

E. What Regulations Allow Facilities To Request a Demonstration of Equivalent Treatment?

Under 40 CFR 268.42(b), facilities may submit an application to EPA demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in § 268.42.

F. What Information Must the Generator Supply for a Demonstration of Equivalent Treatment Petition?

Petitioners must provide sufficient information to EPA, to allow EPA to determine that the alternative treatment method provides a measure of performance equivalent to that achieved by the EPA-specified method in the LDR program. Such information generally includes: a demonstration that their treatment method is in compliance with federal, state, and local requirements and is protective of human health and the environment, and demonstrations of equivalence for an alternative method of treatment based on a comparison of technologies.

III. EPA's Evaluation of the Waste Information and Data

A. What Waste Did LBNL Petition EPA To Delist?

On June 30, 1999, LBNL petitioned EPA to exclude from the list of hazardous wastes at 40 CFR 261.31, an initial volume of approximately 105 U.S. gallons and an approximate annual volume of 65 U.S. gallons of CCO treatment residues generated at the NTLF and designated as F002, F003, and F005 listed mixed wastes. F002, F003, and F005 wastes are spent halogenated and non-halogenated solvent mixtures from non-specific sources. LBNL also included in this submittal a demonstration of equivalent treatment petition for this same waste as this waste is also high-TOC subcategory D001 ignitable wastes.

Since submitting the petitions, the NTLF has generated an additional approximately 95 gallons of treatment residues. There will be no additional treatment residues from the CCO process. LBNL has closed the NTLF. Therefore, the total amount of waste LBNL has petitioned to delist and for which it has sought demonstration of equivalent treatment approval is a total fixed amount of 200 U.S. gallons.

B. How Did LBNL Sample and Analyze the Waste for the Petitions?

LBNL submitted seven sets of analytical data from mixed waste samples and six sets of analytic data

from surrogate waste samples. Because there are no commercially available analytical laboratories with the ability to analyze high activity mixed wastes from NTLF (due to the level of radioactivity), all analytical testing for these mixed wastes was conducted in-house by LBNL and NTLF staff. As a quality control measure, non-radioactive surrogate waste samples were sent for analysis to an offsite commercial laboratory and results were compared to the in-house data.

For the in-house testing data, LBNL provided the experimental data documentation from the operation of the CCO system, and the test results (GC chromatograms). LBNL's in-house testing method used direct liquid injection gas chromatography to minimize the volume of the sample. The LBNL method used two detectors, a Mass Spectrometer and a Flame Ionization Detector. Together, these can detect organic compounds listed in 40 CFR part 261, appendix VIII including those compounds that were present in the original mixed waste and surrogate samples prior to treatment.

LBNL also tested all samples for pH in-house using pH strips. LBNL did not test for inorganic or metal compounds because, based upon the processes and chemicals that LBNL used to produce these wastes, these compounds were not present in the original mixed waste or surrogate samples.

The surrogate samples that were sent to an off-site commercial analytical laboratory were analyzed by EPA Test Methods 8015 (modified) for Industrial Solvents and Method 8260 for Volatile Organic Compounds. Several samples were also tested by Method 8270 for Base Neutral and Acid Extractable Organic Compounds (semivolatile compounds).

IV. Public Comments Received on the Proposed Rule

EPA began accepting public comments just after the original delisting and DET petitions were received in June 1999. At that time, LBNL had just begun treatment of the mixed waste using the CCO process. LBNL operated the CCO system as part of its treatability study in accordance with DTSC regulations (22 CCR 66261.4).

Given the passage of time, many of the public comments that EPA received raised concerns about the treatability study that are no longer pertinent. All the mixed waste has already been treated, the residue is no longer hazardous, and LBNL has closed the NTLF. The remaining residues are radioactive-only and therefore are

subject to regulation by NRC. Thus, the potential availability of new treatment technologies has no bearing on EPA's action here.

Other comments raised issues that are not relevant to the Delisting or DET petitions, such as the Superfund status of LBNL and the potential future issuance of treatment permits authorizing CCO technology. While EPA believes that the CCO process is equivalent to, and in some ways superior to combustion, under our regulations, this decision is site-specific. Others who are pursuing this technology will need to submit their own delisting and DET petitions and permit applications.

A. Who Submitted Comments on the Proposed Rule?

A total of 192 comments (letters and oral testimony) were received during the public comment period from a wide variety of industry and trade associations; a local community group; universities and academic institutions; pharmaceutical companies; Department of Energy (DOE) facilities and LBNL; individuals; and government organizations. Of the comments received, one hundred and seventy-two of the comments were supportive of the proposed decisions, six comments were neutral, and fourteen comments were non-supportive of the proposed decisions. A more detailed response to comment document is included in the rulemaking docket.

B. What Did the Supportive Public Comments Say?

The supportive comments came from all of the categories of groups listed above except for the local community group.

In general, the supportive comments cited the small volumes of waste involved, the small scale of the treatment process, treatment onsite by the waste generators, the expertise of the staff involved in the treatment, and the protective controls already in place under DOE regulation. The supportive comments also pointed out the lack of affordable treatment and disposal options for mixed waste and the effectiveness of the CCO method as superior over required large-scale commercial processes (e.g. incineration) because it prevents the release of tritium to the environment. Many organizations also mentioned this proposed rule as an important initiative designed to help resolve a national mixed waste problem faced by the DOE, other research organizations, and the pharmaceutical industry.