

of cyproconazole  $\alpha$ -(4-chlorophenyl)- $\alpha$ -(1-cyclopropylethyl)-1*H*-1,2,4-triazole-1-ethanol] and its metabolite [ $\delta$ -(4-chlorophenyl)- $\beta$ , $\delta$ -dihydroxy- $\gamma$ -methyl-1*H*-1,2,4-triazole-1-hexenoic acid in or on the following commodity:

Commodity	Parts per million
Milk .....	0.02

(3) Tolerances are established for the combined free and conjugated residues of cyproconazole  $\alpha$ -(4-chlorophenyl)- $\alpha$ -(1-cyclopropylethyl)-1*H*-1,2,4-triazole-1-ethanol and its metabolite 2-(4-chlorophenyl)-3-cyclopropyl-1-[1,2,4]triazol-1-yl-butane-2,3-diol in or on the following commodities:

Commodity	Parts per million
Cattle, liver .....	0.50
Goat, liver .....	0.50
Hog, liver .....	0.01
Horse, liver .....	0.50
Sheep, liver .....	0.50

(b) *Section 18 emergency exemptions.*  
[Reserved]

\* \* \* \* \*

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## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 268

[EPA-HQ-RCRA-2007-0936; FRL-8565-9]

#### Land Disposal Restrictions: Site-Specific Treatment Variance for P- and U-Listed Hazardous Mixed Wastes Treated by Vacuum Thermal Desorption at the Energy Solutions' Facility in Clive, UT

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA or the Agency) is promulgating a final rule granting a site-specific treatment variance to EnergySolutions LLC (EnergySolutions) in Clive, Utah for the treatment of certain P- and U-listed hazardous waste containing radioactive contamination ("mixed waste") using vacuum thermal desorption (VTD). This variance is an alternative treatment standard to treatment by combustion (CMBST) required for these wastes under EPA's rules in implementing the land disposal restriction (LDR) provisions of the Resource Conservation and Recovery Act (RCRA). The Agency has determined that combustion of the solid

treatment residue generated from the VTD unit is technically inappropriate due to the effective performance of the VTD unit. Thus, once the P- and U-listed mixed waste are treated using the VTD unit, the solid treatment residue can be land disposed without further treatment. This variance is conditioned upon EnergySolutions complying with a Waste Family Demonstration Testing (WFDT) plan specifically addressing the treatment of these P- and U-listed wastes, which is to be implemented through a RCRA Part B permit modification for the VTD unit.

**DATES:** This final rule will be effective June 13, 2008.

**ADDRESSES:** EPA has established a docket for this action under Docket ID No. EPA-HQ-RCRA-2007-0936. All documents in the docket are listed on the <http://www.regulations.gov> Web site. Although listed in the index, some information may not be publicly available, because for example, it may be Confidential Business Information (CBI) or other information, the disclosure of which is restricted by statute. Certain material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through <http://www.regulations.gov> or in hard copy at the RCRA Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Avenue, NW., Washington, DC. The Docket Facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the RCRA Docket is (202) 566-0270. A reasonable fee may be charged for copying docket materials.

**FOR FURTHER INFORMATION CONTACT:** For more information on this rulemaking, contact Elaine Eby, Hazardous Waste Minimization and Management Division, Office of Solid Waste (MC 5302 P), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone (703) 308-8449; fax (703) 308-8443; or [eby.elaine@epa.gov](mailto:eby.elaine@epa.gov).

#### SUPPLEMENTARY INFORMATION:

##### A. Does This Action Apply to Me?

This action applies only to EnergySolutions located in Clive, Utah.

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##### I. Summary of This Action

EPA is promulgating, as proposed, a site-specific treatment variance to EnergySolutions in Clive, Utah for the treatment of certain P- and U-listed mixed waste using an alternative treatment standard of VTD.<sup>1</sup> The current treatment standard for these wastes is combustion (CMBST). See 40 CFR 268.40 and 268.42.

EnergySolutions' VTD unit currently operates pursuant to a Part B RCRA permit issued by the State of Utah which (among other things) authorizes the treatment of mixed waste containing both semi-volatile organic compounds (SVOC) and volatile organic compounds (VOC). In 2006, EnergySolutions submitted a petition to EPA for a site-specific treatment variance from the LDR treatment standard of CMBST for various P- and U-listed mixed waste. The petitioner is seeking an alternative treatment standard of VTD.

<sup>1</sup> Mixed waste is defined as radioactive waste that contains hazardous waste that either: (1) Is listed as a hazardous waste in Subpart D of 40 CFR Part 261; or (2) causes the waste to exhibit any of the hazardous waste characteristics identified in Subpart C of 40 CFR Part 261. Mixed waste is regulated under multiple authorities: RCRA (for the non-radioactive component), as implemented by EPA or authorized States; and the Atomic Energy Act (AEA) (for the source, special nuclear, or by-product material component), as implemented by the Nuclear Regulatory Commission (NRC), NRC agreement States (for commercially-generated mixed wastes), or the Department of Energy (DOE) (for defense-related mixed waste generated by DOE activities). The variance is limited to the RCRA requirements for treatment of the hazardous waste portion of the mixed waste and does not affect the regulations under AEA authority.

EnergySolutions provided data and information indicating that the VTD unit is capable of achieving at least 99.99% removal of analyzable SVOC<sup>2</sup> and VOC<sup>3</sup> constituents in the solid treatment residue generated from the VTD unit; analysis of the solid treatment residue shows that the LDR concentration-based treatment standards for these chemical constituents are consistently achieved. (Concentration-based treatment standards for specific chemical constituents are found in 40 CFR 268.48.) The petitioner also supplied performance data demonstrating that the VTD unit effectively removes chemical compounds (in the SVOC and VOC families) from the mixed waste having similar chemical and physical properties (i.e., boiling points and vapor pressures) to the regulated hazardous constituents in the P- and U-listings that are the subject of this site-specific treatment variance. These P- and U-listed wastes are not analyzable, hence the treatment standard of CMBST. EnergySolutions contends that additional treatment of the solid treatment residue from the VTD unit, using the treatment method of CMBST, would be technically inappropriate in that substantial treatment, as measured with the use of similar chemical compounds, has already been achieved using the VTD unit.

The Agency has reviewed the information and data presented by the petitioner and has determined that additional treatment of the solid treatment residue (i.e., complying with the existing CMBST treatment standard) is technically inappropriate given the documented performance of the VTD unit. The Agency is therefore taking final action to grant a site-specific treatment variance to EnergySolutions for an alternative LDR treatment standard of VTD for certain P- and U-listed mixed wastes that have undergone treatment using the VTD process. Once treated, the solid treatment residue can be land disposed: in this case, in EnergySolutions' on-site hazardous mixed waste landfill. As a condition of this treatment variance, EnergySolutions must comply with a WFDT plan that establishes conditions on the treatment process that will assure optimized treatment of the mixed waste, which is implemented through a RCRA Part B permit modification of the VTD unit.

<sup>2</sup> The SVOC waste family is defined as those chemical compounds that are detected using SW-846 Method 8270.

<sup>3</sup> The VOC waste family is defined as those chemical compounds that are detected using SW-846 Method 8260.

## II. Background

Under sections 3004(d) through (g) of RCRA, the land disposal of hazardous wastes is normally prohibited unless such wastes are able to meet the treatment standards established by EPA. Section 3004(m) of RCRA requires EPA to set levels or methods of treatment that substantially diminish the hazardous waste's toxicity or substantially reduce the likelihood of hazardous constituents migrating from the waste so that short-term and long-term threats to human health and the environment posed by the waste's land disposal are minimized. EPA interprets this language to authorize treatment standards based on the performance of best demonstrated available technology (BDAT). This interpretation was upheld by the D.C. Circuit in *Hazardous Waste Treatment Council v. EPA*, 886 F.2d 355 (D.C. Cir. 1989).

However, facilities can apply for a site-specific treatment variance in cases when a hazardous waste that is generated cannot be treated to the specified levels or when it is technically inappropriate for the waste to undergo such treatment (See 51 FR at 40605–40606 (November 7, 1986)). In such cases, the generator or treatment facility may apply for a variance from a treatment standard. The requirements for a treatment variance are found at 40 CFR 268.44.<sup>4</sup>

An applicant for a site-specific treatment variance may demonstrate that it is inappropriate to require a waste to be treated by the method specified as the treatment standard, even though such treatment is technically possible (40 CFR 268.44(h)(2)). This is the criterion pertinent to today's action in that EnergySolutions claims it is technically

<sup>4</sup> In the case where the rules specify that a method of treatment must be used to treat a particular constituent or constituent(s), EPA also allows facilities to demonstrate that an alternative treatment method can achieve a measure of performance equivalent to that achievable by the EPA-specified treatment method (40 CFR 268.42(b)). This demonstration of equivalency, known as a Determination of Equivalent Treatment (DET), is typically both waste-specific and site-specific. EPA notes that the petition submitted by EnergySolutions appears to meet the criteria of 40 CFR 268.42(b) in that the VTD unit removes SVOC and VOC constituents with the same efficiency as hazardous waste combustion units. However, while the Agency could choose to evaluate the petition under the criteria developed for a DET, we are processing EnergySolutions petition under the criteria found in 40 CFR 268.44, as requested in EnergySolutions's petition to EPA. Today's decision is thus based on the rationale provided by EnergySolutions' treatment variance petition, i.e., that it is inappropriate to require the waste to be treated by the method specified as the treatment standard (i.e., CMBST), even though such treatment is technically possible (see 40 CFR 268.44(h)(2)).

inappropriate to further treat the waste (i.e., solid treatment residue) that has already been treated to remove over 99.99% of the hazardous organic constituents contained in the waste.

## III. Development of This Variance

### A. EnergySolutions' Petition

On April 28, 2006, EnergySolutions petitioned EPA for a site-specific treatment variance from the treatment standard of combustion (CMBST) for certain P- and U-listed mixed wastes.<sup>5</sup> EnergySolutions requested an alternative treatment standard of VTD<sup>6</sup> which would allow the land disposal of the solid treatment residue from the VTD unit without having to combust the treatment residue (as required by the CMBST treatment standard). The petitioner contends that additional treatment is inappropriate and would result in little if any additional reduction of the waste's toxicity.

EnergySolutions provided data and information indicating that treatment using their VTD unit achieves substantial reductions in the concentrations of organic constituents (greater than 99.99%) in the solid treatment residue. Data included SVOC and VOC concentrations in the untreated waste, organic liquid condensate and solid treatment residue from demonstration tests conducted in August and September of 2004 and October of 2006. The petitioner also supplied performance data indicating that the VTD unit can remove 99.99% of organic constituents with chemical and physical properties (i.e., boiling points and vapor pressures) similar to the organic constituents in the P- and U-listed hazardous waste identified in their petition.<sup>7</sup> The petitioner also

<sup>5</sup> Under 40 CFR 268.42, "CMBST" is defined as "[h]igh temperature organic destruction technologies, such as combustion in incinerators, boilers, or industrial furnaces operated in accordance with the applicable requirements of 40 CFR Part 264, Subpart O, or 40 CFR Part 265, Subpart O, or 40 CFR Part 266, Subpart H, and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the Catalytic Extraction Process." EnergySolutions' VTD does not meet this definition.

<sup>6</sup> For certain P- and U-listed wastes, EPA was not able to identify an analytical method by which treatment effectiveness could be determined in the regulated constituent. As a result, EPA promulgated CMBST as the treatment standard for these P- and U-listed wastes. CMBST was selected as the method of treatment because it is relatively indiscriminate in the destruction of organics due to the high temperatures, efficient mixing, and consistent residence times present in a well-designed and well-operated facility (see 55 FR 22611, June 1, 1990.)

<sup>7</sup> The specific P- and U-listed hazardous wastes associated with the untreated mixed waste had been conservatively determined by the facility, in

provided a description of the analytical and methodological protocol established by the State of Utah that describes how the VTD unit will be optimized to assure continued optimized removal of hazardous organic constituents from P- and U-listed mixed waste.

On March 6, 2008 (73 FR 12043), the Agency issued a direct final rule and a parallel proposal (73 FR 12043) granting a site-specific treatment variance to EnergySolutions for the treatment of certain P- and U-listed mixed waste using the VTD unit. The treatment variance established an alternative treatment standard to treatment by combustion (CMBST) required for these wastes under EPA's rules implementing the LDR provisions of RCRA. The Agency made the determination that combustion of the solid treatment residue generated from the VTD unit was technically inappropriate due to the effective performance of the VTD unit. The treatment variance was conditioned upon EnergySolutions complying with a WFDT plan specifically addressing the treatment of these P- and U-listed wastes, which is to be implemented through a RCRA Part B permit modification for the VTD unit.

We stated in the preamble to the direct final rule and parallel proposal that if we received adverse comment we would withdraw the direct final rule and proceed with a subsequent final rule. We received adverse comment on the direct final rule and therefore withdrew the direct final rule as of May 2, 2008.

#### B. Comments Received on Variance and Agency's Response

The Agency received four comments on the direct final rule. Two of the comments were identical, and urged the Nuclear Regulatory Commission (NRC) to deny EnergySolutions' request to import nuclear waste into the United States for disposal. We have concluded that these comments are not germane to the treatment variance and addressed an issue outside the scope of this rulemaking. The third comment supported granting the site-specific treatment variance to EnergySolutions. The final comment raised concerns about radioactive waste being treated in Utah and EPA's determination that the only regulated entity that would be affected by the rule would be EnergySolutions (see 73 FR at 12044). The commenter argued that EnergySolutions was not the only

consultation with the State of Utah, using the "derived-from rule" described in 40 CFR 261.3(c)(2)(i). A listing of the specific waste codes and chemical applicable to this rule can be found in the docket supporting this rule.

affected party and stated that the commenter, the State of Utah, and the United States would be affected by granting this treatment variance. The commenter, however, did not state why or how these entities would be affected. While the commenter's assertion that citizens, the States, and the federal government could be affected by this action may be correct in the broadest sense, we believe that it has no relation to the narrow question at issue here of whether the criteria for a treatment variance are satisfied. However, EPA believes firmly that no entities will be adversely affected by granting the treatment variance. First, EnergySolutions is a permitted hazardous waste treatment, storage and disposal facility and is subject to regulations and permit conditions which assure protection of human health and the environment. Second, the unchallenged record indicates that EnergySolutions' method of treatment fully satisfies the criterion for a treatment variance; that is, the method of treatment is one that minimizes threats to human health and the environment posed by land disposal of the wastes being treated.<sup>8</sup>

After review of the comments, the Agency has determined that the site specific treatment variance to EnergySolutions should be promulgated.

#### C. What Type and How Much Mixed Waste Are Subject to This Variance?

The wastes subject to this variance are mixed waste consisting of discarded commercial chemical products (P- and U-listed hazardous wastes) that are required to meet the technology performance standard of CMBST.<sup>9</sup> It also includes secondary waste (e.g., carbon filter media) generated by the EnergySolutions' VTD unit during the processing of the mixed waste.

The Department of Energy (DOE) has identified approximately 50 cubic meters (m<sup>3</sup>) of mixed waste (tank sludges and decontamination residues) in legacy storage in Oak Ridge, Tennessee. EnergySolutions has also identified an additional 900 m<sup>3</sup> of hardened tank sludge at a commercial facility. Another potential source of hazardous waste to be treated by EnergySolutions' VTD unit is from a

<sup>8</sup> It should be noted that even if the Agency were to deny EnergySolutions' petition, it would not prevent them from treating these wastes, although the solid treatment residue generated from the VTD unit would need to be further treated by CMBST. However, the data and information provided by EnergySolutions demonstrates that such further treatment is inappropriate.

<sup>9</sup> A list of these chemicals, with associated boiling point data, is included as part of the docket supporting this rulemaking.

commercial chemical manufacturer. The waste can be characterized as tank sludge, much of which is in a hardened/compressed form, identified as U053 (crotonaldehyde) and U122 (formaldehyde) mixed waste.<sup>10</sup>

#### D. Description of the VTD Process

EnergySolutions' VTD unit holds a permit from the State of Utah as a RCRA Subpart X miscellaneous treatment unit. This permit allows the facility to treat mixed waste that contains SVOC and VOC waste families. The VTD unit has been in operation since March 2005, and has processed more than 304,000 kilograms (kg) of mixed waste. EnergySolutions' VTD process design achieves a removal efficiency of 99.99% for SVOC and VOC waste families in the VTD solid treatment residue and meets all applicable LDR concentration-based treatment standards. Treatment residue from the unit is land disposed at EnergySolutions' on-site permitted mixed waste landfill after all other regulatory requirements are met.

The VTD unit consists of four subsystems: (1) A thermal separation system (dryer); (2) a processed material discharge system; (3) an off-gas treatment train; and (4) a condensate tank system.<sup>11</sup> The treatment system operates by indirectly heating the raw waste fed into the unit, vaporizing the volatile and semi-volatile organic constituents and capturing these constituents as a condensate. The process has one input stream (the raw waste) and three output streams. The three output streams are: (1) The solid treatment residue; (2) the concentrated liquid condensate; and (3) an off-gas, which is released to the atmosphere after passing through a series of filters and condensers. It should be noted that the liquid condensate and the off-gas are not subject to this rulemaking. The condensate is still subject to the CMBST treatment standard before it can be land disposed, and is sent off-site for incineration. The off-gas emission is regulated under a state-issued Part B Permit (its emission limits established using a risk assessment under 40 CFR 270.32(b)(2) (the so-called omnibus provision) and by an Air Approval Order issued by the Utah Department of Environmental Quality).

The thermal separation unit or dryer is a completely enclosed cylindrical

<sup>10</sup> Waste codes are assigned by the generator based upon process knowledge of raw feed materials and by-products within the chemical manufacturing process.

<sup>11</sup> A process diagram of the EnergySolutions' VTD unit can be found in the docket supporting this rulemaking. Schematic drawings of the equipment are also provided.

tank with a processing capacity of approximately 29 cubic feet (ft<sup>3</sup>) of feed material per process cycle. Several process cycles can be run per day. It is indirectly heated by a propane-fired furnace and is permitted to reach process temperatures up to 650 °C. The feed material is introduced into the dryer through a hopper. The system is maintained below atmospheric pressure by a vacuum pump. Nitrogen is introduced to displace oxygen to a level no greater than 7%, which is below the oxygen ignition point for the volatile and semi-volatile contaminants. The nitrogen purge gas carries the volatilized contaminants from the dryer to the off-gas treatment train. Treatment time and temperature in the dryer are established for each process cycle following the characterization of the raw waste.

The processed material discharge system is fully enclosed and consists of a hopper with a cooling jacket, a conveyor system, and a collection container. The system includes water spray nozzles to aid in cooling the processed material and to provide dust control. The dry processed material is collected in the discharge system after the process cycle is completed. An auger conveys the discharged solid to a metal receiving box. Post-treatment analytical samples are collected from the box or directly from the processed material discharge system and tested for all analyzable regulated constituents originally identified in the waste feed. Once successful verification results are received, the process material is land disposed at EnergySolutions' on-site mixed waste landfill.

Off-gas is generated within the dryer and is purged with a nitrogen carrier gas. The off-gas treatment train, also called the air pollution control (APC) system, consists of condensers in series, a vacuum pump, and a filtration adsorption system with a pre-filter, HEPA filter, and carbon adsorption beds. The nitrogen provides a relatively inert atmosphere (oxygen content less than 7%), which prevents combustion of the volatile or semi-volatile constituents. The gas stream then passes through the filtration system to remove the remaining SVOC and VOC.

Hot gas from the dryer is fed to the condensers and the condensers cool the gas stream and the majority of the volatile and semi-volatile compounds are brought to a liquid phase. The condensate tank system consists of traps, for temporary storage, from which the liquid condensate can either be transferred to permanent tanks or to portable totes. Traps located in the liquid discharge line from the condensers collect the condensate. It is

then sent off-site for incineration at a RCRA permitted facility.

The liquid condensate is more amenable to combustion than the untreated waste.<sup>12</sup> Incineration of the liquid condensate optimizes the destruction of toxic organics and yields a smaller volume of post-incineration waste. The liquid condensate contains approximately 5% of the total amount of radionuclides in the untreated waste and presents a significantly lower potential for radioactive materials to be emitted to the atmosphere through the combustion process.

The off-gas emission is vented to the atmosphere through a stack that discharges approximately 35 feet above ground level. The gas emission leaves the APC system and its exit velocity is boosted with outside air through a blower in order to provide good dispersion of any remaining emissions. The APC system also is designed to allow the carrier gas to be recycled back to the dryer. System data are displayed as an electronic process flow diagram that is continuously monitored by trained technicians. Dryer temperature, dryer pressure, oxygen level and off-gas exit temperature are included in the parameters that are measured.<sup>13</sup>

The facility currently ships separately the solid treatment residue, containing the majority of the radionuclides (over 95%) and negligible concentration of organics to its on-site hazardous mixed waste landfill, and the liquid condensate, containing the majority of the organic constituents, to an incinerator to meet the CMBST requirement. The incineration takes place in a unit permitted for both the radioactive component and for RCRA hazardous wastes.<sup>14</sup>

#### IV. EPA's Reasons for Granting This Variance

EPA has determined that given the similarities in chemical and physical properties and separation characteristics between the SVOC and VOC mixed waste and the P- and U-listed mixed wastes, that processing the P- and U-listed mixed waste through the VTD unit will achieve the same level of treatment performance achieved for the

<sup>12</sup> Analytical data on the organic condensate and solid process residuals from the VTD demonstration tests completed in August and September of 2004 and October of 2006 can be found in the docket supporting this rulemaking.

<sup>13</sup> More detailed information on the EnergySolutions' VTD technology process can be found in the docket for this rulemaking.

<sup>14</sup> There are only two permitted mixed waste incinerators in the U.S. These facilities, due to the operational design of their units, have greater available capacity to accept liquid condensate waste and have a backlog of solid mixed wastes.

SVOC and VOC mixed waste (i.e., 99.99% removal in the solid treatment residue). Furthermore, EPA has concluded that subsequent combustion of the solid treatment residue from the VTD unit will not substantially reduce its toxicity so that subsequent treatment by the required treatment standard of CMBST is unnecessary and will achieve no additional benefit. This is because the solid treatment residue has negligible concentrations of the residual organics. Put another way, EPA has determined that additional treatment with CMBST, as required by the treatment standard of CMBST, is technically inappropriate due to the effectiveness of the VTD treatment for the removal of organic constituents. Therefore, EPA is promulgating this final action to grant a site-specific treatment variance to EnergySolutions for an alternative treatment standard of VTD for the land disposal of the solid treatment residue from the treatment of certain P- and U-listed mixed waste.

Not only would further treatment of the residue be technically inappropriate, but it could have environmentally detrimental effects. Under their state-issued Part B permit, EnergySolutions is required to operate the VTD unit so that most (generally over 95%) of the radioactive component remains in the solid treatment residue.<sup>15</sup> Combustion of that treatment residue could release some of the radioactive component to the atmosphere through the combustion process. To limit this potential, the Agency believes that processing the P- and U-listed hazardous wastes through the VTD unit followed by disposal of the solid treatment residue in the on-site mixed waste landfill is environmentally preferable.

#### V. Conditions of the Variance

Although EPA believes the applicant has made a technically sound presentation, and believes further that the VTD process should continue to result in highly effective treatment, EPA (and the applicant, and the State of Utah (the authorized permit-issuer)) believes that conditions can and should be imposed on the treatment process to assure its continued effective operation. Therefore, as a condition of its RCRA permit, EnergySolutions is required to submit to the State of Utah all the appropriate data and documentation, as part of a RCRA Part B permit modification, addressing the treatment of these P- and U-listed mixed wastes using VTD. Most significantly for

<sup>15</sup> Data relating to radiochemical properties of the condensate generated through the process is included in the docket supporting this rulemaking.

purposes of the treatment variance, this submission is to include a new WFDT plan for P- and U-listed mixed wastes developed by the facility and approved by the State of Utah. This plan identifies the surrogate compounds that reflect treatment of the most difficult to treat CMBST-coded organic compounds (e.g., those with the highest vapor pressures and boiling points).<sup>16</sup> Surrogates will have to be selected to measure the level of treatment of the organic compounds that do not have analytical methods of detection or quantification. The RCRA permit, when modified, will require compliance with this WFDT plan for each batch of P- and U-listed mixed waste that requires CMBST.<sup>17</sup> EPA's site-specific treatment variance is conditioned on *EnergySolutions'* adhering to the WFDT plan specifically addressing the treatment of these P- and U-listed wastes.

A WFDT plan is required in the state-issued Part B permit for every new waste type to be treated in the *EnergySolutions'* VTD unit. Because many of the organic chemicals in P- and U-listed hazardous waste do not have analytical methods for detection or quantification, the WFDT plan, as required by the permit, will need to identify individual surrogate compounds that reflect treatment of the non-analyzable organic compounds in the waste family. The volatility of each target contaminant is the most important factor in thermal desorption separation.<sup>18</sup> Most of these chemicals (99 of 139) have boiling points less than 200 °C, 28 have boiling points between 200 °C and 300 °C, seven have boiling

points between 300 °C and 400 °C, four have boiling points between 400 °C and 500 °C, and only one of the compounds has a boiling point greater than 500 °C; at 534 °C. The VTD system is permitted to operate at temperatures up to 650 °C. Based on the volatility of the organic constituents in the boiling point table and the operational temperature of the VTD unit, processing these P- and U-listed hazardous waste through the VTD system can be expected to remove the organic constituents (especially those organics requiring CMBST) from the solid feed material and concentrate them within the liquid condensate, including the surrogates chosen to represent the non-analyzable P- and U-listed organic constituents.

Surrogates are also used to measure the performance of the VTD unit. Rather than test each specific organic constituent associated with each waste family, the facility chooses surrogate compounds to represent the most difficult to treat organic chemicals in the entire waste family matrix (i.e., highest boiling points and pressure vapors). The WFDT plan must identify these surrogate compounds to be spiked into the waste as indicators for the entire waste family performance in the VTD unit.

## VI. Statutory and Executive Order Reviews

### A. Executive Order 12866: Regulatory Planning and Review

This action is not a "significant regulatory action" under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under the Executive Order.

### B. Paperwork Reduction Act

This action does not impose any new information collection burden. This action grants a site-specific treatment variance to *EnergySolutions* for the treatment of certain P- and U-listed mixed wastes using their VTD unit instead of the treatment standard required under RCRA's LDR program, CMBST. However, the Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations at 40 CFR 268.42 and 268.44 under the provisions of the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2050-0085. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

### C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

This site-specific treatment variance does not create any new requirements. Rather, it establishes an alternative treatment standard for specific waste codes and applies to only one facility. Therefore, we hereby certify that this rule will not add any new regulatory requirements to small entities. This rule, therefore, does not require a regulatory flexibility analysis.

### D. Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, sections 205 of UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments

<sup>16</sup>The objectives of the WFDT are: (1) Determine if the P- and U-listed hazardous wastes that have CMBST as the LDR treatment standard are amenable to VTD processing and that the processed material meets the LDR standards for all analyzable P and U hazardous organic constituents; (2) identify and justify representative surrogate compounds for the demonstration for those P and U hazardous organic constituents that do not have an analytical method of detection; (3) determine the optimal operational and system parameters for the new waste family that will ensure at least 99.99 percent removal efficiency is attained for such hazardous wastes; (4) account for toxic waste constituents through material balances; (5) verify compliance of the VTD unit with all applicable conditions of the *EnergySolutions'* state-issued Part B Permit; and (6) determine concentration levels for the hazardous organic constituents in treatment residuals to determine that they are below analytical reporting levels, including surrogate compounds chosen for non-analyzable or difficult to treat organics.

<sup>17</sup>If the conditions outlined in the WFDT plan are not met for each batch of P- and U-listed mixed waste, *EnergySolutions* must re-treat the batch of waste to meet the conditions established in the plan or send the waste off-site for CMBST.

<sup>18</sup>The CMBST Code Boiling Point Table is included in the docket supporting this rulemaking. It provides boiling point data for those non-analyzable hazardous organics that require CMBST as the LDR treatment standard.

to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's rule contains no Federal mandates (under the regulatory provisions of Title II of UMRA) for State, local, or tribal governments or the private sector. The rule imposes no enforceable duty on any State, local or tribal governments or the private sector. Energy Solutions will obtain from the State of Utah a RCRA permit modification for their VTD unit to treat these P- and U-listed wastes. This action, however, does not impose any new duties on the state's hazardous waste program. EPA has determined, therefore, that this rule contains no regulatory requirements that might significantly or uniquely affect small governments.

#### *E. Executive Order 13132: Federalism*

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." Policies that have "federalism implications" are defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This action finalizes a site-specific treatment variance applicable to one facility. Thus, Executive Order 13132 does not apply to this rule.

#### *F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (59 FR 22951, November 9, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." This final rule does not

have tribal implications, as specified in Executive Order 13175. This action is a site-specific treatment variance that applies to only one facility, which is not a tribal facility or located on tribal lands. Thus, Executive Order 13175 does not apply to this rule.

#### *G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks*

EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it does not establish an environmental standard intended to mitigate health or safety risks.

#### *H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use*

This rule is not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355 (May 22, 2001)) because it is not a significant regulatory action under Executive Order 12866.

#### *I. National Technology Transfer and Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

The final rule does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

#### *J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*

Executive Order 12898 (59 FR 7629 (February 16, 1994)) establishes federal executive policy on environmental

justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment. The site-specific treatment variance being finalized applies to certain P- and U-listed mixed waste that is treated in an existing, permitted RCRA facility, ensuring protection to human health and the environment. Therefore, the rule will not result in any disproportionately negative impacts on minority or low-income communities relative to affluent or non-minority communities.

#### *K. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A Major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule as defined by U.S.C. 804(2). This rule will be effective June 13, 2008.

#### **List of Subjects in 40 CFR Part 268**

Environmental protection, Hazardous waste, Mixed waste and variances.

Dated: May 8, 2008.

#### **Susan Parker Bodine,**

*Assistant Administrator, Office of Solid Waste and Emergency Response.*

■ For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

**PART 268—LAND DISPOSAL RESTRICTIONS**

Authority: 42 U.S.C. 6905, 6912(a), 6921, and 6924.

**§ 268.42 Treatment standards expressed as specified technologies.**

■ 1. The authority citation for part 268 continues to read as follows:

■ 2. In § 268.42, Table 1 in paragraph (a) is amended by adding in alphabetical order an entry for “VTD” to read as follows:

\* \* \* \* \*  
(a) \* \* \*

TABLE 1.—TECHNOLOGY CODES AND DESCRIPTION OF TECHNOLOGY-BASED STANDARDS

Technology code	Description of technology-based standards
VTD	Vacuum thermal desorption of low-level radioactive hazardous mixed waste in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission.

■ 3. In § 268.44, the table in paragraph (o) is amended by adding in alphabetical order an entry for “EnergySolutions LLC, Clive, UT” and

adding a new footnote 14 to read as follows:

**§ 268.44 Variance from a treatment standard.**

\* \* \* \* \*  
(o) \* \* \*

TABLE.—WASTES EXCLUDED FROM THE TREATMENT STANDARDS UNDER § 268.40

Facility name <sup>1</sup> and address	Waste code	See also	Regulated hazardous constituent	Wastewaters		Nonwastewaters	
				Concentration (mg/L)	Notes	Concentration (mg/kg)	Notes
EnergySolutions LLC, Clive, UT <sup>14</sup> .	P- and U-listed hazardous waste requiring CMBST.	Standards under 268.40.	NA	NA	NA	CMBST or VTD	NA

<sup>1</sup> A facility may certify compliance with these treatment standards according to provisions in 40 CFR 268.7.

<sup>14</sup> This site-specific treatment variance applies only to solid treatment residue resulting from the vacuum thermal desorption (VTD) of P- and U-listed hazardous waste containing radioactive contamination (“mixed waste”) at the EnergySolutions’ LLC facility in Clive, Utah that otherwise requires CMBST as the LDR treatment standard. Once the P- and U-listed mixed waste are treated using VTD, the solid treatment residue can be land disposed at EnergySolutions’ onsite RCRA permitted mixed waste landfill without further treatment. This treatment variance is conditioned on EnergySolutions complying with a Waste Family Demonstration Testing Plan specifically addressing the treatment of these P- and U-listed wastes, with this plan being implemented through a RCRA Part B permit modification for the VTD unit.

**Note:** NA means Not Applicable.