

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

Facility ID Number: NCR000143545

Facility Name: Momentive Specialty Chemicals, Inc.

Document Group: Inspection/Investigation (I)

Document Type: I - Compliance Evaluation Inspection (CEI)

File Description/Comments: Copy of EPA Inspection for July 15-16, 2008 inspection of "Hexion Specialty Chemicals"

Date of Document: 7/15/2008

Author(s) of Document: Nancy McKee

Inspector Name: N/A

Suborganization:

County (if not on report): Columbus



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

David Swart, P.E., Engineering Engineer
Hexion Specialty Chemicals
333 Neils Eddy Road
Riegelwood, North Carolina 28456

SUBJ: RCRA Compliance Evaluation Inspection
Hexion Specialty Chemicals
EPA ID: NCR 000 143 545

Dear Mr. Swart:

On July 15, 2008 – July 16, 2008, a multi-media Compliance Evaluation Inspection (CEI) was conducted by the United States Environmental Protection Agency (EPA) and the North Carolina Department of Environment and Natural Resources (NCDENR) at Hexion Specialty Chemicals, located in Riegelwood, North Carolina, to determine the facility's compliance status with the Resource Conservation and Recovery Act (RCRA). This RCRA CEI included a sampling investigation by EPA's Science and Ecosystem Support Division (SESD).

Enclosed is the EPA RCRA Inspection Report, which includes the EPA SESD RCRA Sampling Investigation Report. The RCRA Inspection Report indicates violations of RCRA ~~were discovered.~~ A copy of this report has also been forwarded to NCDENR.

If you have any questions concerning the inspection report, please contact Nancy McKee, of my staff, at (404) 562-8674 or by e-mail at mckee.nancy@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Doug McCurry".

Doug McCurry, Chief
North Enforcement & Compliance Section
RCRA and OPA Enforcement & Compliance Branch
RCRA Division

Enclosure

cc: Elizabeth Cannon, NCDENR



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

Ms. Elizabeth Cannon, Chief
Hazardous Waste Section
North Carolina Department of Environment & Natural Resources
401 Oberlin Road, Suite 150
Raleigh, North Carolina 27605

SUBJ: RCRA Compliance Evaluation Inspection (CEI)
Hexion Specialty Chemicals
EPA ID: NCR 000 143 545

Dear Ms. Cannon:

On July 15, 2008 – July 16, 2008, a Compliance Evaluation Inspection (CEI) was conducted by the United States Environmental Protection Agency (EPA) and the North Carolina Department of Environment & Natural Resources at Hexion Specialty Chemicals in Riegelwood, North Carolina, to determine the facility's compliance status with the Resource Conservation and Recovery Act (RCRA). This RCRA CEI was an EPA lead inspection.

Enclosed is the EPA RCRA Inspection Report, which includes the EPA SESD RCRA Sampling Investigation Report. The RCRA Inspection Report indicates violations of RCRA were discovered. Pursuant to the current RCRA Enforcement Response Policy, the facility has been determined by EPA to be a Significant Non-Complier. Based on our telephone conversation on May 29, 2009, EPA will be taking the lead on enforcement.

If you have any questions regarding the inspection, please contact Nancy McKee, of my staff, by phone at (404) 562-8674, or by e-mail at mckee.nancy@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Doug McCurry".

Doug McCurry, Chief
North Enforcement and Compliance Section
RCRA and OPA Enforcement and Compliance
Branch

Enclosure

cc w/enclosure: Bobby Nelms, NCDENR

RCRA Inspection Report

1) Inspector and Author of Report

Nancy McKee, Environmental Scientist
United States Environmental Protection Agency (EPA), Region 4
RCRA Division, RCRA and OPA Enforcement and Compliance Branch
61 Forsyth Street, S.W.
Atlanta, Georgia 30303
404-562-8674

2) Facility Information

Hexion Specialty Chemicals
333 Neils Eddy Road
Riegelwood, North Carolina 28456
Columbus County
EPA ID Number: NCR 000 143 545

3) Responsible Officials

David Swart, P.E., Engineering Manager
Hexion Specialty Chemicals
(910) 655-2263 Ext. 5222

April Hanson, EH & S Leader
Hexion Specialty Chemicals
(910) 655-2263 Ext. 5248

4) Inspection Participants

April Hanson, Hexion Specialty Chemicals (Hexion)
David Swart, Hexion
Michelle West, Hexion
Joel Fonte, Hexion
Nancy McKee, EPA, RCRA Division
David Abbott, EPA, Office of Environmental Accountability (OEA)
Ron Mikulak, EPA, OEA
Joe Compton, EPA, Science and Ecosystem Support Division (SESD)
Mike Neill, EPA, SESD
Brian Herndon, EPA Contractor, SESD
Bobby Nelms, Waste Management Specialist, North Carolina Department of
Environment and Natural Resources, Hazardous Waste Section

5) Date and Time of Inspection

July 15, 2008 – July 16, 2008

6) Applicable Regulations

40 Code of Federal Regulation (CFR), Parts 260 - 270, 273, & 278 Resource Conservation and Recovery Act (RCRA) Sections 3005 and 3007, (42 US Code - Annotated U.S.C.A. 6925 and 6927), and Title 15A Chapter 13, North Carolina Administrative Code.

7) Purpose of Inspection

The purpose of this inspection was to conduct an unannounced compliance evaluation inspection (CEI) to determine Hexion Specialty Chemicals' (Hexion) compliance with the applicable requirements of RCRA and the corresponding NCDENR regulations. This CEI was an EPA lead multi-media inspection that included sampling conducted by EPA SESD.

8) Facility Description

Up until December 2006, this facility operated under the name Wright Chemical Corporation. At that time, Oak-Bark Corporation (OBC) purchased all Wright Chemical Corporation's Acme, North Carolina assets. On November 30, 2006, OBC sold part of its Acme chemical complex plus about 20 acres of its 750 acre site to Hexion Specialty Chemicals, Inc.

Currently, Hexion and OBC operate in separate buildings, but share the facility (with two separate EPA ID#s). The facility is access controlled with a perimeter fence and security. Hexion has 67 employees and operates on four – 12 hour rotating shifts.

Hexion manufactures formaldehyde and hexamine. Formaldehyde is manufactured by oxidizing methanol, using a vanadium pentoxide as a catalyst. Hexamine is manufactured using formaldehyde and ammonia. The facility NAICS code is 325199 – All Other Basic Organic Chemical Manufacturing.

The first EPA notification of waste activity occurred on January 26, 2007. A subsequent update occurred on July 25, 2008, changing the status of the facility from a small quantity generator of hazardous waste to a large quantity generator of hazardous waste. Hexion is currently notified as a large quantity generator of hazardous waste.

Hazardous waste is generated as a result of facility maintenance, laboratory operations, and facility maintenance.

Hexion has a Title V air permit (NO. 01394T39) that was issued and became effective on May 9, 2008. This permit expires on January 31, 2009. Additionally, Hexion has a National Pollution Discharge and Elimination System permit (NC0003395). Hexion's stormwater permit (NCS000156) has expired (Wright Chemical Corporation applied for the original permit). A new stormwater permit will be applied for shortly.

Domestic waste water for both Hexion and OBC is discharged to an on-site septic tank. Industrial waste water is pre-treated on-site and final treatment occurs at a publically owned treatment works that is operated by Hexion. Solids from the waste water process are sent to Columbus County landfill for consolidation.

9) **Previous Inspection History**

NCDENR Hazardous Waste Section conducted the following inspections:

- April 19, 2007 – Compliance Evaluation Inspection. Inspection resulted in a Notice of Violation from NCDENR to Hexion (NOV #2007-107). Three violations were identified.
- April 22, 2007 – Compliance Scheduled Evaluation. No violations were identified.

10) **Findings**

On July 15, 2008, EPA and NCDENR officials arrived at Hexion at approximately 9:00 a.m. Facility representatives from Hexion and OBC received the inspectors. Soon after, an entrance meeting was held with both Hexion and OBC officials, where the inspectors introduced themselves, showed their credentials, and explained the purpose of the visit. Hexion officials provided a tour of their facility operations on July 15 – 16, 2008.

Quality Assurance (QA) Laboratory

The QA Laboratory, Solvent and Gas Room, had three satellite accumulation areas (SAAs) that were being used to accumulate hazardous waste. One container of hazardous waste located in this room was open at the time of the inspection. All other containers were labeled and were closed.

According to 40 CFR § 262.34(c)(1)(i), adopted by reference at 15A NCAC 13A .0107(c), a container holding hazardous waste that is located in a satellite accumulation area must comply with 40 CFR § 265.173(a), adopted by reference at

15A NCAC 13A .0110(i), which states that a container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. Hexion appears to have failed to close one container of hazardous waste, which was being managed in a SAA, located in the QA Laboratory, Solvent and Gas Room.

Hazardous Waste Storage Area – #1

One of Hexion's Hazardous Waste Storage Areas (Storage Area) is located immediately outside of the QA Laboratory. This area is fenced off from the rest of the facility and has a concrete floor. An emergency alarm was observed at this location. Inspections of this area occur weekly.

The storage area had one drum of hazardous waste that was accumulated. The drum was labeled, dated, and closed. No violations were observed at this location.

Hazardous Waste Storage Area – #2

The second Storage Area is located adjacent to the Formaldehyde Production Area. This area is used to store hazardous waste, customer returns, excess product, and empty drums. Numerous drums that once held vanadium pentoxide were located in this area; see Photographs 1 and 2, of Attachment A. The drums were specifically labeled "Vanadium Pentoxide;" see Photograph 3 of Attachment A. Thus, a non-RCRA empty container of this material would be a P-Listed acutely toxic hazardous waste.

Please note that drums that held vanadium pentoxide and were labeled as such (i.e. the drum was specifically labeled "vanadium pentoxide") would not be considered RCRA empty, according to 40 CFR § 261.31 unless they: 1) Have been triple rinsed using a solvent that is capable of removing the vanadium pentoxide, 2) They have been cleaned by another method that has been proven to remove vanadium pentoxide to the same degree as the 1), or 3) The inner liner, if any, has been removed.

At the time of the inspection Hexion was storing the empty (not RCRA empty) drums of vanadium pentoxide. These drums were not labeled with the words "Hazardous Waste," nor were they dated with an accumulation start date.

According to 40 CFR § 262.34(a)(3), adopted by reference at 15A NCAC 13A .0107(c), while being accumulated on-site, each container and tank is labeled or marked clearly with the words, "Hazardous Waste." Hexion appears to have failed to label

numerous containers of non-RCRA empty drums of vanadium pentoxide, an acute hazardous waste, with the words "Hazardous Waste."

According to 40 CFR § 262.34(a)(2), adopted by reference at 15A NCAC 13A .0107(c), the date upon which each period of accumulation begins must be clearly marked and visible for inspection on each container. Hexion appears to have failed to mark numerous containers of non-RCRA empty drums of vanadium pentoxide, an acute hazardous waste, with accumulation start dates.

Additionally, Hexion manufactured its first batch of vanadium oxalate solution on April 2, 2007; thus, this would be the first day that potentially non-RCRA empty containers of vanadium pentoxide were stored. The first disposal of vanadium pentoxide drum liners occurred on July 28, 2008. Hexion disposed of the drum liners on this date through Pollution Control – Willmington (TND 000 772 186), manifest #003797207. As such, the non-RCRA empty drums of vanadium pentoxide had been stored for longer than the 90-day allowance for a LQG, as they had been stored on-site 476 days (386 over the 90-day exemption), from approximately April 2, 2007 to July 28, 2008.

According to 40 CFR § 262.34(b), adopted by reference at 15A NCAC 13A .0107(c), a generator who accumulates hazardous waste for more than 90 days is an operator of a storage facility and is subject to the requirements of 40 CFR parts 264 and 265 and the permit requirements of 40 CFR part 270 unless he has been granted an extension to the 90-day period. Hexion appears to have failed to receive a storage extension for numerous containers of non-RCRA empty drums of vanadium pentoxide, an acute hazardous waste, as the waste was stored for longer than 90 days.

According to April Hanson, Hexion, in an email to Nancy McKee, EPA, on March 19, 2009, the non-RCRA empty drums of vanadium pentoxide had not previously been washed out, either by Hexion or OBC.

This area was used to store two drums of non-hazardous waste and four drums of hazardous waste. All drums containing hazardous waste were labeled, dated, and were kept closed. No violations were found with the four drums of hazardous waste.

Formaldehyde Production Area

One SAA area exists in the Formaldehyde Production Area. This SAA is used to accumulate waste Dowtherm filters, which are hazardous waste once spent. The container used

to accumulate waste Dowtherm filters was labeled and was kept closed. No violations were observed in this area.

Hexamine Warehouse/Production Area

The Hexamine Warehouse/Production Area was observed to have a tank of used oil, which was located near the boiler. The tank was labeled with the words "Used Oil."

Off-specification product from the hexamine production is reworked into the hexamine process. No violations were observed in this area.

Maintenance Area

The Maintenance Area is located on the east-side of the property. It includes a large warehouse that has a parts washer, sand blasting machine, and is used to accumulate fluorescent lamps and used batteries. The parts washer, fluorescent lamps and used batteries are serviced by Safety Kleen. At the time of the inspection, there were no batteries accumulated. The florescent lamps were containerized, labeled, and kept closed. Note: Once the sand from the sandblasting machine becomes spent, a waste determination must be conducted.

Special Products Warehouse

Some maintenance chemicals, such as paint and pesticides were observed inside the Special Products Warehouse. It is recommended that Hexion ensure that these materials are usable products. If not, a waste determination must be conducted.

Other

Hexion hires contractors to conduct paint maintenance. At the time of the inspection, there were numerous, what appeared to be, waste paint and waste paint related items that were located adjacent to the cooling towers. See Photographs 4 and 5 of Attachment A. A waste determination must be conducted on this material.

According to 40 CFR § 262.11, adopted by reference at 15A NCAC 13A.0107(a), a person who generates a solid waste, as defined in 40 CFR § 261.2, must determine if that waste is a hazardous waste using the method described in Section 262.11. Hexion appears to have failed to conduct a hazardous waste determination on waste paint and waste paint related items that were located adjacent to the cooling towers.

Records Review

The records reviewed include hazardous waste manifests, land disposal restriction (LDRs) certificates, annual reports, training, weekly inspection records, and the contingency plan. Hexion was lacking documentation that the local authorities were notified. Additionally, the contingency plan lacked a description of the evacuation routes.

According to 40 CFR § 265.37, adopted by reference at 15A NCAC 13A .0110(c), the owner or operator of a facility must attempt to make arrangements with police, fire departments, and emergency response teams, according to this Subpart. Hexion appears to have failed to attempt to make arrangements with local authorities.

According to 40 CFR § 265.51(f), adopted by reference at 15A NCAC 13A .0110(d), the contingency plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. Hexion appears to have failed to describe facility evacuation routes in their contingency plan.

11) Out-Briefing

The inspectors conducted the exit meeting with representatives from Hexion. During this meeting, EPA presented certain areas of concern.

12) Sampling Overview

EPA SESD conducted a sampling investigation during this CEI. The EPA SESD, RCRA Sampling Investigation Report is included as Attachment B. The sampling investigation included six samples, HA103 – HA108, which were located throughout the facility, See Attachment B, Page 9 of 9 of the RCRA Sampling Investigation Report for sampling locations. Sampling locations HA103 – HA107 were analyzed for pH, flashpoint, metals/Toxicity Characteristic Leaching Procedure (TCLP), volatile organic compounds (VOC)/TCLP, and semi volatile organic compounds (SVOCs)/TCLP. The regulatory levels for the Toxicity Characteristic constituents were not exceeded for these samples. Nor did they exhibit the RCRA characteristic of ignitability or corrosivity.

It should be noted that vanadium was detected in all of the samples with concentrations ranging from 1.4 mg/kg (HA103) to 80 mg/kg (HA106). The liquid sample that was collected from the open drums of vanadium pentoxide contained 69 mg/kg of vanadium.

13) **Conclusion**

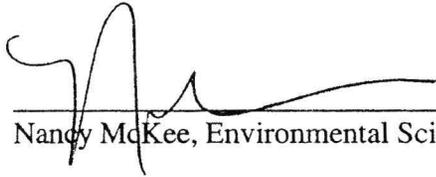
Based on the observations made during the inspection, the facility was in apparent violation with the following requirements:

- 40 CFR § 262.11/15A NCAC 13A.0107(a), Hexion appears to have failed to make a hazardous waste determination on waste paint and waste paint related items that were located adjacent to the cooling towers.
- 40 CFR § 262.34(a)(3)/15A NCAC 13A .0107(c), Hexion appears to have failed to label numerous containers of non-RCRA empty drums of vanadium pentoxide, an acute hazardous waste, with the words "Hazardous Waste."
- 40 CFR § 262.34(b)/15A NCAC 13A .0107 (c), Hexion appears to have failed to receive a storage extension for numerous containers of non-RCRA empty drums of vanadium pentoxide, an acute hazardous waste, as the waste was stored for longer than 90 days.
- 40 CFR § 262.34 (c)(1)(i)/15A NCAC 13A .0107 (c), Hexion appears to have failed to close one container of hazardous waste, which was being managed in a SAA located in the QA Laboratory, Solvent and Gas Room.
- 40 CFR § 265.37/15A NCAC 13A .0110 (c), Hexion appears to have failed to attempt to make arrangements with local authorities.
- 40 CFR § 265.37/15A NCAC 13A .0110 (d), Hexion appears to have failed to describe facility evacuation routes in their contingency plan.

Recommendations:

- Once the sand from the sandblasting machine becomes spent, a waste determination must be conducted.
- Hexion should ensure that materials, such as paint and pesticides, observed in the Special Products Warehouse are usable products. If these materials are not usable, a waste determination must be conducted.

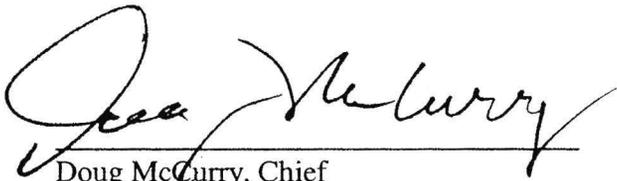
14) Signed



Nancy McKee, Environmental Scientist

4/10/09
Date

Concurrence



Doug McCurry, Chief
RCRA and OPA Enforcement and Compliance North Section
RCRA and OPA Enforcement and Compliance Branch
RCRA Division

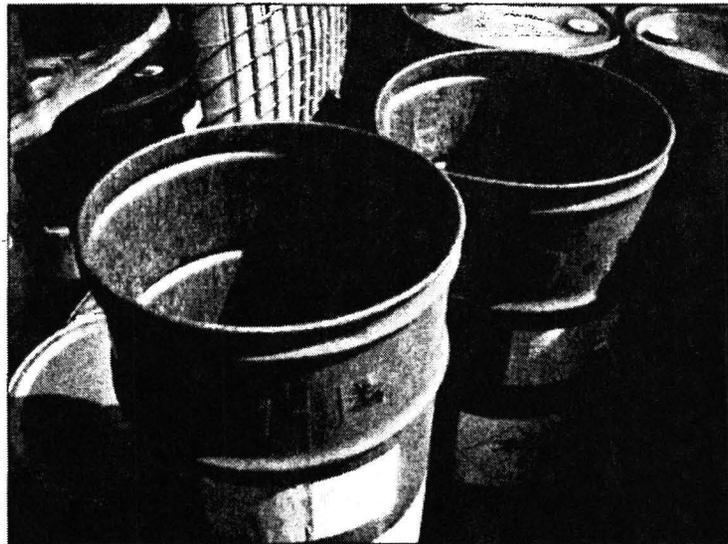
4/29/2009
Date

ATTACHMENT A
PHOTOGRAPHS

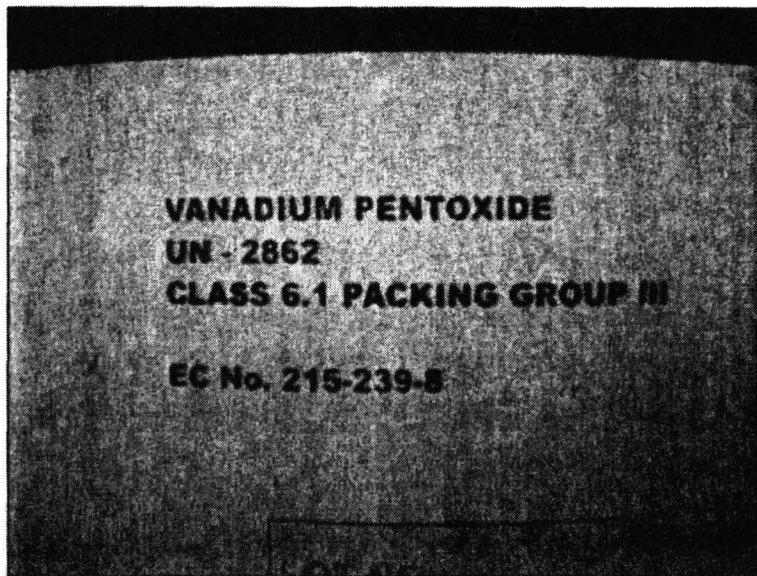
1



Photograph 1 – Empty drums of vanadium pentoxide located in the Storage Area adjacent to the Formaldehyde Production Area.



Photograph 2 – Close-up of drums of vanadium pentoxide.



Photograph 3 – These drums were labeled “vanadium pentoxide.”



Photograph 4 – What appeared to be, waste paint and waste paint related items that were located adjacent to the cooling towers.



Photograph 5 – What appeared to be, waste paint and waste paint related items that were located adjacent to the cooling towers.