

RCRA Inspection Report

1) Inspector and Author of Report

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U.S. Environmental Protection Agency, Region 4
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2) Facility Information

SiVance, LLC
5002 NE 54th Place
Gainesville, FL 32609-1694
EPA ID: FLD050768548

NAICS: 325998 - All Other Miscellaneous Chemical Product and Preparation Manufacturing

3) Responsible Official

Darryon Robinson, Environmental Waste Coordinator
SiVance, LLC
5002 NE 54th Place
Gainesville, FL 32609-1694

4) Inspection Participants

Darryon Robinson	SiVance, LLC
Amy Sweeney	SiVance, LLC
Jeffrey Crim	SiVance, LLC
Edwin Marrero	SiVance, LLC
Paul Wesson	SiVance, LLC
Jacob Ivy	SiVance, LLC
Luke S. Lewis	FDEP Northeast District
Héctor M. Danois	US EPA Region 4

5) Date and Time of Inspection

August 19, 2020 @ 8:40 A.M.

6) Applicable Regulations

Subtitle C of the Resource Conservation and Recovery Act (RCRA) (42 U.S.C. §§ 6921 – 6939g), the Chapter 403 of the Florida Statutes (Fla. Stat.), Fla. Stat. §§ 403.702 et seq.; 40 Code of Federal Regulation (C.F.R.), Parts 260 - 270, 273 & 279, and Rule 62-730 et seq. of the Fla. Admin. Code Ann.

Chapter 403 of the Florida Statutes, Fla. Stat. § 403.702 et seq., and rules 62.710.210 -.901, and 62-730 et seq. of the Florida Administrative Code Annotated (Fla. Admin. Code Ann.).

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.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17], an LQG may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by Section 403.722 of the Florida Statutes, Fla. Stat. § 403.722 [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17] (hereinafter referred to as the "LQG Permit Exemption").

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.15(a)], a generator may accumulate as much as 55 gallons of non-acute hazardous waste in containers at or near the point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or without having interim status, as required by Section 403.722 of the Florida Statutes, Fla. Stat. § 403.722 [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.16(b) or §262.17(a)], except as required in Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.15(a)] (hereinafter referred to as the "SAA Permit Exemption").

Pursuant to Fla. Admin. Code Ann. r. 62-730.185(1) [40 C.F.R. § 273.9], a "Small Quantity Handler of Universal Waste" (SQHUW) is a Universal Waste handler who does not accumulate 5,000 kilograms or more of Universal Waste (batteries, pesticides, mercury-containing equipment, or lamps, calculated collectively) at any time.

7) Purpose of Inspection

The purpose of the inspection was to conduct an RCRA compliance evaluation inspection (CEI) to determine the compliance of SiVance, LLC with the applicable regulations.

8) Previous Inspection History

On March 7, 2017, FDEP conducted a RCRA CEI at the facility and two RCRA deficiencies were discovered.

9) Facility Description

SiVance, LLC (in hereafter known as SiVance or facility) develops, manufactures, and sells, silane, Silazane, and silicone products for the use in LEDs, electronics, surface treatment, silicone producers, personal care, and pharmaceuticals. The facility processes chemical batches in different areas of the facility dependent on customer demands. In between batches, these reactors are washed out with various solvents depending on what chemicals were in the previous batch. Wastes from these processes are initially stored in a container in a satellite accumulation area at the point of generation.

SiVance also manufactures chemicals that are used as intermediates for products such as coatings and medications. The facility has been in operation since 1953 in the 65 acres site. Milliken purchased this location in 2011. There are approximately 130 employees at SiVance operating on 12-hour shifts. The plant operates 24 hours a day, seven days a week.

The facility operates a Research and Development (R&D) Lab, four main production areas, a drum wash area, a Temporary Accumulation Pad, a 90-day Accumulation Area, an Analytical Lab, a Maintenance Shop, and a Universal Waste Accumulation Building.

SiVance's most recent Hazardous Waste Generator Notification (EPA Form 8700-12) dated March 25, 2020, characterized the facility as a large quantity generator (LQG) of hazardous waste.

Currently, SiVance can generate hazardous waste streams, and universal wastes (such as spent batteries, certain types of lamps and mercury-containing devices or equipment), waste solvent, spent aerosol cans, paint waste, and other wastes which include EPA Waste Codes D001, D002, D003, D018, D022, D038, D039, F001, F002, F003, and F005.

10) Opening Conference

☒ Credentials Presented

☒ CBI warning to facility provided

☐ SBREFA fact sheet, if applicable

☐ CBI was provided or discussed during the inspection

☒ Health and Safety, Personal Protective Equipment discussion

☐ Additional equipment that will be used, if applicable (FLIR camera, PID, FID)

On August 19, 2020, the U.S. Environmental Protection Agency, Region 4 inspector, Héctor Danois, accompanied by FDEP inspector Luke S. Lewis, arrived at SiVance to inspect the facility to determine its compliance status with both RCRA and the State of Florida hazardous waste regulations.

SiVance was represented by Mr. Robinson, Ms. Sweeney, Mr. Crim, Mr. Marrero, Mr. Wesson, and Mr. Ivy. Upon entering the facility, the inspectors introduced themselves, showed their credentials, and explained the purpose of the visit, and a description of the facility's process was discussed.

11) Findings

A brief explanation for the inspection was given, as well as an introduction of the FDEP and the EPA inspectors. The inspectors requested a description of the facility operations. The inspectors then performed a walk-through inspection of specific areas in the facility. Below is a description of the observations made during the inspection.

First, new products are tested for mass production in the R&D lab. SiVance produces chemical products in mass production based on customer demands in different locations around the facility. In-between batches, these reactors are washed out with various solvents depending on what chemicals were in the previous batch. Wastes from these processes are placed into a container in SAA at the point of generation. The containers are brought to the temporary storage pad when they are full. Hazardous waste determinations are made at the temporary storage pad, and then the drums are placed in the 90-day Accumulation Area for disposal. Samples are taken from the mass production areas to test for the quality of the product at the analytical lab. There is also a maintenance shop for various facility maintenance needs and a storage area for universal waste.

R&D Lab

The inspection team met with John Cusack, Lab Manager. The R&D Lab is a recently constructed building where new products are tested for mass production. At the time of the inspection, the SAA had a ½-gallon container of SiH waste, a ½-gallon container mixed solvent waste, a ½-gallon container hydrolyzed chlorines waste, and a 5-gallon yellow container of waste contaminated paper towels.

R&D Lab - Hazardous Waste Storage Area (HWSA)

SiVance has a less than 90-day HWSA storing waste generated from the R&D Lab. The waste is stored in a metal cabin located outside the lab. At the time of the inspection, the area was storing four 55-gallon drums storing SiH waste (8/10/20), mixed solvent (8/17/20), waste contaminated towels (7/16/20), and hydrolyzed chlorine (7/24/20). The drums were closed and labeled. The inspection team noticed that some of the drums were hard to inspect due to lack of aisle space (See Figure 1) and the metal container didn't have a "No Smoking" sign. These deficiencies were addressed after the inspection.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17(a)(6)], which incorporates Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.255], and is a condition of the LQG Permit Exemption, a generator is required to maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17(a)(1)(vi) (B)], requires LQGs must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including but not limited to the following: Open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is

being handled, the large quantity generator must confine smoking and open flame to specially designated locations. “No Smoking” signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

Building 39 Production Area

Building 39 is a chemical production area, taking raw material conducting reactions, purification, distillation, and final product packaging. After each campaign, hazardous waste is generated from the cleanout of the reactor vessels with different solvents (D001 hazardous waste). The hazardous waste is stored in a 55-gallon container in a SAA before they are moved to the Temporary Storage Area Pad. At the time of the inspection there was a 55-gallon drum in the SAA of used process filter (D001). The container was labeled and closed.

Building 43 Production Area

Building 43 is a continuous process area taking raw material, conducting reactions, purification, distillation, and final product packaging. At the time of the inspection, there was a SAA with a 55-gallon drum of used NBD filters (D001). The container was labeled and closed.

Maintenance Shop

The Maintenance Shop provides maintenance of equipment around the facility. At the time of the inspection, there was a 5-gallon container of solvent wipes and a 5-gallon container of paint aerosol cans. The 5-gallon container of aerosol paint cans was not labeled and was open (See Figure 2). These deficiencies were addressed after the inspection.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.15(a)(5)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers (i) with the words “Hazardous Waste” and (ii) with an indication of the hazards of the contents.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17(a)(1)(iv)], which is a condition of the LQG Permit Exemption, (A) a container holding hazardous waste must always be closed during accumulation, except when it is necessary to add or remove waste; and (B) A container holding hazardous waste must not be opened, handled, or stored in a manner that may rupture the container or cause it to leak.

Building 25/26 Production Area

Prosil, a water-repellant chemical, is manufactured in this building. At the time of the inspection, there was a 55-gallon drum of SiH waste, a 55-gallon drum of organic waste from drum wash, and a 55-gallon drum of used process filter paper waste. All drums were closed and labeled.

Building 18 Production Area

Building 18 is a small-scale reaction similar to Building 39. At the time of the inspection, there was a 55-gallon drum of used filter paper. The drum was closed and labeled.

Analytical Lab

Samples from the production process and R&D lab are tested in this lab to conduct quality control. Waste solvents generated from the Analytical Lab contain methylene chloride, isopropanol, ethanol, acetone, and tetrahydrofuran. Solvents generated from this lab are taken to a SAA located just outside of the lab. The 55-gallon container in the SAA was labeled and closed.

Temporary Accumulation Pad (the Pad)

Full SAA containers are moved to the Pad before they go to the HWSA 90-day Accumulation Area. According to Mr. Robinson, facility employees date the containers and transfer them to this location. Mr. Robinson inspects the containers to verify the waste profile, attach hazardous waste labels, and ensure other accumulation requirements are being met. Safety and decontamination (eyewash station) equipment was accessible.

At the time of the inspection, the area was storing approximately 130 drums (oldest 7/7/20). The inspection team noticed three drums were missing their accumulation start date, a hazard indication, and one of those drums was deformed (See Figures 3-4). These deficiencies were addressed after the inspection.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17(a)(5)(i)], which is a condition of the LQG Permit Exemption, a generator must mark or label its containers with the following: the words “Hazardous Waste”; an indication of the hazards of the contents; and the date upon which each period of accumulation begins clearly visible for inspection on each container.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17(a)(1)(ii)], which is a condition of the LQG Permit Exemption, if a container holding hazardous waste is not in good condition, or if it begins to leak, the generator must immediately transfer the hazardous waste from this container to a container that is in good condition, or immediately manage the waste in some other way that complies with the LQG Permit Exemption.

Less than 90-days Main HWSA

The facility stores all hazardous waste containers in this area. At the time of the inspection there was approximately 128 drums (oldest 6/1/20). The area was fenced-in, locked, has concrete floors, and secondary containment. Safety equipment was located within the area. At the time of the inspection, the inspection team noticed that at least five 55-gallon drums were missing an indication of the hazard of the contents and some drums didn't have enough aisle space to conduct inspections. These deficiencies were addressed after the inspection.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17(a)(5)(i)], which is a condition of the LQG Permit Exemption, a generator must mark or label its containers with the following: the words “Hazardous Waste”; an indication of the hazards of the contents; and the date upon which each period of accumulation begins clearly visible for inspection on each container.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.17(a)(6)], which incorporates Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.255], and is a condition of the LQG Permit Exemption, a generator is required to maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

Decon Pad

This is the area, near the 90-day accumulation area, where the facility keeps its aerosol can puncture device. At the time of the inspection, there was a SAA with a 55-gallon drum (can puncture) of paint waste and a 55-gallon drum of scrap metal (empty cans). The drum was closed and labeled.

Universal Waste Accumulation Shed

Inside the shed, SiVance stores spent fluorescent lamps and spent batteries generated around the facility. At the time of the inspection, there was a 5-gallon container of mercury-containing equipment (dated 8/7/20), two 5-gallon container storing batteries (dated 8/3/20 & 8/14/20). All the containers were labeled, dated, and closed.

Pilot Plant

SiVance conducts small scale-testing for two processes before the facility determines to mass-produce the product. At the time of the inspection, in the SAA was a 55-gallon drum of filter process paper. The drum was closed and labeled.

Recordkeeping

Paperwork was submitted digitally by the facility per request of the EPA and the FDEP. The following documents were reviewed off site following the site inspection: biannual annual report (2019), HSWA and SAA weekly inspections (2019-2020), contingency plan, quick reference guide (QRG), arrangements with local authorities, employee training (2018-2019), pollution prevention and waste minimization plans, job descriptions, hazardous waste manifests (2019-2020), non-hazardous waste manifests (2019-2020) and universal waste manifests (2018-2020).

12) Closing Conference

The RCRA inspectors completed their inspection on August 19, 2020. SiVance was inspected as an LQG. At the time of the inspection, the facility was operating as an LQG. On September 18, 2020, an out-briefing on the findings of the inspection was provided by Mr. Danois and Mr. Lewis to the inspection participants.

13) **Signed**

For

Héctor M. Danois
Inspector and Author of Report

Date

14) **Concurrence and Approval**

Alan A. Annicella
Chief
Land, Asbestos and Lead Section

Date

Photo Log Summary

Photos taken on August 19, 2020

Héctor M. Danois

Camera: Samsung WB250F

EPA Property Tag: S75914



Figure 1 - Drums storage at the R&D lab HWSA



Figure 2 - 5-gallon container storing aerosol cans



Figure 3 - 55-gallon drum deformed, not labeled dated



Figure 4 - 55-gallon drum not labeled, missing hazard identification