State of Utah

SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of
Environmental Quality

Tim Davis
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 9, 2025, 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 individuals 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 11, 2025, Board Meeting ..... Tab 1 (**Board Action Item**).

V. Petroleum Storage Tanks Update ..... Tab 2

VI. Administrative Rules ..... Tab 3

A. Approval from the Board to proceed with formal rulemaking and public comment on proposed changes to Utah Administrative Code (UAC) R313-24, to incorporate federal regulatory changes made by the Nuclear Regulatory Commission (NRC) to the federal radioactive materials regulations in 2023 (88 FR 57873). The changes are necessary to maintain regulatory compatibility with the NRC as required because Utah is an Agreement State with the NRC (**Board Action Item**).

VII. Low-Level Radioactive Waste ..... Tab 4

A. Energy*Solutions* request for a one-time site specific treatment variance from the Utah Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to dispose, in Energy*Solutions*' Mixed Waste Landfill Cell, waste containing D009 and/or U151 High Mercury-Organic Subcategory and High Mercury-Inorganic Subcategory hazardous waste codes that have been treated using stabilization/amalgamation technologies (**Board Action Item**).

(Over)

VIII. Director's Report.

IX. Executive Director's Report.

X. Other Business.

A. Miscellaneous Information Items.
B. Scheduling of next Board Meeting (November 13, 2025).

XI. Adjourn.

In compliance with the Americans with Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact LeAnn Johnson, Office of Human Resources at 385-226-4881, Telecommunications Relay Service 711, or by email at leannjohnson@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 11, 2025
1:30 p.m.

Board Members Participating at Anchor Location: Brett Mickelson (Chair), Dennis Riding (Vice-Chair), Tim Davis, Mark Franc, Dr. Steve McIff, Neil Schwendiman, Shane Whitney

Board Members Participating Virtually: Danielle Endres, Scott Wardle

Board Members Excused/Absent: Dr. Richard Codell, Jeremy Hawk, Vern Rogers

UDEQ Staff Members Participating at Anchor Location: Doug Hansen, Brent Everett, Morgan Atkinson, Brenden Catt, Chris Howell, Tyler Hegburg, Jalynn Knudsen, Arlene Lovato, Stevie Norcross, Deborah Ng, Mike Pecorelli, Kelly Shaw, Elisa Smith, Brian Speer, David Wilson

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 and an unedited audio of this meeting can be accessed at: **https://www.utah.gov/pmn/files/1323171.mp3**

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. Declarations of Conflict of Interest – None.

IV. Introduction of new Board member Neil Schwendiman.

Chairman Mickelson welcomed Neil Schwendiman and remarked that the Board looks forward to his participation and expertise on the Board.

Mr. Schwendiman informed the Board that he grew up on a farm in southeastern Washington State and holds a bachelor's degree in Crop Science. He began his career on a large farm, primarily working with potatoes, before transitioning into the waste business. His career in the waste business includes working in Washington County in 2004, then moving to the public sector in 2007, and transitioning to North Point Solid Waste in northern Utah County in October of 2020, where he has been employed for almost five years.

Mr. Schwendiman mentioned that he worked with Nathan Rich, who recently retired from the Board, on various waste business matters, including working with him in the Northern Utah Environmental Resource Agency, which comprises the four districts that own Bayview Landfill. Mr. Schwendiman stated that he had discussed with Mr. Jaren Scott, Executive Director at Trans-Jordan Cities, the possibility of one of them replacing Mr. Rich on the Board. Mr. Schwendiman recently had business matters involving UDEQ, where he worked with the UDEQ representatives accordingly to replace Mr. Rich on the Board.

V. Approval of the meeting minutes for the July 10, 2025, Board meeting (Board Action Item).

It was moved by Dennis Riding and seconded by Shane Whitney and UNANIMOUSLY CARRIED to approve the July 10, 2025, Board meeting minutes.

VI. Petroleum Storage Tanks Update.

Brent Everett, Director of the Division of Environmental Response and Remediation (DERR), informed the Board that the cash balance of the Petroleum Storage Tank (PST) Enterprise Fund for the end of August 2025 was $41,033,070.00. The DERR continues to monitor the balance of the PST Enterprise Fund closely to ensure sufficient cash is available to cover qualified claims for releases.

There were no comments or questions for Mr. Everett.

VII. Petroleum Storage Tanks Rules.

A. Approval from the Board to proceed with formal rulemaking and public comment on proposed changes to Utah Administrative Code R311, Petroleum Storage Tanks Rules (Board Action Item).

David Wilson, the DERR PST Compliance Section Manager, explained that the DERR is requesting approval from the Board to proceed with formal rule making, including a 30-day public comment period, proposing changes to R311 PST rules following the passage of House Bill 18, effective May 7, 2025. Key changes include new notification requirements for aboveground petroleum storage tank (APST) owners/operators, expanded certification definitions to include APSTs, installation permit and fee requirements for all PSTs at least 30 days in advance, and eligibility for APST owners/operators to apply for PST Fund loans for upgrades, replacements, or closures. Minor clarifications to existing rules are also included.

Rules to be amended are: R311-200 Petroleum Storage Tanks: Definitions; R311-201 Petroleum Storage Tanks: Certification Programs and Underground Storage Tank Operator Training; R311-203 Petroleum Storage Tanks: Technical Standards; R311-204 Petroleum Storage Tanks: Closure and Remediation; and R311-212 Administration of the Petroleum Storage Tank Fund Loan Program.

There will be non-substantive changes for: R311-205 Site Assessment Protocol and Release Reporting; R311-206 Certificate of Compliance and Financial Assurance Mechanisms; and R311-207 Accessing the Petroleum Storage Tank Fund for Leaking Petroleum Storage Tanks.

Mark Franc mentioned rules appear well written, thoroughly vetted, and supported by strong public involvement.

It was moved by Mark Franc and seconded by Dr. McIff and UNANIMOUSLY CARRIED for the Board to proceed with formal rulemaking by publishing in the October 1, 2025, *Utah State Bulletin* the proposed changes to Utah Administrative Code R311-200, 201, 203, 204, 205, 206, 207, and 212 and conducting a public comment period from October 1, 2025, to October 31, 2025.

VIII. Administrative Rules.

A. Approval from the Board to proceed with formal rulemaking and public comment on proposed changes to Utah Administrative Code R315-260, R315-261, R315-262, R315-263, R315-264, R315-265, R315-266 and R315-270 of the Hazardous Waste Rules to incorporate federal regulatory changes made by the U.S. Environmental Protection Agency (U.S. EPA) and published in the *Federal Register* on July 26, 2024 (89 FR 60692), October 11, 2024 (89 FR 82682), October 31, 2024 (89 FR 86758), December 11, 2024 (89 FR 99727), and February 5, 2025 (90 FR 9010). The Division is also proposing to incorporate additional requirements for the management of military munitions as requested by the U.S. EPA (Board Action Item).

Jalynn Knudsen, Assistant Director in the Division of Waste Management and Radiation Control (Division), reviewed the request for approval from the Board to proceed with formal rulemaking and public comment on proposed changes to Utah Administrative Code R315-260, R315-261, R315-262, R315-263, R315-264, R315-265, R315-266 and R315-270 to amend the hazardous waste rules to incorporate federal regulatory changes made by the U.S. Environmental Protection Agency (U.S. EPA) and published in the *Federal Register* on July 26, 2024, October 11, 2024, October 31, 2024, December 11, 2024, and February 5, 2025. The Division is also proposing to incorporate additional requirements for the management of military munitions as requested by the U.S. EPA.

In February of 1997, the U.S. EPA finalized a rulemaking known as the Military Munitions Rule. Authorized states were not required to adopt this rule because it was considered less stringent than existing regulations. At the time, Utah adopted parts of rulemaking. In July of 2023, comments were received from the U.S. EPA that Utah should adopt more of the regulations promulgated in the Military Munitions Rule because Utah had begun to regulate military facilities in ways that appeared to be consistent with these regulations. After conducting a review of the proposed regulations in the Military Munitions Rule, it was determined that some, but not all, of the proposed regulations should be adopted. This proposed rulemaking adopts those regulations. Other changes made by the U.S. EPA that are being adopted with this proposed rulemaking include integrating the e-Manifest system with hazardous waste imports and exports and some manifest related reports, PCB manifest amendments, removing language that allowed for claims of confidentiality for export documents, clarifying the type of address that must be provided on export documents and provide new instructions for documents and processes used for importing and exporting hazardous secondary materials and waste, amendments to rules for recycling and disposing of hydrofluorocarbons and technical corrections to various hazardous waste regulations.

In addition, the Division is fixing formatting and typographical errors found in the rules.

This is a Board action item. The Director recommends the Board approve proceeding with formal rulemaking and public comment by publishing in the October 1, 2025, *Utah State Bulletin* the proposed changes to Utah Admin. Code R315-260, R315-261, R315-262, R315-263, R315-264, R315-265, R315-266 and R315-270 and conducting a public comment period from October 1, 2025 to October 31, 2025.

Mark Franc noted that in the initial implementation of the regulations in 1997, Utah chose not to implement the initial regulations because Utah's own regulations were considered more stringent and requested clarification if implementing these regulations now would make Utah's regulations less stringent, or are these regulations that do not apply in this situation.

Ms. Knudsen stated her understanding is that the Utah regulations are now aligning with the U.S. EPA, which Deborah Ng, Hazardous Waste Section Manager, confirmed.

Mark Franc then confirmed that this alignment with the U.S. EPA does not change Utah's regulations, but rather aligns them more closely with the U.S. EPA regulations and does not make Utah's regulations less stringent. Ms. Knudsen concurred with this assessment.

It was moved by Dennis Riding and seconded by Dr. McIff and UNANIMOUSLY CARRIED for the Board to proceed with formal rulemaking by publishing in the October 1, 2025, *Utah State Bulletin* the proposed changes to Utah Admin. Code R315-260, R315-261, R315-262, R315-263, R315-264, R315-265, R315-266 and R315-270 and conducting a public comment period from October 1, 2025 to October 31, 2025.

B. Approval from the Board to proceed with final adoption of proposed changes to Utah Administrative Code R315-306, R315-307, R315-310, R315-311, R315-314, and R315-319 to amend the Solid Waste Rules with regard to coal combustion residuals (Board Action Item).

Jalynn Knudsen, Assistant Director in the Division, reviewed the request for approval from the Board to proceed with final adoption of proposed changes to Utah Administrative Code R315-306, R315-307, R315-310, R315-311, R315-314, and R315-319 to amend the solid waste rules with regard to coal combustion residuals.

At the Board meeting on July 10, 2025, the Board approved the proposed changes 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, 2025, issue of the *Utah State Bulletin*.

The public comment period for this rulemaking ended on September 2, 2025; no comments were received.

This is a Board action item. The Director recommends the Board approve final adoption of the proposed changes to Utah Admin. Code R315-306, R315-307, R315-310, R315-311, R315-314, and R315-319 as published in the August 1, 2025, *Utah State Bulletin* and set an effective date of September 15, 2025.

There were no comments or questions for Ms. Knudsen.

It was moved by Mark Franc and seconded by Dr. McIff and UNANIMOUSLY CARRIED for the Board to approve for final adoption the proposed changes, as published in the August 1, 2025, issue of the *Utah State Bulletin* and set an effective date of September 15, 2025, to Utah Administrative Code R315-306, R315-307, R315-310, R315-311, R315-314, and R315-319 to amend the Solid Waste Rules with regard to coal combustion residuals.

C. Approval from the Board to proceed with final adoption of proposed changes to Utah Administrative Code R313-28-20 of the Radiation Control Rules to amend the definition of Healing Arts Screening for consistency with the rules (Board Action Item)

Jalynn Knudsen, Assistant Director in the Division, reviewed the request for approval from the Board to proceed with final adoption of proposed changes to Utah Administrative Code R313-28-20 to amend the definition of Healing Arts Screening for consistency with the rules.

At the Board meeting on June 12, 2025, the Board approved the proposed changes to Utah Admin. Code R313-28-20 to be filed with the Office of Administrative Rules for publication in the *Utah State Bulletin.* The proposed changes were published in the July 1, 2025, issue of the *Utah State Bulletin*.

The public comment period for this rulemaking ended on July 31, 2025; no comments were received.

This is a Board action item. The Director recommends the Board approve final adoption of the proposed changes to Utah Admin. Code R313-28-20 as published in the July 1, 2025, *Utah State Bulletin* and set an effective date of September 15, 2025.

There were no comments or questions for Ms. Knudsen.

It was moved by Shane Whitney and seconded by Scott Wardle and UNANIMOUSLY CARRIED for the Board to approve for final adoption the proposed changes, as published in the July 1, 2025, issue of the *Utah State Bulletin* and set an effective date of September 15, 2025, to Utah Administrative Code R313-28-20 of the Radiation Control Rules to amend the definition of Healing Arts Screening for consistency with the rules.

IX. X- Ray Program.

A. Approval of qualified Mammography Imaging Medical Physicist (MIMP) in accordance with UCA 19-3-103.1 (2)(c) of the Utah Code Annotated (Board Action Item).

Jalynn Knudsen, Assistant Director in the Division, informed the Board that the Division has received one application from an individual seeking certification as a Mammography Imaging Medical Physicist, referred to as a MIMP.

These physicists perform radiation surveys and evaluate the quality control programs of the facilities in Utah providing mammography examinations.

Initial MIMP certification must be approved by the Board as required by Utah Code Section 19-3-103.1(2)(c). The Division staff have reviewed the application from Hao-Yun Hsu and have determined that the applicant meets the requirements detailed in Utah Administrative Code R313-28-140.

The Director of the Division of Waste Management and Radiation Control recommends the Board issue a certificate of approval for the applicant reviewed and presented to the Board**.**

Mark Franc commented that the Board recently approved the Director of the Division of Waste Management and Radiation Control to approve renewal applications of MIMPs, who have been previously certified by Board, and only new applications would continue to be presented to the Board for initial approval.
Ms. Knudsen concurred with his comment.

It was moved by Dr. McIff and seconded by Dennis Riding and UNANIMOULSY CARRIED to approve Hao-Yun Hsu to be certified as a Mammography Imaging Physicist (MIMP) in accordance with Utah Code Section 19-3-103.1 (2) (c).

X. Solid Waste Section.

A. Opportunity to update the Utah Solid Waste Management Plan as established by the Board in accordance with Utah Code Subsections 19-6-104(3) and 19-6-104(4) (Information Item).

Kelly Shaw, Environmental Scientist, Solid Waste Section, in the Division, presented a PowerPoint presentation to the Board regarding the plans to update the Utah Waste Management Plan. A copy of the PowerPoint presentation is included in the meeting minutes.

Ms. Shaw informed the Board that the update to the Utah Waste Management Plan will utilize findings from a statewide waste characterization study that concluded in July 2025 and a public survey on recycling, reuse, and reduction, which will remain open until September 30, 2025. Ms. Shaw stated that the goal is to submit a draft updated Utah Waste Management Plan to the Board by the summer of 2026.

Ms. Shaw informed the Board that the current Utah Waste Management Plan can be found at the following link:
https://lf-public.deq.utah.gov/WebLink/ElectronicFile.aspx?docid=418077&eqdocs=DSHW-2019-002196&dbid=0&repo=Public

Ms. Shaw informed the Board that the Solid Waste Section staff welcomes coordination with the Board throughout the process of updating the Utah Waste Management Plan. Ms. Shaw also offered that if the Board desires to meet with the Board members at a different date and time, the Solid Waste Section staff can provide more detailed information.

Neil Schwendiman commented that their transfer station has been distributing the surveys and inquired if any results have been determined yet. Ms. Shaw informed the Board that the results of the survey are not yet live. The contractor is currently coordinating them and alerting the Solid Waste Program staff of any potential discrepancies or issues that may need to be addressed in the public survey.

Ms. Shaw encouraged the Board or anyone they feel would be interested to take the survey.

Chairman Mickelson commented that it will be very interesting to see the results of the survey and looks forward to hearing from Ms. Shaw when more data is collected.

Ms. Shaw informed the Board that if they would like to be briefed further on the Utah Waste Management Plan to contact Brian Speer or herself to discuss scheduling options.

Chairman Mickelson commented that he considers this a very interesting matter, especially since an update to the Utah Waste Management Plan has not been conducted in a long time.

XI. Low-Level Radioactive Waste.

A. Energy*Solutions* request for a one-time site-specific treatment variance from the Utah Hazardous Waste Management Rules. EnergySolutions seeks authorization to dispose, in Energy*Solutions*' Mixed Waste Landfill Cell, waste containing D009 and/or U151 High Mercury-Organic Subcategory and High Mercury-Inorganic Subcategory hazardous waste codes that have been treated using stabilization/amalgamation technologies (Information Item).

Tyler Hegburg, Environmental Scientist, Low-Level Radioactive Section, in the Division, introduced Steve Gurr, Energy*Solutions* representative, who presented this one-time site-specific treatment variance request to the Board. This is an informational item before the Board.

Mr. Gurr informed the Board that Energy*Solutions* requests approval to dispose, in Energy*Solutions*' Mixed Waste Landfill Cell, waste containing the D009 or U151 High Mercury-Organic Subcategory and High Mercury-Inorganic Subcategory hazardous waste codes that have been treated using stabilization/ amalgamation technologies.

Energy*Solutions* will perform the stabilization and amalgamation treatment on D009 and U151 High Mercury Subcategory waste. At the time of disposal, the waste will be verified to have a mercury concentration of less than 0.2mg/L using the Toxicity Characteristic Leaching Procedure (TCLP) or less than .0.25mg/L TCLP if the waste is a soil matrix. All actions will be performed in accordance with Energy*Solutions*' State-issued Part B Permit.

The listed treatment technology in 40 CFR 268.40 is either incineration (IMERC) or retorting/roasting for mercury recovery (RMERC) for High Mercury Subcategory Mercury, which is both Organic and Inorganic mercury.

The RMERC treatment technology 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.

The U.S. EPA recommends that in cases such as this where the high subcategory waste is also radioactive the stakeholders utilize a site-specific treatment variance, which has been done in the past.

This is the 20th time Energy*Solutions* has requested this variance from the Board. Beginning in 2001, Energy*Solutions* has successfully disposed of approximately 22,100 cubic feet of treated High Mercury Subcategory waste and anticipates receiving approximately 2,500 cubic feet of additional High Mercury Subcategory waste for disposal in the next year under this treatment variance.

There were no comments or questions for Mr. Gurr.

XII. Director's Report.

Director Hansen announced the reappointment of Scott Wardle to the Board in conjunction with the new appointment of Neil Schwendiman. Director Hansen extended his congratulations to Mr. Wardle on his reappointment and thanked him for his past and continued service on the Board.

Director Hansen stated that the Department's Fee Hearing is currently underway, and the Division has a few fee increases being addressed at the meeting. Director Hansen informed the Board that the Division has conducted outreach and has taken comments and considered feedback from facilities that are being impacted by these fee increases.

Director Hansen announced that the Division will be holding its first stakeholder training for the Solid Waste Program. The Solid Waste Section staff have developed templates for the various permits issued within the Solid Waste Program and the Solid Waste Section staff members will conduct outreach and training to help facilities better access these templates as well as provide information on how the Solid Waste Program is administered. Director Hansen mentioned that similar initiatives have been undertaken in the Hazardous Waste Program and the Used Oil Program. The overarching goal is to expand the Division's outreach efforts, assist facilities with permitting by streamlining the process, and enhance understanding of permit compliance.

Director Hansen informed the Board that he will be presenting the results of a Statewide Glass Recycling Study next week with Assistant Director, Stevie Norcross at the Natural Resources, Agriculture, and Environment Interim Committee. This study was commissioned during the last legislative session to identify ways to increase glass recycling in Utah. Director Hansen will also be reporting on and providing a presentation on the Division's Used Oil Program during this meeting. Director Hansen briefly discussed the current funding mechanism for the operational costs of the Used Oil Program, and the fee of four cents per quart on the sale of new lubricating oil in the state. Director Hansen informed the Board that this fee has not changed since the 1990s, and discussions will be held with legislators regarding the possibility of increasing the fee.

There were no comments or questions for Director Hansen.

XIII. Executive Director's Report.

Executive Director Davis expressed his gratitude to Neil Schwendiman and all Board members for their dedicated service.

Executive Director Davis updated the Board on the Department's preparations for the 2026 Utah State Legislative session. Executive Director Davis briefly discussed UDEQ's fees and UDEQ's budget proposal, which has been submitted to the Governor. The anticipated final budget is expected to be released in early December.

Executive Director Davis informed the Board that he represented Utah at the Environmental Council of States (ECOS) meeting last week held in New Mexico. ECOS brings together chief environmental officers from each state twice a year to discuss environmental matters. Executive Director Davis stated that topics discussed included the uncertainty of federal funding, and he has asked each director within the UDEQ to explore how fees could be utilized to provide more certainty and resiliency with the UDEQ's budgets as this initiative aligns with the UDEQ's Strategic Plan to operate more efficiently. Executive Director Davis reported that Lee Zeldin, Chief Administrator for the U.S. EPA, was in attendance at the meetings, which allowed for good discussions regarding this topic. Executive Director Davis will be meeting with Chief Administrator Zeldin in about a month to continue discussions regarding funding and budget matters, as well as continuing discussion about how Utah can implement "doing things the Utah way," rather than following federal approaches and will also be discussing opportunities for Utah to assume additional authority.

Executive Director Davis informed the Board that UDEQ recently held its annual employee picnic, which was attended by Governor Cox. The Governor addressed the staff, speaking about abundance and the need for Utah to find ways to grow while simultaneously protecting and improving air, land, and water in our beautiful state.

Executive Director Davis commented that his discussions with the Board will continue to focus on how UDEQ can issue permits faster, improve efficiency, innovate, and enhance transparency, and is happy to provide updates and answer any questions Board members may have.

There were no comments or questions for Executive Director Davis.

XIV. Other Business.

A. Miscellaneous Information Items. – None.
B. Scheduling of next Board meeting (October 9, 2025).

The next Board meeting is scheduled for October 9, 2025, at the Utah Department of Environmental Quality, Multi-Agency State Office Building.

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

XV. Adjourn.

The meeting adjourned at 2:20 p.m.

PST STATISTICAL SUMMARY

September 1, 2024 -- August 31, 2025

PROGRAM

	September	October	November	December	January	February	March	April	May	June	July	August	(+/-) OR Total
Regulated Tanks	4,832	4,841	4,849	4,855	4,859	4,869	4,886	4,897	4,907	4,902	4,907	4,912	**80**
Tanks with Certificate of Compliance	4,611	4,644	4,651	4,661	4,668	4,670	4,674	4,682	4,683	4,692	4,695	4,701	**90**
Tanks without COC	221	197	198	194	191	199	212	215	223	210	212	211	**(10)**
Cumulative Facilitlies with Registered A Operators	1,269	1,265	1,265	1,266	1,270	1,262	1,278	1,271	1,272	1,254	1,267	1,271	**83.34%**
Cumulative Facilitlies with Registered B Operators	1,283	1,278	1,278	1,279	1,283	1,276	1,280	1,273	1,273	1,256	1,266	1,270	**83.28%**
New LUST Sites	7	4	4	3	11	2	9	6	4	8	5	12	**75**
Closed LUST Sites	5	4	3	7	9	6	6	4	5	3	8	5	**65**
Cumulative Closed LUST Sites	5707	5711	5717	5724	5733	5739	5741	5748	5751	5758	5765	5768	**61**

FINANCIAL

	September	October	November	December	January	February	March	April	May	June	July	August	(+/-)
Tanks on PST Fund	3,022	3,032	3,039	3,049	3,056	3,056	3,052	3,064	3,059	3,067	3,064	3,062	**40**
PST Claims (Cumulative)	735	734	734	734	734	738	738	741	740	740	739	739	**4**
Equity Balance	$7,824,588	$6,991,673	$7,429,379	$7,556,156	$7,848,489	$8,280,893	$8,218,397	$8,511,914	$9,321,582	$9,640,627	$9,913,949	$10,715,671	**$2,891,083**
Cash Balance	$37,044,625	$37,309,972	$37,747,678	$37,874,455	$38,166,788	$38,599,192	$38,536,696	$38,830,213	$39,639,881	$39,958,926	$40,232,248	$41,033,970	**$3,989,345**
Loans	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Cumulative Loans	129	129	129	129	129	129	129	129	129	129	129	129	**0**
Cumulative Amount	$6,213,705	$6,213,705	$6,213,705	$6,213,705	$6,213,705	$6,213,705	$6,213,705	$6,123,705	$6,123,705	$6,123,705	$6,123,705	$6,123,705	**($90,000)**
Defaults/Amount	0	0	0	0	0	0	1	1	2	2	2	2	**2**

	September	October	November	December	January	February	March	April	May	June	July	August	TOTAL
Speed Memos	100	135	103	241	78	127	135	199	135	165	135	114	**1,667**
Compliance Letters	3	17	5	12	13	7	8	11	18	10	9	11	**124**
Notice of Intent to Revoke	0	0	0	0	0	0	1	0	0	0	0	0	**1**
Orders	0	0	1	0	1	0	0	0	0	2	1	0	**5**

WASTE MANAGEMENT AND RADIATION CONTROL BOARD
Executive Summary
Proposed Rule Changes
UAC R313-24
October 9, 2025

What is the issue before the Board?	Approval from the Board to proceed with formal rulemaking and public comment on proposed changes to Utah Administrative Code (UAC) R313-24, to incorporate federal regulatory changes made by the Nuclear Regulatory Commission (NRC) to the federal radioactive materials regulations in 2023 (88 FR 57873). The changes are necessary to maintain regulatory compatibility with the NRC as required because Utah is an Agreement State with the NRC.
What is the historical background or context for this issue?	The NRC has amended its regulations to make miscellaneous corrections. These changes include updating organizational information, revising an address, and correcting reference, spelling, and grammatical errors. The amendments also make updates to replace gendered terms with inclusive, gender-neutral language. As an Agreement State with the NRC for the radioactive materials program, Utah is required to maintain regulatory compatibility with the corresponding NRC radioactive materials regulations. The Division of Waste Management and Radiation Control (Division) is adopting the changes that the NRC designated as necessary for an Agreement State to adopt to maintain regulatory compatibility with the NRC. In addition to the proposed changes detailed above, the Division, at the request of the Governor's Office, is correcting typographical and formatting errors found in the rules. The Notice of Substantive Change document which includes the rule and amendments is included with this Executive Summary.
What is the governing statutory or regulatory citation?	The Board is authorized under Subsections 19-3-103.1 and 19-3-104 to make rules to meet the requirements of federal law relating to radiation control to ensure the radiation control program is qualified to maintain primacy from the federal government and that are necessary to implement the provisions of the Radiation Control Act. The rule changes also meet existing DEQ and state rulemaking procedures.

Is Board action required?	Yes. Board approval is necessary to begin the formal rulemaking process by filing the appropriate documents with the Office of Administrative Rules for publishing the proposed rule changes in the *Utah State Bulletin* and conducting a public comment period.
What is the Division Director's recommendation?	The Director recommends the Board approve proceeding with formal rulemaking and public comment by publishing in the November 1, 2025, *Utah State Bulletin* the proposed changes to UAC R313-24 and conducting a public comment period from November 1, 2025 to December 1, 2025.
Where can more information be obtained?	Please contact Tom Ball by email at tball@utah.govor by phone at 385-454-5574.

State of Utah
Administrative Rule Analysis
Revised May 2025

NOTICE OF SUBSTANTIVE CHANGE		
TYPE OF FILING: Amendment		
Rule or section number:	**R313-24-6**	**Filing ID: OFFICE USE ONLY**
Date of previous publication (only for CPRs):	Click or tap to enter a date.	

Agency Information

1. Title catchline:	Environmental Quality, Waste Management and Radiation Control, Radiation	
Building:	MASOB	
Street address:	195 N. 1950 W.	
City, state:	Salt Lake City, Utah	
Mailing address:	PO Box 144880	
City, state and zip:	Salt Lake City, Utah 84114-4880	
Contact persons:		
Name:	**Phone:**	**Email:**
Tom Ball	385-454-5574	tball@utah.gov
Spencer Wickham	385-499-4895	swickham@utah.gov
Please address questions regarding information on this notice to the persons listed above.		

General Information

2. Rule or section catchline:	
R313-24. Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements.	
3. Are any changes in this filing because of state legislative action?	Changes are not because of legislative action.
If yes, any bill number and session:	HB 1 (2025 General Session), SB 25 (2024 3rd Special Session)
4. Purpose of the new rule or reason for the change:	
The purpose of this rule amendment is to incorporate federal regulatory changes made by the NRC to the federal radioactive materials regulations. The changes are necessary to maintain regulatory compatibility with the NRC as required because Utah is an Agreement State with the NRC.	
5. Summary of the new rule or change:	
The amendment updates the date for Appendix A to Part 40 of 10 CFR that is incorporated by reference in the introductory paragraph to R313-24-6. The date is updated from 2015 to 2023.	

Fiscal Information

6. Provide an estimate and written explanation of the aggregate anticipated cost or savings to:
A. State budget:
It is not anticipated that there will be any cost or savings to the state budget due to this amendment because the changes are administrative in nature and do not add or remove any requirements from the rules.
B. Local governments:
It is not anticipated that there will be any cost or savings to local governments due to this amendment because the changes are administrative in nature and do not add or remove any requirements from the rules.
C. Small businesses ("small business" means a business employing 1-49 persons)**:**
It is not anticipated that there will be any cost or savings to small businesses due to this amendment because the changes are administrative in nature and do not add or remove any requirements from the rules.
D. Non-small businesses ("non-small business" means a business employing 50 or more persons)**:**
It is not anticipated that there will be any cost or savings to non-small businesses due to this amendment because the changes are administrative in nature and do not add or remove any requirements from the rules.
E. Persons other than small businesses, non-small businesses, state, or local government entities ("person" means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an ***agency***)**:**

It is not anticipated that there will be any cost or savings to persons other than small businesses, non-small businesses, state or local governments due to this amendment because the changes are administrative in nature and do not add or remove any requirements from the rules.

F. Compliance costs for affected persons:

There are no compliance costs for affected persons due to this rule amendment because it does not add any new requirements to the rule.

G. Regulatory Impact Summary Table (This table includes only fiscal impacts the agency was able to measure. If the agency could not estimate an impact, it is excluded from this table but described in boxes A through F.)

Regulatory Impact Summary Table

Fiscal Cost	**FY2026**	**FY2027**	**FY2028**	**FY2029**	**FY2030**
State Budget	$0	$0	$0	$0	$0
Local Governments	$0	$0	$0	$0	$0
Small Businesses	$0	$0	$0	$0	$0
Non-Small Businesses	$0	$0	$0	$0	$0
Other Persons	$0	$0	$0	$0	$0
Total Fiscal Cost	**$0**	**$0**	**$0**	**$0**	**$0**
Fiscal Benefits	**FY2026**	**FY2027**	**FY2028**	**FY2029**	**FY2030**
State Budget	$0	$0	$0	$0	$0
Local Governments	$0	$0	$0	$0	$0
Small Businesses	$0	$0	$0	$0	$0
Non-Small Businesses	$0	$0	$0	$0	$0
Other Persons	$0	$0	$0	$0	$0
Total Fiscal Benefits	**$0**	**$0**	**$0**	**$0**	**$0**
Net Fiscal Benefits	**$0**	**$0**	**$0**	**$0**	**$0**

H. Department head comments on fiscal impact and approval of regulatory impact analysis:

The Executive Director of the Department of Environmental Quality, Tim Davis, has reviewed and approved this regulatory impact analysis.

Citation Information

7. Provide citations to the statutory authority for the rule. If there is also a federal requirement for the rule, provide a citation to that requirement:

Section 19-3-104	Section 19-6-107	

Incorporation by Reference Information

8. Incorporation by Reference (if this rule incorporates more than two items by reference, please include additional tables)**:**

A. This rule adds or updates the following title of material incorporated by reference (a copy of the material incorporated by reference must be submitted to the Office of Administrative Rules. *If none, leave blank*)**:**

Official Title of Materials Incorporated (from title page)	Appendix A to Part 40 CRITERIA RELATING TO THE OPERATION OF URANIUM MILLS AND THE DISPOSITION OF TAILINGS OR WASTES PRODUCED BY THE EXTRACTION OR CONCENTRATION OF SOURCE MATERIAL FROM ORES PROCESSED PRIMARILY FOR THEIR SOURCE MATERIAL CONTENT
Publisher	Government Publishing Office
Issue Date	August 24, 2023
Issue or Version	

B. This rule adds or updates the following title of material incorporated by reference (a copy of the material incorporated by reference must be submitted to the Office of Administrative Rules. *If none, leave blank*)**:**

Official Title of Materials Incorporated (from title page)	
Publisher	
Issue Date	

Issue or Version	

Public Notice Information

9. The public may submit written or oral comments to the agency identified in box 1.		
A. Comments will be accepted until:		12/01/2025
B. A public hearing (optional) will be held (The public may request a hearing by submitting a written request to the agency, as outlined in Section 63G-3-302 and Rule R15-1.)**:**		
Date:	**Time** (hh:mm AM/PM)**:**	**Place** (physical address or URL)**:**
Click or tap to enter a date.		
To the agency: If more than one hearing is planned to take place, continue to add rows.		

10. This rule change MAY become effective on:	12/15/2025
NOTE: The date above is the date the agency anticipates making the rule or its changes effective. It is NOT the effective date.	

Agency Authorization Information

To the agency: Information requested on this form is required by Sections 63G-3-301, 63G-3-302, 63G-3-303, and 63G-3-402. The office may return incomplete forms to the agency, possibly delaying publication in the *Utah State Bulletin* and delaying the first possible effective date.			
Agency head or designee and title:	Douglas J. Hansen, Director	**Date:**	Click or tap to enter a date.

R313. Environmental Quality, Waste Management and Radiation Control, Radiation.
R313-24. Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements.

R313-24-6. Clarifications or Exceptions.

For the purposes of Rule R313-24, 10 CFR 40.2a through 40.4; 40.12; 40.20(a); 40.21; 40.26(a) through 40.26(c); 40.31(h); the introductory paragraph of 40.36 and 40.36(a),40.36(b),40.36(d) and 40.36(f); 40.41(c); the introduction to 40.42(k) and 40.42(k)(3)(i); 40.46; 40.61(a) and 40.61(b); 40.65; and Appendix A to Part 40 ([~~2015~~]2023) are incorporated by reference with the following clarifications or exceptions:

(1) The exclusion and substitution of[~~the following~~]:

(a) [~~E~~]exclude 10 CFR 40.26(c)(1) and replace with "(1) [~~The provisions of~~]Sections R313-12-51, R313-12-52, R313-12-53, R313-19-34, R313-19-50, R313-19-61, R313-24-1, Rules R313-14, R313-15, R313-18, and R313-24 (incorporating 10 CFR 40.2a, 40.3, 40.4, and 40.26 by reference)";

(b) [~~I~~]in Appendix A to 10 CFR 40, exclude Criterion 5B(1) through 5H, Criterion 7A, Criterion 13, and replace the excluded Criterion with "Utah Administrative Code, Rule R317-6, Ground Water Quality Protection"; and

(c) [~~I~~]in Appendix A to 10 CFR 40, exclude Criterion 11A through 11F and Criterion 12.

(2) The substitution of[~~the following~~]:

(a) "10 CFR 40" for reference to "this part" as found throughout the incorporated text;

(b) "director" for reference to "Commission" in the first and fourth references contained in 10 CFR 40.2a, in 10 CFR 40.3, 40.20(a), 40.26, 40.36(f), 40.41(c), 40.46[-](a), 40.61, and 40.65; and "director" for reference to "NRC" in 10 CFR 40.36(b);

(c) "Rule[~~s~~] R313-19, R313-21, or R313-22" for "Section 62 of the Act" as found in 10 CFR 40.12(a);

(d) "Section R313-15-402" for reference to "10 CFR 20.1402" and "Section R313-15-403" for reference to "10 CFR 20.1403" in 10 CFR 40.36(d);

(e) "Section R313-15-1109" for reference to "10 CFR 20.2108" in 10 CFR 40.36(f);

(f) "Rule[~~s~~] R313-21 or R313-22" for reference to "the regulations in this part" in 10 CFR 40.41(c);

(g) "Section R313-19-100" for reference to "part 71 of this chapter" as found in 10 CFR 40.41(c);

(h) In 10 CFR 40.42(k)(3)(i), "Sections R313-15-401 through R313-15-406" for reference to "10 CFR part 20, subpart E";

(i) "source material milling" for reference to "uranium milling, in production of uranium hexafluoride, or in a uranium enrichment facility" as found in 10 CFR 40.65(a);

(j) "director" for reference to "appropriate NRC Regional Office shown in Appendix D to 10 CFR part 20 of this chapter, with copies to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555," as stated in 10 CFR 65(a)(1);

(k) "require the licensee to" for reference to "require to" in 10 CFR 40.65(a)(1); and

(l) in Appendix A to 10 CFR part 40, the following substitutions:

(i) "Section R313-12-3" for reference to "Sec. 20.1003 of this chapter" as found in 10 CFR 40.36(f) and in the first paragraph of the introduction to Appendix A;

(ii) "Utah Administrative Code, Rule R317-6, Ground Water Quality Protection" for ground water standards in "Environmental Protection Agency in 40 CFR part 192, subparts D and E" as found in the Introduction, paragraph [4]four; or "Environmental Protection Agency in 40 CFR part 192, subparts D and E (48 FR 45926; October 7, 1983)" as found in Criterion 5;

(iii) "director as defined in Subsection 19-5-102(6)" for reference to "Commission" in the definition of "compliance period," in paragraph five of the introduction and in Criterion 5A(3);

(iv) "director" for reference to "Commission" in the definition of "closure plan", in paragraph five of the introduction, and in Criterions 6(2), 6(4), 6(6), 6A(2), 6A(3), 9, and 10 of Appendix A;

(v) "license issued by the director" for reference to "Commission license" in the definition of "licensed site," in the introduction to Appendix A;

(vi) "director" for reference to "NRC" in Criterion 4D;

(vii) "representatives of the director" for reference to "NRC staff" in Criterion 6(6);

(viii) "director-approved" for reference to "Commission-approved" in Criterion 6A(1) and Criterion 9;

(ix) "director" for reference to "appropriate NRC regional office as indicated in Criterion 8A" as found, Criterion 8, paragraph [~~2~~]two or for reference to "appropriate NRC regional office as indicated in Appendix D to 10 CFR part 20 of this chapter, or the Director, Office of Nuclear Material Safety and Safeguards, U[~~-~~]S[~~-~~] Nuclear Regulatory Commission, Washington, DC 20555," as stated in Criterion 8A; and

(x) "director" for reference to "the Commission or the State regulatory agency" in Criterion 9, paragraph [~~2~~]two.

KEY: environmental analysis, uranium mills, tailings, byproduct material
Date of Last Change: July 15, 2024
Notice of Continuation: October 19, 2021
Authorizing, and Implemented or Interpreted Law: 19-3-104; 19-6-107

WASTE MANAGEMENT AND RADIATION CONTROL BOARD
Executive Summary
REQUEST FOR A SITE-SPECIFIC TREATMENT VARIANCE
Energy*Solutions*, LLC
October 9, 2025

What is the issue before the Board?	On August 6, 2025, Energy*Solutions*, 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 R315-268-40(a)(3) seeking approval to dispose in Energy*Solutions*' Mixed Waste Landfill Cell, 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.
What is the historical background or context for this issue?	Energy*Solutions* seeks approval of this variance to receive and dispose, in Energy*Solutions*' Mixed Waste Landfill Cell, waste containing trace quantities of D009 and/or U151 High Mercury-Organic Subcategory and High Mercury-Inorganic Subcategory hazardous waste that have been treated using stabilization/amalgamation technologies. Furthermore, Energy*Solutions* will perform the appropriate stabilization and amalgamation treatment on D009 and U151 High Mercury Subcategory waste streams that have not been treated prior to arrival at the Energy*Solutions* Clive facility. All actions and other necessary treatment will be performed in accordance with Energy*Solutions*' State-issued Part B Permit. Prior to disposal, the waste will be verified via Toxicity Characteristic Leaching Procedure (TCLP) to have a mercury concentration of less than 0.2mg/L for hazardous waste and 0.25mg/L for contaminated waste soils. D009 High Mercury-Organic Subcategory waste is described as non-wastewaters that exhibit, or are expected to exhibit, the characteristics of toxicity and contain concentrations greater than or equal to 260 mg/kg of total mercury which also contain organics that are not incinerator residues. Similarly, D009 High Mercury-Inorganic Subcategory is comparable in characteristics but contains inorganic residues which include incinerator residues and retorting/roasting residues. The U151 waste code is described as mercury non-wastewaters that contains greater than or equal to 260 mg/kg total mercury but does not clearly distinguish between organic and inorganic category. For the above-mentioned waste codes the listed treatment technology is found in 40 CFR 268.40. D009 High Mercury-Organic Subcategory waste is to be treated by 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 need and justification for this specified variance 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 of radioactive elemental mercury which requires additional stabilization treatment by amalgamation 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. Additionally, 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 that 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 U.S. 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 Energy*Solutions* over the next year. To date, Energy*Solutions* has disposed of approximately 22,100 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, Energy*Solutions* anticipates less than 2,500 cubic feet of additional High Mercury Subcategory waste for disposal in the next year under this treatment variance. This is the 20th time Energy*Solutions* has requested this variance from the Board. Beginning in 2001, Energy*Solutions* has been consistently successful at treating the high subcategory mercury wastes to LDR compliant levels under this request.

	A notice for the 30-day public comment was published in the *Salt Lake Tribune*, the *Deseret News* and the *Tooele Transcript-Bulletin* on September 3, 2025. The 30-day public comment period began September 4, 2025, and ended October 3, 2025; no public comments were received.
What is the governing statutory or regulatory citation?	Variances are provided 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 Utah Administrate Code R315-268.44.
Is Board action required?	Yes, this is an action item before the Board. The Variance Request was presented to the Board as an informational item on September 11, 2025.
What is the Division/Director's recommendation?	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 to human health and the environment as the required method.
Where can more information be obtained?	For technical questions, please contact Tyler Hegburg (385) 622-1875. For legal questions, please contact Bret Randall at (801) 536-0284.

DSHW-2025-004934
Attachment: DSHW-2025-003747

RECEIVED
By Division of Waste Managment and Radiation Control at 4:42 pm, Aug 06, 2025

ENERGYSOLUTIONS

DSHW-2025-003747

August 6, 2025 CD-2025-160

Mr. Doug Hansen
Director
Division of Waste Management and Radiation Control
195 North 1950 West
Salt Lake City, UT 84114-4880

Subject: EPA ID Number UTD982598898 - Request for a Site-Specific Treatment Variance for Wastes Containing High-Subcategory Mercury

Dear Mr. Hansen,

Energy*Solutions* hereby requests a variance to receive an exemption from Utah Administrative Code (UAC) R315-268-40(a)(3) for wastes that are characterized with hazardous waste codes D009 or U151, High Mercury-Organic Subcategory or High Mercury-Inorganic Subcategory. This request is submitted in accordance with the requirements of UAC R315-260-19.

The regulatory requirement authorizing this request is found in UAC R315-268-44 which allows a site-specific variance from an applicable treatment standard provided that the following condition is met:

> *UAC R315-268-44(h)(2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible.*

Energy*Solutions* requests approval to dispose, in Energy*Solutions*' Mixed Waste Landfill Cell, waste containing the D009 or U151 High Mercury-Organic Subcategory and High Mercury-Inorganic Subcategory hazardous waste codes that have been treated using stabilization/amalgamation technologies. Energy*Solutions* 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 Energy*Solutions* Clive facility. At the time of disposal, the waste will be verified to have a mercury concentration less than 0.2 mg/L using the Toxicity Characteristic Leaching Procedure (TCLP) or less than 0.25 mg/L TCLP if the waste is a soil matrix. All actions will be performed in accordance with Energy*Solutions*' state-issued Part B Permit.

The D009 High Mercury-Organic Subcategory is described in the "Treatment Standards for Hazardous Waste" table in 40 CFR 268.40 (incorporated into UAC R315-268-40 by reference). The description is as follows:

> *Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain greater than or equal to 260 mg/kg total mercury that also contain organics and are not incinerator residues. (High Mercury-Organic Subcategory)*

Likewise, the D009 High Mercury-Inorganic Subcategory's description is as follows:

> *Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain greater than or equal to 260 mg/kg total mercury that are inorganic, including incinerator residues and residues from RMERC. (High Mercury-Inorganic Subcategory)*

The U151 hazardous waste code does not delineate between organic or inorganic; the description simply states the following:

> *U151 (mercury) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury.*

The listed treatment technology 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 need and justification for this action are as follows:

- The intent of the RMERC treatment technology 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.

- Both IMERC and RMERC are described in Table 1 of UAC R315-268-42. Both descriptions state that

  > *[A]ll wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories).*

  For RMERC, this treatment standard is explained as an additional D009 subcategory:

  > *[N]onwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain less than 260 mg/kg total mercury and that are residues from RMERC only.*

  The Land Disposal Restriction (LDR) treatment standard for this subcategory is 0.2 mg/L TCLP (or 0.25 mg/L TCLP alternative treatment standard for contaminated soil described in UAC R315-268-49). For IMERC, the ash and/or control equipment media will be a newly generated hazardous waste and would therefore be required to meet the LDR treatment standard for mercury of 0.2 mg/L. The disposal standard proposed by Energy*Solutions* meets the LDR TCLP concentration in a single step.

- 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 (US EPA) has issued a Determination of Equivalent Treatment (DET) for these High Mercury Subcategory wastes that were chemically stabilized. In the 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 that alternative treatment processes should be pursued. A copy of this letter is attached for reference.

- The US EPA has reviewed the treatment of mercury-bearing waste in 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.

- Energy*Solutions* has requested similar site-specific treatment variances (20 times) for High Mercury Subcategory waste in letters dated November 21, 2001; October 21, 2003; April 28, 2004; November 8, 2004; November 29, 2005; December 20, 2006; January 25, 2008; January 20, 2009; January 27, 2010; February 15, 2011; March 21, 2012; March 7, 2013; March 4, 2014; April 21, 2016; September 27, 2017, March 25, 2019; August 25, 2020; January 21, 2022; June 20, 2023; and July 10, 2024. These variance requests were approved on January 8, 2002; December 11, 2003; June 10, 2004; January 13, 2005; January 12, 2006; February 8, 2007; March 13, 2008; March 12, 2009; April 8, 2010; May 12, 2011; May 10, 2012; April 11, 2013; April 10, 2014; June 9, 2016; September 27, 2017; May 9, 2019; November 19, 2020; March 10th, 2022; September 14, 2023; and October 10, 2024 respectively.

- Over the past 24 years that this variance has been granted, Energy*Solutions* and generators have consistently been successful at treating high subcategory mercury to LDR compliant levels.

This variance request consists of waste that is expected to be disposed by Energy*Solutions* over the next year. To date, Energy*Solutions* has disposed of approximately ~22,100 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, Energy*Solutions* anticipates less than 2,500 cubic feet of additional High Mercury Subcategory waste for disposal in the next year under this treatment variance.

Energy*Solutions* requests that a variance be granted to allow the disposal of High Mercury Subcategory waste that has been treated either to the 0.2 mg/L TCLP standard for hazardous waste or the 0.25 mg/L TCLP standard for contaminated soil.

The name, phone number, and address of the person who should be contacted to notify Energy*Solutions* of decisions by the Director is:

Mr. Vern Rogers
Director, Regulatory Affairs
Energy*Solutions* LLC
299 South Main Street, Suite 1700
Salt Lake City, UT 84111
(801) 649-2000

Should there be any questions to this request, please contact me at (801) 649-2043.

Sincerely,

Digitally signed by Steve D. Gurr
Date: 2025.08.06 13:13:54 -06'00'

Steve D. Gurr
Environmental Engineer and Manager

enclosure

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Generator: Brookhaven National Laboratory JZH
Generator # / Waste Stream #: ~~8008-22~~ 2016-1
Waste Stream Name: BNL Treated Mercury Soil

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

Mr. George J. Malosh
U.S. Department of Energy
Brookhaven Group Building 464
Upton, NY 11973-5000

Dear Mr. Malosh:

EPA has reviewed your request for a determination of equivalent treatment as authorized by 40 CRF 268.40(b) for the mercury contaminated waste from your facility that will be the subject of treatability studies.

Based on the information provided in your application and conversations between your staff and mine, EPA is approving the request for a determination of equivalent treatment. EPA agrees that RMERC is not appropriate for this waste, due to the generation of elemental mercury that is contaminated with radioactive materials and that has no current use via recycling. Instead, the facility will need to meet a replacement concentration-based treatment standard for this waste, which is detailed in the enclosed determination. This standard does not replace any other applicable federal, state, or local requirements as specified in the facility's waste analysis plan. Additionally, all wastes subject to this determination must be disposed at a facility permitted to accepted the radioactive elements present in the waste following treatment.

Enclosed you will find our determination on your request. If you need further assistance, please contact John Austin. Waste Treatment Branch (703/308-0436).

Sincerely yours,

Elizabeth A.
Cotsworth, Acting
Director
Office of Solid
Waste

Enclosure

cc: Jim Thompson. OWPE
RCRA Hotline

Generator: Brookhaven National Laboratory
Generator # / Waste Stream #: ~~8000-29~~ 6646 C1
Waste Stream Name: BNL Treated Mercury Soil

Determination of Equivalent Treatment
40 CFR 268.42(b)
Notification of Acceptance

Notification Number: OSW-DE016-0698

Requesting Facility: Brookhaven National Laboratory

Facility Address: U. S. Department of Energy
Brookhaven Group Building 464
Upton, NY 11973-5000

EPA Facility ID #: NY7890008975

Facility Representatives: Gail Penny, Project Manager
(516)344-3229; Email: gpenny@bnl.gov

Glen Todzia, Project Engineer
(516)344-7488

Date of Request: July 1, 1998

Waste Description for Which Replacement Standard is Sought:

The subject wastes consist of (a) treatability samples totaling 4990 kg of RCRA characteristic mercury- and radioactive-contaminated soils and (b) an unspecified amount of residues and newly generated wastes resulting from multiple treatability studies on these samples. The treatability samples are soils that are mostly sand but contain some gravel. Approximately 5% of the treatability sample wastes consists of pieces of glass, metal, and plastic. A summary waste description is given in Table 1.

The subject waste soils were excavated in 1997 from a former land disposal area ("Chemical Holes Area") for miscellaneous laboratory wastes at Brookhaven National Laboratory, in Long Island. New York. The retrieval was performed as a CERCLA removal action. Segregation of the excavated waste into two waste streams was performed by sieving with a 2-inch sieve as the waste was excavated. Only materials that passed through the 2-inch sieve are the subject of the planned treatability studies.

Basis of Request:

The subject mercury-contaminated waste soils (above 260 ppm mercury) are also contaminated with low levels of radioactive materials. The LDR technology specific treatment standard for this waste is RMERC (retorting or roasting with recovery of the mercury for reuse). Retorting or

roasting of the waste is inappropriate because any mercury recovered would still be contaminated with radioactive materials, which would prohibit its recycle or reuse as elemental mercury. The

Table 1. Initial Waste Descriptions

Waste Container ID	Approximate Volume (yd3)	Approximate Weight (kg)	Total Mercury Concentration (mg/kg)	TCLP Mercury Concentration (mg/l)	Primary Mercury Species	Other RCRA Constituents that exceed TC Regulatory Levels or are Listed Wastes	Waste Description and Treatment/ Regulatory Subcategory	Assigned EPA Waste Code	Applicable LDR Treatment Standard
Bin 1	2	2495	6750	3 56	Elemental*	None Identified	Nonwastewater, High Mercury Subcategory*	D009	RMERC
Bin 2	2	2495	18,000	0 263	Elemental*	None Identified	Nonwastewater, High Mercury Subcategory*	D009	RMERC 1. Determine by visual inspection.

2. Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the extraction procedure (EP) in SW 846 Method 1310; and contain greater than or equal to 260 mg/kg total mercury that are inorganic, including residues from RMERC.

elemental mercury would therefore require further treatment (amalgamation) prior to its ultimate disposal. The subject wastes are proposed to be treated by a variety of methods as part of a treatability study to evaluate treatment options for other legacy wastes within the U. S. Department of Energy (DOE) complex.

DOE has requested a Determination of Equivalent Treatment for the treated treatability study samples and any newly generated >260 ppm Hg wastes that may result from these treatability studies (i.e., treatment residues). The proposed waste disposal location for the treatability study wastes that meet the assigned substitute treatment standard (and any other applicable LDR waste treatment standards) is the Envirocare of Utah, Clive, Utah, low level radioactive waste landfill. Alternatively, the DOE Hanford Site, Richland, Washington low level radioactive waste landfill

may be used. Other landfills that become available in the future and that meet all EPA and other agency requirements (e.g., NRC, DOE, or State) for disposal of such waste may also be considered. In the absence of the requested DET replacement standard, all treatment residues would have to be re-treated by retorting or roasting. Any recovered mercury would have to be amalgamated prior to disposal as low level radioactive waste.

EPA is requested to assign a replacement mercury treatment standard of 0.2 mg/kg TCLP to these treated treatability samples and any resulting newly generated treatment residues. The treated samples and newly generated wastes from the treatability study would still be required to meet applicable existing LDR treatment standards for underlying hazardous constituents other than mercury.

Previously Applicable Treatment Standard for Which Equivalency is Granted:

Waste codes of concern			Nonwastewater
D009	Non wastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the extraction procedure (EP) in SW846 Method 1310; and contain greater than or equal to 260 mg/kg total mercury that are inorganic, including incinerator residues from RMERC (High Mercury Inorganic Subcategory	Mercury	RMERC

Replacement Treatment Standards:

Waste codes of concern			Nonwastewater
D009	Non wastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the extraction procedure (EP) in SW846 Method 1310; and contain greater than or equal to 260 mg/kg total mercury that are inorganic, including	Mercury	0.20 mg/L TCLP

incinerator residues from RMERC (High Mercury Inorganic Subcategory

Compliance with these standards, as approved below, does not relieve the facility from compliance with any other applicable treatment standards associated with these wastes. This standard does not replace any other applicable federal, state, or local requirements as specified in the facility's waste analysis plan. Additionally, all wastes subject to this determination must be disposed at a facility permitted to accept the radioactive elements present in the waste.

Authorities and References:

A Determination of Equivalent Treatment is governed by 40 CFR 268.42(b), which states: "(b) Any person may submit an application to the Administrator demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in paragraphs (a), (c), and (d) of this section....The applicant must submit information demonstrating that his treatment method is in compliance with federal, state, and local requirements and is protective of human health and the environment. On the basis of such information and any other available information, the Administrator may approve the use of the alternative treatment method if he finds that the alternative treatment method provides a measure of performance equivalent to that achieved by methods specified in paragraphs (a), (c), and (d) of this section. Any approval must be stated in writing and may contain such provisions and conditions as the Administrator deems appropriate. The person to whom such approval is issued must comply with all limitations contained in such a determination."

The above provision was further clarified in the preamble for the Land Disposal Restriction for Third Third Scheduled Wastes: Final Rule. 55 FR at 22536, (June 1, 1990) as follows: "when EPA requires the use of a technology (or technologies), a generator or treater may demonstrate that an alternative treatment method can achieve the equivalent level of

performance as that of the specified treatment method [40 CFR 268.42(b)]. This demonstration is typically both waste-specific and site-specific and may be based on. (1) the development of a concentration based standard that utilized a surrogate or indicator compound that guarantees effective treatment of the hazardous constituents; (2) the development of a new analytical method for quantifying the hazardous constituents, and (3) other demonstrations of equivalence for an alternative method of treatment based on a statistical comparison of technologies, including a comparison of specific design and operating parameters."

Justification for the Equivalent Treatment Standard:

Generator: Brookhaven National Laboratory JCH
Generator # / Waste Stream #: ~~B008-22~~ 6-046 c1
Waste Stream Name: BNL Treated Mercury Soil

In the context of this treatability study situation, roasting or retorting and recovery of mercury (RMERC) from High Mercury-Inorganic nonwastewater wastes does not appear to be an appropriate treatment method if the wastes are also radioactive. This is because the recovered mercury is expected to be still classified as radioactive material and as such will not be recyclable but will require further treatment prior to its ultimate disposal. Therefore, the earlier recovery step appears not to serve a useful purpose in this particular mixed waste context, and would involve additional waste handling with the attendant concerns about potential exposure to radionuclides. The requested replacement standard for the limited quantity of waste to be subject to the treatability studies is the current LDR concentration-based treatment standard for Low Mercury-Inorganic nonwastewaters that have undergone RMERC, 0.20 mg/L TCLP. Therefore, the wastes will be subject to treatment standards equivalent to those for the residues of the RMERC process, but without having to first undergo a non-useful RMERC step. This is an appropriate measure of equivalent performance and is sufficiently protective of human health and the environment in this particular situation.

Based upon the information submitted, the factors identified above, and the conditions for treatment and disposal set out above, I have determined that the petition for Determination of Equivalent Treatment submitted by DOE on May 20, 1998 is hereby granted, effective upon my signature.

Dated:

Elizabeth A. Cotsworth, Acting Director
Office & Solid Waste

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Attachment I - Analytical Data for Wastes to be Subjected to the Treatability Studies

B-25 Container #1

Parameter	Concentration	
Mercury (total)		6750 mg/kg
Mercury (TCLP)		3.56 mg/L
Gross Alpha	4560 pCi/g	
Gross Beta	525 pCi/g	
Plutonium - 238		72.6 pCi/g
Plutonium - 239/240		19.7 pCi/g

Generator: Brookhaven National Laboratory
Generator # / Waste Stream #: [illegible]
Waste Stream Name: BNL Treated Mercury Soil

Americium - 241		7140 pCi/g
Strontium - 90		2.15 pCi/g

B-25 Container #2

Parameter	Concentration	
Mercury (total)		18,000 mg/kg
Mercury (TCLP)		0.263 mg/L
Gross Alpha	24.9 pCi/g	
Gross Beta	35 9 pCi/g	
Plutonium - 238		7.06 pCi/g
Plutonium - 239/240		5.87 pCi/g
Americium - 241		28.67 pCi/g
Strontium - 90		35.5 pCi/g

Attachment 2- DOE Description of Treatment Technologies to be Included in Treatability Studies

The DOE Mixed Waste Focus Area (MWFA) Mercury Contamination Product Line Mercury Working Group (HgWG) is sponsoring demonstrations of alternative advanced technologies for treating toxicity characteristic mixed waste containing more than 260 ppm total mercury concentrations to determine which technologies can produce stable products for disposal that are acceptably protective of human health and the environment. The initial wastes and the final waste forms are to be tested using TCLP to determine if the final waste forms are no longer toxicity characteristic hazardous waste, meet the applicable replacement LDR treatment standard for mercury, and meet any other LDR waste treatment standards determined to be applicable for this waste. Informational testing to provide additional data for use by EPA will also be conducted, including measurement of mercury vapor pressure over the final waste forms, and selected additional leaching tests to be determined in coordination with EPA Office of Solid Waste. EPA's contractor Professor David Kosson (Rutgers University), Brookhaven National Laboratory (BNL), and the MWFA/HgWG.

Mercury Stabilization

A BNL sulfur polymer cement process will be one of the mercury stabilization processes demonstrated.
Commercial vendors will also be contracted to perform stabilization demonstrations. These vendors will
be selected by the HgWG through an open bidding process. Each stabilization process will have been
previously demonstrated on wastes or surrogates with less than 260 ppm total mercury concentration.

Mercury Separation

A mercury separation technology may be included in the demonstration tests. A candidate process uses a
potassium iodide/iodine leaching solution to solubilize and remove mercury. The mercury is recovered
as elemental mercury and amalgamated for disposal. The extractants are recovered and recycled. This
process has already been demonstrated for mercury levels below 260 ppm.

Mercury Retort and Amalgamation

For comparison with the results of the advanced separation and stabilization technologies, an additional
treatability study will be performed using a mobile commercial vacuum retort unit to thermally desorb
mercury, The recovered mercury will be amalgamated for disposal. This will be the baseline technology
to satisfy the existing LDR treatment standard (RMERC) for High Mercury Inorganic Subcategory waste
and the amalgamation (AMALG) treatment standard for
radioactive elemental mercury waste. Amalgamation will be by commercially available processes or by
an advanced sulfur-polymer-cement process developed and used at BNL.