REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

At

Wellman Dynamics
1746 Commerce Road
Creston, IA 50801
(641) 782-0283

EPA ID Number: IAD065218737

On

December 15, 2021

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 Wellman Dynamics (WD) in Creston, Iowa on December 15, 2021. 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

Wellman Dynamics:
Matt Thelen, Environmental Engineer

EPA Representative, ERG:
Janosh Wolters, Energy Engineer

3.0 INSPECTION PRECEDURES

Due to the COVID-19 pandemic, I contacted the facility via telephone and spoke with Mr. Thelen on December 6, 2022 at approximately 13:00. We discussed facility specific safety protocols to ensure the safety of all personnel involved during the inspection and I informed him when I would arrive at the facility to perform the inspection. After arriving announced at WD at approximately 07:40, I performed a drive-by 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 signed into the visitor's log. Mr. Thelen then led me to his office to begin the opening conference at approximately 07:45.

I initiated the opening conference with Mr. Thelen present as the WD representative. I presented him 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. Thelen with a copy of the *Notice Regarding Proprietary/Confidential Business Information Submitted to or Collected by EPA in Connection with Inspections* and reviewed WD's confidentiality rights. I informed Mr. Thelen 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. Thelen 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. Thelen guided me throughout the facility in order to conduct thorough evaluations of the facility's areas generating, accumulating hazardous waste, and all manufacturing and process areas. The facility also handles universal waste in a designated on-site area, which was also visually inspected. I conducted an in-depth visual inspection of the hazardous waste accumulation containers, used oil storage areas, the universal waste area on site, and all manufacturing areas.

Seven 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. Thelen 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 WD.

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

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

WD began operating in 1965 and currently employs approximately 325 people. The facility operates a stagged eight-hour, three shift operation, Monday through Friday. The facility has a footprint of approximately 293,000 square feet. WD's operations consist of manufacturing magnesium and aluminum sand castings. The major raw materials used are sand, magnesium, and aluminum. The major manufacturing or processing operations that generate waste streams include manufacturing magnesium and aluminum sand castings. The following waste streams are produced: hydrofluoric acid tank sludge, ignitable liquids, scrubber solution, spent flux, solvent wipes, wastewater, wastewater treatment sludge, foundry composite, scrap iron, scrap magnesium, scrap aluminum, scrap copper, quench solution, used oil, used oil filters, universal waste, and general trash.

4.2 RCRA Status

According to the *Hazardous Waste Site Info Verification Report for Inspector* (see Attachment 7), WD notified as a federal large quantity generator (LQG) of D001, D002, D003, D005, D007, F003, and F005 hazardous wastes. I asked Mr. Thelen 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. Mr. Thelen stated the facility has not been operating as a LQG for three years. Mr. Thelen stated the facility has been generating less than 220 pounds of hazardous waste for approximately two years. Mr. Thelen stated he has left the facility as a LQG out of a best management practice. After reviewing the records and walking through the facility, I determined that the facility is operating as a very small quantity generator (VSQG) of D001, D002, and D005 hazardous wastes, a generator of used oil, and a small quantity handler (SQH) of universal waste. WD generated approximately 1,530 pounds in 2020, and approximately 600

pounds of hazardous waste in 2021.

WD was previously inspected by an EPA contractor on March 22, 2016. The inspection led to a notice of preliminary findings (NOPFs). One finding was left for a failure to have adequate aisle space at the hazardous waste accumulation area. I did not observe any issues or findings during my inspection.

4.3 Facility Waste Streams and Management

A Waste Stream and Waste Handling Table for WD 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	Hydrofluoric Acid Tank Sludge (Waste Profile included in Attachment 8)	Cleaning the etch line acid bath tanks (one-time occurrences)	D002 (based on process knowledge and knowledge of the product)	800 pounds generated in 2019 and has not been generated since then	55-gallon containers or 275-gallon containers at the time of clean out	Clean Harbors Environmental Services, Inc. Plymouth County, MA (MAD039322250) to Clean Harbors Deer Trail LLC in Deer Trail, CO (COD991300484) for treatment and landfill
2	Ignitable Liquids (Waste Profile included in Attachment 9)	Residual from empty containers from casting production binders and aerosol can residuals	D001 (based on process knowledge and knowledge of the product)	One 55-gallon container in 2021	55-gallon container	Clean Harbors Environmental Services, Inc. Plymouth County, MA (MAD039322250) to Clean Harbors El Dorado LLC in El Dorado, AR (ARD069748192) for incineration
3	Scrubber Solution (Waste Profile included in Attachment 10)	Cleanout of scrubber	D002 (based on process knowledge and knowledge of the product)	0 pounds in 2021 but has historically generated this waste stream	275-gallon container	Clean Harbors Environmental Services, Inc. Plymouth County, MA (MAD039322250) to Clean Harbors El Dorado LLC in El Dorado, AR (ARD069748192) treatment and landfill
4	Spent Flux	Off-spec material used in melting operations or spilled flux	D005 (based on process knowledge and knowledge of the product)	Has not yet generated this waste stream for over five years and would be less than one 55-gallon when generated	55-gallon container	Clean Harbors Environmental Services, Inc. Plymouth County, MA (MAD039322250) 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
5	Solvent Wipes	Wiping excess solvent off casting	Excluded per 40 CFR 261.4(b)(18) - (based on process knowledge and knowledge of the product)	One 40-gallon plastic bag every two weeks	Five-gallon containers and consolidated into one 40-gallon plastic bag which is added to general trash	Jim's Sanitation in Creston, IA to Metro Park East Landfill in Des Moines, IA for landfill
	During the CEI, I determined based on how this type of waste is generated, it is nonhazardous. See Section 4.4 of this report for more information.					
7	Scrubber Solution (Waste Profile included in Attachment 11)	Cleanout of scrubber	Nonhazardous (based on process knowledge and knowledge of the product)	2,400 pounds per year	275-gallon containers	Clean Harbors Environmental Services, Inc. Plymouth County, MA (MAD039322250) to Clean Harbors El Dorado LLC in El Dorado, AR (ARD069748192) for treatment
8	Wastewater	Rinsing castings	Nonhazardous (based on process knowledge and knowledge of the product)	2,500 gallons per week	Treated in wastewater treatment plant (WWTP)	Discharged to sanitary sewer, City of Creston, Publicly Owned Treatment Works (POTW) for treatment (POTW Agreement included in Attachment 12)
9	Wastewater Treatment Sludge	Filter press from WWTP pH adjustment pretreatment	Nonhazardous (based on process knowledge and knowledge of the product)	500 pounds per month	20-yard container	Jim's Sanitation in Creston, IA to Metro Park East Landfill in Des Moines, IA for landfill

#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
10	Foundry Composite (Sands and Dusts)	Facility operations	Nonhazardous (based on process knowledge and knowledge of the product)	13,000 tons per year	On-site landfill	H&H Commercial Services in Union County, IA to Metro Park East Landfill in Des Moines, IA for use as alternative daily cover
11	Scrap Iron	Facility operations	Nonhazardous (based on process knowledge and knowledge of the product)	10 tons per month	40-yard container	Clayton Auto Salvage in Greenfield, Iowa for recycling
12	Scrap Magnesium, Aluminum and Copper	Facility operations	Nonhazardous (based on process knowledge and knowledge of the product)	20,000 tons per month	Gaylord boxes and 55-gallon containers	Shapiro Metal Recycling in St. Louis, MO for recycling
13	Quench Solution (Waste Profile included in Attachment 13)	Heat treat operations	Nonhazardous (based on process knowledge and knowledge of the product)	2,500 gallons every four months	275-gallon containers	Safety-Kleen in Des Moines, IA (IAD981718000) for treatment

#	WASTE STREAM	GENERATION PROCESS	HAZARDOUS WASTE DETERMINATION	ESTIMATED GENERATION RATE	ON-SITE MANAGEMENT	OFF-SITE MANAGEMENT
14	Used Oil	Facility maintenance	Excluded (managed as used oil per 40 CFR 279)	1,000 gallons per year	55-gallon container to 480-gallon container	Safety-Kleen Systems Inc. in Des Moines, IA (IAD981718000) for recycling (Invoice included in Attachment 14)
15	Used Oil Filters	Facility maintenance	Excluded (based on management and process knowledge) recycled as scrap metal	Two used oil filters per month	Hot drained and punctured and then added to scrap metal containers	Clayton Auto Salvage in Greenfield, Iowa for recycling
16	Universal Waste Lamps	Facility maintenance	Excluded (managed as universal waste per 40 CFR 273)	Four 4-foot containers per year	4-foot containers	A-TEC Recycling in Des Moines, IA (IA0000109827) for recycling ((Bill of Lading (BOL) included in Attachment 15))
17	Universal Waste Batteries	Facility maintenance	Excluded (managed as universal waste per 40 CFR 273)	One 5-gallon container per year	5-gallon container	A-TEC Recycling in Des Moines, IA (IA0000109827) for recycling (BOL included in Attachment 15)
18	General Trash	Facility operations	Nonhazardous (based on process knowledge and knowledge of the product)	Two 2-yard containers picked up weekly. One 20-yard container picked up monthly	2-yard and 20-yard containers	Jim's Sanitation in Creston, IA to Metro Park East Landfill in Des Moines, IA for landfill (Invoice included in Attachment 16)

4.4 Visual Inspection

Foundry Operations:

WD manufactures magnesium and aluminum castings for a variety of industries. WD uses a combination of hydrofluoric waste tanks during the casting process. Cleanout operations take place based on production and would not occur more than once per year. This waste has not been generated in 2021 and Mr. Thelen stated he does not anticipate cleaning the tanks in the near future. Mr. Thelen explained the facility has been slowing operations over the past three years. When this waste is generated, it is shipped off-site on a hazardous waste manifest. The waste profile is provided in Attachment 7. In addition, the facility generates quench waste as a part of the casting process. This waste is nonhazardous and shipped off-site using the waste profile provided in Attachment 13. Mr. Thelen stated scrubber waste is also generated when the scrubber is cleaned out. Mr. Thelen explained a continuously monitoring gauge monitors the pH inside the scrubber and the facility attempts to clean out the scrubber when the pH is greater than 4. If this is achieved, the waste can be managed as a nonhazardous waste and is shipped off-site with the waste profile provided in Attachment 11. If the facility is unable to clean out the scrubber and the pH reaches a level below 4, the facility manages the waste as a D002 hazardous waste. The hazardous scrubber waste is shipped off site using the waste profile provided in Attachment 10.

Mr. Thelen stated the facility attempts to use all purchased binding product for financial reasons. If any residual from empty binding containers is left over, the facility manages this waste as a D001 hazardous waste. Mr. Thelen stated the facility also manages one aerosol can puncture unit on site and all residuals are managed under the same waste profile as the excess binding material. The waste profile for ignitable waste on site is provided in Attachment 9. During the visual inspection, I observed one 55-gallon container of aerosol can residuals and one 55-gallon container of ignitable waste (see Attachment 3, Photo 2 and 3).

Solvent Contaminated Wipes:

Mr. Thelen stated the facility generates solvent contaminated rags on site. The rags are generated from wiping excess solvent off castings during inspections with isopropyl alcohol, acetone, and methanol. The facility uses five-gallon red containers to accumulate all solvent contaminated rags (see Attachment 3, Photo 7). The containers are labeled with “Excluded Solvent Contaminated Wipes” and consolidated before being added to the general trash waste stream. Mr. Thelen explained the facility manages the wipes under the solvent contaminated wipes sent for disposal per 40 CFR 261.4(b)(18). Mr. Thelen explained wipes are not accumulated for more than 180 days, do not contain free liquids when placed inside the container, and all wipes are managed off-site by Jim’s Sanitation in Creston, Iowa to Metro Park East Landfill in Des Moines, Iowa for landfill. An invoice for general trash being shipped off site is provided in Attachment 16. During records review, Mr. Thelen provided me with the facilities SOP for management for these wipes as shown in Attachment 17. In addition, the facility uses a tracking system outlined in the management practice form provided in Attachment 18. All five-gallon containers accumulating solvent contaminated rags were closed, labeled “Excluded Solvent Contaminated Wipes”, and in good condition. I determined the facility is in compliance with the

exclusions set forth in 40 CFR 261.4(b)(18). During further review, I determined this waste to be nonhazardous. Based on the use of an isopropyl alcohol, acetone, and methanol solvent solution mixture and that no free liquids are present on the rags when initially placed inside the 5-gallon container, the rags would not be a F003 listed or D001 characteristic hazardous waste. The facility appears to be overclassifying this waste stream as a conservative measure.

Landfill:

WD has an on-site landfill which is located on the eastern portion of the facility. Mr. Thelen stated the landfill is used to store the facility foundry composite waste. This waste is comprised of different sands and dusts. Mr. Thelen stated the waste is hauled off-site by H&H Commercial Services in Union County, Iowa to Metro Park East Landfill in Des Moines, Iowa for use as alternative daily cover.

POTW:

The facility sends rinse wastewater through the facility's on-site WWTP for pH adjustment. After pretreatment, WD has an agreement with the City of Creston POTW and discharges wastewater via the sanitary sewer. Mr. Thelen explained WD is approved for this discharge as shown in the POTW agreement provided in Attachment 12.

Universal Waste:

WD manages a small amount of universal waste on site. I observed one 4-foot container accumulating universal waste lamps (see Attachment 3, Photo 6). Mr. Theler stated the facility had just shipped universal waste lamps and batteries off site last week. Mr. Thelen stated the facility has A-TEC Recycling pick up both universal waste batteries and universal waste lamps together. The container was located in the maintenance storage area and was replaced just before the visual inspection of this area. At the time of the inspection, I did not observe any universal waste batteries accumulating on site. Mr. Thelen stated the facility shipped off one 5-gallon container last week. The container I observed was labeled as "Universal Waste Lamps", closed, in good condition, and dated with the start accumulation date. The container was labeled with an accumulation start date of "12/15/2021". Examples of a BOL used to ship waste batteries and waste lamps off site is provided in Attachment 15. I did not note any issues or findings at the universal waste accumulation area.

Used Oil:

I visually observed the facility's 480-gallon used oil tank storage located north of the facility's on-site landfill. I observed one 55-gallon container of used oil in the maintenance area. The containers were closed, labeled "Used Oil", and in good condition. An invoice associated with a used oil shipment is provided in Attachment 14. I did not note any issues or findings at the used oil storage area.

Contingency Plan and Manifests:

During records review, Mr. Thelen explained that out of a best management practice, he created a contingency plan with a quick reference guide for the facility and has submitted both to all applicable response agencies. Although not a regulatory requirement for a VSQG, I reviewed the plan during the inspection. The contingency plan and quick reference guide are provided in Attachment 19.

In addition, as discussed in this report, the facility uses hazardous waste manifests to ship wastes off site. The most recent hazardous waste manifest generated and corresponding LDR form is provided in Attachment 20 as an example. Lastly, Mr. Thelen stated he attends a RCRA hazardous waste refresher and trains on-site employees with basic hazardous waste management practices. Mr. Thelen also stated he understood if the facility were to become a LQG of hazardous waste, all emergency coordinators would need to attend hazardous waste refresher training. Mr. Thelen's training certificate is provided in Attachment 21.

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

Janosh Wolters

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Janosh Wolters
Energy Engineer
Date: February 3, 2022

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

Attachments:

1. Facility Layout (1 page)
2. Wellman Dynamics Photolog (1 page)
3. Wellman Dynamics Photos (7 Photos/8 pages)
4. EPA Inspection Checklist (21 pages)
5. Confidentiality Notice (1 page)
6. Receipt for Documents and Samples (1 page)
7. Hazardous Waste Site Information Verification Report (1 page)
8. Hydrofluoric Acid Sludge Waste Profile (4 pages)
9. Ignitable Waste Profile (5 pages)
10. Hazardous Scrubber Solution Waste Profile (5 pages)
11. Nonhazardous Scrubber Solution Waste (5 pages)

12. POTW Agreement (4 pages)
13. Quench Waste Profile (4 pages)
14. Used Oil Invoice (1 page)
15. Universal Waste BOL (1 page)
16. Jim's Sanitation Invoice (1 page)
17. Solvent Excluded Contaminated Wipes SOP (1 page)
18. PM Excluded Solvent Contaminated Wipes Rule (1 page)
19. Contingency Plan (11 pages)
20. Manifests (2 pages)
21. Training Records (2 pages)