

RCRA Inspection Report

1) Inspector and Author of Report

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2) Facility Information

Nouryon EPA ID# NCD0006223116
485 Cedar Springs Road
Salisbury, North Carolina 28147

3) Responsible Officials

Chris Fleming, HSES Manager

4) Inspection Participants

Chris Fleming, Nouryon Rose Pruitt, NCDEQ
Kevin Morris, Nouryon Laurie Benton DiGaetano, EPA

5) Date of Inspection

March 4, 2021

6) Applicable Regulations

Resource Conservation and Recovery Act (RCRA) Sections 3002 (42 U.S. Code – Annotated U.S.C.A. 6925 and 6927), Title 15A of the North Carolina Administrative Code (NCAC), Chapter 13; and 40 Code of Federal Regulation (C.F.R.), Parts 260 - 270, 273, 278, & 279.

7) Purpose of Inspection

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

8) **Previous Inspection History**

NCDEQ has conducted three RCRA CEIs at the subject facility during the past ten years and found no violations during those inspections. On February 11, 2016, the EPA and NCDEQ conducted the most recent RCRA CEI at the subject facility. The EPA found one potential violation of RCRA's requirements for including all the EPA waste codes on an LDR form.

This is the first RCRA CEI at this location since the facility changed names from Akzo Nobel to Nouryon.

9) **Facility Description**

Nouryon produces natural and synthetic polymers for the personal care products industry at the subject facility, which was previously part of a 440-acre facility owned and operated by the National Starch Company. In 2008, Akzo Nobel acquired the National Starch Company and took over the polymer manufacturing processes, which occupy approximately 15-30 acres at this location. Akzo Nobel immediately sold the adhesive side of the plant to the Henkel Corporation in a back-to-back transaction. The Akzo Nobel facility came under the control of Nouryon in 2018, when Nouryon purchased the business unit of Akzo Nobel associated with the facility. In 2020, the facility name officially changed from Akzo Nobel to Nouryon. Because these facilities were previously part of a single plant, Nouryon continues to provide utility services to the Henkel Corporation facility. Nouryon manufactures specialty chemicals at this facility under the NAICS Code 325199 for all other basic organic chemical manufacturing. Operations run 24 hours per day, seven days per week on two 12-hour production shifts, and the facility has approximately 110 employees.

Although most of the finished goods manufactured at this facility are nonhazardous solids or powders, Nouryon uses many hazardous ingredients in the production process. Monomer and catalyst ingredients are fed into the 10,000-12,000-gallon batch reactor vessels, where a closed reaction occurs. The reactors are equipped with agitators to facilitate the reaction, and Nouryon can also heat or cool reactors using a jacketed system surrounding the vessel. When the reaction occurs, the manufactured solids are first suspended in an aqueous slurry. Then the slurry is heated to drive the water from the slurry to the on-site wastewater treatment system. The product material is a powder polymer generated from particulate matter falling from the heated slurry. Product is shipped from this facility to customers in fiber drums and supersac containers.

Nouryon also operates on-site solvent recovery systems, which primarily separate and remove water from certain process chemicals (i.e., isopropyl alcohol, ethanol, isopar E, isopropanol, ethyl acetate, and 1,2 dichloroethane) so that the chemicals may be reused in the manufacturing process. These chemicals are removed from manufacturing process unit, sent through a solvent recovery system, and returned to the same manufacturing process unit. The materials are transferred entirely through connected piping, and only stored in tanks immediately prior to or following the solvent recovery process. Solvent recovery occurs through either (1) phase separation in a manufacturing unit, (2) distillation, or (3) separation by extraction in a closed

vessel. The solvent recovery systems appear to meet the solid waste exclusion found in 15A NCAC 13A.0106 [40 C.F.R. § 261.4(a)(8)].

Hazardous waste is generated from tank heels remaining inside the reactor vessel at the end of each batch cycle, from filters removed from the piping system, from laboratory analysis, and from the maintenance department. Tank heels are removed from the production line into a bucket, which is immediately emptied into a container at the designated satellite accumulation area (SAA). At the time of the inspection, Nouryon was managing a total of seventeen designated hazardous waste SAAs.

This facility has been operating as a large quantity generator (LQG) of hazardous waste for over 20 years, and Nouryon most recently notified as an LQG as part of the biennial report submitted on 02/24/2020. According to the biennial report, Nouryon generates the following hazardous wastes: D001 / D018 / D019 / D028 / F004 / F005 laboratory waste, D002 MEA waste, D001 waste OAA filters, D001 waste OAA in ethanol, D001 waste styrene monomer, D001 waste Celquat solids, D001 waste filters with IPA, D001 waste aerosol cans, D001 / D002 / U122 waste formaldehyde and water, U122 waste formaldehyde PPE, D002 / D007 / D009 / D011 waste OD vials, D001 waste Cuno filters and adhesive, D001 / F003 waste EA wash, D018 waste therminol oil with benzene, D018 waste therminol debris, D001 / D002 / D028 sulfonation waste, D001 waste IPA and Celquat, D001 / U123 waste formic acid, D001 / D002 waste formic acid by-product, D001 waste Dynamx, D001 / F003 waste C-6424 and rags, D001 / D028 / U177 waste 1,2-dichloroethane, D001 waste 28-019A intermediate, D001 equipment clean-up waste, D009 waste mercury, D001 loosepack waste paint and adhesives, D002 waste phosphoric acid 75%, D028 waste SPS filter bags and solids, U122 waste formaldehyde 50 percent, D001 / D002 / D028 tank clean out waste, and D001 tank clean out (Celquat and IPA) waste.

The on-site wastewater treatment system, which receives process wastewater from Nouryon and from Henkel Corporation and discharges to the City of Salisbury, is regulated under the Clean Water Act. Using this pretreatment system, Nouryon adjusts the pH of wastewaters and precipitates solids before discharging the wastewaters. The system includes a series of four concrete lined lagoons, which hold a total of about 2 million gallons, a bioreactor, and a clarifier. Sludge is accumulated in a sludge tank before it is dried in the belt press and shipped offsite as nonhazardous waste.

10) Opening Conference

On March 4, 2021, EPA inspector Laurie Benton DiGaetano, accompanied by NCDEQ inspector Rose Pruitt, arrived at the Nouryon facility at approximately 10:05 a.m. Mr. Chris Fleming, HSES Manager, immediately received the inspectors. The inspectors introduced themselves, showed their credentials to Mr. Fleming, 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 inspectors 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. The inspection participants also discussed health and safety protocols and required personal protective equipment before Mr. Fleming led the inspectors on a tour of the Facility operations. Mr. Kevin Morris, Production Manager, also participated in part

of the facility tour.

Mr. Fleming provided an overview of the facility's history and current operations during the opening conference. The company does not appear to meet the Small Business Regulatory Enforcement Fairness Act's classification of a "small business," which is generally set by the Small Business Administration using the business' SIC/NAICS code and annual receipts or number of employees. Therefore, the EPA inspector did not provide a copy of the agency's information sheet for small businesses, which can be found at <https://www.epa.gov/sites/production/files/2017-06/documents/smallbusinessinfo.pdf>.

11) **Findings**

SAA #1 - Paint Cans: Nouryon manages a SAA just outside the Maintenance Area for managing waste paint cans that are generated in Areas 1 and 2, the Warehouse, and the Maintenance Area as D001 hazardous waste (Photo #1). The inspectors observed one 55-gallon drum inside a locked, plastic clam-shell secondary containment unit at this SAA. The clam-shell was identified as SAA #1, labeled "hazardous waste" and "danger flammable liquids." The drum was labeled hazardous waste paint cans and identified with a very faded flammable liquid DOT hazard placard. The drum lid was secured with a drum locking ring. Mr. Fleming verified that employees had replaced the faded sticker with a new flammable liquid DOT hazard placard before the end of the inspection.

SAA #2 – Celquat Bag Filters: Nouryon manages a SAA in front of Tank R9 in the Area 1 Reactor Room for managing Celquat-bag filters used to collect solids from IPA solvent as D001 hazardous waste (Photo #2). The inspectors observed one 55-gallon drum inside a locked, plastic clam-shell secondary containment unit at this SAA. The clam-shell was identified as SAA #2, labeled "hazardous waste" and marked with a flammable liquid DOT hazard placard. The drum was labeled as hazardous waste flammable liquid and identified with a flammable liquid DOT hazard placard. The drum lid was secured with a drum locking ring.

SAA #3 – Aerosol Cans: Nouryon manages a SAA just inside the Area 1 Tank Farm Room for managing waste aerosol cans that are generated in Areas 1 and 2, the Warehouse, and the Maintenance Area as D001 hazardous waste (Photo #3). The inspectors observed one 55-gallon drum inside a locked, plastic clam-shell secondary containment unit at this SAA. The clam-shell was identified as SAA #3, labeled "hazardous waste," and marked with a flammable liquid DOT hazard placard. The drum was labeled as hazardous waste flammable liquid and identified with a flammable liquid DOT hazard placard. The drum lid was secured with a drum locking ring.

SAA #4 and #5 - Sulfonating: Nouryon manages two SAAs outside the OAA grinding room (inside the building near S10) (Photo #4). SAA #4 is used to manage samples from the Sulfonating process as D001 / D002 / D028 hazardous waste. The inspectors observed one 55-gallon drum and two one-gallon jugs inside a locked, plastic clam-shell secondary containment unit at this SAA (Photo #5 and #6). The clam-shell was identified as SAA #4, labeled "hazardous waste," and marked with flammable liquid, toxic and corrosive DOT hazard placards. The drum was labeled as hazardous SPS waste and identified with flammable liquid and corrosive DOT hazard placards, but it was not identified with a toxic DOT hazard placard. The two one-gallon

jugs were each labeled DCE flush and identified with a Hazcom label. One jug was dated 03/21/2019.

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 process generating the waste, without a permit or without having interim status, as required by 130A-294(c) and (g) of the NCSWML, N.C.G.S. § 130A-294(c) and (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. § 262.15(a)(5)(ii)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers with an indication of the hazards of the contents.

Mr. Mark S., an employee working in this area, joined the inspection participants in this area. He explained that the one-gallon jugs contained sample material from the sulfonating process. He poured liquid from the jugs into the 55-gallon drum in SAA #4. After pouring, the inspection participants observed a solidified mass of material approximately four inches thick inside one of the jugs. Mr. Fleming stated that the waste profile for SPS filter bags and waste managed in SAA #5 will be reviewed to confirm whether the solidified mass can be disposed of with that waste stream.

SAA #5 is used to manage waste filters from the IE column, S5, Storage Tank, D1, D2 and S8 in the Sulfonating Process Area as D001 / D028 hazardous waste. The inspectors observed one 55-gallon drum on a secondary containment unit at this SAA. The drum was labeled as hazardous waste SPS filter bags and products, and it was identified with flammable solid and toxic DOT hazard placards.

SAA #6 – Mono Ethanol Amines (MEA): Nouryon manages a SAA outside of the Area 2 Reactor Room across from the MEA storage tank for managing MEA sample waste generated in the ST 53 and MV 2 receiver areas as D002 hazardous waste (Photo #7). The inspectors observed one 55-gallon drum inside a locked, plastic clam-shell secondary containment unit at this SAA. The clam-shell was identified as SAA #6, and it was labeled “hazardous waste” and “danger corrosive liquids.” The drum was labeled as hazardous MEA waste and identified with a corrosive DOT hazard placard.

SAA #7 – MEA Flare: Nouryon manages a SAA on a concrete pad above the MEA flare for managing draining flare bottoms generated at the MEA flare as D002 hazardous waste (Photo #8). The inspectors observed one 55-gallon drum inside a locked, plastic clam-shell secondary containment unit at this SAA. The clam-shell was identified as SAA #7, and it was labeled “hazardous waste” and “danger corrosive liquids.” The drum was labeled as hazardous MEA

waste and identified with a corrosive DOT hazard placard.

SAA #8 – Process Development (PD) Lab Waste: Nouryon manages a SAA at the PD Laboratory for managing waste from PD lab analysis and small trial batches as D001 hazardous waste (Photo #9). The inspectors observed one flammable can in this SAA. The can was located underneath a laboratory hood. It was labeled as hazardous waste and identified with a flammable liquid DOT hazard placard.

SAA #9, #10, #11 and #12 – Quality Control (QC) Lab Waste: At the time of the inspection, Nouryon was managing four SAAs in the QC Lab. SAA #9 was used to manage waste generated during laboratory analyses as D001 hazardous waste (Photo #10). The inspectors observed one two-gallon container in this SAA. The container was located under a laboratory hood. It was labeled hazardous waste lab waste and identified with a flammable liquid DOT hazard placard. SAA #10 and #11 were used to manage waste generated by each of the Karl Fisher analysis units as D001 hazardous waste (Photo #11 and #12). Each one-liter container was attached to a Karl Fisher unit, labeled hazardous waste, and identified with a flammable liquid DOT hazard placard. SAA #12 was used to manage waste laboratory samples and out of date materials as D001 hazardous waste (Photo #13). The five-gallon container was located inside a laboratory cabinet. The container was labeled hazardous waste QC lab pack and identified with a corrosive DOT hazard placard.

Laboratory personnel explained that, because the waste accumulation containers at the Karl Fisher units are made of glass, personnel pour the contents of these containers into the two-gallon container at SAA #9, which is then poured into the 55-gallon drum at the laboratory Central Accumulation Area (CAA). The inspectors noted that the regulations do not allow a generator to transfer hazardous waste from one SAA to another, and the inspection participants discussed various options for modifying the standard operating procedures at the laboratory to comply with the RCRA regulations. This discussion continued via email correspondence between the inspectors and Mr. Fleming from March 5 through March 11, 2021.

One proposed option for compliance is to designate a single SAA in the QC laboratory for accumulating QC laboratory testing. The two containers at the Karl Fisher (formerly SAA #10 and #11) units and the container under the laboratory hood (formerly SAA #9), could all be managed as containers within the same SAA. The total volume of waste in all containers within the SAA must remain below 55-gallons, and each container must meet the conditions of the SAA exemption (i.e. remain closed, be labeled “hazardous waste,” and be marked with an indication of the hazards). However, this management option would allow for hazardous waste to be transferred from the Karl Fisher containers into the laboratory hood container prior to transfer into the 55-gallon drum at the laboratory CAA.

Laboratory Waste CAA: Nouryon manages a hazardous waste CAA between the QC and PD laboratories (Photo #14). This area is a plastic secondary containment shed located just outside the QC laboratory. The area was identified with a sign which read “hazardous waste storage.” Nouryon manages ignitable waste in this CAA, and the inspectors observed signs reading “danger, no smoking,” and “danger, flammable liquids” on the outside of the storage shed.

The facility is equipped with an internal communications or alarm system capable of providing immediate emergency instruction to facility personnel; and the laboratory is equipped with a device capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams; the laboratory is also equipped with portable fire extinguishers and spill control equipment.

SAA #13 and #14 – Tank Storage Area: Nouryon manages two SAAs inside Area 3 in front of R01. SAA #13 is used to manage waste filter bags generated by filtering OAA while pumping to storage tanks as D001 hazardous waste (Photo #15). The inspectors observed one 55-gallon container in this SAA. The drum was located on a wooden pallet. It was labeled hazardous waste OAA filters and identified with a flammable liquid DOT hazard placard.

SAA #14 is used to manage waste aerosol cans generated in Areas 3 and 4, the Warehouse, and the Maintenance Area as D001 hazardous waste (Photo #16). The inspectors observed one 55-gallon container in this SAA. The drum was located on a wooden pallet. It was labeled hazardous waste aerosol cans and identified with a flammable liquid DOT hazard placard.

SAA #15 – COD Vials: Nouryon manages a SAA in the Waste Treatment Area Building for managing waste COD vials that are generated by COD laboratory analyses performed at the Waste Treatment Area as D002 hazardous waste (Photo #17). The inspectors observed one carboy container in this SAA. The can was located underneath a laboratory hood. It was labeled as hazardous waste COD vials and identified with a corrosive DOT hazard placard.

SAA #16 – C-6424 Sample Flushing / Filter Media: Nouryon manages a SAA behind Tank C41 in Area 2 for managing sampling and cleaning waste generated in Area 2 Tank C41 and Tank MV4 as D001 hazardous waste (Photo #18). The inspectors observed one 55-gallon drum at this SAA. The drum was labeled as hazardous waste C-6424 waste and identified with a flammable liquid DOT hazard placard.

SAA #17 – Cuno Filters in IPA: Nouryon manages a SAA in the IPA Solvent Recovery Area for managing filters that are generated by the CUNO solvent recovery process as D001 hazardous waste (Photo #19). The inspectors observed one 55-gallon drum in this SAA. The clam-shell was identified as SAA #17, labeled as hazardous waste and marked with a flammable liquid DOT hazard placard. The drum was labeled hazardous waste CUNO filters with IPOH and identified with a flammable solid DOT hazard placard.

Used Oil Storage: The inspection participants observed three 55-gallon drums of used oil on a portable secondary containment pallet in the Chiller Room (Photo 20). Each drum was labeled as “Used Oil.”

Universal Waste Management: Nouryon manages universal waste lamps in the Blue Building. The inspectors observed one 8-foot cardboard cylinder, one 4-foot cardboard cylinder, three 8-foot cardboard boxes, five 4-foot cardboard boxes, and one square cardboard box, which all appeared to contain either new lamps or universal waste lamps (Photo #21). The cardboard cylinders and two 4-foot boxes appeared to contain universal waste fluorescent lamps, and the cardboard square box appeared to contain universal waste metal halide lamps (Photo #22). The

remaining three 8-foot boxes and three 4-foot boxes appeared to contain either new, broken, or universal waste lamps. The cylinders were each labeled as universal waste lamps and dated 10/07/2020. None of the cardboard boxes were labeled or dated. The square cardboard box was completely open.

Pursuant to 15A NCAC 13A .0119(b) [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.

Pursuant to 15A NCAC 13A .0119(b) [40 C.F.R. § 273.13(d)], a small quantity handler of universal waste (SQHUW) 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.

Pursuant to 15A NCAC 13A .0119(b) [40 C.F.R. § 273.14(e)], a small quantity handler of universal waste (SQHUW) identify the type of universal waste by labeling or marking each lamp or container of lamps clearly with one of the following phrases: “Universal Waste – Lamp(s), or “Waste Lamp(s),” or “Used Lamp(s).”

Pursuant to 15A NCAC 13A .0119(b) [40 C.F.R. § 273.15(a) and (c)], a small quantity handler of universal waste (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.

Facility Main CAA: Nouryon manages the main hazardous waste CAA on a curbed concrete pad beneath a metal roof near the wastewater treatment lagoons (Photo #23). The area was identified with a sign which read “hazardous waste central accumulation area.” Nouryon manages ignitable waste in this CAA, and the inspectors observed a “Danger, No Smoking” sign on the concrete wall at the CAA. The area is equipped with a telephone capable of alerting security to employ an internal communications or alarm system to provide emergency instruction to facility personnel and summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams; and it is also equipped with a portable fire extinguisher and spill control equipment.

The inspectors observed over fifty 55-gallon containers staged on wooden pallets in four rows within the CAA. The first row was four pallets long, and two of the pallets were double-stacked. Inspectors observed containers of waste isopar heels, waste IPA heels and waste Cuno filters in this row. The drums were all labeled as hazardous waste, identified with a flammable liquid or a flammable solid (Cuno filters) DOT hazard placard, and marked with an accumulation start date. The oldest drum in this row was dated 01/30/2021.

The second row was three pallets long, and all of the pallets were double-stacked. Inspectors observed containers of waste ethyl acetate, waste isopropyl acetate, and waste IPA heels from reclaim in this row. The drums were all labeled as hazardous waste, identified with a flammable liquid DOT hazard placard, and marked with an accumulation start date. However, the ink used to identify the contents and accumulation start date on four of the drums was severely fading and/or washing away. The oldest legible date observed in this row was 02/04/2021. Facility personnel noted the faded labels and indicated that they would be corrected immediately. Please note that the facility's weekly inspection checklist includes an entry for inspecting labels and dates on containers in this area. When information on the container labels becomes faded or illegible, the condition should be noted on the inspection log and corrective actions should be taken.

The third row was two pallets long, and one of the pallets was double-stacked. Inspectors observed containers of waste PQIP wetcake from V90, MEA waste, SPS sulfonation waste, and waste COD vials in this row. The containers were all labeled hazardous waste and marked with an accumulation start date. The oldest container in this row was dated 02/05/2021. The 55-gallon drums of PQIP wetcake and SPS sulfonation waste were identified with a flammable liquid DOT hazard placard, and the 5-gallon carboy of waste COD vials was identified with a corrosive DOT hazard placard. Two 55-gallon drums of MEA waste were not identified with an indication of the hazards of their contents.

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 130A-294(c) and (g) of the NCSWML, N.C.G.S. § 130A-294(c) and (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 .0107 [40 C.F.R. § 262.17(a)(5)(i)(B)], which is a condition of the LQG Permit Exemption, a generator is required to mark or label containers with an indication of the hazards of the contents.

The fourth row was two pallets long. Inspectors observed containers of non-regulated waste and used oil in this row.

Contingency Plan: The actions that facility personnel should take in response to an emergency are described in the facility's Emergency Response and Crisis Manual, which was last updated on December 3, 2020. The plan describes actions facility personnel must take in response to fires and explosions, spills and ground contamination, major spills or releases, and extreme weather conditions; it describes arrangements agreed to with the Rowan County Emergency Management Team; and it lists the names and emergency telephone numbers for persons identified as emergency coordinators and lists those individuals in the order in which they will assume responsibility. The plan includes a list of all emergency equipment at the facility, and that list includes fire extinguishing systems, spill control equipment, and communications and alarm systems. The plan includes an evacuation plan for personnel, which describes signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes.

A copy of the Emergency Response and Crisis Manual (and its quick reference guide) was most recently submitted to the local emergency response entities on June 11, 2020. Although 15A NCAC 13A .0107(a) [40 C.F.R. § 262.17(a)(6)], which incorporates 15A NCAC 13A .0107(i) [40 C.F.R. § 262.262(a)], requires an LQG to submit a copy of the contingency plan and all revisions to all local emergency responders, the revisions to the plan after the date it was last submitted included personnel training requirements and facility reporting requirements. These revisions did not change any of the contents of the plan required by 15A NCAC 13A .0107(i) [40 C.F.R. § 262.261], or include any of the conditions found in 15A NCAC 13A .0107(i) [40 C.F.R. § 262.263], which would require an amendment to the contingency plan.

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; 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 fire extinguishers, emergency showers and eyewash stations, and spill kits; the identification of on-site notification systems; and the name of the emergency coordinator(s) and emergency telephone number(s).

Training Records: The inspectors reviewed facility job descriptions and employee names that were provided for the Waste Management Operator(s), Production Chemical Operator(s), Waste Management Supervisor(s), Warehouse Operator(s), Warehouse Supervisor(s), QC Lab Technician(s), QC Lab Supervisor(s), Quality Assurance Supervisor(s), Productions Operations Manager(s), Production Shift Supervisor(s), Process Development Technician(s), Process/Project Engineer(s), Engineering Manager(s), Maintenance Supervisor(s), Maintenance Manager(s), Maintenance Lead Mechanic(s), Maintenance Mechanic(s), HSE and Security Associate(s), HSE & S Manager(s), and Director of Operations. Each description included the requisite skill, education, or other qualifications, and duties of facility personnel assigned to that position. Nouryon 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. Mr. Fleming pulled up randomly selected employee records to verify that the names of employees filling the position were available and that employees had received the required hazardous waste training.

Waste Manifest Records: The inspectors reviewed available hazardous waste manifest records and land disposal restriction forms for shipments of hazardous waste sent since 2018. Hazardous waste manifest records show that hazardous wastes are routinely shipped to Univar Solutions (NCD061263315), and less often to GRR Sumter (SCD036275626) and Clean Earth Environmental (KYD985073196). Wastes included D001 waste Cuno filter adhesives, D001 / D018 / D019 / D028 / F003 / F005 flammable liquid lab waste, D001 waste ethanol OAA filters, D001 waste isopropyl acetate, D001 / F003 waste ethyl acetate, D001 waste petroleum distillates, D001 waste isopropanol, D028 waste solids containing flammable liquid from process DCA clean-up, D002 waste ethanolamine, D002 / D007 / D009 / D011 waste corrosive acidic liquid (sulfuric acid / chromic acid), D002 waste formic acid, D001 / D028 waste ethylene dichloride spent dichloroethane solids, D001 / D002 / D028 waste flammable liquid and corrosive sulfonation waste, D002 waste nitric acid labpack, D001 / D018 / U009 / U019 waste flammable and toxic liquid labpack, and D002 / D002 waste acetic anhydride labpack.

The records also included full tanker truck of D001 / D018 hazardous waste flammable liquid (isopropyl acetate / benzene) sent to Geocycle (SCD003368891) on October 9, 2020. Mr. Morris explained that this waste is generated in one of the solvent recycling processes. As isopropyl acetate is recycled through this process, it becomes contaminated with benzene. The benzene levels are continuously monitored in the process, and the contaminated solvent is pumped directly from the storage tank into a tanker truck as the levels of benzene approach unacceptable levels. Contaminated solvent is shipped offsite as D001 / D018 hazardous waste flammable liquid (isopropyl acetate / benzene), and virgin isopropyl acetate is pumped into the storage tank to replenish the system. Mr. Morris stated that the contaminated solvent is generated approximately once every two years, but the isopropyl acetate is continuously recycled through the system at all times.

Inspection Records: The inspectors reviewed Nouryon's available records of inspections of the hazardous waste central accumulation area (CAA) since 2018. The inspection log includes a checklist to record observations about leaking containers and for deterioration of containers caused by corrosion or other factors. The checklist is used to record observations about the secondary containment, labels and dates on containers, condition of containers, compatibility of waste with containers, closed containers, and containers stored so that they don't cause a leak. It is also used to record observations about the emergency equipment: the phone, fire extinguisher, spill kit, eyewash and shower systems; access to emergency communication; and aisle spacing. The records include the date and time of the inspection and the name, signature and initials of the employee conducting the inspection. Each week, the employee records notations of observations and necessary follow-up actions for the inspected areas.

12) Closing Conference

The inspectors conducted the exit meeting with Mr. Fleming. During this meeting, the inspectors stated their preliminary conclusions of the inspection.

13) Inspection Findings

Based on the observations made during the inspection, Nouryon was apparently deficient with the following RCRA requirements:

- **Pursuant to 15A NCAC 13A .0107(a) [40 C.F.R. § 262.15(a)(5)(ii)], which is a condition of the SAA Permit Exemption, a generator is required to mark or label its containers with an indication of the hazards of the contents.**
- **Pursuant to 15A NCAC 13A .0107 [40 C.F.R. § 262.17(a)(5)(i)(B)], which is a condition of the LQG Permit Exemption, a generator is required to mark or label containers with an indication of the hazards of the contents.**

Pursuant to 15A NCAC 13A .0119(b) [40 C.F.R. § 273.13(d)], a small quantity handler of universal waste (SQHUW) 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.

- Pursuant to 15A NCAC 13A .0119(b) [40 C.F.R. § 273.14(e)], a small quantity handler of universal waste (SQHUW) identify the type of universal waste by labeling or marking each lamp or container of lamps clearly with one of the following phrases: “Universal Waste – Lamp(s), or “Waste Lamp(s),” or “Used Lamp(s).”
- Pursuant to 15A NCAC 13A .0119(b) [40 C.F.R. § 273.15(a) and (c)], a small quantity handler of universal waste (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.

14) **List of Appendices**

Appendix 1: Photo Log

23 Photos taken on: March 4, 2021

Photos taken by: Laurie Benton DiGaetano

Photos taken with: Panasonic DMC TS-5 Digital Camera

EPA Property Tag: S09533

15) **Signed**

Laurie Benton DiGaetano
Senior Enforcement and Compliance Specialist

Date

Concurrence

Araceli B. Chavez
Chief
RCRA Enforcement Section

Date

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Photo 1: One 55-gallon drum inside a locked, plastic clam-shell secondary containment unit at SAA #1, which is used to accumulate hazardous waste paint cans generated throughout the facility. The clam-shell was identified as SAA #1, labeled hazardous waste and “danger flammable liquids.” The drum was labeled hazardous waste paint cans and identified with a faded flammable liquid DOT hazard placard.



Photo 2: One 55-gallon drum inside a locked, plastic clam-shell secondary containment unit at SAA #2, which is used to accumulate hazardous waste filters that are generated by the Celquat process. The clam-shell was identified as SAA #2, labeled hazardous waste and marked with a flammable liquid DOT hazard placard. The drum was labeled hazardous waste flammable liquid and identified with a flammable liquid DOT hazard placard.

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Photo 3: One 55-gallon drum inside a locked, plastic clam-shell secondary containment unit at SAA #3, which is used to accumulate hazardous waste aerosol cans that are generated on this side of the facility. The clam-shell was identified as SAA #3, labeled as hazardous waste and marked with a flammable liquid DOT hazard placard. The drum was labeled hazardous waste flammable liquid and identified with a flammable liquid DOT hazard placard.

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Photo 4: SAAs #4 and #5 located in the Sulfonating Production Area. The locked, plastic clam-shell secondary containment unit is SAA #4, and the secondary containment pallet next to the clam-shell is SAA #5. Nouryon accumulates hazardous waste sulfonating waste that is generated by sampling the sulfonating process in SAA #4, and accumulates hazardous waste sulfonating filters that are generated by the Sulfonating process in SAA #5. The clam-shell was identified as SAA #4, labeled hazardous waste and marked with flammable liquid, toxic and corrosive DOT hazard placards. The drum in SAA #5 was labeled hazardous waste SPS filter bags and products and identified with flammable solid and toxic DOT hazard placard.

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Photo 5: Two one-gallon jugs inside the locked, plastic clam-shell secondary containment unit at SAA #4. The jugs were each labeled DCE Line Flush and identified with a Hazcom label. One jug was dated 03/21/2019. The drum was labeled hazardous waste and identified with flammable liquid and corrosive DOT hazard placards, but it was not identified with a toxic DOT hazard placard.

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Photo 6: Two one-gallon jugs inside the locked, plastic clam-shell secondary containment unit at SAA #4. The jugs were each labeled DCE Line Flush and identified with a Hazcom label. One jug was dated 03/21/2019.

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Photo 7: One 55-gallon drum inside a locked, plastic clam-shell secondary containment unit at SAA #6, which is used to accumulate hazardous waste MEA waste that is generated by sampling the MEA process. The clam-shell was labeled as SAA #6 and “danger corrosive liquids.” The drum was labeled hazardous waste MEA waste and identified with a corrosive DOT hazard placard.

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Photo 8: One 55-gallon drum inside a locked, plastic clam-shell secondary containment unit at SAA #7, which is used to accumulate hazardous waste MEA waste that is generated by the MEA flare. The clam-shell was labeled as SAA #7 and “danger corrosive liquids.” The drum was labeled hazardous waste MEA waste and identified with a corrosive DOT hazard placard.

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Photo 9: One one-gallon flammable can at SAA #8, which is used to accumulate hazardous waste flammable liquids that are generated in the PD laboratory. The can was labeled hazardous waste and identified with a flammable liquid DOT hazard placard.

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Photo 10: One two-gallon container at SAA #9, which is used to accumulate hazardous waste flammable liquids that are generated by sample analysis in the laboratory. The container was labeled as SAA #9 and hazardous waste and identified with a flammable liquid DOT hazard placard.

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Photo 11: One one-liter jar at SAA #10, which is used to accumulate hazardous waste flammable liquids that are generated by the Karl Fisher unit. The jar was labeled as SAA #11 and hazardous waste and identified with a flammable liquid DOT hazard placard.

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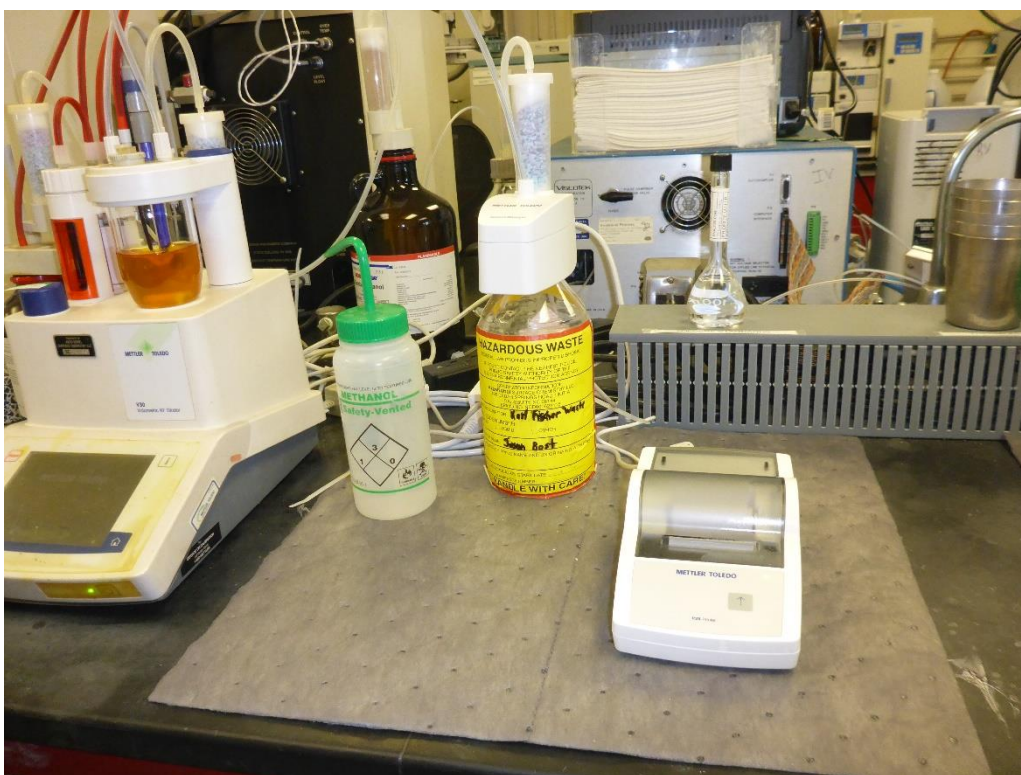


Photo 12: One one-liter jar at SAA #11, which is used to accumulate hazardous waste flammable liquids that are generated by the Karl Fisher unit. The jar was labeled as SAA #11 and hazardous waste and identified with a flammable liquid DOT hazard placard.

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Photo 13: One 5-gallon bucket at SAA #12, which is used to accumulate hazardous waste laboratory chemicals that are generated in the laboratory. The bucket was labeled as SAA #12 and hazardous waste lab pack and identified with a corrosive DOT hazard placard.

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Photo 14: Laboratory CAA between the QC and PD laboratories. The area is a plastic secondary containment shed located just outside the QC laboratory. The area was identified with a sign which read “hazardous waste storage.” Nouryon manages ignitable waste in this CAA, and the shed was also identified with signs reading “danger, no smoking,” and “danger, flammable liquids.”

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Photo 15: One 55-gallon drum at SAA #13, which is used to accumulate hazardous waste OAA filters that are generated by the OAA process. The drum was labeled hazardous waste OAA filters and identified with a flammable liquid DOT hazard placard.

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Photo 16: One 55-gallon drum at SAA #14, which is used to accumulate hazardous waste aerosol cans that are generated on this side of the facility. The drum was labeled hazardous waste aerosol cans and identified with a flammable liquid DOT hazard placard.

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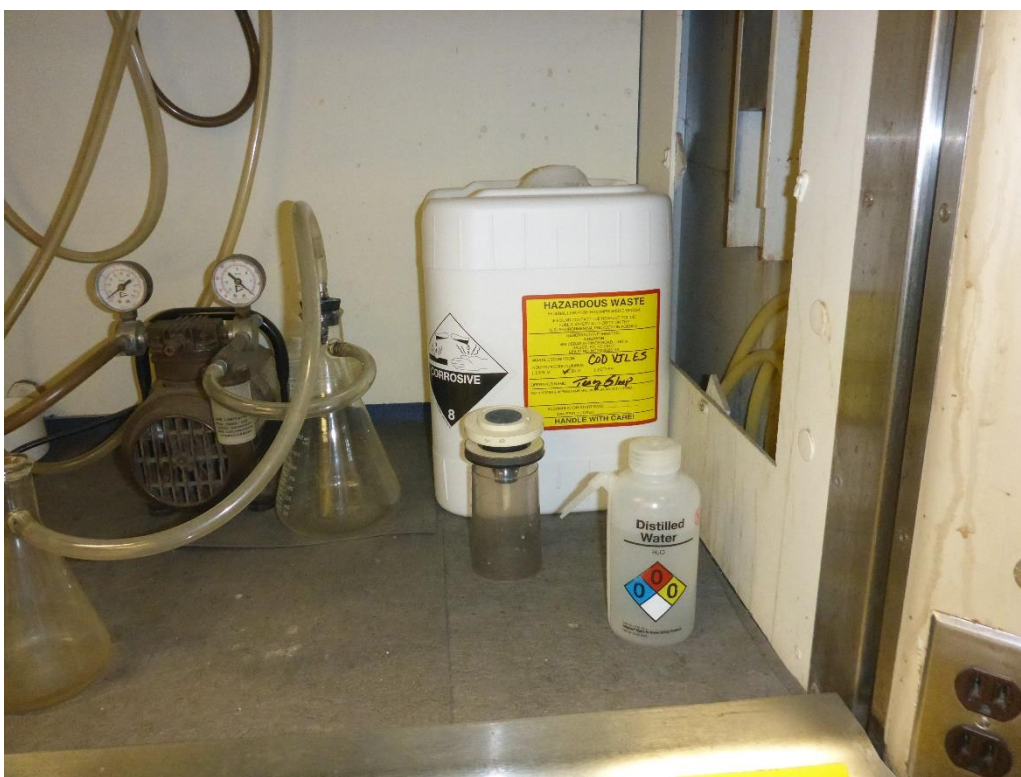


Photo 17: One 5-gallon carboy beneath a laboratory hood at SAA #15 in the Waste Treatment Area. This SAA is used to accumulate hazardous waste COD vials that are generated by COD laboratory analyses performed at the Waste Treatment Area. The container was labeled hazardous waste COD vials and identified with a corrosive DOT hazard placard.

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Photo 18: One 55-gallon drum at SAA #16, which is used to accumulate hazardous waste flammable liquids that are generated by sampling and cleaning operations at the C-6424 process. The drum was labeled hazardous waste C-6424 waste and identified with a flammable liquid DOT hazard placard.

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Photo 19: One 55-gallon drum inside a locked, plastic clam-shell secondary containment unit at SAA #17, which is used to accumulate hazardous waste filters that are generated by the CUNO solvent recovery process. The clam-shell was labeled as SAA #17 and marked with a flammable liquid DOT hazard placard. The drum was labeled hazardous waste CUNO filters with IPOH and identified with a flammable solid DOT hazard placard.

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Photo 20: Three 55-gallon drums of used oil on a portable secondary containment pallet in the Chiller Room.

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Photo 21: One 8-foot cardboard cylinder, one 4-foot cardboard cylinder, two 4-foot cardboard boxes and one open, square cardboard box in the foreground, which all appeared to contain universal waste lamps. The cylinders were each labeled as universal waste lamps and dated 10/07/2020. None of the cardboard boxes were labeled or dated. Additional 8-foot cardboard boxes observed behind these containers. Those additional boxes appeared to contain either new or universal waste lamps.

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Photo 22: One open, square cardboard box of universal waste metal halide lamps. The box was not labeled “universal waste lamps” or marked with an accumulation start date.

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Photo 23: Main CAA with hazardous waste containers arranged on four rows of wooden pallets. The area is identified with signs reading “hazardous waste central accumulation area” and “danger, no smoking.”