REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

MAHLE Engine Components USA Inc.
60428 Marne Road
Atlantic, IA 50022
(712) 250 - 3452

EPA ID Number: IAD096526108

On

June 8, 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 MAHLE Engine Components USA Inc. (MAHLE) in Atlantic, Iowa on June 8, 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

MAHLE Engine Components USA Inc.:
Jodi Allen, Safety, Health and Environment (SHE)/Human Resources Manager
Cody Weaver, Plant Manager
Clint Mathisen, Wastewater Treatment Specialist

EPA Representative, ERG:
Joseph Watson, Senior Chemical Engineer

3.0 INSPECTION PRECEDURES

After arriving unannounced at MAHLE at approximately 08:35, 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 I used the intercom in the lobby for assistance. I explained my reason for being on site is to conduct a RCRA CEI and asked to meet with the facility personnel who manage hazardous waste on site. Ms. Jodi Allen then greeted me at the facility entrance. I was instructed to watch the site safety video and she then led me to the wastewater treatment lab to begin the opening conference at approximately 09:15. I initiated the opening conference with Ms. Allen and Mr. Mathisen as the MAHLE representatives. I presented Ms. Allen and Mr. Mathisen 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 her with a copy of Title 18 U.S. Code, Sections 1001 and 1002. I then presented Ms. Allen with a copy of the *Notice Regarding Proprietary/Confidential Business Information Submitted to or Collected by EPA in Connection with Inspections* and reviewed MAHLE's confidentiality rights. I informed Ms. Allen 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. The Plant Manager, Mr. Weaver joined the inspection during the walkthrough. Ms. Allen provided a facility layout (see Attachment 1) and Ms. Allen, Mr. Mathisen, and Mr. Weaver explained facility operations and locations of hazardous waste generation and management.

During the visual inspection of the facility, Ms. Allen, Mr. Mathisen, and Mr. Weaver guided me throughout the facility in order to conduct thorough evaluations of the facility's satellite accumulation areas (SAAs) and central accumulation areas (CAAs). At the time of the inspection, the facility was operating 83 SAAs and two CAAs. The facility also handles universal waste in a designated area on site. The universal waste storage area was visually inspected. The two parts washers utilize an aqueous cleaning solution. I conducted an in-depth visual inspection of the SAAs, the CAAs, the universal waste storage areas, and all manufacturing areas.

Twelve 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. Weaver with a *Confidentiality Notice, Receipt for Documents and Samples,* and a *Notice of Preliminary Findings (NOPF)* which he signed as acknowledgement of receipt (see Attachments 5, 6, and 7 respectively). No confidentiality claims were made by MAHLE.

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

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)
NOPF (Facility copy)
Instructions for Responding to a NOPF
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

MAHLE began operating in 1978 and currently employs approximately 167 people. The facility operates on a five day, two 8-hour shift schedule with a third shift of two persons for preventive maintenance only. The facility has a footprint of approximately 25 acres. MAHLE operations consist of the manufacturing of engine bearings for heavy duty and industrial gasoline or diesel engines. Manufacturing processes include metal stamping, forming, and boring; electroplating (nickel, lead, aluminum, indium, tin, and copper); and protective coating and painting. The primary raw materials used are bi-metallic strips (steel with a variety of alloys), purchased from MAHLE's sister plants, plating solutions (nickel, lead, aluminum, indium, tin, and copper), and coatings. The major manufacturing or processing operations that generate waste streams include metal stamping, forming, and boring; electroplating (nickel, lead, aluminum, indium, tin, and copper); wastewater treatment plant, and protective coating and painting. The following waste streams are produced: wastewater treatment plant (WWTP) filter cake, waste tool room air filters, waste coatings, mixed waste residuals, aerosol can residuals, solvent/oily rags, parts washer solution, wastewater, scrap metal, waste oil/coolant, universal wastes, and general trash.

4.2 RCRA Status

According to the *Notification Acknowledgement/Verification Report* (see Attachment 8), MAHLE notified as a federal Large Quantity Generator (LQG) of D001, D007, D008, and F006 hazardous wastes. I asked Ms. Allen to review the *Notification Acknowledgement/Verification Report*, which I provided prior to records review and visual inspection of the waste generation areas. Ms. Allen requested I update the facility contact and confirmed the remaining information on the form was accurate to the best of her knowledge. After reviewing the records and walking through the facility, it appears the facility is operating as a federal LQG of D001, D007, D008, and F006 hazardous wastes, and a small quantity handler (SQH) of universal waste. MAHLE generates more than 1,000 kilograms of hazardous waste monthly based on a review of facility records, a visual inspection of process and waste management areas, and interviewing personnel.

MAHLE was previously inspected by an EPA contractor on March 10, 2017. The inspection led to a NOPF. The findings included a failure to keep SAA containers closed when not in use, a failure to label CAA containers with accumulation start dates, failure to maintain documentation of annual refresher hazardous waste training, and failure to mark a container of universal waste lamps with an accumulation start date. I observed a repeat finding regarding an open SAA container. MAHLE responded by correcting issues that led to the findings as shown through documentation provided by the facility and no enforcement actions were taken.

4.3 Facility Waste Streams and Management

A Waste Stream and Waste Handling Table for MAHLE 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	Scrap Metal Aluminum and Scrap Metal Red Alloy	Production	Nonhazardous (based on process knowledge and knowledge of the product)	Approximately 40,000 pounds per month all metals	55-gallon containers throughout facility, occasionally a 1-yard box	TOTALL Metal Recycling, Inc. of Granite City, IL (ILD099670911) for recycling (Invoice included in Attachment 9)
2	Waste Oil/Coolant (Analytical Data included in Attachment 10)	Maintenance of cutting, grinding, and fabricating equipment	D008 (based on process knowledge and 2010 analytical results)	1,500 pounds per month	55-gallon containers in CAA	Tri State Motor Transit Company in Duenweg, Missouri (MOD095038998) to Tradebe Treatment and Recycling in East Chicago, Indiana (IND000646943) for disposal or energy recovery
3	Mixed Process Waste/lead contaminated waste (Waste Profile included in Attachment 11)	Floor sweepings, filter paper, plastic, and rags, contaminated equipment, and used PPE	D008 (based on process knowledge and 2011 analytical results)	Approximately 7,000 pounds per month	5-gallon, 10-gallon, 55-gallon, and 1-yard containers	Tradebe Transportation LLC INR000125497 to Tradebe Treatment and Recycling in East Chicago, Indiana (IND000646943) for disposal
4	Wastewater (Discharge Agreement included in Attachment 12)	Generated from WWTP; a mix of process plating wastewater and groundwater from the on-site remediation activities	Nonhazardous (based on process knowledge and knowledge of the product)	33,000 gallons per day maximum	Process tanks	Discharged to the City of Atlantic POTW

#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
5	Aerosol Cans Residuals (Waste Profile included in Attachment 13)	Aerosol can puncturing	D001 (based on product and process knowledge)	Less than one inch per year	55-gallon container	Tri State Motor Transit Company in Duenweg, Missouri (MOD095038998) to Tradebe Treatment and Recycling in East Chicago, Indiana (IND000646943) for disposal
6	Used Parts Washer Solvent (Aqueous)	Cleaning small tools in maintenance	D008 (based on product and process knowledge)	50 gallons serviced every three months	In parts washer	Heritage-Crystal Clean, LLC in Omaha, NE for recycling (Invoice included in Attachment 14)
7	Filter Cake (Analytical Data included in Attachment 10)	WWTP on-site treatment of plating wastewater	F006 (based on process knowledge)	20 cubic yards per month	1-yard rollaway container to 20-yard container	Heritage Transport LLC (IND058484114) to Heritage Environmental Services in Indianapolis, IN (IND093219012) for disposal
8	Spent GAC	Groundwater treatment system	Nonhazardous (based on process knowledge) Combined with filter cake solids	Approximately 400 pounds every three years	20-yard container	Heritage Transport LLC (IND058484114) to Heritage Environmental Services in Indianapolis, IN (IND093219012) for disposal

#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
9	Waste Degreaser (SDS included in Attachment 15, Waste Profile Included Attachment 16)	Vapor degreaser	D008 (based on process knowledge)	25-gallons per month	55-gallon container	Tri State Motor Transit Company in Duenweg, Missouri (MOD095038998) to Tradebe Treatment and Recycling in East Chicago, Indiana (IND000646943) for disposal
10	Used Tool Room Filters (Analytical Data included in Attachment 10)	From ventilation systems in the tool room	(D007) based on product and process knowledge and 2011 analytical results	Two 55-gallon containers per month	55-gallon container	Tri State Motor Transit Company in Duenweg, Missouri (MOD095038998) to Tradebe Treatment and Recycling in East Chicago, Indiana (IND000646943)
11	Cardboard/ Paper	Generated from packing material	Nonhazardous (based on process knowledge and knowledge of the product)	Approximately 1,500 pounds per month	Standard Bales	TOTALL Metal Recycling, Inc. of Granite City, IL (ILD099670911) for recycling (Invoice included in Attachment 9)
12	Universal Waste Lamps (Invoice included in Attachment 17)	Facility maintenance	Exempted (managed as universal waste per 40 CFR 273)	Approximately 500 lamps per year	4-foot container, 8-foot container	A-TEC Recycling, Inc. of Pleasant Hill, IA for recycling
13	Universal Waste Batteries (Invoice included in Attachment 17)	Facility maintenance	Exempted (managed as universal waste per 40 CFR 273)	Three 5-gallon containers per year	5-gallon container	A-TEC Recycling, Inc. of Pleasant Hill, IA for recycling

#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
14	Waste Coating	Protective polyimide coatings	D001 (based on product and process knowledge)	Approximately 55-gallons every six months	55-gallon container	Tri State Motor Transit Company in Duenweg, Missouri (MOD095038998) to Tradebe Treatment and Recycling in East Chicago, Indiana (IND000646943) for disposal
15	General Trash	Facility operations	Nonhazardous (based on process knowledge and knowledge of the product)	One 20-yard container picked up weekly	20-yard container	Hepler Curbside Recycling to Cass County Landfill in Atlantic, Iowa for landfill

4.4 Less-Than-90-Day Hazardous Waste Accumulation Area

MAHLE has two Less-Than-90-Day CAAs on site, which are located in close proximity to the WWTP on the facility layout (see Attachment 1). I visually inspected CAA #1 located directly underneath the waste treatment lab in the WWTP. I observed 12 55-gallon containers waste coating and hazardous oil (see Photo 3, Attachment 3). All containers were closed, in good condition, labeled as "Hazardous Waste," and labeled with an indication of the nature of the hazard. The earliest accumulation start date on a container in CAA #1 was March 25, 2022. March 25, 2022 is within 90 days from the time of the inspection. There was also one non-hazardous 55-gallon drum of plating wastewater to be processed through the WWTP. A 20-yard WWTP filter cake roll-off container was located just outside the WWTP in CAA #1 (see Photo 5, Attachment 3). The roll-off container was numbered RO-8144. The container was closed, labeled as "Hazardous Waste," and labeled with an indication of the nature of the hazard. The accumulation start date on the container was May 6, 2022. May 6, 2022 is within 90 days from the time of the inspection. A close-up photograph of the label on the 20-yard filter cake roll-off container is shown in Photo 4, Attachment 3.

I visually inspected CAA #2 located west of the WWTP and CAA #1. CAA #2 contained nine 1-yard containers of mixed waste/lead-contaminated waste, one 1-yard container of used tool room air filters, and one black 55-gallon container of waste polymer (see Photos 6, 8 and 9, Attachment 3). The containers were closed, labeled as "Hazardous Waste," and labeled with an indication of the nature of the hazard. A close-up view of a 1-yard mixed waste/lead-contaminated waste container in CAA #2 is shown in Photo 7, Attachment 3. The oldest accumulation start date on a container was April 23, 2022. April 23, 2022 is within 90 days from the time of the inspection.

I observed adequate aisle space to allow for container inspections and access in the event of a spill. I observed a fire extinguisher, spill control equipment, and related safety equipment within the CAA. Operators handling hazardous waste are trained to use their two-way radio system in case of emergencies. A sign was posted on the door of the CAA which listed the phone numbers of emergency coordinators and emergency response agencies along with a "No Smoking" sign. I asked Mr. Mathisen if the facility inspected the CAA. Mr. Mathisen stated the facility inspected the CAA at least weekly and had weekly inspection logs but there might be some gaps from when MAHLE was shut down due to COVID. During records review, Mr. Mathisen provided inspection logs for the CAA. I reviewed the logs and determined the facility did not inspect the CAA from 1/29/22 through 2/12/22; 9/17/21 through 10/1/21; 4/17/21 through 4/30/21; and 6/23/20 through 7/17/20. Examples of the CAA logs are provided in Attachment 18. Therefore, I left the following finding:

NOPF 1 – Failure to inspect CAAs weekly. [40 CFR 262.17(a)(1)(v)].

4.5 Satellite Accumulation Areas

I observed 83 SAAs during the visual inspection. The table below shows the SAA name or location, waste type, volume of waste observed, and container type.

SAA #	SAA Name or Location	Waste Type	Volume of Waste	Container Type
1	Waste Treatment Lab	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
2	Plating Area 486	Waste Paint Related Material	Five gallons	30-gallon drum
3	Area 486, Near RAC Repair	Mixed Process Waste – Lead Contaminated	Empty	55-gallon drum
4	Area 486, Near Nitric Scrubber	Mixed Process Waste – Lead Contaminated	Five gallons	55-gallon drum
5	Area 486, Near Alloy Scrubber	Mixed Process Waste – Lead Contaminated	Empty	55-gallon drum
6	Area 586, EQ No. 9226	Mixed Process Waste – Lead Contaminated	One gallon	5-gallon container
7	Area 487, Coordinator Desk	Mixed Process Waste – Lead Contaminated	One gallon	5-gallon container
8	Area 487, Pack Table	Mixed Process Waste – Lead Contaminated	Four gallons	5-gallon container
9	Area 486, Nickel Recovery	Mixed Process Waste – Lead Contaminated	Less than three inches	55-gallon drum
10	Area 488, Tin Plater	Mixed Process Waste – Lead Contaminated	30 gallons	55-gallon drum
11	Spent Vapor Degreaser	Spent Vapor Degreaser	25 gallons	55-gallon drum
12	Polymer Room Back Corner	Spent Polymer	Five gallons	55-gallon drum
13	Polymer Room Aisle	Mixed Process Waste – Lead Contaminated	One gallon	5-gallon container
14	Polymer Room Aisle	Spent Polymer	Empty	55-gallon drum
15	Polymer Room Aisle	Mixed Process Waste – Lead Contaminated	Empty	5-gallon container
16	Area 551, Maintenance	Mixed Process Waste – Lead Contaminated	50 gallons	55-gallon drum
17	Maintenance Desk Area	Mixed Process Waste – Lead Contaminated	Two gallons	10-gallon container
18	Area 421, EQ No. 5240	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container

19	Area 423	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
20	Area 422	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
21	Tool Room, by 125 Crane	Mixed Process Waste – Lead Contaminated	Two gallons	10-gallon container
22	Tool Room	Tool Room – Chrome Contaminated	Three gallons	5-gallon container
23	Area 413	Mixed Process Waste – Lead Contaminated	Empty	5-gallon container
24	Area 413 – Aisle	Mixed Process Waste – Lead Contaminated	Three gallons	10-gallon container
25	Area 413 – Tool Room Wall	Mixed Process Waste – Lead Contaminated	One gallon	5-gallon container
26	Area 413 – Next to EQ No.1904	Mixed Process Waste – Lead Contaminated	Three gallons	5-gallon container
27	Area 413 – Next to EQ No.3664	Mixed Process Waste – Lead Contaminated	40 gallons	55-gallon drum
28	Area 413 – Next to EQ No.6130	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
29	Area 411 – Across Cafeteria	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
30	Area 413 – Next to EQ No.5453	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
31	Area 413 – Next to Cafeteria	Mixed Process Waste – Lead Contaminated	One gallon	5-gallon container
32	Area 434 – EQ No. 5217	Mixed Process Waste – Lead Contaminated	0.5 gallons	5-gallon container
33	Area 434 – Behind 7307 Shave	Mixed Process Waste – Lead Contaminated	Two gallons	55-gallon drum
34	Area 412 – EQ No. 7405	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
35	Area 430 – EQ No. 5455	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
36	Area 432 – EQ No. 2317	Mixed Process Waste – Lead Contaminated	Four gallons	5-gallon container
37	Area 455 – EQ No. 3106	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container

38	Area 427 – EQ No. 6207	Mixed Process Waste – Lead Contaminated	Three gallons	5-gallon container
39	Area 452	Mixed Process Waste – Lead Contaminated	Three gallons	7-gallon container
40	Area 453 – EQ No. 2111	Mixed Process Waste – Lead Contaminated	4.5 gallons	5-gallon container
41	Area 453 – EQ No. 5217	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
42	Area 453 – EQ No. 2206	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
43	Area 453 – EQ No. 2206	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
44	Area 453 – EQ No. 2508	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
45	Area 452 – EQ No. 2101	Mixed Process Waste – Lead Contaminated	One gallon	10-gallon container
46	Area 455 – EQ No. 2208	Mixed Process Waste – Lead Contaminated	One gallon	5-gallon container
47	Area 481 – EQ No. 3502	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
48	Area 481 – Washer Area	Mixed Process Waste – Lead Contaminated	25 gallons	55-gallon drum
49	Area 480 – EQ No. 4122	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
50	Area 480 – EQ No. 1279	Mixed Process Waste – Lead Contaminated	Four gallons	10-gallon container
51	Area 480 – By Hoist	Mixed Process Waste – Lead Contaminated	25 gallons	55-gallon drum
52	Employee Entrance	Mixed Process Waste – Lead Contaminated	Three gallons	10-gallon container
53	Area 452 – EQ No. 2536	Mixed Process Waste – Lead Contaminated	Three gallons	10-gallon container
54	Area 424 – EQ No. 6208	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
55	Area 424 – EQ No. 6208	Mixed Process Waste – Lead Contaminated	Three gallons	5-gallon container
56	Area 424 – EQ No. 8237	Mixed Process Waste – Lead Contaminated	One gallon	5-gallon container

57	Area 424 – EQ No. 5428	Mixed Process Waste – Lead Contaminated	Four gallons	5-gallon container
58	Area 424 – North Corner	Mixed Process Waste – Lead Contaminated	Five gallons	55-gallon drum
59	Area 416 – EQ No. 5217	Mixed Process Waste – Lead Contaminated	Three gallons	5-gallon container
60	Area 416 – EQ No. 5325	Mixed Process Waste – Lead Contaminated	Three gallons	5-gallon container
61	Area 416 – EQ No. 2118	Mixed Process Waste – Lead Contaminated	Three gallons	5-gallon container
62	Area 416 – EQ No. 12A5	Mixed Process Waste – Lead Contaminated	Three gallons	5-gallon container
63	Area 416 – EQ No. 5459	Mixed Process Waste – Lead Contaminated	Three gallons	5-gallon container
64	Area 410 – EQ No. 8311	Mixed Process Waste – Lead Contaminated	50 gallons	55-gallon drum
65	Area 416 – EQ No. 8328	Mixed Process Waste – Lead Contaminated	One gallon	5-gallon container
66	Area 484 – EQ No. Pack C/D	Mixed Process Waste – Lead Contaminated	Three gallons	5-gallon container
67	Area 428 – EQ No. 6630	Mixed Process Waste – Lead Contaminated	One gallon	5-gallon container
68	Area 484 – Packing	Mixed Process Waste – Lead Contaminated	One gallon	5-gallon container
69	Area 456 – EQ No. 1230	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
70	Area 456 – EQ No. 1230	Mixed Process Waste – Lead Contaminated	Four gallons	6-gallon container
71	Shipping – EQ No. 0651	Mixed Process Waste – Lead Contaminated	One gallon	5-gallon container
72	Cummins Park – EQ No. 06A9	Mixed Process Waste – Lead Contaminated	Four gallons	5-gallon container
73	Wash House	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container
74	Wash House – South Wall	Waste Oil	50 gallons	55-gallon drum
75	Kit Area	Mixed Process Waste – Lead Contaminated	Two gallons	5-gallon container

76	Scrap Area – Shipping Door	Mixed Process Waste – Lead Contaminated	40 gallons	55-gallon container
77	Scrap Area by Door	Mixed Process Waste – Lead Contaminated	Three gallons	6-gallon container
78	Central Fixed	Waste Oil	30 gallons	55-gallon container
79	Central Cart	Waste Oil	40 gallons	55-gallon container
80	Area 553 – Under Office Stairs	Mixed Process Waste – Lead Contaminated	Ten gallons	55-gallon container
81	Scrap Area	Aerosol Residue	Empty	55-gallon container
82	Plating Lab	Mixed Process Waste – Lead Contaminated	Four gallons	5-gallon container
83	Plating Lab	Mixed Process Waste – Lead Contaminated	Four gallons	5-gallon container

The hazardous waste accumulation containers observed in the SAAs except for SAA #19 were in good condition, closed, labeled with the indication of the nature of the hazard, and labeled with the words “Hazardous Waste” (see Attachment 3, Photo 3). The lid on SAA #19 had holes and was not closed. Therefore, I left the following finding:

NOPF 2 – Failure to keep containers closed when not adding waste or for temporary venting. [262.15(a)(4)].

4.6 Bearing Production

During the visual inspection, I observed the beating production operations. In this process, metal strips are fed into a stamping machine after which the bearing is formed, notched, milled, grooved, shaved, and bored. The waste from the stamping and production processes is primarily scrap metal (which is recycled), waste oil/coolant, and mixed process waste. "Mixed" refers to the variety of materials in this waste stream, which includes contaminated debris (floor sweepings, filter paper, plastic, and rags), contaminated equipment, and personal protective equipment (PPE), rather than "mixed waste" (mixed hazardous and radioactive waste). Both mixed process waste and waste oil/coolant are considered hazardous waste by the facility, due to contamination with lead.

Bearings may be cleaned in a vapor degreaser utilizing n-propyl bromide. Waste degreaser is considered hazardous by the facility, also due to contamination with lead. Vapor degreasing is followed by caustic and acid etch baths. Parts are then electroplated with a variety of materials, including nickel, aluminum, lead, indium, copper, and tin; none of the plating processes uses cyanide. Rinse waters from the electroplating process are hard piped to the on-site WWTP.

Wastewater is discharged to the City of Atlantic publicly owned treatment works (POTW) after treatment. MAHLE also coats bearings with a protective polyimide coating, rather than plating. Paint guns and other equipment are cleaned with butyl acetate, and the paint has a xylene carrier. MAHLE considers the paint waste hazardous waste (D001).

Scrap metal, including lead-plated scrap, is generated from discarded metallic parts. Because the scrap metal is recycled, the facility considers it exempt from the definition of solid waste. The facility generates approximately 40,000 pounds of scrap metal per month. Scrap metal is accumulated in containers around the facility (see Photo 11, Attachment 3). It is collected for recycling by Total Metal Recycling of Granite City, Illinois.

I reviewed the management of bearing production and no issues or findings were noted.

4.7 Tool Shop

During the visual inspection, I observed operations at the tool shop. MAHLE machines most of its own tools for production from chrome-plated steel. Tool room operations mostly involve grinding. An exhaust recovery system filters the air, and the used tool room air filters are considered hazardous due to contamination with chromium. Used tool room filters are generated from ventilation systems in the tool room. MAHLE has determined that used tool room filters are hazardous waste (D007) based on product and process knowledge and analysis. I reviewed an analytical report from June 2009, which showed that the material had a chromium TCLP concentration of 3.87 mg/L. Out of an abundance of caution, MAHLE manages this waste stream as hazardous waste The waste is transported to Tradebe in East Chicago, Indiana, for recycling or disposal.

During my inspection of the chemical storage cage CAA, I observed one 1-cubic-yard cardboard container of used tool room filters (see Photo 6, Attachment 3). According to Ms. Allen, the container is brought from the SAA, emptied into the CAA container, and returned to the SAA. The containers were closed, labeled as “Hazardous Waste,” and labeled with an indication of the nature of the hazard. It was dated May 21, 2022.

I reviewed the management of tool shop waste and no issues or findings were noted.

4.8 Mixed Process Waste

Mixed process waste includes contaminated debris (floor sweepings, filter paper, plastic, and rags), contaminated equipment, and used PPE. The facility has determined that mixed process waste is hazardous waste (D008) based on product and process knowledge and analysis. I reviewed the waste Profile in Attachment 11. According to document reviews, this waste profile was based on analytical results from June 2011, which showed that the material failed TCLP analysis for lead.

During the visual inspection, I observed containers of mixed process waste in at least 70 SAAs around the facility. Each of these containers was a 55-gallon metal drum or a 5- or 10-gallon metal safety can. None of the SAAs had more than 55 gallons of waste. Each container was in good condition, at or near the point of generation, and under control of the operator. Each was closed, labeled as "Hazardous Waste," and labeled with an indication of the nature of the hazard. As identified in Section 4.5, the lid on SAA #19 had holes and was not closed. Therefore, I left the following finding:

NOPF 2 – Failure to keep containers closed when not adding waste or for temporary venting. [262.15(a)(4)].

I reviewed the management of the mixed process waste management and no issues or findings were noted.

4.9 Groundwater Remediation

MAHLE operates a groundwater remediation system under a Memorandum of Understanding with EPA, due to a release of chlorinated solvent that occurred in 1981 (the facility previously had used trichloroethene [TCE] in its vapor degreaser). The current groundwater remediation system includes two recovery wells and seven monitoring wells. Used granular activated carbon (GAC) from this system is considered nonhazardous waste. Groundwater from the treatment system is combined with process wastewater after proceeding through the WWTP and before discharge to the sanitary sewer. Spent GAC is generated in the groundwater treatment system, which consists of an aeration unit and the GAC. The facility considers the spent GAC nonhazardous based on product and process knowledge (analysis of pre- and post-treatment groundwater). However, the spent GAC is consolidated with the F006 filter cake, so would carry the F006 waste code, based on the mixture rule. According to Ms. Allen, she believes that the generation rate of 400 pounds of spent GAC every 2 to 3 years is accurate. The spent GAC, mixed with the filter cake, is sent to PDC in Peoria, Illinois, for disposal.

I reviewed the management of groundwater remediation waste management and no issues or findings were noted.

4.10 Aerosol Can Residuals

I asked Mr. Mathisen if aerosol cans are used on site. Mr. Mathisen stated aerosol cans are used primarily for maintenance activities. Mr. Mathisen stated aerosol cans are used until RCRA empty and punctured. Mr. Mathisen stated that if an aerosol broke or became unusable, an operator would immediately puncture the can and manage the aerosol can residuals as a D001 hazardous waste which are managed in SAA #81. There was no aerosol can residuals managed at the time of the inspection.

I reviewed the management of aerosol can residuals and no issues or findings were noted.

4.11 Used Parts Washer Solvent

Used parts washer solvent is generated in two parts washers around the facility. Mr. Mathisen stated the two parts washers use aqueous solvents but the facility has determined that used parts washer solution is hazardous waste (D008) based on product knowledge and testing. The facility generates approximately 50 gallons of used parts washer solvent every 3 months. The waste is transported to Safety-Kleen in Omaha, Nebraska, for recycling or disposal. A Heritage-Crystal Clean service receipt is included in Attachment 14.

I did not observe any used parts washer solvent management during the inspection.

4.12 Wastewater Treatment Plant

During the visual inspection, I observed the on-site WWTP. The WWTP is located on the eastern portion of the plant directly before crossing the railroad tracks as shown on the facility layout (see Attachment 1). Wastewater generated from the on-site WWTP consists of a mix of process wastewater and groundwater from the on-site remediation activities. Because the wastewater is discharged to the City of Atlantic POTW via the sanitary sewer, MAHLE considers it exempt from the definition of solid waste. I reviewed the pretreatment agreement issued by the City of Atlantic. Based on this document, the facility discharged 52,000 gallons per day (approximately 35,000 gallons of process wastewater and 17,000 gallons of groundwater). According to Ms. Allen, the wastewater is sampled before discharge for metals, total suspended solids, oil and grease, and pH (see Attachment 12). Groundwater is sampled regularly as part of the facility's corrective action program.

Filter cake is dewatered sludge generated from on-site treatment of plating wastewater. The facility has determined that filter cake is hazardous waste (F006) based on product and process knowledge. Based on my review of manifests, the facility generates approximately 20-yards of filter cake per month. The waste is transported to Heritage Environmental Services in Indianapolis, IN for disposal.

During my inspection of the WWTP, I observed an empty 1-yard rollaway container under the filter press. According to Mr. Mathisen, the filter cake is generated from a batch process. After dropping into the rollaway container, it is transferred immediately to a 20-yard container just outside the WWTP building (see Photo 4 and Photo 5, Attachment 3). The 20-yard container was closed, labeled as “Hazardous Waste,” and labeled with an indication of the nature of the hazard. The accumulation start date on the container was May 6, 2022.

I reviewed the management of waste from the WWTP, and no issues or findings were noted.

4.13 Universal Wastes

During the visual inspection, I observed the management of universal waste batteries and lamps. Used lamps are generated during facility maintenance and include both fluorescent tube lamps and high-intensity discharge (HID) lamps. Although the facility is transitioning to lower mercury, nonhazardous lamps, the transition is not complete. MAHLE considers the older lamps characteristic hazardous waste and manages all used lamps as universal waste. Used lamps are collected for recycling by A-TEC of Pleasant Hill, Iowa. An invoice of a shipment of universal waste to A-TEC is included in Attachment 17. During the visual inspection of the area around the wastewater pit, I observed three containers of 8-foot tube lamps and 4-foot tube lamps. All containers were closed, in good condition, and labeled as "Universal Waste-Lamp(s)." The earliest accumulation start date was observed on "07/02/2021" and was on a 4-foot container.

The facility considers the used batteries characteristic hazardous waste and manages all waste batteries as universal waste. MAHLE manages universal waste batteries in the maintenance area. Ms. Allen stated MAHLE generates approximately two 5-gallon containers per year. During the visual inspection, I observed a 5-gallon container of universal waste batteries located in Area 484 Packing. The 5-gallon container was closed, in good condition, and labeled as "Spent Batteries." The container was approximately half full. The container did not have an accumulation start date and was not labeled "Universal Waste Used Batteries." I asked Mr. Mathisen if the facility tracked how long universal waste has been accumulated on site. Mr. Mathisen stated the facility would date the containers with an accumulation start date. I explained to Mr. Mathisen the facility is required per 40 CFR 273.15(c) to demonstrate the length of time that universal waste has been accumulated. Therefore, I left the following findings:

NOPF 3 – Failure to demonstrates the length of time that the universal waste has been accumulated. [40 CFR 273.15(c)].

NOPF 4 – Failure to label individual batteries or their containers "Universal Waste-Battery(ies)," or "Waste Battery(ies)," or "Used Battery(ies)". [40 CFR 273.14(a)].

Ms. Allen provided me with invoices for the universal waste lamps and batteries in Attachment 17.

4.14 Waste Oil

I visually observed the facility's bearing production operations. MAHLE generates waste oil/coolant from maintenance of cutting, grinding, and fabricating equipment. The facility has determined that waste oil/coolant is a hazardous waste (D008) based on product and process knowledge and analysis. I reviewed an analytical report from 2009, which showed that the material failed the toxicity characteristic leaching procedure (TCLP) analysis for lead (see Attachment 10). The waste is transported to Tradebe in East Chicago, Indiana, for

disposal. I observed three 55-gallon SAA containers of waste oil/coolant. Each container was closed, labeled as "Hazardous Waste," and labeled with an indication of the nature of the hazard. During my inspection of CAA #1 inside the WWTP building, I observed seven 55-gallon containers of waste oil/coolant (see Photo 3, Attachment 3). Each container was closed, labeled as "Hazardous Waste," and labeled with an indication of the nature of the hazard.

I reviewed the management of waste oil and no issues or findings were noted.

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4.15 Other Regulatory Requirements

Preparedness, Prevention, and Emergency Requirements - Safety and emergency equipment were present and in satisfactory condition in areas throughout the facility, including the two hazardous waste containers CAAs (as noted in Section 4.4 of this report). Appropriate arrangements and coordination were made with necessary State and local emergency agencies.

I reviewed the preparedness, prevention, and emergency requirements and no issues or findings were noted.

Contingency Planning Requirements – Section 3 and Section 8 of the contingency plan (see Attachment 19) was on file electronically and was reviewed while on site. The contingency plan had been revised in March 2020 and included, emergency response procedures, emergency coordinators and contact information, and a list of emergency some response equipment. The contingency plan needed to be updated when Ms. Allen became one of the designated emergency coordinators in March 2021. Ms. Allen stated that MAHLE was going to update the emergency coordinators in the contingency plan. Therefore, I left the following finding:

NOPF 5 – Failure to keeps list of emergency coordinators up-to-date. [40 CFR 262.17(a)(6)→262.261(d)].

The contingency plan did not include a complete evacuation route or alternative routes. During records review, I asked Ms. Allen if the facility had designated evacuation routes or a map indicating where evacuation routes are located throughout the facility. Ms. Allen stated it must have been an oversight that this was not included in the contingency plan. Therefore, I left the following finding:

NOPF 6 – Failure to include a complete evacuation plan including route, signal, and alternate route in the contingency plan. [40 CFR 262.17(a)(6)→40 CFR 262.261(f)].

The facility did not prepare a quick reference guide even though they updated their contingency plan after May 30, 2017. Ms. Allen stated this was an oversight of the previous manager when the contingency plan was updated in March 2020 and MAHLE was going to make it a priority to prepare a quick reference guide. Therefore, I left the following finding:

NOPF 7 – Failure to prepares a quick reference guide and submit it to emergency response agencies. [262.17(a)(6)→262.262(b)].

The facility had submitted the contingency plan to local emergency response agencies including the local police department, fire department, and hospital. Copies of the arrangements with the local response agencies are included in Attachment 20.

I reviewed the entire RCRA contingency plan and no additional issues or findings were noted.

Personnel Training Requirements – Personnel are to be trained to perform hazardous waste duties, and new employees are to be trained within 6 months of start. The training, at a minimum, must be designed to ensure personnel at MAHLE are able to manage hazardous waste relevant to the positions in which they are employed and respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including:

1. Procedures for using, inspecting, repairing, and replacing facility emergency equipment
2. Communications and alarm systems
3. Response to fires or explosions

Upon reviewing the hazardous waste training employees of MAHLE receive, I determined the training to be sufficient. Ms. Allen provided yearly records of completed trainings for all employees handling hazardous waste on site and emergency coordinators listed in the contingency plan. Ms. Allen who has taken on the role as an emergency coordinator for approximately three months has not yet taken the training but is scheduled to take the training within the month. I observed both Daniel Riker and Clint Mathisen signed hazardous waste manifests. Clint Mathisen is a designated wastewater treatment operator. During records review, I observed that the wastewater treatment operator job description explained their respective duties but did not provide information on initial training requirements and continual training requirements. Ms. Allen stated the wastewater treatment operator job description would be updated to include all required information. The wastewater treatment operator and material handler job descriptions provided by Ms. Allen are included in Attachment 21. I observed Mr. Mathisen and Mr. Riker completed annual RCRA hazardous waste refresher training on July 22, 2021 and July 8, 2021 respectively. Training records for Mr. Mathisen and Mr. Riker are included in Attachment 22 as examples. I reviewed the personnel training requirements and I left the following finding:

NOPF 8 – Failure to prepare a written description of type and amount of introductory and continuing training. [40 CFR 262.17(a)(7)(iv)(C)].

Manifest and Land Disposal Restriction (LDR) Requirements – MAHLE maintained records of manifests on site at the time of inspection dating back three years. MAHLE generated approximately 20 manifests over the last three years. I reviewed all manifests from the last three years. Two manifests are provided in Attachment 23 as examples.

I reviewed all other manifest and LDR requirements and no issues or findings were noted.

5.0 SUMMARY OF FINDINGS

NOPF 1 – Failure to inspect CAAs weekly. [40 CFR 262.17(a)(1)(v)].

The facility did not inspect the CAA from 1/29/22 through 2/12/22; 9/17/21 through 10/1/21; 4/17/21 through 4/30/21; and 6/23/20 through 7/17/20.

NOPF 2 – Failure to keep containers closed when not adding waste or for temporary venting. [262.15(a)(4)].

At SAA #19, there was a 5-gallon container of mixed waste/lead-contaminated hazardous waste. The container lid had two holes on the top of the lid and is not closed. The container was labeled as "Hazardous Waste" and labeled with an indication of the nature of the hazard. The container was holding approximately two gallons of hazardous waste.

NOPF 3 – Failure to demonstrates the length of time that the universal waste has been accumulated. [40 CFR 273.15(c)].

NOPF 4 – Failure to label individual batteries or their containers "Universal Waste-Battery(ies)," or "Waste Battery(ies)," or "Used Battery(ies)". [40 CFR 273.14(a)].

During the visual inspection, I observed a 5-gallon container of universal waste batteries located in Area 484 Packing. The 5-gallon container was closed, in good condition, and labeled as "Spent Batteries." The container did not have an accumulation start date and was not labeled "Universal Waste Used Batteries."

NOPF 5 – Failure to keeps list of emergency coordinators up-to-date. [40 CFR 262.17(a)(6)→262.261(d)].

The contingency plan had been revised In March 2020 and included, emergency response procedures, emergency coordinators and contact information, and a list of emergency some response equipment. The contingency plan needed to be updated when Ms. Allen became one of the designated emergency coordinators in March 2021. Ms. Allen stated that MAHLE was going to update the emergency coordinators in the contingency plan.

NOPF 6 – Failure to include a complete evacuation plan including route, signal, and alternate route in the contingency plan. [40 CFR 262.17(a)(6)→40 CFR 262.261(f)].

The contingency plan did not include a complete evacuation route or alternative routes. During records review, I asked Ms. Allen if the facility had designated evacuation routes or a map indicating where evacuation routes are located throughout the facility. Ms. Allen stated it must have been an oversight that this was not included in the contingency plan.

NOPF 7 – Failure to prepares a quick reference guide and submit it to emergency response agencies. [262.17(a)(6)→262.262(b)].

The facility did not prepare a quick reference guide even though they updated their contingency plan after May 30, 2017. Ms. Allen stated this was an oversight of the previous manager when the contingency plan was updated in March 2020 and MAHLE was going to make it a priority to prepare a quick reference guide.

NOPF 8 – Failure to prepare a written description of type and amount of introductory and continuing training. [40 CFR 262.17(a)(7)(iv)(C)].

During records review, I observed that the wastewater treatment operator job description explained their respective duties but did not provide information on initial training requirements and continual training requirements. Ms. Allen stated the wastewater treatment operator job description would be updated to include all required information.

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

Joseph Watson Digitally signed by Joseph Watson
Date: 2022.07.31 22:13:55 -04'00'

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Joseph Watson
Senior Chemical Engineer
Date: July 31, 2022

AMBER WHISNANT Digitally signed by AMBER WHISNANT
Date: 2022.08.05 18:05:52 -05'00'

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

Attachments:

1. Facility Layout (1 page)
2. MAHLE Engine Components USA Inc. Photolog (1 page)
3. MAHLE Engine Components USA Inc. Photos (12 photos/13 pages)
4. EPA Inspection Checklist (42 pages)
5. Confidentiality Notice (1 page)
6. Receipt for Documents and Samples (1 page)
7. Notice of Preliminary Findings (1 page)
8. Notification Acknowledgement Verification Report (1 page)
9. Metal and Cardboard Recycling Invoice (6 pages)
10. Waste Oil, Tool Shop Waste, Filter Cake Analytical Results (3 pages)
11. Mixed Process Waste Waste Profile (5 pages)

12. Discharge Water Agreement (5 pages)
13. Aerosol Residuals Waste Profile (4 pages)
14. Parts Washer Service Invoice (1 page)
15. Vapor Degreaser Waste Profile (7 pages)
16. Waste Profile Vapor Degreaser (4 pages)
17. Universal Waste Invoice (1 page)
18. CAA Inspection Log (8 pages)
19. Contingency Plan Sections (23 pages)
20. Contingency Plan Arrangements (6 pages)
21. Job Descriptions (5 pages)
22. Training Records (2 pages)
23. Manifests (2 pages)

Notice of Preliminary Findings

(For Contractor Use Only)

Facility Name: MAHLE Engine Components USA, INC.

Facility Address: 60428 MARNE ROAD
ATLANTIC IA 50022

EPA ID#: IAD 096552610 8 **Date:** 6/8/2022

Notice: I am not an employee of the Environmental Protection Agency ("EPA"). I am a contractor for the EPA retained to conduct compliance evaluation inspections. The following is a list of observations/recommendations found during this inspection which will be reported back to the EPA. This is not to be construed as a complete list of observations/recommendations. The EPA will be evaluating the report prepared as a result of this inspection and will make determinations as to what violations may have occurred at your facility.

	Citation	Description of Finding
9.	40 CFR 262.17(a)(1)(v)	There were three 10 week periods and one 3 week period between Weekly inspections.
1.	40 CFR 226.15(a)(4)	SMA Container in area 423 had a hole in the lid. The container was not closed.
2.	40 CFR 273.15(c)	ONE 5-gallon container of universal waste batteries did not have an accumulation start date
3.	40 CFR 273.14(e)	5-gallon container of universal waste batteries Not labeled "Universal Waste batteries"
4.	40 CFR 262.17(a)(6) + 262.261(d)	The list of EC's was NOT updated.
5.	40 CFR 262.17(a)(6) + 262.261(f)	The contingency plan did not have did not identify EVACUATION ROUTES
6.	40 CFR 262.17(a)(4) + 262.262(b)	The contingency plan was updated in March 2020 but a quick reference guide was not prepared. Jon
7.	40 CFR 262.17(a)(7)(iii) Training certificates provided after I left the site. Jon	Annual refresher training for personnel was in 2019. Jon
8.	40 CFR 262.17(a)(7)(iv)(C)	No written description of training requirements for introductory and continuing training for the wastewater treatment operator

If you have any questions about this Notice or wish to discuss your response, you may call me at 215-891-6615, or Trevor Urban (Compliance Officer) at 913-551-7133.

This Notice prepared by Joseph Watson Date: 6/8/2022

The undersigned person hereby acknowledges receipt of this Notice and has read the same.

Printed Name: Cody Weaver Date: 6/8/2022

Signature: Cody W

Title: Plant Manager

(Rev: 2/25/2020) White Original/ EPA • Yellow/ Facility