

**U.S. Environmental Protection Agency
Region 5**

Purpose: Clean Water Act National Pollutant Discharge Elimination System Compliance Evaluation Inspection

Facility: Energizer Battery Manufacturing Inc.
2036 Blue Knob Road
Marietta, Ohio 45750

Inspection Date: December 14, 2022

EPA Representatives:

Jake Berger, Physical Scientist, 312-353-8024, berger.jake@epa.gov

William Jones, Environmental Engineer, 312-886-6058, jones.william@epa.gov

Facility Representatives:

Awwen Tyrsson, Quality Manager and Environmental Coordinator

Mark LaFrance, Consultant

Report Prepared by:

Jake Berger, Physical Scientist

Water Enforcement and Compliance Assurance Branch, Section 1

Inspector Signature and Date: _____

Berger, Jake

Digitally signed by Berger,
Jake
Date: 2022.12.30
11:26:57 -06'00'

Approver Name and Title: Molly Smith, Section 1 Supervisor, Water Enforcement and Compliance Assurance Branch

Approver Signature and Date: _____

MOLLY
SMITH

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MOLLY SMITH
Date: 2022.12.30
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PURPOSE OF INSPECTION

The purpose of the inspection by the U.S. Environmental Protection Agency (USEPA) at Energizer Battery Manufacturing Inc. (Energizer or Facility) was to describe, evaluate, and document compliance with the Clean Water Act (CWA).

BACKGROUND

Energizer has approximately 30-40 employees at its Marietta, Ohio location and operates 24 hours per day, 7 days per week. Energizer uses water from the Ohio River and clarifies it onsite to remove sediment. Energizer accepts raw calcined ore, primarily consisting of manganese oxide, and purifies the ore through a series of steps to produce alkaline-grade electrolytic manganese dioxide (MnO₂). These steps consist of leaching, sulfiding, plating, and finishing. Calcined ore is delivered by railcar and pneumatically transferred to one of the three storage bins on the roof, each equipped with a dust collector. The calcined ore is then incrementally fed via hopper into one of four leach tanks (42,000 gallons each) where the ore reacts with sulfuric acid. Leaching occurs in batches taking approximately 8-10 hours per batch cycle where impurities, such as iron and potassium, precipitate out of solution and are removed via hydrocyclone, ultimately producing water and manganese sulfate. The leach process is heated to approximately 290°F via direct steam injection. The leach stream is then clarified with the aid of a polymer to further remove heavy metal impurities. The mixture then undergoes the sulfiding process where clarifier overflow is mixed with sodium hydrosulfide (NASH) to further precipitate sulfide impurities, which are filtered out using drum filters. The purified aqueous filtrate is then pumped to the cell room at a rate of approximately 200 gallons per minute for the plating process. The cell room has 94 plating cells, 14 anodes, and 15 cathodes that are steam-heated to approximately 208°F. After plating is completed, the MnO₂ cake is stripped from the anodes and sent to the cake shed on a partially enclosed conveyor. The finishing process consists of crushing the MnO₂ cake and neutralizing the MnO₂ in one of two 120,000-gallon neutralization tanks, adding sodium hydroxide as needed. After the neutralization tank the material is milled, screened, and bagged.

INSPECTION

Jake Berger and William Jones of USEPA first arrived at the Facility at 8:48 a.m. EST and were met by Awwen Tyrsson (Quality Manager and Environmental Coordinator). Jake Berger and William Jones showed him their inspector credentials and identification. Mark LaFrance (Internal Consultant) also joined, and Jake Berger and William Jones began the opening conference.

Opening Conference

USEPA staff explained that the purpose of the inspection was to:

- Review Energizer's water usage and agreement with Eramet Marietta, Inc. (Eramet);
- Conduct a walkthrough of the Facility;

- Identify locations where storm water control had the potential to be insufficient; and
- Inform Energizer of areas of concern regarding the information collection and facility walkthrough.

All stormwater collected on-site and all process wastewater generated by Energizer are discharged to the Union Carbide Oxidation Process (UNOX) treatment system at the neighboring Eramet Marietta, Inc. (Eramet) facility, as per a longstanding contractual agreement between the two facilities. This also includes any pollutants and water collected via floor drains and water used for the boiler system. Similarly, the sanitary wastewater from Energizer is discharged to the Eramet sanitary treatment system. Chemicals used at the facility include H₂O₂, sodium sulfahydride, caustic, sulfuric acid, and ferric sulfate. Because Energizer does not discharge any pollutants or wastewater to a Waters of the United States themselves, Energizer does not have a National Pollutant Discharge Elimination System (NPDES) permit.

The opening conference portion of the inspection concluded at 9:34 a.m. EST and was immediately followed by a Facility walkthrough tour with Awwen Tyrsson.

Facility Walkthrough

USEPA observed the storm water controls and water usage during the Facility walkthrough, further documented in the Photograph Log (attached).

The Facility walkthrough tour ended at 10:24 a.m. EST and was immediately followed by a closing conference.

Closing Conference

USEPA confirmed that no information collected during the inspection was considered Confidential Business Information. During the conference no areas of concern were conveyed, though this inspection report does not constitute a formal compliance determinate or violation.

USEPA concluded the inspection and left the Facility at 10:24 a.m. EST.

**Energizer Battery Manufacturing Inc.
EPA Inspection 12/14/2022
All photos taken by Jake Berger, Physical Scientist, U.S. EPA
Camera: Olympus Tough TG-6**



1: PC140001

Description: Dyke around perimeter of facility to contain stormwater and chemical products

Camera Direction: East

Date/Time: 12/14/2022 9:39 a.m.



2: PC140002

Description: Treatment system for river water intake

Camera Direction: East

Date/Time: 12/14/2022 9:39 a.m.



3: PC140003

Description: Stormwater and chemical spill catch drain; discharges to UNOX treatment system.

Camera Direction: North

Date/Time: 12/14/2022 9:45 a.m.