State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

L. Scott Baird
Executive Director

DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL
Ty L. Howard
Director

A meeting of the Waste Management and Radiation Control Board has been scheduled for
March 12, 2020 at 1:30 p.m.
This will be a telephonic meeting held in accordance with the Utah Open and Public Meetings Act.

The anchor location for this Board meeting will be at the Utah Department of Environmental Quality, (Multi-Agency State Office Building) Red Rocks Conference Room #3132, 195 North 1950 West, SLC.

One or more Board members may participate telephonically.
General Public Audio Conferencing Access Number: 1-877-820-7831
Passcode Number: 853610#

AGENDA

I. Call to Order.

II. Public Comments on Agenda Items.

III. Declarations of Conflict of Interest.

IV. Approval of Meeting Minutes for the February 13, 2020 Board Meeting ..... Tab 1 (**Board Action Item**).

V. Underground Storage Tanks Update ..... Tab 2

VI. X-Ray Program ..... Tab 3

A. Approval of Mammography Imaging Medical Physicists (MIMP) in accordance with UCA 19-6-104(2)(b) (**Board Action Item**).

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

A. Energy*Solutions* request for a site-specific treatment variance from the Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to receive high concentration arsenic waste for disposal (**Board Action Item**).

B. Energy*Solutions* request for a site-specific treatment variance from the Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to receive Cemented Uranium Extraction Process Residues for disposal (**Board Action Item**).

C. Energy*Solutions* request for a site-specific treatment variance from the Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to receive magnesium/thorium dross for disposal (**Board Action Item**).

(Over)

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VIII. Hazardous Waste Section ..... Tab 5

A. Proposed Stipulation and Consent Order between the Board and Tooele Army Depot South Area (Information Item Only).

IX. Other Business.

A. Director's Report.
B. Miscellaneous Information Items.
C. Scheduling of next Board meeting (April 9, 2020).

X. 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
Utah Department of Environmental Quality
195 North 1950 West (Conference Room #1015)
February 13, 2020
1:30 p.m.

Board Members Present: Brett Mickelson (Chair), Dennis Riding (Vice-Chair), Scott Baird, Marc Franc, Jeremy Hawk, Steve McIff, Shawn Milne, Nathan Rich, Vern Rogers and Shane Whitney

Board Members Participating Telephonically: Danielle Endres and Richard Codell
Others Participating Telephonically: Joni Fable

Board Members Absent/Excused: None

Staff Members Present: Ty Howard, Brent Everett, Thomas Ball, Larry Kellum, Deborah Ng, Arlene Lovato, Rusty Lundberg, Bret Randall, Alma Rosas, Elisa Smith, Don Verbica, Raymond Wixom and Otis Willoughby

Others Present: David Cronshaw, Linda Ebert, Tim Orton, Brent Robinson, Dan Shrum and Dwayne Woolley

I. Call to Order.
II. Public Comments on Agenda Items.
III. Declarations of Conflict of Interest.

IV. Approval of Meeting Minutes for the November 14, 2019 Board Meeting (Board Action Item).

It was moved by Dennis Riding and seconded by Shane Whitney and UNANIMOULSY CARRIED to approve the November 14, 2019, 2019 Board Meeting minutes.

V. Underground 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) Trust Fund at the end of December 2019 was $15,542,604.00. The preliminary estimate for the cash balance of the PST Trust Fund for the end of January 2020 is $15,808,825.00. The PST Trust Fund is managed on a cash balance basis to ensure sufficient coverage for known claims that have been reported. The balance of the PST Trust Fund is watched closely to ensure sufficient coverage for covered releases. The PST Trust Fund Actuarial Report has been provided to the Board. There were no comments or questions.

Mr. Everett informed the Board that the reauthorization of the Hazardous Substance Mitigation Act (HSMA) has gone before the legislature this year. HSMA funds are used to respond to incidents such as the vapor issues encountered in Layton last year. The HSMA reauthorization for 10 years has passed in both the House and the Senate and is awaiting the Governor's signature.

Mr. Everett informed the Board that the Division of Administrative Rules (DAR) has asked the DERR to update the format of the underground storage tank (UST) program rules. The UST rules have been in place since about 1988. As they have been updated, the DERR has been able to maintain the historical format and have that format grandfathered in. Because the reformatting is a non-substantive change, the DERR will proceed with these changes and inform the Board once the formatting has been completed.

VI. Administrative Rules.

A. Approval to proceed with formal rulemaking and a 30-day public comment period on proposed rule changes to R315-260, R315-262, R315-263, R315-264, and R315-265 of the hazardous waste rules to incorporate federal regulatory changes promulgated by the Environmental Protection Agency (EPA) and published in the Federal Register on January 3, 2018 (83 FR 420) (Board Action Item).

Tom Ball, Planning & Technical Support Section Manager reviewed the request for the Board to approve to proceed with formal rulemaking and public comment on proposed changes to R315-260, R315-262, R315-263, R315- 264, and R315-265 of the hazardous waste rules to incorporate federal regulatory changes promulgated by the Environmental Protection Agency (EPA) and published in the Federal Register on January 3, 2018 (83 FR 420).

In September of 2012, the US Congress passed legislation directing EPA to establish an e-Manifest (electronic manifest) system. The bill was signed into law in October of 2012. The EPA has implemented this law in two rulemakings. The first rulemaking was published in the Federal Register on February 7, 2014 (79 FR 7518) and has already been adopted into R315 of the Utah Administrative Code. The issue before the Board is the second rulemaking as discussed above. This rule contains a schedule of user fees to cover EPA's cost of building and running the e-Manifest system and e-Manifest program. The rule announced the date when the system became active, June 30, 2018, and EPA began to accept e-manifests. The rule addresses which users of manifests will be charged fees and when those fees will be charged. The rule also contains the fee formula. Many of the requirements in this rule can only be administered and enforced by EPA. Those that are not solely administered and enforced by EPA were promulgated under the authority of Section 2(g)(3) of the e-Manifest Act. This authority is similar to Section 3006(g) of RCRA which provides that EPA shall carry out regulations promulgated under the Act in each state unless the state program is fully authorized to carry out such regulations in lieu of EPA. The State of Utah is a fully authorized state. However; because the hazardous waste manifest is an area subject to special program consistency considerations and section 2(g)(3) of the e-Manifest Act requires that all federal requirements promulgated under e-Manifest Act authority be given consistent effect in all states, authorized State programs are still required to adopt the e-Manifest provisions into their rules in order to maintain equivalency with the Federal program. The purpose of this change is to adopt the appropriate revisions into R315 of the Utah Administrative Code.

As part of the Divisions on-going efforts to adopt the necessary sections of 40 CFR 265 into R315-265 instead of incorporating them all by reference, R315-265-1030 through 1035 and

R315-265-1080 through 1090 are being adopted into R315-265 with this rulemaking because they were referenced by rules being revised or were being revised themselves by this rulemaking. The proposed changes to R315-260, 262, 263, 264, and 265 were included in the February 13, 2020 Board packet.

The Board is authorized under Subsection 19-6-105(1)(c) to make rules governing generators and transporters of hazardous waste and owners and operators of hazardous waste treatment, storage and disposal facilities. The rule changes also meet existing DEQ and state rulemaking procedures.

The Director recommends the Board approve proceeding with formal rulemaking by publishing in the March 1, 2020, Utah State Bulletin the proposed changes to UAC R315-260, 262, 263, 264, and 265 and conducting a public comment period from March 1, 2020 to March 31, 2020.

It was motioned by Shawn Milne and seconded by Vern Rogers and UNANIMOUSLY CARRIED to approve to proceed with formal rulemaking and a 30-day public comment period on proposed rule changes to R315-260, R315-262, R315-263, R315-264, and R315-265 of the hazardous waste rules to incorporate federal regulatory changes promulgated by the Environmental Protection Agency (EPA) and published in the Federal Register on January 3, 2018 (83 FR 420).

B. Approval to proceed with formal rulemaking and a 30-day public comment period on a proposed rule change to R315-15-14 of the rules for management of used oil clarifying the type of documents that DIYer collection centers must submit in order to qualify for the reimbursement (Board Action Item).

Tom Ball, Planning & Technical Support Section Manager reviewed the request for the Boards approval to proceed with formal rulemaking and public comment on a proposed change to R315-15-14 of the rules for management of used oil clarifying the type of documents that DIYer collection centers must submit in order to qualify for the reimbursement.

R315-15-14.2(a) currently requires DIYer collection centers to submit a copy of all records of used oil collected during the collection period for which they are seeking reimbursement. Many of the copies being received by the Division are poor quality, or are photographs taken with a mobile device, that are difficult to read. The poor quality and readability of the copies is making it difficult for the Division to process reimbursements in a timely manner. Additionally, photographs of documents cannot be used as legal documentation for audit purposes. In order to solve these problems the rule is being changed to require the submission of either original documents or legible copies. The amendment also clarifies that photographs of documents are not acceptable. The proposed changes to R315-15-14 follow this Executive Summary.

The Board is authorized under Subsection 19-6-704(1) to make rules necessary to administer the used oil program. The rule changes also meet existing DEQ and state rulemaking procedures.

The Director recommends the Board approve proceeding with formal rulemaking by publishing in the March 1, 2020, Utah State Bulletin the proposed changes to UAC R315-15-14 and conducting a public comment period from March 1 to March 31, 2020.

A brief discussion was held regarding submitting "scanned" and photograph documentation to the Division. Tom Ball clarified that a scanned document is acceptable and further stated that documents being submitted just need to be "legible/readable" but cannot be a photograph. Board members expressed concern that if a "photograph" is legible it should be allowed to be submitted, as banks now accept photographs for checks to be deposited, as well as the court systems now accepts photographs, etc. Tom clarified that State Finance does not allow photographs; for auditing purposes it is not considered a legal document.

It was motioned by Nathan Rich and seconded by Steve McIff and UNANIMOUSLY CARRIED to approve to proceed with formal rulemaking and a 30-day public comment period on a proposed rule change to R315-15-14 of the rules for management of used oil clarifying the type of documents that DIYer collection centers must submit in order to qualify for the reimbursement.

C. Approval to proceed with formal rulemaking and a 30-day public comment period on a proposed rule change to R313-16-293 of the radiation control rules to clarify the rule regarding who must submit x-ray equipment inspection reports to the Director (Board Action Item).

Tom Ball, Planning & Technical Support Section Manager reviewed the request for the Board to approve to proceed with formal rulemaking and public comment on a proposed change to R313-16-293 of the radiation control rules to clarify the rule regarding who must submit x-ray equipment inspection reports to the Director.

Utah Administrative Code R313-16-293(2)(h) currently states that qualified experts must attest that they or the registrant will submit to the Director, a written report within 30 days of the completion of an inspection. Recent events have brought to the attention of the Division of Waste Management and Radiation Control that this wording is confusing and is causing problems by not clearly defining who is required to submit inspection reports to the Director. This confusion is causing the Division problems and delays in meeting its regulatory obligations in regards to the x-ray inspection program.

The proposed amendment to the rule will make it clear that the qualified experts are required to submit reports of the inspections they conduct to the Director and will eliminate the option of having the registrant submit the report. The proposed changes to R313-16-293 was included in the February 13, 2020 Board packet.

Once the rule becomes effective, a letter will be sent to the approximately 60 qualified experts notifying them of the rule change and reminding them of their obligations under the rule. The letter will also inform them that the Director has the authority to revoke their certifications for failure to meet their regulatory obligations.

The Board is authorized under Subsection 19-6-104 to make rules that are necessary to implement the provision of the Radiation Control Act. The rule changes also meet existing DEQ and state rulemaking procedures.

The Director recommends the Board approve proceeding with formal rulemaking by publishing in the March 1, 2020, Utah State Bulletin the proposed changes to UAC R313-16-293 and conducting a public comment period from March 1 to March 31, 2020.

Tom Ball noted that in the February 13, 2020 Board's Executive Summary (lower section) it stated an incorrect rule R315-15-14 instead of the correct rule R313-16-293.

It was motioned by Mark Franc and seconded by Shane Whitney and UNANIMOUSLY CARRIED to approve to proceed with formal rulemaking and a 30-day public comment period on a proposed rule change to R313-16-293 of the radiation control rules to clarify the rule regarding who must submit x-ray equipment inspection reports to the Director.

D. Request for approval for final adoption of the rule changes to R313-15-1006, R313-19-100, and R313-36-3 of the radiation control rules, as published in the December 1, 2019 issue of the Utah State Bulletin. The rule changes incorporate regulatory corrections promulgated by the Nuclear Regulatory Commission and published in the December 1, 2015 (80 FR 74974), November 15, 2017 (82 FR 52823), June 28, 2018 (83 FR 30285), and November 21, 2018 (83 FR 58721) issues of the Federal Register. (Board Action Item).

Rusty Lundberg, Deputy Director of the Division of Waste Management and Radiation Control reviewed the request for final adoption by the Board of changes to R313-15-1006, Transfer for Disposal and Manifests; R313-19-100, Transportation; and R313-36-3, Clarifications or Exceptions of the radiation control rules to incorporate federal regulatory changes promulgated by the Nuclear Regulatory Commission (NRC) and published in the Federal Register on December 1, 2015 (80 FR 74974), November 15, 2017 (82 FR 52823), June 28, 2018 (83 FR 30285), and November 21, 2018 (83 FR 58721).

The proposed changes affect the following sections of the radiation control rules that incorporate by reference the selected sections of the noted parts of the federal radiation control regulations of 10 CFR: R313-15-1006 incorporates Appendix G of 10 CFR Part 20; R313-19-100 incorporates selected sections of 10 CFR Part 71; and R313-36-3 incorporates selected sections of 10 CFR Part 34. The proposed changes update the incorporation-by-reference dates in each of the noted rules. By updating these dates, the minor corrections made by the NRC in the above referenced Federal Registers are incorporated into the state radiation control rules. 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. While the proposed changes are minor in nature, the NRC designated the changes as necessary for an Agreement State to adopt in order to maintain regulatory compatibility with the NRC. At its November 14, 2019 meeting, the Board approved the proposed changes to be filed and published in the Utah State Bulletin, initiating formal rulemaking and a public comment period. The proposed rule changes were published in the December 1, 2019 issue of the Utah State Bulletin. (The Board's February 13, 2020 Board packet provide a copy of the pertinent pages of that issue.) The public comment period concluded on December 31, 2019. No comments were received.

The Board is authorized under Subsection 19-3-104(4)(b) to make rules to meet the requirements of federal law and maintain primacy of the radioactive materials program from the federal government and under Subsection 19-6- 104(1) to make rules necessary to implement the Radiation Control Act. The proposed rule changes also meet existing DEQ and state rulemaking procedures.

Board action is required for final adoption of the rule changes published in the December 1, 2019, issue of the Utah State Bulletin and to set an effective date of February 14, 2020.

The Director recommends that the Board adopt the rule changes as published in the December 1, 2019 issue of the Utah State Bulletin and set an effective date of February 14, 2020.

Nathan Rich stated concerns with accessing information in the Utah State Bulletin. Mr. Rich stated that one reason no public comments are being received is because the proposed rules cannot be found, etc. and encouraged staff to replace the information with some type of detailed table of content. Mr. Lundberg stated they will look into other options to ensure this information is available, possibly through a bookmark, etc. Scott Baird stated that this matter is bigger than the DEQ, as the Department of Administrative Rules controls this information, but the DEQ will make every effort to make the information more accessible.

It was motioned by Vern Rogers and seconded by Jeremy Hawk and UNANIMOUSLY CARRIED to approve for final adoption the proposed rule changes to R313-15-1006, R313-19-100, and R313-36-3 of the radiation control rules, as published in the December 1, 2019 issue of the Utah State Bulletin and set an effective date of February 14, 2020.

VII. Low-Level Radioactive Waste.

A. Energy*Solutions* request for a site-specific treatment variance from the Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to receive high concentration arsenic waste for disposal (Information Item Only).

Otis Willoughby, Environmental Scientist, Low-Level Radioactive Waste Section and Tim Orton, Energy*Solutions* representative, reviewed Energy*Solutions'* request submitted on December 10, 2019, 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 Rules. Energy*Solutions* seeks authorization to receive high concentration arsenic waste for disposal.

Mr. Orton stated that the Mixed Waste Facility proposes to receive approximately 150 cubic feet of Natural Gas Sweetener Filter Media. This material retains hazardous waste codes for high concentrations of arsenic along with cadmium and benzene. Treatability tests of a similar waste were unsuccessful in reducing the arsenic to required levels. Energy*Solutions* proposes to treat this waste for all contaminants except arsenic by stabilization. Following stabilization, the residue will be encapsulated using the facility's permitted Macroencapsulation process. This treatment will encapsulate the waste and protect it from contact with precipitation, thereby eliminating the potential of leaching.

A notice for public comment was published in the Salt Lake Tribune, the Deseret News and the Tooele County Transcript Bulletin on January 7, 2020. The comment period began January 8, 2020 and ended on February 7, 2020. No comments were received.

This is an informational item before the Board. The Director will provide a recommendation following the public comment period at the next Board meeting.

B. Energy*Solutions* request for a site-specific treatment variance from the Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to receive Cemented Uranium Extraction Process Residues for disposal (Information Item Only)

Otis Willoughby, Environmental Scientist, Low-Level Radioactive Waste Section and Tim Orton, Energy*Solutions* representative, reviewed Energy*Solutions*' request submitted on December 10, 2020 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 Rules. Energy*Solutions* seeks authorization to receive Cemented Uranium Extraction Process Residues for disposal. Mr. Orton stated this is approximately the 11th time this variance request has been requested.

This variance is being requested for approximately 1,000 cubic feet of cemented uranium extraction process residuals from Energy*Solutions* generator 9061-06. The waste is generated as part of a uranium recovery process that involves creating an enriched uranium contaminated ash through a thermal process and then recovering the enriched uranium through an organic solvent extraction process. The residual waste from this extraction system is collected in small cans (~2 ½ gallons each) and stored at the generator's facility. The process residuals within these cans are in the form of an ash generated through this process. This material retains hazardous waste codes for barium, cadmium, chromium, lead, and spent solvents. The generator has encapsulated the waste in concrete for security reasons. Energy*Solutions* proposes to receive this waste for macroencapsulation in the Mixed Waste Landfill Cell rather than chemical stabilization, as required. This request is based on the fact that the waste has already been encapsulated in concrete at the generator's site. Treating this waste by the required method would mean grinding the waste and potentially exposing workers to unnecessary contamination. The proposed treatment will further encapsulate the waste and protect it from contact with precipitation, thereby eliminating the potential of leaching.

A notice for public comment was published in the Salt Lake Tribune, the Deseret News and the Tooele County Transcript Bulletin on January 7, 2020. The comment period began January 8, 2020 and ended on February 7, 2020. No comments were received.

This is an informational item before the Board. The Director will provide a recommendation following the public comment period at the next Board meeting.

C. Energy*Solutions* request for a site-specific treatment variance from the Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to receive magnesium/thorium dross for disposal (Information Item Only).

Otis Willoughby, Environmental Scientist, Low-Level Radioactive Waste Section and Tim Orton, Energy*Solutions* representative, reviewed Energy*Solutions*' request submitted on December 10, 2020 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 Rules. Energy*Solutions* seeks authorization to receive magnesium/thorium dross for disposal.

Mr. Orton stated that the Mixed Waste Facility proposes to receive approximately 700 cubic feet of magnesium/thorium dross. This material retains hazardous waste codes for high concentrations of barium. The treatment standard for barium requires stabilization to a concentration of 21mg/L. Generation of the dross has created a waste comprised of hard, disk-like metal pieces. Stabilization of this material would not be viable. Energy*Solutions* proposes to receive this waste for macroencapsulation in the Mixed Waste Landfill Cell rather than chemical stabilization, as required. This request is based on the fact that the waste does not lend itself to stabilization treatment. The facility proposes to encapsulate the waste using its permitted Macroencapsulation process. This treatment will encapsulate the waste and protect it from contact with precipitation, thereby eliminating the potential of leaching. A notice for public comment was published in the Salt Lake

Tribune, the Deseret News and the Tooele County Transcript Bulletin on January 7, 2020. The comment period began January 8, 2020 and ended on February 7, 2020. No comments were received.

This is an informational item before the Board. The Director will provide a recommendation following the public comment period at the next Board meeting.

VIII. Other Business.

A. Director's Report.

Ty Howard reviewed legislation introduced during the 2020 Legislative session that could impact the Division of Waste Management and Radiation Control. (A copy of this information is included with the meeting minutes).

H.B. 5 Natural Resources, Agriculture, and Environmental Quality Base Budget (Rep. Barlow)
This bill authorizes the base budget for and appropriates funding to certain state agencies, including the Department of Environmental Quality and the Division of Waste Management and Radiation Control, for the fiscal year beginning July 1, 2020 and ending June 30, 2021. STATUS: Passed both the House and the Senate.

H.B. 8 State Agency Fees and Internal Service Fund Rate (Rep. J. Moss)
This bill authorizes certain state agency fees and internal service fund rates, including DEQ's and the Division of Waste Management and Radiation Control's fee schedule for the fiscal year beginning July 1, 2020 and ending June 30, 2021. STATUS: Sent to House Rules Committee

H.B. 27 Waste Tire Recycling Amendments (Rep. Chew)
This bill modifies definitions related to waste tire piles by reducing the number of tires that make up a waste tire pile from 1,000 to 200; Increases the number of whole waste tires a person may transfer at one time to a landfill or any other location in the state authorized by the Director to receive waste tires from four to 12; and, Addresses the storage of whole waste tires and extends the relevant sunset date to July 1, 2030. STATUS: Passed House, Assigned to Senate Natural Resources, Agriculture, and Environment Committee

H.B. 233 Natural Resources Legacy Funding Amendments (Rep. Snider)
This bill enacts the Utah Natural Resources Legacy Fund Act; Creates the Utah Natural Resources Legacy Fund and the Utah Natural Resources Legacy Fund Board; Outlines the uses of the legacy fund; and Modifies the Radioactive Waste Facility Tax Act so that it provides funding to the legacy fund if concentrated depleted uranium is ever disposed in Utah. Currently all taxes collected by the Radioactive Waste Facility Tax Act go to the Uniform School Fund. If this bill passes and concentrated depleted uranium is disposed of in Utah, $7 per cubic foot will be collected and deposited into the newly created Utah Natural Resources Legacy Fund.
STATUS: Assigned to House Natural Resources, Agriculture, and Environment Committee

S.B. 20 Hazardous Substances Mitigation Act Sunset Extension (Sen. Okerlund)
This bill extends the repeal date for the Hazardous Substances Mitigation Act to 2030.
NOTE: This act establishes the Hazardous Substances Mitigation Fund. This fund can be used by the Executive Director of DEQ to: (a) take emergency action as provided by this act; (b) conduct remedial investigations as provided by this act; (c) pay the amount required by the federal

government as the state's portion of the cost of cleanups under authority of CERCLA, as appropriated by the Legislature for that purpose; and (d) pay the amount required by the federal government as the state's portion of the cost of cleanups under 42 U.S.C. 6991 et seq., the Leaking Underground Storage Tank Trust Fund, as appropriated by the Legislature for that purpose. STATUS: Passed both the Senate and House

S.B. 29 Drug Disposal Program (Sen. Thatcher)
This bill creates a program, administered by the attorney general, for the disposal of prescription and over-the-counter drugs; Requires the attorney general to work with law enforcement, pharmacies, and other entities to establish a statewide network of drug disposal repositories or for the distribution of home drug disposal receptacles; Describes the requirements for a drug disposal repository and a home drug disposal receptacle; Requires that the program comply with Drug Enforcement Administration requirements; Requires the attorney general to publish a list of drug disposal repositories or information on obtaining a home drug disposal receptacle; Creates a restricted account to assist with the purchase, operation, or maintenance of a repository or the purchase or distribution of home drug disposal receptacles; Preempts certain action by other state and local government entities in relation to the program. NOTE: This bill has some potential conflicts with the hazardous waste pharmaceuticals rule finalized by EPA in Feb. of 2019 that is scheduled to be adopted in Utah this year. STATUS: Assigned to Senate Judiciary, Law Enforcement, and Criminal Justice Committee

S.B. 60 (1st Substitute) Advice and Consent Amendments (Sen. Mayne)
This bill amends provisions relating to the Senate's advice and consent for gubernatorial nominees; Modifies deadlines, and the information provided by the governor, with respect to non-judicial gubernatorial nominees; requires a Senate confirmation hearing, and provides an exception to a deadline waiver provision, for certain nominees; Requires notice of anticipated vacancies in offices that require Senate consent; Provides a process for government entities and other organizations to provide input on gubernatorial appointments; Requires a judicial nominating commission to provide the list of nominees to the Senate at the time it provides the list to the governor; and amends provisions requiring Senate consent to also require Senate advice.

This bill applies to nominations and confirmations of members of the Waste Management and Radiation Control Board as well as the other three environmental boards and the Executive Director of DEQ. STATUS: Senate 2nd Reading Calendar (Passed Senate Govt. Operations and Political Subdivisions Committee with favorable recommendation)

S.B. 62 Reauthorization of Administrative Rules (Sen. Anderegg)
This bill reauthorizes all state agency administrative rules, as required by the Utah Administrative Rulemaking Act. STATUS: Passed Senate, Sent to House Rules Committee

S.B. 82 Unlawful Drug Disposal Amendments (Sen. Thatcher)
This bill makes it unlawful to dispose of a drug in a drain, sewage system, the waters of the state, or a landfill; Provides for a civil penalty of up to $10,000 for violating the law; and, Creates a restricted account to educate citizens on the requirements of this bill and the lawful methods of disposing of drugs. For purposes of the bill, a drug is defined as: a substance recognized in the official United States Pharmacopoeia, official Homeopathic Pharmacopoeia of the United States, or official National Formulary, or any supplement to any of them, intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in humans or animals; a substance that is required by any applicable federal or state law or rule to be dispensed by prescription only or is restricted to

administration by practitioners only; a substance, other than food, intended to affect the structure or any function of the body of humans or other animals; or a substance intended for use as a component of any substance described above, but does include a dietary supplement. STATUS: Assigned to Senate Judiciary, Law Enforcement, and Criminal Justice Committee

S.B. 88 Environmental Quality Revisions (Sen. Okerlund)
This bill addresses fees throughout the Environmental Quality Code and a dedicated credit for the Division of Air Quality; Requires that a person that operates a source of air pollution to have a permit under certain circumstances; Provides for authority and duties of the Waste Management and Radiation Control Board (Radiation Control Act); Provides for the powers and duties of the Director of the Division of Waste Management and Radiation Control (Radiation Control Act); Amends provisions related to powers of the Drinking Water Board; Amends provisions related to the authority of the Director of the Division of Drinking Water; Addresses violations of the Safe Drinking Water Act or rules or orders issued under that act; Addresses source and storage minimum sizing requirements for public water systems; Modifies definitions under the Water Quality Act; Clarifies powers and duties of the Water Quality Board; Provides for legislative review of total maximum daily load, rules, and standards; Modifies rules related to a penalty imposed on an agriculture discharge; Allows for discharge permits to be renewed; Addresses limitations on effluent limitations standards; Modifies definitions related to the Solid and Hazardous Waste Act; Addresses the powers of the Waste Management and Radiation Control Board, including rulemaking, modifies provisions related to the Director of the Division of Waste Management and Radiation Control; Addresses violations related to used oil management; Addresses proof of service and allows a designee of the Executive Director to issue enforceable written assurances. STATUS: Passed Senate, Sent to House Rules Committee

S.B. 101 Construction or Demolition Materials (Sen. Escamilla)
This bill requires the Department of Environmental Quality to develop by December 31, 2020, one or more model ordinances that a municipality may adopt to require: diversion rate of 50% to 75 % for construction or demolition (C&D) materials; and percentage of reuse of C&D materials of 10% by weight. During the development of the model ordinance(s), DEQ is to consult with: the League of Cities and Towns; the Utah Association of Counties; private and public waste services; and, building construction and management personnel. STATUS: Assigned to Senate Business and Labor Committee

B. Miscellaneous Information Items. – None to Report.
C. Scheduling of next Board meeting (March 12, 2020).

The next Board meeting was scheduled at 1:30 pm on March 12, 2020 at the Utah Department of Environmental Quality, (MASOB Bldg.), located at 195 North 1950 West, SLC.

IX. Adjourn.
The meeting adjourned at 2:20 pm.

UST STATISTICAL SUMMARY

February 1, 2019 -- January 31, 2020

PROGRAM

	February	March	April	May	June	July	August	September	October	November	December	January	(+/-) OR Total
Regulated Tanks	4,067	4,071	4,071	4,075	4,084	4,083	4,098	4,093	4,092	4,089	4,081	4,090	**23**
Tanks with Certificate of Compliance	3,998	4,000	4,004	4,005	4,009	4,006	4,022	3,994	3,996	3,997	3,986	3,982	**(16)**
Tanks without COC	69	71	67	70	75	77	76	99	96	92	95	108	**39**
Cumulative Facilitlies with Registered A Operators	1,300	1,298	1,297	1,297	1,298	1,297	1,296	1,293	1,291	1,292	1,292	1,290	**97.29%**
Cumulative Facilitlies with Registered B Operators	1,302	1,300	1,298	1,297	1,298	1,297	1,296	1,293	1,291	1,292	1,292	1,290	**97.29%**
New LUST Sites	4	3	4	5	4	1	5	6	14	9	6	6	**67**
Closed LUST Sites	4	2	3	11	2	10	3	2	5	5	3	5	**55**
Cumulative Closed LUST Sites	5209	5212	5215	5226	5228	5240	5243	5245	5255	5261	5264	5270	**61**

FINANCIAL

	February	March	April	May	June	July	August	September	October	November	December	January	(+/-)
Tanks on PST Fund	2,689	2,687	2,694	2,692	2,692	2,689	2,696	2,675	2,663	2,661	2,647	2,636	**(53)**
PST Claims (Cumulative)	690	690	692	692	692	672	673	673	672	672	673	673	**(17)**
Equity Balance	-$11,795,381	-$12,311,881	-$12,373,863	-$11,754,675	-$11,876,207	-$11,102,850	-$10,785,760	-$10,680,862	-$10,323,368	-$10,502,116	-$10,575,676	-$10,309,455	**$1,485,926**
Cash Balance	$14,342,630	$13,826,130	$13,764,148	$14,383,336	$14,261,804	$15,035,161	$15,352,251	$15,457,149	$15,794,912	$15,616,114	$15,542,604	$15,808,825	**$1,466,195**
Loans	2	0	0	1	2	0	1	0	0	0	0	0	**-2**
Cumulative Loans	117	117	117	118	120	120	121	121	121	121	121	121	**4**
Cumulative Amount	$4,317,727	$4,317,727	$4,317,727	$4,617,727	$4,732,507	$4,732,507	$4,738,367	$4,738,367	$4,738,367	$4,738,367	$4,738,367	$4,738,367	**$420,640**
Defaults/Amount	1	1	1	2	1	1	1	1	1	1	1	1	**0**

	February	March	April	May	June	July	August	September	October	November	December	January	TOTAL
Speed Memos	16	28	63	49	21	22	18	28	40	40	25	136	**486**
Compliance Letters	4	10	2	3	2	12	3	0	17	19	2	22	**96**
Notice of Intent to Revoke	0	0	0	0	0	0	0	0	0	0	0	1	**1**
Orders	1	0	2	0	2	1	0	0	0	4	3	0	**13**

WASTE MANAGEMENT AND RADIATION CONTROL BOARD
Executive Summary
Approval of Mammography Imaging Medical Physicists
March 12, 2020

What is the issue before the Board?	Approval of qualified Mammography Imaging Medical Physicists
What is the historical background or context for this issue?	Individuals referred to as Mammography Imaging Medical Physicists (MIMP) must submit an application for review of qualifications to be certified by the Board. These physicists perform radiation surveys and evaluate the quality control programs of the facilities in Utah providing mammography examinations. Typically this is done annually in May because the certification year runs from June 1 to May 31st. Occasionally we receive new applications during the year that need to be approved before the May Board meeting. A new application has been received from Jeremy Mangum, MS to be certified as a MIMP. Division staff has reviewed the applicant's qualifications and he meets the requirements detailed in R313-28-140.
What is the governing statutory or regulatory citation?	In accordance with Subsection 19-6-104(2)(b) of the Utah Code Annotated, the Board shall review the qualifications of, and issue certificates of approval to, individuals who: (i) survey mammography equipment; or (ii) oversee quality assurance practices at mammography facilities.
Is Board action required?	Yes.
What is the Division Director's recommendation?	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.
Where can more information be obtained?	Please contact Lisa Mechem, DVM, at (801) 536-4286.

WASTE MANAGEMENT AND RADIATION CONTROL BOARD
Executive Summary
REQUEST FOR A SITE-SPECIFIC TREATMENT VARIANCE
Energy*Solutions*, LLC
March 12, 2020

What is the issue before the Board?	On December 10, 2019, 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 the Utah Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to receive, treat and dispose of high concentration arsenic waste.
What is the historical background or context for this issue?	The Mixed Waste Facility proposes to receive approximately 150 cubic feet of Natural Gas Sweetner Filter Media. This material retains hazardous waste codes for high concentrations of arsenic along with cadmium and benzene. Treatability tests of a similar waste were unsuccessful in reducing the arsenic to required levels. Energy*Solutions* proposes to treat this waste for all contaminants except arsenic. Following stabilization, the residue will be encapsulated using the facility's permitted Macroencapsulation process. This treatment will encapsulate the waste and protect it from contact with precipitation, thereby eliminating the potential of leaching. The Board has approved one similar variance request in the past. A notice for public comment was published in the *Salt Lake Tribune*, the *Deseret News* and the *Tooele County Transcript Bulletin* on January 7, 2020. The comment period began January 8, 2020 and ended February 7, 2020. No comments were received.
What is the governing statutory or regulatory citation?	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.
Is Board action required?	Yes, this is an action item before the Board.
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 Otis Willoughby (801) 536-0220. For legal questions, please contact Bret Randall at (801) 536-0284.

DSHW-2020-003348
Attachment: DSHW-2019-017041

DSHW-2019-017041

Div of Waste Management and Radiation Control

DEC 10 2019

December 9, 2019 CD19-0239

Mr. Ty Howard
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
High Concentration Arsenic Waste

Dear Mr. Howard:

Energy*Solutions* herein requests an exemption from Utah Administrative Code (UAC) R315-268-40(a)(3) for waste that contains high concentrations of arsenic (greater than 1,000 mg/L) that cannot be treated to the specified treatment standard. 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)(1) It is not physically possible to treat the waste to the level specified in the treatment standard.*

Energy*Solutions* requests approval to stabilize, macroencapsulate and dispose of approximately 150 cubic feet of Natural Gas Sweetner Filter Media (clay pellets) that will be characteristically hazardous for arsenic (D004), cadmium (D006), and benzene (D018). The stabilization treatment process will meet Universal Treatment Standards (described in R315-268) for all contaminants except arsenic. All actions requested in this variance will be performed in accordance with Energy*Solutions*' state-issued Part B Permit.

Similar waste from the same generator was received at the Clive Facility in 2015. Analysis of a sample of that waste detected arsenic at 69,700 mg/L in the aqueous liquid phase (a small portion of the waste) 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 reagents 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.

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 finely grained soil-like material; the filter media of this waste stream is physically different in that it is coarse clay pellets. In this media, it is much more difficult for intimate reagent-waste contact to treat the high concentration arsenic down to the treatment standard. 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.

As an alternative to chemical treatment of arsenic to its treatment standard, Energy*Solutions* 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.

A similar variance request was made for this previous waste in a letter dated January 22, 2016 (CD16-0019). This previous request was approved by the Waste Management and Radiation Control Board at a meeting on March 10, 2016.

Energy*Solutions* 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.

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 of 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) 649-2144.

Sincerely,

Timothy L. Orton, P.E.
Environmental Engineer

cc: Don Verbica, DWMRC

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.

WASTE MANAGEMENT AND RADIATION CONTROL BOARD
Executive Summary
REQUEST FOR A SITE-SPECIFIC TREATMENT VARIANCE
Energy*Solutions*, LLC
March 12, 2020

What is the issue before the Board?	On December 10, 2019, 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 the Utah Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to receive, treat and dispose of Cemented Uranium Extraction Process Residues.
What is the historical background or context for this issue?	The Mixed Waste Facility proposes to receive up to 1,500 cubic feet of cemented monoliths containing enriched uranium residuals. This material retains hazardous waste codes for barium, cadmium, chromium, lead, and spent solvents. The generator has encapsulated the waste in concrete for security reasons. Energy*Solutions* proposes to receive this waste for macroencapsulation in the Mixed Waste Landfill Cell rather than chemical stabilization, as required. This request is based on the fact that the waste has already been encapsulated in concrete at the generator's site. Treating this waste by the required method would mean grinding the waste and potentially exposing workers to unnecessary contamination. The proposed treatment will further encapsulate the waste and protect it from contact with precipitation, thereby eliminating the potential of leaching. This is an ongoing waste stream. The Board has considered and approved this variance request over 10 times in the past. A notice for public comment was published in the *Salt Lake Tribune*, the *Deseret News* and the *Tooele County Transcript Bulletin* on January 7, 2020. The comment period began January 8, 2020 and ended February 7, 2020. No comments were received.
What is the governing statutory or regulatory citation?	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.
Is Board action required?	Yes, this is an action item before the Board.
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 Otis Willoughby (801) 536-0220. For legal questions, please contact Bret Randall at (801) 536-0284.

DSHW-2019-017042

December 9, 2019 CD19-0240

Mr. Ty Howard
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 Cemented Uranium Extraction Process Residues

Dear Mr. Howard,

Energy*Solutions* herein requests an exemption from the treatment standards described in Utah Administrative Code (UAC) R315-40(a)(2) for uranium extraction process residuals that retain the hazardous waste codes D005 (barium); D006 (cadmium); D007 (chromium); D008 (lead); D030 (2,4-dinitrotoluene); D032 (hexachlorobenzene) and F001, F002, and F005 (spent solvents) and are encased in cement. This exemption is requested for the purposes of safety, security, and transportation of the radioactive waste. 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 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.*

This variance is being requested for approximately 1,000 cubic feet of cemented uranium extraction process residuals from Energy*Solutions* generator 9061-06. The waste is generated as part of a uranium recovery process that involves creating an enriched uranium contaminated ash through a thermal process and then recovering the enriched uranium through an organic solvent extraction process. The residual waste from this extraction system is collected in small cans (~ 2 ½ gallons each) and stored at the generator's facility. The process residuals within these cans are in the form of an ash generated through this process. The process residuals within the cans have been characterized through a random sampling and analysis process. At the beginning of this

campaign, approximately 2,000 cans of process residues were collected and stored by the generator. The process is ongoing and additional cans are being generated every year. Further, due to safety concerns, some of the cans are being split prior to the repackaging process described below; thereby generating more total material for disposal.

F-listed solvent codes within this waste are derived from rags that are burned in a furnace in order to recover the uranium present within them. None of the F-listed constituents were present above their respective treatment standard concentrations within the random characterization samples of the process residues. The random characterization samples were also analyzed for metals using the Toxicity Characteristic Leaching Procedure (TCLP). These samples detected elevated concentrations of barium (up to 6,740 mg/L TCLP), cadmium (up to 16.4 mg/L TCLP), chromium (up to 15.2 mg/L TCLP), and lead (up to 10.5 mg/L TCLP). Based on these elevated metal concentrations, the characteristic waste codes D005, D006, D007, and D008 were applied to the process residue. Slightly elevated concentrations of 2,4-dinitrotoluene (D030) and hexachlorobutadiene (D032) were also detected in separate analyses. The residue may potentially contain these codes also.

The uranium content within the process residues is enriched. From a health and safety standpoint, the enrichment makes the waste more hazardous to employees managing the waste. Further, enriched material has increased security concerns and must be managed appropriately. To ensure the enriched uranium concentration limits required for worker safety, security, and transportation of this waste are met, appropriate packaging procedures were created and are currently being utilized at the generator's facility. These packaging procedures include repackaging the cans into 16-gallon drums and filling the void spaces with cement; formal treatment for the elevated metals concentrations is not performed during this process. The generator has assessed other options, including treatment for the hazardous constituents; however, additional processing introduced unacceptable hazards from a health and safety, and security viewpoint. Additionally, the waste within the cans is inherently safe from a criticality aspect and the generator concluded that it is unwise to perform extra processing that could potentially change this aspect. Furthermore, encasing enriched uranium within concrete is the preferred method of stabilization as recommended by the Nuclear Regulatory Commission (NRC). The waste material packaged in these 16-gallon monolithic forms is inherently safe and is the form that will be shipped and received at the Energy*Solutions* Clive facility.

The characteristic hazardous waste codes associated with the process residues has numerical concentration-based treatment standards based upon the leachability of the contaminants. Treatment of the monolithic form for these concentration-based treatment

standards would entail a process that includes shredding of the monolith followed by mixing with a stabilizing reagent in a permitted mixer. Both of these steps could mobilize the enriched uranium and possibly cause airborne contamination, increasing the potential for releases to the environment as well as the potential for personnel exposure; thereby violating radiation protection (ALARA – As Low As Reasonably Achievable) principles. Also, the shredding of the solidified uranium ash results in a more accessible form of enriched uranium with potential security ramifications.

Energy*Solutions* proposes to macroencapsulate the waste, thereby isolating the waste from potential leaching media. Macroencapsulation is a permitted process utilized at the Clive facility that significantly reduces the potential for migration (leaching) of waste. Macroencapsulation requires less handling of the waste and creates a waste form for disposal that is protective of human health and the environment. Macroencapsulation also adds a further level of security restricting access to the enriched uranium.

In summary, a variance should be granted based upon three considerations:

1. for both health and security reasons, enriched uranium concentration within the waste precludes actual treatment of the waste;

2. processing this waste in preparation for stabilization treatment would increase worker exposures and the potential for releases to the environment; and

3. the leachability of the waste would be significantly reduced through macroencapsulation, thereby protecting human health and the environment.

Energy*Solutions* requested this same variance for this generator in letters dated July 20, 2007; July 28, 2008; July 15, 2009; July 15, 2010; July 28, 2011; August 13, 2012; July 15, 2013; July 25, 2015; November 4, 2015; October 27, 2016; and November 20, 2018. These previous requests were approved on September 13, 2007; September 13, 2008; September 10, 2009; September 9, 2010; September 8, 2011; September 13, 2012; September 12, 2013; August 14, 2014; December 10, 2015; January 12, 2017; September 27, 2017; and January 10, 2019.

Shipments began in April, 2008 and have been relatively continuous since that time. Since the last variance was approved, Energy*Solutions* has received approximately 1,580 cubic feet of this waste (the 16-gallon monoliths). Energy*Solutions* has received approximately 11,120 cubic feet of this waste since the first variance approval in 2008.

This variance request is for the ongoing processing and disposal of additional uranium extraction process residues created by the generator.

Energy*Solutions* requests that a variance be granted to allow the receipt, macroencapsulation treatment and disposal of approximately 1,500 cubic feet of cemented uranium extraction process residuals that retain hazardous waste codes. Upon approval of this variance, the monolithic waste will be managed as debris.

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 C. Rogers
Director of 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 801-649-2144.

Sincerely,

Timothy L. Orton, P.E.
Environmental Engineer and Manager

cc: Don Verbica, DWMRC

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 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.

WASTE MANAGEMENT AND RADIATION CONTROL BOARD
Executive Summary
REQUEST FOR A SITE-SPECIFIC TREATMENT VARIANCE
Energy*Solutions*, LLC
March 12, 2020

What is the issue before the Board?	On December 10, 2019, 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 the Utah Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to receive, treat and dispose of magnesium/thorium dross.
What is the historical background or context for this issue?	The Mixed Waste Facility proposes to receive approximately 700 cubic feet of magnesium/thorium dross. This material retains hazardous waste codes for high concentrations of barium. The treatment standard for barium requires stabilization to a concentration of 21mg/L. Generation of the dross has created a waste comprised of hard, disk-like metal pieces. Stabilization of this material would not be viable. Energy*Solutions* proposes to receive this waste for macroencapsulation in the Mixed Waste Landfill Cell rather than chemical stabilization, as required. This request is based on the fact that the waste does not lend itself to stabilization. The facility proposes to encapsulate the waste using its permitted Macroencapsulation process. This treatment will encapsulate the waste and protect it from contact with precipitation, thereby eliminating the potential of leaching. A notice for public comment was published in the *Salt Lake Tribune*, the *Deseret News* and the *Tooele County Transcript Bulletin* on January 7, 2020. The comment period began January 8, 2020 and ended February 7, 2020. No comments were received.
What is the governing statutory or regulatory citation?	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.
Is Board action required?	Yes, this is an action item before the Board.
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 Otis Willoughby (801) 536-0220. For legal questions, please contact Bret Randall at (801) 536-0284.

DSHW-2020-003354
Attachment: DSHW-2019-017061

ENERGYSOLUTIONS

DSHW-2019-017061

December 9, 2019 CD19-0241

Mr. Ty Howard
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 Magnesium/Thorium Dross

Dear Mr. Howard:

Energy*Solutions* herein requests an exemption from Utah Administrative Code (UAC) R315-268-40(a)(1) for magnesium/thorium dross that contains high concentrations of barium and cannot be treated to the specified treatment standard. 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)(1) It is not physically possible to treat the waste to the level specified in the treatment standard.*

Energy*Solutions* requests approval to treat, by macroencapsulation, approximately 700 cubic feet of magnesium/thorium dross that is characteristically hazardous for barium (D005). The treatment standards table described in R315-268-40 (Treatment Standards for Hazardous Wastes Table in 40 CFR 268.40, 2015 edition, adopted and incorporated by reference) lists only one option for barium contaminated waste: treatment below a Toxicity Characteristic Leaching Procedure (TCLP) concentration of 21 mg/L. To perform this treatment and meet this treatment standard, the waste would need to be shredded to allow intimate waste-reagent contact throughout the waste. Formation of the dross waste has created extremely hard disc-like metal pieces which cannot be shredded using conventional shredding processes.

The waste is better managed as a debris as it physically similar to debris; however, the regulatory definition in R315-268-2(g) explicitly excludes "process residuals such as smelter slag" (dross is very similar to smelter slag). The reason provided for this exclusion is described by the Environmental Protection Agency (EPA) in the Federal Register (57 FR 37224, August 18, 1992, footnote 20 – attached):

> *The Agency . . . has determined the slag is not debris because it is not the type of material for which today's debris treatment standards were developed – objects contaminated (generally surficially) with hazardous waste.*

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(801) 649-2000 ▪ Fax: (801) 880-2879 ▪ www.energysolutions.com

This action was done to preserve the integrity of the surface treatment standards (extraction and destruction technologies) described as Alternate Treatment Standards for Hazardous Debris in R315-268-45 (40 CFR 268.45). This requirement is not necessary to preserve the integrity of immobilization technologies such as Macroencapsulation since those technologies do not remove the hazard and still require disposal in a hazardous waste landfill.

In lieu of the discussion above, Energy*Solutions* requests a variance to manage the magnesium-thorium dross as debris and use the macroencapsulation treatment technology to safely treat this waste prior to disposal in the Clive Facility Mixed Waste Landfill Cell. This treatment will be conducted in accordance with the requirements of Attachment II-1-5, *Macroencapsulation Plan*, of the Clive Facility 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.

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 of 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) 649-2144.

Sincerely,

Timothy L. Orton, P.E.
Environmental Engineer

cc: Don Verbica, DWMRC

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.

regulated as debris, they would be subject to the LDRs for the waste contaminating them and would remain subject to subtitle C regulation after treatment. Basing the size criterion on particle size rather than sieve size precludes the potential for such sham activities.

(4) Implementation of the Particle Size Criterion. To make today's rule workable, equipment operators need to be able to determine quickly whether material being remediated is debris or nondebris (e.g., soil, waste). In some cases, the determination will vary from one front end loader bucketfull of material to another. Accordingly, the Agency intends for the size criterion to be implemented by visual observation. Screening is not required. If screening is used, however, the screen may be either a square grid with openings 60 mm on a side or a circular grid with circles with a 60 mm diameter.

(d) Waste for Which a Specific Treatment Standard Has Been Established is not Debris. There is one further exception to this definition of debris. EPA is indicating that debris-like material for which the Agency has promulgated a specific treatment standard is not considered to be debris. The reason is that the Agency will have determined that specific treatment standards are appropriate for the material, rather than the assortment of technologies adopted for debris generally. See 57 FR 983 c.3 (Jan. 9, 1992).

The chief examples of a material subject to a specific treatment standard rather than the general debris standards are lead acid batteries and cadmium batteries. EPA has promulgated a treatment standard of metal recovery for each of these materials. See § 268.42. Thus, this more specific treatment standard takes precedence over the more general debris standard adopted today.[17]

d. Mixtures of Debris with Other Materials are Subject to Regulation as Debris if Debris is the Primary Material Present. A further issue needing to be addressed is the status of mixtures of debris and other materials such as soils or sludge. This situation arises often, particularly in remedial situations where debris is rarely present in a pristine state. Since the treatment standards for debris and other materials—sludge or contaminated soil—differ, the issue of classification is an important one. In developing a means of classification, the Agency on the one hand is seeking to prevent the debris classification from invariably overriding the treatment standards for other hazardous wastes. On the other hand, it is important to have a means of classification that is easy to apply by equipment operators in the field.

The Agency has therefore decided to classify [18] as debris any mixture where the debris portion comprises the largest amount of material present by volume, to be determined by visual inspection.[19] Thus, for example, if upon examination, a mixture of cobbles (i.e., with a particle size of 60 mm or more), soil, and sludge is comprised mostly of cobbles, the mixture is classified as debris. After being treated by one of the treatment methods for debris promulgated in today's rule, it could then be land disposed. (Residues from applying the treatment method could be land disposed after being treated to meet the treatment standards for the prohibited waste contaminating the debris.)

The definition of debris encompasses this classification principle by stating that "A mixture of debris and other material such as soil or sludge is also debris if the mixture is comprised primarily of debris by volume, based on visual inspection." It should be clear from this discussion that the rule does not require debris and nondebris materials to be separated prior to treatment (an unintended implication of the proposed rule). Rather, mixtures are either classified as debris or some other type of waste treatability group according to the classification test discussed above.

We note that the "primary material" test for classifying debris does not apply to intact, nonempty containers. Given that such containers are not debris (see discussion below in section V.B.1.f) and can be readily separated from debris (or mixtures of debris and other materials), they are not considered in applying the "primary material" test. Consequently, intact, nonempty containers must not be included in making the volume determinations to classify mixtures of debris.

There is one further point to be made. Although EPA is classifying mixtures that are predominantly debris as debris, this does not mean that debris can be deliberately mixed with other wastes in order to change their treatment classification. Such mixing is impermissible dilution under § 268.3 since it is a substitute for adequate treatment. See also 53 FR 31145 (Aug. 17, 1988); dilution to change treatability groups is ordinarily impermissible. In addition, such situations where debris is used merely to dilute another prohibited waste, the mixture would remain subject to the most stringent treatment standard of any waste that is part of the mixture. See § 268.41(b).

e. *Process Residuals Are Not Debris.* Today's definition of debris explicitly excludes process residuals by stating: "Process residuals such as smelter slag and residues from the treatment of waste (e.g., incinerator ash), wastewater, sludges, or air emissions residues (e.g., collected particulate matter) are not debris." The Agency believes that debris should be limited to manufactured objects (e.g., metal, glass) and naturally occurring objects (e.g., boulders, tree stumps). The Agency developed the treatment standards generally to ensure effective treatment of hazardous waste contaminating an object, rather than effective treatment of a large particle size hazardous waste such as slag.[20]

Several commenters requested clarification as to what the Agency meant in the proposed rule by excluding from the definition of debris "solids that are listed wastes or can be identified as being residues from treatment of wastes and/or wastewaters." The commenters felt that it was unclear whether this phrase exempts from the definition of debris only pollution control residues, or material such as metal filters, ceramic column packing, or discarded pollution control equipment. Commenters suggested that EPA clarify, through examples, that discarded industrial equipment (such as filters, pumps, etc.) would be included in the definition of

[17] A number of commenters questioned the jurisdictional basis for regulating battery plates and groups from lead acid batteries as "solid wastes" subject to subtitle C regulation. EPA adheres to the response set out at 57 FR 960–961 in the proposed rule.

[18] We note that although such mixtures are classified as debris and are subject to the debris treatment standards, if the nondebris materials are separated from the debris prior to treatment by a specified technology, the separated material is no longer classified as debris. If the separated material is a hazardous waste (or soil contaminated with a hazardous waste), it is subject to the waste-specific treatment standards. When treatment residue (i.e., soil, waste, or other nondebris material) is separated from treated debris as required by today's debris standards for extraction or destruction technologies, the residue is subject to the waste-specific standards for the waste contaminating the debris.

[19] Some materials (e.g., soil) mixed with debris may contain free liquids that may still be oozing from the material. The volume of such entrapped liquids need not be considered in determining whether the mixture is primarily debris because it is impracticable to determine the volume of such liquids by visual inspection.

[20] We note that previous debris definitions (see § 268.2(g)) considered "slag" as debris. The Agency has reconsidered this issue and has determined the slag is not debris because it is not the type of material for which today's debris treatment standards were developed—objects contaminated (generally surficially) with hazardous waste.

WASTE MANAGEMENT AND RADIATION CONTROL BOARD
Executive Summary
Tooele Army Depot South Area
March 12, 2020

What is the issue before the Board?	This is a proposed Stipulation and Consent Order (SCO), No. 2001003, to resolve Notice of Violation (NOV) No. 1911117, issued to the Tooele Army Depot South Area on November 26, 2019.
What is the historical background or context for this issue?	The NOV was based on information documented during an inspection at the facility on August 6-7, 2019, and a self-reported notice of non-compliance submitted on August 27, 2019. The Tooele Army Depot South Area had discontinued open detonation operations for several years while they were destroying the chemical agent stockpile. They received authorization to begin open detonation operations again on October 9, 2018. The violations related to the calculations and quantities detonated on several days of operation. The violations have been resolved. The SCO includes a penalty of $25,662.00. Copies of the NOV, the SCO, and the penalty narrative worksheets are included in this Board packet.
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. A public comment period began March 4, 2020, and will end on April 2, 2020. Following the comment period, this matter will be brought before the Board for 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 Rick Page at (801) 536-0230. For legal information, please contact Connie Nakahara at (801) 536-0285.

DSHW-2020-003402
Attachments: DSHW-2020-000142
DSHW-2020-002570

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In the Matter of:	:	**PROPOSED STIPULATION AND CONSENT ORDER**
Tooele Army Depot South Area (TEAD-S) Notice of Violation No. 1911117 UT5210090002	: :	**No. 2001003**

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This draft **STIPULATION AND CONSENT ORDER** is issued by the DIRECTOR OF THE UTAH DIVISION OF WASTE MANAGEMENT AND RADIATION CONTROL pursuant to the Utah Solid and Hazardous Waste Act (the Act), Utah Code Ann. §19-6-101, *et seq*. The Director has authority to issue such ORDERS in accordance with Utah Code Ann. § 19-6-112.

JURISDICTION

1. The Director has jurisdiction over the subject matter of this **CONSENT ORDER** pursuant to Utah Code §19-6-112 and jurisdiction over the Tooele Army Depot South Area (TEAD-S). TEAD-S and the Director are the parties to this agreement.

2. The Board has authority to review this **CONSENT ORDER** pursuant to Utah Code §19-6-104(1)(f), and jurisdiction over TEAD-S.

FINDINGS

3. TEAD-S, formerly the Deseret Chemical Depot (DCD) is a US Army facility located in Rush Valley, Tooele County, Utah.

4. TEAD-S includes operations and facilities for the storage and treatment of hazardous waste. These include igloos for the storage of hazardous waste munitions, and the treatment of military munitions by open detonation. TEAD-S operates these units under the provisions of the State-issued Hazardous Waste Part B Permit (the Permit) most recently reissued to TEAD-S on August 18, 2015, as modified, on file with the Utah Department of Environmental Quality, Division of Waste Management and Radiation Control (the Division). TEAD-S received authorization to begin open detonation operations again on October 9, 2018. They had discontinued open detonation operations for several years while they were destroying the chemical agent stockpile.

5. TEAD-S is a "person" as defined in Utah Code §19-1-103(4) and is subject to all applicable provisions of the Act, the Utah Administrative Code (Rules) and the Permit issued to TEAD-S as owner and operator of the TEAD-S facility.

6. Authorized representatives of the Director (inspectors) conducted a hazardous waste inspection at TEAD-S on August 6-7, 2019 (the FY2019 inspection). In addition, the facility self-reported non-compliance issues at the facility.

7. The Director issued NOTICE OF VIOLATION No. 1911117 (the NOV) on November 18, 2019, alleging violations by TEAD-S of the Permit.

8. TEAD-S filed a response to the NOV on November 26, 2019.

STIPULATION AND CONSENT ORDER

9. The parties now wish to fully resolve the NOV without further administrative or judicial proceedings.

10. In full settlement of the violations alleged in the NOV, TEAD-S shall pay a penalty of $25,662.00 (twenty five thousand six hundred sixty two dollars). Payment shall be made within thirty days of entry into this **CONSENT ORDER**. Payment shall be made to the State of Utah, Department of Environmental Quality, c/o Ty Howard, Director, Utah Division of Waste Management and Radiation Control, P.O. Box 144880, Salt Lake City, Utah 84114-4880. This amount has been determined in accordance with the Division's Civil Penalty Policy (R315-102 of the Rules), 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.

FORCE MAJEURE

11. TEAD-S shall perform the requirements of this CONSENT ORDER within the time frames set forth herein unless the performance is prevented or delayed by events which constitute a force majeure. A force majeure is defined as any event arising from causes not reasonably foreseeable and beyond the control of TEAD-S which cannot be overcome by due diligence. A force majeure shall mean any event arising from causes beyond the control of a party that causes a delay in, or prevents the performance of, any obligation under this CONSENT ORDER, including but not limited to, acts of God, public enemy, unforeseen strikes or work stoppages, fire, explosion, flood, tornado, earthquake, lightening, riot, sabotage, or war. TEAD-S shall notify the Director when it learns that performance will be prevented or delayed, setting forth the cause of the delay and its anticipated duration. The burden of showing that a force majeure event has prevented or delayed performance of this CONSENT ORDER lies upon TEAD-S.

12. TEAD-S shall seek all funds necessary for the payment of civil penalties under this CONSENT ORDER by the most expeditious means possible and, if necessary, shall seek new authorization from Congress to achieve the most expeditious schedule of such compliance. However, nothing herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. Section 1341. Any requirement for payment or obligation of funds by a particular date established by the terms of this agreement shall be subject to the availability of funds.

13. Failure to obtain adequate funds or appropriation from Congress does not, in any way, release TEAD-S from its obligations to comply with the Resource Conservation and Recovery Act, as

amended, 42 U.S.C. Section 6901 et seq., or the Solid and Hazardous Waste Act, Section 19-6-101 et seq., as amended, including the payment of fines or penalties or performance of supplemental environmental projects.

EFFECT OF CONSENT ORDER

14. For the purpose of this **CONSENT ORDER**, the parties agree and stipulate to the above stated facts. 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 its right to initiate enforcement action, including civil penalties, against TEAD-S in the event of future non-compliance with this **CONSENT ORDER**, with the Act, with the Rules, or with the Permit; nor shall the State be precluded in any way from taking appropriate action should such a situation arise again at the TEAD-S facility. However, entry into this **CONSENT ORDER** shall relieve TEAD-S of all liability for violations which did arise or could have arisen with respect to the allegations contained in the NOV.

EFFECTIVE DATE

15. This **CONSENT ORDER** shall become effective upon execution by TEAD-S and the Director.

Dated this _____ day of _____, 2020

Tooele Army Depot South Area	Division of Waste Management and Radiation Control
_____	_____
Todd W. Burnley, Colonel U.S. Army Commanding	Ty L. Howard, Director

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

NOV # 1911117 Violation Number from NOV 1

Violation Description: **MME spreadsheets/nickel exceedances**

1. Gravity Based Penalty: $11,700

   (a) Potential for Harm: **MAJOR.** Without completing the Munitions Mix Evaluator spreadsheets, the emissions from the detonations could possibly pose an unacceptable risk (as was the case for nickel for several days).

   (b) Extent of Deviation: **MAJOR.** The Munitions Mix Evaluator spreadsheets were not done. Permitted emission limits were exceeded.

2. Multiple/Multi-day: $1560

   (a) Number of Violations or Days of Violation: Seventeen.

5. Adjustment for Good Faith: -30% – TEAD-N notified the Division of the violations.

6. Adjustment for Willfulness/Negligence: N/A

7. Adjustment for History of Compliance or Noncompliance: N/A

8. Adjustment for Other Unique Factors: N/A

14. Adjustment for Economic Benefit: $0 – The time required to fill out the spreadsheets would be insignificant.

16. Adjustment for Ability to Pay: N/A

    Total: **$25,662.00**