

**HAZARDOUS WASTE SECTION - COMPLIANCE BRANCH
FILE TRANSMITTAL & DATA ENTRY FORM**

Your Name: Bobby Nelms

Facility ID Number: NCS000002291

Facility Name: Element One, Inc.

Document Group: Inspection/Investigation (I)

Document Type: I - Compliance Evaluation Inspection

File Description/Comments: IANOV Docket #2016-022 issued for CEI conducted 2/26/2016

Date of Document: 2/26/2016

Author(s) of Document: Bobby Nelms

Inspector ID #: NC036

Suborganization: Eastern Region

County (if not on report): New Hanover

For Violations:

Enforcement Date: 3/7/2016

Docket Number: 2016-022

Enforcement Type: IANOV

How many violations were there? 2

For IANOV or CO: The facility is a SNC (SNY Evaluation)

Outcome Measures for CSE for IANOV or CO:

Waste Involved	Volume	Exposure Media (a, gw, sw, s)	Distance to Residences	Number of People involved	Distance to On-site wells	Distance to Off-site wells

Violation #1:

Date Determined: 2/26/2016

Scheduled Return to Compliance:

Actual Return to Compliance: [Click here to enter a date.](#)

Regulation Description: 40 CFR 262.11

Comment: 7

For CSE, Corrections to Violations were:

Violation #2:

Date Determined: 2/26/2016

Scheduled Return to Compliance: /1/2016

Actual Return to Compliance: [Click here to enter a date.](#)

Regulation Description: 15A NCAC 13A .0109(a)

Comment: Hazardous waste may have been disposed of and or treated without complying with permitting requirements of Parts 264 and 265

For CSE, Corrections to Violations were:

**STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WASTE MANAGEMENT
HAZARDOUS WASTE SECTION**

COMPLIANCE EVALUATION INSPECTION REPORT

1. FACILITY INFORMATION:

Facility Name: Element One, Inc.
ID Number: NCS000002291
Status of Facility: To be Determined
Facility Location: 6319-D Carolina Beach Road, Wilmington, NC 28412
County: New Hanover
Phone Number: 910-793-0128

2. FACILITY CONTACT: Kenneth Smith, President - Element One, Inc.

3. INSPECTION PARTICIPANTS: Kenneth Smith, Element One
Bobby Nelms, NCDEQ

4. DATE OF INSPECTION: February 26, 2016

5. DATE OF LAST INSPECTION: Never inspected

6. PURPOSE OF INSPECTION: Unannounced audit to determine compliance with regulations described at 40 CFR 261, 262, 265, 268, 273 and 279.

7. FACILITY DESCRIPTION: Element One, Inc. (Element One) is a privately held independent laboratory located in Wilmington, North Carolina. Element One offers a broad spectrum of confidential analytical and consulting services specializing in metals analyses and method development. There are six labs in the facility: Toxicity Characteristic Leaching Procedure (TCLP) lab, analysis lab, wet lab, IC (Instrument) lab, metals prep lab, and particulate lab. Element One is a certified laboratory for VA, TX, LA, NJ, PA, and NC.

Distance to closest residence: 150 Feet
Distance to closest off-site well(s): 150 feet (suspected)
Water supply: Cape Fear Public Utility Authority
Description of wells on-site: None
Sewage: Cape Fear Public Utility Authority
Operating shifts: 8-5, M-F
Number of employees: Fluctuates from 9-12
Size of facility: 8000 square feet

The facility has not notified with the Hazardous Waste Section as a hazardous waste generator. Due to the facility disposing of waste down the laboratory sinks, the hazardous waste generation status of the facility could not be determined on the day of the inspection.

8. WASTE STREAMS INCLUDE:

During the inspection, Mr. Smith stated laboratory waste was disposed of in the laboratory sinks. Mr. Smith stated that solutions with a pH of 1 were disposed of down the drain without prior neutralization. Mr. Smith also stated that waste solutions generated from the High Performance Liquid Chromatography (HPLC) equipment were disposed of in the laboratory sinks. Typically the mobile phase used in HPLC is an aqueous blend of water with a miscible, polar organic solvent, such as acetonitrile or methanol which, when disposed of, may be an ignitable (D001) and F-listed (F003) hazardous waste. Based on the analytical services provided by Element One solvents used by the laboratory may include acetone, ethyl ether, methanol, methyl isobutyl ketone, xylene and methylene chloride. When disposed of, these solvents could be characterized as ignitable (D001) and/or F-listed (F002, F003, F005). Additionally, Mr. Smith stated that the laboratory stored samples for 6 months and then disposed of them down the laboratory sink drains. Per 40 CFR 261.4(d), samples that are sent to the lab for analysis are not considered regulated waste while awaiting testing, while stored after testing for a specific purpose, or while being transported back to the sample collector. However, once the samples are analyzed and they are designated for disposal by the analyzing laboratory, a waste determination must be made on the samples.

The facility must identify the type(s) and amount of hazardous waste generated at the facility and manage and dispose of hazardous wastes according to the applicable hazardous waste rules.

Other waste streams include – Universal waste lamps

Non-RCRA regulated waste streams include – Municipal solid waste

9. AREAS OF REVIEW AND INSPECTION:

- **Manifests:** Because waste was being disposed down the laboratory sinks, there were no hazardous waste manifests to review. Since there were no manifests, information on hazardous waste transporters and hazardous waste treatment, storage and disposal (TSD) facilities was not captured.
- **Satellite Accumulation Areas:** There were no hazardous waste accumulation containers observed during the inspection. All containers observed in the laboratory appeared to be products and/or actively used for laboratory processes.
- **Storage Areas:** There were no hazardous waste storage containers observed during the inspection. Mr. Smith stated that all wastes generated at the Element One, Inc. facility were disposed in the sinks which are plumbed to a “neutralization tank” which is then discharged to the Cape Fear Public Utility Authority. Mr. Smith provided a blueprint drawing of the original design of the neutralization tank, but it does not indicate the size or scale of the tank. The neutralization tank has not been cleaned out since Element One, Inc. began operation at the site three years ago nor has it ever been equipped with neutralization media. The neutralization tank may be subject to the hazardous waste tank requirements described in 40 CFR 265 Subpart J.
- **Universal Waste:** The facility has the potential to generate used lamps. On the day of the inspection, no used lamps were observed. The facility must comply with the universal waste regulations described in 40 CFR 273 for used lamps.
- **Used Oil:** N/A

10. VIOLATIONS:

40 CFR 262.11, adopted by reference at 15A NCAC 13A .0107(a), requires that a person who generates a solid waste, as defined in 40 CFR 261.2, must determine if the waste is a hazardous waste using the following method:

- a. He should first determine if the waste is excluded from regulation under 40 CFR 261.4.
- b. He must then determine if the waste is listed as a hazardous waste in Subpart D of 40 CFR Part 261.
- c. If the waste is not listed as a hazardous waste in Subpart D of 40 CFR Part 261, he must determine whether the waste is identified in Subpart C of 40 CFR Part 261 by either:
 - i. Testing the waste according to the methods set forth in Subpart C of 40 CFR Part 261, or according to an equivalent method approved by the Administrator under 40 CFR 260.21; or
 - ii. Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

Element One, Inc. is in violation of 40 CFR 262.11, adopted by reference at 15A NCAC 13A .0107(a), in that solid waste was disposed of as defined in 40 CFR 261.2 and a determination was not made by the generator whether that waste was a hazardous waste. All waste was being disposed of in the laboratory sinks.

In order to properly manage hazardous waste, the lab must identify and inventory all of the facility's waste streams, characterize these wastes, and then determine and track the facility's waste generation status. Once the type and volume of the hazardous waste is identified and characterized, the facility must comply with all applicable requirements for the volume of hazardous waste generated at the site.

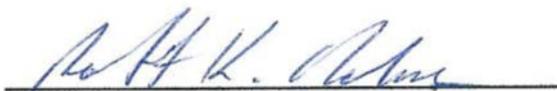
15A NCAC 13A .0109(a), requires that any person who treats, stores, or disposes of hazardous waste shall comply with the requirements set forth in this section. The treatment, storage or disposal of hazardous waste is prohibited except as provided in 40 CFR Parts 264 and 265, adopted by reference in 15A NCAC 13A .0109 and .0110.

Element One, Inc. may be in violation of 15A NCAC 13A .0109(a), in that hazardous waste may have been disposed of and/or treated without complying with the requirements set forth in 40 CFR Parts 264 and 265, adopted by reference in 15A NCAC 13A .0109 and .0110.

11. CONCLUSION:

An Immediate Action Notice of Violation (IANOV) Docket # 2016-022 has been issued requiring the violations listed above be addressed. Specific compliance instructions and more information are provided in the IANOV.

Once the type and volume of the hazardous waste is identified and characterized, the facility must comply with all applicable requirements for the volume of hazardous waste generated at the site.



Date: March 7, 2016

Robert K. Nelms
Environmental Senior Specialist, NCDEQ