

Inert ingredients	Limits	Uses
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Isopropyl myristate, CAS Reg. No. 110-27-0	Solvent
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[FR Doc. 95-2442 Filed 1-31-95; 8:45 am]
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40 CFR Part 261

[SW-FRL-5148-7]

Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Proposed Exclusion

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule and request for comment.

SUMMARY: The Environmental Protection Agency (EPA or Agency) is proposing to grant a petition submitted by the U.S. Department of Energy (DOE), Richland, Washington, to exclude certain wastes to be generated by a treatment process at its Hanford facility from being listed hazardous wastes. The Agency has concluded that the disposal of these wastes, after treatment, will not adversely affect human health or the environment. This action responds to a delisting petition submitted under § 260.22, which specifically provides generators the opportunity to petition the Administrator to exclude a waste on a "generator-specific" basis from the hazardous waste lists. This proposed decision is based on an evaluation of the treatment process and waste-specific information provided by the petitioner. If this proposed decision is finalized, the petitioned wastes will be conditionally excluded from the requirements of hazardous waste regulations under the Resource Conservation and Recovery Act (RCRA).

The exclusion will allow DOE to proceed with critical cleanup at the Hanford site. The primary goal of cleanup is to protect human health and the environment by reducing risks from unintended releases of hazardous

wastes that are currently stored at the site.

The Agency is also proposing the use of a fate and transport model to evaluate the potential impact of the petitioned waste on human health and the environment, based on the waste-specific information provided by the petitioner. This model has been used to predict the concentration of hazardous constituents that may be released from the petitioned waste, at the time of disposal, which will not harm human health or the environment.

DATES: EPA is requesting public comments on today's proposed decision, the applicability of the fate and transport model used to evaluate the petitioned wastes, and on the verification testing conditions which will ensure that petitioned wastes are non-hazardous. Comments must be submitted by March 3, 1995. Because of an existing settlement agreement (consent order) on remediation of the Hanford site that requires DOE to have a final delisting in place by June 1995 or before, no extension to the comment period will be granted. Comments postmarked after the close of the comment period will be stamped "late".

Any person may request a hearing on this proposed decision by filing a request with the Director, Characterization and Assessment Division, Office of Solid Waste, whose address appears below, by February 16, 1995. The request must contain the information prescribed in § 260.20(d).

ADDRESSES: Send three copies of your comments to EPA. Two copies should be sent to the Docket Clerk, Office of Solid Waste (Mail Code 5305), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. A third copy should be sent to Jim Kent, Waste Identification Branch, CAD/OSW (Mail Code 5304), U.S. Environmental

Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. Identify your comments at the top with this regulatory docket number: "F-95-HNEP-FFFFF".

Requests for a hearing should be addressed to the Director, Characterization and Assessment Division, Office of Solid Waste (Mail Code 5304), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460.

The RCRA regulatory docket for this proposed rule is located at the U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460, and is available for viewing (Room M2616) from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding Federal holidays. Call (202) 260-9327 for appointments. The public may copy material from any regulatory docket at no cost for the first 100 pages, and at a cost of \$0.15 per page for additional copies.

FOR FURTHER INFORMATION CONTACT: For general information, contact the RCRA Hotline, toll free at (800) 424-9346, or at (703) 412-9810. For technical information concerning this notice, contact Narendra Chaudhari, Office of Solid Waste (Mail Code 5304), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460, (202) 260-4787.

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I. Disposition of Delisting Petition

U.S. Department of Energy's Hanford Facility, Richland, Washington

A. Site History

In 1943, the U.S. Army Corps of Engineers selected the U.S. Department of Energy's (DOE) Hanford site located in Richland, Washington, as the location for reactor, chemical separation, and related activities in the production and purification of special nuclear materials. The site is situated on approximately 560 square miles (1,450 square kilometers), which is owned by the U.S. Government and managed by DOE. By the 1980s, environmental impacts resulting from operations at this site were acknowledged, and DOE initiated cleanup efforts. In May of 1989, DOE entered into a Tri-Party Agreement ("The Hanford Federal Facility Agreement & Consent Order"), with the State of Washington and the U.S. Environmental Protection Agency to initiate environmental restoration efforts over a 30-year period. As such, the current mission for DOE's Hanford facility is focused on waste management and environmental restoration and remediation. In order to carry out this mission (and allow for possible future use of the site after cleanup), it is critical for DOE's Hanford facility to obtain a delisting for certain wastes generated on-site. (See the public docket for the final report on *The Future for Hanford: Uses and Cleanup*, December 1992.)

B. Petition for Exclusion

On October 30, 1992, DOE petitioned the Agency to exclude treated wastes generated from its proposed 200 Area Effluent Treatment Facility (ETF). DOE subsequently provided additional information to complete its petition and also submitted an addendum to the petition. The ETF is designed to treat process condensate (PC) from the 242-A Evaporator. The untreated PC is a low-level radioactive waste as defined in DOE Order 5820.2A and a RCRA listed hazardous waste (EPA Hazardous Waste Nos. F001 through F005 and F039 derived from F001 through F005) as defined in 40 CFR § 261.31(a). DOE intends to discharge the treated effluents from the ETF to a Washington State Department of Ecology-approved land disposal site. (See DOE's delisting petition and addendum, which are included in the public docket for this

notice, for details regarding wastes being treated and treatment process.)

While the constituents of concern in listed wastes F001, through F005 wastes include a variety of solvents (see Part 261, Appendix VII), the constituents (based on PC sampling data and process knowledge) that serve as the basis for characterizing DOE's petitioned wastes as hazardous were limited to 1,1,1-trichloroethane (F001), methylene chloride (F002), acetone and methyl isobutyl ketone (F003), cresylic acid (F004), and methyl ethyl ketone (F005).

DOE petitioned the Agency to exclude its ETF generated liquid effluent because it does not believe that these wastes, once generated, will meet the listing criteria. DOE claims that its treatment process will generate non-hazardous wastes because the constituents of concern in the wastes are no longer present or will be present in insignificant concentrations. DOE also believes that the wastes will not contain any other constituents that would render it hazardous. Review of the petitioned wastes, except for the radioactive component which are regulated under the Atomic Energy Act (see Part II. Section B. below for details), included consideration of the original listing criteria, as well as the additional factors required by the Hazardous and Solid Waste Amendments (HSWA) of 1984. See Section 222 of HSWA, 42 U.S.C. 6921(f), and § 260.22(d)(2)-(4). Today's proposal to grant this petition for delisting is the result of the Agency's evaluation of DOE's petition.

II. Background

A. Authority

On January 16, 1981, as part of its final and interim final regulations implementing Section 3001 of RCRA, EPA published an amended list of hazardous wastes from non-specific and specific sources. This list has been amended several times, and is published in § 261.31 and § 261.32. These wastes are listed as hazardous because they typically and frequently exhibit one or more of the characteristics of hazardous wastes identified in subpart C of part 261 (i.e., ignitability, corrosivity, reactivity, and toxicity) or meet the criteria for listing contained in § 261.11(a)(2) or (a)(3).

Individual waste streams may vary, however, depending on raw materials, industrial processes, and other factors. Thus, while a waste that is described in these regulations generally is hazardous, a specific waste from an individual facility meeting the listing description may not be. For this reason, § 260.20 and § 260.22 provide an exclusion

procedure, allowing persons to demonstrate that a specific waste from a particular generating facility should not be regulated as a hazardous waste.

To have their wastes excluded, petitioners must show that wastes generated at their facilities do not meet any of the criteria for which the wastes were listed. See § 260.22(a) and the background documents for the listed wastes. In addition, the Hazardous and Solid Waste Amendments (HSWA) of 1984 require the Agency to consider any factors (including additional constituents) other than those for which the waste was listed, if there is a reasonable basis to believe that such additional factors could cause the waste to be hazardous. Accordingly, a petitioner also must demonstrate that the waste does not exhibit any of the hazardous waste characteristics (i.e., ignitability, reactivity, corrosivity, and toxicity), and must present sufficient information for the Agency to determine whether the waste contains any other toxicants at hazardous levels. See § 260.22(a), 42 U.S.C. 6921(f), and the background documents for the listed wastes. Although wastes which are "delisted" (i.e., excluded) have been evaluated to determine whether or not they exhibit any of the characteristics of hazardous waste, generators remain obligated under RCRA to determine whether or not their waste remains non-hazardous based on the hazardous waste characteristics.

In addition, residues from the treatment, storage, or disposal of listed hazardous wastes and mixtures containing listed hazardous wastes are also considered hazardous wastes. See §§ 261.3(a)(2)(iv) and (c)(2)(i), referred to as the "mixture" and "derived-from" rules, respectively. Such wastes are also eligible for exclusion and remain hazardous wastes until excluded. On December 6, 1991, the U.S. Court of Appeals for the District of Columbia vacated the "mixture/derived from" rules and remanded them to the Agency on procedural grounds (*Shell Oil Co. v. EPA*, 950 F.2d 741 (D.C. Cir. 1991)). On March 3, 1992, EPA reinstated the mixture and derived-from rules on an interim basis, and solicited comments on other ways to regulate waste mixtures and residues (see 57 FR 7628). The Agency is going to address issues related to waste mixtures and residues in a future rulemaking.

B. Regulatory Status of Mixed Wastes

The petitioned wastes that are subject to today's notice are "mixed wastes." Mixed wastes are defined as a mixture of hazardous wastes regulated under Subtitle C of RCRA and radioactive

wastes regulated under the Atomic Energy Act (AEA). Because section 1004 of RCRA excludes "source," "special nuclear," and "byproduct materials," as defined under the AEA, from the definition of RCRA "solid waste," there has been some confusion in the past as to the scope of EPA's authority over mixed waste under RCRA. EPA clarified this question in a **Federal Register** notice of July 3, 1986 (51 FR 24504).

EPA's clarification stated that the section 1004 exclusion applies only to the radioactive portion of mixed waste, not to the hazardous constituents. Therefore, a mixture of "source," "special nuclear," or "byproduct materials" and a RCRA hazardous waste must be managed as a hazardous waste, subject to the requirements of RCRA Subtitle C (that is, RCRA standards for the management of hazardous waste). EPA's oversight under RCRA, however, extends only to the hazardous waste components of the mixed waste, not to the source, special nuclear, or byproduct materials themselves. The exempted radionuclides are instead addressed under the AEA. DOE subsequently confirmed and clarified this interpretation in the **Federal Register** on May 1, 1987 (52 FR 15937).

III. Proposed Exclusion

A. Background

1. Approach Used to Evaluate This Petition

This petition requests a delisting for listed hazardous wastes. In making the initial delisting determination, the Agency evaluated the petitioned wastes against the listing criteria and factors cited in § 261.11(a)(2) and (a)(3). Based on this review, the Agency agreed with the petitioner that the wastes are non-hazardous with respect to the original listing criteria. (If the Agency had found that the wastes remained hazardous based on the factors for which the wastes were originally listed, EPA would have proposed to deny the petition.) EPA then evaluated the wastes with respect to other factors or criteria to assess whether there is a reasonable basis to believe that such additional factors could cause the wastes to be hazardous. The Agency considered whether the wastes are acutely toxic, and considered the toxicity of the constituents, the concentration of the constituents in the wastes, their tendency to migrate and to bioaccumulate, their persistence in the environment once released from the wastes, plausible and specific types of management of the petitioned wastes, the quantities of wastes generated, and variability of the wastes.

For this delisting determination, the Agency used such information to identify plausible exposure routes (i.e., ground water, surface water, air) for hazardous constituents present in the petitioned wastes. The Agency determined that disposal in a land-based waste management unit is the most reasonable, worst-case scenario for DOE's wastes, and that the major exposure route of concern would be ingestion of contaminated ground water. The Agency notes that future land use on this site could change to private use and thus require protection of ground water resources (see the public docket for the final report on *The Future for Hanford: Uses and Cleanup*, December 1992). Therefore, the Agency is proposing to use a particular fate and transport model to establish maximum allowable concentrations of hazardous constituents for DOE's petitioned wastes. Specifically, the Agency used the model to estimate a dilution and attenuation factor (DAF) associated with the disposal of DOE's petitioned wastes in a land-based waste management unit, based on the estimated maximum annual volume of the wastes. The Agency used this DAF to back-calculate maximum allowable levels from the health-based levels for the constituents of concern.

EPA believes that this fate and transport model represents a reasonable worst-case scenario for disposal of the petitioned wastes in a land-based waste management unit, and that a reasonable worst-case scenario is appropriate when evaluating whether wastes should be relieved of the protective management constraints of RCRA Subtitle C. The use of a reasonable worst case scenario results ensures that the wastes, once removed from hazardous waste regulation, will not pose a threat to human health or the environment.

As an additional measure for evaluating this petition, the Agency believed that it should also consider the most likely disposal scenario for the petitioned wastes because these petitioned wastes are mixed wastes with limited disposal options. Therefore, EPA also evaluated the risks associated with the on-site disposal option selected by DOE, and accepted by the State of Washington, for the petitioned wastes. The preferred scenario is to pipe the treated waste effluents underground and discharge the effluents into a covered structure with an open bottom to the ground (i.e., a crib disposal system). DOE performed a ground water modeling study to assess the impacts of this disposal option. The results of DOE's ground water modeling study are

discussed in Part III, Section C (Agency Evaluation).

The Agency also considers the applicability of ground-water monitoring data during the evaluation of delisting petitions. In this case, the Agency determined that, because DOE is seeking an upfront delisting (i.e., an exclusion based on data from wastes generated from pilot-scale treatment processes), ground-water monitoring data collected from the areas where the petitioner plans to dispose of the waste in the future are not necessary. Because the petitioned wastes are not currently generated or disposed of, ground-water monitoring data would not characterize the effects of the petitioned wastes on the underlying aquifer at the disposal sites and, thus, would serve no purpose. Therefore, the Agency did not request ground-water monitoring data.

DOE petitioned the Agency for an upfront exclusion (for wastes that have not yet been generated) based on descriptions of pilot-plant treatment processes used to treat samples comparable in composition to dilute aqueous hazardous waste streams at the Hanford facility, information about the sources of the dilute aqueous wastes that will be treated in the future, available characterization data for these wastes, and results from the analysis of treated effluent generated during studies of pilot-scale treatment processes.

Similar to other facilities seeking upfront exclusions, this upfront exclusion (i.e., an exclusion based on information characterizing the process and wastes) would be contingent upon DOE conducting analytical testing of representative samples of the petitioned wastes once the treatment unit is on-line at the Hanford site. Specifically, DOE will be required to collect representative samples from its full-scale 200 Area Effluent Treatment Facility (ETF), once it is operational, to verify that the treatment system is on-line and operating as described in the petition. The verification testing requires DOE to demonstrate that the ETF, once constructed and on-line, will generate non-hazardous wastes (i.e., wastes that meet the Agency's verification testing conditions).

From the evaluation of DOE's delisting petition, a list of constituents was developed for the verification testing conditions. Maximum allowable total constituent concentrations for these constituents were derived by back-calculating from the delisting health-based levels through the proposed fate and transport model for a land-based management scenario. These concentrations (i.e., "delisting levels")

are the proposed verification testing conditions of the exclusion.

The Agency encourages the use of upfront delisting petitions because they have the advantage of allowing the applicant to know what treatment levels for constituents will be sufficient to render specific wastes non-hazardous, before investing in new or modified waste treatment systems. Therefore, upfront delistings will allow new facilities to receive exclusions prior to generating wastes, which, without upfront exclusions, would unnecessarily have been considered hazardous. Upfront delistings for existing facilities can be processed concurrently during construction or permitting activities; therefore, new or modified treatment systems should be capable of producing wastes that are considered non-hazardous sooner than otherwise would be possible. At the same time, conditional testing requirements to verify that the delisting levels are achieved by the fully operational treatment systems will maintain the integrity of the delisting program and will ensure that only non-hazardous wastes are removed from Subtitle C control.

Finally, the Hazardous and Solid Waste Amendments of 1984 specifically require the Agency to provide notice and an opportunity for comment before granting or denying a final exclusion. Thus, a final decision will not be made until all public comments on today's proposal are addressed.

2. Overview of Treatment Process

DOE's proposed treatment process for 242-A Evaporator PC consists of ten primary steps which are: (1) pH adjustment, (2) coarse filtration, (3) ultraviolet/oxidation (UV/OX), (4) pH adjustment, (5) hydrogen peroxide destruction, (6) fine filtration, (7) degasification, (8) reverse osmosis (RO), (9) ion exchange (IX), and (10) pH adjustment. DOE believes that efficient removals can be achieved through the proposed ETF for the remediation of 242-A Evaporator PC, and other liquid waste streams.

DOE chose to perform 242-A Evaporator PC treatability studies using pilot-scale treatment equipment configured similarly to the ETF design. The pilot-scale treatability studies included ultraviolet/oxidation (UV/OX), reverse osmosis (RO), and ion exchange (IX) treatment steps in addition to several intermediate steps such as pH adjustment, hydrogen peroxide destruction, and fine filtration. In addition, since the 242-A Evaporator was not scheduled to be on-line until late 1993 or later, process condensate

was not available for treatability studies in the pilot-scale treatment processes in sufficient time to meet the August 1993 delisting submittal deadline. Therefore, DOE developed four surrogate test solutions (STSs) to characterize 242-A Evaporator PC, as well as other liquid wastes generated at the facility. DOE developed these four surrogate test solutions (i.e., STS-1 through STS-4) to evaluate the treatment capabilities of the ETF, in particular, the UV oxidation rate of organic compounds, and the removal efficiency of inorganic compounds using reverse osmosis and ion exchange. The STS constituents were selected from the 242-A Evaporator PC characterization data (obtained from 34 samples taken between August 1985 and March 1989), a Hanford site chemical inventory, and additional organic compounds representing a variety of chemicals of regulatory concern. DOE believes that the 200 gallons of each batch of STS treated using the three main treatment processes (i.e., UV/OX, RO, and IX) in sequential steps provides pilot study capabilities with minimal infield scale-up issues. DOE's proposed full-scale ETF is designed to allow treatment of a wide range of constituents, in addition to those potentially present in the 242-A Evaporator PC.

B. Agency Analysis

DOE provided information quantifying concentrations of hazardous constituents in 34 samples of untreated process condensate effluent collected between August 1985 and March 1989. These samples were analyzed for metals and other inorganic constituents, organic constituents, and radioactive constituents. DOE used Methods SW-846 6010 to quantify concentrations of the TC metals and other inorganic constituents. DOE used Methods 8240 and 8270 to quantify concentrations of the volatile and semi-volatile organic constituents, and Method 9010 to quantify the total constituent concentrations of cyanide in the 242-A Evaporator PC. Radioactive constituents were analyzed using Method 9310. Table 1 presents 90th percentile upper confidence limit (90%CI) and maximum concentrations of hazardous constituents of concern detected in the 34 samples of 242-A Evaporator PC collected between August 1985 and March 1989.

Table 1 includes all hazardous constituents (listed in App. VIII, § 261) found in the condensate, as well as other detected constituents of concern that have health-based levels. Other constituents detected without health-based levels included inorganic salts

(e.g., sodium, calcium) and organic compounds (e.g., alcohols, hydrocarbons, glycols) of relatively low toxicity. (See the public docket for this notice for a summary of constituents detected and health-based levels.)

TABLE 1.—HAZARDOUS CONSTITUENTS OF CONCERN DETECTED IN UNTREATED 242-A EVAPORATOR PC (PPM)

Parameter	Constituent concentrations	
	90% CI	Maximum
Barium	0.0072	0.008
Cadmium	SD	0.005
Chromium	0.066	0.156
Fluoride	0.971	12.27
Mercury	0.0003	0.0007
Nickel	0.015	0.017
Vanadium	0.0067	0.007
Zinc	0.017	0.044
Acetone	1.0	5.1
Benzaldehyde	SD	0.023
Benzyl alcohol	0.014	0.018
1-Butanol	11.0	88.0
Chloroform	0.014	0.027
Methyl ethyl ketone	0.053	0.12
Methylene chloride*	0.14	0.18
Methyl isobutyl ketone ..	0.014	0.068
N-Nitrosodimethylamine	SD	0.057
Phenol	SD	0.033
Pyridine	SD	0.55
1,1,1-Trichloroethane* ..	SD	0.005

SD Denotes a single detect.

*Constituent confirmed to be in blank samples only.

For the ETF treatability studies, DOE used SW-846 methods 8015 and 8240 for analysis of STS protocol characterization samples, with one exception. The semivolatile organic compound analysis was performed using a Contract Laboratory Program (CLP) analysis method, a method similar to SW-846 Method 8270. DOE used SW-846 Method 9010 to quantify the total constituent concentrations of cyanide in samples of the untreated and treated STSs.

Tables 2 through 5 present concentrations of inorganic and organic compounds in samples of untreated and treated STS-1 through STS-4 and percent removals. Nearly all of the 29 inorganic constituents were treated to below their detection levels based on the inorganic data for the STSs from the IX process; only inorganic constituents above detection limits are included in the tables. Treated values for organic constituents are based on the organic data for the STSs from the UV/OX process only. To fully illustrate the capabilities of the UV/OX system, all meaningful data for organic constituents are given in the tables.

TABLE 2.—TOTAL CONSTITUENT CONCENTRATIONS (PPM) STS-1, UNTREATED AND TREATED

Parameter	Constituent concentrations		
	Untreated	Treated	% removal
Aluminum	5.63	0.20	96
Ammonium	2,175.6	0.079	100
Barium	0.22	0.0075	97
Chloride	0.014	0.00024	98
Fluoride	0.02	0.0002	99
Mercury	0.095	0.00033	100
Nitrate	1.11	0.00022	100
Selenium	1.24	0.0048	100
Acetone	14.0	<0.01	100
Benzene	1.7	0.001	100
1-Butanol	120.0	<0.1	100
Carbon tetrachloride	0.480	0.002	100
Chloroform	1.9	0.029	98
Methyl ethyl ketone	5.3	<0.01	100
Methyl isobutyl ketone	5.8	<0.01	100
Naphthalene	1.9	<0.01	>99
Toluene	1.0	<0.005	100
1,1,1-Trichloroethane	1.3	0.0016	99
Phenol	2.7	<0.01	100
Tributyl Phosphate	15.0	<0.02	100
Tridecane	0.78	0.023	97

< Constituent below detection limit; % minimum removal calculated by assuming constituent is at the detection limit.

TABLE 3.—TOTAL CONSTITUENT CONCENTRATIONS (PPM) STS-2, UNTREATED AND TREATED

Parameter	Constituent concentrations		
	Untreated	Treated	% removal
Ammonium	2,351.0	1.94	100
Arsenic	2.66	0.008	100
Chloride	0.014	0.00079	94
Cyanide	0.002	0.000036	94
Fluoride	0.02	0.0013	94
Mercury	0.095	0.00084	99
Nitrate	1.05	0.00031	100
Acetone	3.9	0.034	99
Benzene	0.21	<0.005	98
1-Butanol	36.0	<0.1	100
Carbon tetrachloride	0.12	0.009	93
Chloroform	0.26	0.025	90
Methyl ethyl ketone	0.82	<0.01	>99
Methyl isobutyl ketone	0.47	<0.01	>98
Naphthalene	0.17	0.016	91
Toluene	0.16	<0.01	>94
1,1,1-Trichloroethane	0.15	<0.005	>97
Phenol	0.21	<0.01	>95
Tributyl Phosphate	8.0	<0.02	100
Tridecane	0.53	0.072	86

< Constituent below detection limit; % minimum removal calculated by assuming constituent is at the detection limit.

TABLE 4.—TOTAL CONSTITUENT CONCENTRATIONS (PPM) STS-3, UNTREATED AND TREATED

Parameter	Constituent Concentrations		
	Untreated	Treated	% removal
Ammonium	35.9	0.15	100
Chloride	0.00065	0.000078	88
Fluoride	0.0052	0.000069	99
Nitrate	0.048	0.0004	99
Selenium	0.94	0.0057	99
Acetone	1.8	<0.01	>99
Benzene	0.016	0.013	99
1-Butanol	7.1	<0.1	>99
Carbon tetrachloride	0.15	0.019	87
Chloroform	0.29	0.006	98
Methyl ethyl ketone	0.078	<0.01	>87
Methyl isobutyl ketone	0.39	0.01	97

TABLE 4.—TOTAL CONSTITUENT CONCENTRATIONS (PPM) STS-3, UNTREATED AND TREATED—Continued

Parameter	Constituent Concentrations		
	Untreated	Treated	% removal
Naphthalene	0.13	<0.01	>92
Toluene	0.18	<0.005	>97
1,1,1-Trichloroethane	0.24	0.005	98
Phenol	0.18	<0.01	>94
Tributyl Phosphate	4.9	<0.02	100
Tridecane	0.13	0.15	NM

< Constituent below detection limit; % minimum removal calculated by assuming constituent is at the detection limit.
 NM Data for tridecane not meaningful due to solubility problems.

TABLE 5.—TOTAL CONSTITUENT CONCENTRATIONS (PPM) STS-4, Untreated and Treated

Parameter	Constituent concentrations		
	Untreated	Treated	% removal
Ammonium	2,047.0	0.74	100
Chloride	0.017	0.00042	98
Fluoride	0.024	0.0003	99
Mercury	0.075	0.0012	98
Nitrate	1.06	0.00064	100
Acrolein	2.4	0.02	99
Aniline	2.7	<0.02	>99
Bis (2-chloroethyl) ether	1.7	<0.01	>99
Bis(2-ethylhexyl)phthalate	0.059	0.014	76
1-Butanol	8.9	<0.1	>99
1, 4-Dichlorobenzene	1.9	<0.01	99
gamma-BHC	1.4	0.19	86
Hexachloroethane	0.93	0.57	39
Nitrobenzene	3.3	<0.01	100
N-Nitroso-di-n-propylamine	1.45	<0.01	99
Pentachlorophenol	1.5	<0.02	99
Tetrachloroethylene	1.2	0.24	80
Tetrahydrofuran	5.3	<0.005	100
Tributyl phosphate	4.8	<0.02	100
1,1, 2-Trichloroethane	2.4	1.0	58
Tridecane	0.36	0.14	61

< Constituent below detection limit; % Removal calculated by assuming constituent is at the detection limit.

DOE provided information, pursuant to § 260.22, indicating that the ETF effluent is not expected to demonstrate the characteristics of ignitability, corrosivity, or reactivity. According to DOE, the 242-A Evaporator PC is a dilute aqueous waste with low levels of volatile organic compounds which, when passed through the ETF, are expected to be destroyed or present at very low concentrations. Therefore, the ETF effluents are not likely to be ignitable wastes. The wastes are not expected to be corrosive because

measured pH for the 242-A Evaporator PC ranged from 9.72 to 10.83 standard units. Also, the pH of the ETF effluents will be adjusted to be between 6.5 and 8.5 before disposal. To be designated corrosive, pH must be less than 2, or greater than or equal to 12.5 standard units. The wastes are not expected to be reactive because the 242-A evaporator PC (a dilute aqueous waste) does not readily undergo violent chemical change, react violently or form potentially explosive mixtures with water, explode when subject to a strong

initiating force, explode at normal temperatures and pressures, or fit the definition of a class A or Class B explosive. The 242-A Evaporator PC also does not contain sufficient quantities of sulfide or cyanide to generate toxic fumes when mixed with water or acid. See § 261.21, § 261.22, and § 261.23 respectively.

DOE estimated that a maximum of 19 million gallons of liquid effluents will be generated annually from treating the petitioned wastes in the ETF. The Agency may review a petitioner's

estimates and, on occasion, has requested a petitioner to re evaluate the estimated waste generation rate. EPA accepts DOE's certified estimate of 19 million gallons per year (approximately 95,000 cubic yards) of ETF effluents to be generated at its Hanford facility.

EPA does not generally verify submitted test data before proposing delisting decisions. The sworn affidavit submitted with this petition binds the petitioner to present truthful and accurate results. The Agency, however, has maintained a spot-check sampling and analysis program to verify the representative nature of the data for some percentage of the submitted petitions. A spot-check visit to a selected facility may be initiated before finalizing a delisting petition or after granting an exclusion.

C. Agency Evaluation

Review of this petition included consideration of the original listing criteria as well as the additional factors required by the Hazardous and Solid Waste Amendments (HSWA) of 1984. See Section 222 of HSWA, 42 U.S.C. 6921(f), and 260.22(d)(2)-(4).

The Agency considers characterization information and data for the untreated liquid waste to be sufficient to evaluate the potential constituents of concern in the untreated wastes. The Agency believes that DOE's inventory of chemicals used in production plants and supporting operations provides an understanding of the hazardous constituents that are potentially present in the DSTs. In addition, the Agency believes that the analytical data characterizing the untreated 242-A Evaporator PC represents the types of liquid waste that will be treated in the ETF. Furthermore, the Agency believes that DOE has conducted sufficient studies of its pilot-scale treatment processes to demonstrate that the system, once on-line, will be able to treat dilute aqueous wastes containing hazardous constituents of concern to levels below the level of concern for human health and the environment.

The results of the treatability studies were used by DOE to estimate maximum concentrations of hazardous constituents in the untreated wastes once treated by the ETF. The data from this evaluation clearly demonstrated that the ETF would have the capability of treating hazardous constituents in the PC to below delisting levels.

DOE estimated the maximum concentrations of hazardous constituents that can be treated by the ETF based on one pass of the STSs (waste waters) through the ETF. (If

necessary, the ETF design provides for recycle of the treated waters.) The maximum concentrations of constituents that the ETF is capable of treating are also low. This is because many inorganic constituents were treated to below detection limits by the RO process so that the ability of the IX to remove inorganic constituents was not considered. In addition, the ability of RO and IX processes to further remove organic constituents after the UV/OX process was not considered.

The treatment data showed ETF to be extremely effective for all classes of inorganic species (i.e., monovalent and divalent cations and anions). Furthermore, the levels of inorganic constituents in the PC are expected to be relatively low in any case because it is a condensate derived from an evaporation process. The non-volatile inorganic metals are not expected from such a waste generating process. The existing PC data confirms that only trace levels of the non-volatile metals are present, while salts generated from dissolved ammonia are present at levels above 500 ppm. Because removal efficiencies for ammonia in the treatment studies were demonstrated to be 99-100%, this indicates that ETF should be able to effectively remove any inorganic constituents of concern in the PC.

The treatability studies also demonstrated that organic constituents can be effectively treated by the UV/OX process. In the UV/OX process, the oxidation (destruction) of organic constituents was shown to follow first order kinetics. This means that the organic constituent concentration decreased logarithmically with time. Under the conditions used for the process (large excess of oxidant), the rate of destruction typically will not depend on the concentration of the constituent.

The constituent concentrations in the STSs were varied to span the concentrations of constituents observed in the PC and to evaluate the treatment capabilities of the ETF. STS-1 and STS-4 contained relatively high levels of organics in comparison to STS-2 and STS-3. The pilot-scale UV/OX unit was able to decrease the concentrations of most organic constituents by greater than 90 percent (long before testing times had expired). The organic compounds that were somewhat more difficult to destroy were the chlorinated compounds (i.e., hexachloroethane and 1,1,2-trichloroethane) contained in STS-4 and tridecane contained in STS-3 and STS-4.

STS-4 contained high concentrations of inorganic constituents and additional

organic constituents (which are not expected to be in the PC) representing various chemical groups. The organic constituents were generally the easier to oxidize compounds at a concentration of greater than 25 times the quantitation level (exception being the chlorinated compounds listed above and tridecane). The purpose of the organic constituents contained in STS-4 was to demonstrate the versatility of the ETF to treat a variety of constituents representing various chemical groups.

The testing of STSs performed with the UV/OX process was primarily designed to determine the oxidation rate for a wide range of organic groups. The testing was not intended to show 100 percent destruction of each of the organic constituents in the STSs. The destruction efficiency is a function of the oxidation rate and exposure time in the UV/OX unit. The exposure time for each of the STSs was based on the type of organic and inorganic constituents they contained and their respective concentrations. The exposure time in the UV/OX unit for STS-4 (5 minutes) was kept the shortest of the four STSs because the test solution generally did not contain the difficult to oxidize organic constituents. This exposure time did not prove to be sufficient for several organic compounds which were difficult to oxidize (i.e., the chlorinated compounds referred to above and tridecane). However, STS-1, which also contained relatively high levels of inorganics and organics (including difficult to oxidize chlorinated compounds similar to STS-4), demonstrated more complete oxidation of the organic constituents based on longer exposure time in the UV/OX unit (46 minutes).

The organic constituent levels in the STSs, particularly STS-1 and STS-4, are worst-case levels. In addition, most of the organic constituents in STS-4 have never been detected in the PC. The Agency believes that the ETF should be able to effectively remove the organic constituents found in the PC. If necessary, it is also possible to increase the amount of UV/OX exposure (and thus treatment) provided for organic compounds in the ETF by either recycling the treated PC or by reducing the flow rate through the UV/OX unit.

As discussed previously in this notice, the Agency is proposing to include monitoring and testing requirements in DOE's exclusion in order to ensure that the ETF is capable of treating dilute aqueous wastes such that concentrations of hazardous constituents are below delisting levels of concern. As part of these testing requirements, EPA established

maximum allowable waste concentrations for hazardous inorganic and organic constituents of concern. To set these levels, the Agency identified a fate and transport model that would provide some estimate of the dilution afforded to a constituent once the petitioned wastes were disposed of, based on the reasonable, worst-case management scenario for the wastes. The Agency considered the appropriateness of alternative waste management scenarios for DOE's liquid wastes and decided that disposal in a land-based waste management unit, such as a surface impoundment, is a reasonable, worst-case scenario. Under a surface impoundment disposal scenario, the major exposure route of concern for hazardous constituents would be ingestion of contaminated ground water.

The Agency, therefore, used the modified EPACML, which predicts the potential for ground-water contamination from wastes that are disposed of in a surface impoundment, to establish maximum allowable waste concentrations for DOE's petitioned wastes. See 56 FR 32993 (July 18, 1991), 56 FR 67197 (December 30, 1991) (and the RCRA public docket for these notices) for a detailed description of the EPACML model and the modifications made for delisting. This model, which includes both unsaturated and saturated zone transport modules, estimates the dilution and attenuation factor (DAF) resulting from subsurface processes such as three-dimensional dispersion and dilution from ground-water recharge for a specific volume of waste. Using this model, the Agency obtained a DAF of 10 for the maximum annual volume of petitioned wastes expected to be generated (i.e., 95,000 cubic yards or 19 million gallons). The Agency used this DAF to back-calculate maximum allowable levels (from the health-based levels) for the constituents of concern in ground water at a compliance point (i.e., a receptor well serving as a drinking-water supply). The Agency requests comments on the use of the modified EPACML to set maximum allowable waste concentrations (see also Section F—Verification Testing Conditions).

Because the petitioned wastes are mixed wastes, the disposal options for the petitioned wastes are realistically limited to disposal on-site in a State-approved land disposal facility. The preferred disposal system is an infiltration crib, which is described as a grid of diffuser pipes placed in a trench and covered by 6 feet of sand. DOE submitted to EPA a summary of a modeling effort which predicts tritium concentrations in ground water that would result from the operation of the

infiltration crib. Based on the modeling information provided by DOE, the crib system would ensure that petitioned wastes (i.e., waste waters) containing tritium are isolated for many years while they migrate slowly through the subsurface environment from the crib to the Columbia River. By the time the waste waters reach the river (estimated to take more than 120 years), the effect of radioactive decay will have lowered concentrations of tritium in the waste waters to acceptable levels. In addition, the crib system would significantly reduce volatilization of organics.

Because EPA evaluated the hazardous constituents in the petitioned wastes, EPA requested DOE to provide additional modeling information concerning transport of hazardous chemical constituents using its existing model for transport of tritium. DOE submitted a ground water modeling study that was based on several conservative assumptions. A continuous waste water discharge of 150 gallons per minute (gpm) was assumed in the modeling (ETF is designed to handle a maximum feed rate of 150 gpm at 72 percent efficiency), which translates into approximately 78 million gallons per year (more than 4 times greater than the maximum annual volume of petitioned wastes expected to be generated). DOE's study also assumed that the ETF will treat hazardous waste forever (rather than the estimated period of 30 years or less needed to treat the petitioned wastes), chemical constituents will not be retarded in the unsaturated or the saturated zones, and there will be no attenuation processes (i.e., volatilization, biodegradation, hydrolysis, or adsorption). Under these worst-case assumptions, the DOE study predicted minimum dilution factors at the Columbia River ranging from 14 (after 200 years) to 9 (after 300 years).

Although the modeling assumptions were different, the dilution factors estimated from DOE's study (9 to 14) are consistent with the DAF of 10 calculated using the modified EPACML. Therefore, based on the results of both of these conservative analyses, EPA is assuming a DAF of 10 to establish delisting levels for the effluent wastes.

During the evaluation of DOE's petition, the Agency also considered the potential impact of the petitioned waste via non-ground-water routes. The Agency evaluated the potential hazards resulting from airborne exposure to volatile constituents present in DOE's treated effluent using a simple air dispersion model for releases from an underground crib disposal system. Similar to its use of the EPACML, the Agency used this model to back-

calculate maximum allowable concentrations of volatile constituents that could be present in the treated effluent without presenting a potential hazard. The Agency then compared these concentrations with those set in the conditions proposed in today's notice (using the modified EPACML) to determine whether concentrations of volatile constituents would be of concern if the treated effluent met the criteria set forth in the proposed testing conditions. The results of this conservative evaluation indicated that there is no substantial present or potential hazard from airborne exposure to constituents from DOE's petitioned waste. A description of the Agency's assessment of the potential impact of DOE's waste, with regard to exposure to volatile constituents, is presented in the docket for today's proposed rule.

The Agency also considered the potential impact of the petitioned waste via a surface water route. (A description of the Agency's assessment is included in the RCRA public docket for today's notice.) In general, the Agency believes that constituents from the petitioned waste will not directly enter a surface water body without first traveling through the saturated subsurface where dilution of hazardous constituents, such as that modeled by the modified EPACML (or DOE's study), may occur. Further, the Agency believes that any constituents transported here would be diluted once they reached the Columbia River. The Agency, therefore, believes that this route of exposure is not of concern.

D. Conclusion

The Agency concludes that the descriptions of DOE's 200 Area Evaporator Treatment Facility process and analytical characterizations, in conjunction with the proposed delisting testing requirements, provide a reasonable basis to grant DOE's petition for an upfront conditional exclusion. The Agency believes that the samples collected from the treatability studies and waste variability study adequately represent the variations in raw materials and processing. The data submitted in support of the petition show that DOE's proposed ETF can substantially reduce the toxicity of the waste, and render effluent generated on site non-hazardous by reducing the levels of inorganic and organic constituents of concern in the waste to below delisting levels. In addition, under the testing provisions of the conditional exclusion, DOE will be required to retreat effluents in a verification tank exhibiting total constituent levels above a specified

level (i.e., "delisting level") (see Section F—Verification Testing Conditions).

The Agency proposes to grant a conditional exclusion to DOE-RL, located in Richland, Washington, for the liquid wastes described in its petition as EPA Hazardous Waste Nos. F001, F002, F003, F004, F005, and F039 (derived from F001 through F005). The Agency's decision to exclude this waste is based on process descriptions, characterization of untreated 242-A Evaporator PC, and results from the analysis of liquid wastes generated by a pilot-scale ETF using surrogate test solutions. If the proposed rule becomes effective, the petitioned liquid wastes, provided the conditions of the exclusion are met, will no longer be subject to regulation under parts 262 through 268 and the permitting standards of part 270.

E. Verification Testing Conditions

The testing requirements are to be conducted in two phases, initial and subsequent testing. The initial testing requirements apply to the first three verification tanks filled with treated effluent generated from the full-scale ETF at typical operating conditions. Following completion of testing requirements with the initial three verification tanks, the subsequent testing requirements would apply to every tenth verification tank filled with treated effluent.

If the final exclusion is granted as proposed, DOE will be required to: (1) Submit information on the operating parameters of the process units comprising the ETF; (2) collect and analyze a representative sample from each of the first three verification tanks filled with ETF effluent to verify that the units comprising the ETF meet the treatment capabilities of the pilot-scale units described in the petition; and (3) continue to collect and analyze representative samples from every tenth verification tank filled with ETF effluent to verify that the ETF effluent continues to meet the Agency's verification testing limitations (i.e., "delisting levels"). These proposed conditions are specific to the upfront exclusion petitioned for by DOE. The Agency may choose to modify these proposed conditions based on comments that may be received during the public comment period for this proposed rule. The proposed exclusion for DOE's Effluent Treatment Facility in Hanford, Washington, is conditional upon the following requirements:

(1) *Testing:* Sample collection and analyses (including quality control (QC) procedures) must be performed according to SW-846 (or other EPA-

approved) methodologies. If EPA judges the treatment process to be effective under the operating conditions used during the initial verification testing, DOE may replace the testing required in Condition (1)(A) with the testing required in Condition (1)(B). DOE must continue to test as specified in Condition (1)(A) until notified by EPA in writing that testing in Condition (1)(A) may be replaced by Condition (1)(B).

(A) *Initial Verification Testing:* During the period required to fill the first three verification tanks (each designed to hold approximately 650,000 gallons) with effluents generated from an on-line, full-scale Effluent Treatment Facility (ETF), DOE must monitor the range of typical operating conditions for the ETF. DOE must collect a representative sample from each of the first three verification tanks filled with ETF effluents. The samples must be analyzed, prior to disposal of ETF effluents, for all constituents listed in Condition (3). DOE must report the operational and analytical test data, including quality control information, obtained during this initial period no later than 90 days after the first verification tank is filled with ETF effluents.

The Agency believes that an initial period of approximately 10 days (based on an estimated 3-day period to fill each of the first three verification tanks) is appropriate for DOE to collect sufficient data to verify that a full-scale treatment process comprised of units such as those described in the petition (e.g., ultraviolet/oxidation, reverse osmosis, ion exchange, etc.) is operating correctly. The initial verification testing conditions, if promulgated as proposed, will require a representative sample from each of the first three verification tanks filled with ETF effluents generated from an on-line, full-scale ETF. The Agency proposes this initial verification testing condition to ensure that the full-scale ETF is closely monitored during the start-up period, and to enable the collection of complete information characterizing the ETF effluents. If the Agency determines that the data from the initial verification period demonstrates that the treatment process is effective and that hazardous constituents of concern in the ETF effluents are consistently below delisting levels, EPA will notify DOE in writing that the testing conditions in (1)(A) may be replaced with the testing conditions in (1)(B).

(B) *Subsequent Verification Testing:* Following notification by EPA, DOE may substitute the testing conditions in this condition for (1)(A). DOE must continue to monitor operating

conditions, and collect and analyze representative samples from every tenth verification tank filled with ETF effluents. These representative samples must be analyzed, prior to disposal of ETF effluents, for all constituents listed in Condition (3). If all constituent levels in a sample do not meet the delisting levels specified in Condition (3), DOE must analyze representative samples from the following two verification tanks generated prior to disposal. DOE may also collect and analyze representative samples more frequently.

The Agency believes that the concentrations of the constituents of concern in the ETF effluents may vary somewhat over time. As a result, in order to ensure that DOE's ETF can effectively handle any variation in constituent concentrations in the PC derived from the on-site double shell tanks, the Agency is proposing a subsequent testing condition. The proposed subsequent testing would verify that the ETF is operated in a manner similar to its operation during the initial verification testing and that the ETF effluents do not exhibit unacceptable levels of toxic constituents. Therefore, the Agency is proposing to require DOE to analyze representative samples from every tenth verification tank filled with ETF effluents as described in Condition (1)(B). The Agency believes that collecting representative samples from every tenth verification tank will ensure that the ETF is able to handle any potential variability in concentrations of those constituents of most concern. If DOE makes any significant changes in operating conditions as described in Condition (4), then DOE must reinstitute all testing in Condition (1)(A), pending a new demonstration under this condition for reduced testing.

Future delisting proposals and decisions issued by the Agency may include different testing and reporting requirements based on an evaluation of the manufacturing and treatment processes, the waste, the volume of waste, and other factors normally considered in the petition review process.

(2) *Waste Holding and Handling:* DOE must store as hazardous all ETF effluents generated during verification testing (as specified in Conditions (1)(A) and (1)(B)), that is until valid analyses demonstrate that Condition (3) is satisfied. If the levels of hazardous constituents in the samples of ETF effluents are equal to or below all of the levels set forth in Condition (3), then the ETF effluents are not hazardous and may be managed and disposed of in accordance with all applicable solid

waste regulations. If hazardous constituent levels in any representative sample collected from a verification tank exceed any of the delisting levels set in Condition (3), the ETF effluents in that verification tank must be re-treated until the ETF effluents meet these levels. Following re-treatment, DOE must repeat analyses in Condition (3) prior to disposal.

The purpose of this condition is to ensure that ETF effluents which contain hazardous levels of inorganic or organic constituents are managed and disposed of in accordance with Subtitle C of RCRA. Holding the ETF effluents until characterization is complete will protect against improper handling of hazardous materials. The representative samples from the specified verification tanks must be analyzed for the appropriate parameters, and must meet the appropriate delisting levels, in order for the wastes to be considered non-hazardous.

(3) *Delisting Levels:* All total constituent concentrations in the waste samples must be measured using the appropriate methods specified in "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods," U.S. EPA Publication SW-846 (or other EPA-approved methods). All total constituent concentrations must be equal to or less than the following levels (ppm):

Inorganic Constituents:

Ammonium	10.0
Antimony	0.06
Arsenic	0.5
Barium	20.0
Beryllium	0.04
Cadmium	0.05
Chromium	1.0
Cyanide	2.0
Fluoride	40.0
Lead	0.15
Mercury	0.02
Nickel	1.0
Selenium	0.5
Silver	2.0
Vanadium	2.0
Zinc	100.0

Organic Constituents:

Acetone	40.0
Benzene	0.05
Benzyl alcohol	100.0
1-Butyl alcohol	40.0
Carbon tetrachloride	0.05
Chlorobenzene	1.0
Chloroform	0.1
Cresol	20.0
1,4-Dichlorobenzene	0.75
1,2-Dichloroethane	0.05
1,1-Dichloroethylene	0.07
Di-n-octyl phthalate	7.0
Hexachloroethane	0.06
Methyl ethyl ketone	200.0
Methyl isobutyl ketone	30.0
Naphthalene	10.0
Tetrachloroethylene	0.05
Toluene	10.0

Tributyl phosphate	0.2
1,1,1-Trichloroethane	2.0
1,1,2-Trichloroethane	0.05
Trichloroethylene	0.05
Vinyl Chloride	0.02

The Agency selected the set of constituents specified in Condition (3) after evaluating information provided in DOE's petition describing the inventory of chemicals used in production plants and supporting operations feeding wastes to the double-shell tank system, reviewing information about the composition of the wastes in the double-shell tanks, and identifying available information about the health-based effects of these constituents. The constituents listed in Condition (3) include those constituents with available health-based levels that were: (1) detected in samples of the 242-A Evaporator effluent (i.e., the untreated waste), and (2) identified by DOE to be on the inventory of chemicals used at the Hanford site. The Agency is also proposing to require testing for other volatile chlorinated organic constituents of possible concern, i.e., those listed under the toxicity characteristic (§ 261.24). While these constituents were not found in the evaporator condensate samples, chlorinated compounds were one of the most difficult groups of chemicals to treat using the UV/OX process. Including these chlorinated constituents (many of which are common solvents) will help ensure that the treated effluent is nonhazardous.

As a further check on the operational efficiency of the treatment process, the Agency is also proposing to require testing for two key indicator parameters with no verified HBL, i.e., ammonia and tributyl phosphate. The Agency believes that ammonia is a good indicator of the efficiency of the RO stage of the treatment process, because ammonia was found at relatively high levels in most evaporator condensate samples (90th percentile upper confidence limit concentration was 511 ppm). Based on the maximum level of ammonia found in the waste feed (9350 ppm), and assuming the RO process is operating at a 99.9% removal efficiency, the Agency is proposing that the treated effluent be below a maximum of 10 ppm.

The Agency proposes to add tributyl phosphate as an additional indicator of the UV/OX treatment efficiency, because this chemical was found in nearly all evaporator condensate samples at significant levels (90th percentile upper confidence limit concentration was 4.1 ppm and the maximum concentration was 21 ppm). Tributyl phosphate was the only organic compound found above 1 ppm, except

for 1-butyl alcohol and acetone (both of which are already on the testing list). The Agency is proposing that the concentration of tributyl phosphate in the treated effluents be below 0.2 ppm. The level of 0.2 ppm is an order of magnitude above the detection limit for tributyl phosphate, and would allow a sufficient margin for any variability in the waste sampling and analysis. The Agency has often used an order of magnitude (i.e., a factor of 10) in chemical analyses to allow for variations in analyses and matrices (for example, see 55 FR 22541, June 1, 1990, and 55 FR 30414, July 25, 1990).

The proposed list of analytes in condition (3) does not include four constituents given in Table 1 (i.e., benzaldehyde, N-nitrosodimethylamine, phenol, and pyridine), because these constituents were only found in one sample, and may be analytical anomalies. None were contained on DOE's inventory of chemicals used at the Hanford site, and these constituents are members of chemical classes that are readily destroyed by the UV/OX process. Therefore, the Agency believes that there is no reason to require analysis for these chemicals. EPA also is not placing methylene chloride on the list of analytes in condition (3), because this chemical was only detected in blanks obtained during characterization of the PC. Therefore, the Agency believes that this constituent is unlikely to be present in the PC. Methylene chloride is well known as a common laboratory contaminant, and if it were on the list, the occurrence of "false-positives" (i.e., detections due to lab contamination) may lead to unnecessary retreatment of ETF effluents.

The Agency established the delisting levels by back-calculating the maximum allowable levels (MALs) from the HBLs (see docket for today's rule for complete list) for the constituents of concern using the modified EPACML dilution and attenuation factor (DAF) of 10, i.e., MAL=HBL×DAF. This factor corresponds to a maximum annual waste volume of 19 million gallons (e.g., approximately 95,000 cubic yards) for a surface impoundment scenario.

(4) *Changes in Operating Conditions:* After completing the initial verification testing in Condition (1)(A), if DOE significantly changes the operating conditions established in Condition (1), DOE must notify the Agency in writing. After written approval by EPA, DOE must re-institute the testing required in Condition (1)(A). DOE must report the operations and test data, required by Condition (1)(A), including quality control data, obtained during this period no later than 60 days after the changes

take place. Following written notification by EPA, DOE may replace testing Condition (1)(A) with (1)(B). DOE must fulfill all other requirements in Condition (1), as appropriate.

To ensure consistent and efficient treatment, the Agency is requiring DOE to operate the ETF in accordance with the operating conditions established under Condition (1). However, the proposed exclusion allows DOE some flexibility in modifying the operating conditions to optimize its treatment process, if DOE can demonstrate the effectiveness of the modified operating conditions through new initial verification testing under Condition (1)(A).

(5) *Data Submittals*: At least two weeks prior to system start-up, DOE must notify, in writing, the Chief of the Waste Identification Branch (see address below) when the Effluent Treatment Process will be on-line and waste treatment will begin. The data obtained through Condition (1)(A) must be submitted to the Branch Chief, Waste Identification Branch, OSW (Mail Code 5304), U.S. EPA, 401 M Street, S.W., Washington, DC 20460 within the time period specified. Records of operating conditions and analytical data from Condition (1) must be compiled, summarized, and maintained on site for a minimum of three years. These records and data must be furnished upon request by EPA or the State of Washington and made available for inspection. Failure to submit the required data within the specified time period or to maintain the required records on site for the specified time will be considered by EPA, at its discretion, sufficient basis to revoke the exclusion to the extent directed by EPA. All data must be accompanied by a signed copy of the following certification statement to attest to the truth and accuracy of the data submitted:

Under civil and criminal penalty of law for the making or submission of false or fraudulent statements or representations (pursuant to the applicable provisions of the Federal Code, which include, but may not be limited to, 18 USC 1001 and 42 USC 6928), I certify that the information contained in or accompanying this document is true, accurate, and complete.

As to the (those) identified section(s) of this document for which I cannot personally verify its (their) truth and accuracy, I certify as the official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that

this information is true, accurate, and complete.

In the event that any of this information is determined by EPA in its sole discretion to be false, inaccurate, or incomplete, and upon conveyance of this fact to DOE, I recognize and agree that this exclusion of waste will be void as if it never had effect or to the extent directed by EPA and that the DOE will be liable for any actions taken in contravention of its RCRA and CERCLA obligations premised upon DOE's reliance on the void exclusion.

If made final, the proposed exclusion will apply only to the wastes and waste volume (a maximum of 19 million gallons or 95,000 cubic yards generated annually) covered by the original demonstration. DOE would require a new exclusion if either its wastes or treatment processes are significantly altered beyond the changes in operating conditions described in Condition (4), such that an adverse change in waste composition (e.g., if levels of hazardous constituents increased significantly) or increase in waste volume occurred. Accordingly, DOE would need to file a new petition for the altered waste. DOE must treat waste generated in excess of 95,000 cubic yards per year or from changed processes as hazardous until a new exclusion is granted.

Although management of the wastes covered by this petition would be relieved from Subtitle C jurisdiction upon final promulgation of an exclusion, the generator of a delisted waste must either treat, store, or dispose of the waste in an on-site facility, or ensure that the waste is delivered to an off-site storage, treatment, or disposal facility, either of which is permitted, licensed, or registered by a State to manage municipal or industrial solid waste.

IV. Effective Date

This rule, if finalized, will become effective immediately upon such finalization. The Hazardous and Solid Waste Amendments of 1984 amended Section 3010 of RCRA to allow rules to become effective in less than six months when the regulated community does not need the six-month period to come into compliance. That is the case here, because this rule, if finalized, would reduce the existing requirements for persons generating hazardous wastes. In light of the unnecessary hardship and expense that would be imposed on this petitioner by an effective date six months after publication and the fact that a six-month deadline is not necessary to achieve the purpose of Section 3010, EPA believes that this exclusion should be effective

immediately upon final publication. These reasons also provide a basis for making this rule effective immediately, upon final promulgation, under the Administrative Procedure Act, 5 U.S.C. 553(d).

V. Regulatory Impact

Under Executive Order 12866, EPA must conduct an "assessment of the potential costs and benefits" for all "significant" regulatory actions. This proposal to grant an exclusion is not significant, since its effect, if promulgated, would be to reduce the overall costs and economic impact of EPA's hazardous waste management regulations. This reduction would be achieved by excluding wastes generated at a specific facility from EPA's lists of hazardous wastes, thereby enabling this facility to treat its wastes as non-hazardous. There is no additional impact due to today's rule. Therefore, this proposal would not be a significant regulation, and no cost/benefit assessment is required. The Office of Management and Budget (OMB) has also exempted this rule from the requirement for OMB review under Section (6) of Executive Order 12866.

VI. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act, 5 U.S.C. 601-612, whenever an agency is required to publish a general notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis which describes the impact of the rule on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions). No regulatory flexibility analysis is required, however, if the head of the Agency certifies that the rule will not have any impact on any small entities.

This rule, if promulgated, will not have any adverse economic impact on any small entities since its effect would be to reduce the overall costs of EPA's hazardous waste regulations and would be limited to one facility. Accordingly, I hereby certify that this proposed regulation, if promulgated, will not have a significant economic impact on a substantial number of small entities. This regulation, therefore, does not require a regulatory flexibility analysis.

VII. Paperwork Reduction Act

Information collection and record-keeping requirements associated with this proposed rule have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (P.L. 96-511, 44 USC 3501 *et seq.*) and

TABLE 2.—WASTES EXCLUDED FROM SPECIFIC SOURCES—Continued

Facility	Address	Waste description
		<p>Selenium: 0.5 Silver: 2.0 Vanadium: 2.0 Zinc: 100.0</p> <p><i>Organic Constituents:</i> Acetone: 40.0 Benzene: 0.05 Benzyl alcohol: 100.0 1-Butyl alcohol: 40.0 Carbon tetrachloride: 0.05 Chlorobenzene: 1.0 Chloroform: 0.1 Cresol: 20.0 1,4-Dichlorobenzene: 0.75 1,2-Dichloroethane: 0.05 1,1-Dichloroethylene: 0.07 Di-n-octyl phthalate: 7.0 Hexachloroethane: 0.06 Methyl ethyl ketone: 200.0 Methyl isobutyl ketone: 30.0 Naphthalene: 10.0 Tetrachloroethylene: 0.05 Toluene: 10.0 Tributyl phosphate: 0.2 1,1,1-Trichloroethane 2.0 1,1,2-Trichloroethane: 0.05 Trichloroethylene: 0.05 Vinyl Chloride: 0.02</p> <p>(4) <i>Changes in Operating Conditions:</i> After completing the initial verification testing in Condition (1)(A), if DOE significantly changes the operating conditions established in Condition (1), DOE must notify the Agency in writing. After written approval by EPA, DOE must re-institute the testing required in Condition (1)(A). DOE must report the operations and test data, required by Condition (1)(A), including quality control data, obtained during this period no later than 60 days after the changes take place. Following written notification by EPA, DOE may replace testing Condition (1)(A) with (1)(B). DOE must fulfill all other requirements in Condition (1), as appropriate.</p> <p>(5) <i>Data Submittals:</i> At least two weeks prior to system start-up, DOE must notify, in writing, the Chief of the Waste Identification Branch (see address below) when the Effluent Treatment Process will be on-line and waste treatment will begin. The data obtained through Condition (1)(A) must be submitted to the Branch Chief, Waste Identification Branch, OSW (Mail Code 5304), U.S. EPA, 401 M Street, S.W., Washington, DC 20460 within the time period specified. Records of operating conditions and analytical data from Condition (1) must be compiled, summarized, and maintained on site for a minimum of three years. These records and data must be furnished upon request by EPA or the State of Washington and made available for inspection. Failure to submit the required data within the specified time period or to maintain the required records on site for the specified time will be considered by EPA, at its discretion, sufficient basis to revoke the exclusion to the extent directed by EPA. All data must be accompanied by a signed copy of the following certification statement to attest to the truth and accuracy of the data submitted:</p> <p>Under civil and criminal penalty of law for the making or submission of false or fraudulent statements or representations (pursuant to the applicable provisions of the Federal Code, which include, but may not be limited to, 18 USC 1001 and 42 USC 6928), I certify that the information contained in or accompanying this document is true, accurate, and complete.</p> <p>As to the (those) identified section(s) of this document for which I cannot personally verify its (their) truth and accuracy, I certify as the official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.</p> <p>In the event that any of this information is determined by EPA in its sole discretion to be false, inaccurate, or incomplete, and upon conveyance of this fact to DOE, I recognize and agree that this exclusion of waste will be void as if it never had effect or to the extent directed by EPA and that the DOE will be liable for any actions taken in contravention of its RCRA and CERCLA obligations premised upon DOE's reliance on the void exclusion.</p>
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DEPARTMENT OF TRANSPORTATION**Maritime Administration****46 CFR Part 381**

[Docket No. R-153]

RIN 2133-AB17

Cargo Preference—U.S.-Flag Vessels; Available U.S.-Flag Commercial Vessels**AGENCY:** Maritime Administration, Department of Transportation.**ACTION:** Proposed rule.

SUMMARY: This amendment to the cargo preference regulations of the Maritime Administration (MARAD) would provide that during the 1995 shipping season when the St. Lawrence Seaway is in use, MARAD will consider the legal requirement for the carriage of bulk agricultural commodity preference cargoes on privately-owned "available" U.S.-flag commercial vessels to have been satisfied where the cargo is initially loaded at a Great Lakes port on one or more U.S.-flag or foreign-flag vessels, transferred to a U.S.-flag commercial vessel at a Canadian transshipment point outside the St. Lawrence Seaway, and carried on that U.S.-flag vessel to a foreign destination. This amendment would allow Great Lakes ports to compete for agricultural commodity preference cargoes during an entire season trial period. MARAD issued a prior final rule on August 8, 1994, that adopted this policy for the 1994 Great Lakes shipping season that had been in progress since April 1994. This did not allow for a true trial period that MARAD could evaluate in determining whether to make this a permanent policy.

DATES: Comments must be received on or before March 3, 1995.

ADDRESSES: Send original and two copies of comments to the Secretary, Maritime Administration, Room 7210, Department of Transportation, 400 7th Street S.W., Washington, D.C. 20590. To expedite review of comments, the Agency requests, but does not require, submission of an additional ten (10) copies. All comments will be made available for inspection during normal business hours at the above address. Commenters wishing MARAD to acknowledge receipt of comments should enclose a self-addressed envelope or postcard.

FOR FURTHER INFORMATION CONTACT: John E. Graykowski, Deputy Maritime Administrator for Inland Waterways and Great Lakes, Maritime Administration, Washington, DC 20590, Telephone (202) 366-1718.

SUPPLEMENTARY INFORMATION: United States law at sections 901(b) (the "Cargo Preference Act") and 901b, Merchant Marine Act, 1936, as amended (the "Act"), 46 App. U.S.C. 1241(b) and 1241f, requires that at least 75 percent of certain agricultural product cargoes "impelled" by Federal programs (preference cargoes), and transported by sea, be carried on privately-owned United States-flag commercial vessels, to the extent that such vessels "are available at fair and reasonable rates." The Secretary of Transportation wishes to administer that program so that all ports and port ranges may participate.

Prior Rulemaking

On August 8, 1994, MARAD published a final rule on this subject in the **Federal Register** (59 FR 40261). That rule stated that it was intended to allow U.S. Great Lakes ports to participate with ports in other U.S. port ranges in the carriage of bulk agricultural commodity preference cargoes. Dramatic changes in shipping conditions have occurred since 1960, including the disappearance of any all-U.S.-flag commercial ocean-going service to foreign countries from U.S. Great Lakes ports. The static configuration of the St. Lawrence Seaway system and the evolving greater size of commercial vessels contributed to the disappearance of any all-U.S.-flag service.

No preference cargo has moved on U.S.-flag vessels out of the Great Lakes since 1989, with the exception of one trial shipment in 1993. Under the Food Security Act of 1985, Public Law 99-198, codified at 46 App. U.S.C. 1241f(c)(2), a certain minimum amount of Government-impelled cargo was required to be allocated to Great Lakes ports during calendar years 1986, 1987, 1988, and 1989. That "set-aside" expired in 1989, and was not renewed by the Congress. The disappearance of Government-impelled cargo flowing from the Great Lakes coincided with the expiration of the Great Lakes "set aside."

At the time of the opening of the 1994 Great Lakes shipping season on April 5, 1994, the Great Lakes did not have any all-U.S.-flag ocean freight capability for carriage of bulk preference cargo. In contrast, the total export nationwide by non-liner vessels of USDA and USAID agricultural assistance program cargoes subject to cargo preference in the 1992-

1993 cargo preference year (the latest program year for which figures are available) amounted to 6,297,015 metric tons, of which 4,923,244, or 78.2 percent, was transported on U.S.-flag vessels. (Source: Maritime Administration database.)

MARAD issued the previous rule to provide Great Lakes ports with the opportunity to compete for agricultural commodity preference cargoes for only the 1994 Great Lakes shipping season cargoes, and to assess the results.

Extension of Trial Period

As predicted by numerous commenters, the timing of the final rule, which was not published until August 18, 1994, did not allow for a true trial period since it actually extended for less than one-half of the 1994 Great Lakes Shipping season. Because of the long lead time required for arranging shipments of bulk agriculture commodity preference cargoes, there apparently was no real opportunity for U.S.-flag vessel operators to make the necessary arrangements and bid on preference cargoes. Accordingly, MARAD proposes to extend the trial period for applying its modified policy with respect to shipment of preference cargoes on U.S.-flag vessels through the 1995 Great Lakes shipping season.

Rulemaking Analyses and Notices*Executive Order 12866 (Regulatory Planning and Review)*

This rulemaking has been reviewed under Executive Order 12866 and Department of Transportation Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). It is not considered to be an economically significant regulatory action under section 3(f) of E.O. 12866, since it has been determined that it is not likely to result in a rule that may have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities. However, since this rule would affect other Federal agencies, is of great interest to the maritime industry, and has been determined to be a significant rule under the Department's Regulatory Policies and Procedures, it is considered to be a significant regulatory action under E.O. 12866.

MARAD projects that this rule would allow the movement of up to 300,000 metric tons of agricultural commodities from Great Lakes ports, with a reduction in the shipping cost to sponsoring