

**FINAL**

**Evidentiary Report of Possible e-Stewards® Critical Non-Conformity**

**Universal Recycling Technologies**

**February 26, 2024**

**Case Number:** 12-05-24-01

**Observation Locations:** Universal Recycling Technologies facility in Janesville, WI (2535 Beloit Ave, Janesville WI 53546)

**Date of Observation:** October 17<sup>th</sup>, 2024

**Appendices:**

APPENDIX 1: OSHA Violation Details (source: OSHA database)

APPENDIX 2: URT-Provided Formal Response Letter

APPENDIX 3: URT-Provided Additional Details

**Sections of e-Stewards Standard (V4.1) and Critical Non-Conformity (CNC) Policy potentially violated:**

<b>Section</b>	<b>Requirement</b>	<b>Finding Indicated</b>	<b>Likely Class of violation</b>
<b>8.3 Industrial Hygiene Program</b>	“With consideration for the risks and obligations identified in Section 6, the Organization shall establish, document, implement, maintain, and, where possible, continually improve Industrial Hygiene controls in order to reduce or eliminate identified workplace hazards, including injury, illness, and exposure to hazardous materials. Following the Precautionary Principle, this program shall effectively address:  A. Operational risks and hazards, including as applicable: a. Airborne hazards;... B. Prevention of hazard migration outside operational areas.”	OSHA citations against the Lead and Cadmium OSHA standards indicate that if an Industrial Hygiene monitoring program is in place at URT, it is inefficient at determining actual employee exposure.	Major Non-Conformity
<b>8.3.1 Potentially Hazardous Processing</b>	“If the Organization uses one or more PHPTs, they shall expand their Industrial	OSHA citations indicate URT’s IH monitoring	Major Non-Conformity

<p>Technologies (PHPTs)</p>	<p>Hygiene program to include the following:...</p> <p>A) Testing &amp; Monitoring Protocols In addition to the requirements listed in b) through f) below, the Organization shall ensure that:</p> <ol style="list-style-type: none"> <li>1) All IH testing is conducted under the direct supervision of a CIH or Equivalent; and</li> <li>2) All laboratory analyses are performed by an ISO 17025 accredited laboratory or a nationally accredited laboratory; and...</li> <li>4) Monitoring is conducted for any applicable hazards specified in Appendix A.8.3.1 that may affect both the operators of PHPTs and those working where hazards are likely to migrate, including testing of worker breathing zones and wipe sampling for surface areas...</li> </ol> <p>D) Evaluation of and Response to Test Results The Organization shall ensure a Certified Industrial Hygienist or Equivalent and/or a physician knowledgeable in occupational medicine and/or medical toxicology evaluates the monitoring results, including calculating time-weighted</p>	<p>program was insufficient in calculating actual employee exposure of Lead and/or Cadmium during normal business activities and hours. OSHA citations included, in summary:</p> <ul style="list-style-type: none"> <li>• Samples taken did not represent regular employee shift and/or exposure;</li> <li>• Change rooms not provided for employees exposed above PEL;</li> <li>• Change rooms not equipped with separate storage of street clothes and protective clothing;</li> <li>• Protective clothing not removed in change rooms;</li> <li>• Employees exposed above PEL are not showering at the end of employee shifts;</li> <li>• Biological monitoring and medical examinations are not provided for employees exposed above PEL;</li> <li>• Biological</li> </ul>	
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	<p>averages, by comparing the test results to the most protective Exposure Limits. Appropriate action shall be taken as recommended by the CIH or Equivalent or physician based on the test results...</p> <p>F) Determination of Medical Surveillance Needs, and Implementation of Biological Monitoring if Required. The Organization shall:</p> <ol style="list-style-type: none"> <li>1. Implement biological monitoring if any of the following occur... <ul style="list-style-type: none"> <li>• Indication that Exposure Limits have been reached or exceeded based on relevant Industrial Hygiene test results</li> </ul> </li> <li>2. Develop, document, and implement a medical surveillance program, if determined to be necessary, in consultation with the CIH or Equivalent. The Designated Health Provider shall decide upon the medical issues, but an occupational health nurse or physician's assistant may carry out these decisions. This medical surveillance program shall: <ul style="list-style-type: none"> <li>• Be conducted for all workers whose representative IH exposure data indicates the occupational Exposure Limits have been exceeded; and...</li> <li>• Specify the frequency of</li> </ul> </li> </ol>	<p>monitoring not provided at required frequency;</p> <ul style="list-style-type: none"> <li>• Engineering/work practice controls are not implemented effectively;</li> <li>• Surfaces are not kept free from Lead and/or Cadmium</li> </ul> <p>These citations show that URT was not following e-Stewards Standard requirements in section 8.3.1 for Industrial Hygiene monitoring for those employees that may have exposure above regulatory exposure limits. Medical surveillance and biological monitoring needs are/were not being met.</p>	
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	<p>biological testing, medical exams, and conditions where workers are removed or returned to work; and</p> <ul style="list-style-type: none"> <li>• Include worker baseline examinations and specify when follow up medical evaluations are required; ...”</li> </ul>		
<p><b>e-Stewards Critical Non-Conformity Policy 1.3.2.2</b></p>	<p>“The following conduct shall also be considered a CNC should it take place by a licensed or prospective e-Stewards Recycler/Refurbisher, its owner or by individuals on their executive team at any time in the last 5-year period of continuous ownership; or the 5-year period prior to contracting with an e-Stewards certification body:</p> <p>A. Violation of laws pertaining to any electronics recycling business operations that:</p> <ol style="list-style-type: none"> <li>1. Exceeded \$100,000 in penalties/fines within a one-year period. If fines are under appeal, this trigger can be deferred until resolution,... </li> </ol>	<p>After an informal conference between OSHA and URT, it was reported that a settlement had been reached with a final fine amount agreed upon at \$129,048. This amount exceeds the \$100,000 threshold defined in the CNC Policy.</p>	<p>Critical Non-Conformity</p>

**Case Description:**

e-Stewards staff were notified of several OSHA violations issued to e-Stewards Certified Processor Universal Recycling Technologies (herein URT) in the October 17<sup>th</sup>, 2024 digital edition of industry newsletter, E-Scrap News. Therein it was announced that on October 9<sup>th</sup>, OSHA had announced that “an inspection at the Janesville, WI plant revealed two “repeat” violations, six “serious” violations, and one non-serious violation of workplace safety regulations.” It was noted that some of the violations came after URT was cited for many of the same issues in April of 2023, resulting in the “repeat” label on multiple violations. Initial fines proposed by OSHA were \$202,820.

In a subsequent article published on November 7<sup>th</sup>, 2024 by E-Scrap News, it was detailed that URT had met with OSHA representatives in an informal settlement meeting, resulting in some citations being removed and others reclassified. The fine total was reduced to \$129,048. Violation details can be found in Appendix 1 of this report.

After review of the publicly available information on OSHA’s database, it was determined that in addition to a possible Critical Non-Conformity based on the fine amount, it is likely that URT may have several major non-conformities against Industrial Hygiene program requirements. CNC violations (1.3.2.1(c)) would have been

possible for the described health and safety violations had they been cited by OSHA as willful, or there is further evidence of these being willful – which, to date, has not been the case.

#### **URT Provided Timeline:**

- **2023:** URT cited by OSHA (Janesville location) for several positions on the CRT processing line showing above PEL. Also cited for not using a specific calculation calculating the “additive effect of lead and cadmium” for blood monitoring.
  - URT’s respiratory protection program was not cited as an issue, and no blood tests showed elevated levels of exposure to lead or cadmium both individually or using the “additive effect” calculation noted above.
  - Abatement process agreed to increase blood testing from annually to bi-annually.
- **4<sup>th</sup> Quarter, 2023:** Plant management at Janesville location changed. Complete turnover of supervisory staff and Plant Manager position. New plant manager started January 29<sup>th</sup>, 2024. No Maintenance Supervisor in place at this time.
- **February & March, 2024:** URT redesigned the CRT d-man process, eliminating all but 2 of the locations that were cited for being above the PEL during the OSHA inspection in 2023. CRT d-man restarted in March of 2024 with IH testing in place to determine where additional engineering controls needed to be instituted.
- **April, 2024:** OSHA inspection, unannounced. Not initiated by an employee complaint.
- **September, 2024:** OSHA publishes findings citing several repeat violations and the initial fine of \$202,820. URT was not given prior notification of these findings before they were made public.

NOTE: Between the time period of April to September, URT enhanced the CRT processing area of the facility and implemented “significant engineering controls”.

**January 28<sup>th</sup>, 2025:** e-Stewards provided a response to URT’s formal response to the Evidentiary Report, asking for additional clarifications as well as reports for IH monitoring. Deadline for submittal is February 4<sup>th</sup>, end of business.

**January 30<sup>th</sup>, 2025:** URT provided prompt response to e-Stewards’ requests, with clarifying details regarding the IH monitoring performed and applicable OSHA clauses cited. These details further provided evidence of URT’s response to the citations and plans for addressing any outstanding matters.

#### **Case Resolution:**

In review of all evidence provided and the transparency of URT in all communication regarding the OSHA violations, steps taken to address each of the citations, and controls implemented at the facility in question, it is the determination that URT has taken appropriate action with regard to the OSHA citations.

However, per the e-Stewards Critical Non-Conformity Policy, a CNC is triggered when there is a violation of laws pertaining to any electronics recycling business operations that exceeds \$100,000 in penalties/fines within a one-year period. As URT settled with OSHA for a total fine amount of \$129,048, this penalty exceeds the threshold defined in the CNC policy. As such, and with no exemptions detailed, the resolution for this case is a Critical Non-Conformity issued to URT, as well as other potential non-conformities that will be communicated to URT’s respective certifying body to follow up on at future audits.

#### **Conclusion:**

The potential consequences defined in the Critical Non-Conformity policy include a minimum 30-day suspension of the processor’s e-Stewards certificate or withdrawal from the program for a minimum of 2 years. Due to the cooperation of URT, the transparency provided, and the implementation of controls to address each of the OSHA citations appropriately, it is the determination of the e-Stewards team that URT shall receive the lesser of consequences, being a 30-day suspension of their certificate.

# APPENDIX 1: OSHA Citation Details

## Inspection Detail

Case Status: OPEN

**Note:** The following inspection has not been indicated as closed. Please be aware that the information shown may change, e.g. violations may be added or deleted. For open cases, in which a citation has been issued, the citation information may not be available for 5 days following receipt by the employer for Federal inspections or for 30 days following receipt by the employer for State inspections.

### Inspection: 1742375.015 - Universal Recycling Technologies, Llc

Inspection Information - Office: Madison Area Office

Inspection Nr: 1742375.015

Report ID: 0523300

Date Opened: 04/18/2024

**Site Address:**

Universal Recycling Technologies, Llc  
2535 Beloit Ave  
Janesville, WI 53546

Union Status: NonUnion

**SIC:**

NAICS: 423930/Recyclable Material Merchant Wholesalers

**Mailing Address:**

2535 Beloit Ave, Janesville, WI 53546

Inspection Type: FollowUp

Safety/Health: Health

Scope: Partial

Close Conference: 04/18/2024

Advanced Notice: N

Emphasis: N:Lead

Ownership: Private

Case Closed:

#### Related Activity

Type	Activity Nr	Safety	Health
Inspection	1630595		Yes

Case Status: OPEN

#### Violation Summary

Violations/Penalties	Serious	Willful	Repeat	Other	Unclass	Total
Initial Violations	6		2	1		9
Current Violations	7			2		9
Initial Penalty	\$76,056	\$0	\$126,764	\$0	\$0	\$202,820
Current Penalty	\$112,917	\$0	\$0	\$16,131	\$0	\$129,048
FTA Penalty	\$0	\$0	\$0	\$0	\$0	\$0

**Violation Items**

#	Citation ID	Citation Type	Standard Cited	Issuance Date	Abatement Due Date	Current Penalty	Initial Penalty	FTA Penalty	Contest	Latest Event	Note
1.	01001A	Other	19101025 D01 III	09/26/2024	12/02/2024	\$16,131	\$12,676	\$0		I - Informal Settlement	
2.	01001B	Other	19101027 D01 II	09/26/2024	12/02/2024	\$0	\$0	\$0		I - Informal Settlement	
3.	01002A	Serious	19101025 G02 IV	09/26/2024	01/02/2025	\$16,131	\$12,676	\$0		I - Informal Settlement	
4.	01002B	Serious	19101027 I02 I	09/26/2024	01/02/2025	\$0	\$0	\$0		I - Informal Settlement	
5.	01002C	Serious	19101027 I02 II	09/26/2024	12/02/2024	\$0	\$0	\$0		I - Informal Settlement	
6.	01003A	Serious	19101025 I03 I	09/26/2024	12/02/2024	\$16,131	\$12,676	\$0		I - Informal Settlement	
7.	01003B	Serious	19101027 J03 I	09/26/2024	12/02/2024	\$0	\$0	\$0		I - Informal Settlement	
8.	01004	Serious	19101025 J02 I A	09/26/2024	12/02/2024	\$16,131	\$12,676	\$0		I - Informal Settlement	
9.	01005A	Serious	19101027 C	09/26/2024	01/02/2025	\$0	\$12,676	\$0		I - Informal Settlement	Citation has been deleted.
10.	01005B	Serious	19101027 F01 I	09/26/2024	05/01/2025	\$16,131	\$0	\$0		I - Informal Settlement	
11.	01006	Serious	19101027 E01	09/26/2024	12/02/2024	\$16,131	\$12,676	\$0		I - Informal Settlement	
12.	02001A	Repeat	19101000 D01 I	09/26/2024	01/02/2025	\$0	\$63,382	\$0		I - Informal Settlement	Citation has been deleted.
13.	02001B	Serious	19101000 E	09/26/2024	05/01/2025	\$16,131	\$0	\$0		I - Informal Settlement	
14.	02002A	Serious	19101025 H01	09/26/2024	01/02/2025	\$16,131	\$63,382	\$0		I - Informal Settlement	
15.	02002B	Serious	19101027 K01	09/26/2024	01/02/2025	\$0	\$0	\$0		I - Informal Settlement	
16.	03001	Other	19101200 H03 II	09/26/2024	12/02/2024	\$0	\$0	\$0		I - Informal Settlement	

## APPENDIX 2: URT-Provided Response Letter



Universal Recycling Technologies  
120 E. Burbank Ave.  
Janesville, WI 53546  
01/03/2025

Selena Turnock  
Certification Director  
s-Stewards

Selena,

This is the formal response requested regarding the OSHA violation dated Oct 17<sup>th</sup>.

First, the context to the fine. In 2023, OSHA cited URT (Janesville location) for having several positions on the CRT line showing above Permissible Exposure Limits (PEL). URT was also cited for not using an obscure calculation calculating the additive effect of lead and cadmium for the blood tests. This calculation was not something our attorney (expert in OSHA regulations) was familiar with prior to this citation. It needs to be stressed that URT's RPP program was not an issue and no blood tests showed elevated levels of lead or cadmium either individually or using the additive effect calculation OSHA referred to. As part of the abatement, URT was to increase blood testing from an annual process to a bi-annual process.

During the 4<sup>th</sup> quarter of 2023, the plant management was changed at the Janesville location. There was a complete turnover of the supervisor staff as well as the Plant Manager and the admin assistant. The new plant manager started January 29<sup>th</sup> with no maintenance supervisor in place.

In February & March of 2024, URT completely redesigned the CRT d-man process eliminating all but 2 of the locations that were cited for being above PEL in 2023. CRT d-man production started again in March with IH testing in place to determine were additional engineering controls needed to be instituted.

OSHA visited again in April. It needs to be noted that neither of these visits were initiated by an employee complaint.

URT heard nothing from OSHA until September when OSHA published its findings. URT was notified the day OSHA publicly announced the citation.

During the April to September time frame, significant engineering controls were put into place.

Again, URT's RPP program was proven to be robust. No employee has had elevated blood levels for lead or cadmium or the calculated additive effect of the two.





This citation focuses on the following issues:

1. Blood testing on a bi-annual basis vs. annual
2. IH testing for the function of cleaning the “glass room”
3. Employee education- URT trained employees on the dangers of lead and cadmium exposure but neglected to include training on the lead/cadmium additive effect
4. Engineering controls on the shop floor
5. Engineering controls in the changing/shower area

The citation doubled up all these issues, one for lead and one for cadmium, stacking the citations, excepting the training.

The discussion points for these issues are:

1. Changing the blood testing from annual to bi-annual was a complete miss on the part of URT. URT did not have a robust enough management system in place to handle the complete turnover of facility management. This has been fixed.
2. The grinding and sifting equipment for the CRT line is in an enclosed room (glass room). It was determined by URT that there were not practicable engineering controls to keep exposure below PEL. As such (and allowable) the RPP program as well as dress code is used to keep employees safe. Because of this, the IH testing did not include cleaning the glass room. OSHA does not agree that all practicable engineering controls have been put into place and therefore cited URT.
3. URT’s training included the hazards of lead exposure and the hazards of cadmium exposure but did not include the hazards of the additive effect of lead and cadmium exposure.
4. Despite the obvious engineering controls put into place and planned to be put into place on the new CRT line, OSHA cited URT for the locations not yet having engineering controls in place.
5. URT did have showers and a locker room in place for employees to shower and change at the end of their shift. The employees had been trained on the dangers of lead and cadmium exposure. During the interview process, some employees admitted to not taking showers and occasionally wearing their work boots home. Additionally, the locker room area did allow for cross-contamination of clean and dirty clothing.

To reiterate:

- No employee showed elevated blood levels giving credit to URT’s RPP program.
- This inspection was not the result of an employee complaint.
- OSHA’s visit was within a month of the start up of a new CRT de-man process, before URT could finish its monitoring procedures and complete the engineering controls.
- OSHA believes that not every “practicable” engineering control has been tried inside the glass room.
- The blood sample frequency and training violations have been fixed immediately with upgraded management system put into place.



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Responses to the Evidentiary Report of Possible e-Steward Critical Non Conformity:

8.3 OSHA citations against the Lead and Cadmium OSHA standards indicate that if an Industrial Hygiene monitoring program is in place at URT, it is inefficient at determining actual employee exposure.

Response: URT had chosen not to include cleanup of the glass room in its IH testing because it was believed that practicable engineering controls do not exist. Alternate protective measures were used in their place.

8.3.1 OSHA citations indicate URT's IH monitoring program was insufficient in calculating actual employee exposure of Lead and/or Cadmium during normal business activities and hours. OSHA citations included, in summary:

- Samples taken did not represent regular employee shift and/or exposure;
  - i. Response: As stated above, this applies specifically to the glass room
- Change rooms not provided for employees exposed above PEL;
  - i. Response: Change rooms were in fact provided for employees exposed above PEL
- Change rooms not equipped with separate storage of street clothes and protective clothing;
  - i. Response: The layout of the change room has been changed in such a way that the "clean side" and "dirty side" are separated by a physical barrier and have changed our entry and exit process to ensure exposed clothes stay only on the dirty side of the locker room.
- Protective clothing not removed in change rooms;
  - i. Response: Protective clothing was removed in the provided change rooms
- Employees exposed above PEL are not showering at the end of employee shifts;
  - i. Response: Some employees admitted to not taking showers consistently. Change room layout has been modified that to cross from the "dirty side" to the "Clean side" requires them to walk through the shower area.
- Biological monitoring and medical examinations are not provided for employees exposed above PEL;
  - i. Response: This is incorrect. See next bullet
- Biological monitoring not provided at required frequency;
  - i. URT was on an annual basis but in 2023 should have switched to every six months. The management system has been strengthened to eliminate this from happening again.
- Engineering/work practice controls are not implemented effectively;
  - i. With the exception of the glass room, engineering controls where in the process of being put into place. All abatement items (except the glass room) will be completed well before the OSHA deadline.



- ii. Regarding the glass room, outside consultants have been brought in and different equipment will be tested to see what might work.
- Surfaces are not kept free from Lead and/or Cadmium
  - i. The cleaning schedule for the changing area has been significantly increased.

1.3.2.2 After an informal conference between OSHA and URT, it was reported that a settlement had been reached with a final fine amount agreed upon at \$129,048. This amount exceeds the \$100,000 threshold defined in the CNC Policy.

Response: This is correct. OSHA plainly stated to URT that the only way to get the fine below \$100,000 was to challenge the citation in court. URT made the business decision to agree to the modified citation rather than incur the legal costs.

Regards,

Ken Thomas  
President  
Universal Recycling Technologies



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## APPENDIX 3: URT-Provided Additional Details

### e-Stewards Remarks: Section1

1. What was the “obscure calculation”? Can you provide the formula, and/or cite the specific OSHA requirement for this?

This is the calculation that URT was performing for each contaminate during IH testing

1910.1000(d)(1)(i)  
The cumulative exposure for an 8-hour work shift shall be computed as follows:

$$E = (C_1 T_1 + C_2 T_2 + \dots + C_n T_n) \div 8$$

Where:

E is the equivalent exposure for the working shift.

C is the concentration during any period of time T where the concentration remains constant.

T is the duration in hours of the exposure at the concentration C.

The value of E shall not exceed the 8-hour time weighted average specified in subpart Z of 29 CFR part 1910 for the substance involved.

1910.1000(d)(1)(ii)  
To illustrate the formula prescribed in paragraph (d)(1)(i) of this section, assume that Substance A has an 8-hour time weighted average limit of 100 ppm noted in Table Z.1. Assume that an employee is subject to the following exposure:

Two hours exposure at 150 ppm  
Two hours exposure at 75 ppm  
Four hours exposure at 50 ppm

Substituting this information in the formula, we have

$$(2 \times 150 + 2 \times 75 + 4 \times 50) \div 8 = 81.25 \text{ ppm}$$

Since 81.25 ppm is less than 100 ppm, the 8-hour time weighted average limit, the exposure is acceptable.

This is the calculation for any mixture of contaminants that URT was not documenting on previous IH results

1910.1000(d)(2)(i)  
In case of a mixture of air contaminants an employer shall compute the equivalent exposure as follows:

$$E_m = (C_1 \div L_1 + C_2 \div L_2) + \dots + (C_n \div L_n)$$

Where:

$E_m$  is the equivalent exposure for the mixture.

C is the concentration of a particular contaminant.

L is the exposure limit for that substance specified in subpart Z of 29 CFR part 1910.

The value of  $E_m$  shall not exceed unity (1).

1910.1000(d)(2)(ii)  
To illustrate the formula prescribed in paragraph (d)(2)(i) of this section, consider the following exposures:

Substance	Actual concentration of 8-hour exposure (ppm)	8-hour TWA PEL (ppm)
B	500	1,000
C	45	200
D	40	200

Substituting in the formula, we have:

$$E_m = 500 \div 1,000 + 45 \div 200 + 40 \div 200$$

$$E_m = 0.500 + 0.225 + 0.200$$

$$E_m = 0.925$$

Since  $E_m$  is less than unity (1), the exposure combination is within acceptable limits.

Specific OSHA requirement [29 CFR 1910.1000\(d\)\(1\)\(i\)](#)

Specific OSHA requirement [29 CFR 1910.1000\(d\)\(2\)\(i\)](#)

2. Are you able to provide e-Stewards with the OSHA air monitoring records for this area of the facility?  
 (Confidentially, personal employee information can be redacted)



OSHA REGION V – AIR MONITORING RESULTS

Company: Universal Recycling Technologies, LLC  
 Address: 2535 Beloit Ave, Janesville, WI 53546

Inspection #: 1742375  
 Survey Dates: April 19, 2024

EMPLOYEE SAMPLED	OPERATION DESCRIPTION	MINUTES SAMPLED	CHEMICAL	OSHA AL	OSHA PEL	MONITORING RESULTS		
						TWA	8-HR TWA	SEVERITY
[REDACTED]	Cross Functional Operations Associate: Manual dismantling of large CRT televisions. Ventilation – General/facility dilution ventilation Respiratory protection - none	405	Lead	30 µg/m³	50 µg/m³	7.3 µg/m³	6.2 µg/m³	0.12 *I
			Cadmium	2.5 µg/m³	5 µg/m³	1.1 µg/m³	0.9 µg/m³	0.19 *I
			Mixture (Pb & Cd)	N/A	1	0.37	0.30	0.30 *I
[REDACTED]	General Processing Operator: Glass room operation. Bagging and monitoring final product leaving glass room. Ventilation – Glass room output dust collection Respiratory protection - Half-mask elastomeric respirator equipped with P100 cartridges	404	Lead	30 µg/m³	50 µg/m³	21 µg/m³	17 µg/m³	0.35 *I
			Cadmium	2.5 µg/m³	5 µg/m³	ND	ND	0 *I
			Mixture (Pb & Cd)	N/A	1	0.41	0.35	0.35 *I
[REDACTED]	General Processing Operator: QC/Sort – Quality control and sorting of the recycle conveyor serving the glass room Ventilation – Slot source capture ventilation Respiratory protection – Half-mask elastomeric respirator equipped with P100 cartridges	402	Lead	30 µg/m³	50 µg/m³	71 µg/m³	60. µg/m³	1.2 *3
			Cadmium	2.5 µg/m³	5 µg/m³	ND	ND	0 *I
			Mixture (Pb & Cd)	N/A	1	1.4	1.2	1.2 *3

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EMPLOYEE SAMPLED	OPERATION DESCRIPTION	MINUTES SAMPLED	CHEMICAL	OSHA AL	OSHA PEL	MONITORING RESULTS		
						TWA	8-HR TWA	SEVERITY
[REDACTED]	General Processing Operator: DMAN: Position closest to the DMAN upper/ramp. Manual disassembly of CRT TVs to plastic and cathode ray tube. Ventilation – Hood over DMAN conveyor Respiratory protection - Half-mask elastomeric respirator equipped with P100 cartridges	398	Lead	30 µg/m³	50 µg/m³	41 µg/m³	34 µg/m³	0.68 *I
			Cadmium	2.5 µg/m³	5 µg/m³	0.77 µg/m³	0.64 µg/m³	0.13 *I
			Mixture (Pb & Cd)	N/A	1	0.97	0.30	0.81 *I
[REDACTED]	General Processing Operator: DMAN: Middle position on DMAN. Manual disassembly of CRT TVs to plastic and cathode ray tube. Ventilation – Hood over DMAN conveyor Respiratory protection - Half-mask elastomeric respirator equipped with P100 cartridges	405	Lead	30 µg/m³	50 µg/m³	80. µg/m³	67 µg/m³	1.3 *3
			Cadmium	2.5 µg/m³	5 µg/m³	12 µg/m³	10. µg/m³	2.1 *3
			Mixture (Pb & Cd)	N/A	1	4.0	3.4	3.4 *3
[REDACTED]	General Processing Operator: DMAN: Third position on DMAN, furthest from upper/ramp. Manual disassembly of CRT TVs to plastic and cathode ray tube. Ventilation – Hood over DMAN conveyor Respiratory protection - Half-mask elastomeric respirator equipped with P100 cartridges	401	Lead	30 µg/m³	50 µg/m³	124 µg/m³	104 µg/m³	2.1 *3
			Cadmium	2.5 µg/m³	5 µg/m³	4.0 µg/m³	3.4 µg/m³	0.67 *I
			Mixture (Pb & Cd)	N/A	1	3.3	2.8	2.8 *3

e-Stewards Remarks: Section 2

1. What IH testing was performed? Can you share the results? (Confidentially, personal employee information can be redacted)



**Table 1**  
**Universal Recycling Technologies - Air Sampling Results**  
 2535 Beloit Avenue, Janesville, WI 53546  
 February 7, 2024

Sample No.	Name	Position	Analyte	Time (Minutes)	Concentration	8-hr TWA	OSHA PEL	OSHA Action Level
URT-01	[REDACTED]	Tube Tipper	Total Dust	473	3.7 mg/m <sup>3</sup>	3.6 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	- -
			Cadmium		3.4 µg/m <sup>3</sup>	3.4 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		29 µg/m <sup>3</sup>	29 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-02	[REDACTED]	Sort Station (1st Half of Shift)	Total Dust	238	1.7 mg/m <sup>3</sup>	- -	- -	- -
			Cadmium		<0.53 µg/m <sup>3</sup>	- -	- -	- -
			Lead		46 µg/m <sup>3</sup>	- -	- -	- -
URT-05	[REDACTED]	Sort Station (2nd Half of Shift)	Total Dust	229	2.0 mg/m <sup>3</sup>	- -	- -	- -
			Cadmium		<0.55 µg/m <sup>3</sup>	- -	- -	- -
			Lead		33 µg/m <sup>3</sup>	- -	- -	- -
-	[REDACTED]	Sort Station (Combined)	Total Dust	467	1.8 mg/m <sup>3</sup>	1.8 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	- -
			Cadmium		<0.54 µg/m <sup>3</sup>	<0.53 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		40 µg/m <sup>3</sup>	39 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-03	[REDACTED]	M10 Frames	Total Dust	469	1.4 mg/m <sup>3</sup>	1.4 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	- -
			Cadmium		<0.26 µg/m <sup>3</sup>	<0.25 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-04	[REDACTED]	Bagging	Total Dust	467	1.3 mg/m <sup>3</sup>	1.3 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	- -
			Cadmium		<0.27 µg/m <sup>3</sup>	<0.26 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		16 µg/m <sup>3</sup>	16 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
BLANK	Blank	-	Total Dust	-	<53 µg	- -	- -	- -
			Cadmium		<0.25 µg	- -	- -	- -
			Lead		<1.8 µg	- -	- -	- -

**Equipment**

Air Sampling: Sensidyne GilAir Plus personal sampling pumps; 37-mm pre-weighted polyvinyl chloride (PWPVC) filters; Mesa Labs Defender 510-M calibrator (168286, Cal: 3/28/23)

2. Did you test in other areas of the facility to deduce if there was migration of exposures?

- a. No additional testing at that time. Future testing performed included other areas of the facility and surrounding area to the glass processing (determination of regulated area based on test results see below)



Table 2  
 Universal Recycling Technologies - Air Sampling Results (Area Samples)  
 2535 Beloit Avenue, Janesville, WI 53546  
 October 31, 2024

Sample No.	Name	Position	Analyte	Time (Minutes)	Concentration	8-hr TWA	OSHA PEL	OSHA Action Level
URT-20	Area Sample	Corner of Glass Room near Bagging	Total Dust	460	0.87 mg/m <sup>3</sup>	0.83 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	-
			Cadmium		0.27 µg/m <sup>3</sup>	0.26 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		15 µg/m <sup>3</sup>	14 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-21	Area Sample	Column by D-Man	Total Dust	460	0.81 mg/m <sup>3</sup>	0.78 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	-
			Cadmium		<0.27 µg/m <sup>3</sup>	<0.26 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-22	Area Sample	D-Man	Total Dust	462	0.73 mg/m <sup>3</sup>	0.70 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	-
			Cadmium		0.30 µg/m <sup>3</sup>	0.29 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		11 µg/m <sup>3</sup>	11 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-23	Area Sample	Baler Rall	Total Dust	459	0.72 mg/m <sup>3</sup>	0.69 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	-
			Cadmium		<0.27 µg/m <sup>3</sup>	<0.26 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		11 µg/m <sup>3</sup>	11 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-24	Area Sample	Tube Tipper/Big TV	Total Dust	424	0.42 mg/m <sup>3</sup>	0.37 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	-
			Cadmium		<0.30 µg/m <sup>3</sup>	<0.27 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		6.5 µg/m <sup>3</sup>	5.7 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-25	Area Sample	Toolbox by Baler	Total Dust	472	0.63 mg/m <sup>3</sup>	0.62 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	-
			Cadmium		<0.26 µg/m <sup>3</sup>	<0.26 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		7.9 µg/m <sup>3</sup>	7.8 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-26	Area Sample	Conveyor	Total Dust	473	1.2 mg/m <sup>3</sup>	1.2 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	-
			Cadmium		0.29 µg/m <sup>3</sup>	0.29 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		13 µg/m <sup>3</sup>	13 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-27	Area Sample	Workstation near Conveyor	Total Dust	474	1.3 mg/m <sup>3</sup>	1.3 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	-
			Cadmium		<0.27 µg/m <sup>3</sup>	<0.27 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		16 µg/m <sup>3</sup>	16 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-28	Area Sample	Mezzanine	Total Dust	474	5.7 mg/m <sup>3</sup>	5.6 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	-
			Cadmium		0.61 µg/m <sup>3</sup>	0.60 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		26 µg/m <sup>3</sup>	26 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-29	Area Sample	Conveyor Transition at Seiler Outlet	Total Dust	478	1.6 mg/m <sup>3</sup>	1.6 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	-
			Cadmium		<0.26 µg/m <sup>3</sup>	<0.26 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		22 µg/m <sup>3</sup>	22 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>

**e-Stewards Remarks:**

**1. Did OSHA again perform any IH monitoring during this visit? If so, what was it, and what were the results?**

**(Confidentially, personal employee information can be redacted)**

- OSHA did not perform any additional IH monitoring other than the samples taken 4-19-24 (above)

**e-Stewards Remarks: Section 4**

**1. What, specifically, were the significant engineering controls that were put into place?**

- a. Sieler room was enclosed with physical barrier to prevent dust escape (previously using freezer curtain to prevent escape was not sealed)



- b. Transition points throughout the return conveyor were enclosed and sealed preventing dust escapes at each of the 6 transition points from the sieler room to the hammer mill room



- c. Remote dust collection units were installed at high exposure points (4 total remote dust collection units were installed and placed in locations in addition to the current HVAC drops)




- d. Retraining and updated work instructions were put in place for high exposure point of the bagging station operator, changes to removal and inspection were updated to limit the overall exposure



2. Was IH monitoring done after these controls were implemented to show any improvement? If so, what testing, and what were the results? (Confidentially, personal employee information can be redacted)


IH Monitoring before completion of above engineering controls

**Table 1**  
Universal Recycling Technologies - Air Sampling Results  
2535 Beloit Avenue, Janesville WI  
August 29, 2024



Sample No.	Name	Position	Analyte	Time (Minutes)	Concentration	8-hr TWA	OSHA PEL	OSHA Action Level
URT-08	[REDACTED]	Tube Tipper	Total Dust	461	2.2 mg/m <sup>3</sup>	2.1 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium		16 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		36 µg/m <sup>3</sup>	35 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-09	[REDACTED]	Glass Seiler - M10 Frames	Total Dust	456	4.3 mg/m <sup>3</sup>	4.1 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium		2.9 µg/m <sup>3</sup>	2.8 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		64 µg/m <sup>3</sup>	61 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-03	[REDACTED]	Glass Seiler - Glass Rerun	Total Dust	456	0.67 mg/m <sup>3</sup>	0.64 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium		0.74 µg/m <sup>3</sup>	0.70 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		17 µg/m <sup>3</sup>	16 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-04	[REDACTED]	Glass Seiler - Bagging	Total Dust	459	17 mg/m <sup>3</sup>	16 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium		0.95 µg/m <sup>3</sup>	0.91 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		220 µg/m <sup>3</sup>	210 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-02	Blank	-	Total Dust	-	<53 µg	--	--	--
			Cadmium		<0.25 µg	--	--	--
			Lead		<1.8 µg	--	--	--

**Table 2**  
Universal Recycling Technologies - Air Sampling Results  
2535 Beloit Avenue, Janesville WI  
August 29, 2024



Sample No.	Name	Position	Analyte	Time (Minutes)	Concentration	8-hr TWA	OSHA PEL	OSHA Action Level
URT-01	[REDACTED]	Pit Seiler - TV D-Man	Total Dust	350	1.3 mg/m <sup>3</sup>	0.9 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium		0.73 µg/m <sup>3</sup>	0.53 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		20 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-05	[REDACTED]	Pit Seiler - Baler	Total Dust	373	1.7 mg/m <sup>3</sup>	1.3 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium		0.68 µg/m <sup>3</sup>	0.53 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		37 µg/m <sup>3</sup>	29 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-06	[REDACTED]	Pit Seiler - Conveyor	Total Dust	367	1.5 mg/m <sup>3</sup>	1.1 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium		1.1 µg/m <sup>3</sup>	0.8 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Lead		27 µg/m <sup>3</sup>	21 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
URT-02	Blank	-	Total Dust	-	<53 µg	--	--	--
			Cadmium		<0.25 µg	--	--	--
			Lead		<1.8 µg	--	--	--

IH Monitoring after above engineering controls

**Table 1**  
Universal Recycling Technologies - Air Sampling Results (Personal Samples)  
2535 Beloit Avenue, Janesville, WI 53546  
October 31, 2024

Sample No.	Name	Position	Analyte	Time (Minutes)	Concentration	8-hr TWA	OSHA PEL	OSHA Action Level
URT-01	[Redacted]	CRT Tube Tipper	Total Dust	452	1.2 mg/m <sup>3</sup>	1.1 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium	0.49 µg/m <sup>3</sup>	0.46 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Lead	12 µg/m <sup>3</sup>	11 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Mixture	0.3	0.3	1.0	--	
URT-02	[Redacted]	Glass Rerun	Total Dust	454	1.2 mg/m <sup>3</sup>	1.1 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium	<0.27 µg/m <sup>3</sup>	<0.26 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Lead	18 µg/m <sup>3</sup>	17 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Mixture	0.4	0.4	1.0	--	
URT-03	[Redacted]	M10 Frame	Total Dust	457	4.2 mg/m <sup>3</sup>	4.0 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium	1.0 µg/m <sup>3</sup>	1.0 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Lead	39 µg/m <sup>3</sup>	37 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Mixture	0.98	0.9	1.0	--	
URT-04	[Redacted]	Ragger	Total Dust	453	11 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium	0.42 µg/m <sup>3</sup>	0.40 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Lead	89 µg/m <sup>3</sup>	89 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Mixture	13 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
URT-13	[Redacted]	Glass Room - End of Shift Cleanup	Total Dust	32	<0.3 µg/m <sup>3</sup>	<0.3 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Cadmium	450 µg/m <sup>3</sup>	86 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Lead	11 mg/m <sup>3</sup>	11 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
			Mixture	0.65 µg/m <sup>3</sup>	0.66 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
URT-05	[Redacted]	Big TV D-Man	Total Dust	485	122 µg/m <sup>3</sup>	123 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
			Cadmium	2.6	2.6	1.0	--	
			Lead	0.79 mg/m <sup>3</sup>	0.74 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
			Mixture	0.30 µg/m <sup>3</sup>	0.28 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
URT-15	[Redacted]	Glass Room - End of Shift Cleanup	Total Dust	39	7.8 µg/m <sup>3</sup>	7.8 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
			Cadmium	17 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
			Lead	<3.2 µg/m <sup>3</sup>	<0.53 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Mixture	600 µg/m <sup>3</sup>	49 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	

Tube Tipper

- Previous Over PEL (Cadmium)
- Previous Over Action Level (Lead)
- After Eng Controls – Acceptable

M10 Frames

- Previous Over PEL (Lead)
- Previous Over Action Level (Cadmium)
- After Eng Controls – Acceptable (Cadmium)
- After Eng Controls - Over Action Level (Lead) significant reduction

Bagging Station

- Previous Over PEL (Lead)
- After Eng Controls – Over PEL (Lead)
- Reduction of 50%
- Continued with changing process instructions for additional reduction

Cleaning specific timing and exposures being broken out in the after to target the locations necessary for additional Engineering controls

- Air scrubbing units in glass and sieler room planned, for further reduction of 8-hr TWA results
- Additional HVAC drops and rebalance for areas with higher exposure levels
- Actions to be complete before abatement date 5/1/25

**Table 1**  
Universal Recycling Technologies - Air Sampling Results (Personal Samples)  
2535 Beloit Avenue, Janesville, WI 53546  
October 31, 2024

Sample No.	Name	Position	Analyte	Time (Minutes)	Concentration	8-hr TWA	OSHA PEL	OSHA Action Level
URT-06	[Redacted]	Full-Shift	Total Dust	491	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium	0.53 µg/m <sup>3</sup>	0.54 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Lead	55 µg/m <sup>3</sup>	56 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Mixture	1.2	1.2	1.0	--	
URT-07	[Redacted]	Forklift	Total Dust	451	1.3 mg/m <sup>3</sup>	1.2 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium	<0.26 µg/m <sup>3</sup>	<0.26 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Lead	12 µg/m <sup>3</sup>	11 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Mixture	0.3	0.3	1.0	--	
URT-16	[Redacted]	Seller Room - End of Shift Cleanup	Total Dust	33	1.7 mg/m <sup>3</sup>	1.6 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium	0.63 µg/m <sup>3</sup>	0.59 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Lead	14 µg/m <sup>3</sup>	13 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Mixture	4.5 mg/m <sup>3</sup>	0.3 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
URT-08	[Redacted]	Full-Shift	Total Dust	485	<3.7 µg/m <sup>3</sup>	<0.3 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Cadmium	86 µg/m <sup>3</sup>	7 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Lead	1.9 mg/m <sup>3</sup>	1.9 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
			Mixture	0.84 µg/m <sup>3</sup>	0.85 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
URT-18	[Redacted]	CRT D-Man	Total Dust	457	4.7 mg/m <sup>3</sup>	4.5 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium	8.2 µg/m <sup>3</sup>	8.0 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Lead	23 µg/m <sup>3</sup>	22 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Mixture	18 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
URT-19	[Redacted]	Seller Room - End of Shift Cleanup	Total Dust	32	<3.9 µg/m <sup>3</sup>	<0.3 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Cadmium	250 µg/m <sup>3</sup>	19 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Lead	5.4 mg/m <sup>3</sup>	5.5 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
			Mixture	8.2 µg/m <sup>3</sup>	8.3 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
URT-10	[Redacted]	Full-Shift	Total Dust	489	40 µg/m <sup>3</sup>	41 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
			Cadmium	1.4	1.5	1.0	--	
			Lead	0.6	0.6	1.0	--	
			Mixture	1.4	1.5	1.0	--	

**Table 1**  
Universal Recycling Technologies - Air Sampling Results (Personal Samples)  
2535 Beloit Avenue, Janesville, WI 53546  
October 31, 2024

Sample No.	Name	Position	Analyte	Time (Minutes)	Concentration	8-hr TWA	OSHA PEL	OSHA Action Level
URT-09	[Redacted]	CRT D-Man	Total Dust	454	5.3 mg/m <sup>3</sup>	5.0 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium	3.9 µg/m <sup>3</sup>	3.7 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Lead	35 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Mixture	7.0 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
URT-17	Lorraine Garcia	Seller Room - End of Shift Cleanup	Total Dust	33	<3.7 µg/m <sup>3</sup>	<0.3 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>
			Cadmium	130 µg/m <sup>3</sup>	9 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Lead	5.4 mg/m <sup>3</sup>	5.5 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
			Mixture	3.9 µg/m <sup>3</sup>	3.9 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
URT-11	[Redacted]	Full-Shift	Total Dust	487	38 µg/m <sup>3</sup>	39 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
			Cadmium	1.5	1.6	1.0	--	
			Lead	3.8 mg/m <sup>3</sup>	3.5 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
			Mixture	0.30 µg/m <sup>3</sup>	0.27 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
URT-12	[Redacted]	Baler	Total Dust	437	8.0 µg/m <sup>3</sup>	8.0 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
			Cadmium	0.8	0.7	1.0	--	
			Lead	1.3 mg/m <sup>3</sup>	1.2 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
			Mixture	<0.26 µg/m <sup>3</sup>	<0.26 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
URT-14	[Redacted]	Conveyor	Total Dust	452	15 µg/m <sup>3</sup>	14 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
			Cadmium	13 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--	
			Lead	<3.3 µg/m <sup>3</sup>	<0.3 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Mixture	560 µg/m <sup>3</sup>	42 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
URT-14	Danielle Magnabosco	Glass Room - End of Shift Cleanup	Total Dust	36	2.2 mg/m <sup>3</sup>	2.2 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium	<0.52 µg/m <sup>3</sup>	<0.53 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Lead	55 µg/m <sup>3</sup>	56 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Mixture	1.2	1.2	1.0	--	
URT-10	[Redacted]	Shred	Total Dust	468	4.8 mg/m <sup>3</sup>	4.7 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>	--
			Cadmium	0.29 µg/m <sup>3</sup>	0.28 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	2.5 µg/m <sup>3</sup>	
			Lead	28 µg/m <sup>3</sup>	25 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
			Mixture	0.6	0.6	1.0	--	

IH testing for the function of cleaning the “glass room” – Q: Is the “glass room” separated from the remainder of the facility? What controls are in place to prevent migration of hazardous substances? Section 5

- a. The glass room and sieler room are physical structures (cinder block rooms approx. 20'x20') inside the facility.
- b. The glass room houses the hammer mill and screener for sizing and rerunning product until it reaches the acceptable sizes
- c. The Sieler room houses a rotating drum used to break and crush tubes to sizes acceptable for the hammer mill
- d. Current controls are connection of HVAC baghouse systems for removal of some dust
  - I. Future plans are to rebalance HVAC to maximize the draw at the point of use locations for the individual operators
  - II. Within each room we are installing air scrubbing units specific to the room that will collect and capture the dust that is being created when hammer milling glass or breaking glass tubes. We are working with Zehnder on this application and expect to limit the exposure by 75%-85% of the current levels.

– Q: Did OSHA provide any insight into other controls that could be utilized? Has URT implemented anything new in this “glass room” to help with over exposure? Section 6

- a. OSHA does not provide insight or options for controls it is up to URT to find and confirm effectiveness.
- b. URT performed a search for applicable options and determined that removal/capture of the dust would be the quickest and most direct way to address the exposure levels within the rooms. The only exposure within the rooms is during the end of shift cleaning. There is no reason to access these rooms during operation. Contracts have been signed and expected installation of the air scrubbing units is late February.
- c. URT has purchased vacuum (double hepa filter style) in line with OSHA performance standards to vacuum settled dust from the floors of the room, this is a change from spraying with water, sweeping and shoveling. This process is currently under development and will be included in IH testing for results and adjustments.

During the interview process, some employees admitted to not taking showers and occasionally wearing their work boots home. Additionally, the locker room area did allow for cross-contamination of clean and dirty clothing. – Q: Has this issue been resolved? Section 7

- a. Yes this has been submitted for abatement already.
- b. URT extended the glass lockerroom area to create a separation of clean and dirty locations. We now have a section of the lockerroom where all “dirty” used coveralls are removed and placed in laundry hampers for collections by third party.
- c. URT has developed a boot storage area for the glass team due to the possible exposure to lead dust and those boots are kept on site. They are audited daily by the lead and marked on the boot audit form that is logged weekly.
- d. URT has updated and created a showering process (scheduled times daily) releasing team members with specific times to facilitate the showering process. We have the same 3<sup>rd</sup> party who launders the coveralls provide towels and shower supplies with towel cleaning and restocking happening weekly.