C. Code Ann. Regs. 61-79.260-270, 61-79.273 and 61-79.279 [40 Code of Federal Regulation (C.F.R.), Parts 260 - 270, 273, 278, & 279]. South Carolina Department of Health and Environmental Control RCRA Permit number SCD069314045 in effect since September 29, 2009.

As the State's authorized hazardous waste program operates in lieu of the federal RCRA program, the citations of those authorized provisions alleged herein will be to the authorized State program; however, for ease of reference, the federal citations will follow in brackets.

7) Purpose of Inspection

The purpose of this inspection was to determine Milliken Chemical - Dewey Plant's compliance with the applicable requirements of RCRA and the corresponding South Carolina regulations. This was an announced EPA lead inspection.

8) Previous Inspection History

On July 30, 2019, the South Carolina Department of Health and Environmental Control (SCDHEC) inspected the facility. In the report, the inspector indicated that Milliken Chemical - Dewey Plant failed to keep a used oil container properly closed, to date one universal waste batteries container, to properly label two hazardous waste containers and to document the distribution of the facility's contingency plan to all local emergency responders (i.e., police departments, fire departments, hospitals, and state and local emergency response teams) that may be called upon to provide emergency services.

Facility Description

Milliken Chemical - Dewey Plant (Milliken or "the facility"), a division of Milliken & Company, is a chemical manufacturer. It manufactures hundreds of specialty chemical products including colorants, lubricants, anhydrides, and plastic additives used by third parties as ingredients for consumer products. All production is conducted in batches. The facility operates over 20 reactors, varying in sizes from 50 to 6,000 gallons, where it conducts polymerization, condensation, propoxylation, ethoxylation, diazotization, and esterification.

The wastes resulting from production operations include sample line flushing, off quality commercial chemical products and reactors rinsate. Most of the products manufactured at the facility are water-based, which allows the facility to clean those reactors with water. All production wastewater is treated on-site and discharged to either the Lawson's Fork Creek or the Town of Inman sanitary sewer line.

The facility is in a mixed use (industrial – residential) area, west of Inman, on a 288-acre lot. It has approximately 120 employees and operates seven days per week, 24 hours per day with production operators working a 12-hour rotating shift schedule. Milliken is registered with the

SCDHEC as a Large Quantity Hazardous Waste Generator and a Hazardous Waste Storage Facility. Hazardous wastes generated at the facility include laboratory wastes (D001, D002, D003, D007, D009, D011, F002, F003 and U220), production processes waste streams (D001, D002, D003, F002 and F003), spent solvents (D001, F003 and F005) and off-specification chemicals (D001, D002, D003, U154, U238 and U353).

9) **Opening Conference**

Due to the Coronavirus (COVID-19), the EPA pre-announced the inspection via an email sent to Mr. Kairas Parvez on June 2, 2021. In the email, the EPA explained the purpose of the inspection and included a list of the documents to be reviewed during the inspection. On June 4, 2021, the inspectors conducted a virtual opening conference with Milliken. The following Milliken representatives participated in the call: Kairas Parvez, Jennifer Reid, Allison Hundley, Richard Plumley, and Cassidy Carlile. During the conference call, the EPA inspector stated the purpose of the inspection and indicated because of concerns with the COVID-19, the facility tour was going to be limited to hazardous wastes handling units. In addition, the EPA discussed the company's ability, pursuant to 40 C.F.R. §2.203, to assert a business confidentiality claim for information submitted to the EPA.

The company does not appear to meet the Small Business Regulatory Enforcement Fairness Act's classification of a "small business," which is generally set by the Small Business Administration using the business' SIC/NAICS code and annual receipts or number of employees. Therefore, the EPA inspectors did not provide a copy of the agency's information sheet for small businesses, which can be found at <https://www.epa.gov/sites/production/files/2017-06/documents/smallbusinessinfo.pdf>.

On June 9, 2021, the EPA inspector and SCDHEC inspectors, arrived at Milliken at approximately 9:30 am and met Kairas Parvez. Mr. Parvez escorted the inspectors to a conference room where they met Jennifer Reid, Lisa Luna, Allison Hundley, Richard Plumley, Blake Herring, Cassidy Carlile and Kristyn Mullinax. The inspectors introduced themselves, presented their credentials and explained the purpose of the visit. The inspectors described the anticipated use of a digital camera during the inspection. Ms. Reid indicated that it is Milliken's policy to use intrinsically safe cameras at the facility. Hence, the EPA agreed for a Milliken representative to take the pictures with the facility's intrinsically safe camera. Mr. Plumley took the photographs as pointed by the inspectors.

Following the introductions, Milliken's representatives provided an overview of the facility's history and current operations. Ms. Reid indicated that the facility submitted the RCRA Part B permit renewal application permit to SCDHEC, where it indicates that it would like to convert the current permitted container storage area to a 90-day hazardous waste central accumulation area. The inspectors explained that the current permit conditions for the container storage area are in effect until closure of the unit is certified and approved by the SCDHEC or the permit renewal is issued.

Next, the inspection participants discussed health and safety protocols and required personal protective equipment before the inspectors toured the facility's hazardous waste management units. The following are the observations made during the inspection.

10) **Findings**

Maintenance Shop:

In the maintenance shop, the facility generates used oil, aerosol cans and shop rags. The satellite accumulation area (SAA) for solvent contaminated rags waste generated in the maintenance shop is in a shed outside the building. In the shed, the inspectors observed one 55-gallon container with shop contaminated rags (D001/F003), one 5-gallon container with aerosol cans (D001), one 55-gallon container with a can puncturing device to empty hazardous waste aerosol cans (D001) and one 55-gallon used oil container. The containers were on spill containment pallets, properly labeled, closed, and appeared to be in good condition (Photograph 1). The aerosol residue accumulation container was dated 4/28/21.

Main Manufacturing Building:

On the second floor of the Main Manufacturing building, the facility operates SAA #4. In the SAA, the inspectors observed one 55-gallon that contained sample residues (D001) from the manufacture of polyurethane protection products marketed as Milliguard®. The container was on a spill containment pallet, properly labeled, closed, and appeared to be in good condition (Photograph 2).

Next the inspectors, went to the quality control laboratory. In this laboratory, the inspectors observed eight SAAs (see table below). All hazardous waste containers were properly labeled, closed, and appeared to be in good condition.

SAA ID	Waste Stream	Comment
2	Spent methanol from atomic absorption (AA) unit - D001, F003, U003	5-gallon container connected to the AA unit with a hose (Photograph 3)
6	Lab sample retains (D002, D001, D003, F003, D038, U012)	No hazardous waste observed in the SAA
7	Tetrahydrofuran test residue (D001, F003, U003) from GPC unit	1-liter container connected to the chromatography unit with a hose (Photograph 7)
8	Residue HP liquid chromatography unit (D001, F003, U003)	1-gallon container connected to the chromatography unit (Photograph 4)
9	Hydroxyl test residue (D001, F003, D038, U003, F005)	1-gallon container in a bucket
10	Flammable products test residues (D001, F003, U003)	Two 1-gallon containers in a bucket
12	Silylation test residues (D038, D001)	5-gallon container
13	Hydroxyl test automatic titrator residue (D001, F003, U003)	1-gallon container in a bucket

Adjacent to the laboratory, Milliken has a 90-day hazardous waste central accumulation area (CAA) where it consolidates hazardous wastes generated in the laboratory. In the central accumulation area, the inspectors observed one 55-gallon hazardous waste container on a self-contained pallet. The container was dated 5/12/21, properly labeled, closed, and appeared to be in good condition. In the pallet, the inspectors observed a small amount of liquid that the facility later determined to be rainwater.

Across from the container CAA, Milliken operates a 500-gallon aboveground tank where it stores hazardous wastes (D001) from tank TSL-04 in the hydride production area. Mr. Parvez indicated that the tank, identified as TOX-13, has been in service since July 2020. In addition, Mr. Parvez indicated that the tank is in heavy liquid service. The inspectors did not observe any gaps between the tank's openings and closure devices. The tank was properly identified and dated 5/12/21 (Photograph 5).

Hazardous Waste Storage Pad:

The hazardous waste storage pad is a bermed concrete floor with a metal roof. Access to the pad is controlled with a gated chain link type fence. The storage pad is regulated under a RCRA permit issued by SCDHEC in September 2009. The permit allows Milliken to store up to 6,160 gallons (equivalent to 112, 55-gallon containers) of hazardous wastes (Waste Phenols, Anhydrides and Halogenated and Nonhalogenated Solvents – D001, D002, F001, F002, F003, F005, U147, U188 and U220) in containers. In its permit renewal application, Milliken proposed to operate the storage pad as a central accumulation area, with a 90-day storage limit. SCDHEC is evaluating the permit renewal application. Hence, the storage pad is subject to the existing permit conditions until the permit is renewed.

At the time of the inspection, the storage pad had the required signage, spill kits and fire extinguishers. In the pad, the inspectors observed 34, 55-gallon containers (including 13 containers labeled as “pending analysis”) and five 5-gallon containers. All containers were on spill containment pallets, properly labeled, dated, and appeared to be in good condition. (Photographs 6 and 7). The oldest accumulation start date observed during the inspection was 05/13/21.

The storage pad concrete floor is sloped towards a blind sump in the center of the unit. Although there was no evidence of releases, the inspectors observed several hairline cracks and some nicked areas on the concrete floor (Photograph 8). Following the inspection, Milliken coated the floor with a sealant (Photograph 9).

Pursuant to Permit Condition III.F, Milliken shall maintain the containment system free of cracks in accordance with R.61-79.264.175 [40 C.F.R. 264.175], and Section D of the approved Permit application.

086 Warehouse/Recycle Area

Milliken uses this warehouse to receive raw materials and for shipping finished products. In an area designated for storage of universal wastes, the inspectors observed two universal waste lamp containers, one broken mercury lamp container (managed as D008 hazardous waste), and six

universal waste batteries containers. All containers were, closed, labeled, dated, and appeared to be in condition.

Wastewater Laboratory:

In the laboratory, Milliken generates spent chemical oxygen demand (COD) test vials and spent ammonium nitrogen test kits. At the time the inspection, the inspectors observed one 15-gallon container with spent COD vials (D009) and one 5-gallon container with ammonium nitrogen test kits (D003). Both containers were properly labeled, closed, and appeared to be in good condition. (Photograph 10)

Containers Washing Station:

According to facility's personnel, only non-RCRA regulated containers are washed in this area. Rinse water from washing activities are discharged to the on-site wastewater treatment facility. No hazardous waste was observed in the area during the inspection.

Records Review:

As part of the inspection, the inspectors reviewed the following records:

- Contingency Plan and Quick Reference Guide
- Hazardous waste, used oil and universal waste shipment records
- Hazardous waste training program records
- Facility contingency plan
- Inspection logs

Milliken keeps records of weekly and monthly inspections required by the permit, as well as the weekly inspection for the CAA and SAAs. On July 28, 2020, Milliken inspected its hazardous waste accumulation tank, per the requirements in Subpart CC of R.61-79.265 [Subpart CC of 40 C.F.R. 265]. With respect to the hazardous waste storage pad, the inspectors noted that no record of concern with the concrete floor conditions was recorded in the inspection logs. In Section D of the permit application, Milliken indicated that the epoxy coating was going to be inspected approximately every six (6) months and repaired as needed.

Pursuant to Permit Condition II.D, Milliken shall follow the general inspection requirements set out in R.61-79.264.15 and Section F of the approved Permit application, and to comply with the records keeping requirements by including in the inspections log the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

Milliken's contingency plan and quick reference guide were up to date. In addition, Milliken provided documentation of the documents' distribution to the local emergency response authorities.

The inspectors reviewed training records and manifests from July 2020 to the inspection date (June 9, 2021). During the reviewed timeframe, Milliken shipped hazardous waste at least every

30 days and universal wastes twice a year. Training records and manifests were found to be complete.

11) **Summary**

The inspectors conducted an exit meeting with Milliken's representatives and provided the preliminary results of the inspection.

12) **Signed**

Digitally signed
by JAVIER
GARCIA
Date: 2021.07.21
14:49:40 -04'00'

Javier E. García
Inspector and Author of Report

Date

13) **Concurrence and Approval**

Digitally signed by
ARACELI CHAVEZ
Date: 2021.07.21
14:56:27 -04'00'

Araceli B. Chavez
Chief
RCRA Enforcement Section

Date

RCRA Compliance Evaluation Inspection Photographs

***Milliken Chemical – Dewey Plant
1440 Campton Road
Inman, South Carolina 29349-0817***

EPA ID #: SCD069314045

Photographs Taken by Richard Plumley, Milliken Chemical – Dewey Plant

June 9, 2021



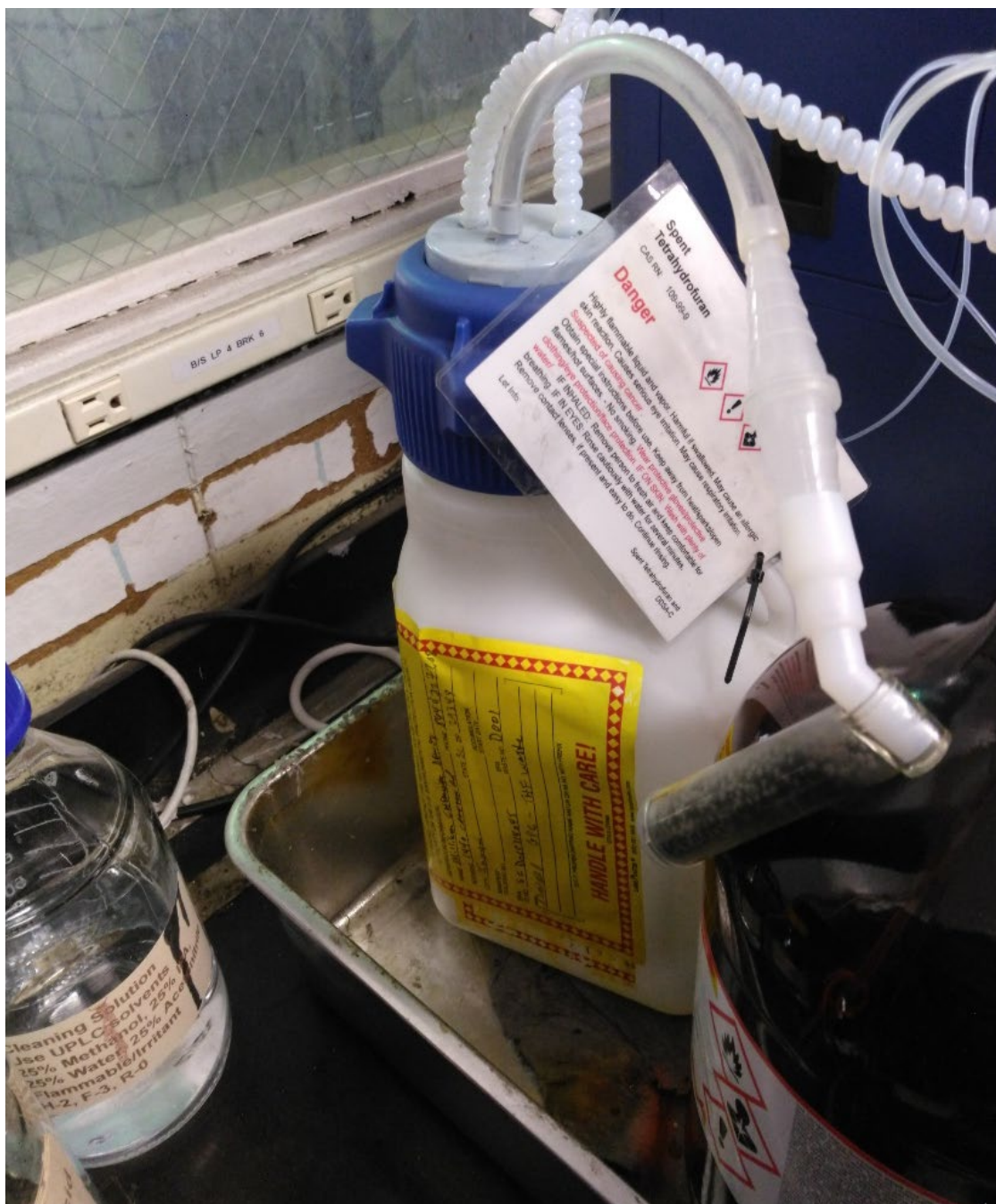
Photograph 1: Maintenance Warehouse Oil Shed: 5-gallon with aerosol cans and one 55-gallon container with an aerosol can puncturer, one 55-gallon used oil container and one 55-gallon container of solvent contaminated shop rags.



Photograph 2: AOX and UVX sample residues accumulation container in SAA #4 located on the 2nd floor of the main production building.



Photograph 3: SAA 2 with 5-gallon container connected to the AA unit with a hose collecting spent methanol from atomic absorption unit - D001, F003, U003



Photograph 4: SAA 7 with 1-liter container connected to a chromatography unit accumulating tetrahydrofuran test residue (D001, F003, U003).



Photograph 5: Aboveground hazardous waste storage tank in the main production building.



Photograph 6: Access gate to the hazardous waste storage pad.



Photograph 7: General view of the containers in the hazardous waste storage pad.



Photograph 8: View of hairline cracks observed in the concrete floor of the hazardous waste storage pad



Photograph 9: View of the hazardous waste storage pad's floor to document coating with sealant. Milliken took the photograph on June 21, 2021.



Photograph 10: Hazardous waste containers in the wastewater laboratory's SAA.