



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

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DENVER, CO 80202-1129
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Ref: 8P-R

FEB 28 2014

Timothy L. Orton, P.E.
Environmental Engineer
EnergySolutions, LLC
423 West 300 South, Suite 200
Salt Lake City, Utah 84101

Re: Renewal and Modifications to Coordinated Approval of
Mixed Waste Landfill Cell (MWLC)

Dear Mr. Orton:

This is in response to your March 26, 2013, letter requesting a renewal and modification of the June 25, 2010, Coordinated Approval of Mixed Waste Landfill Cell (MWLC), and Waiver of Technical Requirements Application for Land Disposal of Polychlorinated Biphenyls (PCBs) Waste to EnergySolutions, LLC at Clive, Utah. Your requested modification includes: a) a change of the Toxic Substance Control Act (TSCA) annual report schedule to be consistent with the Resource Conservation and Recovery Act (RCRA) Permit report schedule; b) reconsideration on the leachate and groundwater monitoring requirements; and c) incorporation of the operating procedures for shredding waste and managing non-aqueous liquid into Conditions of the Approval.

The U.S. Environmental Protection Agency (EPA) Region 8 has reviewed your request and granted the renewal of the Approval with modifications to Conditions 2, 4, 5, 6 and 8 of the Approval. The EPA revises Condition 2 of the Approval allowing a change of the TSCA annual report schedule to be consistent with the state-issued RCRA Part B Permit's schedule. With respect to the leachate and groundwater monitoring requirement, the Agency's decision is that PCB monitoring will be based on the detectable PCB Aroclors and that the notification requirement on any detection of PCBs in the leachate will be maintained. The EPA modifies Conditions 4 and 5 of the Approval, in accordance with 40 CFR 761.75(c)(3)(ii), including a notification requirement and any other action that the EPA may require EnergySolutions to conduct if PCBs are ever detected in the leachate or in the groundwater. With regard to the facility operating procedures, the EPA modifies Condition 6 and 9 of the Approval to include the procedures for shredding wastes and management of non-aqueous liquid at the site.

Enclosed is the signed Modification Approval. The Approval is effective upon signature and expires on March 1, 2019, or upon expiration or termination of the state-issued RCRA Part B Permit, whichever comes first. EnergySolutions, LLC shall apply for an extension of the Approval in writing at least 120 days, but no sooner than 180 days, prior to the expiration date of this Approval.

The renewal and modifications to the Approval are granted upon the EPA's determination that the MWLC, when operating in accordance with the modified Conditions of the Approval, does not present an unreasonable risk of injury to human health or the environment. Please contact Francis Tran of my staff at (303) 312-6036 if you have additional questions.

Sincerely,



Debra H. Thomas
Acting Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

Enclosure

cc: Scott Anderson, UDEQ
Otis Willoughby, UDEQ



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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

IN THE MATTER OF) COORDINATED APPROVAL
EnergySolutions, LLC) OF MIXED WASTE LANDFILL CELL (MWLC)
423 West 300 South, Suite 200) AND WAIVER OF TECHNICAL REQUIREMENTS
Salt Lake City, Utah 84101) APPLICATION FOR LAND DISPOSAL
) OF POLYCHLORINATED BIPHENYL (PCB) WASTE

AUTHORITY

This Coordinated Approval and Waiver of Technical Requirements (Approval) is issued to EnergySolutions, LLC pursuant to Section 6(e) of the Toxic Substances Control Act of 1976 (TSCA), 15 U.S.C. 2601 *et seq.*, and the Federal PCB Regulations at 40 Code of Federal Regulations (CFR) Sections 761.75 and 761.77. Conditions of this Approval supersede any conflicting elements of the Application and previous Approvals by the U. S. Environmental Protection Agency (EPA) Region 8.

WAIVER OF TECHNICAL REQUIREMENTS

The EPA waives the requirement at 40 CFR § 761.75(b)(3) to permit the bottom of the Mixed Waste Landfill Cell (MWLC) to be at 18 feet above the historical high water table compared to at least 50 feet as required. The EPA also waives the requirements at 40 CFR §§ 761.75(b)(6)(iii) and (7) to permit the frequencies of groundwater and leachate analyses for PCBs, pH, specific conductance and chlorinated organics to be performed annually. The EPA believes that the operations of the landfill will not present an unreasonable risk of injury to health or the environment from PCBs when the requirements at 40 CFR §§ 761.75(b)(3), (6)(iii) and (7) are waived. In particular, the MWLC has triple High Density Polyethylene (HDPE) liners with a leachate collection and groundwater monitoring system; the groundwater movement is slow (less than 2 feet per year); and EnergySolutions, LLC is prohibited from disposing of any liquid at the MWLC.

DEFINITIONS

1) All definitions contained in 40 CFR §§ 761.3 and 761.123 are incorporated by reference into this TSCA Approval. Terms not defined in the regulations or in the Approval shall be defined by a generally accepted scientific, industrial meaning or a standard dictionary meaning.

2) “Application” means the following documents submitted by EnergySolutions, LLC (formerly “Envirocare of Utah”) for approval:

EnergySolutions February 2014 Operating Procedure CL-MT-PR-107, *Draining Large Capacitors*, as revised;

EnergySolutions February 2014 Operating Procedure CL-MT-PR-108, *Draining and Flushing of PCB Items*, as revised;

Letter to Ms. Derrith R. Watchman-Moore, dated March 26, 2013, requesting modifications to the EnergySolutions Operating Procedures and the leachate/groundwater monitoring conditions;

Letter to Mr. Stephen Tuber, dated November 12, 2009, requesting a modification to the August 2004 Approval to allow size-reduction of wastes contaminated with PCBs using the Primary Shredder at the Mixed Waste Facility;

Letter to Mr. Stephen Tuber, dated October 14, 2009, requesting a waiver of the groundwater and leachate analyses requirement and that the required monitoring can be performed annually;

Letters to Mr. Stephen Tuber, dated July 11, 2008, requesting an amendment to the Approval to allow size-reduction of wastes contaminated with PCBs at the Mixed Waste Facility, and October 28, 2008, requesting a further amendment to allow the receipt, management and disposal of liquids from incidental sources. Letter to Ms. Melanie Pallman, dated August 13, 2009, providing the Primary Shredder Post-Demonstration Test Report;

Letter to Mr. Francis Tran, dated July 19, 2004, requesting an amendment to the Approval to allow drained PCB/Radioactive containers and PCB/Radioactive remediation wastes to be accepted and disposed of at the Mixed Waste Landfill Cell;

Letters to Mr. Francis Tran, dated August 24 and October 16, 2001, requesting waivers of the hydrologic conditions, water analysis and leachate collection requirements, and an approval to dispose of drained PCB/radioactive transformers and other drained PCB/radioactive articles with PCB concentrations equal or greater than 500 parts per million;

Revised Hydrogeologic Report for the EnergySolutions Waste Disposal Facility, Clive, Utah, dated January 2000;

Mixed Waste Cell Infiltration and Transport Modeling, dated November 22, 2000; and

EnergySolutions RCRA Part B Permit, dated November 30, 1990, as amended.

- 3) “ARA” means the Assistant Regional Administrator, Office of Partnerships and Regulatory Assistance, EPA Region 8, and any person with authority to act on behalf of the ARA.
- 4) “EnergySolutions” means EnergySolutions, LLC which owns and operates the Mixed Waste Landfill Cell in Clive, Utah.
- 5) “EPA” means the Environmental Protection Agency Region 8 Office in Denver, Colorado.
- 6) “MWLC” means the Mixed Waste Landfill Cell.
- 7) “Primary Shredder” means the shredder that is located inside the Mixed Waste Treatment Building in the Mixed Waste Landfill Cell in Clive, Utah.
- 8) “RCRA Permit” means the State-issued Resource Conservation and Recovery Act (RCRA) Part B Permit of the Mixed Waste Landfill Cell issued to EnergySolutions by the State of Utah Department of Environmental Quality, Division of Solid and Hazardous Waste, on November 30, 1990, as revised.
- 9) “TSCA” means the Toxic Substances Control Act of 1976, 15 U.S.C. 2601, *et seq.*

EFFECTIVE DATE

This Approval shall become effective immediately and will expire on March 1, 2019, or upon expiration or termination of the RCRA Permit, whichever comes first. EnergySolutions, LLC shall apply for an extension of the Approval in writing at least 120 days, but no sooner than 180 days, prior to the expiration date of this Approval.

CONDITIONS OF APPROVAL

- 1) Terms and conditions of the November 30, 1990, RCRA Permit will be applied to the TSCA disposal requirements for PCB/radioactive remediation and/or bulk product wastes, PCB/radioactive transformers, PCB/radioactive capacitors, containers and/or other articles whose surfaces have been contacted or contaminated with PCBs at concentrations equal to or greater than 500 parts per million (ppm) accepted for disposal at the MWLC.
- 2) EnergySolutions shall annually submit groundwater and leachate monitoring data to the EPA. The detection limits and report schedule shall be the same as the RCRA Permit requirements in Module VI, *Groundwater Monitoring* and Attachment II-1-10, *Management of Waste Containing Polychlorinated Biphenyls (PCBs) at the Mixed Waste Facility*. The reports shall include, at a minimum, groundwater

elevations for monitoring wells, analyses for PCBs, pH, specific conductance and chlorinated organics and volumes of leachate collected from the sumps.

- 3) *EnergySolutions* shall submit to the EPA on a quarterly basis (no later than 20 calendar days following the end of the quarter), leachate collection/removal volumes for each collection or leak detection sump. The data may be submitted in an Excel and/or PDF format. If liquid is found in the second-lowest leak detection system in quantities greater than 15 gallons per acre per day, or in the lowest leak detection system in quantities greater than 10 gallons per acre per day, *EnergySolutions* shall notify the EPA in writing within 72 hours of discovery.
- 4) *EnergySolutions* shall notify the EPA in writing within five working days after the discovery of any PCB Aroclor at a concentration of 1 part per billion (ppb) or above in the leachate and verified with a follow-up analysis within 30 calendar days from receipt of the results. The EPA may require that such leachate be treated on-site or disposed of at an off-site disposal facility. The EPA may also require that leachate monitoring frequency be increased until a PCB detection in the leachate is less than 1.0 ppb.
- 5) If a PCB Aroclor is detected in a monitoring well at a concentration of 1 ppb or above and verified with a follow-up sample and analysis performed in accordance with the RCRA Permit Module VI, *Groundwater Monitoring*, *EnergySolutions* shall submit a proposed corrective action plan as outlined in the RCRA Permit Module VII, *Corrective Action Program* to the EPA for approval.
- 6) *EnergySolutions* may use the Primary Shredder in the Mixed Waste Treatment Building to shred wastes containing PCBs. At a minimum, large PCB capacitors shall be drained in accordance with the *EnergySolutions* Operating Procedure CL-MT-PR-107. Prior to shredding waste with a potential liquid component, absorbent shall be placed in the shredder tank to absorb any residual liquids and a plastic barrier shall be placed around the exterior of the tank to prevent any contamination outside the tank. Once PCBs are shredded, the Primary Shredder and associated tank shall be labeled PCB, using standard PCB marks, until decontaminated.
- 7) PCB transformers shall be managed in accordance with the *EnergySolutions* Operating Procedure CL-MT-PR-108. PCB transformers shall be drained and then filled with solvent for at least 18 continuous hours. The solvent shall be thoroughly removed and properly managed. Remaining liquid in the container shall be less than or equal to 1 percent of the total volume of the container. The equipment shall be filled with sufficient absorbent material to absorb any remaining liquid prior to being disposed of in the MWLC.
- 8) PCB hydraulic machines shall be managed in accordance with the *EnergySolutions* Operating Procedure CL-MT-PR-108. Hydraulic machines with $\geq 1,000$ ppm PCBs shall be drained, and then filled with solvent for at least 18 continuous hours. Hydraulic machines with $< 1,000$ ppm PCBs shall be only drained prior to disposal. The solvent shall be thoroughly removed and managed in accordance with procedures outlined in Attachment II-1-10, *Management of Waste Containing Polychlorinated Biphenyls (PCBs) at the Mixed Waste Facility*, of the RCRA Permit. Remaining liquid in the container

shall be less than or equal to 1 percent of the total volume of the container. The equipment shall be filled with sufficient absorbent material to soak up any remaining liquid prior to being disposed of in the MWLC.

9) *EnergySolutions* shall not dispose of any liquid containing PCBs at the MWLC. Non-aqueous PCB liquid (e.g., PCB liquid drained from transformers, capacitors, or electrical equipment) shall be shipped off-site or treated through the thermal desorption unit prior to disposal. Incidental liquid containing PCBs as described in 40 CFR § 761.60(a)(3) shall be solidified prior to disposal using solidification materials approved in the RCRA Permit. Incidental liquids that have an oily sheen shall be managed as non-aqueous PCB liquids. All other incidental liquids shall be sampled and analyzed for Total Organic Carbon (TOC) or PCBs prior to management. Incidental liquids with a TOC greater than 10% or a PCB concentration greater than 500 ppm shall be managed as non-aqueous PCB liquids.

10) *EnergySolutions* shall notify the EPA in writing at least 30 days before transferring ownership of the MWLC. This notification shall include a notarized affidavit signed by the transferee which states that the transferee is willing to abide by all conditions of this Approval.

11) *EnergySolutions* shall comply with all applicable TSCA Approvals and PCB regulations including, but not limited to, marking, storage, notification, manifesting, annual document logs and annual reports as a commercial disposer.

12) Notifications to the EPA required under this Approval shall be sent to the Resource Conservation and Recovery Program at the following address:

U.S. Environmental Protection Agency Region 8
1595 Wynkoop Street
Mail Code: 8P
Denver, CO 80202-1129

Telephone notification shall be reported to the PCB Notification Hotline to the EPA Region 8 at (303) 312-6400.

Notifications and/or reports required under 40 CFR §§ 761.207 through 761.218 shall be submitted to the PCB Technical Enforcement Program at the same address, Mail Code: 8ENF-AT. The data may be electronically submitted in an Excel and/or PDF format.

13) *EnergySolutions* shall request an approval from the Assistant Regional Administrator (ARA) for any application it makes to modify the design/construction or closure of the MWLC, such as a capacity increase, mounding and/or closure cap, at the same time it makes such application to the state.

14) *EnergySolutions* shall maintain financial assurance for closure of the MWLC and/or of the PCB storage capacity. *EnergySolutions* shall notify in writing within 5 working days if it fails to be in compliance with the financial assurance.

15) *EnergySolutions* shall notify the EPA in writing at least 60 days prior to the date it expects to begin closure of the MWLC and/or the commercial storage of PCBs.

16) This Approval is subject to *EnergySolutions* having provided the EPA with all material facts necessary for the determinations made herein. Any misrepresentation or omission by *EnergySolutions* of any material fact in the Application for this Approval, or the application for the RCRA Permit, shall constitute sufficient cause for the EPA to revoke, suspend and/or modify this Approval, in addition to any other legal or equitable relief or remedy the EPA may choose to pursue under applicable law.

17) The requirements of the RCRA Permit referenced in this Approval are incorporated into this Approval with the full force and effect as if fully set forth herein. *EnergySolutions* shall notify the EPA, in writing, in advance of any pending amendment to the RCRA Permit requirements referenced in this Approval affecting the conditions found at 40 CFR § 761.75, or of any new provision concerning PCB waste which is not included under 40 CFR § 761.75, which also requires approval, or which would be less stringent than a requirement of the PCB regulations. For other RCRA Permit modifications of existing conditions and/or standard operating procedures affecting PCB waste management and/or requirements, *EnergySolutions* shall notify the EPA in writing before or within 5 calendar days of the changes in the RCRA Permit modifications or the referenced standard operating procedures. Where *EnergySolutions* has notified the EPA of the amendment as required, any amendment of the RCRA Permit will be automatically incorporated as an amendment to this TSCA Approval as of the date such amendment takes effect in the RCRA Permit unless otherwise specified in writing by the ARA.

APPROVAL STATEMENT

1) The EPA finds that the operations to be authorized under this Approval, conducted in accordance therewith, will not present an unreasonable risk of injury to health or the environment. This Approval may be revoked, suspended and/or modified at any time if the EPA determines that implementation of this Approval presents an unreasonable risk of injury to health or the environment. Nothing in this Approval is intended, or is to be construed, to prejudice any right or remedy concerning the operation of the *EnergySolutions* facility otherwise available to the EPA under section 6(e) of TSCA, 15 U.S.C. § 2605 and/or 40 CFR Part 761.

2) *EnergySolutions* shall be responsible for the actions (or the failure to act) of all individuals who implement or are otherwise involved in any activities taken pursuant to or otherwise required under this Approval. *EnergySolutions'* acceptance of this Approval constitutes *EnergySolutions'* agreement to comply with a) all conditions and terms of this Approval, and b) all applicable provisions of federal, state or local law. Any failure by *EnergySolutions* to comply with any condition or term of this Approval shall constitute a violation of said Approval, which has been issued pursuant to 40 CFR §§ 761.77 and 761.75. Any such violation(s) may result in an action by the EPA for any legal or equitable relief or remedy available under applicable law. Any such violation might also result in the EPA revoking, suspending and/or modifying this Approval.

- 3) This Approval is conditional upon the ongoing consent of *EnergySolutions* to allow the EPA employees or agents, upon presentation of credentials to enter onto the site, and inspect, sample, copy records or otherwise monitor the *EnergySolutions* PCB landfill activities at any reasonable time for the purpose of determining compliance with this Approval and/or the PCB regulations.
- 4) Operation of the MWLC by *EnergySolutions* shall constitute acceptance of and agreement to all conditions of this Approval.



Debra H. Thomas, Acting
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

FEB 28 2014

Date