

# WASHINGTON STATE DIRECT PROCESSOR PERFORMANCE STANDARDS AUDIT REPORT

*Ace Metal Company*  
Mukilteo, Washington

March 30, 2018

Prepared for:



**ACE METAL CO.**  
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A handwritten signature in blue ink, appearing to read "P. J. Bridgen".

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Dr. P. J. Bridgen Lead Auditor, CEO of Environment International Ltd.

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## ACRONYMS AND ABBREVIATIONS

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CEP	Covered (or Consumer) Electronic Product
CRT	Cathode Ray Tube
EHSMS	Environmental, Health, and Safety Management System
OECD	Organization for Economic Co-operation and Development
OSHA	Occupational Safety and Health Administration
PCB	Printed Circuit Board
WAC	Washington Administrative Code

## **Executive Summary**

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Under contract with Ace Metal Company, Environment International Ltd. (EI) performed an audit on March 21, 2018, at the Ace Metal facilities in Mukilteo and Lynnwood, WA. The purpose of the audit was to assess the facility's conformance with Washington State Direct Processor Performance Standards in accordance with WAC 173-900-650. The conclusion of the auditors is that Ace Metal's Mukilteo and Lynnwood facilities currently meet all minimum standards and preferred standards. This report presents the results and findings from the audit.

## **Facility Information**

The Ace Metal main facility is a portion of a warehouse located at 11110 Mukilteo Speedway in Mukilteo, WA. The facility is approximately 10,000 sq. ft. and consists of a large open warehouse floor with an indoor dismantle line, an outdoor work space, and smaller attached office space. There is additional indoor dismantling facility that consists of a 7000 square foot warehouse and adjacent office located at 15030 Highway 99, Lynnwood, WA 98087. There are 9 employees at the Mukilteo Speedway facility and 6 employees at the facility on Highway 99.

## **Methodology**

One Auditor (Dr. Pamela Bridgen, Senior Scientist and CEO, a Registrar Accreditation Board Certified Lead Auditor) from Environment International Ltd. (EI) performed the third-party audit on March 21, 2018 and prepared this report. Dr. Bridgen has previously have been certified by the Washington State Department of Ecology to conduct third-party audits under the Washington State Direct Processor Performance Standards. The auditor inspected the site's facilities, interviewed Ace Metal personnel, and reviewed facility records, in particular the most recent version of the Environmental Health and Safety Management System document dated February 6, 2018 (revision 11). After a brief opening meeting, the auditor reviewed facility records and toured both sites. Staff interviews were conducted with the Company President and seven other employees. The auditor reviewed the facility's compliance with environmental performance standards for direct processors of electronic waste in Washington State.

At the conclusion of the site visit, an informal closing meeting was held. The most senior representative present at the closing briefing was the Company President. Table 1 presents a summary of all Washington State direct processor performance standards (minimum and preferred) and indicates whether or not Ace Metal's facility and operations conform to each standard.

**Table 1: Conformance of Mukilteo Facility of Ace Metal Co. with Washington State Direct Processor Performance Standards (Minimum and Preferred).**

<b>Performance Standard</b>	<b>Minimum Standard</b>	<b>Preferred Standard</b>
1. Responsible Management Priorities	✓	N/A
2. Legal Requirements	✓	N/A
3. Environmental, Health, and Safety Management Systems	✓	✓
4. Recordkeeping	✓	✓
5. On-site Requirements	✓	✓
6. Materials of Concern	✓	N/A
7. Recycling	✓	✓
8. Reuse	✓	✓
9. Disposal of Residuals	✓	✓
10. Refurbishment	N/A	✓
11. Transport	✓	✓
12. Prison Labor	✓	N/A
13. Facility Access	✓	N/A
14. Notification of Penalties and Violations	✓	N/A
15. Due Diligence Downstream	N/A	✓
16. Exporting	N/A	✓
17. Insurance	N/A	✓
18. Closure Plan and Financial Responsibility	N/A	✓
19. Facility Security	N/A	✓

# **Performance Standards for Direct Processors**

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## **1. Responsible Management Priorities**

### **Minimum Performance Standards**

*A direct processor must periodically evaluate its management strategies to assure it takes advantage of new more effective technologies and is otherwise continuously improving its practices and processes.*

Ace Metal Co. utilizes a written Environmental Health and Safety Management System (EHSMS – most recent version Revision 11 dated February 6, 2018) with a commitment to continuously improving its environmental practices. James Yoo, Ace Metal’s president, holds regular meetings with his managers in order to discuss facility operations and opportunities for advancing environmental performance.

### **Preferred Performance Standards**

*No additional performance standards.*

## 2. Legal Requirements

### Minimum Performance Standards (no preferred performance standards)

*(a) A direct processor must comply with all federal, state, and local requirements and, if it exports, those of all transit and recipient countries that are applicable to the operations and transactions in which it engages related to the processing of CEPs, components, parts, and materials and disposal of residuals. These include but are not limited to applicable legal requirements relating to:*

- (i) Waste and recyclables processing, storage, handling, and shipping; and*
- (ii) Air emissions and waste water discharge, including storm water discharges; and*
- (iii) Worker health and safety; and*
- (iv) Transboundary movement of electronic equipment, components, materials, waste, or scrap for reuse, recycling, or disposal.*

*(b) Upon request by a covered entity, a direct processor must make available information to that covered entity about any financial penalties, regulatory orders, or violations the direct processor received in the previous three years. If the direct processor receives subsequent penalties or regulatory orders, the direct processor must make that information available within sixty days after any subsequent penalties or regulatory orders are issued.*

Per Ace Metal's EHSMS, Ace Metal will comply with all federal, state, and local standards.

During the site visit, no violation of federal, state, or local regulations was observed in the storage, handling, and preparation for shipment of waste and recyclables.

During the site visit and staff interviews, no violation of federal, state, or local regulations was observed regarding air emissions and water and stormwater discharges, nor of regulations regarding worker health and safety.

Ace Metal staff indicated that they have received no financial penalties, regulatory orders, or violations the direct processor received in the previous three years. They stated that upon request they will make any such information available to regulatory agencies or other appropriate persons upon request.

### 3. Environmental, Health, and Safety Management Systems (EHSMS)

#### Minimum Performance Standards

*(a) A direct processor must develop, document, fully implement, and update at least annually a written EHSMS that includes all of the following:*

*(i) Written goals and procedures that require the direct processor to systematically manage its environmental, health, and safety matters.*

*(ii) Utilization of a "plan, do, check, act" model that identifies environmental aspects, implements operational controls, and provides corrective action procedures.*

*Elements of this model must include:*

**(A) Plan**

*(I) Identification of environmental impacts, and legal and regulatory requirements;*

*(II) Establishment of environmental goals, objectives and targets;*

*(III) Plan actions that work toward achieving identified goals;*

*(IV) Plan for emergency preparedness and response; and*

*(V) Commitment of management support.*

**(B) Do**

*(I) Establish roles and responsibilities for the EHSMS and provide adequate resources;*

*(II) Assure that staff are trained and capable of carrying out responsibilities; and*

*(II) Identify and correct problems and prevent recurrence; and*

*(III) Provide a measurement system that quantifies the application of the model.*

Ace Metal has developed and documented a written EHSMS in the form of an Environmental, Health, and Safety Manual (EHSM) (last revision dated February 6 2018) that was made available to the auditor.

The EHSM includes plans and procedures covering the required topics and the company's plan-do-check-act model.

The emergency preparedness and response plan is adequate and appropriate for the scope of operations, and there is a written commitment of management support.

Roles are accurately described in the EHSM. Ace Metal's president, James Yoo, is very involved in the day-to-day operation, was present at the audit, and ensures that adequate resources are allocated for environmental, health, and safety plans.

Employee training records were examined and several employees were interviewed. Employee were aware of their responsibilities and aware of potential hazards of the materials processed. All training records reviewed were dated and signed by the subject employee.

*(III) Establish a process for communicating about the EHSMS within the business.*

**(C) Check**

*(I) Monitor key activities and track performance;*

**(D) Act**

*(I) Conduct annual progress reviews;*

*(II) Act to make necessary changes to the EHSMS; and*

*(III) Create and implement an action plan for continual improvement.*

*(iii) A worker safety and health management plan that conforms to a consensus-based standard covering worker health and safety such as ANSI Z10 or to a similarly rigorous in-house standard.*

*(iv) A plan for responding to and reporting exceptional releases that could pose a risk to worker safety, public health, or the environment. Such releases include emergencies such as accidents, spills, fires, and explosions. The direct processor must submit this plan to all appropriate emergency responders, e.g., police, fire department, hospitals.*

*(v) A plan is conformable with ISO 14001, Institute of Scrap Recycling Industries' Recycling Industry Operating Standards ("RIOS"), the International Association of Electronic Recyclers' ("IAERs") standard, or other standards designed at a level appropriate for processing at the facility.*

*(b) A direct processor must ensure all employees understand and follow the portions of the EHSMS relevant to the activities they perform.*

Daily meetings are held to update staff on any relevant issues. Progress reviews are discussed as part of overall evaluation of management strategies during weekly management meetings, after which any necessary changes are communicated to staff. More significant issues are discussed at monthly meetings. Updates and improvements to the EHSM are not limited to once per year but are implemented as necessary.

Ace Metal's EHSM contains sections fulfilling these requirements, identifying requisite health and safety measures that workers must take at the facility, as well as potential risks and systems to reduce those risks.

Staff interviews indicated that staff are familiar with emergency plans and are prepared to implement them if it should become necessary.

The EHSM follows the framework required for conformance with ISO 14001 although the system is not certified as conforming to ISO 14001.

Staff interviews indicated that the personnel are familiar with the EHSM as it relates to their activities.



## Preferred Performance Standards

*(c) The EHSMS must also include a procedure for:*

- (i) Identifying and evaluating the environmental, health, and safety impacts of downstream vendors, and*
- (ii) Utilizing the information in (a) in the selection of downstream vendors.*

Ace Metal utilizes downstream vendors only once the vendors have submitted answers to

a due diligence audit questionnaire that is filed with the written EHSM. Responsible Recycling (R2) certification is considered to be an acceptable substitute for answering Ace Metal's own questionnaire.

Ace Metal staff produced downstream vendor audit questionnaires and current R2 certification attesting to the vendors' compliance with environmental, health, and safety regulations. His questionnaires were reviewed by the auditor; the most recent had been completed on March 20, 2018. During interviews, Ace Metal staff demonstrated a commitment to ensuring that their materials are not sent downstream to companies with poor environmental records. The CEO, Mr. Yoo, and the interim General Manager keep up to date with industry standards and best available vendors through networking and Internet review.

## 4. Recordkeeping

### Minimum Performance Standards

*(a) A direct processor must maintain documentation such as commercial contracts, bills of lading, or other commercially accepted documentation for all transfers of CEPs, components, parts, materials, and residual into and out of its facilities.*

*(b) A direct processor must retain documents required for at least three years.*

Per interviews with Ace Metal's staff, Ace Metal has a policy to retain all transaction records that document downstream disposition of materials. During the audit, the auditor reviewed the system of binders and electronic filing used to keep such records, which appeared to be complete. Ace Metal staff indicated that they understood the three-year requirement for maintaining records and appeared to have retained all records for the required time period.

### Preferred Performance Standards

*(c) The direct processor must also maintain records for any brokering transactions for at least three years.*

Ace Metal staff confirmed that no brokering transactions had taken place since the previous audit and none were planned for the future.

## 5. On-site Requirements

### Minimum Performance Standards

*(a) General*

*(i) Direct processors must take all practicable steps to maximize recycling.*

*(ii) A direct processor must have the expertise and technical capability to process each type of CEP and component it accepts in a manner protective of worker safety, public health, and the environment.*

*(iii) A direct processor must use materials handling, storage and management practices, that assure that all work and storage areas are kept clean and orderly.*

*(iv) Speculative accumulation:*

*(A) "Speculative accumulation" means holding, storing or accumulating CEPs, components, parts, materials, or residual derived therefrom for more than one hundred eighty days.*

*(B) Generators and facilities holding, storing, or accumulating CEPs, components, parts, materials, or residual derived there from for more than one hundred eighty days will be considered holding, storing, accumulating solid or hazardous waste and subject to applicable treatment, storage or disposal regulations or equivalent.*

*(v) A direct processor must use a certified scale to weigh CEPs and components counted towards a plan's equivalent share.*

During the site visit, all steps to ensure recycling were being taken. CEPs were disassembled by hand and separated into components for recycling and disposal streams. Materials were handled according to acceptable industry standards of care.

During the audit, all handling and storage areas were observed and regular housekeeping procedures such as sweeping were taking place. The cleanliness of the facility is maintained by sweeping a minimum of four times a day.

During interviews, staff indicated that they were aware of the requirement not to accumulate CEPs for more than 180 days. Ace Metal ships CEPs on average two times per month. No CEPs were observed with an accumulation date earlier than January 2018. Ace Metal provided its scale calibration certification for inspection by the auditors. The scale was scheduled for recalibration on March 26, 2018 and the certificate was provided to the auditor after completion of the on-site portion of the audit. The certificate is currently valid through March 2019.

*(b) Storage*

*A direct processor must store materials of concern removed from CEPs, components, parts, materials, or residuals in accordance with WAC 173-900-650(11) in a manner that:*

- (i) Protects them from adverse atmospheric conditions and floods and, as warranted, includes a catchment system;*
- (ii) Is secure from unauthorized entrance; and*
- (iii) Is in clearly labeled containers and/or storage areas.*

*(c) Exceptional releases posing risks*

*A direct processor must be prepared to immediately implement the practices set forth in its EHSMS for responding to and reporting exceptional releases that could pose a risk to worker safety, public health, or the environment, including emergencies such as accidents, spills, fires, and explosions.*

Ace Metal's storage area is indoors and can be closed off to protect the facility from the weather. Gaylord boxes are stored off the ground on pallets, and as necessary are wrapped in plastic.

During the audit, Ace Metal's storage area appeared secure, with a lockable perimeter fence and security system.

All CEP storage containers were clearly labeled at the time of the audit.

The potential release posing the greatest risk at Ace Metal is broken glass containing lead. According to interviews with employees and a supervisor conducted during the audit, workers are trained to handle such a situation, as well as other release situations. Employees explained the process to the auditor during the site visit.

## Preferred Performance Standards

### *(d) Workforce and Environmental Protection*

*(i) Hazards identification and assessment: A direct processor must conduct on an ongoing basis (as new types of CEPs, components, parts and materials are processed or new processes are utilized) a hazards identification and assessment of occupational and environmental risks that exist or could reasonably be expected to develop at the facility.*

*Such risks could result from any sources, including but not limited to:*

- Emissions of and/or exposure to substances*
- Noise*
- Ergonomic factors*
- Thermal stress*
- Substandard machine guarding*
- Cuts and abrasions*

*(ii) The hazards identification and assessment is captured in writing and incorporated as a component of the direct processor's EHSMS.*

Specific staff members are tasked with keeping up with new types of CEPs and components and their concomitant hazards, as well as new recycling processes that may become available. One or more staff members subscribe to industry magazines, search the internet and communicate with peers and consultants in order to stay up to date on current hazards and recycling practices. Ace Metal's EHSMS has a written hazard identification and assessment that includes requirements for protections against all risks listed in the standard that apply at the facility.

CRT glass crushing is not performed at either facility.

(iii) A direct processor must manage the hazards and minimize the releases it identifies using an appropriate combination of strategies in the following order of priority:

- Engineering controls
- Administrative and work practice controls
- Personal protection equipment

(A) Engineering controls:

(I) A direct processor must use at least one of the following:

- Substitution (e.g., replacing a toxic solvent with one less toxic),
- Isolation (e.g., automating a process to avoid employee exposure), or
- Ventilation and, if appropriate, capture (e.g., fume hood), And

(II) All of the following:

- Dust control, capture, and clean up, and
- Emergency shut-off systems, and
- Fire suppression systems.

(B) Administrative and work practice controls:

A direct processor must use administrative and work practice controls including appropriate combinations of:

- (I) Regular, documented health and safety training that covers information from the hazardous assessment, safe management handling, spill prevention, engineering controls, equipment safety, and use and care of personal protection equipment; with training for new hires and refresher courses for all employees that is understandable to them given language and level-of-education considerations,
- (II) Job rotation, as feasible, given workforce size,
- (III) Safe work practices,
- (IV) Medical monitoring,
- (V) Safety meetings.

(C) Personal protective equipment, including respirators, protective eyewear, cut-resistant gloves, etc. as appropriate for the risks involved in the tasks being performed.

Ace Metal's work space is well-ventilated.

Dust control is not applicable as there is no shredding, grinding or other dust-generating operation at Ace Metal's facilities. One machine, a baler, has an emergency shut-off system. The baler had been broken for two months resulting in a backup of plastics at the Lynnwood facility. The facility was in the process of reducing this backup. Ace Metal's facilities has a network of extinguishers for fire suppression, and over the past year the company has installed audible and visual fire alarms throughout the facility.

Initial health and safety training records for employees were made available to auditors for inspection, and covered all topics listed in the standard. Regular monthly staff training is documented.

According to a staff member, Ace Metal's employees rotate jobs on a regular basis, but the staff size is quite small and employees are well-trained in all relevant procedures.

Safe work practices are documented in Ace Metal's EHSM.

According to staff interviews and the EHSM, Ace Metal employees are required to wear personal protective equipment (PPE) depending on the task they are performing, including, among other items, boots, gloves, safety glasses, and masks as needed. Employees were observed using PPE as appropriate during the site visit. They all indicated that they had been well-trained on the use of PPE. The EHSM indicates the requirement for training regarding PPE as part of each employee's training record and documentation of such training for each employee was verified during the site visit.

*(iv) A direct processor must use and document monitoring and sampling protocols according to state and federal standards and provide assurances that the practices it employs are effective and continuously managing the risks it has identified. This includes complying with all applicable Federal or State (Occupational Safety and Health Administration) OSHA standards and sampling and/or monitoring protocols.*

*(v) A direct processor must treat anyone performing activities in its facilities, using the standard of care established in this section. Direct processors are not required to provide medical monitoring for short-term, temporary and volunteer workers.*

*(vi) A direct processor must designate a qualified employee or consultant to coordinate its efforts to promote worker health and safety. This individual is identified to all employees and two-way communication is encouraged between employees and this individual regarding potential hazards and how best to address them.*

Ace Metal complies with state and federal monitoring requirements at safety meetings. The interim Gen. Manager who was interviewed during the audit indicated that the meetings cover a range of safety and risk management topics, and that impromptu meetings are held if issues arise between meetings.

During the audit, three Disassemble Line employees confirmed that they are treated by Ace Metal with the standard of care established in its EHSM. The auditor observed other employees at work and confirmed that they appeared to be treated with the same standard of care.

Responsibility for hazard communication is in the Ace Metal EHSM. Employees are encouraged to talk with the hazard communication manager or their own manager if they have safety concerns. One Disassemble Line employee interviewed indicated that he felt the facility had few safety concerns and was a safe place to work.

## 6. Materials of Concern

### Minimum Performance Standards (no preferred performance standards)

*Materials of concern must be handled according to the standards in this section. "Materials of concern" are any of the following:*

- (a) Any devices, including fluorescent tubes, containing mercury or PCBs;*
- (b) Batteries;*
- (c) CRTs and leaded glass; and*
- (d) Whole circuit boards.*

Per Ace Metal's EHSM, all sources of materials of concern have been identified. Specific disposition of each material of concern, including end-of-life processing destination country, is documented. All batteries are accumulated in closed containers and recycled.

## 7. Recycling

### Minimum Performance Standards

#### *(a) Recycling*

*(i) A direct processor must remove from CEPs and components destined for recycling any parts that contain materials of concern that would pose a risk to worker safety, public health, or the environment during subsequent processing.*

*(ii) A direct processor must remove any parts that contain materials of concern prior to mechanical or thermal processing and handle them in a manner consistent with the regulatory requirements that apply to the items, or any substances contained therein. Circuit boards and materials derived therefrom will be allowed to be shredded prior to separating.*

Ace Metal's EHSM lays out specific procedures for properly handling, classifying, and storing materials of concern and all other materials. During the audit, CRT glass was observed by the auditor to be packaged for shipment in a manner consistent with regulatory requirements. The auditor also observed separate storage for circuit boards and batteries.

### Preferred Performance Standards

#### *(b) Recycling:*

*(i) A direct processor must dismantle, separate, and/or mechanically process, as appropriate, CEPs, components, and parts from which materials are to be recovered for recycling into separate "material streams" to generate value, recover materials and minimize waste, and to enable safe management through to final disposition.*

During the audit, all CEPs and components were observed being separated into distinct material streams for recycling or recovery to the greatest extent possible.



## 8. Reuse

### Minimum Performance Standards

#### (a) Reuse

(i) "Reuse" means any operation by which an electronic product or component of a covered electronic product changes ownership and is used, as is, for the same purpose for which it was originally purchased.

(ii) For a CEP, component or part to be put to reuse it must be fully functioning.

(iii) CEPs, components and parts gleaned for reuse shall not be included in the weight totals submitted to a plan for compensation.

No CEPs are reused, only dismantled or processed, with the exception of a program that allows each employee to take up to two TVs per year for personal use. This program has officially been allowed since Jan. 9 2017. These weights are subtracted from the reported volumes to the WMMFA as per the standard.

### Preferred Performance Standards

#### (b) Reuse:

(i) Before shipping CEPs, components, or parts for reuse, the direct processor must:

(A) Test and ensure that the CEPs, components, and parts are functioning properly for the same purpose for which they were originally purchased.

(B) Accurately label, package, and ship the CEPs, components, and parts in a manner that will minimize damage during transport.

(ii) A direct processor must verify a legitimate end-use market for the intended purpose of any CEPs, components or parts shipped for reuse.

Per interviews with Ace Metal staff, CEPs are not tested for reuse possibilities and are only dismantled or processed. . No CEPs are reused, with the exception of a program that allows each employee to take up to two TVs per year for personal use.

## 9. Disposal of Residuals

### Minimum Performance Standards

#### *(a) Disposal of residuals*

*(i) "Residuals" are leftover materials from processing CEPs, components, parts and materials. Residuals are materials that cannot be used for their original function or cannot be recycled and are sent by a processor to a disposal facility.*

*(ii) Residuals must be properly designated and managed under applicable solid waste and hazardous waste laws at the location where disposal occurs.*

*(iii) A direct processor must not send residuals containing materials of concern to incinerators or solid waste landfills if doing so will pose a higher risk to worker safety, public health, or the environment than alternative management strategies.*

*(iv) Residuals from processing of materials of concern must not be mixed with other residuals for the purpose of disposal.*

During the audit, staff interviews indicated that Ace Metal properly designates and manages residuals under their applicable solid and hazardous waste regulations.

Per a review of records of transport at Ace Metal, residuals containing materials of concern are not sent to incinerators or solid waste landfills.

Ace Metal separates all material streams for recycling, recovery, or disposal; residuals from processing materials of concern are not mixed with other waste streams.

### Preferred Performance Standards

*(b) Residuals must be disposed of in a regulated solid waste disposal facility. Residuals containing materials of concern must be disposed in a regulated hazardous waste disposal facility.*

Ace Metal uses a system to track disposition of residuals, and these records were reviewed by the auditor. Based on this review, Ace Metal appears to be following regulations regarding disposal of residuals to regulated facilities.

## 10. Refurbishment

### Minimum Performance Standards

*No minimum performance standards from WAC 173-900-650.*

### Preferred Performance Standards

*(a) Refurbishment:*

*(i) A direct processor must adhere to all the performance standards in this document for all on-site activities relating to CEPs, components, and parts destined for refurbishment.*

*(A) A direct processor must conform to all performance standards in this document for its onsite and downstream vendors' refurbishment operations, and when shipping CEPs, components, or parts to downstream vendors for refurbishment.*

*(ii) CEPs, components and parts gleaned for refurbishment shall not be included in the weight totals submitted to a plan for compensation.*

*(iii) A direct processor must verify a legitimate end-use market for the intended purpose of any CEPs, components or parts shipped for refurbishment.*

During the audit, staff indicated that Ace Metal does not currently refurbish CEPs or send CEPs to downstream vendors for same.

## 11. Transport

### Minimum Performance Standards

*(a) A direct processor must ensure that all CEPs, CEP components and materials to be transported are packaged in compliance with all applicable transport laws and rules.*

Ace Metal assures that its CEPs, CEP components, materials, and residuals will be transported appropriately so as to prevent spillage, contamination, or any other risks posed to public health or the environment. During the site visit, all CEPs, components, and residuals that were packed in preparation for transport appeared to be in compliance with transport laws.

### Preferred Performance Standards

*(b) A direct processor must ensure all CEPs, components, parts, materials, and residuals to be transported are packaged appropriately in light of the risk they could pose during transportation to public health or the environment and the level of care warranted by their intended use.*

Ace Metal assures that its CEPs, CEP components, materials, and residuals will be transported appropriately so as to prevent spillage, contamination, or any other risks posed to public health or the environment. During the site visit, all CEPs, components, and residuals that were packed in preparation for transport appeared to be in compliance with transport laws.

*(c) A direct processor must obtain written documentation or a third-party certification indicating that their transporters have all the necessary regulatory authorizations and no significant violations of relevant legal requirements during the past three years.*

Ace Metal shared with the auditor written documentation regarding the regulatory authorizations and lack of significant legal violations during the past three years of their contracted transporter.

## 12. Prison Labor

### Minimum Performance Standards (no preferred performance standards)

*Direct processors may not use federal or state prison labor for processing.*

Ace Metal does not participate in the hiring of federal or state prison inmates.

## 13. Facility Access

### Minimum Performance Standards (no preferred performance standards)

*(a) Direct processors must allow access to the facility and the documentation required in this section for the purposes of assessing compliance with the requirements in this chapter and for sampling to:*

- (i) Ecology and ecology's designee(s);*
- (ii) Third-party observers for the purposes of sampling;*
- (iii) For processors used by the standard plan:*

*(A) The authority;*

*(B) The authority's designee(s);*

- (iv) For processors used by an independent plan:*

*(A) That plan's authorized party;*

*(B) The authorized party's designee(s) for that plan.*

Ace Metal will allow Ecology, third-party observers (for the purpose of sampling), and members of the Authority access to its facilities for the purpose of assessing compliance. During interviews, staff indicated that they were familiar with this requirement. The most recent visit from regulatory authorities was conducted by Chris Hall of Washington State Department of Ecology.

## 14. Notification of Penalties and Violations

### Minimum Performance Standards (no preferred performance standards)

*Each direct processor must notify ecology within thirty days if the direct processor receives any penalties, violations or regulatory orders related to processing activities.*

Ace Metal will notify Ecology within 30 days if any penalties, violations, or regulatory orders related to processing activities are received. During interviews, staff indicated that they were familiar with this requirement.

## 15. Due Diligence Downstream

### Minimum Performance Standards

*No minimum performance standards in WAC 173-900-650.*

### Preferred Performance Standards

*(a) For materials of concern and residuals containing materials of concern a direct processor must only use downstream vendors who conform with all of the performance standards in this document.*

*(i) A direct processor must review its downstream vendors' conformity to these standards at least every two years and more frequently as changes in circumstances warrant. The direct processor must provide the verification and documentation to Ecology upon request.*

*(ii) A direct processor must document the chain of custody of all materials of concern and their residuals through final disposition.*

*(iii) A direct processor does not need to conduct the due diligence for downstream vendors certified to the performance standards in this document by an accredited body.*

Ace Metal partners only with downstream vendors that meet Ace Metal's labor, health, and environmental standards, and ensures that downstream vendors meet these requirements by requesting that they fill out a detailed questionnaire. Questionnaires, the most recent of which was dated March 20, 2018, were reviewed during the audit. Ace Metal is prepared to provide all documentation to Ecology upon request.

During the audit, the auditor inspected records for shipments containing materials of concern. For most shipments that left Ace Metals prior to January 2018, a return invoice was provided verifying final disposition by a conforming downstream vendor.

## 16. Exporting

### Minimum Performance Standards

*No minimum performance standards in WAC 173-900-650.*

### Preferred Performance Standards

*(a) A direct processor that exports materials of concern must ensure that each transit and recipient country legally accepts such imports. For each country that is not a member of the Organization for Economic Co-operation and Development (OECD), this entails either:*

*(i) Requesting and receiving documentation, prior to shipping, from the Competent Authority<sup>2</sup> of each such transit and/or import country, that clearly verifies in English that the country legally accepts such imports, or*

*(ii) Requesting and receiving, prior to shipping, confirmation—that the country(ies) legally accepts such imports—*

*from the United States Environmental Protection Agency, which in turn will communicate with the other country's Competent Authority to get a determination.*

Ace Metal ensures that CEPs, components, and residuals are legally accepted by any importing countries. This was confirmed by staff who were interviewed during the audit. Ace Metal currently exports materials of concern to Mexico. Ace Metal provided an acknowledgment of consent from EPA that these countries legally accept the imports.

## 17. Insurance

### Minimum Performance Standards

*No minimum performance standards in WAC 173-900-650.*

### Preferred Performance Standards

*(a) A direct processor possesses adequate Comprehensive or Commercial General Liability Insurance including coverage for:*

*(i) Bodily injury,*

*(ii) Property damage,*

*(iii) Pollutant releases,*

*(iv) Accidents and*

*(v) Other emergencies.*

Ace Metal maintains \$2 million general aggregate insurance, as well as insurance for employee liability, bodily injury, property damage, pollutant damage, accidents, and other emergencies. During the site visit, Ace Metal provided documentation of the insurance to the auditor. The most recent insurance is valid through January 15, 2019.

## 18. Closure Plan and Financial Responsibility

### Minimum Performance Standards

*No minimum performance standards in WAC 173-900-650.*

### Preferred Performance Standards

*A direct processor must develop and keep current a closure plan and a sufficient financial instrument that assures proper closure of the facility and assures against abandonment of any CEPs, components, parts, materials or residuals.*

The auditor reviewed Ace Metal's most recent version (dated estimated costs for a third-party closure and found the analysis to be reasonable. Ace Metal provided documentation that they maintain a bank account assigned to the State of Washington with funds sufficient to cover those costs.

## 19. Facility Security

### Minimum Performance Standards

*No minimum performance standards in WAC 173-900-650.*

### Preferred Performance Standards

*A direct processor must have a functioning security program that controls access to all or parts of the processing facility in a manner and to a degree appropriate given the type of CEPs, components, parts, materials, and residuals handled and the needs of the customers served and may include such items such as indoor and outdoor lighting, secured facilities, and perimeter fencing.*

During the site visit, Ace Metal was observed to have a security system monitored by ADT in place with outdoor CCTV cameras and indoor motion sensors, as well as secure perimeter fencing.



## Conclusions

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Ace Metal Co.'s Mukilteo and Lynnwood facilities for direct processing of electronic waste show every sign of being an exemplary operation in terms of commitment to employee safety and environmental performance and continual improvement. In the opinion of the auditor from Environment International, Ace Metal's Mukilteo and Lynnwood facilities meet all minimum and preferred standards dictated by WAC 173-900-650 and laid out in the document, "Environmentally Sound Management and Performance Standards for Direct Processors," Washington State Department of Ecology publication # 07-07-046, from the Washington State Electronic Products Recycling Program, prepared by the Solid Waste and Financial Assistance Program, dated November 2007.

## ACE Metals Materials of Concern Chart 2018

Materials	Recycling Process	Fate	End-of-life Processing Destination
<b>MATERIALS OF CONCERN</b>			
<b>CRT Glass</b>	Removed from CEP by hand dismantling separated panel and funnel, all metal removed	Glass to glass, all materials are reused in new glass product	India Spain Netherlands
<b>Circuit Boards</b>	Removed from CEP by hand dismantling	Precious metals recovery	Japan
<b>Batteries</b>	Hand removed from CEP and sorted by type	Metal Recovery	<b>Alkaline:</b> USA  <b>Lithium:</b> USA
<b>Mercury Devices</b>	Hand removed from CEP managed as universal waste	Retort Mercury Recovery	USA
<b>MATERIALS OF NON-CONCERN</b>			
<b>Steel</b>	Hand removed from CEP and sorted	Metal Recovery	USA
<b>Plastics</b>	Hand removed from CEP and sorted	Plastic Recovery	China
<b>Insulated Wire</b>	Hand removed from CEP and sorted	Metal Recovery	USA
<b>Aluminum</b>	Hand removed from CEP and sorted	Metal Recovery	USA
<b>Wood</b>	Hand removed from CEP and sorted	Wood Recovery	USA