

RCRA Inspection Report

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2) Facility Information

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EPA ID No. SCD980841944

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4) Inspection Participants

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SAATI Americas, Inc.
SCD980841944
RCRA CEI Report
June 17, 2021

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Tom Richmond, S.C. Department of Health and Environmental Control
Christopher M. Cusack, S.C. Department of Health and Environmental Control
William Kappler, U.S. Environmental Protection Agency, Region 4

5) **Date of Inspection**

June 17, 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].

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**

On June 9, 2021, Environmental Protection Agency (EPA) inspector William Kappler contacted SAATI Americas, Inc., to discuss a joint RCRA compliance evaluation inspection (CEI) with inspectors from the South Carolina Department of Health and Environmental Control (SCDHEC). The inspector introduced himself and explained the purpose of the RCRA CEI, including the date and time of the RCRA inspection, notification procedures due to the Covid-19, EPA health and safety procedures, general areas for inspection and RCRA records needed for review. SAATI Americas, Inc., explained health and safety procedures and the RCRA records for review.

On June 9, 2021, the EPA inspector emailed SAATI Americas, Inc., to confirm the date and time of the RCRA inspection, with the EPA inspector's business card, and a list of the RCRA records needed for review. SAATI Americas, Inc., submitted RCRA records, in several emails to the EPA on June 11 through June 14, 2021.

On June 17, 2021, EPA inspector William Kappler accompanied by SCDHEC inspectors Tom Richmond, and Christopher M. Cusack conducted an announced CEI at SAATI Americas, Inc., (hereinafter, "SAATI" or the "facility") to determine the compliance status of the facility with the RCRA and the State of South Carolina regulations. This was an EPA-lead inspection. Inspectors arrived at SAATI and were greeted by facility representatives. The inspectors introduced themselves, showed credentials, exchanged business cards, and explained the purpose of the visit during an opening conference.

SAATI staff provided an overview of the facility's history and current operations during the opening conference. The inspectors described the possible use of a digital camera during the inspection and the facility's ability, pursuant to 40 C.F.R. §2.203, to assert a business confidentiality claim for information submitted to the EPA. The facility did not assert a business confidentiality claim. SAATI 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. Health and safety protocols and required personal protective equipment were discussed. Mr. Steven Neves and Ms. Alice Kowalske, of SAATI led the inspectors on a tour of the facility's operations.

8) Facility Description

SAATI is located at 201 Fairview Street Extension, Fountain Inn, Greenville County, South Carolina. The facility has been at this location since 2010, after purchasing the facility from Kemet. The facility is located on 46 acres of property. Approximately 9 acres are areas that contain industrial activity. The property is owned by Samaj Real Estate Company. The facility employs approximately 113 people and operates two shifts consisting of Monday through Thursday from 6:00 a.m. to 12:00 a.m. and on Friday from 6:00 a.m. to 6:00 p.m. The facility operations are conducted in one main building consisting of approximately 260,000 square feet of space. Non-manufacturing buildings include the Wastewater Treatment Facility at 4,717 square feet, the Environmental Building at 10,572 square feet and the Guard Shack at 172 square feet. The Greenville Water System provides potable water service and ReWa provides the domestic waste service. SAATI discharges to ReWa as a Non-Significant Industrial User (NSIU) Permit Number 500179. The primary NAICS code for the facility is 334413, Semi-Conductor Related Device Manufacturing.

The facility's Chemical Emulsion Mixing, Seal Solvent and Fabric Film Impregnation Line and emission control devices and associated equipment are subject to a Conditional Major Operating Permit CM-1200-0493, which was issued on July 10, 2013, became effective on October 1, 2013, and expires on September 30, 2023. The permit was revised on December 13, 2016. SAATI was last inspected by the SCDHEC air program on February 4, 2021, for compliance with the facility's current operating permit. No violations of permit requirements or applicable regulations were noted during the February 4, 2021 inspection.

SAATI last notified of its regulated waste activity (8700-12) to SCDHEC on May 4, 2020, as a large quantity generator of hazardous waste (LQG) and a small quantity handler of universal waste (SQHUW).

9) General Process Description

SAATI's process operations are divided into four divisions, which consist of Protection and Composite, SAATI Chemical, SAATI Filtration, and SAATI Print. The Protection and Composite Division warps, weaves, finishes and coats protective fiber to produce armored vests and helmets. Single "Kevlar" and "Aramid" fibers are received by SAATI in bulk. The fibers are wound on specialized sectional wappers to create a single string or fiber line and wound onto

bobbins. The bobbins are loaded onto approximately 19 automated looms to weave approximately 1,000 to 1,200 strings into sheets of fabric. The woven fabric is then transferred to the finishing area water and wash line to reduce the fabric's sizing, to prevent the fabric from unravelling or fraying and to apply a waterproofing coating on the fabric. The fabric is then dried in a 400-degree Fahrenheit oven and wound onto a roller for shipment to the customer or for an additional coating process by SAATI. The coating process consists of using an "Isotex" Machine to apply a coat or thin film of protective phenolic resin material on the fabric and squeezing the fabric through rollers to impregnate the resin into the fabric. The finished product is then tested in the Ballistics Laboratory.

The Chemical Division mixes water-soluble chemicals for its customers to transpose images through screen printing operations. Chemical emulsions are mixed in 450-gallon mix tanks. The chemical mixture is provided with a cool time for chemical reaction and then mixed with additional chemicals to a final product. The emulsion is then filtered and placed into 55-gallon containers for offsite shipment to the customer.

The Filtration Division cuts, assembles, and prepares mono-filtering mesh materials for customers in the acoustics field, water purification, agricultural, medical supply, and the automotive industries.

The Print Division is a sales group at the facility that offers support to the screen-printing industry.

General facility maintenance and repair is conducted in the maintenance shop and the facility operates a warehouse and conducts shipping and receiving operations.

10) Previous RCRA Inspection History

SAATI was last inspected by the SCDHEC on November 18, 2019. No RCRA violations were observed at the time of the CEI.

SAATI has never previously been inspected by the EPA for compliance with the federal and the State of South Carolina hazardous waste regulations.

11) Findings

The information in this RCRA inspection report is based on the EPA's June 17, 2021, RCRA CEI.

Protection and Composite Division

Sectional Warper Area

The fibers are wound on specialized sectional warpers to create a single string or fiber line and wound onto bobbins. Pieces of fiber cut during the process are generated in this area. No hazardous waste was observed in this area.

Weaving Area

The fabric lines are woven into sheets of fabric in this area. Pieces of fabric cut during the process are generated in this area. No hazardous waste was observed in this area.

Finishing Area

In this area the fabric is processed in a “Tenter” waterproofing machine by submerging it in a process tank containing water-soluble textile chemicals (PHOBOL CP-C, PHOBOL Extender XAN, and Invadine PBN). The fabric is processed through rollers to remove excess liquid. The liquid (wastewater) is discharged to the tank’s floor level sump constructed with a drain and covered by a metal grate (Sump). The Sump’s drain discharges to the sanitary sewer. Mr. Neves and Ms. Kowalske explained the chemical in the tank is used in its entirety or any remaining liquid chemical is discharged to the Sump. The inspectors observed wastewater accumulating in the Sump and in the dead-end floor sumps surrounding the waterproofing machinery and equipment. Mr. Neves and Ms. Kowalske explained the Sump drain becomes clogged due to the wastewater coagulating and requires occasional cleaning. The facility determined the wastewater discharged to the sanitary sewer is not a hazardous waste based on the SDS of the chemicals used in the process. Documentation that an accurate waste determination was performed on the wastewater and the process tank’s unused chemical was not observed in the record review.

Pursuant to 25 S.C. Code Ann. Regs. 61-79.262.11 [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in 25 S.C. Code Ann. Regs. 61-79.261.2 [40 C.F.R. § 261.2], must use the steps articulated in 25 S.C. Code Ann. Regs. 61-79.262.11 [40 C.F.R. § 262.11] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

On July 12, 2021, Ms. Kowalske emailed the EPA a completed waste profile form dated June 21, 2021, on the waste determination conducted on the Tenter wastewater. SAATI determined the wastewater non-hazardous waste. SAATI also explained that the Tenter wastewater in the Sump was pumped out on June 18, 2021 and accumulated in a tote. SAATI provided a photograph of the Sump.

Ovens

The fabric is dried in ovens at a temperature of 400 degrees Fahrenheit. No hazardous waste was observed in this area.

Coating Line - Isotex Machine

In this area a resin is coated on the fabric by dipping and/or placing a thin film of resin on the fabric. The Isotex machine coats the fabric with a resin for use in protective helmets. The inspectors observed two satellite accumulation areas (SAA) located next to a structural column (Photograph 3).

The inspectors observed a 55-gallon container on a wooden pallet in the first SAA next to the column. The inspectors observed the container was closed, labeled with the words hazardous waste (waste flammable liquids D001, D035, F005) and labeled with a flammable hazard indicator (Photograph 1). The profile number for this waste stream is 193220232. The inspectors observed a 55-gallon container on a wooden pallet in the second SAA next to the column. The

inspectors observed the container was closed, labeled with the words hazardous waste (waste flammable solids D001, D035), and labeled with a flammable hazard indicator (Photograph 2). The profile number for this waste stream is 193221580.

Located next to the Isotex machine inspectors observed an empty 5-gallon red safety container to accumulate hazardous waste rags during the day and transferred to a 55-gallon container in the SAA at the end of the shift. The container was labeled with the words hazardous waste (waste flammable solids D001, D035) and labeled with a flammable hazard indicator. The container's lid did not appear to be in good condition to keep the container closed when accumulating hazardous waste. The inspectors suggested the container not be used to accumulate hazardous waste (Photographs 4 and 5).

On July 12, 2021, Ms. Kowalske emailed the EPA a photograph showing the facility replaced the 5-gallon container with a new container on June 23, 2021.

The inspectors also observed one 55-gallon container in this area accumulating oily debris. The container was closed and labeled with the words non-hazardous waste. The profile number for this waste stream was 13157.

Ballistics Laboratory

Chris Grant is the Laboratory Technician in the Ballistics Laboratory (Laboratory). The Laboratory is located on the third floor and has been operating for approximately eight years.

Firing Range

The Firing Range is a rectangular room constructed of concrete walls and a concrete floor. The Firing Range conducts the ballistics testing on the test panels of Aramid fabric (test Panel). The testing is conducted by securing the test Panel on the surface of a five-inch-thick clay mold packed into a metal box form (box form). The clay simulates the texture of the human body. The box form has a dimension of about 24 to 30-inches squared. The box form is positioned vertically in front of a bullet trap. The bullet trap is filled with hard rubber material. Lead-based bullets ranging from nine-millimeter to 50-caliber are shot at the test Panel to determine its protective ability. Mr. Grant indicated to inspectors that the box form is usable for approximately three test events at six bullets per test event (most are nine-millimeter) for a minimum of 18 bullets to a maximum of 25 bullets, before the clay in the box form is considered unusable (waste Clay). Mr. Grant indicated that some of the clay in the box form not impacted by testing is reused. Mr. Grant also indicated the bullets are mined from the waste Clay. The waste Clay is disposed in the municipal solid waste (MSW) stream. The inspectors asked Mr. Grant if there was waste Clay accumulating in a container at the time of the inspection. Mr. Grant indicated to inspectors there was no waste Clay accumulating in a container.

On June 18, 2021, the EPA inspector sent an email to Ms. Kowalske of SAATI asking for additional information on waste Clay generated in the Ballistic Laboratory. SAATI provided the information in an email to the EPA on June 26, 2021. SAATI also provided an updated summary of work completed and a safety data sheet on the clay on July 12, 2021. The Ballistics Laboratory uses Roma Plastilina clay (clay) to pack the box form. Three box forms are maintained in the Firing Range's conditioned cabinet for use. Two full box forms are maintained,

and a third box form is maintained approximately one third full to full of clay. Waste Clay is generated when the oldest box form is completely emptied and filled with new clay. Historically the box forms are changed out in November. The most recent generation of waste Clay was in March 2021. Waste Clay is also generated when small amounts are manually removed from the impacted areas in the box form. The pieces of waste Clay have aramid fibers and bullet fragment(s). Deflected waste Clay is generated daily from cleaning the impacted floor, walls, and ceiling.

On July 12, 2021, Ms. Kowalske emailed the EPA SAATI's Waste Clay Report. The report included the background on the clay, clay inventory history, Ballistic Range schematic and test procedure, waste Clay summary, answers to the four questions posed in EPA's June 18, 2021 email, and the clay sampling and analysis results.

SAATI's Waste Clay Report provided a history and an inventory of the amount of clay purchased to the amount of waste Clay generated from January 29, 2019 to the present. SAATI's historical inventory indicated the most recent purchase of clay was in November 2018 at 12 cases of clay (480 pounds), with two cases in stock (80 pounds), for 560 pounds of clay and three box forms in use for 564 pounds of clay, totaling 1,124 pounds of clay as of January 29, 2019. SAATI indicated in Table 1 of its "Current Clay Inventory" (See Appendix 1), a total of 826 pounds of clay and waste Clay at the facility as of July 8, 2021. Table 1 included 456 pounds of loaded clay box forms, 160 pounds of unopened clay cases, 42 pounds of individual clay bricks, 142 pounds of waste Clay for testing and 26 pounds of waste Clay from the laboratory oven (826 total pounds). Based on SAATI's calculation, a total of 298 pounds of waste Clay was generated from January 29, 2019 to June 16, 2021 ($1,124 - 826 = 298$). The EPA's review of Table 1 indicates, of the 826 pounds of clay inventoried, approximately 658 pounds of clay appeared to be usable, and 168 pounds appeared to be generated and accumulating as waste Clay at the time of the inspection. SAATI indicated in Table 2 of its "Summary of Consumption" (See Appendix 1) a total of 298 pounds of waste Clay generated since January 29, 2019. It appears with the addition of 168 pounds of waste Clay accumulating at the facility at the time of the CEI, 466 pounds of waste Clay has been generated at the facility since January 29, 2019. SAATI also explained there is no clear record to determine waste Clay generated prior to January 29, 2019. SAATI estimated an additional 71.9 pounds of waste Clay generated from June 2018 to January 2019.

SAATI's June 26, 2021, email response to EPA's June 18, 2021, email asking for additional information, also informed the EPA that at the time of the inspection there were two containers in the back of the Firing Range and two containers just outside the Firing Range near the material storage racks accumulating fabric for recycle, treated fabric that is non-recyclable, test Panels, floor sweepings, and waste Clay. Approximately 130 pounds of waste Clay was accumulating at the time of the inspection. Also, approximately 12 pounds of smaller waste Clay pieces impacted with Aramid yarn were accumulating in collection bins at the facility on the date of the inspection. On or about June 25, 2021, SAATI transported approximately 130 pounds of waste Clay and 12 pounds of smaller waste Clay pieces to Rogers and Callcott Environmental Laboratory for sampling and analysis.

SAATI explained in its July 12, 2021, response the waste Clay and other waste streams

generated in the Ballistic Laboratory are disposed to the facility's leased 34 cubic yard general trash compactor (compactor). The waste Clay was last disposed to the compactor in March 2021. Waste Management transports the compactor to the Fennell Transfer Station in Greenville, S.C. for final disposal at the Republic Services Union County Regional Landfill in Enoree, S.C., a Subtitle D landfill. SAATI does not maintain disposal records on the waste streams generated in the Ballistics Laboratory. Documentation that accurate waste determinations were performed on the fabric for recycle, treated fabric that is non-recyclable, test Panels, floor sweepings, waste Clay, waste Clay pieces impacted with Aramid yarn, and waste Clay from the laboratory oven was not observed in the record review.

Pursuant to 25 S.C. Code Ann. Regs. 61-79.262.11 [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in 25 S.C. Code Ann. Regs. 61-79.261.2 [40 C.F.R. § 261.2], must use the steps articulated in 25 S.C. Code Ann. Regs. 61-79.262.11 [40 C.F.R. § 262.11] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

Bullet Recycling Area

Bullets that miss the box form or deflect off the bullet trap are removed off the floor and accumulated with the casings as scrap metal. Bullets removed from the box form and from the bullet trap are also accumulated as scrap metal. The inspectors observed three 2-gallon containers accumulating nine-millimeter, 357 and 44 magnum bullets and brass casings (Photograph 6). According to the facility the rubber material in the bullet trap has not been replaced.

On July 12, 2021, Ms. Kowalske emailed the EPA a photograph showing the facility added a new container for scrap metal in the Firing Range on June 23, 2021. The photograph showed the container was labeled with the words "lead for recycling scrap metal".

Ammunition Assembly Room

The Ammunition Assembly Room is in a separate room from the Firing Range. Bullets are assembled on an ammunition preparation table (Table). The lead bullet is assembled with gunpowder into the casing using a mechanical loading device. The Table and equipment are wiped down and cleaned to remove possible gunpowder and lead using a wipe and/or a rag. The inspectors did not observe a container accumulating waste wipes and rags at the time of this inspection. Mr. Grant indicated the waste gunpowder and lead, and waste wipes and rags are disposed in the MSW stream. Documentation that an accurate waste determination was performed on the waste gunpowder and lead and on waste wipes and rags was not observed in the record review.

Pursuant to 25 S.C. Code Ann. Regs. 61-79.262.11 [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in 25 S.C. Code Ann. Regs. 61-79.261.2 [40 C.F.R. § 261.2], must use the steps articulated in 25 S.C. Code Ann. Regs. 61-79.262.11 [40 C.F.R. § 262.11] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

On July 12, 2021, Ms. Kowalske emailed the EPA photographs showing the facility added two

new SAAs for gunpowder and lead in the Ballistic Laboratory and in the Firing Range on June 23, 2021. The photographs showed the containers were closed, labeled with the words “hazardous waste, gunpowder and lead contaminated material”, and marked with the reactive and toxic hazard indicators.

On July 12, 2021, Ms. Kowalske emailed the EPA SAATI’s Waste Clay Laboratory Report.

The waste Clay was transported by SAATI to Rogers and Callcott Environmental Services (R&C) on June 25, 2021. On June 25, 2021, R&C collected two grab samples of the waste Clay for laboratory testing. The chain of custody record identifies the two samples as Clay Waste Sample 1 and Clay Waste Sample 2, but it is not clear in the chain of custody record which Clay Waste Sample is representative of the two Clay related waste streams. The samples of waste Clay were analyzed on June 30, 2021 and July 5, 2021, using “EPA Method 3005A, ICP digestion” and “EPA Method 7471B mercury digestion” and “EPA Method 1311 - TCLP Extraction”. The reported result for Clay Waste Sample 1 had a lead concentration level of 1.29 mg/L and the reported result for Clay Waste Sample 2, had a lead concentration level of 1.20 mg/L. Reported concentration levels for the remaining RCRA metals in both samples were reported as not detected.

Chemical Division

Mix Room

Water soluble chemicals are mixed in tanks in this room. The emulsion is then filtered and placed into 55-gallon containers for offsite shipment to the customer. The inspectors observed two 55-gallon containers in this room accumulating waste filter bags. The containers were closed and labeled with the words non-hazardous waste.

Cool Room

Ann Goodreaux is the QC Laboratory Technician in this area. After mixing the emulsion is transferred to this room to cool. Samples of the emulsion products are retained in this room for customer quality control. The samples are removed from their specified shelf space, based on a date procedure, and accumulated in a 55-gallon container as non-hazardous waste. The inspectors observed one 55-gallon container in this area accumulating waste emulsion samples. The container was closed and labeled with the words non-hazardous waste (Photograph 7).

Filtration Division

Filtration Mesh Storage Area Clean Room (Medical)

Mr. Neves and Ms. Kowalske explained no hazardous waste is generated in this area.

Non-Clean Room

Mr. Neves and Ms. Kowalske explained no hazardous waste is generated in this area.

Print Division

The Print Division is a sales group that offers support to the screen-printing industry. Mr. Neves and Ms. Kowalske explained no hazardous waste is generated in this area.

90-Day or Less Accumulation Area

The 90-Day or Less Accumulation Area (90-Day) is constructed of cinder block walls, a concrete floor and secured by locked double metal doors. The inspectors observed signs posted on the exterior doors with the words “Caution Hazardous Waste Storage Area Unauthorized Persons Keep Out” and “Danger No Smoking or Open Flames Within 50 Feet” (Photograph 9). Chemical products and hazardous wastes are stored in the room. The accumulation area for hazardous waste is separated from the chemical products. The inspectors observed hazardous waste is accumulated on a shelf system constructed of metal scaffolding. The inspectors observed a sign on the shelf with the words “Caution Hazardous Waste Area”. Located on a wooden pallet the inspectors observed a five-gallon container accumulating waste acetone (D001, F003), a one-gallon container of ignitable waste (D001), a five-gallon container of ignitable waste (D001), two one-quart containers of ignitable waste (D001) and a 5-gallon container of corrosive waste (D002). The containers were closed, in good condition, accumulating with aisle space, labeled with the words hazardous waste, and labeled with a hazard indicator. The containers were marked with a date. The earliest date observed on a container was May 3, 2021.

The inspectors observed a 0.5-gallon container of expired chemical (silver ink 191) labeled with the words hazardous waste. The hazard indicator (pictogram) was covered with other labeling partially concealing the hazard indicator (Photograph 8).

Pursuant to 25 S.C. Code Ann. Regs. 61-79.262.17 [40 C.F.R. § 262.17], a large quantity generator may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by Section 44-56-60(a)(2) and (b)(3) of the SCHWMA, S.C. Code Ann. § 44-56-60(a)(2) and (b) [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in 25 S.C. Code Ann. Regs. 61-79.262.17 [40 C.F.R. § 262.17] (hereinafter referred to as the “LQG Permit Exemption”).

Pursuant to 25 S.C. Code Ann. Regs. 61-79.262.17(a)(5)(i) [40 C.F.R. § 262.17(a)(5)(i)], which is a condition of the LQG Permit Exemption, a large quantity generator must mark or label its containers with the following: an indication of the hazards of the contents (examples include, but are not limited to, the applicable hazardous waste characteristic(s) (i.e., ignitable, corrosive, reactive, toxic); hazard communication consistent with the Department of Transportation requirements at 49 CFR part 172 subpart E (labeling) or subpart F (placarding); a hazard statement or pictogram consistent with the Occupational Safety and Health Administration Hazard Communication Standard at 29 CFR 1910.1200; or a chemical hazard label consistent with the National Fire Protection Association code 704).

On July 12, 2021, Ms. Kowalske emailed the EPA a photograph showing the facility re-labeled the container with a flammable hazard indicator on June 17, 2021.

The inspectors also observed four 55-gallon containers accumulating used oil or oily debris on a poly pallet. The containers were closed and labeled with the words used oil.

The inspectors observed an eye wash and overhead shower station, spill control equipment and

emergency equipment stored in a cage area. Emergency communications are conducted by cell phone and from a phone located outside the 90-Day Area.

Loading Dock Area

Spent aerosol cans are accumulated in this area as universal waste. The inspectors observed a 55-gallon container accumulating spent aerosol cans. The container was closed labeled with the words universal waste, marked with the date July 29, 2020, and marked with the word aerosol cans. The inspectors explained the effective date the universal waste aerosol rule was adopted by SCDHEC was May 28, 2021. The facility marked the container with the date May 28, 2021 (Photograph 10).

Maintenance Shop

General facility maintenance and repair is conducted. The inspectors observed one four-foot box accumulating spent fluorescent lamps on a shelf. The container was closed, in good condition, labeled with the words universal waste lamps and marked with the date May 21, 2021. It appeared the container was accumulating with containers of new lamps. The inspectors suggested to separate universal waste lamps from lamp products.

On July 12, 2021, Ms. Kowalske emailed the EPA a photograph showing the facility relocated the universal waste from products in the Maintenance Shop on June 28, 2021.

12) Waste Management Practices

SAATI operates several SAAs and a 90-Day or Less Accumulation Area. Hazardous waste generated from the manufacturing process include, ignitable (D001), corrosive (D002), toxic (D007, D008, D035) waste and listed (F003, F005, F006) waste. Hazardous waste off-spec commercial chemical (U002, U057, U080, U159, U210) is also generated. Hazardous waste is accumulated in containers for 90-days or less.

Non-hazardous Tenter wastewater and the waste Tenter process tank chemical generated in the Finishing Area is discharged to the Sump and drained to the sanitary sewer. Hazardous waste phenolic resin and methyl ethyl ketone liquids and solids are generated in the Coating Area - Isotex Machine and accumulated in containers for offsite disposal to a RCRA destination facility. Treated fabric that is non-recyclable, test Panels, floor sweepings, waste Clay, waste Clay pieces impacted with Aramid yarn, waste Clay from the laboratory oven generated in the Firing Range, waste gunpowder and lead, and waste wipes and rags generated in the Ammunition Assembly Table are disposed in the municipal solid waste stream. Waste lead bullets and casings generated in the Firing Range are shipped as scrap metal. Waste fabric is also recycled. Non-hazardous waste colorant filters generated in the Chemical Division are accumulated in containers for offsite disposal to the Lee County Solid Waste Facility. Waste emulsion samples generated from mixing water-soluble chemicals in the Chemical Division are accumulated in containers for offsite disposal to a destination facility. Spent part washer fluid generated in the maintenance shop is transported by Safety Kleen Systems to Safety Kleen Systems in Greer, S.C., as nonhazardous waste. Universal waste aerosol cans, fluorescent lamps, batteries, and waste electronic equipment generated from general facility maintenance are accumulated in containers for offsite disposal to Cleanlites Recycling South, LLC and Veolia ES Technical Solutions, LLC.

Used oil and oily absorbent from oil spills is accumulated in containers for offsite disposal to the Lee County Solid Waste Facility. Cooling water generated from the air system evaporators, blowdown water and rinse water from cleaning the mix tanks is discharged to the sanitary sewer. Waste Cartasol red and waste 4,4-diaminodiphenyl sulfone are accumulated in containers for offsite disposal to a destination facility.

The facility ships hazardous waste approximately on a monthly to two-month schedule. The facility prepares the hazardous waste for packaging and onsite management, prior to shipping the hazardous waste using the manifest system to a treatment, storage, or disposal facility (TSDF).

SAATI used the following transporters in 2019 through 2021.

Freehold Cartage, Inc. – NJD054126164
Veolia ES Technical Solutions, LLC – FL0000207449
Safety Kleen Systems – TXR000081205
Tradebe Transportation, LLC – INR000123497
Maumee Express, Inc. – NJD986607380

SAATI used the following TSDF in 2019 through 2021.

Clean Earth of Alabama – ALD981020894
Safety Kleen Systems Greer – SCD981031040
Tradebe Treatment & Recycling of Tennessee, LLC- TND000772186

13) **Record Review**

Because of the COVID-19 pandemic, the EPA sent an email to SAATI on June 9, 2021, requesting they submit as many RCRA records as possible for review by June 11, 2021. A list of the RCRA records was attached to the EPA's email. SAATI submitted RCRA records, in several emails to the EPA on June 11 through June 14, 2021. SAATI also provide the RCRA records in hard copies for review on the day of the inspection.

RCRA Site Identification (Form 8700-12)

The inspectors reviewed SAATI's most recent notification of its regulated waste activity (8700-12) to SCDHEC dated May 4, 2020. The facility notified as a large quantity generator of hazardous waste and a small quantity handler of universal waste.

Manifests

The inspectors reviewed hazardous waste manifests, land disposal restrictions and non-hazardous waste manifests from December 20, 2019 to June 10, 2021.

Universal Waste Manifests

The inspectors reviewed Universal Waste Bill of Lading for lamps, batteries, and electronic equipment shipped for 2020 and 2021. Waste fluorescent lamps, batteries and electronic equipment generated are shipped for offsite disposal to Cleanlites Recycling South, LLC and Veolia ES Technical Solutions, LLC. Shipments of universal waste should be confirmed with a certificate of destruction.

On July 12, 2021, Ms. Kowalske emailed the EPA the certificates of recycling for lamps, batteries, and electronic equipment dated October 29, 2020, March 25, 2021, and April 23, 2021.

Waste Determination/Profiles/Safety Data Sheets (SDS)

The inspectors reviewed copies of the waste determination, generator waste profile, laboratory analysis and SDS documents.

The inspectors reviewed the SDS for the textile chemicals PHOBOL CP-C, PHOBOL Extender XAN, and Invadine PBN used in the Finishing Area generating the Tenter wastewater. The inspectors reviewed the SDS for Roma Plastilina clay, IMR gunpowder and Western Powders, Inc., used in the Ballistic Laboratory. The gunpowders are a 1.3 Explosive Division (fire, blast, or projection hazard). Documentation that an accurate waste determination was performed using process knowledge and laboratory analysis on the solid wastes was not observed in the record review.

On July 12, 2021, Ms. Kowalske emailed the EPA a completed waste profile form dated June 21, 2021, on the waste determination conducted on the Tenter wastewater. SAATI determined the wastewater non-hazardous waste.

The inspectors reviewed the waste profiles 193220232 for waste resin residue and solvent (D001, D035, F005), waste profile 193221580 process clean up material (D001, D035), and waste profile 183222423 waste phenolic resin (D001) generated in the Coating Line and waste petroleum distillates (D001). Waste profile 6456/6455 oily absorbent from oil spills was determined a non-hazardous waste using laboratory analysis and generator knowledge. Spent colorant filters generated from filtering emulsions in the Chemical Division was determined a non-hazardous waste using process knowledge and SDS.

Waste Cartasol red and waste 4,4-diaminodiphenyl sulfone were determined a non-hazardous waste using process knowledge and SDS. Documentation that an accurate waste determination was performed using process knowledge and laboratory analysis on the solid wastes was not observed in the record review.

Contingency Plan

The inspectors reviewed the contingency plan (Plan). The Plan was revised on April 14, 2021. The inspectors observed the Plan did not have a list of the emergency and spill control equipment and a description of the equipment's capability.

Pursuant to 25 S.C. Code Ann. Regs. 61-79.262.261(e) [40 C.F.R. § 262.261(e)], which is a condition of the LQG Permit Exemption, the plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications, and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.

On July 12, 2021, Ms. Kowalske emailed the EPA a copy of the revised Plan dated June 29,

2021. The Plan was revised to include additional facility contacts to the notification list, an emergency equipment and spill control equipment list with a brief outline of the capabilities, a map of the spill kit locations, a description of the Ballistic Laboratory, the generated waste streams, and a site map of the waste generation areas.

Quick Reference Guide

The inspectors reviewed the Quick Reference Guide.

Arrangements with Local Authorities

The inspectors reviewed the arrangements with the local authorities. The contingency plan was revised on April 14, 2021. The inspectors observed the arrangement with SCDHEC was not made.

Pursuant to 25 S.C. Code Ann. Regs. 61-79.262.262(a) [40 C.F.R. § 262.256(a)], which is a condition of the LQG Permit Exemption, the large quantity generator must submit a copy of the contingency plan and all revisions 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). This document may also be submitted to the Local Emergency Planning Committee, as appropriate.

On July 12, 2021, Ms. Kowalske emailed the EPA copies of the transmittal letters dated June 30, 2021, for the Fountain Inn Police and Fire Departments, Prisma Health, Greenville County Office of Emergency Management, Greenville County Sheriff's Office, and the State Emergency Response Commission (SERC). SAATI also submitted the Certified Mail Receipts and Return Receipts.

Personnel Training

The inspectors reviewed the RCRA training given to employees handling and managing hazardous waste in 2020 and 2021. The inspectors reviewed the job titles and position descriptions for Paint Mixer, Paint Maintenance Tech 1, Paint Department Manager and Process Engineer. The inspectors observed that RCRA training was not given to Chris Grant, Laboratory Technician in the Ballistic Laboratory. The inspectors observed documentation of his RCRA training, job title and position description were not in the record review.

Pursuant to 25 S.C. Code Ann. Regs. 61-79.262.17(a)(7)(i)(A) and (a)(7)(iii) [40 C.F.R. § 262.17(a)(7)(i)(A) and (a)(7)(iii)], which is a condition of the LQG Permit Exemption, facility personnel must successfully complete a program of classroom instruction, online training, or on-the-job training that teaches them to perform their duties in a way that ensures compliance with this part and must take part in an annual review of the initial program.

Pursuant to 25 S.C. Code Ann. Regs. 61-79.262.17(a)(7)(iv)(A), (B) and (D) [40 C.F.R. § 262.17(a)(7)(iv)(A), (B) and (D)], which is a condition of the LQG Permit Exemption, the LQG must maintain the following documents and records at the facility: the job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job; a written job description for each position listed under

paragraph (a)(7)(iv)(A) of this section. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications, and duties of facility personnel assigned to each position; records that document that the training or job experience, required under paragraphs (a)(7)(i), (ii), and (iii) of this section, has been given to, and completed by, facility personnel.

On July 12, 2021, Ms. Kowalske emailed the EPA documentation showing the RCRA training given to Chris Grant on June 24, 2021.

On July 12, 2021, Ms. Kowalske emailed the EPA the RCRA training given by Heritage on July 22, 2020, the RCRA training given by Rogers and Callcott in the Spring 2021, and SAATI's RCRA training program dated June 21, 2021.

Weekly Container Inspection Records

The inspectors reviewed the weekly container inspection records for the 90-Day Accumulation Area from November 6, 2019 to June 8, 2021. The inspectors observed the weekly container inspections for the week between December 18, 2019 and December 30, 2019, and for the week between July 10, 2020 and July 24, 2020 appear not to have been documented.

Pursuant to 25 S.C. Code Ann. Regs. 61-79.265.15(d) [40 C.F.R. § 265.15(d)], which is a condition of the LQG Permit Exemption, the owner or operator must record inspections in an inspection log or summary. He must keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

On July 12, 2021, Ms. Kowalske emailed the EPA a copy of the "Note to the Inspection File" for each missed weekly container inspection, documenting the reason the weekly inspection was not recorded.

RCRA Organic Air Emissions - Containers

The inspectors reviewed SAATI's standard operating procedure (SOP) on the type and management of containers used to accumulate hazardous waste.

RCRA Quarterly Report

The inspectors reviewed the quarterly reports from the fourth quarter of 2019 through the first quarter 2021.

Waste Minimization Report

The inspectors reviewed the FY2020 waste minimization report.

14) Closing Conference

Upon conclusion of the inspection, a closing conference was conducted in the presence of SAATI Americas, Inc. The facility was informed of the preliminary findings at the time of the

inspection.

15) Conclusion/Summary of Violations

Based on the CEI conducted on June 17, 2021, SAATI Americas, Inc., was inspected as a large quantity generator of hazardous waste and a small quantity handler of universal waste.

16) Signed

William Kappler
Physical Scientist
RCRA Enforcement Section

Date

17) Concurrence

Araceli B. Chavez
Chief
RCRA Enforcement Section

Date

Appendix 1

EXHIBIT #5 - CLAY INVENTORY AND CONSUMPTION CALCULATION

Table 1. Current Clay Inventory			
Item	Count	Mass (lbs)	Description
Loaded Clay Box	2.5	456	Clay Box holds 94 bricks or 188 lbs
Unopened Cases	4	160	Full boxes of modelling clay each box containing 20 bricks or 40 lbs
Individual Bricks	21	42	Individually packaged clay bricks 2 lbs each
Test Specimen	n/a	142	Material transported for testing at Rogers & Callcott Environmental
Loose Clay	n/a	26	Clay collected in and around the lab oven (Figure 3)

Table 2. Summary of Consumption		
Estimate	Time Period	Value [lb.]
29 Month Total	1/29/19 to 6/16/21	298
Monthly Average	1/29/19 to 6/16/21	10.3
7 Month Total	6/17/18 to 1/28/18	71.9
36 Month Total	6/17/18 to 6/16/21	370

SAATI Americas, Inc.
SCD980841944
June 17, 2021
RCRA CEI Photographs
Photographs by William Kappler
Camera Model: Samsung WB250F
Property Tag #: S75917



SAATI Americas, Inc., (SAATI). Coating Line. Inspectors observed one 55-gallon container accumulating hazardous waste next to the column. Photograph 1 taken at 10:45 a.m.



SAATI. Coating Line. Inspectors observed a second 55-gallon container accumulating hazardous waste next to the column. Photograph 2 taken at 10:47 a.m.



SAATI. Coating Line. The two 55-gallon containers observed by inspectors in photographs 1 and 2. Photograph 3 taken at 10:47 a.m.



SAATI. Coating Line. Inspectors observed one 5-gallon empty container. The cover was not in good condition. Photograph 4 taken at 10:52 a.m.



SAATI. Coating Line. Inspectors observed one 5-gallon empty container. Cover was not in good condition. Photograph 5 taken at 10:52 a.m.



SAATI. Ballistics Laboratory. Inspectors observed three 5-gallon containers accumulating spent bullets. Photograph 6 taken at 11:08 a.m.



SAATI. Cool Room (Emulsions). The inspectors observed waste samples are accumulated in a 55-gallon container labeled with the words non-hazardous waste. Photograph 7 taken at 11:36 a.m.



SAATI. 90-Day or Less Accumulation Area. The inspectors observed the hazardous waste label on a one-quart bottle appeared to cover the hazard indicator. Photograph 8 taken at 11:49 a.m.



SAATI. 90-Day or Less Accumulation Area. Inspectors observed signs identifying the storage area. Photograph 9 taken at 11:49 a.m.



SAATI. Loading Dock Area. The inspectors observed a 55-gallon container accumulating aerosol cans not at atmospheric pressure. The facility corrected accumulation date on the container. Photograph 10 taken at 11:59 a.m.