

Environmental, Health and Safety Compliance
and System EHSMS Audit in Response to:

Washington State Preferred Performance
Measures for Direct Processors

WAC 173-900-650

Facility Audited: Ace Metal Corporation
Mukilteo, WA 98275

Auditor: Bob Delich
Date: July 24, 2024

Scope of Audit

This audit was designed to meet the specific requirements of the State of Washington's "Environmentally Sound Management Performance Measures for Direct Processors – Preferred Status" qualification requirements. The WA State Standards, WAC 173-900-650. These were interpreted, and a facility checklist was prepared to meet the standards requirements that related directly to the operations. The audit consisted of confirming the nexus between the two documents and the operations.

The Environmental, Health and Safety management system manages non-conformances with a corrective action process.

The facility audited:

Ace Metal Corporation facility located at - 11110 Mukilteo Speedway, Mukilteo, WA 98275. The audit was performed July 24, 2024.

The site manages EHS responsibilities with a simple and non-certified EMS which is supported by a consultant. The facility is well run and operating efficiently. Employees demonstrated proficiency in their job duties and the management system in general. The Ace staff demonstrated strong commitment to the management system and the overall QEHS performance of the company.

Audit Summary

The following is a summary of a comprehensive review for compliance of operations in response to the Washington State Department of Ecology Preferred Performance Standards for Direct Processors of Electronics Processors - WAC 173-9000. After the audit the POC submitted Corrective Actions taken to address some of the findings noted. See attachments and photos.

1. Responsible Management Priorities – *Facility Maintains Compliance with Standards*

Inherent in the Washington State Department of Ecology Preferred Performance Standards for Direct Processors of Electronics Processors - WAC 173-9000.

2. Legal Requirements – *Facility Maintains Compliance with Standards*

Facility has annual inspections from the City of Mukilteo and Department of Ecology. Reviewed the Mukilteo Public Works-Facility Inspection dated 5.23.2024. There was one finding for a stormwater sampling exceedance.

Auditor reviewed Corrective Action and Validation Report for stormwater benchmark that was exceeded, in the 1st quarter of 2024. In the 2nd quarter of 2024, the sample was within required benchmarks. Reviewed City of Mukilteo Public Works Facility Inspection letter dated 05-23-24 which states the City of Mukilteo has closed the case for the property and that the required maintenance has been completed. City inspection noted both flow restrictors missing chains/rods, noted the required chain and catch basin 02540 (highlighted on map) was observed to have over two inches of oily sheen and over one foot of sediment in the sump. The Corrective

Action was to clean the entire catch basin, including the flow restrictor and flow restrictor orifice using a vector truck.

Facility has an Industrial Stormwater Permit. Reviewed the reissuance letter for the Industrial Stormwater Permit WAR 125520 from State of Washington Department of Ecology which expires on 12-31-24.

Reviewed email from Christine Haun of E-Cycle Washington informing Ace Metal Company that the registered status as a transporter with the E-Cycle Washington Electronic Products Recycling Program for the period 09-01-24 to 08-31-25 has been changed to "in compliance".

3. Environmental, Health, and Safety Management System EHSMS - Facility Maintains Compliance with Standards

The company wide EHSMS is not certified through a third party and is audited by their consultant and updated, as new procedures are implemented, or as new material is accepted. The EHSMS contains a diligent "Plan, Do, Check" component, which manages change and issues through constant management review. Reviewed the Management Review Meeting minutes dated 02-02-2023.

The following finding was addressed after completion of the onsite audit, see attachment 01.

Finding:

- A Management Review Meeting has not been completed for 2024.

4. Recordkeeping – Facility Partially Maintains Compliance with Standards

Records are managed well as noted during the audits and all material downstream dispositions to the first tier using shipping paperwork and final destinations documented on the MOC chart. The "end of life" companies highlighted for battery recycling have not been verified as battery processors by this audit. It is possible these companies are sort and ship facilities and not final destinations for these materials. POC onsite noted they do not usually ship batteries with BOLs but drop off at their DSV and they depend on their DSV to sort and invoice them. The last invoice was for 300 pds, which is quite small.

MOC chart for 2024

- CRT glass is shipped to [REDACTED] (tier 1) and they ship to [REDACTED] in Des Moines, IA (tier 2 / EOL) The glass is shredded and treated to make an end product of glass frit.
- Lead Acid Batteries are removed and packaged and sent to [REDACTED] (Tier 1), [REDACTED] OR (Tier 2 / EOL)
- Alkaline batteries are removed and packaged and sent to [REDACTED] (Tier 1), [REDACTED] WA (Tier 2 / EOL)
- Lithium-Ion Batteries are removed and packaged and sent to [REDACTED] (Tier 1), [REDACTED] (Tier 2 / EOL)
- Mercury Bulb-removed from CEDs are sent to [REDACTED] WA.
- LCD devices are brokered through [REDACTED] (tier 1) shipped to [REDACTED] (tier 2) for Manual Dismantle/Mechanical Shredding at [REDACTED] WI 54650. Circuit boards are shipped to [REDACTED] [REDACTED] Akita, 017-0202, which is an (EOL) smelter.

- Circuit boards are shredded at [REDACTED] (tier 1) and they export the circuit boards to [REDACTED] Japan (EOL) for smelting.
- LCD devices shipped to [REDACTED] (tier 1) for [REDACTED] Oregon, [REDACTED] which is an (EOL) shredder.
- Mercury Devices-removed by hand and sent to [REDACTED] WA for recovery and to [REDACTED] IN as a 2nd tier for mercury retort.

The facility's uses a manual mass balance sheet to track material, reviewed the 2023 Mass Balance Report.

Findings

- Ace does not have a record of the last shipment of batteries to [REDACTED] Auditor reviewed Invoice and Non-Hazardous Waste Manifest records for shipment to [REDACTED] dated 02-11-23.
- The 2023 MOC incorrectly shows [REDACTED] as EOL Retort: Mercury Recovery.
- There was only one daily Driver's Vehicle Inspection Report record available for review.

5. On-site requirements - Facility Partially Maintains Compliance with Standards

Ace Metal Co has an EPA /State ID number WAH000058380 for being a Large Quantity Handler of Universal Waste and accepts all types of electronic waste. Material is received and logged on the WMMFA signing sheet for CRT, TVs, monitors, computers and laptops.

Computers and CRT devices are dismantled onsite, the CRT tubes, circuit boards, and batteries are shipped to approved DSVs. Hard drives that are 1TB or more are sent to an approved DSV for data sanitization and resale. Plastic is baled and exported to Malaysia. Laptops and flat panel display devices are packaged and shipped to approved DSVs.

The facility uses a 28-foot box truck that is owned for picking up from customers. Driver's Vehicle Inspection Report is to be completed daily although only one was available for the auditor to review.

Reviewed Quarterly Facility Inspection Checklist dated 07-09-24.

All employees are trained on New Hire and Annual Refresher Training which includes Management of CRTs, Universal Waste Devices, Lead Spill, and Mercury Spill Clean-up and Exposure Training. Handling batteries, General UW Labeling and Signage, PPE, Machine Guarding, and Forklift Safety.

Management meetings and safety committee meetings are conducted monthly. Reviewed management meetings minutes dated 07-10-24 and safety committee meetings minutes dated 06-17-24.

The following finding was addressed after completion of the onsite audit, see attachment 02.

Findings:

- Gasoline was not stored in a flammable safe cabinet.

- Pallets were stored on end.
- Wire stripping equipment electrical plug could not reach outlet and an extension cord was being used.
- Wire stripping equipment cord was worn near the plug.

6. Materials of Concern - Facility Maintains Partially Compliance with Standards

The auditor observed most Materials of Concern (MOC) being handled in accordance with standards. A MOC flow chart is attached. The auditor verified that all downstream vendors for MOC's handle material per the WA State DOE Standards with the exception of plastics which are sent to a NON OECD country. Auditor is unable to verify end of life processing for battery chemistries listed in the MOC Chart at this time. Ace agrees to notify the WA State DOE of vendor changes for all MOC's.

Findings:

- Plastics are a MOC are sent to a NON OECD country.
- Auditor is unable to verify several EOL battery processors listed in the MOC Chart as true EOL sites.

7. Recycling - Facility Maintains Compliance with Standards

Materials managed to ANSI and OSHA standards - observed during the site visit. The auditor observed dismantling and to the highest marketable levels.

8. Reuse - Facility Maintains Compliance with Standards

Ace just started separating hard drives for reuse. Hard drives that are 1TB will be sold to an approved DSV for data sanitization and resale.

9. Disposal of Residuals - Facility Maintains Compliance with Standards

Facility waste management follows state and federal guidelines. No Materials of Concern go to non-HW landfills or incineration. Site waste is managed and separated to minimize material going to landfill and nothing from the recycling process goes to the landfill.

10. Refurbishment - Facility Maintains Compliance with Standards

Not applicable, facility does not repair/refurbish units.

11. Transport – Facility Maintains Compliance with Standards

Ace accepts deliveries directly from customers, or they use their own box truck for pick-ups. They also have a backup truck if the box truck need repair. The facility does not use third party transporters. Reviewed annual vehicle inspection report from [REDACTED] dated 08-08-23. Reviewed email from Christine Haun of E-Cycle Washington informing Ace Metal Company that the registered status as a transporter with the E-Cycle Washington Electronic Products Recycling Program for the period 09-01-24 to 08-31-25 has been changed to in compliance.

12. Prison Labor – Facility Maintains Compliance with Standards

Ace does not use prison labor.

13. Facility Access – Facility Maintains Compliance with Standards

Ace allows WA State DOE full record and site access – auditor discussed with management team.

14. Notification of Penalties and Violations – Facility Maintains Compliance with Standards
Ace agrees to notify the WA DOE within 30 days if they receive a Notice of Violation at the facility. The facility has listed this requirement in their Legal and Other requirements to manage.

15. Due Diligence Downstream - Facility Partially Maintains Compliance with Standards
As part of the audit process the auditor reviewed Ace’s comprehensive audit criteria for downstream vendor audits and sampled some of their audit packages which include permits, Bills of Ladings, confirmation that the material processing meets the WMMFA requirements and worker health and safety protections. Processing technologies and material dispositions are listed in the MOC chart attached to this report. While onsite the auditor also reviewed 12 months of Bills of Lading for all Material of Concern against audit folders and the list of approved downstream vendors for accuracy.

Finding:

Ace has out of date Downstream Vendor packages for the following:

- [Redacted]
- [Redacted]
- [Redacted]

- [Redacted] OR
- [Redacted] WA
- [Redacted] WI

Plastics

- [Redacted] Malaysia

16. Exporting – Facility Partially Maintains Compliance with Standards
Ace exports baled plastic, a Material of Concern to Malaysia, a NON OECD country. Circuit boards are sent to approved DSVs and then are exported to smelters in Japan. All batteries and mercury containing devices are processed domestically although the auditor is not familiar with the battery processing facilities noted on the MOC Chart as End of Life facilities.

The following finding was addressed after completion of the onsite audit, see attachment 03.

Finding:

- The Export Permit for baled plastic exported to [Redacted] Malaysia expired in February of 2024.
- Plastics are a MOC and are being exported to a NON-OECD country.

17. Insurance - Facility Maintains Compliance with Standards

Ace maintains adequate insurance to cover their employees, operations, and pollution liability. The facility holds the following insurances, which are valid through 05/22/2025:

General Aggregate Limit (Other than Products/Completed Operations): \$2,000,000

Products/Completed Operations Aggregate Limit: \$2,000,000

Personal & Advertising Injury Limit: \$2,000,000

Commercial General Liability Each Occurrence Limit: \$2,000,000

Damage To Premises Rented to You Limit: \$100,000

Medical Expense Limit: \$10,000

Third Party Pollution Liability Each Pollution Condition Limit: \$1,000,000

Onsite Cleanup Each Pollution Condition Limit: \$1,000,000

18. Closure EHSMS and Financial Responsibility - Facility Maintains Compliance with Standards

Reviewed Closure Plan dated 02-02-23. The Closure Plan estimated cost of closure is \$21,000.

Ace Metal Company and its sole owner Mr. James Yoo with provide all financial guarantees of closure and compliance with the Closure Plan. Current value of property is more than \$2,000,000.

19. Facility Security - Facility Maintains Compliance with Standards

Vivent a third-party alarm company, monitors the doors, motion, and electrical failure 24/7.

There are 13 cameras with recordings stored for 1 month. The facility has access to cameras on the owner's phone.

Findings

Findings are listed by corresponding section:

3. Environmental, Health, and Safety Management System EHSMS

- The Management Review Meeting has not been completed for 2024.

4. Recordkeeping

- Ace does not have a record of the last shipment of batteries to [REDACTED]. Auditor reviewed Invoice and Non-Hazardous Waste Manifest records for shipment to [REDACTED] was dated 02-11-23.
- The 2023 MOC Chart incorrectly shows [REDACTED] as EOL Retort: Mercury Recovery.
- There was only one daily Driver's Vehicle Inspection Report record available for review.

5. On-site requirements

- Gasoline was not stored in a flammable safe cabinet.
- Pallets were stored on end.
- Wire stripping equipment electrical plug could not reach outlet, and an extension cord was being used.
- Wire stripping equipment cord was worn near the plug.

15. Due Diligence Downstream

Ace has out of date Downstream Vendor packages for the following:

- [REDACTED]
- [REDACTED]
- [REDACTED]

- [REDACTED] OR
- [REDACTED] WA
- [REDACTED] WI

Plastics

- [REDACTED] Malaysia

Auditor is unable to verify several EOL battery processors listed in the MOC Chart as true EOL sites.

16. Exporting

- The Export Permit for baled plastic exported to [REDACTED] Malaysia expired in February of 2024.
- Plastics are a MOC and are being exported to a NON-OECD country.

Auditor Qualifications

The auditor is certified by the State of WA DOE to perform this audit. Bob Delich is the Co-Owner/Managing Director of Greeneye Partners, LLC.

ACE Metals Materials of Concern Chart 2024

Materials	Recycling Process	Fate of Recycling Process	End-of-life Processing Destination Country
MATERIALS OF CONCERN			
CRT Glass	Removed from CEP by hand dismantling separated	The glass is shredded, and treated to make an end product of glass frit.	USA
Batteries	Removed and Packaged	Make new batteries	USA
LCD Devices Flats	Manual Dismantle/Mechanical Shredding	Shredded	USA
Circuit Boards	Removed from CEP by hand dismantling	Precious metals recovery	Japan
LCD Devices Flats	Manual Dismantle/ Shredding		USA
Mercury Devices	Hand removed from CEP managed as universal waste	Retort: Mercury Recovery	USA
Plastics	Hand removed from CEP and sorted	Plastic Recovery	Malaysia
MATERIALS OF NON-CONCERN			
Steel	Hand removed from CEP and sorted	Metal Recovery	USA
Insulated Wire	Hand removed from CEP and sorted	Metal Recovery	USA
Aluminum	Hand removed from CEP and sorted	Metal Recovery	USA
Wood	Hand removed from CEP and sorted	Wood Recovery	USA