

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: Universal Recycling Technologies  
Clackamas, Oregon

Auditor: Bob Delich  
Date: November 30<sup>th</sup>, 2023

### **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 ISO system manages non-conformances with the CAPA process. All of the issues that have been identified will be managed appropriately to resolution and to prevent recurrence.

### **The facility audited:**

Universal Recycling Technologies (URT) facility located at -10151 SE Jennifer St. Clackamas, OR, 97015. The audit was performed November 30<sup>th</sup>, 2023.

The facility is well run and operating efficiently. Employees demonstrated proficiency in their job duties and the management system in general. The URT staff demonstrated strong commitment to the management systems 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.

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

Inherent in the ISO 9001, ISO 14001, ISO 45001, R2v3, NAID AAA and e-Stewards v4.1 Standards, which is what this company utilizes as an EHSMS, is the continuous improvement of operations through management and operation's evaluations.

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

URT, OR utilizes a subscription service that identifies local, state, federal and international regulations. An external audit of compliance is completed every two years by a third party. Internal audits are completed annually, and the certification bodies do an annual surveillance audit as well.

At the OR facility material continues to be managed under Fed UW regulations as required by the state of Oregon. The company agrees to be completely transparent with the WA DOE in regard to non-compliant events. This is added this to the Legal and Other Requirements register at the OR facility and corporate office.

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

In Oregon, Universal Recycling Technologies is certified to ISO 9001, ISO 14001, ISO 45001, R2v3, NAID and e-Stewards v4.1. These are internationally recognized standards of excellence in Environmental, Health and Safety Management Systems. The company wide EHSMS is audited and updated, as new procedures are implemented, or as new materials is accepted. The QEHSMS contains a diligent "Plan, Do, Check" component, which manages change and issues through constant management review. The system is 3<sup>rd</sup> party reviewed annually during surveillance audits required by these certifications.

### **4. Recordkeeping – Facility Maintains Compliance with Standards**

Records are managed well as noted during the audits and all material downstream dispositions to final destinations were confirmed through the e-Steward and R2v3 audit certification processes, which also meet the WA DOE requirements.

- Circuit boards are consolidated brokered through [REDACTED] and sent to [REDACTED] Tacoma site (tier 1) and sent to [REDACTED] (tier 2), [REDACTED] (tier 3/EOL) in South Korea, [REDACTED] (tier 3/EOL) in Japan.
- Circuit boards are consolidated and sent to [REDACTED] (tier 1) for shredding then sent to [REDACTED] (tier 2) in Japan for smelting.
- Circuit boards are consolidated and shipped to [REDACTED] (tier 1) Japan for smelting.
- CRT glass is processed onsite and separated. The funnel glass is vitrified and leaves as a commodity for tile manufacturing.
- LCDs are processed onsite and separated into commodities. Circuit boards and mercury lamps are sent downstream for further processing, see flowchart.
- Mercury lamps containing devices are consolidated and sent to [REDACTED] WA (tier 1) for crushing/pulverizing and then on for mercury retort.
- Mercury captured from the LCD and CRT process is sent to [REDACTED] WI (tier 1) for mercury retort.
- Lead Acid Batteries are consolidated and sent to [REDACTED] MN (tier 1) for processing.
- Lithium-Ion Batteries are consolidated [REDACTED] and brokered by [REDACTED] [REDACTED] (tier 1) then to [REDACTED] OR (tier 2) then to [REDACTED] NY (tier 3) EOL.
- Mixed batteries (no lithium-ion or lead acid) are shipped to [REDACTED] GA (tier 1) for processing.
- Plastics goes to [REDACTED] Malaysia for processing and [REDACTED] [REDACTED] US (domestic).

The facility's tracking database enables auditors to track all tonnage and materials to a final destination.

### **5. On-site requirements - Facility Maintains Compliance with Standards**

Universal Recycling Technologies, LLC accepts all types of electronic waste. Material is received through one of their eight receiving docks, tagged with a personalized tracking slip, and sorted. CRTs are sent to the glass processing room. Material and components that have the capabilities for refurbishment are tested onsite. All flat screens, computers (removed batteries, ram and wire removed in processor), peripherals are shredded on-site.

Printers, circuit boards, peripherals and all whole flat panel display devices are shredded in the e-waste shredder separation system which uses a proprietary shredding system with a HEPA and carbon air filter system. This was installed in July of 2017. There is a proprietary mercury recovery capture device on the shredder. The DEQ Air Quality Division has placed no limitations on what the facility can shred.

Facility has a Solid Waste Material Recovery Facility Permit #1405 expires on 09-04-29. The facility creates dust from the glass separation machine. The Oregon DEQ has authorized the process. The facility has recently installed new equipment and the glass lines do not produce fines as a waste. Fines are included in the vitrified frit commodity. A very small amount of municipal waste is generated that includes office waste that goes into the landfill and plastic film from the LCD teardown line is landfilled.

The facility leases trailers that are dropped off at customer sites and picked up when full. Observed 16 trailers onsite or in the loading dock. 3 trailers with solar panels and the 13 trailers are empty. On December 5th and 6th, the facility is going to ship approximately 100,000 lbs. of solar panels to Mitsubishi (Brokered through Ousei). URT has a formal Health and Safety Policy. Monthly employee advisory meetings are conducted with open topics for entire warehouse. The facility also conducts two safety talks every week, and safety committee meetings was conducted one per month.

All employees are trained in proper PPE use, mercury spill kits, and emergency procedures. Mercury Hygiene Policy/Procedures and Employee Exposure Programs including class topics such as, Decontamination of Hands, Decontamination of Clothing/PPE, Food and Drink Restrictions, Decontamination of Surfaces, Air Monitoring, Necessary PPE for Locations, and Employee Biological Monitoring (as necessary). Equipment is inspected and tested monthly. Evacuation routes and hazard signs are posted. Auditor reviewed Competence, Training and Awareness Procedure, and Employee Training records.

Universal Recycling Technologies, LLC (URT) retained Insight IH Consulting, LLC (Insight) to conduct full-shift time weighted average (TWA) personal breathing zone sampling for total dust and metals at its Clackamas, Oregon facility located at 10151 S.E. Jennifer Street. Additionally, noise dosimetry assessments and surface sampling for cadmium, lead, and mercury particulate were performed. The monitoring was conducted on November 11th, 2021, by Insight's Industrial Hygienist, Mr. Eric Pylkas. Air monitoring sample results for total dust and metals on D-Man (Mini), Big TV D-Man, PC D- Man, Asset, and UW employees were all below the applicable OSHA PELs. URT has implemented a medical surveillance program for all employees who are or may be exposed at or above the action level for cadmium or lead for more than 30 days per year. This includes the CRT D-Man and Shredder Processing employees. Based on the results of the noise monitoring, employees working in Big TV D-Man, CRT D-Man, and Shredder Processing have been included in the hearing conservation program.

The facility does not discharge air emissions. They have two dust collection systems; one for the shred system (LCD's and small electronics) which has a mercury capture system, and the other dust collection unit for the CRT glass room where full CRT tubes are broken up and separated into funnel and panel glass. Air-testing results for particulate matter, opacity, and green loading were well below required limits in 2015, which satisfied the air permit, and does not require additional testing. The facility's renewed discharge air emissions permit doesn't require air

emissions testing moving forward. The facility has an Air Contaminant Discharge Permit #03-9511-SI-01, expired on 01-02-2022. The TDEQ has notified URTs renewal application had been received prior to the expiration date, and the current permit will remain valid until the new version of the ACDP #: 03-9511-SI-01 can be re-issued. The auditor reviewed Air Permit extension email dated 11-08-23.

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

The auditor observed 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. URT agrees to notify the WA State DOE of vendor changes for all MOC's and has built this into their EHSMS.

**7. Recycling - Facility Maintains Compliance with Standards**

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

**8. Reuse - Facility Maintains Compliance with Standards**

Any material or components received that have the capability for reuse are tested for functionality according to e-Stewards requirements onsite. This includes RAM, Monitors, Processors, Video Cards, and Power Supplies. Failed devices are shredded or sent downstream for processing.

Facility is NAID certified. Hard drives are shredded onsite. Drives are stored for less than a month prior to shredding and all data bearing devices are shredded onsite. All material is stored indoors, and all staff are drug tested, and 7-year background checks conducted. There are 20 cameras with recordings which are stored for at least 180 days.

**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 functionality testing but does not repair/refurbish units.

**11. Transport – Facility Maintains Compliance with Standards**

URT accepts deliveries directly from customers, or they use their own box truck for pick-ups. One box truck and one tractor trailer are leased for local deliveries inbound customer pickups and outbound to ██████████ WA, and ██████████ OR. The facility requires third party transporters for all other outbound deliveries and has appropriate documentation including insurance, W-9s, and applicable permits. Reviewed the UCR Registration Confirmation #000-0378-8600 for 11 vehicles (Motor Private Carrier) expires 12-31-23.

**12. Prison Labor – Facility Maintains Compliance with Standards**

URT does not use prison labor.

**13. Facility Access – Facility Maintains Compliance with Standards**

URT 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**  
URT 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 the Legal and Other requirements to manage.

**15. Due Diligence Downstream - Facility Maintains Compliance with Standards**  
As part of the audit process the auditor reviewed URT's comprehensive audit criteria for downstream vendor audits and sampled some of their annually updated audit packages which include permits, Bills of Ladings, Export Permissions, confirmation that the material processing meets the e-Steward, R2v3 and 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. All current vendors have been audited and the CB auditor will review these documents with the next onsite e-Stewards and R2v3 surveillance audit.

**16. Exporting – Facility Maintains Compliance with Standards**  
As confirmed during the e-Steward and R2v3 certification audits, URT is following WA DOE and FED EPA standards as the destination for CRT glass processing as it leave the site as a commodity for tile manufacturing. Circuit Boards are sent to smelters in Japan, and S. Korea either directly or through downstream vendors. All batteries and mercury containing devices are processed domestically. The facility has audits of these facilities on file which include required export requirements which are reviewed by the CB auditors during the certification audits.

**17. Insurance - Facility Maintains Compliance with Standards**  
URT maintains more than adequate insurance to cover their employees, operations, and pollution liability. The facility holds the following insurances, which are valid through 7/06/2024.  
General Liability: \$1,000,000 per occurrence / \$2,000,000 aggregate  
Automobile Liability: \$1,000,000 Combined Single Limit  
Umbrella Liability: \$10,000,000 per occurrence / \$10,000,000 aggregate  
Workers Compensation: \$1,000,000 each/ \$1,000,000 disease  
Pollution Liability: \$15,000,000, \$25,000 deductible expires on 7/06/2026  
Cyber/Technical E&O: \$5M/25K Retention Exp. 07-06-24

**18. Closure EHSMS and Financial Responsibility - Facility Maintains Compliance with Standards**  
The Closure Plan in place uses a surety bond to cover the estimated costs of calculated closure. Estimated cost of closure is \$284,392.05. URT is principal and it will be executed by Westchester Fire Insurance Company of the Surety Bond that has a value of \$284,392.

**19. Facility Security - Facility Maintains Compliance with Standards**  
Facility is NAID certified. Auditor reviewed NAID Certificate expiring 10-31-24. Facility stores all materials indoors and employees must complete a background check and drug testing before hire. There is a 24/7 intrusion detection system to monitor the doors, motion, and electrical failure. Badge access is needed from outside. Any door opens longer than 45 seconds trip an alarm and ADT monitors access control. There are 20 cameras with recordings stored for up to 6 months. The facility has a weekly camera check as well monthly security checklist including

checking motion detectors, camera functions, door contacts, keypads, battery back-ups, monitoring services, visitor in/out logs, visitor badges, lighting, and locks.

Hard drives are shredded onsite. Drives are stored for less than a month prior to shredding and all data bearing devices are shredded onsite. The entire warehouse is considered secure with keycode access. Loading docks are shut unless active loading and unloading is being conducted. All material is stored indoors, and all staff are drug tested, and 7-year background checks conducted. There are 20 cameras with recordings which are stored for at least 180 days.

**Findings**

No findings were identified.

**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.