



State of Ohio Environmental Protection Agency

Northwest District Office

347 North Dunbridge Road
Bowling Green, OH 43402-9398

TELE: (419) 352-8461 FAX: (419) 352-8468
www.epa.state.oh.us

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korteski, Director

Re: Linde Lima
Allen County
Hazardous Waste
Notice of Violation

December 12, 2008

Mr. Normand Paquette
Cluster Plant Manager
Linde Gas North America LLC
1150 South Metcalf Street
P.O. Box 1918
Lima, Ohio 45802

Dear Mr. Paquette:

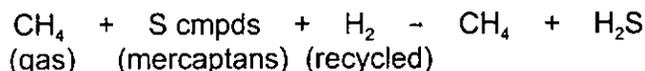
Thank you for accompanying me on Ohio EPA's December 2, 2008, compliance evaluation inspection of Linde Lima (LL) located at 1150 South Metcalf Street in Lima, Ohio. I inspected LL to determine its compliance with Ohio's hazardous waste laws as found in Chapter 3734. of the Ohio Revised Code (ORC) and Chapter 3745. of the Ohio Administrative Code (OAC). My inspection included observations of facility operations and a review of written documentation. This letter will explain the violation I found and what you need to do to correct the violation.

In May of 2008, the Ohio EPA became aware that LL shipped certain spent catalyst off-site in 2007 (desulfurization catalyst) and 2008 (SMR catalyst and shift converter catalyst) as K171 hazardous waste and used the U.S. EPA ID number for Husky Lima Refinery. You explained that LL buys catalyst from Univar and that Univar was hired to remove fouled catalyst in 2007 and 2008 and properly dispose of it. You explained that Univar had chosen to list it as K171 and used the Husky Lima Refinery ID number on their own. On December 4, 2008, I told Nancy Catt of ChemCare/Univar not to use the ID number on file for Linde Lima since it was really the ID number for Husky Lima Refinery. She said the information was inactivated.

The spent catalyst generated at LL is not the listed hazardous waste K171. This listing is for spent hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors. LL does not refine petroleum. On December 4, 2008, Nancy Catt of ChemCare/Univar stated that this catalyst was shipped as hazardous waste (K171) and was incinerated at WTI, a permitted hazardous waste facility. You explained that the various catalysts, that were recently replaced, are expected to last 8-9 years.

LL produces hydrogen gas for use by ISP in the manufacturing of butanediol and also for use by Husky Lima Refinery. LL includes Lima 1, which supplies ISP and Lima 2, which supplies the refinery. LL also operates three nitrogen generators at the Lima facility. LL uses pure natural gas (methane) to produce the hydrogen. The process includes the following steps: Step 1 - Desulfurization catalyst removes sulfur compounds (mainly mercaptan sulfide used as an odorant in the natural gas) from the natural gas stream. The sulfur compounds will poison

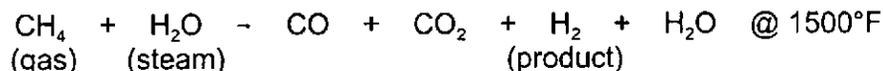
the other catalysts. The reaction is:



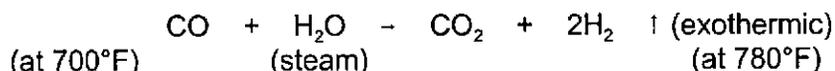
and



Step 2 - In the SMR (steam methane reforming hydrogen plant) the following reaction takes place:



Then in the I Shift (temperature shift) step the following reaction takes place:



You explained that the catalysts are dried with nitrogen gas as the temperature is reduced in the vessels and is vacuumed out when cool and dry enough. You stated that LL does not believe that any of the spent catalyst would be hazardous waste since the only raw materials are pure natural gas and steam. At the time of my inspection, LL was not accumulating waste and did not expect to generate spent catalyst for at least 7-8 years.

I found the following violation of Ohio's hazardous waste laws. In order to correct this violation you must do the following and send me the required information **within 30 days** of your receipt of this letter:

1. Waste Evaluation
OAC Rule 3745-52-11

A generator must determine whether its waste is hazardous by first determining if the waste is listed as a hazardous waste in rules 3745-51-30 to 3745-51-35; by testing the waste according to the methods set forth in rules 3745-51-20 to 3745-51-24 or by applying knowledge of the hazardous characteristic of the waste in light of the materials or the processes used.

LL failed to adequately evaluate all of its waste properly, according to this rule, since it did not evaluate the spent desulfurization catalyst, which it sent off-site for disposal in 2007 and SMR catalyst and shift converter catalyst, which were sent off-site for disposal in 2008. Please be aware that when catalyst is removed for disposal, especially Shift Converter catalyst, it is the responsibility of LL to evaluate it for any hazardous waste characteristics (including, but not limited to chromium).

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In order to abate this violation, you must describe in writing how LL will evaluate any waste that is generated at its Lima facility. This written description should include the sampling and analytical methods LL expects to use.

The Division of Hazardous Waste Management has created an electronic news service to provide you with quick and timely updates on events and news related to hazardous waste activities in Ohio. If you haven't already, we encourage you to sign-up for this free service. You can find more information at the following Web link <http://www.epa.state.oh.us/dhwm/listserv.html>. Please feel free to share this information with your colleagues.

If you have any questions, please feel free to contact me at (419) 373-3074. You can find copies of the rules and other information on the division's web page at <http://www.epa.state.oh.us/dhwm>. Ohio EPA also has helpful information about pollution prevention at the following web address: <http://www.epa.state.oh.us/opp>.

Sincerely,



Don North
District Representative
Division of Hazardous Waste Management

/lb

pc: Colleen Weaver, DHWM, NWDO
Cindy Lohrbach, DHWM, NWDO
~~DHWM, NWDO, Allen County, Linde/BOC Gases Lima File~~

ec: Don North, DHWM, NWDO

NOTICE:

Ohio EPA's failure to list specific deficiencies or violations in this letter does not relieve your company from having to comply with all applicable regulations.

**Ohio Environmental Protection Agency
RCRA SUBTITLE C SITE
IDENTIFICATION/VERIFICATION FORM**

For Ohio EPA use only

E-mail this completed form to kristina.durnell@epa.state.oh.us
or mail it to Kristina Durnell, Central Office

Site EPA ID No. Site Name Site Location Information Site Land Type (check only one) NAICS code(s) www.census.gov/eod/www/naics.html	EPA ID Number: <i>None</i> Name: <i>Linde Gas North America LLC</i> Website: (Optional) Street Address: <i>1150 South Metcalf St. P.O. Box 1918</i> City, Town, or Village: <i>Lima</i> County Name: <i>Allen</i> Private <input type="checkbox"/> County <input type="checkbox"/> District <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Indian <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other <input type="checkbox"/> Zip Code: <i>45802</i>
Facility Representative Additional names can be recorded in number 12 Only provide address information if it is different than the site address	First Name: <i>Normand Paquette</i> MI: Last Name: <i>Paquette</i> Phone Number: <i>419-224-2500</i> Phone Number Extension: E-Mail Address: Fax Number: <i>419-225-2516</i> Fax Number Extension: Street or P.O. Box: City, Town or Village: State: Zip Code:
Legal Owner And Operator of the Site List Additional Owners and/or Operators in the Comment Section or on another copy of this form page	Name of Site's Legal Owner: Owner Private County District Federal Indian Municipal State Other Type: <input type="checkbox"/> <input type="checkbox"/> Date Became Owner (mm/dd/yyyy): Street or P.O. Box: City, Town or Village: State: Zip Code: Owner Phone #: Country: Zip Code: Name of Site's Operator: Date Became Operator (mm/dd/yyyy): Owner Private County District Federal Indian Municipal State Other Type: <input type="checkbox"/> <input type="checkbox"/> Street or P.O. Box: City, Town or Village: State: Operator Phone #: United States Zip Code:

VIOLATIONS CITED? Yes No

TYPE OF HANDLER - A MINIMUM OF ONE BOX MUST BE CHECKED

<input checked="" type="checkbox"/> Not a Generator <input type="checkbox"/> UNKNOWN: Cited for violation of 3745-52-11	<input type="checkbox"/> Large Quantity Generator (LQG)
	<input type="checkbox"/> Small Quantity Generator (SQG)
	<input type="checkbox"/> Conditionally Exempt Small Quantity Generator
	<input type="checkbox"/> U.S. Importer of Hazardous Waste
	<input type="checkbox"/> Mixed Waste (Hazardous and Radioactive) Generator

TYPE OF REGULATED WASTE ACTIVITY (MARK X IN ALL OF THE APPROPRIATE BOXES)

- | | |
|---|--|
| <input type="checkbox"/> Recycler of Hazardous Waste | <input type="checkbox"/> Exempt Boiler and/or Industrial Furnace |
| <input type="checkbox"/> Underground Injection Control Facility | <input type="checkbox"/> Small Quantity On-Site Burner Exemption |
| <input type="checkbox"/> Hazardous Waste Transporter | <input type="checkbox"/> Smelting, Melting, Refining Furnace Exemption |
| <input type="checkbox"/> Treater, Storer or Disposer of Hazardous Waste | |

UNIVERSAL WASTE ACTIVITIES (INDICATE TYPES OF UNIVERSAL WASTE MANAGED)

(CHECK ALL BOXES THAT APPLY)

- | | |
|--|---|
| <input type="checkbox"/> Small Quantity Handler of Universal Waste | <input type="checkbox"/> Destination Facility for Universal Waste |
| <input type="checkbox"/> Large Quantity Handler of Universal Waste (accumulates 5,000 kg. or more) | |

CHECK ALL BOXES BELOW THAT APPLY FOR THE TYPES OF UNIVERSAL WASTE THE FACILITY MANAGES

- Batteries
- Pesticides
- Mercury containing equipment
- Lamps

USED OIL ACTIVITIES (INDICATE TYPE(S) OF ACTIVITY(S))

- Used Oil Generator
- Used Oil Transporter
- Used Oil Transfer Facility
- Used Oil Processor
- Used Oil Re-refiner
- Off-Specification Used Oil Burner
- Used Oil Fuel Marketer Who Directs Shipment of Off-Spec. Oil
- Used Oil Fuel Marketer to Off-Specification Used Oil Burner

Waste Codes for Federally Regulated Hazardous Waste: List the codes for the federally regulated hazardous waste handled at the site. List them in the order they are presented in the regulations (40 CFR 261.11-261.12). Use an additional page if more space is needed. If there are more than 7 waste codes and they are the same as listed in the most recent RCRA Info source record, you do not need to list them all. Instead just indicate the date of the most recent source record.

COMMENTS. USE THIS AREA TO DESCRIBE WHETHER THE INSPECTION WAS ANNOUNCED, WHETHER THE WASTE IS STORED IN TANKS OR CONTAINERS, ETC.

- Announced Yes No Additional Facility Representatives:
- Tanks Yes No Other Comments:
- Containers Yes No

Name of Inspector(s) _____ Date of Inspection/Time (mm/dd/yyyy) (hh:mm) _____

Don North

12-2-08

OPTIONAL CERTIFICATION: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Owner, Operator, or an Authorized Representative _____ Name and Title (Print) _____ Date (mm/dd/yyyy) _____