



State of Utah

SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of
Environmental Quality

Kimberly D. Shelley
Executive Director

DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL

Douglas J. Hansen
Director

A meeting of the Waste Management and Radiation Control Board has been scheduled for October 12, 2023, at 1:30 p.m. at the Utah Department of Environmental Quality, (Multi-Agency State Office Building) Conference Room #1015, 195 North 1950 West, SLC.

Board members and interested persons may participate electronically/telephonically.

Join via the Internet: meet.google.com/gad-sxsd-uvs
Join via the Phone: (US) +1 978-593-3748 PIN: 902 672 356#

AGENDA

- I. Call to Order and Roll Call.
- II. Public Comments on Agenda Items.
- III. Declarations of Conflict of Interest.
- IV. Approval of the meeting minutes for the September 14, 2023 Board meeting Tab 1
(Board Action Item)
- V. Petroleum Storage Tanks Update Tab 2
- VI. FY2023 Petroleum Storage Tanks Fund Actuarial Review (Information Item)
- VII. Administrative Rules Tab 3
 - A. Proposed changes to the Utah Solid and Hazardous Waste Rules R315-124, R315-301, R315-302, R315-304, R315-306, R315-309, R315-310, R315-311, R315-315 and R315-320 of the Utah Administrative Code (Information Item).
- VIII. Low-Level Radioactive Waste Tab 4
 - A. EnergySolutions’ request for a site-specific treatment variance from the Utah Hazardous Waste Management Rules. EnergySolutions seeks authorization to macroencapsulate and dispose of waste containing high concentrations of arsenic in quantities greater than 1,000mg/L that cannot be treated to the specified treatment standard **(Board Action Item)**.

(OVER)

B. EnergySolutions' request for a site-specific treatment variance from the Utah Hazardous Waste Management Rule UAC R315-268-40(a)(3) to receive incinerator ash containing dioxan/furan contaminants above Universal Treatment Standards (**Board Action Item**).

IX. Proposed Stipulation and Consent Order between the Director and Utah State University..... Tab 5 (Information Item)

X. Director's Report.

XI. Other Business.

A. Miscellaneous Information Items.

B. Scheduling of next Board Meeting (November 9, 2023).

XII. Adjourn.

In compliance with the Americans with Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Larene Wyss, Office of Human Resources at (801) 536-4284, Telecommunications Relay Service 711, or by email at "lwyss@utah.gov".

Waste Management and Radiation Control Board Meeting Minutes
Utah Department of Environmental Quality
Multi-Agency State Office Building (Conf. Room #1015)
195 North 1950 West, SLC
September 14, 2023
1:30 p.m.

Board Members Participating at Anchor Location: Brett Mickelson (Chair), Dennis Riding (Vice-Chair), Mark Franc, Jeremy Hawk, Kim Shelley, Vern Rogers, Shane Whitney

Board Members Participating Virtually: Danielle Endres, Nathan Rich

Board Members Excused/Absent: Dr. Richard Codell, Dr. Steve McIff, Scott Wardle

UDEQ Staff Members Participating at Anchor Location:

Doug Hansen, Mike Pecorelli, Tom Ball, Brenden Catt, Tyler Hegburg, Larry Kellum, Jalynn Knudsen, Arlene Lovato, Carlo Romano, Elisa Smith, Otis Willoughby

Others Attending at Anchor Location: Steve Gurr

Other UDEQ employees and interested members of the public also participated either electronically or telephonically. This meeting was recorded.

I. Call to Order and Roll Call.

Chairman Mickelson called the meeting to order at 1:30 p.m. Roll call of Board members was conducted; see above.

II. Public Comments on Agenda Items – None.

III. Declaration of Conflict of Interest.

Vern Rogers announced he will abstain from voting on Agenda Item VII. (A.) (EnergySolutions site-specific treatment variance request).

IV. Approval of the meeting minutes for the July 13, 2023, Board meeting (Board Action Meeting).

It was moved by Shane Whitney and seconded by Vern Rogers and UNANIMOUSLY CARRIED to approve the July 13, 2023, Board meeting minutes.

V. Petroleum Storage Tanks Update.

Michael Pecorelli, Division of Environmental Response and Remediation (DERR), Environmental Assurance Program Section Manager, informed the Board that the preliminary estimate of the cash balance of the Petroleum Storage Tank (PST) Fund for the end of August 2023, is \$32,627,152.00. The actual cash balance at the end of July 2023, was \$30,685,747.00. The DERR continues to watch the balance of the PST Fund closely to ensure sufficient cash is available to cover qualified claims for releases. Mr. Pecorelli also informed the Board that the DERR has provided information to the actuarial contractor for the Annual PST Fund Actuarial Report. The DERR has received and is reviewing a draft of the report. A final report is expected near the end of September and will be provided to Board members. There were no comments or questions.

VI. Administrative Rules.

A. **Final adoption of proposed rule changes to Radiation Control Rules UAC R313-12-3 and UAC R313-32-2, to incorporate federal regulatory changes made by the NRC to the federal radioactive materials regulations in 2020 (Board Action Item).**

Tom Ball, Planning and Technical Support Section Manager in the Division of Waste Management and Radiation Control (Division), reviewed the request for the Board's approval for final adoption of proposed changes to Utah Administrative Code (UAC) R313-12-3 and UAC R313-32-2, of the Radiation Control Rules, to incorporate federal regulatory changes made by the Nuclear Regulatory Commission (NRC) to the federal radioactive materials regulations in 2020.

At the Board meeting on July 13, 2023, the Board approved the proposed changes to UAC R313-12-3 and UAC R313-32-2 to be filed with the Office of Administrative Rules for publication in the Utah State Bulletin. The proposed changes were published in the August 1, 2023, issue of the Utah State Bulletin (Vol. 2023, No. 15). The public comment period for this rulemaking ended on August 31, 2023. No comments were received.

This is a Board action item, and the Director of the Division of Waste Management and Radiation Control recommends the Board approve final adoption of the proposed changes to UAC R313-12-3 and UAC R313-32-2 as published in the August 1, 2023, issue of the Utah State Bulletin and set an effective date of September 18, 2023.

There were no comments or questions.

It was moved by Vern Rogers and seconded by Jeremy Hawk and UNANIMOUSLY CARRIED to approve for final adoption the proposed rule changes to Radiation Control Rules UAC R313-12-3 and UAC R313-32-2, to incorporate federal regulatory changes made by the NRC to the federal radioactive materials regulations in 2020, as published in the August 1, 2023, issue of the Utah State Bulletin and set an effective date of September 18, 2023.

VII. Low-Level Radioactive Waste.

A. **EnergySolutions' request for a site-specific treatment variance from the Hazardous Waste Management Rules. EnergySolutions seeks authorization to dispose of waste containing D009 or U151 High Mercury-Organic Subcategory and High Mercury-Inorganic Subcategory hazardous waste codes (Board Action Item).**

Tyler Hegburg, Environmental Scientist, Low-Level Radioactive Section, Division of Waste Management and Radiation Control, reviewed EnergySolutions' request for a site-specific treatment variance. During the July 13, 2023, Board Meeting, this variance request was presented to the Board as an information item.

EnergySolutions is seeking an exemption from Utah Administrative Code R315-268-40(a)(3) to dispose, in EnergySolutions' Mixed Waste Landfill Cell, approximately 2,000 cubic feet of waste containing D009 or U151 High Mercury-Organic Subcategory and High Mercury-Inorganic Subcategory hazardous waste codes that have been treated using stabilization/amalgamation technologies to either the 0.2 mg/L TCLP standard for hazardous waste or the 0.25 mg/L TCLP standard for contaminated soil.

EnergySolutions requests approval to receive and dispose, in EnergySolutions' Mixed Waste Landfill Cell, waste containing the D009 or U151 High Mercury-Organic Subcategory and High Mercury-Inorganic Subcategory hazardous waste codes that has been treated using stabilization/amalgamation technologies. Furthermore, EnergySolutions will perform the stabilization/amalgamation treatment on D009 and U151 High Mercury Subcategory waste streams that have not been treated prior to arrival at the EnergySolutions

Clive facility. All actions will be performed in accordance with EnergySolutions' State-issued Part B Permit prior to disposal of waste within their mixed waste landfill cell.

For this waste stream, the listed treatment technology in found in 40 CFR 268.40 for the D009 High Mercury-Organic Subcategory is either incineration (IMERC) or retorting/roasting for mercury recovery (RMERC). The listed treatment technology for the D009 High Mercury-Inorganic Subcategory and for U151 is RMERC.

The needs and justifications for this variance/action are as follows: The intent of the RMERC treatment process is to recover elemental mercury for recycling. However, radioactive mercury cannot be recycled, and the RMERC process generates secondary waste (radioactive elemental mercury) which requires additional treatment by amalgamation (a stabilization technology) prior to disposal. The IMERC technology is also intended to be a mercury recovery technology where the waste is incinerated, and the mercury recovered in the ash or in a specific off-gas control system. For radioactive mercury, both the ash and the control equipment/media will require further treatment. Furthermore, IMERC involves an extra handling step for the radioactive residue. Successful chemical stabilization of High Mercury-Inorganic Subcategory wastes has been demonstrated to achieve a measure of performance equivalent to the required methods which require two treatment methods (RMERC and stabilization) with no detrimental effect to human health or the environment.

The U.S. Environmental Protection Agency (U.S. EPA) has issued a Determination of Equivalent Treatment (DET) for these High Mercury Subcategory wastes that were chemically stabilized. In the U.S. EPA's determination, they concluded that for waste streams that are radioactive and contain mercury, the recovery portion of RMERC may not be appropriate and alternative treatment processes should be pursued. The U.S. EPA has reviewed the treatment of mercury-bearing waste in a Federal Register Notice (68 FR 4481). In this notice, the US EPA concluded that treatment of mercury waste is possible, and it is suggested that stakeholders should use the site-specific treatment variance process to achieve approval for the treatment of high subcategory mercury wastes. The notice specifically designates an example of when this would be appropriate as the case of a high mercury subcategory waste that is also radioactive. This variance request consists of waste that may be shipped to EnergySolutions over the next year.

To date, EnergySolutions has disposed of approximately 16,800 cubic feet of treated High Mercury Subcategory waste. From knowledge of the current market of High Mercury Subcategory Waste requiring treatment or disposal, and from past experience receiving this type of waste, EnergySolutions anticipates less than 2,000 cubic feet of additional High Mercury Subcategory waste for disposal in the next year under this treatment variance.

EnergySolutions has requested similar site-specific treatment variances for High Mercury-Organic Subcategory and High Mercury-Inorganic Subcategory hazardous waste codes; over the years this variance has been granted approximately 18 times.

A notice for public comment was published in the *Salt Lake Tribune*, the *Deseret News*, and the *Tooele Transcript-Bulletin* on July 5, 2023. The comment period began July 6, 2023, and ended August 4, 2023. No comments were received.

This is a Board action item. The Director of the Division of Waste Management and Radiation Control recommends approval of this variance request based on the following findings: the proposed alternative treatment method meets the regulatory basis for a variance and will be as safe to human health and the environment as the required method.

Danielle Endres asked if the reason the waste cannot be recycled is because of the radioactive element in the product or the waste. Mr. Hegburg stated this waste can't be recycled due to the radioactive component found in the waste.

Ms. Endres requested an explanation of what the mixed waste landfill cell contains. Specifically, is that space that is designated for waste that is part radioactive and part something else. Mr. Hegburg stated that EnergySolutions' mixed waste cell is designated for RCRA hazardous wastes that also contain radioactive elements; that is why it is designated as a mixed waste cell.

Ms. Endres asked if EnergySolutions has other cells that are designated for other different types of wastes. Mr. Hegburg answered in the affirmative.

Vern Rogers asked if the waste just contained the high-subcategory mercury without the radioactive component, what options would be available to generators to dispose of the waste; i.e., would the waste be able to be received at the Clive Facility/EnergySolutions, etc.

Mr. Hegburg stated that without the radioactive component, it could still come to EnergySolutions because the waste could still be placed in the mixed waste cell because of its RCRA category. Mr. Rogers corrected Mr. Hegburg and stated that EnergySolutions is prohibited from taking that type of waste as the waste must contain a radioactive element to be accepted for disposal at EnergySolutions mixed waste cell.

Shane Whitney informed the Board that for this type of waste (without the radioactive component) to be accepted for disposal at Clean Harbors facility, other factors/data will need to be evaluated, including the retorting data, before this type of waste could be accepted at the Clean Harbors facility.

It was moved by Mark Franc and seconded by Dennis Riding and UNANIMOUSLY CARRIED to approve EnergySolutions' request for a site-specific treatment variance from the Hazardous Waste Management Rules to dispose of waste containing D009 or U151 High Mercury-Organic Subcategory and High Mercury-Inorganic Subcategory hazardous waste codes.

B. EnergySolutions' request for a site-specific treatment variance from the Utah Hazardous Waste Management Rules. EnergySolutions seeks authorization to macroencapsulate and dispose of waste containing high concentrations of arsenic in quantities greater than 1,000mg/L that cannot be treated to the specified treatment standard (Information Item).

Mr. Hegburg introduced Steve Gurr, EnergySolutions representative, who presented this variance request. Mr. Gurr reviewed EnergySolutions request to the Director of the Division of Waste Management and Radiation Control for a one-time site-specific treatment variance from Utah Hazardous Waste Management Rule R315-268-40(a)(3) for waste containing high concentrations of arsenic in quantities greater than 1,000mg/L that cannot be treated to the specified treatment standard.

The waste consists of approximately 250 cubic feet of Natural Gas Sweetener Filter Media (clay pellets) and rinse water that will be characteristically hazardous for arsenic, cadmium and benzene. The clay pellets filter the natural gas impurities and are replaced by the generator approximately every three to five years. Analysis of a sample of waste received by EnergySolutions in June 2023, detected arsenic at 14,400 mg/L in the aqueous liquid phase (approx. 20 cubic feet) and 4,600 mg/L in the solid phase (two different phases of the waste).

The stabilization treatment process will meet Universal Treatment Standards (described in UAC R315-268) for all contaminants except arsenic. Similar waste from the same generator was received at the EnergySolutions' Clive Facility in 2015 and 2019 (this waste stream is received approximately every four years at EnergySolutions). In 2015, analysis of a sample of that waste detected arsenic at 69,700 mg/L in the aqueous liquid phase and 1,800 mg/L in the solid. Over the course of two months, eight separate treatability studies of increasing intensity were conducted on that waste. Both single phase and multiple phase formulas were attempted with all contaminants meeting treatment standards except arsenic. Arsenic was reduced from the baseline concentration and plateaued at around 130 mg/L (a reduction factor of approximately 16) with a formula dilution up to 5:1 reagent to waste. This concentration is greatly reduced from the baseline concentration but remained greater than 25 times the treatment standard of 5.0 mg/L.

Utah Administrative Code R315-268-44(h)(1) allows a variance if it can be demonstrated that “because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method.” The treatment standard was developed using a fine-grained, soil-like material; the filter media of this waste stream is physically different in that it is coarse clay pellets.

Similar variance requests were made in 2016 and 2019; both variance requests were approved by the Board.

EnergySolutions requests that a variance be granted to allow macroencapsulation and land disposal of the waste that will meet all treatment standards after stabilization except the treatment standard for arsenic.

Mr. Hegburg informed the Board that this is an informational item before the Board. The Director of the Division of Waste Management and Radiation Control will provide a recommendation following the 30-day public comment period at the next Board meeting.

Danielle Endres asked if this variance is to allow EnergySolutions to accept the waste although all the arsenic (arsenic levels) do not get below the required levels, and if that is the case, Ms. Endres requested Mr. Gurr explain more about the risks associated from the small level of arsenic that will not be contained by the described method. Specifically, what would the risks be to health or environment?

Mr. Gurr explained the process of managing the waste. Specifically, when the waste arrives at EnergySolutions, it would still receive stabilization with chemicals reagents; stabilization is typically done with all waste streams received. From past experiences these chemical reagents do not get the arsenic level down to the required treatment standard level of 5.0 mg/L. Therefore, the waste stream would then be followed up with a second treatment, so it actually would not be disposed higher than that level, because the second treatment method would be the in-cell macroencapsulation. Which, at that point, the process locks up the waste and keeps it from leaching into the environment. So, that is essentially the backup proposal to EnergySolutions’ request. Specifically, the waste stream is macroencapsulation.

Dennis Riding asked if the reason arsenic is difficult to treat is because of the media; i.e., the media is clay. Mr. Gurr stated yes and explained that the physical form comes in pellets, and typically, with the reagents, you have more of a fine grained soil or sediment or something that the reagents can bond to and change the chemical format. However, with pellets, it is harder to penetrate to get the waste to the required treatment standards, as well as the pellets being received arrive with high levels of arsenic as well. The treatment is effective; it just does not get the waste to the required treatment standard level of 5.0 mg/L

Shane Whitney requested clarification regarding the variance request that this waste will be stabilized once it is received at EnergySolutions and then macroencapsulated. Mr. Gurr confirmed that the waste is stabilized and treated for all other contaminants and then microencapsulated. Mr. Gurr further stated that this specific waste is treated just for metals and reiterated that eight separate treatability studies have been conducted on this waste.

C. EnergySolutions’ request for a site-specific treatment variance from the Utah Hazardous Waste Management Rule UAC R315-268-40(a)(3) to receive incinerator ash containing dioxan/furan contaminants above Universal Treatment Standards (Information Item).

Steve Gurr, EnergySolutions representative, presented this variance request and reviewed EnergySolutions’ request to the Director of the Division of Waste Management and Radiation Control for a one-time site-specific treatment variance from Utah Hazardous Waste Management Rule UAC R315-268-40(a)(3) to receive incinerator ash containing dioxan/furan contaminants above Universal Treatment Standards. Mr. Gurr stated that the incinerator ash waste meets all treatment standards except those wastes containing dioxan/furan contaminants as underlying hazardous constituents (UHCs).

Because of the waste generation processes, all the ash waste contains dioxins and furans; however, in accordance with regulations, only a portion of the waste needs to be treated for those contaminants.

Requiring the waste to meet the dioxin and furan treatment standards is inappropriate based on the processes that generate the waste which is incineration.

Prior to receiving this variance in 2018, the generator attempted to reduce concentration of dioxins and furans in the ash by re-incineration. However, re-incineration resulted in a very minor reduction in the concentrations of dioxan and furan contaminants.

The generator has previously analyzed each container of ash for metals contamination. If metals were below the toxicity characteristic concentrations described in 40 CFR 261.24 (R315-261-24), the waste would be shipped to the Clive facility as Low-Level Radioactive Waste (LLRW) and disposed in the Class A Embankment. If metals were above the Toxicity Characteristic concentrations, then the waste would need treated for those metals as well as all UHCs, including dioxins and furans. It is inappropriate to require treatment of dioxin and furan contaminants in instances where characteristic metals are found in the waste when treatment is not required if metals are below characteristic concentrations in the waste.

EnergySolutions proposes to confirm the waste meets all required treatment standards with the exception of the dioxin and furan UHCs and then to macroencapsulate the residue in MACRO Vaults using requirements approved in the state-issued Part B Permit. Final disposal of the waste will occur in the Mixed Waste Disposal Cell at the EnergySolutions' Mixed Waste Facility.

EnergySolutions' request for this same variance request was approved previously in 2018, 2019, 2021, and 2022. Over the previous year while this variance was in effect, the EnergySolutions' Clive facility received approximately 30 tons (eight shipments) of this ash for treatment. EnergySolutions forecasts similar amounts of this waste over the next year.

Mr. Hegburg informed the Board that this is an informational item before the Board. The Director of the Division of Waste Management and Radiation Control will provide a recommendation following the public comment period at the next Board meeting.

Mark Franc commented that the Board frequently deals with variance requests from EnergySolutions, and from his position on the Board, it appears that EnergySolutions and their responsibilities as a company (one of which is a highly regulated and oversighted communities in the industry) is a responsible citizen in the community and does a great job of entertaining all of the Board's questions/concerns. Some of the variance requests the Board deals with can occur over 20 times, some happen less often, but the attention that EnergySolutions pays to the details, regulations, etc. and their desire/attempts to do the work appropriately is appreciated. Mr. Franc further commented that EnergySolutions is a very necessary facility in the solid waste industry and wanted to provide a favorable remark to EnergySolutions for addressing the Board's questions and doing the job right regarding these variance requests.

VIII. Director's Report.

Director Hansen informed the Board that next week the Division of Waste Management and Radiation Control (Division) will undergo an evaluation by the U.S. Nuclear Regulatory Commission (NRC). The NRC uses the Integrated Materials Performance Evaluation Program (IMPEP) in the evaluation of an Agreement State and radioactive materials programs. This evaluation is conducted every four years and is a huge effort that involves much of the Division staff engaging in preparing data, information, and reports for the IMPEP's team to evaluate. The evaluation will be conducted for approximately one week, and the IMPEP process uses a multi-disciplinary team comprised of NRC and Agreement State staff. The IMPEP team will do an in-depth evaluation of all the Division's radioactive materials programs. The Division staff are looking forward to hosting the IMPEP team next week and receiving the results of the findings from the

IMPEP evaluation. Director Hansen stated that if improvements are identified, those improvements will be taken as a positive of things to continue to work on.

Director Hansen informed the Board that the Division is hosting a couple of meetings over the subsequent two weeks after the IMPEP evaluation. The U.S. EPA, Region 8 Directors' meeting will be held in Park City and is comprised of Director Hansen's counterparts and other program leadership within the sister states within Region 8 of U.S. EPA. This meeting allows for an opportunity to get together and talk about how each state administers their programs as well as learn from each other and meet some of the challenges that are facing each state.

Also scheduled in a couple of weeks, the Division will be hosting the Low-Level Radioactive Waste Forum meeting in Salt Lake City. Vern Rogers, a member of our Division staff, and Director Hansen will have the pleasure of speaking at that meeting. A tour of the Clive facility is being offered in conjunction with this meeting. Director Hansen stated this is a public meeting and encouraged anyone interested in low-level radioactive waste matters to register and attend the meeting/tour.

Director Hansen reminded those Board members that are up for reappointment that Governor Cox has approved those recommendations, and the Senate will likely be voting on their confirmations on October 11, 2023. However, at this time, no information has been relayed regarding whether those Board member will be given the opportunity to speak to the Senate Subcommittee regarding their reappointments. If these Board members are requested to meet with the Senate Subcommittee, they will be notified as soon as possible.

IX. Other Business.

A. Miscellaneous Information Items – None.

B. Scheduling of next Board Meeting (October 12, 2023).

The next meeting is scheduled for October 12, 2023, at the Utah Department of Environmental Quality, Multi-Agency State Office Building.

Interested parties can join via the Internet: meet.google.com/gad-sxsd-uvs
Or by phone: (US) +1 978-593-3748 PIN: 902 672 356#

X. Adjourn.

The meeting adjourned at 2:00 p.m.

PST STATISTICAL SUMMARY
September 1, 2022 -- August 31, 2023

PROGRAM													
	September	October	November	December	January	February	March	April	May	June	July	August	(+/-) OR Total
Regulated Tanks	4,184	4,191	4,190	4,196	4,188	4,200	4,203	4,198	4,210	4,211	4,218	4,241	57
Tanks with Certificate of Compliance	4,072	4,073	4,085	4,083	4,089	4,088	4,093	4,103	4,105	4,110	4,122	4,117	45
Tanks without COC	112	118	105	113	99	112	110	95	105	101	96	124	12
Cumulative Facilities with Registered A Operators	1,279	1,278	1,276	1,282	1,280	1,279	1,276	1,279	1,279	1,282	1,289	1,288	98.10%
Cumulative Facilities with Registered B Operators	1,280	1,279	1,277	1,282	1,281	1,281	1,279	1,280	1,279	1,281	1,288	1,288	98.10%
New LUST Sites	5	10	8	9	9	9	4	2	9	6	5	5	81
Closed LUST Sites	7	3	14	3	7	8	17	6	11	4	7	8	95
Cumulative Closed LUST Sites	5474	5491	5494	5501	5509	5524	5531	5539	5542	5549	5556	5571	97
FINANCIAL													
	September	October	November	December	January	February	March	April	May	June	July	August	(+/-)
Tanks on PST Fund	2,645	2,636	2,635	2,628	2,623	2,621	2,617	2,619	2,617	2,618	2,621	2,617	(28)
PST Claims (Cumulative)	711	711	711	711	711	711	710	711	713	723	724	724	13
Equity Balance	-\$127,174	-\$281,835	\$80,750	\$274,341	\$739,913	\$1,273,567	\$1,223,767	\$1,689,965	\$1,933,855	\$2,514,097	\$3,265,812	\$4,455,502	\$4,582,676
Cash Balance	\$27,524,702	\$27,889,815	\$28,252,400	\$28,445,991	\$28,911,563	\$29,445,217	\$29,395,417	\$29,861,615	\$30,105,505	\$30,685,747	\$31,437,462	\$32,627,152	\$5,102,450
Loans	5	0	0	0	0	0	0	0	0	0	1	0	-5
Cumulative Loans	128	128	128	128	128	128	128	128	128	128	129	129	1
Cumulative Amount	\$6,014,420	\$6,014,420	\$6,014,420	\$6,014,420	\$6,014,420	\$6,014,420	\$6,014,420	\$6,014,420	\$6,014,420	\$6,014,420	\$6,213,705	\$6,213,705	\$199,285
Defaults/Amount	0	0	0	0	0	0	0	0	0	0	0	0	0
	September	October	November	December	January	February	March	April	May	June	July	August	TOTAL
Speed Memos	77	105	60	31	42	44	79	40	61	102	62	103	806
Compliance Letters	7	7	9	9	5	3	7	27	5	17	4	7	107
Notice of Intent to Revoke	0	0	0	0	0	0	0	0	0	0	0	0	0
Orders	0	0	0	3	0	0	1	1	0	0	0	0	5

WASTE MANAGEMENT AND RADIATION CONTROL BOARD
Executive Summary
Proposed Rule Changes
UAC R315-124, R315-301, R315-302, R315-304, R315-306, R315-309, R315-310,
R315-311, R315-315 and R315-320
October 12, 2023

<p>What is the issue before the Board?</p>	<p>Next month the Division will be seeking approval from the Board to proceed with formal rulemaking and public comment on proposed changes to R315-124, R315-301, R315-302, R315-304, R315-306, R315-309, R315-310, R315-311, R315-315 and R315-320 of the Utah Administrative Code to correct rule and statutory references and language, clarify rule language, remove requirements that are no longer necessary, add some new requirements to the rules, and add language and requirements to rules as required by legislation passed by the Utah Legislature.</p>
<p>What is the historical background or context for this issue?</p>	<p>The solid waste rules have not been updated or amended for several years. The purpose of this rulemaking is to bring the rules up-to-date and fix errors in the rules.</p> <p>There are several statutory citations in the rules that are not correct because the statutes have been amended and numbering has changed. These citations are being corrected.</p> <p>Several rule citations were found to be incorrect. These are being corrected.</p> <p>Clarifying language is being added in several locations to assist the regulated community in implementing the rules.</p> <p>The Utah Legislature passed bills in 2011, 2013, 2014, 2017, and 2019 that made changes to the solid waste program. These changes are being codified in rule with these amendments.</p> <p>Utah Administrative Code R315-311 is being amended to require the Division to follow the requirements of UAC R315-124 when an application for a solid waste facility permit is received, modified, revoked or terminated. Following the requirements of UAC R315-124 will improve the public participation process for these types of actions.</p> <p>Additionally, the Division is fixing typographical and formatting errors found in the rules as requested by the Governor’s Office.</p>

<p>What is the governing statutory or regulatory citation?</p>	<p>The Board is authorized under Subsection 19-6-105 to make rules that establish minimum standards for protection of human health and the environment for the treatment and disposal of solid waste.</p> <p>The rule changes also meet existing UDEQ and state rulemaking procedures.</p>
<p>Is Board action required?</p>	<p>No. This is an informational item for the Board. Board action on this proposed rulemaking will be required at a future Board meeting.</p>
<p>What is the Division Director's recommendation?</p>	<p>Not applicable at this time.</p>
<p>Where can more information be obtained?</p>	<p>Please contact Tom Ball by phone at 385-454-5574 or by email at tball@utah.gov.</p>

WASTE MANAGEMENT AND RADIATION CONTROL BOARD
Executive Summary
REQUEST FOR A SITE-SPECIFIC TREATMENT VARIANCE
EnergySolutions, LLC
October 12, 2023

<p>What is the issue before the Board?</p>	<p>On August 9, 2023, EnergySolutions, LLC submitted a request to the Director of the Division of Waste Management and Radiation Control for a one-time site-specific treatment variance from Utah Hazardous Waste Management Rule UAC R315-268-40(a)(3).</p> <p>EnergySolutions seeks approval to macroencapsulate and dispose, in EnergySolutions' Mixed Waste Landfill Cell, waste containing high concentrations of arsenic in quantities greater than 1,000mg/L that cannot be treated to the specified treatment standard.</p>
<p>What is the historical background or context for this issue?</p>	<p>EnergySolutions requests approval to stabilize, macroencapsulate and dispose of approximately 250 cubic feet of Natural Gas Sweetener Filter Media (clay pellets) and rinse water that will be characteristically hazardous for arsenic (D004), cadmium (D006), and benzene (D018).</p> <p>Analysis of a sample of waste received in June 2023, detected arsenic at 14,400 mg/L in the aqueous liquid phase (approx. 20 cubic feet) and 4,600 mg/L in the solid phase. The stabilization treatment process will meet Universal Treatment Standards (described in UAC R315-268) for all contaminants except arsenic. All actions requested in this variance will be performed in accordance with EnergySolutions' state-issued Part B Permit.</p> <p>Similar waste from the same generator was received at the Clive Facility in 2015 and 2019. In 2015, analysis of a sample of that waste detected arsenic at 69,700 mg/L in the aqueous liquid phase and 1,800 mg/L in the solid. Over the course of two months, eight separate treatability studies of increasing intensity were conducted on that waste. Both single phase and multiple phase formulas were attempted with all contaminants meeting treatment standards except arsenic. Arsenic was reduced from the baseline concentration and plateaued at around 130 mg/L (a reduction factor of approximately 16) with a formula dilution up to 5:1 reagent to waste. This concentration is greatly reduced from the baseline concentration, but remained greater than 25 times the treatment standard of 5.0 mg/L.</p> <p>Utah Administrative Code R315-268-44(h)(1) allows a variance if it can be demonstrated that "because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method." The treatment standard was developed using a fine-grained soil-like material; the filter media of this waste stream is physically different in that it is coarse clay pellets.</p>

	<p>In this media, it is much more difficult for intimate reagent-waste contact to treat the high concentration arsenic down to the treatment standard.</p> <p>Furthermore, the results described above demonstrate that large amounts of absorbent would be needed to meet the treatment standard, if it could be met. This would bring into question whether actual treatment was occurring or whether dilution was causing the reduction in arsenic concentration.</p> <p>As an alternative to chemical treatment of arsenic to its treatment standard, EnergySolutions proposes to first treat the waste such that all contaminants other than arsenic meet their respective treatment standards, then macroencapsulate the treatment residual in accordance with requirements in Attachment II-1-5, Macroencapsulation Plan, of the state-issued Part B Permit. Macroencapsulation is a permitted process that significantly reduces the potential for migration (leaching) of waste. This process would ensure protection of public health and the environment.</p> <p>Similar variance requests were made for this waste stream in letters dated January 22, 2016 (DSHW-2016-002241) and December 9, 2019 (DSHW-2019-017041). These previous requests were approved by the Waste Management and Radiation Control Board at meetings held on March 10, 2016, and March 12, 2020, respectively.</p> <p>EnergySolutions requests that a variance be granted to allow macroencapsulation and land disposal of waste that will meet all treatment standards except the treatment standard for arsenic.</p> <p>A notice for public comment was published in the <i>Salt Lake Tribune</i>, the <i>Deseret News</i> and the <i>Tooele County Transcript Bulletin</i> on August 31, 2023. The 30-day public comment period began August 31, 2023 and ended September 29, 2023. No public comments were received.</p>
<p>What is the governing statutory or regulatory citation?</p>	<p>Variances are provided for in 19-6-111 of the Utah Solid and Hazardous Waste Act. This is a one-time site-specific variance from an applicable treatment standard as allowed by R315-268.44 of the Utah Administrative Code.</p>
<p>Is Board action required?</p>	<p>Yes, this is an action item before the Board. This Variance Request was presented to the Board as an information item on September 14, 2023.</p>
<p>What is the Division/Director's recommendation?</p>	<p>The Director recommends approval of this variance request. The Director's recommendation is based on the following findings: the proposed alternative treatment method meets the regulatory basis for a variance and will be as safe for human health and the environment as the required method.</p>
<p>Where can more information be obtained?</p>	<p>For technical questions, please contact Tyler Hegburg (385) 622-1875. For legal questions, please contact Bret Randall at (801) 536-0284.</p> <p>EnergySolutions request for a site-specific treatment variance for high concentration arsenic waste was provided in the September 14, 2023 Board's packet (DSHW-2023-208740).</p>

WASTE MANAGEMENT AND RADIATION CONTROL BOARD
Executive Summary
REQUEST FOR A SITE-SPECIFIC TREATMENT VARIANCE
EnergySolutions, LLC
October 12, 2023

<p>What is the issue before the Board?</p>	<p>On August 16, 2023, EnergySolutions, LLC submitted a request to the Director of the Division of Waste Management and Radiation Control for a one-time site-specific treatment variance from the Utah Hazardous Waste Management Rule UAC R315-268-40(a)(3) to receive incinerator ash containing dioxan/furan contaminants above Universal Treatment Standards.</p>
<p>What is the historical background or context for this issue?</p>	<p>Requiring the waste to meet the dioxin and furan treatment standards is inappropriate based on the processes that generate the waste. Because of the waste generation processes, all the ash waste contains dioxins and furans; however, in accordance with regulations, only a portion of the waste needs to be treated for those contaminants. The generator has previously analyzed each container of ash for metals contamination. If metals were below the toxicity characteristic concentrations described in 40 CFR 261.24 (UAC R315-261-24), the waste would be shipped to the Clive facility as Low-Level Radioactive Waste (LLRW) and disposed in the Class A Embankment. If metals were above the Toxicity Characteristic concentrations, then the waste would need treated for those metals as well as all underlying hazardous constituents (UHCs), including dioxins and furans. It is inappropriate to require treatment of dioxin and furan contaminants in instances where characteristic metals are found in the waste when treatment is not required if metals are below characteristic concentrations in the waste.</p> <p>Furthermore, the stabilized ash was re-incinerated as an attempt to reduce the concentration of dioxins and furans in the ash. Re-incineration resulted in very little reduction in the concentrations of dioxan and furan contaminants. It is inappropriate to require this additional incineration step in order to attempt to meet the treatment standards.</p> <p>EnergySolutions proposes to confirm the waste meets all required treatment standards with the exception of the dioxin and furan UHCs and then to macroencapsulate the residue in MACRO Vaults using requirements approved in the state-issued Part B Permit. Final disposal of the waste will occur in the Mixed Waste Disposal Cell at the EnergySolutions Mixed Waste Facility.</p> <p>EnergySolutions requested this same variance for this generator in letters dated June 27, 2018 (DSHW-2018-005927), August 23, 2019 (DSHW-2019-010041), June 16, 2021 (DSHW-2021-009081), and July 20, 2022 (DSHW-2022-021742). The previous requests were approved by the Waste Management and Radiation Control Board on September 13, 2018, November 14, 2019, September 9, 2021, and October 13, 2022, respectively.</p>

	<p>Over the previous year this variance was in effect, the EnergySolutions Clive facility received approximately 30 tons (eight shipments) of this ash for treatment. EnergySolutions forecasts similar amounts of this waste over the next year.</p> <p>A notice for public comment was published in the <i>Salt Lake Tribune</i>, the <i>Deseret News</i> and the <i>Tooele County Transcript Bulletin</i> on August 31, 2023. The comment period began August 31, 2023 and ended September 29, 2023. No public comments were received.</p>
What is the governing statutory or regulatory citation?	<p>Variances are provided for in 19-6-111 of the Utah Solid and Hazardous Waste Act. This is a one-time site-specific variance from an applicable treatment standard as allowed by R315-268.44 of the Utah Administrative Code.</p>
Is Board action required?	<p>Yes, this is an action item before the Board. This Variance Request was presented to the Board as an information item on September 14, 2023.</p>
What is the Division/Director's recommendation?	<p>The Director recommends approval of this variance request. The Director's recommendation is based on the following findings: the proposed alternative treatment method meets the regulatory basis for a variance and will be as safe for human health and the environment as the required method.</p>
Where can more information be obtained?	<p>For technical questions, please contact Tyler Hegburg (385) 622-1875. For legal questions, please contact Bret Randall at (801) 536-0284.</p> <p>EnergySolutions request for a site-specific treatment variance for dioxan and furan contaminants above Universal Treatment Standards was provided in the September 14, 2023 Board's packet (DSHW-2023-208740).</p>

WASTE MANAGEMENT AND RADIATION CONTROL BOARD
Executive Summary
Proposed Stipulation and Consent Order
Utah State University
October 12, 2023

What is the issue before the Board?	This is a proposed Stipulation and Consent Order (SCO), No. 2207086 to resolve Notice of Violation and Compliance Order (NOV/CO) No. 2108087, issued to Utah State University (USU) on April 8, 2022.
What is the historical background or context for this issue?	<p>The NOV/CO was based on information documented during an inspection at the facility on August 11, 2021.</p> <p>The violations noted in the NOV/CO have been resolved.</p> <p>The SCO includes a total penalty of \$28,409.00. USU will pay a monetary penalty of \$2,840.90, while \$25,568.10 may be credited toward the total penalty of \$28,409.00 if USU completes a supplemental environmental project (SEP) related to the installation of solar panels on an existing parking garage at Utah State University. This SEP is expected to increase green electrical generation capacity by 40,460 kilowatt hours per year, which equates to approximately 53 pounds per year reduction in PM₁₀ indirect emissions associated with energy use. Fifty cents will be applied toward the credit amount for every SEP dollar spent by USU.</p>
What is the governing statutory or regulatory citation?	§19-6-104 of the Utah Solid and Hazardous Waste Act authorizes the Board to issue orders and approve or disapprove settlements negotiated by the Director with a civil penalty over \$25,000.
Is Board action required?	No, this is an informational item only. A 30-day public comment period is currently underway. Following the comment period, this matter will be brought before the Board for final action in a future meeting.
What is the Division Director's recommendation?	N/A
Where can more information be obtained?	For technical information, please contact Judy Moran at (385) 499-0184. For legal information, please contact Elizabeth Burns at (385) 441-4789.

DSHW-2023-209755

Attachments:

DSHW-2022-000277 (Notice of Violation and Compliance Order No. 2108087)

DSHW-2023-000342 (Stipulation and Consent Order No.2207086)

DSHW-2023-000341 (Penalty Narrative for SCO No. 2207086)



State of Utah

SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of
Environmental Quality

Kimberly D. Shelley
Executive Director

DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL

Douglas J. Hansen
Director

April 8, 2022

Eric Jorgensen, Director
Environmental Health and Safety
Utah State University
8315 Old Main Hill
Logan, UT 84322-8315

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7019 2970 0000 5340 2708

RE: Notice of Violation No. 2108087
UTD000651653

Dear Mr. Jorgensen:

Enclosed is a **NOTICE OF VIOLATION AND ORDER FOR COMPLIANCE (NOV/OC)** Number 2108087, based on findings documented by the Division of Waste Management and Radiation Control during a compliance inspection on August 8, 2021.

You are hereby required to submit to the Director within 30 days of issuance of this Order, written verification that the violations documented in the NOV have been corrected. Please include a description of the corrective actions implemented to ensure these violations do not recur. Your response to this request will not constitute an administrative contest to the attached NOV.

You have 30 days from the date of this letter to contest the NOV/OC in the manner and within the time frame prescribed by R305-7-303, Utah Administrative Code.

If you have any questions, please call Judy Moran at (801) 536-0255.

Sincerely,

Douglas J. Hansen, Director
Division of Waste Management and Radiation Control

(Over)

DJH/JAM/wa

Enclosure: Notice of Violation No. 2108087

c: Jordan Mathis, Health Officer, Bear River Health Department
Grant Koford, EHS, Environmental Health Director, Bear River Health Department
Annette Maxwell, U.S. EPA, Region VIII, ENF-R
Lisa Berreau, Vice President, Research, USU (Email)
Mica McKinney, Vice President, Legal Affairs (Email)
Stevie Norcross, PhD, Assistant Director, Div. of Waste Management and Radiation Control, UDEQ
Connie Nakahara, Assistant Attorney General, Utah Attorney General's Office
Kimberly D. Shelley, Executive Director, Utah Department of Environmental Quality

---oo0oo---

In the Matter of:	:	NOTICE OF VIOLATION and
	:	ORDER for COMPLIANCE
Utah State University	:	No. 2108087
UTD000651653	:	

---oo0oo---

This **NOTICE OF VIOLATION AND ORDER FOR COMPLIANCE (NOV/OC)** is issued by the Director of the Division of Waste Management and Radiation Control (Director) pursuant to the Utah Solid and Hazardous Waste Act (the Act), Utah Code § 19-6-101, *et seq.*, and Utah Code § 19-6-701, *et seq.* The Director has authority to issue such NOTICES and ORDERS in accordance with Utah Code § 19-6-112.

FINDINGS

1. Utah State University (USU) is a non-profit public state higher-education institution.
2. USU is a Utah public university located at 8315 Old Main Hill, Logan, Utah in Cache County.
3. USU is a "person" as defined in Utah Code § 19-1-103(4) and is subject to all applicable provisions of the Act and the Utah Administrative Code (the "Rules" or "UAC").
4. USU operates a public university that generates listed and characteristic hazardous wastes as defined in the Act and the Rules from laboratories, a printing plant, a warehouse, a vehicle maintenance facility, and other plant operations facilities on the approximately 400-acre property.
5. On December 12, 2016, USU submitted a universal waste "Drum-Top Lamp Crusher Registration Application" (Application), UT-DTLC-001, (DSHW-2016-015129). Based on the information certified in the Application on February 8, 2017, the Division confirmed that USU's Application was in compliance with the application requirements of R315-273-13 UAC.
6. On May 2, 2018, USU submitted an EPA Form 8700-12 notification to the Division as a large quantity generator (LQG) consolidating very small quantity generator (VSQG) waste from Utah State University – Blanding; Utah State University – Eastern (Price); Utah State University – Space Dynamics Laboratory (Logan); Utah State University – Kaysville; Utah State University – Caine; and Utah State University – Vernal.
7. On April 15, 2021, USU revised its prior EPA Form 8700-12 notification, indicating that it would no longer consolidate VSQG waste.
8. On August 19, 2021, USU revised its EPA Form 8700-12 notification as an LQG consolidating VSQG waste from Utah State University – Blanding; Utah State University – Kaysville; Utah State University – Caine; USDA APHIS ADC Predator Research Project; and Utah State University Ecology Center. USU did not provide justification for the "under control" provision for USU consolidating waste from the USDA APHIS ADC Predator Research Project.

9. On August 11, 2021, pursuant to Utah Code § 19-6-109, authorized representatives of the Director (inspectors) conducted a compliance evaluation inspection at Utah State University (Logan).
10. On February 28, 2022, pursuant to Utah Code § 19-6-109, authorized representatives of the Director (inspectors) conducted a compliance evaluation inspection at Utah State University - Vernal (UTR000014282). Based on waste disposal records and employee interviews, it appears that USU - Vernal was a very small quantity hazardous waste generator in 2019; 2020; 2021; and January 2022 despite having submitted an EPA Form 8700-12 notification to the Division as a small quantity generator (SQG) on April 14, 2021.
11. On March 1, 2022, pursuant to Utah Code § 19-6-109, authorized representatives of the Director (inspectors) conducted a compliance evaluation inspection at Utah State University – Nephi Vet Diagnostic Lab (UT000015396). Based on waste disposal records and employee interviews, inspectors determined that USU – Nephi Vet Diagnostic Lab was a very small quantity hazardous waste generator in 2019; 2020; 2021; and January 2022 despite having submitted an EPA Form 8700-12 notification to the Division as a small quantity generator (SQG) on April 14, 2021.
12. R315-262-11 UAC requires a person who generates a solid waste, as defined in Section R315- 261-2 UAC, to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable regulations.
 - 12.1 On August 11, 2021, inspectors observed and documented a small unlabeled vial of white powder in a cardboard box in the hazardous waste satellite accumulation area (SAA) outside of the “Baker Lab” in the Biology Building. USU failed to determine if this solid waste was a hazardous waste.
 - 12.2 On August 11, 2021, inspectors observed and documented at least 100 small containers of waste laboratory chemicals in 5-gallon carboys, glass jugs, and other smaller containers in the hazardous waste central accumulation area (CAA) at the Research Agent Containment Center (RACC). USU was storing these waste chemicals picked up from laboratory SAAs at the RACC while USU Environmental Staff determined (i) whether the wastes are hazardous, (ii) what waste codes applied, (iii) whether the waste could be bulked, and (iv) which waste chemicals to combine together in lab-packs. USU failed to make hazardous waste determinations at the point of waste generation in the laboratory SAAs.
 - 12.3 On August 11, 2021, USU failed to determine if wipes used to apply and remove cleaning solvent containing toluene, isopropyl alcohol (IPA), xylene, and naphtha from the printing press at "Aggie Print," the campus printing plan, were hazardous wastes.
13. R315-262-15(a)(5) UAC requires a generator to mark or label each container of hazardous waste in a satellite accumulation area (SAA) with the following: (i) the words “Hazardous Waste” and (ii) an indication of the hazards of the contents.
 - 13.1 On August 11, 2021, inspectors observed and documented a small vial of white powder in a cardboard box in the hazardous waste SAA outside of the “Baker Lab” in the Biology Building. USU failed to mark or label the waste “Hazardous Waste” and failed to mark or label the container with an indication of the hazards of the contents.
 - 13.2 On August 11, 2021, inspectors observed and documented two containers of hazardous waste laboratory chemicals in the SAA in the “Freeman lab” in the Biology Building. USU failed to mark or label the waste laboratory chemical containers with an indication of the hazards of the contents.

- 13.3 On August 11, 2021, inspectors observed and documented seven containers of hazardous waste laboratory chemicals in the SAA in the “Berreau lab” in the Widsow Chemistry Building. USU failed to mark or label the waste laboratory chemical containers with an indication of the hazards of the contents.
14. R315-262-17(a)(1)(v) UAC requires an LQG to inspect central accumulation areas at least weekly. The Rule requires LQGs to identify leaking containers and deterioration of containers caused by corrosion or other factors.
- 14.1 On August 11, 2021, inspectors observed and documented 12 containers of hazardous laboratory chemical wastes in fume hoods in a room in the Widsow Chemistry Building across the hall from the “Berreau lab” where the wastes were generated. USU informed the inspectors that graduate students move full containers of hazardous waste from SAAs in the Berreau lab to this room. Additionally, USU stated that students and faculty from other labs on the floor use the storage room to store laboratory chemicals. USU failed to inspect the containers of hazardous waste stored in the Widsow Chemistry Building CAA weekly.
15. R315-262-17(a)(5)(i)(B) UAC requires an LQG that accumulates hazardous waste on site without a permit or interim status, mark or label each container of hazardous waste with the words “Hazardous Waste” and an indication of the hazards of the contents.
- 15.1 On August 11, 2021, inspectors observed and documented at least 100 small containers of waste laboratory chemicals in 5-gallon carboys, glass jugs, and other smaller containers in the receiving and staging area of the hazardous waste CAA at the RACC. USU failed to label a glass bottle of methanol waste and at least a dozen other containers of laboratory waste in the receiving and staging area with the words “Hazardous Waste.”
- 15.2 On August 11, 2021, inspectors observed twelve containers of hazardous laboratory chemical wastes from the Berreau lab in a CAA on the third floor of the Widsow Chemistry Building. USU failed to mark or label the twelve containers of hazardous laboratory wastes with an indication of the hazards of the contents.
16. R315-262-17(a)(5)(i)(C) UAC requires an LQG to mark their containers of hazardous waste with the date they began accumulating.
- 16.1 On August 11, 2021, inspectors observed and documented 12 containers of hazardous laboratory chemical wastes from the Berreau lab in a CAA on the third floor of the Widsow Chemistry Building. USU failed to mark the containers of hazardous waste with the date the waste began accumulating.
- 16.2 On August 11, 2021, inspectors observed and documented at least 100 small containers of waste laboratory chemicals in 5-gallon carboys, glass jugs, and other smaller containers in the receiving and staging area of the hazardous waste CAA at the RACC. Most of the containers in the RACC receiving and staging area were not marked with the accumulation start date. Inspectors observed and documented at least eight containers of waste isopropyl alcohol with hazardous waste labels in the RACC CAA on which USU failed to mark the date the hazardous waste began accumulating in the CAA. USU also failed to mark the accumulation start date on six containers of tannin assay hazardous waste in the RACC CAA.

17. R315-262-17(a)(7)(iv) UAC requires that an LQG maintain the following documents and records at the facility: The job title for each position at the facility related to hazardous waste management and the name of the employee filling each job; a written job description for each position that includes the requisite skill, education, or other qualifications, and duties of facility personnel assigned to each position; a written description of the type and amount of both introductory and continuing training that will be given to each person filling a listed position; and records that document that the training or job experience has been given to, and completed by, facility personnel.
- 17.1 During the inspection on August 11, 2021, inspectors documented that USU did not maintain a written description of the type and amount of both introductory and continuing training that will be given to each person filling a position at the facility related to hazardous waste management.
- 17.2 During the inspection on August 11, 2021, inspectors observed and documented that E. Jorgensen is listed as the tertiary emergency coordinator in the USU hazardous waste contingency plan. USU failed to maintain records documenting that training or job experience has been given to, and completed by, E. Jorgensen.
- 17.3 During the inspection on August 11, 2021, inspectors observed and documented that M. Williams fills a position related to hazardous waste management. USU failed to maintain records documenting that M. Williams has been given and completed 40-hour HAZWOPER training.
18. R315-262-17(f) UAC allows large quantity generators to accumulate on site hazardous waste received from very small quantity generators under control of the same person, as defined in R315-260-10 UAC, without a storage permit or interim status provided that they comply with the following conditions: (a) the large quantity generator notifies the Director at least thirty (30) days prior to receiving the first shipment from each VSQG using EPA Form 8700-12; (b) the LQG identifies on the form the name and site address for each VSQG as well as the name and business telephone number for a contact person for each VSQG; and (c) the LQG maintains records of each shipment for three years from the date the hazardous waste was received from each VSQG. The shipment records must identify the name, site address, and contact information for each VSQG and include a description of the hazardous waste received, the quantity of waste, and the date the waste was received.
- 18.1 During records review, inspectors observed and documented instances when USU accepted hazardous waste from offsite very small quantity (VSQG) hazardous waste generators that USU failed to identify on EPA Form 8700-12 and failed to notify the Director 30 days prior to receiving the first shipment from each VSQG that it intended to consolidate waste from:
- 18.1.1 On December 28, 2018, USU hazardous waste staff signed a bill of lading (BOL) accepting four containers of waste flammable formaldehyde solution from the USU Veterinary Diagnostic Lab in Spanish Fork, Utah who USU failed to identify on EPA Form 8700-12 as a VSQG from whom it was consolidating hazardous waste and failed to notify the Director 30 days prior to receiving the waste.
- 18.1.2 A “Waste Request Pickup Listing” printed on August 28, 2019, reflecting pickups from August 1, 2019 to August 20, 2019, shows that USU picked up 5 gallons of waste formaldehyde solution from the USU Veterinary Diagnostic Lab in Spanish Fork, Utah which were in storage at the RACC CAA at USU (Logan). USU failed to notify the Director 30 days prior to receiving the waste from the USU Veterinary Diagnostic Lab in Spanish Fork as a VSQG.

- 18.1.3 A "Waste Request Pickup Listing" dated January 7, 2019, and printed on February 25, 2022, documents that USU picked up formalin waste from the Nephi Veterinary Diagnostic Lab. USU Drum Inventory sheets show that the formalin waste was in storage at the RACC CAA at USU (Logan). The formalin waste was bulked and shipped out as hazardous waste on manifest #011967245FLE on February 19, 2019. USU failed to notify the Director 30 days prior to receiving the waste from the Nephi Veterinary Diagnostic Lab as a VSQG.
- 18.1.4 A "Waste Request Pickup Listing" printed on February 25, 2022, reflecting a pickup on June 16, 2020, documents that USU picked up 5 gallons of buffered formalin solution waste from the Nephi Veterinary Diagnostic Lab. A USU Drum Inventory sheet shows that the formalin waste was in storage at the RACC CAA at USU (Logan) on July 14, 2020, and the waste formalin was bulked and shipped out as hazardous waste on manifest #13285587FLE on July 28, 2020. USU failed to notify the Director 30 days prior to receiving the waste from the Nephi Veterinary Diagnostic Lab as a VSQG.
- 18.1.5 On August 11, 2021, inspectors observed and documented a plastic carboy bearing a hazardous waste label documenting that the waste solution (containing ddH₂O, acetonitrile, tetrahydrofuran, DMSO, DNPH, acetone, methanol, and isopropanol) was picked up from the Bingham Research Center Room 218. Pickup requests were dated April 26, 2021, and April 29, 2021. This waste was bulked with other hazardous wastes and shipped offsite as hazardous waste. The Bingham Research Center is located at USU Uintah Basin in Vernal, Utah.
- 18.1.6 On June 10, 2021, USU received one container of flammable liquid and one container of hydrochloric acid on a bill of lading (BOL) from USU-Eastern (Price), by Rule a small quantity generator not a VSQG. USU hazardous waste staff signed the bill of lading (BOL) as both the shipper and carrier, and these wastes were picked up and accepted into the RACC CAA.
- 18.1.7 A "Waste Request Pickup Listing" printed on June 1, 2021, documents that USU picked up ignitable hazardous waste from the Space Dynamics Lab, identified by USU as a small quantity generator not a VSQG.
19. R315-273-13(d)(1) UAC requires a small quantity handler of universal waste to contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages shall remain closed and shall lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.
- 19.1 During the inspection on August 11, 2021, inspectors observed and documented that USU stored universal waste lamps in the warehouse in one box that was not closed and three fiber barrels that were not closed.
20. R315-273-14(e) UAC requires that a small quantity handler of universal waste label or mark each lamp, as defined in R315-273-5 UAC, or a container or package in which such lamps are contained with one of the following phrases: "Universal Waste-Lamp(s)", or "Waste Lamp(s)", or "Used Lamp(s)".

- 20.1 During the inspection on August 11, 2021, inspectors observed and documented that USU failed to label or mark a box of universal waste lamps at the Facilities Warehouse with one of the following phrases: "Universal Waste-Lamp(s)", or "Waste Lamp(s)", or "Used Lamp(s)".
21. R315-273-13(d)(3)(ii) UAC requires that a small quantity handler of universal waste lamps operate the registered drum-top lamp crusher (DTC) to ensure the lamps are crushed in a controlled manner that prevents the release of mercury vapor or other contaminants in exceedance of the manufacturer's specifications.
- 21.1 During the inspection on August 11, 2021, inspectors observed and documented that USU failed to crush the lamps in a controlled manner that prevents release of mercury when the 8-foot lamps break. N. Moore, USU Warehouse Worker, told the inspectors that the 8-foot lamps always break while he is feeding them into the lamp crusher. USU failed to record reported malfunctions in the operating record as required.
22. R315-273-13(d)(3)(iv) UAC requires that a small quantity handler of universal waste lamps operate the DTC to ensure the DTC is installed, maintained, and operated in accordance with written procedures developed by the manufacturer of the equipment including specific instructions for the frequency of filter changes.
- 22.1 USU failed to maintain and operate the DTC in accordance with written manufacturer instructions as follows:
- 22.1.1 Due to health concerns related to mercury exposure, the manufacturer's owner manual states that the operator of the machine should crush no more than one full drum of lamps per 8-hour work shift. Nevertheless, the operator crushed more than one full drum per day 18 times between October 2018 through July 15, 2021.
- 22.1.1.a On June 24, 2019, December 3, 2019, March 9, 2020, March 23, 2020, April 3, 2020, April 24, 2020, May 18, 2020, May 22, 2020, June 18, 2020, June 19, 2020, July 2, 2020, July 28, 2020, August 14, 2020, and February 12, 2021, the operator crushed two drums of lamps; on May 6, 2020, May 8, 2020, June 12, 2020, and July 6, 2020 the USU operator crushed three drums of lamps.
- 22.1.2 Because of mercury exposure and contamination concerns, the manufacturer specifies that the first-stage filter should be replaced every half drum of crushed lamps. USU failed to demonstrate in its operating records that it replaced the first-stage filter after each drum was half full and after each drum was completely full.
- 22.1.2.a Between October 30, 2018 and November 16, 2018, the operator recorded crushing 818 bulbs before changing the 1st stage filter on November 16, 2018;
- 22.1.2.b USU crushed 978 more bulbs before the 1st stage filter was changed on January 11, 2019;
- 22.1.2.c USU crushed 1,996 bulbs before the 1st stage filter was changed on March 22, 2019;
- 22.1.2.d USU crushed 1,034 bulbs before a 1st stage filter change on April 12, 2019;
- 22.1.2.e USU crushed 1,203 bulbs before a 1st stage filter change on May 24, 2019;
- 22.1.2.f USU crushed 1,190 bulbs before a 1st stage filter change on June 24, 2019;
- 22.1.2.g USU crushed 940 bulbs before a 1st stage filter change on July 10, 2019;

- 22.1.2.h USU crushed 1,090 bulbs before a 1st stage filter change on August 2, 2019;
- 22.1.2.i USU crushed 1,179 bulbs before a 1st stage filter change on August 9, 2019;
- 22.1.2.j USU crushed 1,174 bulbs before a 1st stage filter change on September 5, 2019;
- 22.1.2.k USU crushed 958 bulbs before a 1st stage filter change on October 15, 2019;
- 22.1.2.l USU crushed 1,047 bulbs before a 1st stage filter change on October 18, 2019;
- 22.1.2.m USU crushed 921 bulbs before a 1st stage filter change on October 25, 2019;
- 22.1.2.n USU crushed 1,147 bulbs before a 1st stage filter change on November 11, 2019;
- 22.1.2.o USU crushed 964 bulbs before a 1st stage filter change on December 3, 2019;
- 22.1.2.p USU crushed 1,223 bulbs before a 1st stage filter change on January 2, 2020;
- 22.1.2.q USU crushed 1,227 bulbs before a 1st stage filter change on January 15, 2020;
- 22.1.2.r USU crushed 1,252 lamps before a 1st stage filter change on February 19, 2020;
- 22.1.2.s USU crushed 1,145 bulbs before a 1st stage filter change on March 5, 2020;
- 22.1.2.t USU crushed 1,308 bulbs before a 1st stage filter change on March 9, 2020;
- 22.1.2.u USU crushed 1,528 bulbs before a 1st stage filter change on March 23, 2020;
- 22.1.2.v USU crushed 1,160 bulbs before a 1st stage filter change on April 3, 2020;
- 22.1.2.w USU crushed 916 bulbs before a 1st stage filter change on April 13, 2020;
- 22.1.2.x USU crushed 1,251 bulbs before a 1st stage and HEPA filter change on April 17, 2020;
- 22.1.2.y USU crushed 1,300 bulbs before a 1st stage filter change on April 29, 2020
- 22.1.2.z Between May 6, 2020 and August 20, 2021, inspectors documented 53 times that USU crushed 1,200 bulbs between 1st stage filter changes; and
- 22.1.2.aa USU crushed 1,100 bulbs between 1st stage filter change on September 3, 2021.

22.1.3 The manufacturer requires the 2nd stage filter (the HEPA filter) replacement after every 10 full drums. USU’s operating record shows that it failed to change the HEPA filter until after processing (a) 20 drums of lamps on April 17, 2020; (b) 29 drums of lamps June 19, 2020; and (c) 21 drums of lamps on December 18, 2020.

23. R315-273-13(d)(3)(vii) UAC requires “[t]he area in which the drum top crusher is operated is well ventilated and monitored to ensure compliance with applicable Occupational Safety and Health Administration (OSHA) exposure levels for mercury.”

23.1 USU stated it conducted a single monitoring event over the three plus-year operational period. USU failed to provide to the Director any monitoring records for the three plus-year operational period to document compliance with applicable OSHA exposure levels for mercury.

24. R315-273-13(d)(3)(x) UAC requires that a small quantity handler of universal waste lamps keep an operating record consisting of the following: (A) the number and size of lamps crushed per calendar day, per calendar month, and per calendar year; (B) the schedule for the change out of filters; (C) date and time of filter change out; (D) date, type, and time of equipment maintenance; (E) any occurrence of equipment malfunction; and (F) procedures for preventing equipment malfunctions.

- 24.1 During records review, inspectors observed that USU failed to document in the DTC operating record: the size of the lamps crushed; the time of each filter changeout; the date, time, and type of maintenance (other than filter changes); occurrence of any malfunctions; and procedures for preventing malfunction.
25. R315-262-42(a) of the Utah Administrative Code requires an LQG who does not receive a copy of their manifest with the signature of the operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter to submit an Exception Report to the Director.
- 25.1 USU failed to file an Exception Report for manifest #015243262FLE which was accepted by the initial transporter on June 3, 2021, but not signed by the destination facility until July 20, 2021, in excess of 45 days.
26. R315-273-14(f) UAC requires that a small quantity handler of universal waste label or mark each container, tank, or transport vehicle or vessel in which universal waste antifreeze is contained with the words "Universal Waste-Antifreeze".
- 26.1 On August 11, 2021, USU failed to label or mark a container of used antifreeze in the Motorpool Shop with the words "universal waste-antifreeze."
27. R315-273-14(g) UAC requires that a small quantity handler of universal waste label or mark each aerosol can, or a container in which the aerosol cans are contained, with any of the following phrases: "Universal Waste-Aerosol Can(s)", "Waste Aerosol Can(s)", or "Used Aerosol Can(s)".
- 27.1 USU failed to label or mark universal waste aerosols and a drum containing universal waste aerosols in the RACC receiving/staging area "Universal Waste-Aerosol Can(s)", "Waste Aerosol Can(s)", or "Used Aerosol Can(s)".
28. R315-273-15(d) UAC requires that a small quantity handler of universal waste is able to demonstrate the length of time that universal waste has been accumulated from the date it became a waste or was received.
- 28.1 USU failed to demonstrate the length of time the universal waste antifreeze had been accumulating in the Motorpool Shop by documenting the accumulation start date.
- 28.2 USU failed to demonstrate the length of time the universal waste batteries had been accumulating at Chemistry Stores by documenting the accumulation start date.
29. R315-15-2.3(c)(1) UAC requires containers used to store used oil at generator facilities to be labeled or marked clearly with the words "Used Oil".
- 29.1 On August 11, 2021, inspectors observed containers of used oil in the RACC CAA and a container of used oil in the Motorpool Shop which USU failed to label or mark clearly with the words "Used Oil."

30. R315-262-11 UAC requires a person who generates a solid waste, as defined in Section R315- 261-2 UAC, to make an accurate determination as to whether that waste is a hazardous waste in order to ensure wastes are properly managed according to applicable regulations.

30.1 USU failed to determine if wipes used to apply and remove cleaning solvent containing toluene, isopropyl alcohol (IPA), xylene, and naphtha from the printing press at “Aggie Print,” the campus printing plant, were hazardous waste.

31. R315-261-4(a)(26) UAC excludes solvent-contaminated wipes from the definition of solid waste provided that the solvent-contaminated wipes are contained in non-leaking, closed containers and are labeled “Excluded Solvent-Contaminated Wipes” and that generators maintain at their site the following documentation: a description of the process the generator is using to ensure the solvent-contaminated wipes contain no free liquids at the point of being laundered or dry cleaned on-site or at the point of being transported off-site for laundering or dry cleaning; and the solvent-contaminated wipes are sent to a laundry or dry cleaner whose discharge, if any, is regulated under sections 301 and 402 or section 307 of the Clean Water Act.

31.1 USU failed to contain Aggie Print’s solvent-contaminated wipes in a closed container that was labeled "Excluded Solvent-Contaminated Wipes," failed to maintain a description of the process used to ensure the solvent-contaminated wipes contained no free liquids at the point of being transported off-site for laundering or dry cleaning, and failed to maintain documentation that the laundry where Aggie Print sends the solvent-contaminated wipes is regulated under sections 301 and 402 or section 307 of the Clean Water Act.

DETERMINATION OF VIOLATIONS

In accordance with Utah Code § 19-6-101, *et seq.*, and based on the foregoing FINDINGS, Utah State University has violated provisions of the Rules, the Act, and the Used Oil Act applicable to its facility. Specifically, Utah State University has violated the following:

1. R315-262-11 UAC for failing to make an accurate determination as to whether its solid waste is a hazardous waste. (*See Finding 12*).
2. R315-262-15(a)(5) UAC for failing to mark containers in a satellite accumulation area with the words “Hazardous Waste” and an indication of the hazards. (*See Finding 13*).
3. R315-262-17(a)(1)(v) UAC for failing to inspect containers at least weekly. (*See Finding 14*).
4. R315-262-17(a)(5)(i)(B) UAC for failing to mark containers of hazardous waste with the words “Hazardous Waste” and an indication of the hazards of the contents. (*See Finding 15*).
5. R315-262-17(a)(5)(i)(C) UAC for failing to mark containers of hazardous waste with the date they began accumulating. (*See finding 16*).

6. R315-262-17(a)(7)(iv) UAC for failing to maintain training records for employees with hazardous waste management duties. (*See Finding 17*).
7. R315-262-17(f) UAC for failing to notify the Director that they were consolidating certain VSQG's hazardous waste and for consolidating hazardous waste from small quantity generators without a permit. (*See Finding 18*).
8. R315-273-13(d)(1) UAC for failing to contain universal waste fluorescent lamps in closed containers or packages. (*See Finding 19*).
9. R315-273-14(e) UAC for failing to mark each container or package of universal waste fluorescent lamps with one of the following phrases: "Universal Waste-Lamp(s)", or "Waste Lamp(s)", or "Used Lamp(s)". (*See Finding 20*).
10. R315-273-13(d)(ii) UAC for failing to operate the drum-top lamp crusher in a controlled manner that prevents the release of mercury vapor or other contaminants in exceedance of the manufacturer's specifications. (*See Finding 21*).
11. R315-273-13(d)(3)(iv) UAC for failure to operate the registered drum-top lamp crusher to ensure the drum-top lamp crusher (DTC) is installed, maintained, and operated in accordance with written procedures developed by the manufacturer of the equipment including specific instructions for the frequency of filter changes. (*See Finding 22*).
12. R315-273-13(d)(3)(vii) UAC for failing to monitor the area in which the drum-top crusher was operated to ensure compliance with applicable Occupation Safety and Health Administration (OSHA) exposure levels for mercury. (*See Finding 23*).
13. R315-273-13(d)(3)(x) UAC for failing to maintain a complete operating record of the drum-top lamp crusher. (*See Finding 24*).

ORDER FOR COMPLIANCE

Utah State University is hereby ordered to:

1. To address Violation 7, immediately cease accepting hazardous waste generated offsite, except for any VSQGs for which USU has notified the Director at least 30 days prior to receiving the first shipment from each VSQG from which USU will consolidate wastes.
2. To address Violations 10 through 13, within 30 days of the date of issuance of this NOV/OC, submit a report documenting the decontamination steps as well as supporting documentation demonstrating successful remediation to the Director for approval in compliance with all applicable requirements of UAC R315-273-13.
3. To address Violations 4 and 5, immediately cease moving containers of hazardous waste that are not labeled with the words "hazardous waste" and an indication of the hazards of the contents to central accumulation areas. Mark the date that SAA hazardous wastes are brought to any central accumulation area legibly on the hazardous waste label or on the container if there is no label.

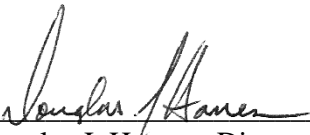
4. To address violations 1 through 3, 6, 8, and 9, within 30 days of the date of issuance of this NOV, USU shall provide the Director with the following information and analyses:
- a. Determination of the root cause of the violations;
 - b. the specific corrective actions taken;
 - c. the date(s) the violations were resolved; and
 - d. how these corrective actions will prevent violations from recurring.

OPPORTUNITY FOR HEARING

This NOTICE OF VIOLATION AND ORDER FOR COMPLIANCE is effective immediately and shall become final unless Utah State University administratively contests it. Failure to contest this NOTICE OF VIOLATION AND ORDER FOR COMPLIANCE in the manner and within the time period prescribed by Utah Admin. Code R305-7-303 constitutes a waiver of any right of administrative contest, reconsideration, review, or judicial appeal.

Utah Code Section 19-6-113(2) provides that violation of any order, plan, rule, or other requirement issued or adopted under Title 19, Ch. 6, Pt. 1 may be subject to a civil penalty of up to \$13,000 per day for each day of violation.

Dated this 8th day of April, 2022

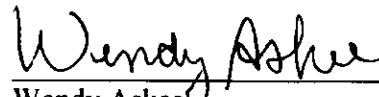
By:  _____
Douglas J. Hansen, Director
Division of Waste Management and Radiation Control

CERTIFICATE OF MAILING

I HEREBY CERTIFY that I mailed a true and correct copy of the foregoing [NOTICE OF VIOLATION or NOTICE OF VIOLATION AND COMPLIANCE ORDER] on the 8th day of April, 2022 by US Certified Mail, Return receipt Requested, to:

Eric Jorgensen, Director
Environmental Health and Safety
Utah State University
8315 Old Main Hill
Logan, UT 84322-8315

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7019 2970 0000 5340 2708



Wendy Askee

---oo0oo---

In the Matter of:	:	
	:	
Utah State University	:	STIPULATION AND CONSENT ORDER
Notice of Violation and	:	No. 2207086
Compliance Order No. 2108087	:	
UTD000651653	:	

---oo0oo---

This **STIPULATION AND CONSENT ORDER** (CONSENT ORDER) is issued by the Director of the Division Waste Management and Radiation Control (Director) pursuant to the Utah Solid and Hazardous Waste Act (the Act), Utah Code § 19-6-101, *et seq.*, and Utah Administrative Code (UAC) R315 (the Rules).

JURISDICTION

1. The Director has jurisdiction over the subject matter pursuant to Utah Code §§ 19-6-107 and 19-6-112 and jurisdiction over Utah State University (USU). USU consents to and will not challenge issuance of this CONSENT ORDER or the Director’s jurisdiction to enter and enforce this CONSENT ORDER. The Director and USU are parties to this CONSENT ORDER.
2. The Waste Management and Radiation Control Board has authority to review and approve or disapprove this CONSENT ORDER pursuant to Utah Code § 19-6-104(1)(e).

FINDINGS

3. USU is a “person” as defined in Utah Code § 19-1-103(4) and is subject to all applicable provisions of the Utah Administrative Code (the Rules or UAC) and the Act.
4. USU operates a public university in Logan, Utah, that generates listed and characteristic hazardous wastes as defined in the Act and the Rules from laboratories, a printing plant, a warehouse, a vehicle maintenance facility, and other plant operations facilities on the approximately 400-acre property.
5. USU also generates hazardous waste at Utah State University – Blanding; Utah State University – Eastern in Price, Utah; Utah State University – Space Dynamic Laboratory in Logan, Utah; Utah State University – Kaysville; Utah State University – Caine; Utah State University – Vernal; and Utah State University – Nephi Vet Diagnostic Lab.
6. On December 12, 2016, USU submitted a universal waste “Drum-Top Lamp Crusher Registration Application” (Application), UT-DTLC-001, (DSHW-2016-015129). Based on the information certified in the Application on February 8, 2017, the Division of Waste Management and Radiation Control (Division) confirmed that USU’s Application was in compliance with the application requirements of UAC R315-273-13.

7. On August 11, 2021, authorized representatives (inspectors) of the Director conducted a hazardous waste compliance evaluation inspection at the Utah State University in Logan, Utah.
8. On February 28, 2022, inspectors also conducted a compliance evaluation inspection at Utah State University – Vernal (UTR000014282).
9. On March 1, 2022, inspectors conducted a compliance evaluation inspection at Utah State University – Nephi Vet Diagnostic Lab (UT000015396).
10. On December 16, 2021, the Director issued a Notice of Immediate Action Required, suspending the Division’s February 8, 2017, determination that USU was in compliance with the application requirements of UAC R315-273-13 for its “Bulb Eater, Model 55-VSR-U” or “drum top lamp crusher” and suspended authorization to operate the drum top lamp crusher.
11. On January 14, 2022, USU submitted a response to the Notice of Immediate Action Required stating, in part, that “no further bulbs will be crushed” and proposing to “decommission, decontaminate and discard the Drum Top Fluorescent Light Tube Crusher and area surrounding the crusher.”
12. Based on findings documented during the inspections and records review, on April 8, 2022, the Director issued Notice of Violation and Compliance Order No. 2108087 (NOV/CO) (DSHW-2022-000277) to USU alleging violations of the Rules.
13. On May 6, 2022, USU submitted a response to the NOV/CO No. 2108087 (DSHW-2022-010482), stating, in part:
 - 13.1. “All USU fluorescent light tube crushing activities (#UT-DTLC-001) were discontinued on September 3, 2021.”
 - 13.2. “Fluorescent light tube crusher decommission[ing] and decontamination [] was completed on March 8, 2022.”
14. After consideration of facts provided in USU’s May 6, 2022, response to the NOV/CO No. 2108087 (DSHW-2022-010482), the Director decided not to pursue a penalty for Violations 3 and 5.
15. In accordance with the Civil Penalty Policy, Utah Admin. Code R315-102, which considers such factors as the gravity of the violations, the extent of deviation from the Rules, the potential for harm to human health and the environment, good faith efforts to comply, and other factors, the Director calculated and proposed a penalty based on the violations alleged in NOV/CO No. 2108087.

STIPULATION AND CONSENT ORDER

16. This CONSENT ORDER has been negotiated in good faith and the parties now wish to fully resolve NOV/CO No. 2108087 without further administrative or judicial proceedings.

17. In full settlement of the violations alleged in NOV/CO No. 2108087, the Director calculated a total penalty of \$62,599.00 but has decided to assess a total penalty of **\$28,409.00**.
 - 17.1. The Director has decided not to pursue penalties for Violations 3 and 5. This brought the total penalty calculated to \$62,209.00.
 - 17.2. The total penalty calculated for violations associated with the operation of the drum-top crusher (Violations 10, 11, 12, and 13) is \$46,800.00. The Director has decided to assess a penalty of \$13,000.00 for all four drum-top crusher violations (Violations 10, 11, 12, and 13) and waive the remaining \$33,800.00. This brought the total penalty calculated to **\$28,409.00**.
 - 17.3. USU shall pay a monetary penalty of **\$2,840.90**. Payment shall be made within 30 days of the effective date of this CONSENT ORDER. Payment shall be made to the State of Utah, Department of Environmental Quality, c/o Douglas J. Hansen, Director, Division of Waste Management and Radiation Control, P.O. Box 144880, Salt Lake City, Utah 84114-4880.
 - 17.4. The amount of **\$25,568.10** may be credited toward the \$28,409.00 stipulated penalty if, within two years of the effective date of this CONSENT ORDER, USU completes a Supplemental Environmental Project (SEP) related to the installation of solar panels on an existing parking garage at Utah State University. This SEP is expected to increase green electrical generation capacity by 40,460 kilowatt hours per year, which equates to approximately 53 pounds per year reduction in PM₁₀ indirect emissions associated with energy use. Fifty cents will be applied toward the credit amount for every SEP dollar spent by USU.
 - 17.5. To document appropriate penalty credit of the SEP, within 30 days of completing this SEP, USU shall provide a breakdown of its costs to implement the SEP to the Director, demonstrating that it equals or exceeds **\$51,136.20**. If USU spends less than **\$51,136.20** in performing the SEP, fifty cents of each dollar spent will be applied toward the \$25,568.10 credit. In the case of an outstanding balance, USU shall make a cash payment to the Director to cover the difference between USU's costs and the \$25,568.10 credit.

EFFECT OF CONSENT ORDER

18. For the purpose of this **CONSENT ORDER**, the parties agree to and stipulate to the above stated facts. The obligations in the CONSENT ORDER apply to and are binding upon the Division of Waste Management and Radiation Control and upon USU and any of USU's successors, assigns, or other entities or persons otherwise bound by law.
19. The stipulations contained herein are for the purposes of settlement and shall not be considered admissions by any party and shall not be used by any person related or unrelated to this CONSENT ORDER for purposes other than determining the basis of this CONSENT ORDER. Nothing contained herein shall be deemed to constitute a waiver by the State of Utah of its right to initiate enforcement action, including civil penalties, against USU in the event of future non-compliance with this CONSENT ORDER, with the Act, or with the Rules; nor shall the State of Utah be precluded in any way from taking appropriate action should such a situation arise again at the USU main campus in Logan or any satellite locations. However, entry into this

CONSENT ORDER shall relieve USU of all liability for violations which did arise or could have arisen with respect to the allegations contained in NOV/CO No. 2108087.

EFFECTIVE DATE

20. This CONSENT ORDER shall become effective upon the date of execution by the Director.

PUBLIC PARTICIPATION

21. This CONSENT ORDER shall be subject to public notice and comment for a period of at least 30 days (“Comment Period”) in accordance with Utah Admin. Code R315-124-34. The Director reserves the right to withdraw or withhold his consent if any comment received during the Comment Period discloses facts or considerations indicating this CONSENT ORDER is inappropriate, improper, or inadequate.

22. The Waste Management and Radiation Control Board has authority to review and approve or disapprove this CONSENT ORDER pursuant to Utah Code Section 19-6-104(1)(e).

SIGNATORY

23. The undersigned representative of Utah State University certifies the person is authorized to enter into this CONSENT ORDER and to execute and legally bind Utah State University.

Pursuant to the Utah Solid and Hazardous Waste Act (the Act), Utah Code § 19-6-101, *et seq.*, and Utah Administrative Code R315, the parties hereto mutually agree and consent to the STIPULATION AND CONSENT ORDER as evidenced below:

UTAH STATE UNIVERSITY

STATE OF UTAH
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL

David T. Cowley, Vice President for Finance
and Administrative Services

Douglas J. Hansen, Director

Date: _____

Date: _____

**NARATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 1

Violation Description: **Failure to make an accurate determination as to whether its solid waste is a hazardous waste.**

1. Gravity Based Penalty: **\$2,600.00**
 - (a) Potential for Harm: **Moderate:** Failure to make an accurate hazardous waste determination could lead to hazardous waste being improperly handled and stored, posing a risk of exposure to workers and the environment. The potential for harm was mitigated by the fact that the wastes were not unknown to the central accumulation area personnel because Safety Data Sheets (SDSs), chemical constituents, or process information was provided to the EH&S staff operating the Research Agents Containment Center (RACC) using USU's waste pickup request system.

Proper characterization of waste is a foundation of the hazardous waste regulation program.
 - (b) Extent of Deviation – **Moderate:** Inspectors observed up to 100 instances in the Research Agents Containment Center (RACC) where USU failed to make hazardous waste determinations. Potentially hazardous wastes were moved from points of generation to a central accumulation area without first having determined if the wastes were hazardous. However, the contents of the containers and the associated chemical hazards were known to USU staff operating the RACC but were not properly labeled for other university students and staff.
 - (c) Multiple/Multi-day – N/A
2. Adjustment Factors (if applicable)
 - (a) Good faith- N/A
 - (b) Willfulness/Negligence- N/A
 - (c) History of Compliance or Noncompliance- The previous inspection in 2017 resulted in no compliance findings.
 - (d) Ability to pay- N/A
 - (e) Other Unique Factors – N/A
3. Economic Benefit- Economic benefit was evaluated and found to be negligible. USU already provides training and hazardous waste labels to researchers and students generating hazardous waste in laboratories.
4. Recalculation of Penalty based on New Information -

TOTAL: \$2,600.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 2

Violation Description: **Failure to mark containers in a satellite accumulation area with the words “Hazardous Waste” and an indication of the hazards.**

1. Gravity Based Penalty: **\$2,600.00**
 - (a) Potential for Harm - **Moderate**: Failure to label hazardous waste containers with the words “Hazardous Waste” and an indication of the hazards could lead to mismanagement, improper handling of the waste, and worker exposure to dangerous chemical waste, risking human health and the environment.

Properly identifying which wastes are hazardous are foundational to implementing the hazardous waste program.
 - (b) Extent of Deviation - **Moderate**: Inspectors observed 10 instances where USU failed to mark containers in satellite accumulation areas with the words “Hazardous Waste” and an indication of the hazards.
 - (c) Multiple/Multi-day – N/A
2. Adjustment Factors (if applicable)
 - (a) Good faith – N/A
 - (b) Willfulness/Negligence - N/A
 - (c) History of Compliance or Noncompliance – The previous inspection in 2017 resulted in no compliance findings.
 - (d) Ability to pay - N/A
 - (e) Other Unique Factors - N/A
3. Economic Benefit – Economic benefit was evaluated and found to be negligible. USU already provides training and hazardous waste labels to researchers and students generating hazardous waste in laboratories. Labels are insignificant because they could use a marker to mark the containers.
4. Recalculation of Penalty based on New Information -

TOTAL: \$2,600.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 3

Violation description: **Failure to inspect containers at least weekly.**

1. Gravity Based Penalty: **\$260.00**
 - (a) Potential for Harm – **Minor**: The accumulation area was not authorized by the EHS Department or the Principal Investigator responsible for the research. Graduate students began using a hood in another lab room because they ran out of space in their hood a few weeks before the inspection. The EHS Department shut it down as soon as they became aware of it.
 - (b) Extent of Deviation – **Minor**: USU graduate students created an unauthorized central accumulation area (CAA) because of lack of space in the satellite accumulation area in their research lab. Documented inspections were not performed because they did not understand that inspections were required. The unauthorized CAA was visited at least weekly, and probably more often, by the students. The hazardous wastes in the unauthorized CAA were in closed containers in lab fume hoods.
 - (c) Multiple/Multi-day – N/A
2. Adjustment Factors (if applicable)
 - (a) Good faith - N/A
 - (b) Willfulness/Negligence - N/A
 - (c) History of Compliance or Noncompliance - N/A
 - (d) Ability to pay - N/A
 - (e) Other Unique Factors - N/A
3. Economic Benefit – Economic benefit was evaluated and found to be negligible. The graduate students could have conducted inspections had they known their actions caused inspections to be required.
4. Recalculation of Penalty based on New Information -

TOTAL: \$260.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 4

Violation Description: **Failure to mark containers of hazardous waste in a central accumulation area with the words "Hazardous Waste" and an indication of the hazards of the contents.**

1. Gravity Based Penalty: **\$2,600.00**

- (a) Potential for Harm - **Moderate:** Failure to label hazardous waste containers with the words "Hazardous Waste" and an indication of the hazards could lead to mismanagement, improper handling of the waste, and worker exposure to dangerous chemical waste, risking human health and the environment. The potential for harm was mitigated by the fact that the wastes were not unknown to the central accumulation area personnel because Safety Data Sheets (SDSs), chemical constituents, or process information was provided to the EHS staff operating the Research Agents Containment Center (RACC) using USU's waste pickup request system.

Hazardous waste being identified as such is critical to implementation of the hazardous waste program.

- (b) Extent of Deviation – **Moderate:** Inspectors observed at least 12 instances where USU graduate students failed to mark containers in a laboratory hood being used as an unauthorized central accumulation area with the words "Hazardous Waste" and an indication of the hazards.

More than 50% of the containers in the authorized central accumulation area were marked or labeled appropriately. SDSs, chemical constituents, or process information was provided to the EHS staff operating the Research Agents Containment Center (RACC), USU's central accumulation area using USU's waste pickup request system so the wastes were not unknown to the RACC personnel.

- (c) Multiple/Multi-day - NA

2. Adjustment Factors (if applicable)

- (a) Good faith – N/A

- (b) Willfulness/Negligence - N/A

- (c) History of Compliance or Noncompliance - N/A

- (d) Ability to pay - N/A

- (e) Other Unique Factors - N/A

3. Economic Benefit - Economic benefit was evaluated and found to be negligible. USU had labels and staff to apply labels.

4. Recalculation of Penalty based on New Information -

TOTAL: \$2,600.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 5

Violation Description: **Failure to mark containers of hazardous waste with the date they began accumulating.**

1. Gravity Based Penalty: **\$260.00**
 - (b) Potential for Harm – **Minor**: Because the accumulation area was not authorized, students began using a hood in another lab room because they ran out of space in their hood. The EHS Department shut it down as soon as they became aware of it. The students knew when the waste began accumulating in the lab hood, so USU EHS staff were able to ensure that hazardous waste was not stored >90 days. The hazardous wastes in the unauthorized CAA were in closed containers in lab fume hoods.
 - (b) Extent of Deviation – **Minor**: USU graduate students created an unauthorized central accumulation area (CAA) because of lack of space in the satellite accumulation area in a laboratory fume hood in their research lab.
 - (c) Multiple/Multi-day – N/A
2. Adjustment Factors (if applicable)
 - (a) Good faith - Decrease 50% - Utah State University immediately after the inspection, modified their training curriculum to emphasize correct hazardous waste handling procedures and updated their hazardous waste collection site inspection procedures.
 - (b) Willfulness/Negligence - N/A
 - (c) History of Compliance or Noncompliance - N/A
 - (d) Ability to pay - N/A
 - (e) Other Unique Factors - N/A
3. Economic Benefit - Economic benefit was evaluated and found to be negligible. USU graduate students could have marked containers with the accumulation start date for no extra cost.
4. Recalculation of Penalty based on New Information -

TOTAL: \$130.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 6

Violation Description: **Failure to maintain training records for employees with hazardous waste management duties.**

1. Gravity Based Penalty: **\$2,600.00**
 - (a) Potential for Harm - **Moderate:** Not maintaining training records with a description of the required training for each position could cause mismanagement of waste by untrained individuals. USU cannot ensure that untrained individuals are not managing hazardous waste. By not having a central repository for training records, instead expecting each individual employee to maintain their own training records, USU could not ensure that each employee was trained appropriately and could not demonstrate to inspectors that employees with hazardous waste and emergency response duties were trained.

Not having the required records available for review impacts the Division's ability to inspect and determine compliance.
 - (b) Extent of Deviation – **Moderate:** USU could not demonstrate that key personnel, including the Environmental, Health & Safety Director and the Hazardous Waste Technician, had been trained for their roles.
 - (c) Multiple/Multi-day – N/A
2. Adjustment Factors (if applicable)
 - (a) Good faith – N/A
 - (b) Willfulness/Negligence - N/A
 - (c) History of Compliance or Noncompliance - N/A
 - (d) Ability to pay - N/A
 - (e) Other Unique Factors - N/A
3. Economic Benefit - Economic benefit was evaluated and found to be negligible. There was no additional cost to maintaining training records in the EHS office since USU already had administrative staff assigned to the EHS office.
4. Recalculation of Penalty based on New Information -

TOTAL: \$2,600.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 7

Violation Description: **Failure to notify the Director that they were consolidating certain VSQG's hazardous waste and for consolidating hazardous waste from small quantity generators without a permit.**

1. Gravity Based Penalty: **\$500.00**
 - (a) Potential for Harm - **Minor:** Failing to follow the notification requirements for hazardous waste consolidation has the potential to harm the regulatory purpose of this rule and by impeding the Division's ability to properly oversee to determine compliance. However, in this case the potential for harm was mitigated by USU's recordkeeping that identified the source of all the consolidated waste.
 - (b) Extent of Deviation – **Moderate:** USU consolidated waste from two facilities it had not identified it was picking waste up from and picked up waste from three facilities identified as small quantity generators (SQGs). All of the facilities identified by USU as SQGs were, based on their monthly waste generation, actually very small quantity generator (VSQGs).
 - (c) Multiple/Multi-day – N/A
2. Adjustment Factors (if applicable)
 - (a) Good faith – N/A
 - (b) Willfulness/Negligence - N/A
 - (c) History of Compliance or Noncompliance - N/A
 - (d) Ability to pay - N/A
 - (e) Other Unique Factors - N/A
3. Economic Benefit – Economic benefit was evaluated and found to be negligible. Notification costs nothing, and all the facilities were in fact VSQGs whose waste could be consolidated at USU's main campus.
4. Recalculation of Penalty based on New Information -

TOTAL: \$500.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 8

Violation Description: **Failure to contain universal waste fluorescent lamps in closed containers or packages.**

1. Gravity Based Penalty: **\$4,160.00**
 - (a) Potential for Harm - **Moderate**: Universal waste lamps containing mercury were not protected from breakage, thereby risking employee exposure to broken glass and mercury vapors, as well as risking release of mercury to the environment.
 - (b) Extent of Deviation – **Major**: Four out of four containers in which universal waste lamps were being accumulated were not closed. Some of the lamps were longer than the containers in which they were stored, showing a lack of regard for the requirement to accumulate universal waste lamps in closed containers or packages.
 - (c) Multiple/Multi-day – N/A
2. Adjustment Factors (if applicable)
 - (a) Good faith – N/A
 - (b) Willfulness/Negligence – N/A
 - (c) History of Compliance or Noncompliance – N/A
 - (d) Ability to pay – N/A
 - (e) Other Unique Factors – N/A
3. Economic Benefit – A larger UN-rated fiber drum that will hold T8s and T12s was **\$89** from NewPig.
4. Recalculation of Penalty based on New Information -

TOTAL: \$ 4,249.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 9

Violation Description: **Failure to mark each container or package of universal waste fluorescent lamps with one of the following phrases: "Universal Waste-Lamp(s)", or "Waste Lamp(s)", or "Used Lamp(s)".**

1. Gravity Based Penalty: **\$260.00**
 - (a) Potential for Harm - **Minor:** Universal waste lamps that are not identified could be mishandled, thus exposing people to mercury or releasing mercury to the environment. In this case however, the lamps were awaiting processing in the drum-top lamp crusher so there was not much likelihood they would be mishandled. However, as drum-top lamp crusher (DTC) registrants at the time, USU should be held to a standard of full compliance. Failure to identify universal waste as such interferes with implementation of the hazardous and universal waste program.
 - (b) Extent of Deviation - **Moderate:** USU failed to identify the contents of four out of six containers as universal waste lamps and the USU could not demonstrate when the lamps began accumulating.
 - (c) Multiple/Multi-day - N/A
2. Adjustment Factors (if applicable)
 - (a) Good faith – N/A
 - (b) Willfulness/Negligence – N/A
 - (c) History of Compliance or Noncompliance – N/A
 - (d) Ability to pay – N/A
 - (e) Other Unique Factors – N/A
3. Economic Benefit – Economic benefit was evaluated and found to be negligible as there is no cost to use a marker to write the correct words on a container.
4. Recalculation of Penalty based on New Information -

TOTAL: \$260.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 10

Violation description: **Failure to operate the drum-top lamp crusher in a controlled manner that prevents the release of mercury vapor or other contaminants in exceedance of the manufacturer's specifications.**

1. Gravity Based Penalty: **\$13,000.00**

- (a) Potential for Harm - **Major:** Mercury poses a serious occupational exposure risk. By not operating the DTC in a controlled manner, USU exposed workers operating the DTC and workers in the warehouse building to mercury. Mercury could also have entered the environment through an open warehouse door or been tracked out into the environment by workers walking through the warehouse.

USU's failure to operate the DTC in accordance with the terms of its approved registration undermines the effectiveness of the hazardous waste program.

- (b) Extent of Deviation – **Major:** The operator stated that 8-foot lamps broke off in the feed tube every time he fed them into drum-top crusher. Because these malfunctions were not recorded in the operating log as required it is not possible to determine how often this occurred, but since USU began crushing lamps in 2017 they crushed tens of thousands of lamps, many of which were likely 8-foot lamps.

- (c) Multiple/Multi-day – N/A

2. Adjustment Factors (if applicable)

- (a) Good faith - N/A

- (b) Willfulness/Negligence - N/A

- (c) History of Compliance or Noncompliance - N/A

- (d) Ability to pay - N/A

- (e) Other Unique Factors - N/A

3. Economic Benefit –Economic benefit was not applied because the statutory maximum was already met.

4. Recalculation of Penalty based on New Information -

TOTAL: \$13,000.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 11

Violation Description: **Failure to operate the registered drum-top lamp crusher to ensure the drum-top lamp crusher (DTC) is installed, maintained, and operated in accordance with written procedures developed by the manufacturer of the equipment including specific instructions for the frequency of filter changes.**

1. Gravity Based Penalty: **\$13,000.00**
 - (a) Potential for Harm - **Major:** Mercury poses a serious occupational exposure risk. By failing to operate and maintain the DTC according to written manufacturer instructions, USU exposed workers operating the DTC and workers in the warehouse building to mercury. USU's failure to operate the DTC in accordance with the terms of its approved registration undermines the effectiveness of the hazardous waste program.
 - (b) Extent of Deviation – **Major:** The DTC was not maintained or operated in accordance with written procedures developed by the manufacturer 101 separate times. The operator crushed more than one full drum of lamps per day 18 times. USU failed to replace the first-stage filter after every half drum of crushed lamps 80 times. USU failed to replace the HEPA filter after every 10 full drums three times.
 - (b) Multiple Events/Multi-day – Evaluated, but not included.
2. Adjustment Factors (if applicable)
 - (a) Good faith – N/A
 - (b) Willfulness/Negligence – N/A
 - (c) History of Compliance or Noncompliance – N/A
 - (d) Ability to pay – N/A
 - (e) Other Unique Factors – N/A
3. Economic Benefit - \$78 per filter x 80 times the filter should have been changed but was not changed. Taking into account the first change out, the economic benefit is \$78 per filter x 79 occurrences equals **\$6,162.00**. Economic benefit was not applied because the statutory maximum was already met.
4. Recalculation of Penalty based on New Information -

TOTAL: \$13,000.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 12

Violation Description: **Failure to monitor the area in which the drum-top crusher was operated to ensure compliance with applicable Occupation Safety and Health Administration (OSHA) exposure levels for mercury.**

1. Gravity Based Penalty: **\$13,000.00**
 - (a) Potential for Harm - **Major:** Mercury is a neurotoxin. Mercury vapors are invisible and odorless. Breathing mercury vapors can harm the nervous system, lungs, and kidneys. Mercury vapors can pass easily from the lungs to the bloodstream. Elemental mercury is most dangerous when inhaled and must be handled with care. The legal airborne permissible exposure limit (PEL) is 0.1 mg/m³ averaged over an 8-hour work shift. The recommended airborne exposure limit (REL) is 0.05 mg/m³ (as Mercury vapor) averaged over a 10-hour work shift and 0.1 mg/m³ (as Mercury), not to be exceeded at any time. Mercury vapors can remain airborne for up to a year. Failure to monitor the workspace while operating the DTC poses a serious risk to human health. Failure to operate in compliance with terms and conditions of the DTC registration undermines the effectiveness of the hazardous waste program.
 - (b) Extent of Deviation – **Major:** USU stated it conducted a single monitoring event over the three plus-year operational period. USU failed to provide to the Director any monitoring records for the three plus-year operational period to document compliance with applicable OSHA exposure levels for mercury. According to the operating record provided, USU operated the DTC 149 days without monitoring the air to document compliance with applicable OSHA exposure levels for mercury.
 - (c) Multiple/Multi-day – Evaluated, but not included.
2. Adjustment Factors (if applicable)
 - (a) Good faith - N/A
 - (b) Willfulness/Negligence - N/A
 - (c) History of Compliance or Noncompliance - N/A
 - (d) Ability to pay - N/A
 - (e) Other Unique Factors - N/A
3. Economic Benefit –The economic benefit was negligible since USU had monitoring equipment available for use.
4. Recalculation of Penalty based on New Information -

TOTAL: \$13,000.00

**NARRATIVE EXPLANATION TO SUPPORT
PENALTY AMOUNT FOR PROPOSED STIPULATION AND CONSENT ORDER**

NOV # 2108087

Violation Number: 13

Violation Description: **Failure to maintain a complete operating record of the drum-top lamp crusher.**

1. Gravity Based Penalty: **\$7,800.00**
 - (a) Potential for Harm - **Major:** Failure to maintain an operating record of a registered DTC interferes with the Division's ability to inspect and determine compliance with the registration requirements. For example, the USU employee operating the DTC stated that 8-foot lamps broke every time he fed them into the DTC, but he did not record these malfunctions in the operating record, so it was impossible to determine how many times the equipment was operated in a manner that allowed mercury to be released into the workspace and the environment.
 - (b) Extent of Deviation – **Moderate:** USU failed to document in the DTC operating record: the size of the lamps crushed; the time of each filter changeout; the date, time, and type of maintenance (other than filter changes); occurrence of any malfunctions; and procedures for preventing malfunction. USU did maintain an operating record, but as described, it did not contain many of the required elements.
 - (c) Multiple/Multi-day - N/A
2. Adjustment Factors (if applicable)
 - (a) Good faith - N/A
 - (b) Willfulness/Negligence - N/A
 - (c) History of Compliance or Noncompliance - N/A
 - (d) Ability to pay - N/A
 - (e) Other Unique Factors - N/A
3. Economic Benefit - Economic benefit was evaluated and found to be negligible as there would have been no additional cost to maintain a complete operating record.
4. Recalculation of Penalty based on New Information -

TOTAL: \$7,800.00