

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
61 Forsyth Street, S.W.
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2) Facility Information

Hallstar Greensboro, LLC
520 Broome Rd.
South Greensboro, N.C. 27406

EPA ID#: NCD061795696
NAICS #: 325199 – All other Basic Organic
Chemical Manufacturing
325998 – All Other Miscellaneous Chemical
Product and Preparation Manufacturing

3) Responsible Officials

Terry Hurst
Plant Manager
thurst@hallstar.com

4) Inspection Participants

Terry Hurst, Hallstar Greensboro, LLC	Daniel Girdner, NCDEQ
Susan Gay, Hallstar Greensboro, LLC	Kayla Acosta, USEPA

5) Date of Inspection

October 19, 2023, at 8:50 AM.

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; [State Code (see below)]; and The North Carolina Solid Waste Management Law, N.C.G.S. § 130A-17 to -28 and 130A-290 to - 310.22, and North Carolina Hazardous Waste Management Rules, 15A NCAC 13A .0101 to .0119

Pursuant to 15A NCAC 13A .0102(b) [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 15A NCAC 13A .0107(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 any point of generation where wastes initially accumulate, which is under the control of the operator of the

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.

process generating the waste, without a permit or without having interim status, as required by Sections 130A-294(c) and (g) of the NCSWML, N.C.G.S. § 130A-294(c) to (g) [Section 3005 of RCRA, 42 U.S.C. § 6925], and without complying with 15A NCAC 13A .0107(a) [40 C.F.R. § 262.16(b) or § 262.17(a)], except as required in 15A NCAC 13A .0107(a) [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in 15A NCAC 13A .0107(a) [40 C.F.R. § 262.15(a)] (hereinafter referred to as the “SAA Permit Exemption”).

Pursuant to 15A NCAC 13A .0107(a) [40 C.F.R. § 262.17], an LQG may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by Sections 130A-294(c) and (g) of the NCSWML, N.C.G.S. § 130A-294(c) to (g) [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in 15A NCAC 13A .0107(a) [40 C.F.R. § 262.17] (hereinafter referred to as the “LQG Permit Exemption”).

Pursuant to 15A NCAC 13A .0119(a) [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, 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 Hallstar Greensboro, LLC’s (known hereinafter as “Hallstar” or “facility”) compliance with the applicable requirements of RCRA and the corresponding North Carolina regulations. This was an EPA led inspection.

8) Facility Description

The Hallstar Company was founded in Chicago, Illinois in 1986 and specializes in research and development, focused on ester chemistry innovation for industrial applications. The Hallstar Company has facilities in nearly every continent, manufacturing specialized industrial esters and plasticizers. According to their website, The Hallstar Company’s main markets include the industrial and beauty industries.

The facility itself has been a chemical manufacturing plant since 1978 operating first as Unitex Chemical Corporation and then purchased by LANXESS Corporation on April 2, 2016. The Hallstar Company bought the chemical manufacturing plant and began operating under the name Hallstar on October 2, 2022. The facility operates 24 hours a day, seven days a week, and has four staggered shifts. The property is approximately 19 acres, with 6 acres consisting of plant operations. The facility has perimeter fencing around the property and a security gate entrance for controlled access in and out of the facility. There are approximately 39 employees working at the facility.

Hallstar is a chemical manufacturer, specializing in the manufacturing of plasticizers and flame retardants. Product examples include making plasticizers that make resin more flexible or rigid.

The facility operates seven (7) chemical reactors. Raw material liquids are shipped in bulk to the facility by tanker trucks and stored in aboveground storage tanks (ASTs). The raw materials are then pumped through a detachable hose connection into the chemical reactors. Most of the finished products are not classified as D.O.T. hazardous materials and are ready to be added as additives into manufacturing plastics. Hazardous waste generated at the facility is mostly from ester manufacturing which produces an alcohol byproduct (isobutyl alcohol and xylene). The isobutyl alcohol and xylene are transferred by detachable hose connection and blown into a 6,000-gallon hazardous waste AST (Tank B-9). The facility also has a quality control (QC) laboratory to test products and make sure they meet customer satisfaction.

Hallstar is registered as an LQG of hazardous waste. The facility first notified of its regulated waste activities on February 14, 1990, as an LQG of hazardous waste. The facility most recently notified on February 22, 2022. Waste streams and associated waste codes include waste isobutyl alcohol and xylene (EPA waste codes D001, F003, and F005), waste aerosols (EPA waste code D001), and reactive waste (EPA waste code D003). The facility also generates universal waste fluorescent lamps and universal waste batteries. Used oil is also generated at the facility. Non-hazardous wastewater is collected in Tank T-6 and is discharged into the city of Greensboro sanitary sewer system under wastewater discharge permit # P025. The facility also has a National Pollutant Discharge Elimination System (NPDES) Permit (Permit No. NCS000107) for Stormwater.

9) Previous Inspection History

NCDEQ has conducted one RCRA CEI at the subject facility between 2018 and 2023 when the facility was operating under LANXESS Corporation and found no violations during that inspection.

10) Opening Conference

On October 19, 2023, EPA inspector Kayla Acosta, accompanied by NCDEQ inspector Daniel Girdner, arrived at Hallstar at approximately 8:50 AM. Terry Hurst, Plant Manager, immediately received the inspectors. Terry Hurst, and the inspectors were joined by Susan Gay, HSE Manager for the opening conference. The inspectors introduced themselves, showed their credentials, and explained the purpose of the visit.

The inspectors described the anticipated use of equipment (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.

Terry Hurst 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.

11) **Inspection Observations**

QC Laboratory:

Laboratory analysis is required for raw materials, in process testing (during chemical reactions), and for finished products. The laboratory contains hazardous waste satellite accumulation areas (SAAs). The inspectors observed the following hazardous waste in the SAAs:

- One (1) 1-gallon container of COD Test Mercury Salt Waste. The container was closed and marked with an indication of the hazard of the contents but not labeled with the words "Hazardous Waste" (Photo 1).
- One (1) 1-gallon container of Waste Mercury Nitrate. The container was closed and marked with an indication of the hazard of the contents but not labeled with the words "Hazardous Waste".

Pursuant to 15A NCAC 13A .0107(a) [40 C.F.R. § 262.15(a)(5)(i)], a generator must mark or label its container with the following: (i) The words "Hazardous Waste".

During the inspection, facility representatives placed hazardous waste labels on both containers (Photo 2).

Storage 1 (S-1):

This area is used to segregate and store solid raw material. No hazardous waste was observed in this area.

Storage 2 (S-2):

S-2 is another raw material storage area. No hazardous waste was observed in this area.

B-Tank Farm:

The B-Tank farm is located on the south side of the facility. Most ASTs in the B-Tank farm are for bulk storage of raw material (liquid chemicals) and for the hazardous waste tank. The tanks are situated on concrete secondary containment which had no evidence of holes or visible cracks. The area is identified with a sign that reads "Danger, Flammable, No Smoking, Matches, or Open Lights" (Photo 3). There is a fire hydrant and extinguisher located right next to the tank farm (Photo 4).

Hazardous waste Tank B-9 is a 9000-gallon AST with a fixed roof and is equipped with a conservation vent and a flame arrestor for air emission control. The tank is also equipped with a pneumatic valve as a closure device for the fill port. The tank level is monitored electronically

from a Differential Pressure Transmitter (DP Cell) that is located on Tank B-9 and provides feedback to the facility's digital control network. The DP Cell is calibrated annually.

The tank is labeled "Hazardous Waste" and marked with an NFPA hazard diamond to indicate the hazard of the contents (Photos 5-8). The hazardous waste tank is not labeled with an accumulation start date; however, the facility empties and ships off at least 4,000-gallons of the waste isobutyl alcohol and xylene from Tank B-9 at a minimum every 90-days. The facility uses their hazardous waste manifests to demonstrate compliance with the 90-day storage limit. The next shipment of hazardous waste from the tank is scheduled for 12/11/2023. The previous two shipments were: 09/11/2023, Manifest 017674059FLE (4,400 gallons) and 06/14/2023, Manifest 018320302FLE (4,600 gallons). Previously, the facility would ship waste from Tank B-9 twice every 90 days; however, within the last year the facility has not been generating as much waste.

The hazardous waste in Tank B-9 contains a volatile organic concentration greater than 10% by weight in light liquid service. The waste is generated in reactor vessels and is pumped to Tank B-9 by hose connection (detachable lines). The detachable hose connection is also used for the transfer of raw material from the tank farm to the reactor vessels, therefore there is no dedicated hose connection (transfer line) to Tank B-6. The hose connection is purged with nitrogen after each transfer. Waste transfers are logged electronically (including transfer contact time) in the control room through the facility's electronic DCS system. Pumps, connectors, valves, lines are in contact with hazardous waste less than 300 hours per year. Hazardous waste is transferred to Tank B-6 every month and a half or once a month max, with a contact time of 15 minutes each transfer (about 180 minutes or 3 hours a year). The facility does not conduct air emission monitoring for the detachable equipment. However, the exclusion from the Subpart BB requirements appears to apply pursuant to *40 C.F.R. § 265.1050(e), equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for less than 300 hours per calendar year is excluded from the requirements of §§ 265.1052 through 265.1060 of this subpart if it is identified, as required in § 265.1064(g)(6) of this subpart.*

C-Tank Farm:

The C-Tank farm is located directly across from the B-Tank farm and stores additional process tanks in secondary containment including two (2) 15,000-gallon process tanks that are used to recover solvent through a distillation column. Tank C-9 is labeled "Dirty Mixed Solvents" which goes through solvent distillation and enters tank C-11 which is labeled as "Recovered Mixed Solvents". Both ASTs have an NFPA diamond next to their respective tank names (Photo 9). Both ASTs are constantly in use and do not store solvent for long as the contents are constantly changed out. The volume of the tanks can be tracked through the facility's electronic DCS system which can display the amount of material in each tank and when material is added or removed.

Storage 3 (S-3):

This area is used for universal waste storage. The inspectors observed the following universal waste (Photo 10):

- One (1) cylinder cardboard container of 8-ft used lamps. The container was closed, labeled “Universal Waste” but did not have a start accumulation date.
- One (1) cardboard box of 5-ft used lamps. The container was labeled “Universal Waste” but was open and not dated.

Facility representatives stated that universal waste is shipped offsite every November at a minimum to ensure it is not being stored over the one-year accumulation time limit. Last shipment occurred on October 10, 2023, and the previous shipment was on December 01, 2022.

Pursuant to 15A NCAC 13A .0119(b) [40 C.F.R. § 273.13(d)(1)], a small quantity handler of universal waste must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

On October 20, 2023, Susan Gay sent a photo via email showing the 5-ft box containing universal waste lamps was taped up and properly closed (Photo 11).

Building D:

Outside of Building D, the inspectors observed 20x 55-gallon drums labeled “Non-hazardous waste” from well sampling collected from monitoring wells owned by LANXESS Corporation as part of an ongoing soil remediation project. NCDEQ defines this type of waste as investigational derived waste (IDW). The soil remediation activities are being managed by LANXESS Corporation and are not a part of Hallstar’s facility operations. At the time of the inspection the IDW was pending laboratory analysis before being shipped offsite to a designated disposal facility (Photos 12-14). The inspectors expressed some concern due to the containers being labeled as non-hazardous waste without the results of the pending laboratory analysis and requested that Hallstar representatives contact LANXESS Corporation to address the labeling concerns. Towards the end of the inspection Anthony Kellog, environmental consultant for LANXESS Corporation arrived at the facility to re-label the containers as “Hazardous Waste—Pending Analysis” and would be marking the containers with the proposed indication of the hazard of the contents.

The IDW was confirmed to have been generated on the property by LANXESS while conducting independent assessment and cleanup action for the Unitex Chemicals project listed on the NCDEQ Inactive Hazardous Sites Branch List. The results of the analysis determined that one (1) 55-gallon container of soil drill cuttings was hazardous. The IDW that was generated on the property still uses the EPA ID for the property but will ship with comments and contact information for LANXESS. NCDEQ has taken lead on correspondence with LANXESS.

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 Contingency Plan, which was last updated on January 4, 2022. 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 plan lists the names and emergency telephone numbers for persons identified as emergency coordinators. Terry Hurst is listed as the primary emergency coordinator, and the other individuals are listed in the order in which they will assume responsibility as alternates.

The plan includes a list of all emergency equipment at the facility. The list includes fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment. The plan did not include the location and a physical description of each item on the list, and a brief outline of its capabilities.

Pursuant to 15A NCAC 13A .0107(i) [40 C.F.R. § 262.261(e)], 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 October 24, 2023, Susan Gay provided an updated contingency plan with a list of emergency equipment and the location and a physical description of each item on the list, and a brief outline of its capabilities.

The plan also included 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 Contingency Plan was most recently submitted to the Guilford County Local Emergency Planning Committee (LEPC) who distributes it to the local fire department, police department, and hospital on February 28, 2023.

At the time of the inspection, the facility did not have a quick reference guide (QRG). Since the facility last updated their contingency plan on January 4, 2022, a QRG is required to be included with the updated contingency plan.

Pursuant to 15A NCAC 13A .0107(i) [40 C.F.R. § 262.262(b)], A large quantity generator that first becomes subject to these provisions after May 30, 2017 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 at paragraph (a) of this section or, as appropriate, the Local Emergency Planning Committee. The quick reference guide must include the elements listed in 40 C.F.R. § 262.262(b)(1-8).

On October 24, 2023, Susan Gay provided a quick reference guide for the facility via email and submitted the quick reference guide along with the updated contingency plan to the Guilford County LEPC on October 24, 2023.

Training Records:

The inspectors reviewed facility job descriptions and employee names that were provided for production staff, laboratory staff, the plant manager, and the operations manager. Each description included the requisite skill, education, or other qualifications, and duties of facility personnel assigned to that position.

The facility 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 2021-2023. It appeared that for five employees, contingency plan training was conducted but not entered into the facility's training log for employees. Terry Hurst stated the training was conducted in May 2023; however, the former environmental health and safety manager had not entered the training into the facility's training log.

Pursuant to 15A NCAC 13A .0107(a) [40 CFR 262.17(a)(7)(iv)(D)], the large quantity generator must maintain the following documents and records at the facility: (D) 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.

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 2020. Hazardous waste manifest records show that (D001, F003, and F005) hazardous waste flammable liquids are routinely shipped to Clean Harbors Reidsville (EPA ID NCD000648451) in Reidsville, NC; (D001 and D003) hazardous waste aerosols, reactive waste, and universal waste are routinely shipped to Tradebe Treatment and Recycling in East Chicago, IN (EPA ID IND000646943) and Millington, TN (EPA ID TND000772186). The most recent shipment was made on 10/16/2023 for universal waste and waste aerosols.

Daily Tank Inspection Records:

The facility conducts visual daily tank inspections each operating day. Prior to January 2023, the facility was not operating on Sundays. Daily tank inspection records were available from 2020 to present. The inspection checklist includes items such as tank level, overfill protection device, signs of leaks, evidence of corrosion, and secondary containment. There appeared to be no issues with the tank inspections. The last daily tank inspection was on 10/18/2023.

Annual Roof/ Closure Device Inspections:

The facility conducts annual roof inspections of Tank B-9 which includes visual inspections of closure devices. The last three roof/ closure device inspections were on 09/21/2021, and 09/07/2022, and 09/05/2023.

Tank P.E. Certification for Installation and Design:

The tank certification was available for review for the hazardous waste tank. The tank was last certified on 03/18/2018 by Chris Crispens, P.E. (N.C. #19119) for Performance Engineering, Inc.

Additional Tank Records:

Instrumentation Services, Inc. (ISI) conducts annual calibration for the DP Cell. The last calibration was on 03/15/2023.

Waste Profiles:

The Facility's waste profiles are maintained online through Clean Harbor's website and were available for review.

13) Closing Conference

The inspectors conducted the exit meeting with Terry Hurst and Susan Gay. During this meeting, the inspectors stated their preliminary conclusions of the inspection. The facility agreed to provide a photo of the universal waste lamp container closed, an updated contingency plan and quick reference guide by the end of the week. On 10/20/23 and 10/24/2023 Susan Gay provided the requested documents by email.

14) List of Appendices

Appendix 1 – Photo Log:

15) Signed

KAYLA ACOSTA Digitally signed by KAYLA
ACOSTA
Date: 2023.12.15 09:24:32 -05'00'

Kayla Acosta
Physical Scientist

16) Concurrence

ARACELI CHAVEZ Digitally signed by ARACELI
CHAVEZ
Date: 2023.12.15 10:34:16 -05'00'

Araceli B. Chavez
RCRA Enforcement Section

Appendix 1 – Photo Log

[14] Photos taken on: October 19, 2023

Photos taken by: Kayla Acosta

Photos taken with: Canon PowerShot Elph 180

EPA Property Tag: S/N 902063018726

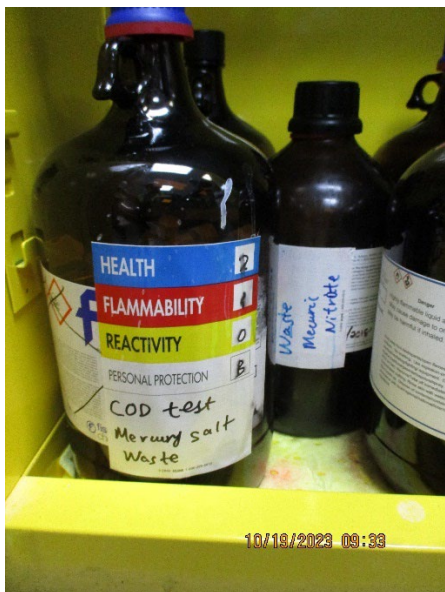


Photo 1: Two (2) one-gallon SAA containers missing hazardous waste label in the laboratory.



Photo 2: Hazardous waste labels placed on SAA containers in laboratory.



Photo 3: "No Smoking" sign.



Photo 4: Fire hydrant next to B-Tank Farm.



Photo 5: Hazardous waste Tank B-9.



Photo 6: Top of Tank B-9.



Photo 7: Hazardous waste Tank B-9.

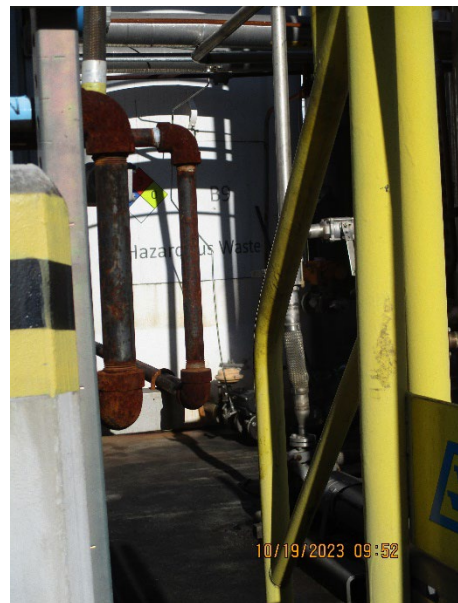


Photo 8: Fill port side of Tank B-9.



Photo 9: Process Tanks C-9 (Dirty Mixed Solvents) and C11 (Recovered Mixed Solvents).



Photo 10: Universal waste container to the right is open.



Photo 11: Universal waste container closed and taped up on the top.



Photo 12: Soil samples from LANXESS Corporation monitoring wells.



Photo 13: Soil samples from LANXESS Corporation monitoring wells.

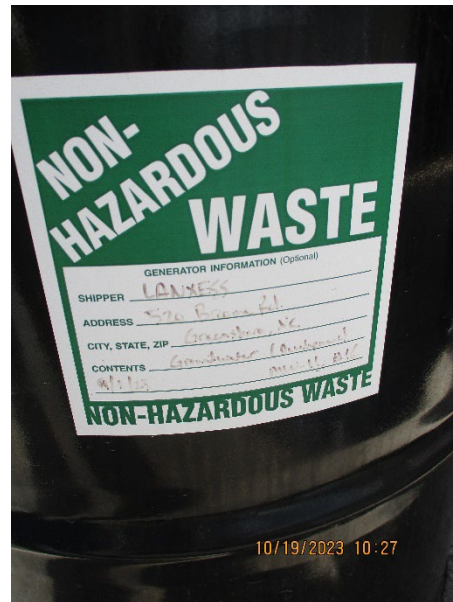


Photo 14: Soil samples from LANXESS Corporation monitoring wells.