

RCRA Compliance Evaluation Inspection Report

1) **Inspector and Author of Report**

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2) **Facility Information**

IPS Structural Adhesives Inc.
600 Ellis Road
Durham, North Carolina 27703
County: Durham

Latitude: 35.945785
Longitude: -78.867605
EPA ID Number: NCR000135509
Primary NAICS – 325520 – Adhesive Manufacturing
SIC Code – 2891 – Adhesives and Sealants

3) **Responsible Official**

James Crisp, Production Manager, IPS Structural Adhesives Inc.
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4) **Inspection Participants**

Parvez Mallick, U. S. EPA Region 4
Aram Kim, Environmental Senior Specialist, NCDEQ
Heather Goldman, P.S.M, Eastern Region Compliance Supervisor, NCDEQ
James Crisp, Production Manager, IPS Structural Adhesives Inc.

5) **Date of Inspection**

March 24, 2021, 8:30 a.m.

6) **Applicable Regulations**

Subtitle C of the Resource Conservation and Recovery Act (RCRA) (42 U.S.C. §§ 6921 – 6939f), 40 Code of Federal Regulation (C.F.R.), Parts 260 - 270, 273 & 279, and NCHWMR, Title 15A of the North Carolina Administrative Code (NCAC), Chapter 13 NCAC 13A .0101 to .0119.

As the State's authorized hazardous waste program operates in lieu of the federal RCRA program, the citations of those authorized provisions alleged herein will be to the authorized State program; however, for ease of reference, the federal citations will follow in brackets.

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 [40 C.F.R. § 262.17], a generator may accumulate hazardous waste onsite 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) 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 [40 C.F.R. § 262.17] (hereinafter referred to as the "LQG Permit Exemption").

7) **Purpose of Compliance Evaluation Inspection**

On March 24, 2021, Aram Kim and Heather Goldberg of North Carolina Department of Environmental Quality (NCDEQ), and Parvez Mallick of EPA Region 4, conducted an announced compliance evaluation inspection (CEI) at IPS Structural Adhesives Inc. (IPS or the facility) to determine the facility's compliance with state and federal hazardous waste regulations. This was an EPA lead joint inspection. IPS was represented by Mr. James Crisp, Production Manager, IPS Structural Adhesives Inc. Upon entering the facility, the inspectors introduced themselves, showed their credentials and explained the purpose of the visit and a description of the facility's process was discussed.

8) **Facility Description**

IPS Structural Adhesives Inc., Durham facility, manufactures methyl methacrylate structural adhesives for construction, transportation, marine, and general industry markets. The adhesives are used widely in product-assembly of new boats/yachts, buildings, aircrafts, motor homes and vehicles. Methyl methacrylate adhesives (MMAs) are used for bonding metals including steel, stainless steel, aluminum, composites including fiberglass and carbon fiber, unsaturated polyester, vinyl ester, gel-coat, sheet molding compound and epoxy. They are also commonly

used with other thermoplastics like acrylics, acrylonitrile butadiene styrene, polycarbonates, and polyvinyl chloride. IPS's product packages range from 50-ml cartridges, to 5-gallon pails, to 55-gallon drums. The Durham facility also serves as the East Coast distributor for products manufactured at the parent facility in Compton, CA.

IPS is located in the city of Durham, North Carolina, on a 4.23-acre site. The facility consists of a primarily steel frame, metal siding structure with approximately 33,000 sq. ft. of raw materials and finished goods warehousing and refrigerated storage, adhesive product manufacturing (batch mixers) and packaging, plus shipping and receiving. A brick building houses offices and the quality control/research laboratory. IPS began operations at this location in September 2005, operating 12-hour shift Monday through Saturday. Currently, the facility employs approximately 45 employees. City of Durham provides potable water and sanitary sewer services.

The facility's most recent hazardous waste generator notification form (EPA form 8700-12) submitted on February 27, 2020, characterized the facility as a large quantity generator (LQG) of hazardous waste, generating D001, D002, D003, D035, F005, U003, U069, and U219 wastes. Other wastes generated at the facility are used oil, parts washer fluids, and universal waste.

The facility's manufacturing operation utilizes seven different mixing vessels with either a 60-gallon capacity or a 150-gallon capacity. MMA is delivered by tanker to an outdoor, aboveground storage tank located approximately 275 feet southwest of the plant. MMA is a flammable liquid. Some wastes generated by manufacturing processes are characteristic hazardous wastes due to flammability. Methyl ethyl ketone (MEK), used in the process for cleaning mix tanks, is also flammable and toxic. The resulting MEK "wash" is handled as a hazardous waste secondary material from which usable MEK is reclaimed. Still bottoms from the solvent reclaim process are one example of characteristic and listed hazardous waste generated by manufacturing processes. Organic peroxides are also used in the process, providing additional fire and reactive hazards. Some raw materials have toxicity as well as flammable characteristics (e.g. reaction initiators) and would be a hazardous waste if spilled.

9) **Inspection Findings**

The inspectors performed a walk-through inspection of the facility with Mr. James Crisp of IPS. Below is a description of the observations made during the walk-through. During the inspection, all hazardous satellite accumulation area containers were observed to be at or near the point of generation and under control of the operator.

Central Accumulation Area (CAA)

The hazardous waste CAA is in a fenced-in cage located in the raw material storage area. The cage is inside the main facility near the loading dock and is always locked unless hazardous waste is being moved in or out of storage. Hazardous wastes were stored in 55-gallon containers. The inspectors observed that the CAA area was congested, and the facility personnel had to move several containers to see the container's condition, labels, and dates during the inspection. A twenty-four inch aisle space was not maintained between two rows of containers against the fences. The inspectors observed the following:

- Two 55-gallon containers of methyl methacrylate monomers (D001) waste. The containers were closed, marked "Hazardous Waste," and marked with an indication of the hazards of the contents. Both containers' accumulation start date was 3/4/2021; and

- Six 55-gallon containers of MEK/adhesive 10:1 (D001 and D035) waste. Five of six containers were closed, marked “Hazardous Waste,” and marked with an indication of the hazards of the contents. The containers’ accumulation dates were 3/23/2021, 3/23/2021, 3/22/2021, 3/22/2021, and 3/13/2021. One of six containers was not marked with an indication of the hazards of the contents. The container was dated with an accumulation start date, 3/5/2021.

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 .0107 [40 C.F.R. § 262.17(a)(6)], which incorporates 15A NCAC 13A .0107(i) [40 C.F.R. § 262.255], and is a condition of the LQG Permit Exemption, a generator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

QC Lab

The inspector observed the following satellite containers in the QC lab:

- One closed 5-gallon container of IPS 10:1 activator (D001 and D035) waste. The container was marked with the words “Hazardous Waste,” but not marked with an indication of the hazards of the contents.
- One closed 5-gallon container of MEK wash (D001 and D035) solvent waste. The container was not marked with the words “Hazardous Waste,” nor marked with an indication of the hazards of the contents.
- One closed 55-gallon container of waste adhesive (D001 and D035). The container was marked “Hazardous Waste,” marked with an indication of the hazards of the contents and dated 3/3/2021. *The inspectors explained to the facility representative that a start accumulation date of a satellite area container is not required.*

Pursuant to 15A NCAC 13A .0107(a) [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 with the words “Hazardous Waste” and with an indication of the hazards of the contents.

MEK Distillation Unit

The solvent distillation unit is in the Mixing Room. The inspector observed the following satellite waste container in the distillation area:

- One closed 55-gallon container of still bottoms dated 3/19/2021 and marked with EPA waste code “D001 and D035” waste. *The inspectors stated if a listed solvent identified in 40 C.F.R. § 261.31 as F001, F002, F004 or F005 for cleaning purposes (cleaning surfaces, spray guns, brushes, etc.), then the still bottoms will carry the same listing as the solvent. Any of these listed still bottoms are hazardous waste and the facility will need to apply the waste code that matches the solvent used. For example, if you use methyl ethyl ketone (F005) as a solvent in a distillation unit, then the still bottoms from that unit continue to be a listed hazardous waste and carry the F005 waste code. The inspectors*

indicated IPS to add an additional EPA waste code of F005 to the still bottom profile and container.

- The inspectors observed black tar like materials underneath the distillation unit. The inspector instructed the facility to clean-up the area and dispose of the materials accordingly.

Pursuant to 15A NCAC 13A .0107(a) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in 15A NCAC 13A .0106 [40 C.F.R. § 261.2], must use the steps articulated in 15A NCAC 13A .0107(a) [40 C.F.R. § 262.11(a) – (e)] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

Pursuant to 15A NCAC 13A .0107(a) [40 C.F.R. § 262.11(f)], an LQG must maintain records supporting its hazardous waste determinations. These records must comprise the generator's knowledge of the waste and support the generator's determination, as described at paragraphs (c) and (d) of this section.

Press Area

The inspector observed the following satellite waste containers in the Press area:

- One closed 55-gallon container of 10:1 adhesive flammable waste dated 3/19/2021;
- One closed 55-gallon container of flammable activator dated 3/15/2021;
- One closed 55-gallon container of 1:1 activator waste dated 3/17/2021; and
- One closed 55-gallon container of 1:1 adhesive flammable dated 3/12/2021.

The containers were marked with the words "Hazardous Waste" and marked with an indication of the hazards of the contents.

There were two bags of MEK laden dirty rags to be laundered by Aramark. According to the facility, no waste determination has been conducted on the MEK laden rags. The inspectors requested that IPS conduct a waste determination on the MEK laden rags.

Pursuant to 15A NCAC 13A .0107(a) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in 15A NCAC 13A .0106 [40 C.F.R. § 261.2], must use the steps articulated in 15A NCAC 13A .0107(a) [40 C.F.R. § 262.11(a) – (e)] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

Filling/Cartridge Packaging Area

The inspectors observed several satellite accumulation areas and observed the following containers:

- One 6-gallon blue container of rags was open and not marked;
- One closed 55-gallon container of 10:1 adhesive solid dated 3/17/2021; and
- One closed 55-gallon container of 10:1 activator solid dated 3/22/2021.

The 55-gallon containers were marked with the words "Hazardous Waste" and marked with an indication of the hazards of the contents.

There was an open 5-gallon container of MEK wash solvent. The container was left open to the atmosphere and it was not labeled as hazardous waste or marked with an indication of the hazards of its contents. *The inspectors instructed the facility to label the container and keep it closed when not in use.*

Pursuant to 15A NCAC 13A .0107(a) [40 C.F.R. § 262.11], a person who generates a solid waste, as defined in 15A NCAC 13A .0106 [40 C.F.R. § 261.2], must use the steps articulated in 15A NCAC 13A .0107(a) [40 C.F.R. § 262.11(a) – (e)] to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable RCRA regulations.

Pursuant to 15A NCAC 13A .0107(a) [40 C.F.R. § 262.15(a)(4)], which is a condition of the SAA Permit Exemption, a generator is required to keep containers of hazardous waste closed at all times during accumulation, except when adding, removing, or consolidating waste; or when temporary venting of a container is necessary for the proper operation of equipment, or to prevent dangerous situations, such as build-up of extreme pressure.

Pursuant to 15A NCAC 13A .0107(a) [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 with the words “Hazardous Waste” and with an indication of the hazards of the contents.

Records Review

The inspection team reviewed the facility records including the manifests and bills of lading, biennial report, training records, waste analysis plan, contingency plan, and inspection records, among other records.

Hazardous wastes generated in 2019 biennial report included:

- Spent 10:1 adhesive waste from manufacturing process, EPA waste code D001 and D035, 4,5834 lbs.;
- Spent 10:1 activator from manufacturing process, EPA waste code D001 and D035, 5,9933 lbs.;
- Spent 1:1 adhesive waste from manufacturing process, EPA waste code D001, 1,119 lbs.;
- Spent 1:1 activator from manufacturing process, EPA waste code D001, 1,563 lbs.;
- Still bottoms, EPA waste code D001 and D035, 13,569 lbs.;
- Off-spec adhesive activator, EPA waste code D001, 3,511 lbs.;
- Waste corrosive liquids lab-pack from production quality assurance lab, EPA waste code D002, 19 lbs.;
- Waste flammable liquids lab-pack from production quality assurance lab, EPA waste code D001 and U003, 17 lbs.; and
- Waste toxic liquids lab-pack from production quality assurance lab, EPA waste code U069 and U219, 21 lbs.

IPS has been using Freehold Cartage, Inc. (NJD054126164) as their transporter of hazardous waste and Giant Resources Recovery-Attalla, Inc. (ALD070513767) as the designated treatment, storage, and disposal facility.

The inspectors reviewed weekly records of inspections of the central accumulation area. The records include the date and time of the inspection and the signature of the employee conducting

the inspection. Each week, the employee records notations of observations and necessary follow-up actions for the inspected areas. No records of inspections were provided between 12/18/2018 and 1/2/2019 (14 days), 12/19/2019 and 1/6/2020 (17 days) and 12/14/2020 and 1/4/2021 (20 days).

Pursuant to 15A NCAC 13A .0107(a) [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 container and for deterioration of containers caused by corrosion or other factors.

According to facility documentation, the contingency plan (CP) was submitted to Durham Police, Durham Fire, and Duke Regional Hospital, and NCDENR on 1/4/2019. The CP listed the names and emergency telephone numbers of persons identified as emergency coordinators. Since 2019, emergency coordinators have changed but names and emergency telephone numbers had not been updated, and the revised plan was not sent to the local emergency response entities. The generator must keep documentation of the fact that it has made arrangements with local emergency response entities. A large quantity generator must also submit a quick reference guide (QRG) at the time they next submit a revised contingency plan to local response entities due to other necessary revisions. The QRG includes eight elements that are critical to local response entities when an emergency is occurring at the facility:

1. The types and names of the hazardous wastes on site and their hazard in layman's terms (e.g., toxic paint wastes, spent ignitable solvents);
2. An estimated maximum amount of each hazardous waste on site at any one time;
3. The identification of any hazardous waste that would require unique or special treatment by medical staff in the event of exposure;
4. A map of the facility identifying where hazardous waste may be located;
5. A street map of the facility in relation to surrounding businesses, residences, and schools;
6. The location of the water supply;
7. Information about any on-site notification systems to communicate with people at the facility; and
8. The name of an emergency coordinator available at any time.

Pursuant to 15A NCAC 13A .0107(a) [40 C.F.R. § 262.17(a)(6)], which incorporates 15A NCAC 13A .0107(i) [40 C.F.R. § 262.263(d)], and is a condition of the LQG Permit Exemption, the contingency plan must be reviewed, and immediately amended whenever the list of emergency coordinators changes.

Employee hazardous waste training records were reviewed for 2018, 2019 and 2020. IPS's hazardous waste training records included the job titles and descriptions for persons responsible for managing hazardous waste, or the names of employees filling those positions. No records were provided to show that the contingency plan was reviewed by employees. The RCRA and DOT training records were available for Mr. James Crisp from 2018-2020 calendar years. No records were provided to show that the contingency plan was reviewed or RCRA training was provided to Mr. Edgar Young and Kevin Connolly during 2018-2020 calendar year. According to IPS representative, Mr. Connolly left IPS early 2020.

Pursuant to 15A NCAC 13A .0107(a) [40 C.F.R. § 262.17(a)(7)(i)-(iii)], which is a condition of the LQG Permit Exemption, facility personnel must successfully complete a program of classroom instruction, online training, or on-the-job training that teaches them to perform their duties in a way that ensures compliance with this part. Facility personnel must successfully complete this training within six months and must take part in an annual review of the initial training.

10) Out-Briefing

The inspectors conducted the exit meeting with Mr. James Crisp. During this meeting, the inspectors stated their preliminary conclusions of the inspection. Based on the observations made during the inspection, IPS appeared to be deficient with the RCRA requirements.

11) Signed

Signature
Parvez Mallick
Inspector and Author of Report

Date

12) Concurrence and Approval

Signature
Araceli B. Chavez
Chief
RCRA Enforcement Section

Date