

RCRA Compliance Branch INSPECTION REPORT

Inspection Date(s):	05/07/2025	Inspection Announced: No
Facility or Site Name:	Starfire Systems Inc.	
Facility/Site Physical Location:	8 Sarnowski Drive	
(city, state, zip code)	Schenectady, NY 12302	
Mailing address (if different from above):		
(city, state, zip code)		
Facility/Site Contact:	Jeremy Pratten	Chemical Operator
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	(845) 443-3119	
RCRA ID Number:	NYR000227108	
Facility/Site Personnel Participating in Inspection:		
Jeremy Pratten	Above	Above
Alex Blair	EHS and Production Manager	Alex.blair@starfiresystems.com (347) 733-9961
Inspector(s):		
William Chernes	WILLIAM CERNES Digitally signed by WILLIAM CERNES Date: 2025.07.15 12:29:29 -04'00'	
Supervisor:		
Derval Thomas	DERVAL THOMAS Digitally signed by Derval THOMAS Date: 2025.07.14 19:51:21 -04'00'	

SECTION I – INTRODUCTION

Purpose of the Inspection Objective

The purpose of the inspection was to determine the facility's compliance with the Resource Conservation and Recovery Act. The inspection was conducted by EPA RCRA inspector William Chernes.

Opening Conference

EPA Region 2 RCRA inspector William Chernes arrived at the Starfire Systems Inc. facility on May 07, 2025, for an unannounced inspection. I met with Mr. Jeremy Pratten, Chemical Operator, at the opening conference of the inspection. I presented my credentials to Mr. Pratten and informed him that this was an EPA inspection to determine the facility's compliance with RCRA. The scope of the inspection a compliance evaluation inspection (CEI).

Facility/Site Description

Starfire Systems Inc. is a chemical manufacturer that creates polymer, ceramic technology, and epoxy type products for the aerospace industry. The facility maintains several laboratories, a mixing room area, and the Polymer Lab Production Area. The hazardous wastes typically generated at the facility include corrosive and ignitable wastes. Hazardous wastes are collected in satellite accumulation containers, storage drums, and 275-gallon totes. A scrubber is also used in production to remove HCl gas. The facility was determined to be a Large Quantity Generator (LQG) of hazardous waste at the time of the inspection.

The facility employs approximately 10 individuals and operates Monday to Friday from 8AM – 5PM.

SECTION II – OBSERVATIONS

Fine Chemicals Lab

The fine chemicals laboratory is a small-scale chemistry lab, that conducts both research and development as well as final product production. The fine chemicals laboratory had one 1-gallon satellite accumulation container that was not labeled or closed. Additionally, four approximately 5-gallon municipal waste garbage cans were observed with hazardous waste PPE, hazardous waste lab equipment (pipettes, etc.), and hazardous waste chemical-stained rags stored within them (figures 1-4). The facility representative stated the hazardous waste observed within the municipal waste garbage cans are disposed of within the facility's municipal waste dumpster located in the Back Pad Area.

Polymer Lab

The polymer laboratory contained a 90-day hazardous waste storage area. Two 55-gallon hazardous waste drums (one was a satellite drum) were observed in this area at the time of the inspection; one of the hazardous waste drums was not labeled or dated, and the other satellite accumulation hazardous waste drum was not labeled with the words "Hazardous Waste". Additionally, there was one 1-gallon satellite accumulation container that was not labeled or closed. The storage area did have a spill kit and fire extinguisher. The two 55-gallon hazardous waste drums are pumped from this area to the Back Pad storage area 275-gallon totes. The facility uses a double-diaphragm pump; the pump was not tagged at the time of the inspection.

The facility representative stated the pump system utilizes just one valve, and the valve was properly tagged.

Polyramics Lab

The polyramics laboratory had one 55-gallon satellite accumulation container and one 5-gallon satellite accumulation container at the time of the inspection. The 55-gallon satellite accumulation container was not labeled “Hazardous Waste” and was not labeled with words identifying its contents. Additionally, the 5-gallon satellite accumulation container was not closed (figure 5). There was a 2.5-gallon container of glycol located in this area as well. Several hazardous waste saturated and unusable absorbent pads were observed in this area at the time of the inspection. The absorbent pads were stated to be used to collect spilled hazardous wastes; the pads were severely stained and saturated and no longer sufficient to properly contain hazardous waste spills. (figures 6 and 7). The facility representative stated the hazardous waste containing absorbent pads are disposed of within the municipal waste stream (municipal waste dumpster).

Mixing Room

The mixing room is used to fill containers with virgin materials for production. The containers are filled under a fume hood to collect chemical vapors; however, the fume hood was not operable at the time of the inspection. The virgin materials are stored in flammables storage cabinets in this area. The areas of concern observed in the flammable’s cabinets at the time of the inspection were as follows:

- Flammable Cabinet 1 – One container labeled as “unknown substance - needs GC,” the container was unidentified at the time of the inspection and a hazardous waste determination was not done. The container had a corrosives placard on it and was incompatibly stored with ignitable materials (figure 8).
- Flammables Cabinet 2 – Corrosive and ignitable materials were incompatibly stored in this area. Many of the stored chemical containers showed signs of corrosion and degradation. One 35-gallon drum of magnesium powder was observed to be severely degraded and had flammable liquid stored on top of the drum. The magnesium powder was labeled “dangerous when wet” and “spontaneously combustible” (figures 9 and 10).
- Flammables cabinet 3: Lithium aluminum hydride was stored in this cabinet.

Back Pad Area

The back pad area is used as the main hazardous waste and waste storage area. The back pad area contained hazardous waste totes and hazardous waste drum storage. The hazardous waste observed in this area at the time of the inspection was as follows:

- Four 55-gallon drums were observed on a pallet, the facility representative stated the facility was determining if these chemicals were still usable. One 55-gallon drum of Tetrahydrofuran was observed to be extremely corroded and potentially unusable in the condition observed (figure 11).
- Four full 275-gallon hazardous waste totes (not in the filling pad area) were closed and labeled but were not dated.

- Three 275-gallon hazardous waste totes were observed in the filling pad area. One tote was hooked up to the fill line that is pumped from the polymer lab. All three totes were not labeled and not dated. Additionally, two of the totes were not closed; one tote utilized a T pipe connector to vent vapors (figure 12), and one tote had an open hose connection attached to the top cap (figure 13).
- One 275-gallon hazardous waste tote used to collect corrosive scrubber wastes did not have a date on the hazardous waste label. However, a date was observed written on the hazardous waste tote for 08/14/2024, and the facility representative stated the tote has been accumulating waste on site for approximately 6-months (figure 14).
- Hazardous waste lab pipettes were observed scattered all around the back pad area, there was yellowing and staining observed inside the pipettes indicating they have been used (figure 15).
- One 5-gallon container filled with used hazardous waste containing absorbent pads and hazardous waste PPE, the container was not closed, labeled, or dated. The absorbent pads were completely saturated. The facility representative stated the hazardous waste container will be disposed of within the municipal waste dumpster (figure 16).
- The secondary containment area in the back pad area was severely corroded, cracked, and pitted. Any release in this area would not be contained and would likely enter the soil.

Municipal Waste Dumpster

The municipal waste dumpster was located in the back pad area. Hazardous waste was observed disposed of within the municipal dumpster. Hazardous wastes that were observed at the time of the inspection include hazardous waste absorbent pads, hazardous waste PPE, hazardous waste lab equipment (pipettes, etc.), and soiled chemical-stained rags (Figures 17-19). There were several contractor bags observed with unidentified content in the dumpster as well. When the facility representative opened the dumpster, a strong solvent odor was identified coming from the dumpster's contents. The facility was ordered to remove all hazardous waste from the dumpster before close of business to ensure no further illegal disposal at a municipal waste facility. The facility representative stated the company has been disposing of the hazardous wastes identified in the municipal waste dumpster since the opening of the new location in 2018.

Record Review

- Manifests and Land Disposal Restrictions

After review of the manifest and land disposal restrictions, there were no discrepancies to report.

- Weekly Container Storage Area Inspections

The weekly container storage area inspections were deficient, the inspection sheet did not include container conditions which is required for proper weekly inspections.

- Contingency Plan

The contingency plan contained all required information and was up to date.

- Arrangements with the Local Authorities

The facility did not have any records to show arrangements with the local authorities were made.

- Personnel Training

The personnel training was determined to be deficient, there were several reoccurring RCRA concerns throughout the facility. Additionally, due to the deficient training, hazardous waste was illegally disposed of to a municipal waste facility since 2018.

SECTION III – AREAS OF CONCERN

Regulatory Concerns

1. Pursuant to 6 NYCRR § 372.2(a)(2), Hazardous waste determination. A person who generates a solid waste must determine if that waste is a hazardous waste...
 - a. At the time of the inspection, the facility had failed to make a hazardous waste determination for its lab PPE (personal protection equipment) and general facility PPE which inevitably led to the disposal of hazardous waste into the municipal waste stream.
 - b. At the time of the inspection, the facility had failed to make a hazardous waste determination for its laboratory equipment (pipettes, etc.) which inevitably led to the disposal of hazardous waste into the municipal waste stream.
 - c. At the time of the inspection, the facility had failed to make a hazardous waste determination for its hazardous waste containing absorbant pads which inevitably led to the disposal of hazardous waste into the municipal waste stream.
 - d. At the time of the inspection, the facility had failed to make a hazardous waste determination for its hazardous waste chemical containing rags which inevitably led to the disposal of hazardous waste into the municipal waste stream.
 - e. At the time of the inspection, the facility failed to make a hazardous waste determination for a container labeled as “unknown substance - needs GC,” located in the mixing room flammables cabinet 1. The container was unidentified at the time of the inspection and a hazardous waste determination was not done. The container had a corrosives placard on it and was incompatibly stored with ignitable materials.
 - f. At the time of the inspection, the facility had failed to make a hazardous waste determination for a 55-gallon drum of Tetrahydrofuran that was located in the back pad area. The drum was observed to be extremely corroded and inherently waste like.
2. Pursuant to 6 NYCRR § 373-3.3(b), Facilities must be maintained and operated 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.
 - a. At the time of the inspection, the facility failed to prevent hazardous waste from entering the municipal waste stream and therefore increasing the risk to human health and the environment. Various streams of hazardous waste were observed disposed of within the municipal waste dumpster. It was also determined that the hazardous waste was disposed of as municipal waste since the opening of the facility in 2018.

- b. At the time of the inspection, one 35-gallon drum of magnesium powder located in the mixing room flammables cabinet 2 was observed to be severely degraded and had flammable liquid stored on top of the drum. The magnesium powder was labeled “dangerous when wet” and “spontaneously combustible.” Due to the reactive nature of the magnesium powder and the conditions of its storage, the risk of a fire or explosion significantly increases. This substantially impacts the safety of employees and visitors at the facility.
- 3. Pursuant to 6 NYCRR § 373-3.9(d)(1), (d) Management of containers. (1) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.
 - a. At the time of the inspection, the fine chemicals laboratory had one 1-gallon satellite accumulation container that was not closed.
 - b. At the time of the inspection, one 5-gallon satellite accumulation container located in the polyramics lab was not closed.
 - c. At the time of the inspection, two of the totes located in the back pad area were not closed; one tote utilized a T pipe connector to vent vapors, and one tote had an open hose connection attached to the top cap .
 - d. At the time of the inspection, one 5-gallon container filled with used hazardous waste containing absorbant pads and hazardous waste PPE located in the back pad area was not closed.
- 4. Pursuant to 6 NYCRR § 373-3.9(d)(3), (3) Containers holding hazardous waste must be marked with the words “Hazardous Waste” and with other words identifying their contents.
 - a. At the time of the inspection, one 55-gallon hazardous waste drum located in the polymer lab was not labeled.
 - b. At the time of the inspection, three 275-gallon hazardous waste totes were observed in the filling pad area. All three totes were not labeled with the words “Hazardous Waste.”
 - c. At the time of the inspection, one 5-gallon container filled with used hazardous waste containing absorbant pads and hazardous waste PPE located in the back pad area was not labeled with the words “Hazardous Waste” and with other words identifying its contents.
- 5. Pursuant to 6 NYCRR § 372.2(a)(8)(i)(a)(2), (a) A generator may accumulate up to 55 gallons of hazardous waste or one quart of acutely hazardous waste listed in section 371.4(b), (c) and (d)(5) of this Title 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 interim status and without complying with subparagraph (ii) of this paragraph, provided the generator: (2) marks the containers with the words "hazardous waste" and with other words that identify the contents of the containers.
 - a. At the time of the inspection, one 1-gallon satellite accumulation container located in the fine chemicals lab that was not labeled.
 - b. At the time of the inspection, one 55-gallon satellite accumulation drum located in the polymer lab was not labeled with words identifying its contents.

- c. At the time of the inspection, one 55-gallon satellite accumulation drum located in the polyamatics lab was not labeled “Hazardous Waste” and was not labeled with words identifying its contents.
6. Pursuant to 6 NYCRR § 372.2(a)(8)(ii), Except as provided in subparagraphs (iii), (iv), and (v) of this paragraph, a generator may accumulate hazardous waste on-site of generation for a period of 90 days or less under the provisions of section 373 1.1(d)(1)(iii), (iv), (xix) and (xx) of this Title. The date upon which each period of accumulation begins must be clearly marked and visible for inspection on all containers.
 - a. At the time of the inspection, one 55-gallon hazardous waste drum located in the polymer lab was not dated.
 - b. At the time of the inspection, eight 275-gallon hazardous waste totes located in the back pad area were not dated.
 - c. At the time of the inspection, one 5-gallon container filled with used hazardous waste containing absorbant pads and hazardous waste PPE located in the back pad area was not dated.
7. Pursuant to 6 NYCRR § 373-3.9(e), At least weekly, the owner or operator must inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.

At the time of the inspection, the weekly container storage area inspections were deficient, the inspection sheet did not include container conditions which is required for proper weekly inspections. Additionally, many areas were misidentified as satellite accumulation areas but in fact were hazardous waste storage areas.

8. Pursuant to 6 NYCRR § 373-3.3(g)(1)(i) and (iv), The owner or operator must attempt to make the following arrangements as appropriate for the type of waste handled at the owner or operator's facility and the potential need for the services of these organizations: arrangements to familiarize police, fire departments and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes; ... arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions or releases at the facility.

At the time of the inspection, the facility did not have any records to show arrangements with the local authorities were made.

General Concerns

1. At the time of the inspection, the secondary containment area in the back pad area was severely degraded, any release in the area could potentially enter the ground. Additionally, in several locations the containment area was uneven increasing tripping hazard risks.

2. Pursuant to 6 NYCRR § 373-3.2(g)(1-3), (i) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this Subpart. The owner or operator must ensure that this program includes all the elements described in the document required under subparagraph (4)(iii) of this subdivision. (ii) This program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed. (iii) At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment and emergency systems, including where applicable:
- (a) procedures for using, inspecting, repairing and replacing facility emergency and monitoring equipment;
 - (b) key parameters for automatic waste feed cutoff systems;
 - (c) communication or alarm systems;
 - (d) response to fires or explosions;
 - (e) response to ground-water contamination incidents; and (f) shutdown of operations.
- (iv) For facility employees that receive emergency response training pursuant to Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910.120(p)(8) and 1910.120(q) (see section 370.1[e] of this Title), the facility is not required to provide separate emergency response training pursuant to this section, provided that the overall facility training meets all the requirements of this section. (2) Facility personnel must successfully complete the program required in paragraph (1) of this subdivision within six months after the date of their employment or an assignment to a facility, or to a new position at a facility. Employees must not work in unsupervised positions until they have completed the training requirements of paragraph (1) of this subdivision. (3) Facility personnel must take part in an annual review of the initial training required in paragraph (1) of this subdivision.

At the time of the inspection, the personnel training was determined to be deficient, there were several reoccurring RCRA concerns throughout the facility. Additionally, due to the deficient training, hazardous waste was illegally disposed of to a municipal waste facility since 2018.

Closing Conference

Inspector Chernes went over the compliance evaluation inspection that had just been conducted at the facility and discussed the various area of concerns that were identified during the inspection. Mr. Pratten and Mr. Blair stated they would remedy these concerns immediately.

Figures:



Figure 1: Hazardous waste lab PPE, hazardous waste lab equipment, and hazardous waste chemical-stained rags observed stored in municipal waste garbage can.



Figure 2: Hazardous waste lab PPE, hazardous waste lab equipment, and hazardous waste chemical-stained rags observed stored in municipal waste garbage can.



Figure 3: Hazardous waste lab PPE, hazardous waste lab equipment, and hazardous waste chemical-stained rags observed stored in municipal waste garbage can.



Figure 4: Hazardous waste lab PPE, hazardous waste lab equipment, and hazardous waste chemical-stained rags observed stored in municipal waste garbage can.



Figure 5: The 5-gallon satellite accumulation container located in the polyramics lab was not closed. Additionally, hazardous waste containing absorbant pads were observed in this figure. The absorbant pads were saturated and no longer sufficient to collect hazardous wastes.



Figure 6: Absorbant pads observed in the polyramics lab were severely stained and saturated and no longer sufficient to properly contain hazardous waste spills.



Figure 7: Absorbant pads observed in the polyramics lab were severely stained and saturated and no longer sufficient to properly contain hazardous waste spills.



Figure 8: In the mixing room flammables cabinet 1, one container labeled as “unknown substance - needs GC,” the container was unidentified at the time of the inspection and a hazardous waste determination was not done. The container had a corrosives placard on it and was incompatibly stored with ignitable materials.



Figure 9: In the mixing room flammables cabinet 2, one 35-gallon drum of magnesium powder was observed to be severely degraded and had flammable liquid stored on top of the drum. The magnesium powder was labeled “dangerous when wet” and “spontaneously combustible.”



Figure 10: In the mixing room flammables cabinet 2, many of the stored chemical containers showed signs of corrosion and degradation. The corroded magnesium powder drum can also be seen in the figure.



Figure 11: In the back pad area, one 55-gallon drum of Tetrahydrofuran was observed to be extremely corroded and potentially unusable in the condition observed.



Figure 12: One tote located in the back pad area utilized a T pipe connector to vent vapors and was not closed.



Figure 13: One tote located in the back pad area had an open hose connection attached to the top cap and was not closed.



Figure 14: One 275-gallon hazardous waste tote located in the back pad area used to collect corrosive scrubber wastes was not dated. A date was observed written on tote for 08/14/2024 however, the facility representative stated the tote has been accumulating waste on site for approximately 6-months



Figure 15: This figure shows one of the many areas in the back pad area where hazardous waste lab pipettes were observed scattered on the ground.

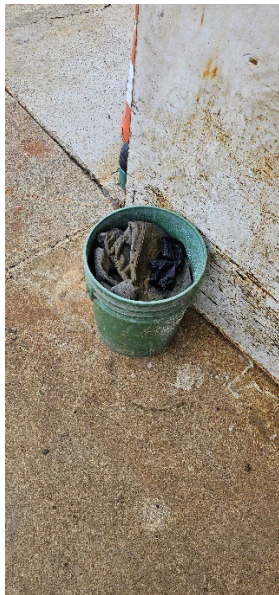


Figure 16: One 5-gallon container located in the back pad area filled with used hazardous waste containing absorbent pads and hazardous waste PPE, the container was not closed, labeled, or dated.



Figure 17: . Hazardous waste observed disposed of within the municipal dumpster in the back pad area. Hazardous wastes that were observed at the time of the inspection include hazardous waste absorbant pads, hazardous waste PPE, Hazardous waste lab equipment (pipettes, etc.), and soiled chemical-stained rags.



Figure 18: Hazardous waste observed disposed of within the municipal dumpster in the back pad area. Hazardous wastes that were observed at the time of the inspection include hazardous waste absorbant pads, hazardous waste PPE, Hazardous waste lab equipment (pipettes, etc.), and soiled chemical-stained rags.



Figure 19: Hazardous waste observed disposed of within the municipal dumpster in the back pad area. Hazardous wastes that were observed at the time of the inspection include hazardous waste absorbant pads, hazardous waste PPE, Hazardous waste lab equipment (pipettes, etc.), and soiled chemical-stained rags.