

RCRA Inspection Report

1) Inspector and Author of Report

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U.S. Environmental Protection Agency, Region 4
Enforcement and Compliance Assurance Division
Chemical Safety and Land Enforcement Branch
RCRA Enforcement Section
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2) Facility Information

Hankook and Company ES America
Corporation (Hankook)
1325 International Blvd.
Clarksville, Tennessee 37040
Montgomery County

EPA ID#: TNR000046052
NAICS #: 33591 - Battery Manufacturing

3) Responsible Officials

Chad Proffitt, EHS Manager
Chad.Proffitt@hankookn.com
931-999-8272

4) Inspection Participants

Chad Proffitt, Hankook
Sam (Hyunwoo) Park, Hankook
Darren Isbell, Hankook
Ronda Inmon, Hankook
Aaron Grubb, Hankook
Don Page, Hankook

Rachel Freeman, TDEC
Terri Carrier, TDEC
Alan Newman, USEPA

5) Date of Inspection

March 6, 2024, 9:15 am – 5:00 pm

6) Applicable Regulations¹

Resource Conservation and Recovery Act (RCRA) Sections 3002 (42 U.S. Code – Annotated U.S.C.A. 6925 and 6927), and 40 Code of Federal Regulation (C.F.R.) Parts 260 - 270, 273, 278, & 279; Tennessee Hazardous Waste Management Act of 1977, Tennessee Code Annotated (Tenn.

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.

Code Ann.) § 68-212-101 *et seq.*, and Chapter 0400-12-01 of the Rules and Regulations of the State of Tennessee (Tenn. Comp. R. & Regs.)

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.01(2)(a) [40 C.F.R. § 262.10], a large quantity generator (LQG) is a generator who generates greater than or equal to 1,000 kilograms (2,200 lbs) of non-acute hazardous waste in a calendar month.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(4)(e)2. [40 C.F.R. § 262.34(a) (2016)], 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 68-212-108 of the THWMA, Tenn. Code Ann. § 68-212-108 [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in Tenn. Comp. R. & Regs. 0400-12-01-.03(4)(e)2.(i)-(v) [40 C.F.R. § 262.34(a)(1)-(4) (2016)] (hereinafter referred to as the "LQG Permit Exemption").

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(4)(e)5.(i) [40 C.F.R. § 262.34(c)(1)], a generator may accumulate as much as 55 gallons of 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 68-212-108 of the THWMA, Tenn. Code Ann. § 68-212-108 [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with Tenn. Comp. R. & Regs. 0400-12-01-.03(4)(e)2. [40 C.F.R. § 262.34(a) (2016)], provided that the generator complies with the satellite accumulation area (SAA) conditions listed in Tenn. Comp. R. & Regs. 0400-12-01-.03(4)(e)5.(i)(I)-(II) [40 C.F.R. § 262.34(c)(1)(i)-(ii)] (hereinafter referred to as the "SAA Permit Exemption").

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.12(1)(i) [40 C.F.R. § 273.9], a small quantity handler of universal waste (SQHUW) is a universal waste handler who accumulates less than 5,000 kilograms total of universal waste (batteries, pesticides, mercury-containing equipment, lamps, or aerosol cans, calculated collectively) at any time.

7) Purpose of Inspection

The purpose of this inspection was to conduct an unannounced compliance evaluation inspection to determine Hankook's compliance with the applicable requirements of RCRA and the corresponding Tennessee regulations. This was an EPA lead inspection.

8) Facility Description

Hankook is located at 1325 International Blvd., Clarksville, Tennessee 37040. Hankook specializes in the production of standard Sealed Maintenance Free (SMF) batteries and Absorbent Glass Mat (AGM) batteries, which are high-performance batteries for start-stop vehicles. Hankook currently has approximately 280 employees and operates 24 hours a day seven days a week. The building is approximately 200,000 square feet under roof.

Hankook first notified as a Large Quantity Generator (LQG) of hazardous waste in February 2020. Based on the quantities of waste observed and verbally described by Hankook during the

inspection, the facility was inspected as a LQG of hazardous waste. Most recently, Hankook notified on March 3, 2023, as an LQG. Hankook is also a small quantity handler of universal waste and a used oil generator.

Most of the waste streams reported in the annual report submitted to TDEC have a high lead (D008) content and are sent for offsite recycling under a recycling exclusion:

Waste Stream Number	Description	EPA Waste Number	Maximum Rate per Month (Pounds)	Managed as Hazardous Waste or Scrap Metal
1	Scrap material from the manufacturing process	D008	42,000	Scrap Metal
2	Dross from the manufacturing process	D008	42,000	Scrap Metal
3	Scrap metal such as lead grids/cells with or without paste and envelopes	D008	42,000	Scrap Metal
4	Lead oxide dust from bag houses and residue from the manufacturing process	D008	5,834	Scrap Metal
5	Spill cleanup of chemicals from the manufacturing process	D002/D008	4,170	Scrap Metal
6	Filter cake from the wastewater treatment process	D008	8,333	Scrap Metal
7	Discarded contaminated plastic covers/cases from the manufacturing process	D008	2,083	Hazardous Waste
8	Waste, spent, off spec or contaminated sulfuric acid	D002	2,083	Hazardous Waste
9	contaminated personal protective equipment	D008	15,000	Hazardous Waste

10	Solids from cleaning of the facility and equipment	D008	1,000	Hazardous Waste
11	Liquids from cooling hot lead	D008	35,000	Hazardous Waste

9) Previous Inspection History

On February 5, 2021, TDEC conducted the most recent RCRA CEI at the subject facility and found three apparent violations of RCRA's requirements for failure to label containers accumulating hazardous waste in SAAs with the words "Hazardous Waste", failure to close a container accumulating hazardous waste in a SAA, and failure to close a container storing hazardous waste in a Central Accumulation Area (CAA). As a result, TDEC issued a Notice of Violation to Hankook on February 19, 2024.

10) Opening Conference

On March 6, 2024, EPA inspector Alan Newman, accompanied by TDEC inspectors Terri Carrier and Rachel Freeman, arrived at Hankook at approximately 9:15 am. Chad Proffitt, EHS Manager, immediately received the inspectors. Chad Proffitt and Sam (Hyunwoo) Park and the inspectors were joined by Darren Isbell, Don Page, and Aaron Grubb, for the opening conference. The inspectors introduced themselves, showed their credentials to Chad Proffitt, 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 EPA. The company did not assert a business confidentiality claim.

Chad Proffitt and Darren Isbell 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 Chad Proffitt and Darren Isbell led the inspectors on a tour of the Facility operations. Hankook provided N95 masks for the inspection team.

11) Inspection Observations

The inspection team was informed that uniforms are provided for employees and laundered by Hankook. Although, facility representatives wore full face respirators for a portion of the inspection; the inspection team utilized N95 masks during the inspection in high lead areas and ear protection where directed.

The inspection team toured the following areas.

- Raw Material Warehouse
- Oxide department,
- Break Room #1
- Assembly Area
- Wastewater Treatment Area
- Outside South of the building area
- Formation/filling Area
- Acid Farm Area
- Finishing Area
- Packing Area
- Chemistry Laboratory
- Finished product warehouse and
- Municipal compactor

- Raw Material Warehouse

The inspection team noted multiple items in the raw material warehouse, including solid lead product, plastic battery cases, solid scrap lead waste, scrap waste batteries, and various aerosol can products (primarily paint). No hazardous waste was observed in this area during the inspection. Facility personnel stated that spent aerosol cans are managed along with plant trash. Hankook had not made a hazardous waste determination for the spent aerosol cans.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in Tenn. Comp. R. & Regs. 0400-12-01-.02(1)(b) [40 C.F.R. § 261.2], must 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 articulated in Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11].

- Oxide Department

Hankook produces powdered lead oxide by heating lead product in a melting pot. The melted lead is spread out and allowed to cool. The cooled lead is crushed in a ball mill system that pulverizes the lead in the presence of oxygen resulting in powdered lead oxide. The lead oxide powder is mixed with water and made into a paste for making battery plates. The waste generated in this area includes wastewater, lead dross, and waste PPE. The wastewater is pumped to the onsite wastewater treatment plant to be treated. The dross is accumulated in a 55-gallon container and managed as scrap lead for reclamation. Hazardous waste PPE (waste stream #9 – D008) is accumulated in gaylord boxes which, when full, are stored in a CAA in the northeast corner of the Oxide Department.

Hankook manages two hazardous waste CAAs in the Oxide Department. The inspectors observed 14 closed, gaylord cardboard boxes of waste PPE (Photographs 1-7) in the first CAA, which is in the northeast corner of the Oxide Department. One box was not labeled with the words “Hazardous Waste” and none of the boxes were labeled with an indication of the hazards of the contents or with the accumulation start date. Facility personnel stated that

waste PPE containers are marked with an inventory date when they are placed into this CAA, rather than when the period of accumulation begins.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(v)(I) [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.

Hankook manages a second hazardous waste CAA to accumulate hazardous waste PPE (waste stream #9 – D008) near the melting pot in the Oxide Department. The inspectors observed an open 250-gallon Gaylord container (Photograph 8) in this CAA. This container was labeled as hazardous waste but was not labeled with an indication of the hazard of the contents or with the accumulation start date. According to the February 19, 2021, inspection report, the TDEC inspector observed an open container in this CAA during the RCRA CEI conducted on February 5, 2021.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(v)(I)II.-III. [40 C.F.R. § 262.17(a)(5)(i)(B-C)], which is a condition of the LQG Permit Exemption, a generator must mark or label its containers with the following: 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 Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(i)(IV)I. [40 C.F.R. § 262.17(a)(1)(iv)(A)], 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.

- Break Room #1

Hankook was managing a SAA for accumulating hazardous waste PPE (waste stream #9 – D008) outside of Break Room #1. The inspectors observed an open, plastic-lined 55-gallon container (Photographs 9-10) in this CAA. This container was not labeled with the words “Hazardous Waste” or with an indication of the hazards of the contents.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(iv) [40 C.F.R. § 262.15(a)(4)], which is a condition of the SAA Permit Exemption, a container holding hazardous waste must be closed at all times during accumulation, except when adding, removing, or consolidating waste or when temporary venting of the container is necessary.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(v) [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 the following (i) the words “Hazardous Waste” and (ii) with an indication of the hazards of the contents.

- Assembly Area

In the Assembly Area, Hankook groups negative and positive plates together to begin forming the battery. The inspection team noted two 250-gallon gaylord boxes in a central accumulation

area accumulating hazardous waste PPE (waste stream #9 – D008), one 55-gallon of spent filters, and one 55-gallon container affixed with a vacuum to accumulate dust (Photographs 11-12). Facility personnel stated that the dust vacuumed into the accumulation container and the spent filters are managed as scrap metal for reclamation to recover lead. Spent Filters and vacuumed dust do not appear to be included in the definition of scrap metal. Please provide a hazardous waste determination for these two waste streams. One of the gaylord boxes was open and one was closed; both were labeled as hazardous waste, but neither were labeled with the indication of the hazard or accumulation start dates.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(i)(IV)I. [40 C.F.R. § 262.17(a)(1)(iv)(A)], 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.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(v)(I)II.-III. [40 C.F.R. § 262.17(a)(5)(i)(B-C)], which is a condition of the LQG Permit Exemption, a generator must mark or label its containers with the following: 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 Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in Tenn. Comp. R. & Regs. 0400-12-01-.02(1)(b) [40 C.F.R. § 261.2], must 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 articulated in Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11].

- Wastewater Treatment (WWT) Area

Hankook accumulates wastewater pumped from various parts of the production areas in an 11,000-gallon equalization tank. Operators adjust the pH, add a flocculent, and further treat the wastewater utilizing a gravity settling clarifier, a sludge tank, and a filter press (Photograph 16). Wastewaters from the clarifier are discharged to the local POTW under a pretreatment permit. Filter press wastewaters are pumped back into the equalization tank and are reprocessed. The filter press filter cake is shipped as scrap metal for reclamation (Photograph 17). Filter press filter cake does not appear to be included in the definition of scrap metal. Please provide a hazardous waste determination for this waste stream.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in Tenn. Comp. R. & Regs. 0400-12-01-.02(1)(b) [40 C.F.R. § 261.2], must 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 articulated in Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11].

Hankook accumulates hazardous waste PPE (waste stream #9 – D008) in a SAA at the WWT Area. The inspection team noted two 55-gallon metal containers, one black and one white, in this SAA (Photographs 13-15). The white container, which was open and not yet full, was labeled with the words “Hazardous Waste”. The black container, which was closed and full, was

not labeled with the words “Hazardous Waste”. Neither of these two containers were marked with an indication of the hazards of the contents or with the date that hazardous waste in excess of 55-gallons began to accumulate in this SAA. On the pallet beside these two accumulation containers, the inspection team observed PPE that had either fallen out of one of the containers or had not yet made it into one of the containers. Hankook should ensure that hazardous waste is placed inside the accumulation container rather than on the area surrounding the container in order to minimize the possibility of any unplanned release of hazardous waste.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(iv) [40 C.F.R. § 262.15(a)(4)], which is a condition of the SAA Permit Exemption, a container holding hazardous waste must be closed at all times during accumulation, except when adding, removing, or consolidating waste or when temporary venting of the container is necessary.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(v) [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 the following (i) the words “Hazardous Waste” and (ii) with an indication of the hazards of the contents.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(vi) [40 C.F.R. § 262.15(a)(6)], which is a condition of the SAA Permit Exemption, a generator who accumulates either acute hazardous waste listed in subparagraph (4)(b) or part (4)(d)5 of Rule 0400-12-01-.02 or non-acute hazardous waste in excess of the amounts listed in this part at or near any point of generation must do the following: (III) during the three-consecutive-calendar-day period the generator must continue to comply with subparts (i) through (v) of this part. The generator must mark or label the container(s) holding the excess accumulation of hazardous waste with the date the excess amount began accumulating.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(viii) [40 C.F.R. § 262.15(a)(8)], which incorporates Tenn. Comp. R. & Regs. 0400-12-01-.03(12)(b) [40 C.F.R. § 262.251], and is a condition of the LQG Permit Exemption, a generator is required to maintain and operate its facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

Hankook manages a hazardous waste CAA in an area that is identified with a sign that read “Used Oil Storage” one wall of the WWT area (Photographs 18-19). The inspection team observed three 275-gallon totes of coolant/oil/water (waste stream #11 – D008) in this CAA. One of these totes was open. None of these totes were labeled with the words “Hazardous Waste,” with an indication of the hazards of the contents, or with an accumulation start date.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(i)(IV)I. [40 C.F.R. § 262.17(a)(1)(iv)(A)], 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.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(v)(I) [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.

- Outside on the south side of the building

Hankook manages a hazardous waste CAA in an area that is located through the rollup door in the WWT area. The inspection team noted several containers and some process equipment on top of and next to a concrete pad (Photographs 20-22). The inspection team observed a pallet which held two lead paste gates that were covered with caked-on lead paste. Some of the lead paste had fallen off the gates and onto the ground underneath.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(vi) [40 C.F.R. § 262.17(a)(6)], which incorporates Tenn. Comp. R. & Regs. 0400-12-01-.03(12)(b) [40 C.F.R. § 262.251], and is a condition of the LQG Permit Exemption, a generator is required to maintain and operate its facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

The inspection team also observed eight 55-gallon containers, which were not labeled, that were storing unknown materials. Hankook personnel had not made a hazardous waste determination on the contents of these containers. The inspection team also observed two closed 55-gallon containers of oil/water (waste stream #11 – D008). These two containers were not labeled with the words “Hazardous Waste,” with an indication of the hazards, or with accumulation start dates.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in Tenn. Comp. R. & Regs. 0400-12-01-.02(1)(b) [40 C.F.R. § 261.2], must 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 articulated in Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11].

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(v)(I) [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.

- Formation/filling Area

Batteries are filled with acid and receive a charge in the Formation/Filling Area as part of the quality assurance quality control measures. The charging batteries are kept cool by submerging them in a water bath. No hazardous waste was observed being generated or stored in this area.

- Acid Farm Area

Sulfuric acid is stored outside in large above ground storage tanks within concrete secondary containment. The tanks were well marked and in good condition. No hazardous waste was observed in this area.

- Finishing Area

Hankook manages a CAA for accumulating hazardous waste PPE (waste stream #9 – D008) in the Finishing Area. The inspection team observed one open 55-gallon fiber container in this CAA (Photographs 23-24). This container was labeled as hazardous waste, but it was not labeled with an indication of the hazard of the contents. This container was marked with an accumulation start date of “8/30/23,” which indicates that the waste had been stored in this area for 189 days at the time of the CEI.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(i)(IV)I. [40 C.F.R. § 262.17(a)(1)(iv)(A)], 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.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(v)(I)II. [40 C.F.R. § 262.17(a)(5)(i)(B)], which is a condition of the LQG Permit Exemption, a generator must mark or label its containers with an indication of the hazards of the contents.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.[: 40 C.F.R. § 262.17(a)], which is a condition of the LQG Permit Exemption, a large quantity generator may accumulate hazardous waste on site without a permit or interim status, and without complying with the requirements of Rules 0400-12-01-.05 through 0400-12-01-.07, and 0400-12-01-.09, including the notification requirements, provided that all of the following conditions for exemption are met: a large quantity generator accumulates hazardous waste on site for no more than 90 days.

- Packing Area

Hankook was managing one SAA in the Packing Area. The inspection team observed one 55-gallon container accumulating hazardous waste PPE (waste stream #9 – D008) in this SAA. The container was open and it was labeled as “Used PPE only” (Photograph 25). This container was not labeled with the words “Hazardous Waste” or with the indication of the hazard of the contents.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(iv) [40 C.F.R. § 262.15(a)(4)], which is a condition of the SAA Permit Exemption, a container holding hazardous waste must be closed at all times during accumulation, except when adding, removing, or consolidating waste or when temporary venting of the container is necessary.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(v) [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 the following (i)the words “Hazardous Waste” and (ii) with an indication of the hazards of the contents.

- Chemistry Laboratory

The inspection team toured the Chemistry Laboratory. Facility representatives stated that testing in this area included particle size analyzer (PSA) and an inductively coupled plasma instrument. The inspection team observed an empty collection container attached to the PSA. Hankook was managing one SAA for accumulating hazardous waste PPE (waste stream #9 – D008) generated in the Chemistry Laboratory. The inspection team observed one 2-gallon metal step-can on the floor in this SAA (Photograph 26). This step-can was closed and labeled “P.P.E.” This container was not labeled with the words “Hazardous Waste” or with an indication of the hazards of the contents. According to Mr. Proffitt, the sink used in this area is drains to the WWT area for treatment.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(v) [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 the following (i)the words “Hazardous Waste” and (ii) with an indication of the hazards of the contents.

- Finished Product Warehouse

Hankook was accumulating hazardous waste PPE (waste stream #9 – D008) in a CAA at the Finished Product Warehouse. The inspection team observed two open 55-gallon containers in this CAA. These containers were not labeled with the words “Hazardous Waste,” the indication of the hazard, or the accumulation start date.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(i)(IV)I. [40 C.F.R. § 262.17(a)(1)(iv)(A)], 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.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(v)(I) [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.

- Municipal Compactor

The inspection team noted that the municipal trash compactor showed no signs of any hazardous waste on the day of the inspection.

Throughout the facility, the inspection team noted safety equipment including a ceiling sprinkler system, fire extinguishers (inspected monthly and serviced annually), absorbents, spill kit equipment, and emergency eye washes and shower stations.

12) Records Review

The inspection team reviewed records including manifests for calendar years 2021-2024, LDR forms, weekly and monthly inspections, training records, job titles and descriptions, the contingency plan and quick reference guide, and the annual reports for calendar years 2021-2023.

The inspection team noted that hazardous waste training records indicate that the most recent hazardous waste training for two new employees was completed within the last year. However, the most recent plant-wide hazardous waste training occurred on April 27, 2022. Furthermore, the job titles and job descriptions that were provided for personnel with hazardous waste management responsibilities did not correlate with the names of current employees.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(vii)(III) [40 C.F.R. § 262.17(a)(7)(iii)], which is a condition of the LQG Permit Exemption, the large quantity generator personnel must take part in an annual review of the initial training required in item (I) of this subpart.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(vii)(IV)I. and II.[40 C.F.R. § 262.17(a)(7)(iv)(A-B)], which is a condition of the LQG Permit Exemption, the large quantity generator 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 and a written job description for each position listed under subitem I of this item. 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.

The inspection team noted that Hankook had not documented annual reports for either 2022 or 2023. In addition, the 2021 annual report was incorrect due to failure to mark box 1f for toxicity and corrosivity for waste stream #5.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(5)(b)1. [40 C.F.R. § 262.41], a generator who is a large or small quantity generator for at least one month of the calendar year who ships any hazardous waste off-site to a treatment, storage, or disposal facility within the United States must complete and submit an annual report to the Commissioner by March 1 for the preceding calendar year. Such report must be submitted on forms provided by the Commissioner, and the form must be completed according to the instructions accompanying it.

The list of emergency coordinators included in the current contingency the plan identified personnel that no longer work at the Hankook Facility and was therefore out of date. Additionally, Hankook was unable to provide any documentation that the quick reference guide had been submitted to local emergency responders.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(vi) [40 C.F.R. § 262.17(a)(6)], which incorporates Tenn. Comp. R. & Regs. 0400-12-01-.03(12)(k)4. [40 C.F.R. § 262.263(d)],

which is a condition of the LQG Permit Exemption, a large quantity generator must review their contingency plan and immediately amend it whenever: the list of emergency coordinators changes.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(vi) [40 C.F.R. § 262.17(a)(6)], which incorporates Tenn. Comp. R. & Regs. 0400-12-01-.03(12)(j)2 [40 C.F.R. § 262.262(b)], which is a condition of the LQG Permit Exemption, a large quantity generator that first becomes subject to these provisions after the effective date of these rules, or a large quantity generator that is otherwise amending its contingency plan, must at that time submit a quick reference guide of the contingency plan to the local emergency responders identified in part 1 of this subparagraph or, as appropriate, the Local Emergency Planning Committee.

The inspection team noted that no records of weekly inspection of the CAAs were available for 2021, 2023, or 2024 and records of only six weekly inspections were available for 2022.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(i)(V) [40 C.F.R. § 262.17(a)(1)(v)], which is a condition of the LQG Permit Exemption, a generator is required to, at least weekly, inspect central accumulation areas looking for leaking containers and for deterioration of containers caused by corrosion or other factors. The large quantity generator must record inspections required by subitem I of this item in an inspection log or summary. The large quantity generator 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.

The inspection team requested a copy of the hazardous waste reduction plan. There were no hazardous waste reduction plan annual progress reports for the last 36 months.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(6)(c)1., all generators shall annually review their waste reduction plan and complete a hazardous waste reduction progress report which shall: (i) Analyze and quantify progress made, if any, in hazardous waste reduction, relative to each performance goal established under subparagraph (b) of this paragraph. (ii) Set forth amendments, if needed, to the hazardous waste reduction plan and explain the need for the amendments.

13) Closing Conference

The inspectors conducted the exit meeting at 4:00 pm. During this meeting, the inspectors stated their preliminary conclusions of the inspection. Between March 14, 2024 and March 20, 2024, Chad Proffitt provided documentation regarding job descriptions for three job titles and information regarding communication devices used by employees.

14) Summary of Observations

- a) The following wastes need clarification regarding their hazardous waste determinations:
- Raw Material Warehouse – Aerosol Cans;
 - Assembly Area for - Spent Filters and vacuumed dust do not appear to be included in the definition of scrap metal;

- WWT - Filter press filter cake does not appear to be included in the definition of scrap metal; and
- Outside on the south side of the building – eight unknown 55-gallon containers

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in Tenn. Comp. R. & Regs. 0400-12-01-.02(1)(b) [40 C.F.R. § 261.2], must 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 articulated in Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(b) [40 C.F.R. § 262.11].

b) The inspection team observed open SAA containers in the following areas:

- Break Room #1
- WWT
- Packing Area

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(iv) [40 C.F.R. § 262.15(a)(4)], which is a condition of the SAA Permit Exemption, a container holding hazardous waste must be closed at all times during accumulation, except when adding, removing, or consolidating waste or when temporary venting of the container is necessary.

c) Failure to labeled SAA containers in the following areas:

- Break Room #1
- WWT
- Packing Area
- Chemistry Laboratory

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(v) [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 the following (i)the words “Hazardous Waste” and (ii) with an indication of the hazards of the contents.

d) Hankook failed to date excess waste in SAA containers in WWT.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(vi) [40 C.F.R. § 262.15(a)(6)], which is a condition of the SAA Permit Exemption, a generator who accumulates either acute hazardous waste listed in subparagraph (4)(b) or part (4)(d)5 of Rule 0400-12-01-.02 or non-acute hazardous waste in excess of the amounts listed in this part at or near any point of generation must do the following: (III) during the three-consecutive-calendar-day period the generator must continue to comply with subparts (i) through (v) of this part. The generator must mark or label the container(s) holding the excess accumulation of hazardous waste with the date the excess amount began accumulating.

e) Hankook failed to ensure waste is placed into a container to minimize the possibility of a release near SAA containers in WWT.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(f)1.(viii) [40 C.F.R. § 262.15(a)(8)], which incorporates Tenn. Comp. R. & Regs. 0400-12-01-.03(12)(b) [40 C.F.R. § 262.251], and is

a condition of the LQG Permit Exemption, a generator is required to maintain and operate its facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

f) Hankook was storing waste in a CAA for 189 days without a permit.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.[: 40 C.F.R. § 262.17(a)], which is a condition of the LQG Permit Exemption, a large quantity generator may accumulate hazardous waste on site without a permit or interim status, and without complying with the requirements of Rules 0400-12-01-.05 through 0400-12-01-.07, and 0400-12-01-.09, including the notification requirements, provided that all of the following conditions for exemption are met: a large quantity generator accumulates hazardous waste on site for no more than 90 days.

g) The inspection team noted open CAA containers in the following areas:

- Oxide Department
- Assembly Area
- WWT
- Finishing Area
- Finished Product Warehouse

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(i)(IV)I. [40 C.F.R. § 262.17(a)(1)(iv)(A)], 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.

h) The inspection team noted that no records of weekly inspection of the CAAs were available for 2021, 2023, or 2024 and records of only six weekly inspections were available for 2022.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(i)(V) [40 C.F.R. § 262.17(a)(1)(v)], which is a condition of the LQG Permit Exemption, a generator is required to, at least weekly, inspect central accumulation areas looking for leaking containers and for deterioration of containers caused by corrosion or other factors. The large quantity generator must record inspections required by subitem I of this item in an inspection log or summary. The large quantity generator 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.

i) The inspection team noted unlabeled CAA containers in the following areas:

- Oxide Department
- Assembly Area
- WWT
- Outside on the south side of the building

- Finishing Area
- Finished Product Warehouse

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(v)(I) [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.

- j) Hankook was unable to provide any documentation that the quick reference guide had been submitted to local emergency responders.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(vi) [40 C.F.R. § 262.17(a)(6)], which incorporates Tenn. Comp. R. & Regs. 0400-12-01-.03(12)(j)2 [40 C.F.R. § 262.262(b)], which is a condition of the LQG Permit Exemption, a large quantity generator that first becomes subject to these provisions after the effective date of these rules, or a large quantity generator that is otherwise amending its contingency plan, must at that time submit a quick reference guide of the contingency plan to the local emergency responders identified in part 1 of this subparagraph or, as appropriate, the Local Emergency Planning Committee.

- k) The list of emergency coordinators included in the current contingency the plan identified personnel that no longer work at the Hankook Facility and was therefore out of date.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(vi) [40 C.F.R. § 262.17(a)(6)], which incorporates Tenn. Comp. R. & Regs. 0400-12-01-.03(12)(k)4. [40 C.F.R. § 262.263(d)], which is a condition of the LQG Permit Exemption, a large quantity generator must review their contingency plan and immediately amend it whenever: the list of emergency coordinators changes.

- l) Hankook failed to conduct annual review of RCRA Training for most of workers at facility.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(vii)(III) [40 C.F.R. § 262.17(a)(7)(iii)], which is a condition of the LQG Permit Exemption, the large quantity generator personnel must take part in an annual review of the initial training required in item (I) of this subpart.

- m) Job titles and job descriptions that were provided for personnel with hazardous waste management responsibilities did not correlate with the names of current employees.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(vii)(IV)I. and II.: [40 C.F.R. § 262.17(a)(7)(iv)(A-B)], which is a condition of the LQG Permit Exemption, the large quantity generator 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 and a written job description for each position listed under subitem I of this item. 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.

- n) The inspection team noted that Hankook had not documented annual reports for either 2022 or 2023. In addition, the 2021 annual report was incorrect due to failure to mark box 1f for toxicity and corrosivity for waste stream #5.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(5)(b)1. [40 C.F.R. § 262.41], a generator who is a large or small quantity generator for at least one month of the calendar year who ships any hazardous waste off-site to a treatment, storage, or disposal facility within the United States must complete and submit an annual report to the Commissioner by March 1 for the preceding calendar year. Such report must be submitted on forms provided by the Commissioner, and the form must be completed according to the instructions accompanying it.

- o) There were no hazardous waste reduction plan annual progress reports for the last 36 months.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(6)(c)1., all generators shall annually review their waste reduction plan and complete a hazardous waste reduction progress report which shall: (i) Analyze and quantify progress made, if any, in hazardous waste reduction, relative to each performance goal established under subparagraph (b) of this paragraph. (ii) Set forth amendments, if needed, to the hazardous waste reduction plan and explain the need for the amendments.

- p) The inspection team observed a pallet which held two lead paste gates that were covered with caked-on lead paste. Some of the lead paste had fallen off the gates and onto the ground underneath.

Pursuant to Tenn. Comp. R. & Regs. 0400-12-01-.03(1)(h)1.(vi) [40 C.F.R. § 262.17(a)(6)], which incorporates Tenn. Comp. R. & Regs. 0400-12-01-.03(12)(b) [40 C.F.R. § 262.251], and is a condition of the LQG Permit Exemption, a generator is required to maintain and operate its facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

15) List of Attachments

Attachment 1 – Photo Log with 28 photographs.

16) Signed and Concurrence

ALAN NEWMAN Digitally signed by ALAN
NEWMAN
Date: 2024.06.11 17:50:39 -04'00'

Alan Newman, Acting Chief
RCRA Enforcement Section

Appendix 1

Photograph Log:

Photos taken March 6, 2024
Photos taken by Alan Newman



Photograph 1: Oxide CAA.



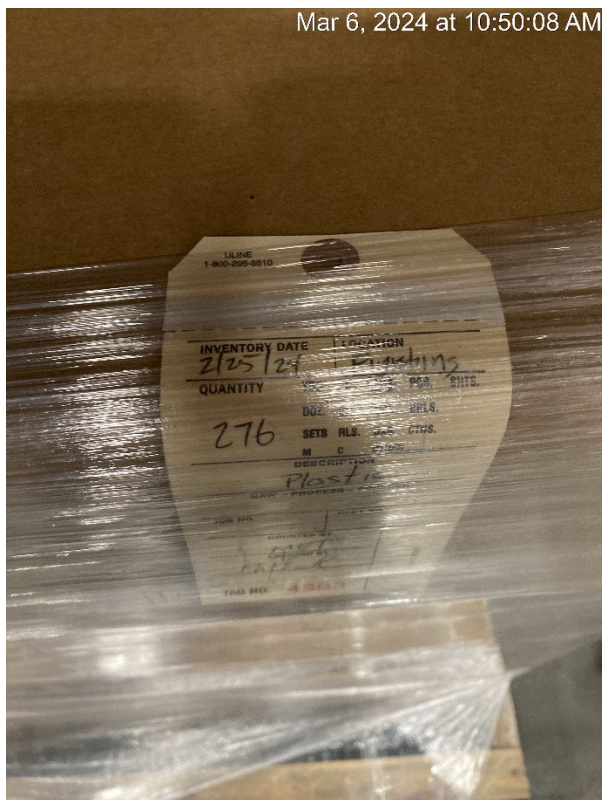
Photograph 2: Oxide CAA.



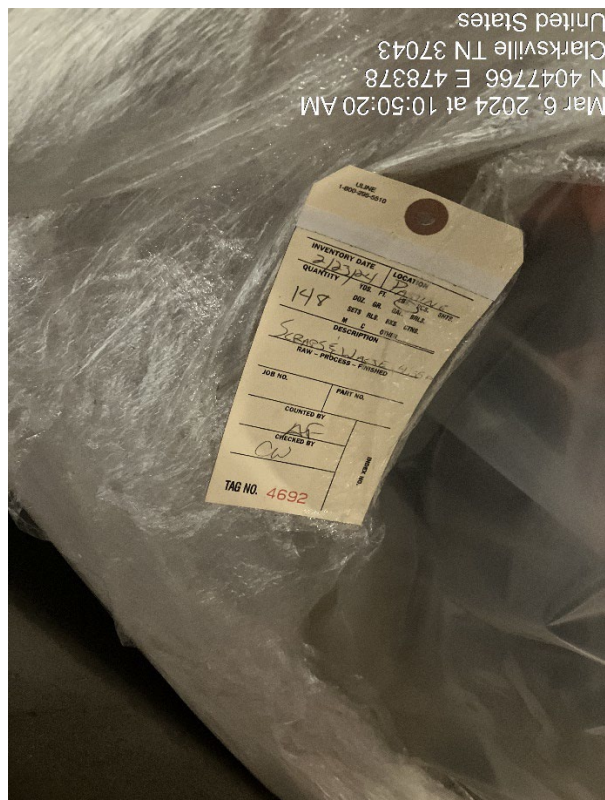
Photograph 3: Oxide CAA.



Photograph 4: Oxide CAA.



Photograph 5: Oxide CAA.



Photograph 7: Oxide CAA.



Photograph 6: Oxide CAA.



Photograph 8: Oxide CAA.



Photograph 9: Break Room #1 SAA.



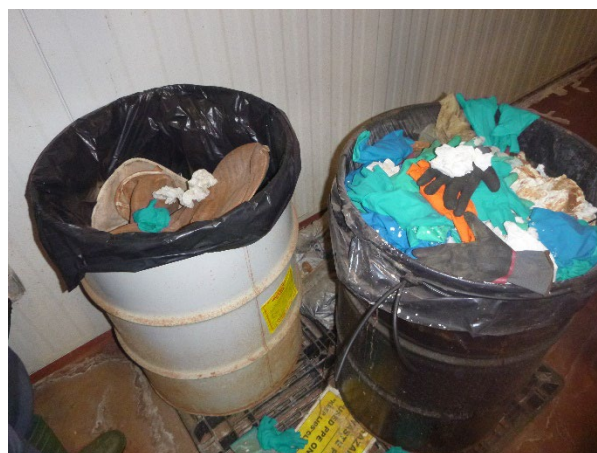
Photograph 10: Break Room #1 SAA.



Photograph 11: Spent filters and vacuums at Assembly Area.



Photograph 12: Assembly Area CAA.



Photograph 13: WWT SAA.



Photograph 14: WWT SAA.



Photograph 16: WWT Filter Press



Photograph 15: WWT SAA



Photograph 17: WWT Filter cake containers



Photograph 18: Coolant/Oil/Water Totes CAA.



Photograph 19: Coolant/Oil/Water Totes CAA.



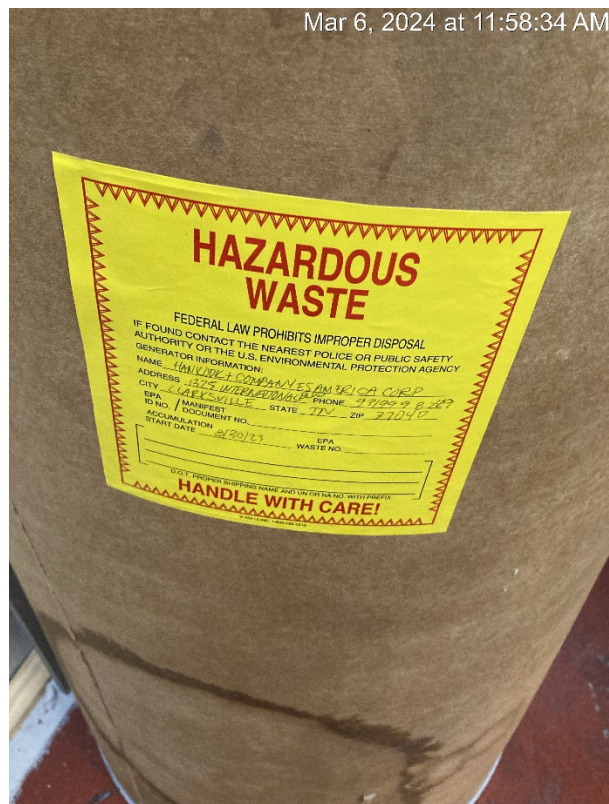
Photograph 20: South side of the building.



Photograph 21: South side of the building.



Photograph 22: South side of the building.



Photograph 24: Finishing Area CAA.



Photograph 23: Finishing Area CAA.



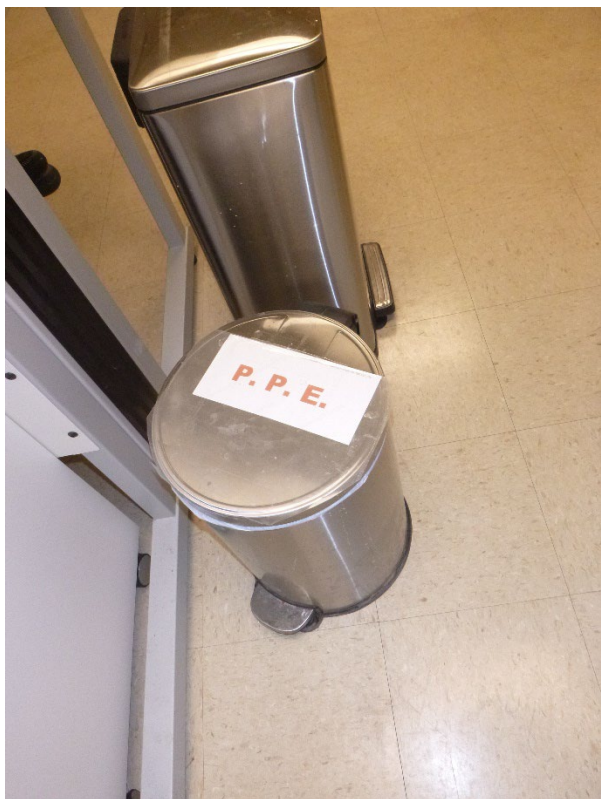
Photograph 25: Packing Area CAA.



Photograph 26: Chemistry Laboratory.



Photograph 28: Finished Goods CAA.



Photograph 27: Chemistry Laboratory SAA.