

REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

Lloyd Inc.
604 W Thomas Ave
Shenandoah, Iowa 51601
(712) 246-4000

EPA ID Number: IAR000505230

On

June 16, 2022

By

Eastern Research Group, Inc.

For

U.S ENVIRONMENTAL PROTECTION AGENCY
Region 7
Enforcement and Compliance Assurance Division

1.0 INTRODUCTION

At the request of the Enforcement and Compliance Assurance Division/Chemical Branch/RCRA Section (ECAD/CB/RCRA) of the U.S. Environmental Protection Agency (EPA) Region 7, Eastern Research Group, Inc. (ERG) conducted a Resource Conservation and Recovery Act (RCRA) compliance evaluation inspection (CEI) at Lloyd Inc. (LI) in Shenandoah, Iowa on June 16, 2022. The CEI was conducted under the authority of Section 3007(a) of RCRA, as amended. Throughout the CEI, data and information were collected to determine compliance with the applicable regulatory and statutory requirements. The inspection report and attachments present the results of the CEI.

2.0 PARTICIPANTS

Lloyd Inc.:

Roger Buhman, Senior Scientist Research and Development

EPA Representative, ERG:

Janosh Wolters, Energy Engineer

3.0 INSPECTION PRECEDURES

After arriving unannounced at LI at approximately 08:50, I performed a drive-by visual inspection of the facility and took a photograph before beginning the inspection and did not note any areas of concern. I then entered the main entrance and introduced myself to the front desk attendant. I explained my reason for being on site is to conduct a RCRA CEI and asked to meet with the facility personnel who manages hazardous waste on site. I was immediately met with Mr. Buhman, Senior Scientist of Research and Development. Mr. Buhman guided me to his office to begin the opening conference. I initiated the opening conference with Mr. Buhman present as LI's representative. I presented Mr. Buhman with my inspector credentials and business card, as well as the business card of the EPA Task Order Contracting Officer Representative, Mr. Trevor Urban. I then presented a copy of RCRA Section 3007(a), which contains EPA's inspection authority. I explained my need to collect accurate information and presented them with a copy of Title 18 U.S. Code, Sections 1001 and 1002. I then presented Mr. Buhman with a copy of the *Notice Regarding Proprietary/Confidential Business Information Submitted to or Collected by EPA in Connection with Inspections* and reviewed LI's confidentiality rights. I informed Mr. Buhman that I would provide a *Confidentiality Notice* at the end of this inspection.

The inspection consisted of a discussion of facility operations, waste generation and waste management, a review of waste management records, and a visual inspection of the waste generation and management areas. Mr. Buhman provided a facility layout (see Attachment 1) and explained facility operations and locations of hazardous waste generation and management.

During the visual inspection of the facility, Mr. Buhman guided me throughout the facility in order to conduct thorough evaluations of the facility's areas generating, accumulating hazardous waste, and the laboratory area. The facility consists of one laboratory which generates all the facility's hazardous waste. At the time of the inspection, the facility was not accumulating any universal waste. I conducted an in-depth visual inspection of the hazardous waste accumulation containers, and facility areas.

Five photographs were collected as inspection documentation and are shown in Attachments 2 and 3. Information collected during the inspection is documented on the *EPA Inspection Checklist* (see Attachment 4). I followed the inspection procedures discussed in the RCRA CEI Standard Operating Procedure (No. 2321.01D), unless noted differently. At the conclusion of the inspection, I provided Mr. Buhman with a *Confidentiality Notice* and *Receipt for Documents and Samples* which he signed as acknowledgement of receipt (see Attachments 5 and 6, respectively). No confidentiality claims were made by LI.

The following inspection documents and compliance assistance handouts were left with LI:

RCRA Section 3007(a)
Title 18 U.S. Code, Sections 1001 and 1002
Notice Regarding Proprietary/Confidential Business Information Submitted to or Collected by EPA in Connection with Inspections
Confidentiality Notice (Facility copy)

Receipt of Documents and Samples (Facility copy)
Security Awareness
Commercial Motor Vehicle Transportation
Security Planning
EPA E-Manifest Fact Sheet U.S.
EPA Small Business Resources
U.S. EPA Publication, Managing Your Hazardous Waste
U.S. EPA Publication, Managing Used Oil-Advice for Small Businesses
PowerPoint Presentation, 2013 Solvent Wipes Final Rule
Pollution Engineering Article, 10 Common Questions for Waste Generators
Iowa Department of Natural Resources (IDNR) Waste Exchange Folder and P2 Brochures
IDNR Management of Fluorescent Lamps for Businesses Information Sheets
IDNR Aerosol Can Disposal for Businesses Information Sheet
University of Northern Iowa Waste Reduction Center Information Card
Solvent-Contaminated Wipes Final Rule Summary Chart

4.0 FINDINGS AND OBSERVATIONS

4.1 Facility Information and Operations

LI began operating in 1964 and currently employs approximately 80 people. The facility operates a single, eight-hour shift, Monday through Friday. The facility has a footprint of approximately 22,000 square feet. LI's operations consist of testing pharmaceutical products. The major raw materials used are water, methanol, and acetonitrile. The only processing operation that generates waste streams is laboratory testing. The following waste streams are produced: flammable liquids, methylene chloride, pyridine, lead, perchloric acid, potassium ferricyanide, and general trash.

4.2 RCRA Status

According to the *Hazardous Waste Site Info Verification Report for Inspector* (see Attachment 7), LI notified on September 1, 2005 as a federal very small quantity generator (VSQG) of P075, P108, U002, U003, U019, U044, U080, U112, U117, U123, U151, U154, U161, U218, and U220 hazardous wastes. I asked Mr. Buhman to review the *Hazardous Waste Site Info Verification Report for Inspector*, which I provided prior to records review and visual inspection of the waste generation areas. To the best of his knowledge, Mr. Buhman believed the form was accurate and he did not request any changes or updates. After reviewing the records and walking through the facility, it appears that the facility is operating as a very small quantity generator (VSQG) of D001, D002, D008, D038, U192, and F002 hazardous wastes, and potentially a small quantity handler (SQH) of universal waste. LI waste codes can vary based on the types of chemicals used in analytical testing. The above listed waste codes were the codes I observed the facility generating based on records review from the previous three years. LI generated approximately 630 pounds of hazardous waste per year for the past three years.

LI was previously inspected by an EPA contractor on June 14, 2005. The inspection led to a notice of preliminary findings (NOPFs). The findings were later retracted and no enforcement

actions were taken by EPA.

4.3 Facility Waste Streams and Management

A Waste Stream and Waste Handling Table for LI is presented below. The table describes waste streams generated, generation process/rates, hazardous waste determinations, and on-site/off-site management.

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#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
1	Flammable Liquids (Acetonitrile, Methanol)	Laboratory testing	D001 (based on process knowledge and knowledge of the product)	50 pounds per month	55-gallon container	Barton Solvents Inc, (IAD089570063) in Council Bluffs, IA to Coal City Cob Company, Inc (TXR000079839) in Waxahachie, TX to WRR Environmental Services (WID990829475) in Eau Clair, WI for incineration
2	Methylene Chloride	Laboratory testing	F002 (based on process knowledge and knowledge of the product)	3 gallons per year	1-liter containers, consolidated into a 15-gallon container	Barton Solvents Inc, (IAD089570063) in Council Bluffs, IA to Coal City Cob Company, Inc (TXR000079839) in Waxahachie, TX to WRR Environmental Services (WID990829475) in Eau Clair, WI for incineration
2	Pyridine/Corrosi ve Wastes	Laboratory testing	D001, D002, D038, U080, U196 and various waste codes (based on process knowledge and knowledge of the product)	25 pounds per month	15-gallon container	Clean Harbors Environmental Services, Inc. Plymouth County, MA (MAD039322250) in Polk County, IA to Clean Harbors El Dorado LLC in El Dorado, AR (ARD069748192) for incineration

#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
3	Toxic Waste Chemicals	Laboratory testing	D002 and various waste codes (based on process knowledge and knowledge of the product)	Less than 5-gallons per year	Various sized laboratory chemical containers ranging up to 1 liter	Clean Harbors Environmental Services, Inc. Plymouth County, MA (MAD039322250) in Polk County, IA to Clean Harbors El Dorado LLC in El Dorado, AR (ARD069748192) for incineration
4	Lead/Perchloric Acid/Potassium Ferricyanide	Laboratory testing	D001, D008 (based on process knowledge and knowledge of the product)	5 pounds per year	1 liter container	Clean Harbors Environmental Services, Inc. Plymouth County, MA (MAD039322250) in Polk County, IA to Clean Harbors El Dorado LLC in El Dorado, AR (ARD069748192) for incineration
5	General Trash	Facility operations	Nonhazardous (based on process knowledge and knowledge of the product)	5-yard container picked up three times per week	5-yard container	Shenandoah Sanitation in Shenandoah, IA to Page County Landfill in Clarinda, IA for landfill

4.4 Visual Inspection

Laboratory Operations:

LI conducts analytical analyses on various pharmaceutical products. Mr. Buhman stated the largest amount of raw material used to run analytical testing is water. In addition, various chemicals are used during analytical testing. Samples taken that are later used for testing are disposed as hazardous waste as waste chemicals. Mr. Buhman stated the largest amount of chemicals used are methanol and acetonitrile. Mr. Buhman stated all the hazardous wastes are accumulated in various containers in the lab and consolidated in the southern corner outside the QC lab (see Attachment 3, Photos 2-5). The facility accumulates toxic and corrosive wastes in separate blue containers in the same location. The containers are labeled “Hazardous Material Storage Cabinet” and “Toxic, or “Corrosive”. There is one blue container for toxic and one container for corrosive wastes. The wastes are either expired chemicals or waste chemicals used during analytical testing. Mr. Buhman stated all the hazardous wastes are generated by running analytical tests on various pharmaceutical products. I did not observe any P listed wastes at the time of the inspection. Mr. Buhman explained when a toxic or corrosive waste is generated, chemists use process and product knowledge along with SDSs to determine how the respective waste should be managed. I observed expired toxic wastes during my visual inspection (see Attachment 3, Photo 4). Additionally, I observed expired corrosive wastes and did not note any concerns or issues with the management of either of these types of waste. All containers observed were closed, in good condition, and labeled with the words “Hazardous Waste” or a label indicating what type of waste is being stored within the container. The last hazardous waste shipment occurred on February 8, 2022. A total of 800 pounds of waste flammable liquid (primarily acetonitrile and methanol) was shipped off site. Mr. Buhman stated the facility ships off hazardous waste approximately once every 12-16 months. The manifest from the most recent shipment is provided in Attachment 8 as an example.

Universal Waste:

At the time of the inspection, LI was not generating or accumulating any universal wastes. Mr. Buhman stated the facility does not generate any battery waste but does generate spent lamps waste occasionally. During the visual inspection, I only observed green tipped florescent lamps. In addition, Mr. Buhman stated the maintenance team informed him they are beginning a transition to light emitting diode (LED) lighting. Mr. Buhman stated the green tipped lamps are thrown away in the general trash because they are nonhazardous. At the time of the inspection, I did not leave a finding for the management of spent lamps because they were green tipped. In order for a facility to manage lamps under the universal waste rule, they first must be hazardous and green tipped lamps do not appear to be a hazardous waste. Upon further EPA review, a finding may be added for failure to make an adequate waste determination and manage the lamps either as a hazardous waste or universal waste moving forward. At the conclusion of the inspection, Mr. Buhman stated he would research options to manage spent lamps under universal waste if required.

Used Oil/Aerosol Cans/Wastewater:

Mr. Buhman stated the facility does not generate used oil, wastewater, or aerosol can wastes. I did not observe any used oil or aerosol cans being generated or accumulated during my visual inspection. Mr. Buhman explained the facility does not pour any chemicals down any laboratory sinks. Wastewater is not a generated waste stream on site.

I observed no issues or findings during this inspection. However, further EPA review may add findings.

**Janosh
Wolters** Digitally signed
by Janosh Wolters
Date: 2022.08.03
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Janosh Wolters
Energy Engineer
Date: August 3, 2022

**AMBER
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Amber Whisnant
Section Chief
ECAD/CB/RCRA, EPA Region 7
Date: _____

Attachments:

1. Facility Layout (1 page)
2. Lloyd Inc. Photolog (1 page)
3. Lloyd Inc. Photos (5 Photos/6 pages)
4. EPA Inspection Checklist (14 pages)
5. Confidentiality Notice (1 page)
6. Receipt for Documents and Samples (1 page)
7. Hazardous Waste Site Information Verification Report (1 page)
8. Manifest (1 page)