

RCRA Inspection Report

1) Inspector and Author of Report

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U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW
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2) Facility Information

Tennessee Valley Authority
Environmental Research Center
1010 Reservation Road
Shoals, Alabama 35661
Colbert County

EPA ID: AL3640090004
NAICS: 81131 - Commercial and Industrial
Machinery and Equipment (Except Muscle
Automotive and Electronic) Repair
and Maintenance

3) Responsible Official

Dustin Durham
Environmental Scientist
Tennessee Valley Authority
Environmental Research Center
112 Nickajack Court
Sheffield, Alabama 35661
drdurham@tva.gov

4) Inspection Participants

Dustin Durham, Tennessee Valley Authority Environmental Research Center
Brandon Williams, Tennessee Valley Authority Environmental Research Center
Adrian Corbitt, ADEM
Novelle Smith, US EPA Region 4 Atlanta
Paula Whiting, US EPA Region 4 Atlanta

5) Date and Time of Inspection

November 14, 2024, at 9:00 a.m. CST

6) Applicable Regulations¹

Resource Conservation and Recovery Act (RCRA) Sections 3002, 3005 and 3007 (42 U.S.C. §§ 6922, 6925 and 6927), and the regulations promulgated pursuant thereto at 40 Code of Federal Regulations (C.F.R.) Parts 260-270, 273 and 279.

Alabama Hazardous Waste Management and Minimization Act of 1978, Ala. Code § 22-30-1 et seq., and rules 335-14-1 to 335-14-17 (2016 and 2018) of the Alabama Department of Environmental Management (ADEM) Administrative Code (ADEM Admin. Code)

Pursuant to ADEM Admin. Code 335-14-1-.02-(1)(a)111. [40 C.F.R. § 260.10], a large quantity generator of hazardous waste (LQG) is a generator who generates greater than or equal to 1,000 kilograms (2,200 pounds) of non-acute hazardous waste in a calendar month.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(7)(a) [40 C.F.R. § 262.17], a large quantity generator (LQG) may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by Section 22-30-12(b) of the AHWMMMA, Ala. Code § 22-30-12(b) [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in ADEM Admin. Code r. 335-14-3-.01(7)(a) [40 C.F.R. § 262.17] (hereinafter referred to as the “LQG Permit Exemption”).

Pursuant to ADEM Admin. Code r. 335-14-3-.01(5)(a) [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 KRS 224.46-520(1) [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with ADEM Admin. Code r. 335-14-3-.01(6) (b) or (7)(a)) [40 C.F.R. § 262.16(b) or §262.17(a)], except as required in ADEM Admin. Code r. 335-14-3-.01(5)(a)7 and 8) [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in ADEM Admin. Code r. 335-14-3-.01(5)(a) [40 C.F.R. § 262.15(a)] (hereinafter referred to as the “SAA Permit Exemption”).

Pursuant to ADEM Admin. Code r. 335-14-11-.02(1)(a)244. [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 this inspection was to conduct an unannounced compliance evaluation inspection to determine Tennessee Valley Authority Environmental Research Center’s (EPA ID Number: AL3640090004) compliance with the applicable requirements of RCRA and the corresponding Alabama Department of Environmental Management (ADEM) regulations. This was an EPA lead inspection.

¹ As the State’s authorized hazardous waste program operates in lieu of the federal RCRA program, the citations of those authorized provisions will be to the authorized State program. However, for ease of reference, the federal citations will follow in brackets.

8) Facility Description

Tennessee Valley Authority Environmental Research Center (TVA ERC) is an environmental research and development installation operated by the Tennessee Valley Authority, specializing in industrial agriculture and remediation sciences, including clean-up at military installations. Until the 1970s, when the facility's name was changed from the National Fertilizer Development Center, three-quarters of the synthetic fertilizers in use in the United States were developed here, with the cooperation of universities and the petrochemical industry. The facility was established at this location to take advantage of the buildings and infrastructure already in place from a World War One-era munitions plant, and of power and water provided by the TVA.

Tennessee Valley Authority Environmental Research Center employs 100 employees with 2 –3 employees handling hazardous waste. The facility operates on 15 acres and under 30,000 square feet of production area, one shift, 12 hours a day, seven days per week.

Tennessee Valley Authority Environmental Research Center's most recent Hazardous Waste Generator Notification (EPA Form 8700-12) dated February 12, 2024, characterized the facility as a Large Quantity Generator (LQG) of hazardous waste. Tennessee Valley Authority Environmental Research Center may generate hazardous waste streams, spent aerosol cans, used solvent, used oil, universal lamps and batteries, paint waste and other wastes.

9) Previous Inspection History

ADEM has conducted 42 RCRA CEIs at the subject facility between 1986 and 2024 and found 55 violations during those inspections.

On July 24, 2024, ADEM conducted the most recent RCRA CEI at the subject facility and found no apparent violations of the RCRA's requirements.

10) Findings

On November 14, 2024, EPA inspectors Paula Whiting and Novelle Smith, accompanied by ADEM inspector Adrian Corbitt arrived at Tennessee Valley Authority Environmental Research Center at approximately 9:00 a.m. CST. The inspectors entered the facility and was escorted to a conference room. Dustin Durham, Environmental Scientist immediately received the inspectors. Dustin Durham and the inspectors were joined by Brandon Williams, Environmental Scientist, for the opening conference. The inspectors introduced themselves, showed their credentials to Dustin Durham and explained the purpose of the visit.

The inspectors described the anticipated use of a digital camera during the inspection and provided a request for records. The EPA inspector explained that the Small Business Regulatory Enforcement Fairness Act's classification of a "small business" is generally set by the Small Business Administration using the business' SIC/NAICS code and annual receipts or number of employees. A copy of the EPA's information sheet for small businesses can be found at <https://www.epa.gov/sites/production/files/2017-06/documents/smallbusinessinfo.pdf>. The EPA

inspector also 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 did not assert a business confidentiality claim.

Dustin Durham provided an overview of the facility's history and current operations during the opening conference. The inspection participants also discussed health and safety protocols and required personal protective equipment before facility representative led the inspectors on a tour of the facility operations. Below is a description of the observations made during the inspection.

11) Inspection Observations

11.1 Temporary Hazardous Waste Storage Area

TVA ERC manages a temporary hazardous waste central accumulation area (CAA) in the Shop 2 Paint Shop. The Paint Shop contains painting supplies, a paint booth, and a blaster booth. The CAA was a secondary containment pallet with two containers, a 55-gallon container of paint waste (D001, F003, F005), and 15-gallon container of paint still bottoms (F003, F005) (Pictures 1-3). Both containers had a start accumulation date of September 25, 2024. The temporary CAA was in a corner inside the Paint Shop and was not identified with a sign which read "danger, hazardous waste storage." TVA ERC manages ignitable and toxic paint wastes in this CAA, and the inspectors did not observe "No Smoking" signs around the temporary CAA and/or the Paint Shop. However, the inspectors did observe signs (e.g., Danger Unauthorized Personnel Keep Out) laying on a wooden pallet next to the temporary CAA.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(7)(a)1.(vi)(II) [40 C.F.R. § 262.17(a)(1)(vi)(B)], which is a condition of the LQG Permit Exemption, a generator is required 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.

The CAA is equipped with an internal communications or alarm system capable of providing immediate emergency instruction to facility personnel; it is equipped with a device capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams; it is equipped with portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment; and it is equipped with water to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray system.

11.2 Paint Shop 2

TVA ERC manages several satellite accumulation areas (SAAs) in Shop 2 Paint Shop. The first SAA was for managing hazardous waste aerosol can residue that is generated by puncturing discarded aerosol cans (Pictures 5-6). The inspectors observed a 55-gallon container in SAA #7. The container was located near the temporary CAA, and it was equipped with a closed top lid with a bung, which

was closed. The container was marked as waste profile number 21-032, labeled D001 hazardous waste Aerosol Can Residue, and identified with a flammable hazard identification.

The Paint Shop held two paint booths but only one booth was active. The inspectors observed 14 paint filters in the walls inside the paint booth (Pictures 6-7). Leonard Caldwell explained that the paint filters are changed once a year. The discarded filters are managed as a paint solid, bagged and put into a hazardous waste Open Top roll-off.

The second SAA was for managing hazardous waste baghouse dust that is generated by media blaster (Pictures 8-12). The inspectors observed two 55-gallon containers under the CLEMCO baghouses. The containers were located outside the Paint Shop, connected to the CLEMCO baghouses, and equipped with open top lids with hose connections, which were closed. The containers were marked as waste profile number CS-057 and CS-058, labeled D008 hazardous waste CLEMCO sandblast dust, and identified with a miscellaneous dangerous goods hazard identification. However, a miscellaneous dangerous good hazard identification is not sufficient but must have the hazardous properties of the waste (i.e., flammable, corrosive, reactive, toxic). The containers are required to have a toxic hazard identification.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(6)(b)6.(i) [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.

The dust collection system had twelve HEPA filters located inside. Leonard Caldwell explained that the discarded filters are collected as paint solids along with the forty sandblast media filters once a year, bagged and put into a hazardous waste Open Top roll-off.

The third SAA was for managing hazardous waste paint cleanup and solids that is generated from the paint booth (Pictures 15-16). The inspectors observed a 55-gallon container in SAA #4. The container was located beside the paint booth, and it was equipped with an open top lid with a clamp, which was closed. The container was marked as waste profile number 21-002, labeled D008, F003, F005 hazardous waste Paint Cleanup and Solids, and identified with a miscellaneous dangerous goods hazard identification. However, a miscellaneous dangerous good hazard identification is not sufficient but must have the hazardous properties of the waste (i.e., flammable, corrosive, reactive, toxic). The containers are required to have a toxic hazard identification.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(6)(b)6.(i) [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.

11.3 Paint Distillation Shed

The SAA was for managing hazardous waste still bottoms that is generated by distilling the solvent from the paint waste (Pictures 13-14). The inspectors observed a 30-gallon container in the SAA. The container was located near the shed door, and it was equipped with an open top lid with a clamp, which was closed. The container was marked as waste profile number 24-054, labeled F003, F005 hazardous waste Paint Still Bottom Solids, and identified with a miscellaneous dangerous

goods hazard identification. However, a miscellaneous dangerous good hazard identification is not sufficient but must have the hazardous properties of the waste (i.e., flammable, corrosive, reactive, toxic). The containers are required to have a toxic hazard identification.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(6)(b)6.(i) [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.

At the rear of the shed were two parts washers with methyl ethyl ketone. The shed is kept locked and only accessible to Leonard Caldwell and his team. Underneath the washers were 5-gallon containers to capture the discarded solvent and paint waste. The container under the washer was empty at the time of the inspection. A red 5-gallon distillation unit sat next to a yellow flammable storage cabinet for the recycled and new solvent containers.

11.4 Paint Shop 2 Blaster

The sandblaster was across from the paint booth and took up a third of the building. Two SAAs were located near the sandblaster. The first SAA was for managing hazardous waste blaster solids that is generated from the sandblasting booth (Picture 17). The inspectors observed a 55-gallon container in the SAA with hoses attached to the lid. The container was located behind the sandblasting booth, and it was equipped with an open top lid, which was closed. The container was marked as waste profile number DR10-034, labeled D008, hazardous waste sandblast with metals, and identified with a miscellaneous dangerous goods hazard identification. However, a miscellaneous dangerous good hazard identification is not sufficient but must have the hazardous properties of the waste (i.e., flammable, corrosive, reactive, toxic). The containers are required to have a toxic hazard identification.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(6)(b)6.(i) [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.

The second SAA was for managing hazardous waste paint related material that is generated from the sandblasting booth (Picture 18). The inspectors observed a 55-gallon container in SAA#3 inside a secondary containment. The container was located in the shop area beside the sandblasting booth, and it was equipped with a closed top lid with a bung, which was closed. The container was marked as waste profile number 24-053, labeled D001, F003, F005, hazardous waste paint related material, and identified with a flammable hazard identification. However, a miscellaneous dangerous good hazard identification is not sufficient but must have the hazardous properties of the waste (i.e., flammable, corrosive, reactive, toxic). The containers are required to have a toxic hazard identification.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(6)(b)6.(i) [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.

On the floor near one of the shop’s exit doors was a medium sized box of discarded aerosol cans

(Picture 19). The cans had not been punctured or moved to the SAA for aerosol can puncturing. The box did not have a start accumulation date and was not labeled to identify the contents as “Universal Waste - Aerosol Cans.”

Pursuant to ADEM Admin. Code r. 335-14-11-.02(6)(a) [40 C.F.R. § 273.15(a) and (c)], a SQHUW may accumulate universal waste no longer than one year and must be able to demonstrate the length of time that the universal waste has accumulated from the date that it became a waste or was received.

Pursuant ADEM Admin. Code r. 335-14-11-.02(5)(f) [40 C.F.R. § 273.14(f)], a SQHUW must label or mark universal waste aerosol cans (i.e., each aerosol can), or a container in which the aerosol cans are contained, clearly with any of the following phrases: “Universal Waste—Aerosol Can(s),” “Waste Aerosol Can(s),” or “Used Aerosol Can(s).”

11.5 Breaker Shop

The Breaker Shop is a shared service area for Shops 1 and 2 that fabricate and repair breakers. The inspectors observed several SAAs in this shop.

The first SAA was for managing hazardous waste solid debris that is generated from the shop (Picture 20). The inspectors observed a 55-gallon container in SAA #33. The container was equipped with a flip-top lid, which was closed. The container was marked as waste profile number 22-07X, labeled D006, F003, F005, hazardous waste Solid debris with metals, and identified with a miscellaneous dangerous goods hazard identification. However, a miscellaneous dangerous good hazard identification is not sufficient but must have the hazardous properties of the waste (i.e., flammable, corrosive, reactive, toxic). The containers are required to have a toxic hazard identification.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(6)(b)6.(i) [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.

Two used oil containers were observed on a wooden pallet (Picture 21) in the polishing area. The containers were labeled used oil and closed. Near the rear exit was a SAA for managing hazardous waste polisher sludge that is generated from polishing process (Picture 22-24). The inspectors observed a 55-gallon container in SAA #37. The container was equipped with an open lid, which was closed. The container was marked as waste profile number 22-008, labeled D006, hazardous waste Breaker Shop polisher sludge, and identified with a miscellaneous dangerous goods hazard identification. However, a miscellaneous dangerous good hazard identification is not sufficient but must have the hazardous properties of the waste (i.e., flammable, corrosive, reactive, toxic). The containers are required to have a toxic hazard identification.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(6)(b)6.(i) [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.

The inspectors observed a Zero Blast Cabinet with overspill underneath the cabinet and on the

floor around the cabinet (Pictures 25-27, 30). Brandon Williams spoke with shop personnel and was told that the material was non-hazardous and spilled clean sandblast media. The inspectors opened the cabinet and observed filters inside. Brandon Williams explained that the media is shaken from the filters and extracted from the bottom of the cabinet. The spent media is placed in the SAA #33. The filters are not replaced on a regular schedule but as needed and disposed of as hazardous waste. The inspectors recommended housekeeping of the spilled media to prevent cross contamination of clean and discarded media.

Near the rear roll up door was a 55-gallon container labeled Special Waste Asbestos Arc Shields (Pictures 28, 29, 31). The container contained fiberboard arc shields made of asbestos. The waste marked non-hazardous, and the container was closed and full. The shop personnel did not know how long the container had been staged in this area.

11.6 Shop 2

The Shop 2 SAA #11 had three containers. The first container was for managing hazardous waste broken bulbs that are generated from the shop (Pictures 32-35). The inspectors observed a 55-gallon container equipped with an open top lid, which was closed. The container was marked as waste profile number 08-039, labeled D009, hazardous waste broken bulbs with mercury, and identified with a miscellaneous dangerous goods hazard identification. However, a miscellaneous dangerous good hazard identification is not sufficient but must have the hazardous properties of the waste (i.e., flammable, corrosive, reactive, toxic). The containers are required to have a toxic hazard identification.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(6)(b)6.(i) [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.

The first container was for managing hazardous waste broken bulbs that are generated from the shop. The inspectors observed a 55-gallon container equipped with an open top lid, which was closed. The container was marked as waste profile number 08-039, labeled D009, hazardous waste broken bulbs with mercury, and identified with a miscellaneous dangerous goods hazard identification. However, a miscellaneous dangerous good hazard identification is not sufficient but must have the hazardous properties of the waste (i.e., flammable, corrosive, reactive, toxic). The containers are required to have a toxic hazard identification.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(6)(b)6.(i) [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.

The second container was for managing hazardous waste anode dust that are generated from the shop (Pictures 32-35). The inspectors observed a white 5-gallon container, which was closed. The container was marked as waste profile number 13-018, labeled D003, hazardous waste anode dust, and identified with a miscellaneous dangerous goods hazard identification. However, a miscellaneous dangerous good hazard identification is not sufficient but must have the hazardous

properties of the waste (i.e., flammable, corrosive, reactive, toxic). The containers are required to have a toxic hazard identification.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(6)(b)6.(i) [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.

The third container was for managing hazardous waste chromium contaminated debris that are generated from the shop. The inspectors observed a 55-gallon container equipped with an open top lid, which was closed. The container was marked as waste profile number 08-072, labeled D007, hazardous waste chromium contaminated debris, and identified with a miscellaneous dangerous goods hazard identification. However, a miscellaneous dangerous good hazard identification is not sufficient but must have the hazardous properties of the waste (i.e., flammable, corrosive, reactive, toxic). The containers are required to have a toxic hazard identification.

Pursuant to ADEM Admin. Code r. 335-14-3-.01(6)(b)6.(i) [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.

11.7 Shop 2 Compressor Room

The Compressor room had recently been renovated and the old leaking equipment was removed. The inspectors observed underneath a tank an old condensate collection box filled with oily water (Pictures 36-41). Brandon Williams called around and verified that the tank and the collection box were still in use and that the oily water was being sent to the oil-water separator in Shop 1. The used oil was collected for disposal.

11.8 Universal Waste Shed

TVA ERC manages universal waste lamps in a fenced in enclosure with a sign on the gate. The universal waste lamps are stored in a wooden box until ready to ship. The inspectors observed two empty 4-foot fiberboard containers (Pictures 42-43). No lamps were in the storage area.

11.9 Shop 2 Blaster

The Shop 2 sandblasting shop is a standalone hanger open at both ends. At the time of the inspection, the inspectors observed two lead acid batteries sitting in rainwater (Pictures 44-46). One of the batteries was connected to the sandblaster system. The inspectors expressed concern about worker safety of having the batteries exposed to wet weather and sitting in water as well as connected for use.

The inspectors observed spent black beauty sandblast media on the ground inside the hanger and releasing outside the hanger via the walls and entrances (Pictures 47-49). Brandon Williams explained that the spent media was non-hazardous but collected, stored in open top boxes in the yard, and labeled as hazardous waste until the analytical results for the pending boxes are returned. The inspectors expressed concern about the quantity of spent media allowed to gather on the floor of the sandblast, the amount spilling from the walls and the door, and the personnel that tracked the spent blast media from the hanger to other areas via shoes or vehicles. The EPA

recommends a stronger housekeeping practice to prevent the release to spent sandblast media outside of the hanger.

During the records review, the inspectors requested the spent sandblast media waste profile and past analytical results. The 2022 and 2023 results for the Blast Media Roll-off had lead contamination and was disposed of as hazardous waste.

11.10 Open Top Boxes

TVA ERC stores four open top (OT) boxes in the yard beyond the Shop 2 sandblasting hanger (Pictures 50-58). Brandon Williams explained that OT 501, 503 and 504 were waiting on Toxic Characteristic Leaching Procedure (TCLP) analytical results for metals. The containers were labeled as hazardous waste sandblast (D008) from lead abatement sandblasting. The containers were dated November 12, 2024. OT 502 results were non-hazardous, and the box was waiting on pickup.

12) Records Review

Contingency Plan and Quick Reference Guide (QRG)

The actions that facility personnel should take in response to an emergency are described in the facility's PSS Contingency Plan, which was last updated on November 12, 2024.

The plan describes actions facility personnel must take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.

The plan describes arrangements agreed to with the local police department, fire department, other emergency response teams, emergency response contractors, equipment suppliers, local hospitals, or the Local Emergency Planning Committee. The documentation of the arrangements was sent to the local authorities on March 18, 2024, and on November 12, 2024.

The plan lists the names and emergency telephone numbers for persons identified as emergency coordinators.

The plan includes a list of all emergency equipment at the facility. The list includes spill control equipment, communications and alarm systems, and decontamination equipment. The list appears up to date. The plan includes the location and a physical description of each item on the list, and a brief outline of its capabilities. The plan did not include the fire extinguishing systems. However, on November 21, 2024, a Teams meeting was held with TVA ERC, ADEM and EPA to show the fire extinguisher list that would be added to the PSS Contingency Plan.

The plan includes an evacuation plan for personnel. This plan describes signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes.

A copy of the PSS Contingency Plan (and its quick reference guide) was most recently submitted to the local authorities on November 12, 2024.

The quick reference guide includes the types/names of hazardous waste in layman's terms and the associated hazard associated with each hazardous waste present at any one time; the estimated maximum amount of each hazardous waste that may be present at any one time; the identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff; a map of the facility showing where hazardous wastes are generated, accumulated and treated and routes for accessing these wastes; a street map of the facility in relation to surrounding businesses, schools and residential areas; the locations of water supply; the identification of on-site notification systems; and the name of the emergency coordinator(s) and emergency telephone number(s).

Training Records

On November 25th via an email for Brandon Williams, the inspectors reviewed facility job descriptions and employee names that were provided for Laborers' Other Duties. The description included the requisite skill, education, or other qualifications, and duties of facility personnel assigned to that position.

TVA ERC provided a written description of the type and amount of both introductory and continuing training to be given to each person filling the positions listed above. The inspectors reviewed records of employee hazardous waste training completed in 2022-2024.

Waste Manifest and Land Disposal Restriction (LDR) Records

The inspectors reviewed available hazardous waste manifest records and land disposal restriction forms for shipments of hazardous waste sent since 2022. Hazardous waste manifest records show that (D008) hazardous waste CLEMCO Sandblast Dust collected from the sandblast (D006) hazardous waste breaker shop polishing water/sludge from the Breaker Shop, (D001, D006, D007, D008, F003, F005) hazardous waste paint and cleanup liquids and (D006, D007, D008) hazardous waste CLEMCO dusts/overflow debris are routinely shipped to Chemical Waste Management (EPA ID ALD0000622464), Morris Farm Landfill (Solid Waste Permit 40-08), and Clean Harbors El Dorado (EPA ID ARD069748192) and the most recent shipment was made on October 30, 2024.

Waste Profiles

The waste certification 010066 for the Shop 2 sandblast media dated July 20, 2023, was reviewed. Toxic Characteristic Leaching Procedure (TCLP) results dated October 30, 2024, indicated the recently shipped spent sandblast media was not hazardous. However, during the review of the 2022-2023 TCLP results for spent sandblast media indicated contamination of lead (D008). On November 21st, Brandon Williams provided via email manifests and analytical results dated August - September 2022 and June – August 2023, for the hazardous waste sandblast media in roll-offs and the hazardous waste sandblast media and spent filter bags.

Weekly Inspection Records

The inspectors reviewed the TVA ERC's available inspection records of the hazardous waste central accumulation area (CAA) from January 2022 to present. The inspection log includes a checklist to record observations about leaking containers and for deterioration of containers caused by corrosion or other factors. The records include the date and time of the inspection and the name, signature and initials of the employee conducting the inspection. Employees do routinely record

inspection observations and subsequent follow-up actions on the inspection log.

Waste Minimization Plan

The Waste Minimization Plan was reviewed for current signatures and the certification statement.

13) Closing Conference

The inspectors conducted the exit meeting at 5:00 PM CST with Dustin Durham and Brandon Williams. During this meeting, the inspectors stated their preliminary conclusions of the inspection. TVA ERC agreed to provide the information below.

On November 21, 2024, and November 25, 2024, Brandon Williams provided the job titles and description of the employees handling hazardous waste and the analytical results of the spent sand blast media for 2022-2024 in emails to Paula Whiting, Novelle Smith, and Adrian Corbitt.

15) List of Attachments

Attachment A – Photo Log: Tennessee Valley Authority Environmental Research Center

16) Signed

PAULA WHITING

 Digitally signed by PAULA WHITING
Date: 2025.01.23 08:42:52 -05'00'

Paula A. Whiting
Environmental Engineer

17) Concurrence

BROOKE YORK

 Digitally signed by BROOKE YORK
Date: 2025.01.23 09:55:27 -05'00'

Brooke York
Acting Chief
RCRA Enforcement Section

ATTACHMENT A

TENNESSEE VALLEY AUTHORITY ENVIRONMENTAL RESEARCH CENTER

SHEFFIELD, ALABAMA

COMPLIANCE EVALUATION INSPECTION PHOTOGRAPHS

NOVEMBER 14, 2024

**Photos taken by Paula A. Whiting
Camera Type: Olympus Tough
Serial Number: SC7374**



Picture 1 – Temporary Hazardous Waste Storage Area



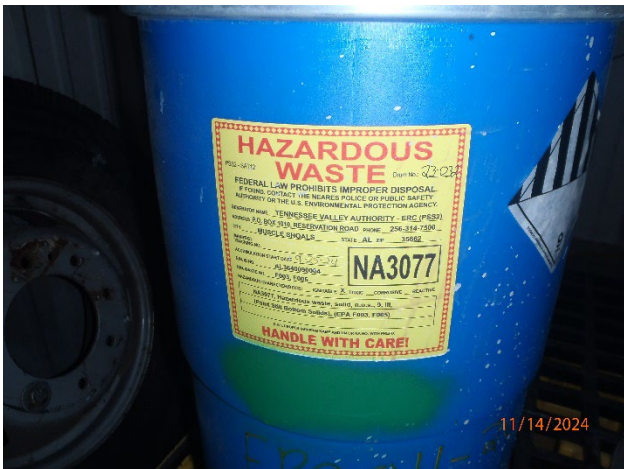
Picture 4 – Paint Shop 2 SAA#7



Picture 2 – Temporary Hazardous Waste Storage Area label



Picture 5 – Paint Shop 2 SAA#7 label



Picture 3 – Temporary Hazardous Waste Storage Area label



Picture 6 – Paint Shop 2 paint filters in use



Picture 8 – Blast Media Booth CLEMCO baghouse



Picture 7 – Paint Shop 2 paint filters in use



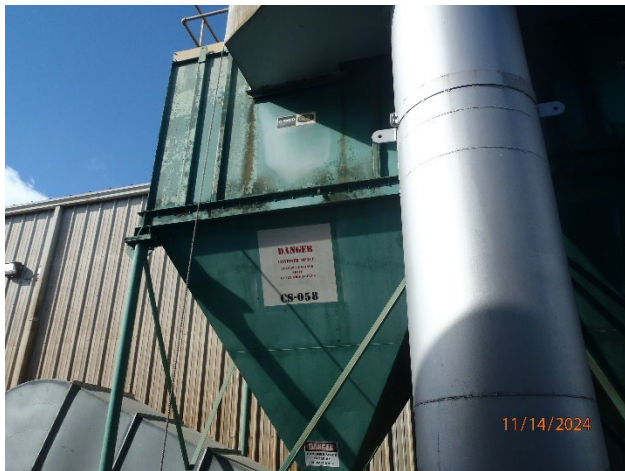
Picture 9 – Blast Media Booth CLEMCO baghouse



Picture 10 – Blast Media Booth CLEMCO baghouse



Picture 13 – Paint Distillation Shed SAA



Picture 11 – Blast Media Booth CLEMCO baghouse



Picture 14 – Paint Distillation Shed



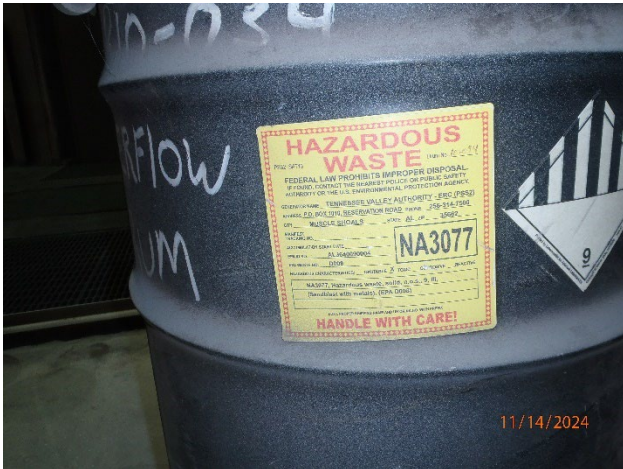
Picture 12 – Blast Media Booth CLEMCO dust collection system



Picture 15 – Paint Cleanup and Solids SAA#4



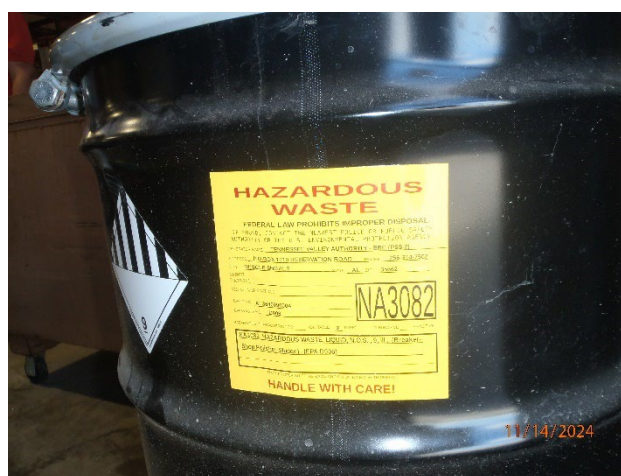
Picture 17 – Blaster Solid Waste SAA



Picture 16 – Paint Cleanup and Solids SAA#4 label



Picture 18 – Blaster Waste Paint Related Material SAA#3



STAPLES

HAZARDOUS WASTE SATELLITE INVENTORY FORM

Location Department: Breaker Shop & M&E Satellite #: 37 Drum # 2A-008

DATE	NAME	WASTE	PROCESS GENERATING WASTE	AMOUNT ADDED
10/5/22	Durdick	Greasy water	Tumbler w/ media	2 Gal
11/1/22	Durdick	Greasy water	Tumbler w/ media	1 Gal
11/14/23	Durdick	Greasy water	Tumbler w/ media	1 Gal
9/13/23	Durdick	Greasy water	Tumbler w/ media	2 Gal
9/13/23	Durdick	Greasy water	Tumbler w/ media	1 Gal
11/29/24	Durdick	Greasy water	Tumbler w/ media	2 Gal
11/7/24	Durdick	Greasy water	Tumbler w/ media	2.5 Gal
9/11/24	Durdick	Greasy water	Tumbler w/ media	1 Gal
10/2/24	Durdick	Greasy water	Tumbler w/ media	2 Gal
10/29/24	Durdick	Greasy water	Tumbler w/ media	2 Gal
/ /				
/ /				
/ /				
/ /				
/ /				

Start Accumulation Date **: _____ ** Date drum is full or process is complete.

11/14/2024



Picture 25 – Breaker Shop Zero Blast Cabinet spilled media



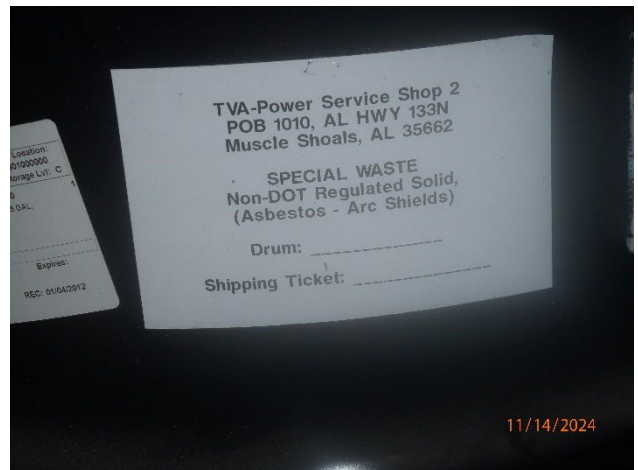
Picture 26 – Breaker Shop Zero Blast Cabinet spilled media



Picture 27 – Breaker Shop Zero Blast Cabinet spilled media



Picture 28 – Breaker Shop Special Waste – Asbestos Arc Shields



Picture 29 – Breaker Shop Special Waste – Asbestos Arc Shields label



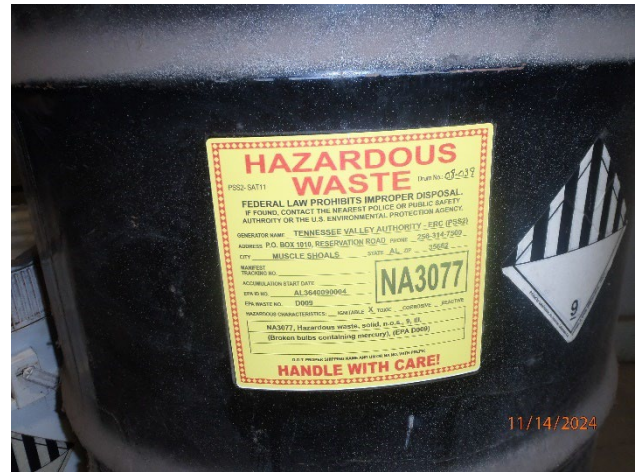
Picture 30 – Breaker Shop Zero Blast Cabinet filters



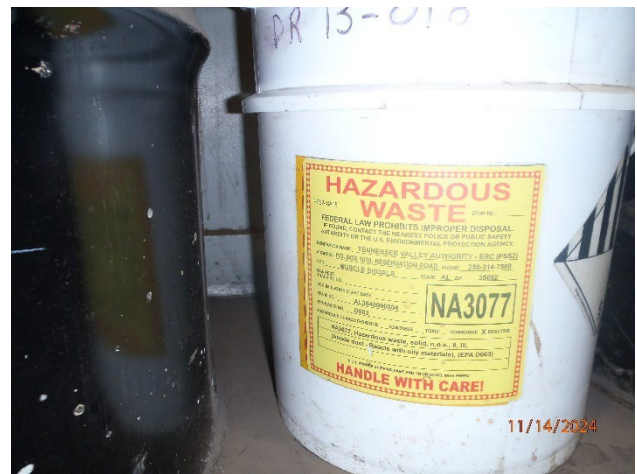
Picture 31 – Breaker Shop Special Waste – Asbestos Arc Shields



Picture 32 – Shop 2 SAA #11



Picture 33 – Shop 2 SAA #11 label



Picture 34 – Shop 2 SAA #11



Picture 35 – Shop 2 SAA #11



Picture 36 – Shop 2 Compressor Room condensate collection box



Picture 39 – Shop 2 Compressor Room condensate collection box



Picture 37 – Shop 2 Compressor Room condensate collection box oily water



Picture 40 – Shop 2 Compressor Room condensate collection box



Picture 38 – Shop 2 Compressor Room condensate collection box oily water



Picture 41 – Shop 2 Compressor Room condensate collection box



Picture 42 – Universal Waste Shed



Picture 45 – Shop 2 Blaster Shop lead acid battery in water



Picture 43 – Universal Waste Shed label



Picture 46 – Shop 2 Blaster Shop lead acid battery in water



Picture 44 – Shop 2 Blaster Shop lead acid battery in water



Picture 47 – Shop 2 Blaster Shop spent media from lead abatement



Picture 48 – Shop 2 Blaster Shop spent media from lead abatement



Picture 49 – Shop 2 Blaster Shop spent media from lead abatement



Picture 50 – Open Top Box – Spent Blast Media



Picture 51 –



Picture 52 –



Picture 53 – Open Top Box – Spent Blast Media



Picture 56 – Open Top Box – Spent Blast Media label



Picture 54 – Open Top Box – Spent Blast Media



Picture 57 – Empty vac boxes



Picture 55 – Open Top Box – Spent Blast Media



Picture 58 – Open Top Box – Spent Blast Media