

Minnesota Attorney General: Administrative Rules Proceedings

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Version 3
August 20, 2018

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RULE REVIEW CHECKLIST

File No. RR#1643 Docket No. 05-0009-0697

DATE RECEIVED 11-29-89 ADOPTED W/O HEARING X

REVIEW DATE 12-8-89 EMERGENCY RULE _____

DUE DATE 12-13-89 TO REVISOR ON 12-4-89

REVISOR APPROVED ✓

APPROVED 12-13-89 REVISOR DISAPPROVED _____

DISAPPROVED _____ FILED W/SEC. OF STATE 12-13-89

WITHDRAWN _____ RETURNED TO AGENCY _____

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4 Rule as adopted (4 copies) 2 to the Revisors

✓ Notice to Solicit Outside Information/Opinion (if applicable)
Aug 8, 1989 Date published in State Register
NA Comments

_____ Petition for Adoption of a Rule (if applicable)

✓ Board's Authorizing Resolution
Aug 22, 1989 Date adopted

✓ Proposed Rule
✓ Revisor's Certificate

✓ Notice of Intent to Adopt Rule
115.03 subd 1, 3 Statutory Authority 116.07, subd 4
_____ Small Business Statement - makes a statement that they considered small businesses
NA Expenditure of public money statement
8-28-89 Signature

✓ Statement of Need and Reasonableness (if applicable)
✓ Small Business Statement - do not present an unreasonable burden to small businesses.
NA Fees - § 16A.128

✓ Affidavit of Mailing Notice of Intent to Adopt Rule
Sept 8, 1989 Date (30)/25 days before adoption
✓ Notice attached - indicates is attached
_____ Copy of rule or summary attached

✓ Publication in State Register
Sept 11, 1989 Date (30)/25 days before adoption

_____ 180-day deadline from:
NA Effective date of law requiring rule (14.12) (both rules) amendments doesn't apply
_____ end of comment period (§ 14.26) (rules without hearing)
✓ effective date of statutory authority (§ 14.29) (emergency rules) Oct 11 - 11-29-89 less than 180 day

✓ Resolution Adopting
Nov 28, 1989 Date adopted

✓ Findings of Fact, Conclusions & Order Adopting
Nov 28, 1989 Date

✓ Written requests, submissions or comments

✓ Declaration of attorney
Kathyleen Winter Name of SAAG representing agency

NA Notice of Submission to Atty. Gen. (if applicable) submitted affadavit

_____ Aff. of Mailing Notice to Atty. Gen. (if applicable)

FILE COPY

SF-00006-05 (4/86)

DEPARTMENT : ATTORNEY GENERAL

STATE OF MINNESOTA

Office Memorandum

DATE : December 13, 1989

TO : KATHLEEN L. WINTERS
Special Assistant Attorney General
520 Lafayette Road, Suite 200

FROM : CHARLENE HATCHER
Special Assistant Attorney General
525 Park Street, Suite 500

PHONE :

SUBJECT : In the Matter of the Adopted Rule Relating to Hazardous Waste; Burning of Hazardous Waste and Used Oil

The above-referenced rule has been approved as to its legality by the Attorney General on December 13, 1989.

Enclosed is your copy of the approved rule. This office has already filed two copies with the Secretary of State, who will forward one copy to the Revisor of Statutes. The fourth is being retained by this division of the Attorney General's Office for its records.

Also enclosed are any petitions, requests, submissions or comments along with any extra copies of documents which you submitted to the Attorney General.

Your next step is to arrange for publication of the Notice of Adoption in the State Register. In a day or two, you should receive from the Revisor's Office three copies of the notice of adoption of your rule. You should submit two copies of the Notice of Adoption to the State Register for publication. A permanent rule without a hearing does not become effective until five days after a notice of adoption is published in the State Register in accordance with Minn. Stat. § 14.27. An emergency rule becomes effective five working days after approval by the Attorney General; however, the agency must publish a notice in the State Register in accordance with Minn. Stat. § 14.34.

If you have any questions in this regard, please contact me.

Enclosures
cc: William Brown, Chief Judge (memo only)
MaryAnn Hruby " "

Amendments not new material

Notice of Intent
§115.03 subd 1(g) there is no such statute

(g) To prescribe and alter rules, not inconsistent with law, for the conduct of the agency

116.07, subd 4 . . . . . .
Pursuant to Chapter 14, the pollution control agency may adopt, amend, and rescind rules . . . relating to any purpose within the provisions of this chapter for generators of hazardous waste, the management . . . .

Rules were modified - changes were not substantial according to Statement of need and Reasonableness

Statement of Need and Reasonableness

no statement that the rule as adopted is needed and reasonable (2010.0300 K (8))

there is a statement that the MPCA adopts the Statement of need and Reasonableness as the factual basis for the rule

Pollution Control Agency

Adopted Permanent Rules Relating to Hazardous Waste; Burning of Hazardous Waste and Used Oil

Rules as Adopted

7001.0520 PERMIT REQUIREMENTS.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Permits by rule.** The owner or operator of the following facilities shall be deemed to have obtained a hazardous waste facility permit without making application for it unless the commissioner finds that the following conditions are not met:

A. to D. [Unchanged.]

E. Containers or tanks where generators mix characteristic hazardous waste as identified in part 7045.0131, subpart 2, with used oil if:

(1) the generators who produce at least 1,000 kilograms per calendar month of hazardous waste meet the requirements of part 7045.0292, subpart 1; or

(2) the generators who produce less than 1,000 kilograms per calendar month of hazardous waste meet the requirements of part 7045.0219, subpart 4, item A.

Subp. 4. [Unchanged.]

7045.0020 DEFINITIONS.

Subpart 1. to 6. [Unchanged.]

Subp. 6a. **Boiler.** "Boiler" means an enclosed device using controlled flame combustion and having the characteristics specified in item A or B. If used oil or hazardous waste is to be used as a fuel in an industrial boiler or a utility boiler, these boilers must meet the additional criteria in items C and D.

A. and B. [Unchanged.]

C. An industrial boiler burning used oil or hazardous waste as a fuel must be located on the site of an establishment engaged in a manufacturing process where substances are

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transformed into new products, including the component parts of products, by mechanical processes.

D. A utility boiler burning used oil or hazardous waste as a fuel must be one that is used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

Subp. 6b. [Unchanged.]

Subp. 6c. **Burner.** "Burner" means an owner or operator of an industrial furnace, industrial boiler, or utility boiler meeting the definition of industrial furnace in subpart 43a or boiler in subpart 6a.

Subp. 7. to 9. [Unchanged.]

Subp. 9a. **Collector.** "Collector" means an initial transporter who receives used oil only from generators and does not market the used oil directly to a person who burns it for energy recovery.

Subp. 9b. **Combustible liquid.** "Combustible liquid" ~~means a liquid that has a flash point below 200 degrees Fahrenheit and equal to or greater than 100 degrees Fahrenheit, as defined~~ has the meaning given in Code of Federal Regulations, title 49, section 173.115.

Subp. 9c. **Commissioner.** "Commissioner" means the commissioner of the Minnesota Pollution Control Agency or the commissioner's designee.

Subp. 9d. **Component.** "Component" means either the tank or ancillary equipment of a tank system.

Subp. 10. to 21a. [Unchanged.]

Subp. 21b. **EPA identification number.** "EPA identification number" means the number assigned by the Environmental Protection Agency to each generator, transporter, and treatment, storage and disposal facility.

Subp. 22. to 24a. [Unchanged.]

Subp. 24b. **Flammable liquid.** "Flammable liquid" ~~means a liquid exhibiting a flash point below 100 degrees Fahrenheit, as defined~~ has the meaning given in Code of Federal Regulations, title 49, section 173.115.

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Subp. 25. to 34. [Unchanged.]

Subp. 34a. **Hazardous waste fuel.** "Hazardous waste fuel" means a hazardous waste that is burned for energy recovery and includes fuel that is produced from hazardous waste by processing, blending, or other treatment, except for those blended fuels described in part 7045.0102, subpart 3.

Subp. 35. to 40. [Unchanged.]

Subp. 40a. **Incidental burner.** "Incidental burner" means a person who burns some used oil fuel for purposes of processing other used oil or treating other used oil to produce used oil fuel for marketing. These persons are considered to be burning incidentally to processing.

Subp. 41. to 55. [Unchanged.]

Subp. 55a. **Marketer.** "Marketer" means a generator who markets hazardous waste fuel or used oil fuel directly to a burner; a person who receives hazardous waste or used oil from generators and produces, processes, or blends hazardous waste fuel from these hazardous wastes, or blends used oil from these oils; a person who distributes but does not process or blend hazardous waste fuel or used oil; and a person who sends blended or processed used oils to brokers or other intermediaries.

Subp. 56. to 58. [Unchanged.]

Subp. 58a. **Mixed municipal solid waste.** "Mixed municipal solid waste" has the meaning given it in Minnesota Statutes, section 115A.03, subdivision 21.

Subp. 59. and 59a. [Unchanged.]

Subp. 59b. **Off-specification used oil.** "Off-specification used oil" means a used oil fuel that exceeds any of the specification levels for the following constituents or has a flash point less than 100 degrees Fahrenheit.

Constituent	Allowable level
Arsenic, total	5 parts per million maximum
Cadmium, total	2 parts per million maximum
Chromium, total	10 parts per million maximum
Lead, total	100 parts per million maximum
Total Halogens	4,000 parts per million maximum

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Subp. 59c. **Onground tank.** "Onground tank" means a device meeting the definition of "tank" in subpart 90 and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.

Subp. 60. [Unchanged.]

Subp. 60a. **On-specification used oil.** "On-specification used oil" means used oil fuel that does not exceed the specification levels for the constituents in subpart 59b, and has a flash point equal to or greater than 100 degrees Fahrenheit.

Subp. 61. to 100a. [Unchanged.]

Subp. 100b. **Used oil fuel.** "Used oil fuel" means used oil that is burned for energy recovery, and includes fuel produced from used oil by processing, blending, or other treatment, except for those blended fuels described in part 7045.0102, subpart 3.

Subp. 101. to 109. [Unchanged.]

7045.0102 MIXTURES OF WASTES.

Subpart 1. **Scope.** Except as provided in part 7045.0665, subpart 5 1, mixtures of wastes are listed in subparts 2 and 3.

Subp. 2. **Mixtures of hazardous and nonhazardous wastes.**

A. to G. [Unchanged.]

Subp. 3. **Mixtures of used oil and hazardous waste.** Items A and B apply to used oil that is intentionally mixed with hazardous waste.

A. Used oil mixed with a hazardous waste that exhibits any of the characteristics of part 7045.0131, subparts 2 to 7, is regulated as hazardous waste. If it is burned for energy recovery, it is regulated as a hazardous waste fuel under part 7045.0692 provided the mixture continues to exhibit any of those characteristics. If the mixture no longer exhibits any of those characteristics and is to be burned for energy recovery, it is regulated as a used oil fuel under part 7045.0695. If the mixture no longer exhibits any of those characteristics and is

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not burned for energy recovery, it is subject to the requirements of part 7045.0125.

B. Used oil mixed with hazardous waste listed in part 7045.0135 is a hazardous waste. If it is to be burned for energy recovery, it is regulated as a hazardous waste fuel under part 7045.0692.

7045.0120 EXEMPT WASTES.

The following wastes may be stored, labeled, transported, treated, processed, and disposed of without complying with the requirements of this chapter:

A. to L. [Unchanged.]

M. a sample of waste, water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition when:

(1) to (6) [Unchanged.]

N. pulping liquors (for example, black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless they are accumulated speculatively as defined in part 7045.0020;

O. spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in part 7045.0020; or

P. secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided that:

(1) to (4) [Unchanged.]

7045.0125 MANAGEMENT OF WASTE BY USE, REUSE, RECYCLING, AND RECLAMATION.

Subpart 1. **Scope.** This part regulates hazardous waste and used oil that is to be recycled except for use constituting disposal as provided in part 7045.0665, hazardous waste used for precious metals recovery as provided in part 7045.0675; spent lead-acid batteries being reclaimed as provided in part 7045.0685; hazardous waste fuel being burned for energy recovery

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as provided in part 7045.0692; or used oil fuel being burned for energy recovery as provided in part 7045.0695.

Subp. 3. [Unchanged.]

Subp. 3a. **Management requirements for used oil.**

A. Used oil that is recycled in some other manner than being burned for energy recovery is not subject to the requirements of parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380.

B. Used oil that is not recycled is regulated as a hazardous waste and is subject to the applicable requirements of parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380.

C. Used oil that is to be burned for energy recovery is regulated under part 7045.0695. Used oil that is mixed with hazardous waste and is burned for energy recovery is regulated under part 7045.0692 and the applicable requirements of part 7045.0102.

Subp. 4. **Management of specific hazardous wastes.** Management of the following wastes when recycled, is not subject to regulation under parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380:

A. industrial ethyl alcohol that is reclaimed, except as provided in subpart 12;

B. used batteries or used battery cells returned to a battery manufacturer for regeneration;

C. scrap metal;

D. fuels produced from the refining of oil-bearing hazardous wastes along with normal process streams at a petroleum refining facility if the wastes result from normal petroleum refining, production, and transportation practices;

E. oil that is reclaimed from hazardous wastes that are generated from normal petroleum refining, production, and transportation practices, and that is to be refined along with normal process streams at a petroleum refining facility;

F. coke and coal tar from the iron and steel industry that contain EPA Hazardous Waste No. K087 listed under part 7045.0135, subpart 3, item L, subitem (2), (decanter tank tar

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sludge from coking operations) from the iron and steel production process;

G. hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from the hazardous wastes, where the hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil if the resulting fuel meets the used oil specification under part 7045.0695, subpart 1, item B, subitem (1), and no other hazardous wastes are used to produce the hazardous waste fuel;

H. hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining, production, and transportation practices, where the hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, if the fuel meets the used oil fuel specification under part 7045.0695, subpart 1, item B, subitem (1);

I. oil that is reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, and is burned as a fuel without reintroduction to a refining process, if the reclaimed oil meets the used oil fuel specification under part 7045.0695, subpart 1, item B, subitem (1); and

J. petroleum coke produced from petroleum refinery hazardous wastes containing oil at the same facility at which the wastes were generated, unless the resulting coke product exhibits one or more of the characteristics of hazardous waste in part 7045.0131.

Subp. 5. **Requirements for use of hazardous wastes as feedstock.**

A. Except as provided in items B to D, hazardous wastes that are shown to be recycled by being used in a manner specified in subitems (1) to (3), are not subject to regulation under parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380. This subpart does not apply to wastes being accumulated

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speculatively as defined in part 7045.0020, or being managed by use constituting disposal as regulated under part 7045.0665 or burning for energy recovery, as regulated in part 7045.0692. Hazardous wastes are considered to be used as feedstock if they are:

(1) to (3) [Unchanged.]

B. to D. [Unchanged.]

Subp. 6. **Requirements for reclamation of specific hazardous wastes.**

A. [Unchanged.]

B. This subpart does not apply to hazardous wastes being accumulated speculatively as defined in part 7045.0020 or being managed by use constituting disposal, as regulated under part 7045.0665 or being burned for energy recovery as regulated by part 7045.0692.

Subp. 7. **Generator requirements.** Except as provided in subpart 3a, 4, 5, or 6, or part 7045.0695, generators of hazardous waste destined for recycle are subject to the requirements of parts 7045.0205 to 7045.0304.

Subp. 8. **Transporter requirements.** Except as provided in subpart 3a, 4, 5, or 6, or part 7045.0695, transporters of hazardous waste destined for recycle are subject to the requirements of parts 7045.0351 to 7045.0397.

Subp. 9. **Facility requirements.** Except as provided in subpart 3a, 4, 5, or 6, or parts 7045.0692 and 7045.0695, owners or operators of facilities which recycle hazardous waste are subject to the following requirements:

A. and B. [Unchanged.]

Subp. 10. and 11. [See Repealer.]

Subp. 12. [Unchanged.]

7045.0214 EVALUATION OF WASTES.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Wastes generated by treatment, storage, or disposal.** Wastes generated by treatment, storage, or disposal of hazardous waste are as follows:

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A. Except as provided in items B, C, and D, any waste generated from the treatment, storage, or disposal of hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate, but not including precipitation run-off, is a hazardous waste if it meets the criteria of subpart 2 or if it is derived from a waste that is listed in part 7045.0135.

B. [Unchanged.]

C. Materials that have been reclaimed from hazardous wastes and from wastes that have been reclaimed that are beneficially used are not hazardous wastes unless the reclaimed material is used in a manner constituting disposal under part 7045.0665 or burned for energy recovery under part 7045.0692.

D. Wastes from burning any of the materials exempted from regulation by part 7045.0125, subpart 4, items D to J, are not hazardous wastes.

7045.0219 SPECIAL REQUIREMENTS FOR SMALL QUANTITY GENERATORS OF HAZARDOUS WASTE.

Subpart 1. **Applicability; quantities.** A generator is a small quantity generator subject to the requirements of subparts 2 to 6 if, in a calendar month, he or she generates less than:

A. to C. [Unchanged.]

Subp. 2. and 3. [Unchanged.]

Subp. 4. **Accumulation on-site.** A small quantity generator who does not have a permit or interim status may accumulate hazardous waste on-site under the following conditions: if the quantity of hazardous waste accumulated at any time exceeds the quantities in item A or B, whichever applies, the small quantity generator must manage all of the accumulated waste in accordance with all the generator requirements in parts 7045.0205 to 7045.0304, excluding this part, but does not lose the small quantity generator status.

A. The following provisions apply to waste not listed as acute hazardous waste:

(1) A small quantity generator who in a calendar

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month generates at least 100 kilograms of waste not listed as acute hazardous waste in part 7045.0135, subpart 2, 3, or 4, item E, may accumulate that waste on-site for 180 days or less if the quantity of waste accumulated on-site never exceeds 3,000 kilograms and the small quantity generator meets all the requirements of subpart 5. For purposes of this subitem, the time period for accumulation begins when the generator begins accumulation in a container or tank. If the small quantity generators regulated under this subitem mix used oil with hazardous waste, they must meet the requirements under part 7045.0102, subpart 3.

(2) A small quantity generator who in a calendar month generates less than 100 kilograms of waste not listed as acute hazardous waste in part 7045.0135, subpart 2, 3, or 4, item E may accumulate that waste on-site indefinitely until 1,000 kilograms of waste are accumulated, at which point the small quantity generator may only store the waste on-site for a period of 180 days following the date the 1,000 kilogram limit is reached. A small quantity generator accumulating waste under this subitem must meet the requirements of subpart 5, except for subpart 5, item B, subitems (2) to (5). If the small quantity generators regulated under this subitem mix used oil with characteristic hazardous waste, they must meet the requirements under subpart 6. Small quantity generators regulated under this subitem who mix used oil with listed hazardous waste must meet the hazardous waste fuel requirements under part 7045.0692 if the waste is to be burned for energy recovery.

(3) [Unchanged.]

B. [Unchanged.]

Subp. 5. **Management requirements.**

A. Small quantity generators shall comply with the following requirements of this chapter:

(1) to (5) [Unchanged.]

(6) parts 7045.0566 and 7045.0568;

(7) parts 7045.0626 and 7045.0629; and

(8) as applicable, parts 7045.0692 and 7045.0695.

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B. and C. [Unchanged.]

Subp. 6. **Mixtures.** A small quantity generator's hazardous waste may be mixed as specified in items A to C and be subject to the reduced requirements of this rule.

A. Hazardous waste may be mixed with nonhazardous waste pursuant to part 7045.0102 and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity generation and accumulation limitations identified in this rule unless the resultant mixture is hazardous pursuant to part 7045.0102.

B. A waste that is hazardous solely for the characteristic of ignitability may be mixed with used oil that is generated on-site and regulated as used oil fuel under part 7045.0695 if the waste mixed is hazardous solely for the characteristic of ignitability under part 7045.0131, subpart 2, and the following conditions are met:

(1) the ignitable waste is generated by a small quantity generator who in a calendar month generates a total of less than 100 kilograms of hazardous waste;

(2) the ignitable waste has a flash point of 100 degrees Fahrenheit or greater, is not a metal bearing paint waste, or is not gasoline; and

(3) the concentration of ignitable waste in the used oil does not exceed ten percent by volume.

C. Mixtures that do not meet the criteria in item B are subject to part 7045.0102, subpart 3.

7045.0665 USE CONSTITUTING DISPOSAL.

Subpart 1. [Unchanged.]

Subp. 1a. **Land application prohibition.**

A. The following materials may not be placed in mixed municipal solid waste or applied as a dust suppressant or used for road treatment:

(1) waste oil;

(2) used oil;

(3) hazardous waste; and

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(4) a mixture of hazardous waste and other material, waste oil, or used oil.

B. A person may not otherwise place used or waste oil in or on the land, unless approved by the commissioner. The application of used or waste oil in or on the land shall only be approved in the case of an accidental ~~oil~~ spill.

Subp. 2. to 4. [Unchanged.]

7045.0692 HAZARDOUS WASTE BURNED FOR ENERGY RECOVERY.

Subpart 1. **Scope.** This part applies to hazardous wastes that are burned for energy recovery in a boiler or industrial furnace that is not regulated by the thermal treatment standards in part 7045.0542 or 7045.0640, except:

A. Gaseous emissions recovered from hazardous waste management activities when the gas is burned for energy recovery.

B. Used oil that exhibits a characteristic of hazardous waste as identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste, and is regulated as a used oil fuel in part 7045.0695.

C. Hazardous wastes that are exempt from regulation under part 7045.0125, subparts 3a and 4, items D to J.

D. Mixtures of used oil and waste that is hazardous solely for the characteristic of ignitability in part 7045.0131, subpart 2, provided the waste is generated by a person who in a calendar month generates less than 100 kilograms of hazardous waste. This mixture is regulated as provided in part 7045.0219, subpart 6. If the waste is generated by a person who in a calendar month generates at least 100 kilograms of hazardous waste, part 7045.0102, subpart 3, item A, applies.

E. Used oil being burned for energy recovery as regulated in part 7045.0695.

Subp. 2. **Prohibitions.**

A. A person may market hazardous waste fuel only:

(1) to persons who have notified the Environmental Protection Agency of their hazardous waste fuel

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activities and have an EPA identification number; and

(2) if the fuel is to be burned, to persons who burn the fuel in boilers or industrial furnaces identified in item B.

B. Hazardous waste fuel may be burned for energy recovery only in industrial furnaces as defined in part 7045.0020, or boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet one of the following criteria:

(1) industrial boilers located on the site of an establishment engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes; or

(2) utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

C. Hazardous waste or a fuel that contains a hazardous waste may not be burned in a cement kiln unless the kiln fully complies with the thermal treatment standards of part 7045.0542.

Subp. 3. **Standards applicable to generators of hazardous waste fuel.** Generators of hazardous waste that is used as a fuel or used to produce a fuel are subject to parts 7045.0205 to 7045.0304. Generators who market hazardous waste fuel to a burner are also subject to subpart 5. Generators who are burners are also subject to subpart 6.

Subp. 4. **Standards applicable to transporters of hazardous waste fuel.** Transporters of hazardous waste fuel and hazardous waste that is used to produce a fuel are subject to parts 7045.0351 to 7045.0397.

Subp. 5. **Standards applicable to marketers of hazardous waste fuel.** Marketers are subject to the requirements in items A to F.

A. A marketer of hazardous waste that is used as a fuel or used to produce a fuel must notify the Environmental

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Protection Agency to identify hazardous waste fuel activities. Even if a marketer has previously notified the Environmental Protection Agency of hazardous waste management activities other than hazardous waste fuel activities, a marketer must renotify specifically to identify hazardous waste fuel activities.

B. A marketer must comply with the prohibitions in subpart 2, item A.

C. If a marketer is a generator, or becomes a generator by initiating a shipment of hazardous waste fuel, the marketer must comply with parts 7045.0205 to 7045.0304. If the marketer operates a facility, the marketer must comply with parts 7045.0450 to 7045.0534. If the marketer is operating a facility under interim status, the marketer must comply with parts 7045.0552 to 7045.0632. If the marketer stores hazardous waste, the marketer must comply with the agency's permitting procedures in chapter 7001 for storage of hazardous waste.

D. Before a marketer initiates the first shipment of hazardous waste fuel to a burner or another marketer, a one-time written and signed notice from the burner or marketer must be obtained certifying that:

(1) the burner or marketer has notified the Environmental Protection Agency and identified the waste-as-fuel activities; and

(2) if the recipient is a burner, the burner will burn the hazardous waste fuel only in an industrial furnace or boiler identified in subpart 2, item B.

E. Before a marketer accepts the first shipment of hazardous waste fuel from another marketer, the receiving marketer must provide the other marketer with a one-time written and signed notice certifying that the receiving marketer has notified the Environmental Protection Agency and identified the receiving marketer's hazardous waste fuel activities.

F. In addition to the applicable record keeping requirements of parts 7045.0205 to 7045.0304, 7045.0450 to 7045.0534, and 7045.0552 to 7045.0632, a marketer must keep a copy of each certification notice received or sent for three

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years from the date the marketer last engaged in a hazardous waste fuel marketing transaction with the person who sent or received the certification notice.

Subp. 6. **Standards applicable to burners of hazardous waste fuel.** Owners and operators of industrial furnaces and boilers identified in subpart 2, item B, that burn hazardous fuel are subject to the requirements in items A to F.

A. A burner must notify the Environmental Protection Agency of hazardous waste fuel activities and obtain an EPA identification number. Even if a burner has previously notified the Environmental Protection Agency of the burner's hazardous waste management activities and obtained an EPA identification number, the burner must renotify the Environmental Protection Agency to identify the burner's hazardous waste fuel activities.

B. Before a burner accepts the first shipment of hazardous waste fuel from a marketer, the burner must provide the marketer with a one-time written and signed notice certifying that:

(1) the burner has notified the Environmental Protection Agency and identified the burner's waste-as-fuel activities; and

(2) the burner will burn the fuel only in a boiler or furnace identified in subpart 2, item B.

C. In addition to the applicable record keeping requirements of parts 7045.0478 to 7045.0482 and 7045.0584 to 7045.0588, a burner must keep a copy of each certification notice that the burner sends to a marketer for three years from the date the burner last receives hazardous waste fuel from that marketer.

D. Generators who accumulate hazardous waste fuel before burning on-site within the accumulation time period allowed in part 7045.0292 must comply with that part. Small quantity generators who accumulate hazardous waste fuel before burning on-site within the accumulation time period allowed in part 7045.0219 must comply with that part. Burning by the generator of a hazardous waste that is a sludge or is or

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contains a waste listed in part 7045.0135 for reasons other than ignitability or is or contains a waste that is toxic under part 7045.0131, subpart 6, is subject to the additional requirements of item E, subitem (2).

E. Generators who accumulate waste for longer than the time periods in item D, and burners who receive waste from off-site and store it, must comply with the following requirements:

(1) the agency's permitting procedures in chapter 7001 for hazardous waste storage facilities, parts 7045.0205 to 7045.0536, 7045.0544, 7045.0552 to 7045.0632, 7045.1000 to 7045.1030, and 7045.1300 to 7045.1380; and

(2) if the hazardous waste to be burned is a sludge or is or contains a waste listed in part 7045.0135 for reasons other than ignitability, or is or contains a waste that is toxic under part 7045.0131, subpart 6, then parts 7045.0542, excluding subparts 4, item C, and 7, item A, subitem (2); and 7045.0640 apply.

F. A burner must abide by Minnesota and federal air quality regulations, including obtaining a permit if necessary. Compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes.

7045.0695 USED OIL BURNED FOR ENERGY RECOVERY.

Subpart 1. **Scope.** The requirements of this part apply to used oil that is burned for energy recovery in a boiler or industrial furnace that is not regulated under part 7045.0542 or 7045.0640. <u>Burning used oil as a fuel is prohibited except as provided in this part.</u> Used oil burned for energy recovery is subject to regulation under this part rather than as hazardous waste fuel under part 7045.0692, even if it exhibits a characteristic of hazardous waste identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste. Used oil intentionally mixed with a characteristic hazardous waste as identified in part 7045.0131 is regulated as specified in part 7045.0102, subpart 3.

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A. The requirements of this part do not apply to subitems (1) and (2), which are regulated as specified.

(1) Used oil that has been intentionally mixed with a hazardous waste listed in part 7045.0135 is regulated under part 7045.0692 if it is to be burned for energy recovery.

(2) Used oil containing more than 1,000 parts per million of total halogens is presumed to have been mixed with a halogenated hazardous waste listed in part 7045.0135 and is a hazardous waste. It is subject to the requirements of part 7045.0692 if it is to be burned for energy recovery. This presumption may be rebutted by a demonstration that the used oil does not contain hazardous waste.

B. Used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment, is subject to regulation as off-specification used oil fuel if it exceeds any of the allowable levels of the constituents and properties in subitem (1). On-specification used oil fuel as defined in part 7045.0020, subpart 60a, is subject only to the analysis and record keeping requirements under subpart 3, item B, subitems (1) and (8).

(1) Used oil exceeding any of the following allowable levels, for the constituent or property listed, is subject to full regulation under this part when burned for energy recovery:

Constituent/property	Allowable level
Arsenic, total	5 parts per million maximum
Cadmium, total	2 parts per million maximum
Chromium, total	10 parts per million maximum
Lead, total	100 parts per million maximum
Flash Point	100 degrees Fahrenheit minimum
Total Halogens	4,000 parts per million maximum

(2) The specifications in subitem (1) do not apply to used oil fuel mixed with a listed hazardous waste identified in part 7045.0135. Such wastes are regulated under part 7045.0692.

(3) If the presumption of mixing is not

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successfully rebutted, used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided in item A, subitem (2). This used oil is subject to part 7045.0692 rather than this part when burned for energy recovery. If the presumption of mixing is successfully rebutted and the oil is on-specification used oil, it is subject only to the reduced requirements identified in subpart 3, item B, subitems (1) and (8).

Subp. 2. **Standards applicable to generators of used oil to be burned for energy recovery.** Except as provided in items A and B, generators of used oil are not subject to this subpart.

A. Generators who market used oil directly to a burner are subject to subpart 3.

B. Generators who burn used oil are subject to subpart 4.

Subp. 3. **Standards applicable to marketers of used oil to be burned for energy recovery.**

A. The following persons are not marketers:

(1) Used oil generators, and collectors who transport used oil received only from generators, unless the generator or collector markets the used oil directly to a person who burns it for energy recovery. Generators and collectors who market to incidental burners are not marketers subject to this subpart.

(2) Persons who market only on-specification used oil fuel and who are not the first person to claim the used oil meets the specifications of subpart 1, item B.

B. Marketers are subject to the following requirements:

(1) Used oil fuel is subject to regulation as off-specification used oil fuel under this part unless the marketer obtains analyses or other information documenting that the used oil is on-specification used oil fuel.

(2) A person may market off-specification used oil for energy recovery only:

(a) to burners or other marketers who have

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notified the Environmental Protection Agency of their used oil management activities stating the location and general description of those activities, and who have an EPA identification number; and

(b) to burners who burn the used oil in an industrial furnace or boiler identified in subpart 4, item A, subitems (1) and (2).

(3) Even if a marketer has previously notified the Environmental Protection Agency of the marketer's hazardous waste management activities and obtained an EPA identification number, the marketer must renotify the Environmental Protection Agency to identify the marketer's used oil management activities.

(4) When a marketer initiates a shipment of off-specification used oil fuel, the marketer must prepare and send the receiving facility an invoice containing the following information:

(a) a unique invoice number;

(b) the marketer's own EPA identification number and the EPA identification number of the receiving facility;

(c) the names and addresses of the shipping and receiving facilities;

(d) the quantity of off-specification used oil fuel to be delivered;

(e) the dates of shipment or delivery; and

(f) the following statement: "This used oil is subject to EPA regulation under Code of Federal Regulations, title 40, section 266."

(5) Used oil that meets the definition of combustible liquid or flammable liquid is subject to the United States Department of Transportation hazardous materials regulations in Code of Federal Regulations, title 49, sections 100 to 177.

(6) Before a marketer initiates the first shipment of off-specification used oil fuel to a burner or other marketer, the marketer must obtain a one-time written and signed

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notice from the burner or marketer certifying that:

(a) the burner or marketer has notified the Environmental Protection Agency stating the location and general description of the marketer's used oil management activities; and

(b) if the recipient is a burner, the burner will burn the off-specification used oil fuel only in an industrial furnace or boiler identified in subpart 4, item A, subitems (1) and (2).

(7) Before a marketer accepts the first shipment of off-specification used oil fuel from another marketer subject to the requirements of this part, the first marketer must provide the other marketer with a one-time written and signed notice certifying that the first marketer has notified the Environmental Protection Agency of the first marketer's used oil management activities.

(8) A marketer who first claims under item B, subitem (1), that used oil fuel meets the specifications must keep copies of analysis, or other information used to make the determination, for three years from the date of analysis. That marketer must also record in an operating log and keep for three years the information in units (a) to (d) on each shipment of on-specification used oil fuel. On-specification used oil fuel is not subject to further regulation, unless it is subsequently mixed with hazardous waste or unless it is mixed with used oil so that it no longer meets the specifications:

(a) the name and address of the facility receiving the shipment;

(b) the quantity of used oil fuel delivered;

(c) the date of shipment and delivery; and

(d) a cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets the specifications required under this subitem.

(9) A marketer who receives or initiates an invoice under the requirements of this subpart must keep a copy

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of each invoice for three years from the date the invoice is received or prepared. In addition, a marketer must keep a copy of each certification notice that the marketer received or sent for three years from the date that the marketer last engaged in an off-specification used oil fuel marketing transaction with the person who sent or received the certification notice.

Subp. 4. **Standards applicable to burners of used oil burned for energy recovery.** Owners and operators of devices that burn used oil fuel are subject to the requirements in items A to G.

A. Off-specification used oil fuel may be burned for energy recovery only in industrial furnaces defined in part 7045.0020, or in boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet the following criteria:

(1) industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

(2) utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale; or

(3) used oil-fired space heaters provided that:

(a) the heater burns only used oil that the owner or operator generates or used oil received from do-it-yourself oil changers who generate used oil as household waste;

(b) the heater is designed to have a maximum capacity of not more than 0.5 million Btu per hour; and

(c) the combustion gases from the heater are vented to the out-of-doors.

B. Burners of off-specification used oil fuel and burners of on-specification used oil fuel who are the first to claim that the oil meets the specifications provided in subpart 1, item B, must notify the Environmental Protection Agency stating the location and general description of used oil

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management activities. Burners who meet the following criteria are not required to notify the Environmental Protection Agency:

(1) burners of on-specification used oil fuel who receive the oil from a marketer who has previously notified the Environmental Protection Agency;

(2) owners and operators of used oil-fired space heaters that burn used oil fuel under item A, subitem (3); and

(3) burners who burn on-specification used oil that they generate.

C. Before a burner accepts the first shipment of off-specification used oil fuel from a marketer, the burner must provide the marketer with a one-time written and signed notice certifying that:

(1) the burner has notified the Environmental Protection Agency stating the location and general description of the burner's used oil management activities; and

(2) the burner will burn the used oil only in an industrial furnace or boiler identified in item A, subitems (1) and (2).

D. A person who burns used oil fuel that has been generated on-site is subject to regulation under this subpart unless that person obtains analysis or other information documenting that the oil is on-specification used oil.

E. Burners who process, blend, or otherwise manage off-specification used oil to meet the specifications provided under subpart 1, item B, must obtain analyses or other information documenting that the oil is on-specification used oil.

F. A burner must retain a copy of the invoice given from a marketer for three years from the date the invoice is received. Burners must also keep for three years copies of all analyses of used oil fuel as may be required by items D and E. In addition, the burner must keep a copy of each certification notice that the burner sends to a marketer for three years from the date the burner last received off-specification used oil fuel from that marketer.

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G. Burners must abide by Minnesota and federal air quality regulations, including obtaining a permit if necessary. Compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes.

REPEALER. Minnesota Rules, parts 7045.0100; and 7045.0125, subparts 10 and 11, are repealed.

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by Revisor _____

STATE OF MINNESOTA
DEPARTMENT OF STATE
FILED

DEC 13 1989

Joan Anderson Growe
Secretary of State

11:45 AM

APPROVED AS TO LEGALITY

December 13, 19 89

HUBERT H. HUMPHREY, III
ATTORNEY GENERAL

BY Charlene H. Hatcher
SPECIAL ASSISTANT ATTORNEY GENERAL

HUBERT H. HUMPHREY, III
ATTORNEY GENERAL

STATE OF MINNESOTA
OFFICE OF THE ATTORNEY GENERAL
ST. PAUL 55155

ADDRESS REPLY TO:
SUITE 200
520 LAFAYETTE ROAD
ST. PAUL, MN 55155
TELEPHONE: (612) 297-1075

November 29, 1989

Ms. Patricia Nolte
Assistant Attorney General
Office of the Attorney General
525 Park Street
St. Paul, Minnesota 55155

Dear Ms. Nolte:

Re: In the Matter of Proposed Rules Governing the Management, Storage and Treatment of Hazardous Waste, Minn. Rules Pts. 7001.0520, 7045.0020, 7045.0102, 7045.0120, 7045.0125, 7045.0214, 7045.0219, 7045.0655, 7045.0692, 7045.0695

On November 28, 1989, the Minnesota Pollution Control Agency adopted the above-captioned rules governing used oil burned for energy recovery, hazardous waste burned for energy recovery, a land application prohibition and a technical correction to the existing federal requirements for recyclable materials. Enclosed for your review are the following:

1. Rules as adopted (original and three copies).

2. Findings of Fact, Conclusions, and Order Adopting rules (two copies).

3. Certificate of Resolution Adopting Rules.

4. Notice of Intent to Solicit Outside Opinion (13 SR 309, August 8, 1988).

5. Affidavit stating that no comments were received pursuant to the Notice of Intent to Solicit Outside Opinion.

6. Certificate of Authorizing Resolution.

7. Notice of Intent to Adopt Rules Without a Public Hearing and rules as proposed (14 SR 583, September 11, 1989).

8. Comments received during the comment period.

9. Notice of Intent to Adopt Rules Without a Public Hearing, as mailed.

10. Affidavit of Mailing the Notice of Intent to Adopt Rule Without a Public Hearing and Certificate of Mailing List.

11. Rules as proposed.

12. Statement of Need and Reasonableness.

13. Declaration of Counsel.

14. Affidavit stating that no requests were received for Notification of Submission of Rule Adopted Without Public Hearing to the Attorney General.

Sincerely,

KATHLEEN L. WINTERS
Special Assistant
Attorney General

Environmental Protection Division

KLW:jlm

Enclosures

STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of the Proposed Amendments of Rules Governing the Management, Storage and Treatment of Hazardous Waste, Minn. Rules Pts. 7001.0520, 7045.0020, 7045.0102, 7045.0120, 7045.0125, 7045.0214, 7045.0219, 7045.0665, 7045.0692 and 7045.0695.

STATEMENT OF NEED AND REASONABLENESS

Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, Minnesota 55155

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Exhibit 6 January 11, 1985 Federal Register

STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of the Proposed Amendments of Rules Governing the Management, Storage and Treatment of Hazardous Waste, Minn. Rules Pts. 7001.0520, 7045.0020, 7045.0102, 7045.0120, 7045.0125, 7045.0214, 7045.0219, 7045.0665, 7045.0692 and 7045.0695.

STATEMENT OF NEED AND REASONABLENESS

I. INTRODUCTION

The subject of this proceeding is the adoption of rules of the Minnesota Pollution Control Agency (hereinafter "Agency") governing the management, storage and treatment of hazardous waste. These amendments incorporate into the state rules four sets of revisions to the federal hazardous waste regulations promulgated by the United States Environmental Protection Agency (hereinafter "EPA"). The proposed amendments pertain to the following:

A. The regulation of hazardous waste burned for energy recovery in industrial furnaces, industrial boilers, or utility boilers. The amendments place storage and administrative controls on marketers and burners of hazardous waste fuel.

B. Conditions for management of used oil burned for energy recovery. The amendments establish administrative requirements for marketers and burners of used oil fuel.

C. The prohibition of land application of used oil. The amendments establish restrictions for hazardous waste contaminated materials and used oil from being used as a dust suppressant or for road treatment.

D. Incorporation of technical corrections to the existing federal requirements for recyclable materials. The correction adds an exemption for certain waste derived fuels.

The rules regarding used oil burned for energy recovery (used oil fuel) and hazardous waste burned for energy recovery (hazardous waste fuel) are addressed

in the Federal Register published on November 29, 1985 (Exhibit 1), with technical corrections published on April 13, 1987 (Exhibit 2). The land application prohibition was promulgated and published in the Federal Register on July 15, 1985 (Exhibit 3). The technical corrections to the definition of hazardous waste were published in the August 20, 1985, Federal Register (Exhibit 4) and additional exemptions are provided in the November 29, 1985, Federal Register.

The federal amendments exempting certain waste-derived fuels were promulgated by EPA under the authority of the Resource Conservation and Recovery Act (RCRA). The federal amendments pertaining to hazardous waste fuel and the land application prohibition were promulgated by EPA under the authority of the Hazardous and Solid Waste Amendments (HSWA) of 1984. The federal regulations for used oil burned for energy recovery were promulgated by EPA under the authority of the Used Oil Recycling Act of 1980 which were codified in RCRA.

These state rule amendments are proposed pursuant to the Agency's authority under Minn. Stat. § 116.07, subd. 4 (1988).

This Statement of Need and Reasonableness is divided into seven parts. Following this introduction, Part II contains the Agency's explanation of the need for the proposed amendments. Part III discusses the reasonableness of the proposed amendments. Part IV documents how the Agency has considered the methods of reducing the impact of the proposed amendments on small businesses as required by Minn. Stat. § 14.115 (1988). Part V documents the economic factors the Agency considered in drafting the amendments as required by Minn. Stat. § 116.07, subd. 6 (1988). Part VI sets forth the Agency's conclusion regarding the amendments. Part VII contains a list of exhibits relied on by the Agency to support the proposed amendments. The exhibits are available for

review at the Agency's offices at 520 Lafayette Road North, St. Paul, Minnesota 55155.

II. NEED FOR THE PROPOSED AMENDMENTS TO THE HAZARDOUS WASTE RULES

Minn. Stat. ch. 14 (1988) requires an agency to make an affirmative presentation of facts establishing the need for and reasonableness of the rules or amendments proposed. In general terms, this means that an agency must set forth the reasons for its proposal, and the reasons must not be arbitrary or capricious. However, to the extent that need and reasonableness are separate, need has come to mean that a problem exists which requires administrative attention and reasonableness means that the solution proposed by an agency is appropriate.

Need is a broad test that does not easily lend itself to evaluation of each proposed revision. In the broad sense, the need for amendments to the Agency's rules governing the management, treatment, storage, and disposal of hazardous waste has two bases: (A) the need for consistency with the federal hazardous waste regulations; and (B) the need for rules which provide protection of human health and the environment without unduly restricting normal commerce.

A. Need for Consistency with Federal Regulations.

In 1976, Congress adopted RCRA to regulate the management of hazardous waste. 42 U.S.C. section 6901, et seq. In adopting RCRA, Congress provided for eventual state control of the hazardous waste program and set up the mechanism for the EPA to grant authority to states to operate the program. In states that receive authorization, the state environmental agency administers the state program in lieu of the federal program. To receive and maintain authorization, the state program must be "equivalent" to the federal program and consistent with federal or state programs applicable to other states. EPA has defined equivalent to mean that the state requirements are at least as

stringent as federal requirements. In terms of consistency, EPA's goal is to achieve an integrated national program which requires that final state programs do not conflict with each other or with the federal program.

Minnesota received final authorization from EPA for its hazardous waste program pursuant to RCRA effective February 11, 1985. See 50 Fed. Reg. 3756 (January 28, 1985). A state with final authorization administers its hazardous waste program in lieu of the EPA program for those regulations which were promulgated pursuant to RCRA as adopted in 1976 and as amended in 1980.

Generally, federal regulations promulgated under RCRA are not in effect in Minnesota until the state rules are amended to incorporate the federal changes. Used oil burned for energy recovery, however, is regulated under the Used Oil Recycling Act. Section 3014(a) of the Act specifically provides that regulations promulgated thereunder are applicable to the states.

Used oil fuel is not presently regulated as a hazardous waste under § 3001 of RCRA. This is because the regulations have been promulgated pursuant to: (1) the Used Oil Recycling Act (§ 3014(a) of RCRA) which directed EPA to regulate recycled used oil even if it is not a hazardous waste; and (2) the Superfund Amendments and Reauthorization Act of 1986 (SARA § 205(j) adding RCRA § 3006(h)). SARA § 205(j) provides for delegation to states for used oil recycling standards even if used oil is not listed or identified as a hazardous waste.

The authorization Minnesota received on February 11, 1985, did not extend to those federal requirements promulgated by EPA pursuant to HSWA. Congress significantly amended RCRA in 1984 by establishing HSWA. One of the most significant aspects of this legislation is the fact that the specific mandates of HSWA become effective nationally upon promulgation of regulations by EPA. Thus, the federal amendments promulgated under HSWA are in effect in Minnesota

and are enforced by EPA until Minnesota modifies its program to adopt the HSWA amendments. Once a state modifies its program to adopt HSWA amendments, the state must apply for and receive authorization specifically under HSWA in order to enforce the HSWA provisions in lieu of EPA as part of the authorized state program. The existing federal regulations establish specific time frames for the adoption of state rules intended to maintain equivalency to the federal rules. The federal regulations pertaining to hazardous waste burned for energy recovery and the land application prohibition on used oil for use as a dust suppressant and road treatment that Minnesota is incorporating into its hazardous waste rules in this rulemaking, were promulgated under the authority of HSWA.

Used oil collected in Minnesota is either burned for energy recovery in industrial furnaces such as asphalt plants or is transported out of the state to similar burning devices or to re-refineries. This means that hazardous waste generators and used oil generators, marketers and burners must be knowledgeable about requirements of both the state and federal hazardous waste programs. The need to comply with multiple sets of rules makes compliance difficult. Therefore, to the extent it can be accomplished without posing a threat to human health and the environment, amendment of Minnesota's hazardous waste rules to incorporate EPA's amendments is desirable.

B. Need for Rules Protective of Human Health and the Environment.

The proposed amendments to the Minnesota hazardous waste rules are needed for the protection of human health and the environment. As more scientific and technological information becomes available regarding the potential dangers of hazardous wastes and the alternatives available for reducing the risks of harm to the environment and humans, the Agency must use the information to establish

hazardous waste management requirements that adequately protect human health and the environment.

Congress directed the EPA to enact regulations on hazardous waste and used oil burned for energy recovery for two main reasons. The first reason is to prohibit burning hazardous waste and contaminated used oil in burning devices that do not have adequate air pollution control equipment. To accomplish this, the federal rules place restrictions on where off-specification used oil and hazardous waste fuels can be burned. Nonindustrial burning devices are prohibited by this rule from burning off-specification used oil or hazardous waste as fuels. The second reason is to track used oil and hazardous waste burned for energy recovery in order to assure proper management of these substances. This is implemented and enforced by placing administrative controls on marketers and burners of these fuels.

III. REASONABLENESS OF THE PROPOSED AMENDMENTS TO THE HAZARDOUS WASTE RULES

The Agency is required by Minn. Stat. ch. 14 (1988) to make an affirmative presentation of facts establishing the reasonableness of the proposed rules or amendments. The Agency proposes to incorporate federal requirements promulgated by EPA. A complete discussion of the reasonableness of the federal amendments is presented in Exhibits 1, 2, 3, and 4 listed in Part VII of this document, which are hereby incorporated by reference. The reasonableness of each proposed amendment to the state hazardous waste rules is discussed below.

A. Minn. Rules Pt. 7001.0520 Permit Requirements.

The existing hazardous waste rules in Minn. Rules pt. 7001.0520[1] (Permit Requirements) require a person who treats, stores or disposes of hazardous

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1. Parts, subparts, items, etc. are underlined when they are first introduced as amendments or additions. The underlining is done to help the reader follow the discussion which corresponds to the specific rule amendments.

waste to obtain a permit. In order to be consistent with the federal regulations, the Agency is proposing to add to Minn. Rules pt. 7001.0520, subp. 3, entitled "Permits by rule," an item E which would follow the existing items A to D. Currently, items A to D list conditions operators of hazardous waste facilities must meet in order to operate without obtaining a hazardous waste facility permit. Item E would "permit by rule" the mixing of characteristic hazardous waste[2] and used oil only if the following conditions are met: (1) Generators who produce at least 1000 Kg/mo of hazardous waste comply with the accumulation requirements in Minn. Rules pt. 7045.0292, subp. 1; and (2) Generators who produce less than 1000 Kg/mo hazardous waste comply with the accumulation requirements of Minn. Rules pt. 7045.0219, subp. 4. Conditions (1) and (2) are subitems (1) and (2) in item E of the proposed rules, respectively.

Mixing characteristic hazardous waste with used oil to render the waste nonhazardous constitutes treatment. However, generators who choose to treat their own characteristic hazardous waste by mixing it with used oil within accumulation tanks or containers, and are in compliance with the applicable accumulation requirements of Minn. Rules pt. 7045.0292 and Minn. Rules pt. 7045.0219, do not need to obtain a permit. In this case, the generator is not actually operating a treatment facility and poses no greater threat to

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2. Waste is designated as hazardous if it fits in one of two categories: A waste may be hazardous because it is a "characteristic" hazardous waste or it may be hazardous because it is a "listed" hazardous waste. A characteristic hazardous waste is a waste that, when evaluated, exhibits one or more of the hazardous characteristics specified in the hazardous waste rules. Listed wastes are specific wastes or categories of wastes that have been identified as consistently displaying hazardous characteristics or which have hazardous properties that are not readily assessed. Carcinogenicity is an example of a reason why a waste may be listed as a hazardous waste. In may cases, the proposed rules distinguish between waste that is hazardous because it is listed and waste that is hazardous based on its characteristics.

human health and the environment than if he did the same activity within the authority of a treatment permit.

The same management standards apply to treatment in tanks that apply to storage in tanks, and the rules allow for limited on-site storage without a storage permit. Therefore, if generators comply with the accumulation requirements and if they render the characteristic hazardous waste nonhazardous on-site by mixing it with used oil, it is reasonable to allow this mixing to be conducted without a permit. These management standards are adequate to ensure the protection of human health and the environment under the short-term. To require generators to obtain a treatment permit would be unreasonably burdensome and would only impose administrative conditions that would not afford any additional protection.

B. Minn. Rules Pt. 7045.0020 Definitions.

The following discussion addresses the reasonableness of the proposed new and amended definitions of key words and phrases used in the hazardous waste rules. It is reasonable to include definitions in the proposed rules to provide a consistent interpretation of terms used by all parties. By defining potentially confusing terms, the Agency provides the regulated community with an understanding of what is expected of them in order to comply with the proposed rules. New terms to be added to Minn. Rules pt. 7045.0020 are "burner" (subpart 6c), "collector" (subpart 9a), "combustible liquid" (subpart 9b), "EPA Identification Number" (subpart 21a), "flammable liquid" (subpart 24b), "hazardous waste fuel" (subpart 34a), "incidental burner" (subpart 40a), "mixed municipal solid waste" (subpart 58a), "off-specification used oil" (subpart 59b), "on-specification used oil" (subpart 60a), and "used oil fuel" (subpart 100b). The terms to be amended are "boiler" (subpart 6a) and

"marketer" (subpart 55a). The reasonableness of each of the definitions is discussed below.

Minn. Rules pt. 7045.0020, subp. 6a currently provides a definition for the word "boiler." A boiler is defined as an enclosed device using controlled flame combustion that must also have the characteristics described in items A and B. In this rulemaking, the Agency is incorporating major requirements applicable to used oil and hazardous waste fuels that are to be burned for energy recovery. These new standards restrict the burning of these fuels to specific types of burning devices. Therefore, the Agency is amending the definition of a boiler to include the types of boilers that are specific to used oil and hazardous waste fuels. Items C and D are added to describe criteria specific to boilers that burn used oil fuel and hazardous waste fuel for energy recovery. It is reasonable to amend the term to clarify what types of burning devices can be used to burn used oil fuel and hazardous waste fuel. The amendment is equivalent to 40 CFR § 266.31 (b)(2)(i-ii).

Minn. Rules pt. 7045.0020, subp. 6c will add a definition for the word "burner." A burner is an owner or operator of an industrial furnace, industrial boiler, or utility boiler that meets the existing definition of an industrial furnace or the amended definition of boiler located in subpart 6a. It is reasonable to define the term burner so that the rules clearly define who can burn used oil and hazardous waste for energy recovery and the types of burning devices allowed. The amendment is equivalent to 40 CFR § 266.35.

Minn. Rules pt. 7045.0020, subp. 9a is added to define a "collector." A collector is defined as an initial transporter who receives used oil from generators and does not market the used oil directly to a person who burns it for energy recovery. No federal definition is provided for this term. A collector is different from a marketer, as defined in subpart 55a; therefore,

it is necessary to differentiate between the two by defining the terms. The proposed definition reasonably describes the activities of a used oil collector and differentiates between a used oil marketer and a used oil collector.

Minn. Rules pt. 7045.0020, subp. 9b is added to define a "combustible liquid." A combustible liquid is being defined as any liquid that has a flash point below 200 degrees Fahrenheit but equal to or greater than 100 degrees Fahrenheit. This is further defined in 49 CFR § 173.115 which provides more detail regarding the criteria of this term. It is reasonable to define the term because the rules distinguish between combustible and flammable liquids. The regulated community needs to know the difference between the two. The amendment is equivalent to 40 CFR § 266.43.

Minn. Rules pt. 7045.0020, subp. 21a is added to provide a definition for the term "EPA identification number." An EPA identification number is a number assigned by the EPA to each hazardous waste generator, transporter and treatment, storage and disposal facility. The number is owner and site specific. It is reasonable to define EPA identification number because it is used throughout the hazardous waste rules and is required for anyone who generates, transports, stores, treats or disposes of hazardous waste.

Minn. Rules pt. 7045.0020, subp. 24b is added to provide a definition for the term "flammable liquid." A flammable liquid is being defined as any liquid exhibiting a flash point below 100 degrees Fahrenheit. The rules reference 49 CFR § 173.115 which provides more detail regarding the criteria of this term. It is reasonable to define the term in the rules so that the regulated community knows the difference between flammable and combustible liquids.

Minn. Rules pt. 7045.0020, subp. 34a is added to define "hazardous waste fuel." Hazardous waste fuel is being defined as any hazardous waste that is burned for energy recovery and includes any fuel that is produced from

hazardous waste by processing, blending, or other treatment, except for those blended fuels as described in Minn. Rules pt. 7045.0102, subp. 3. The new amendments to the hazardous waste rules place additional administrative requirements on hazardous wastes that are being burned as fuels. These requirements are different from the requirements placed on hazardous wastes that are merely being destroyed by burning. Depending on what type of hazardous waste is blended with used oil, the language in Minn. Rules pt. 7045.0102, subp. 3 could also apply. It is necessary to differentiate between hazardous waste that is being destroyed and hazardous waste that is being burned for energy recovery. This amendment is equivalent to 40 CFR § 266.30(a).

Minn. Rules pt. 7045.0020, subp. 40a is added to provide a definition for "incidental burner." The definition for an incidental burner is a person who burns used oil fuel for purposes of processing other used oil, or treating other used oil to produce used oil fuel for marketing. These persons are considered to be incidentally burning used oil for further processing of other used oil. It is reasonable to include this definition because these incidental burners are not subject to the requirements for burners of used oil fuel. Therefore, it is necessary for the regulated community to understand the differences between an incidental burner and a burner (see subpart 6c). This amendment is equivalent to 40 CFR § 266.43.

Minn. Rules pt. 7045.0020, subp. 55b provides a definition of the word "marketer." It is being amended to clarify the definition. The existing definition of marketer is very similar to the amended version but is more limited in scope. The existing definition of a marketer is a person who, for the purpose of burning for energy recovery, processes, blends, or distributes waste oil, used oil, or hazardous waste. "Marketer" includes a generator who

processes, distributes, or blends such fuel and provides it directly to a person who burns it. The federal regulations published on November 29, 1985, expanded the definition of marketer. Hence, the current definition of marketer is being amended to remain consistent with the EPA's regulations by including more details in order to more clearly understand who is a marketer. The amended definition of a "marketer" is a generator who markets hazardous waste fuel or used oil fuel directly to a burner; a person who receives hazardous waste or used oil from generators and produces, processes, or blends hazardous waste fuel from these hazardous wastes, or blends used oil from these oils; a person who distributes but does not process or blend hazardous waste fuel or used oil; and a person who sends blended or processed used oils to brokers or other intermediaries. These fuels are further processed or sold to other marketers or burners. It is reasonable to expand the existing definition of a marketer in order to provide a clearer definition of who is classified as a marketer. Since marketers are key players in used oil fuel and hazardous waste fuel management, it is necessary to define who these persons are. The amendment is equivalent to 40 CFR § 266.34 and 266.43.

Minn. Rules pt. 7045.0020, subp. 58a is a new definition for "mixed municipal solid waste." This definition incorporates an existing statutory definition found in Minn. Stat. § 115A.03, subd. 21. Because this term is mentioned in the rule, it is reasonable to include its definition so that the regulated community understands what is included in this type of waste.

Minn. Rules pt. 7045.0020, subp. 59b is a new definition for "off-specification used oil." Off-specification used oil is defined as any used oil fuel that exceeds any of the established specification levels for arsenic, cadmium, chromium, lead, total halogens, or has a flash point less than 100 degrees Fahrenheit. Used oil that meets all of the specified levels

is not subject to the same regulations that are placed upon off-specification used oil. Therefore, it is reasonable to define this term in order for persons managing used oil to understand the differences between on-specification used oil and off-specification used oil. The amendment is equivalent to 40 CFR § 266.40(b).

Minn. Rules pt. 7045.0020, subp. 60a is a definition for the term "on-specification used oil." On-specification used oil is defined as used oil fuel that does not exceed the specification levels for the constituents in subpart 59b (off-specification used oil) and has a flash point equal to or greater than 100 degrees Fahrenheit. Less stringent marketer and burner requirements are imposed for the management of on-specification used oil than are imposed for the management of off-specification used oil fuel; therefore, it is reasonable to differentiate between the two terms.

Minn. Rules pt. 7045.0020, subp. 100b is a definition for the term "used oil fuel." Used oil fuel is defined as used oil that is burned for energy recovery. It includes any fuel produced from used oil by processing, blending, or other treatment, except as Minn. Rules pt. 7045.0102, subp. 3 describes. Again, depending on what is blended with used oil, the language in Minn. Rules pt. 7045.0102 clearly dictates how mixtures of used oil are regulated. Used oil fuel is an integral part of the used oil management system and, therefore, it is reasonable to define it so the regulated community understands what requirements are placed on used oil fuel. The amendment is equivalent to 40 CFR § 266.40 (b).

C. Minn. Rules Pt. 7045.0100 Classification of Certain Wastes; Scope.

Minn. Rules pt. 7045.0100 currently is an introductory rule that gives direction to where discussions of mixtures of hazardous and nonhazardous wastes and exempt wastes are located in the rules. The Agency is proposing to repeal

this entire part because this direction is provided in Minn. Rules pts. 7045.0102, (New title: Mixtures of wastes) and 7045.0120 (Exempt wastes) and is not necessary here. Therefore, it is reasonable to repeal this part.

D. Minn. Rules Pt. 7045.0102 Mixtures of Wastes.

The Agency is proposing to restructure Minn. Rules pt. 7045.0102 to accommodate the new provisions for hazardous waste and used oil burned for energy recovery. (See new Minn. Rules pts. 7045.0692 and 7045.0695). Thus, the existing title of "Mixtures of Hazardous and Nonhazardous wastes" is no longer appropriate and is being changed to "Mixtures of Waste." The rules then do not classify used oil as either hazardous or nonhazardous, which is consistent with federal regulations.

The first paragraph has been designated as a new subpart 1 and addresses the scope of this part. The existing language has been changed to reflect the proposed additions and revisions to this part. It is reasonable to reorganize Minn. Rules pt. 7045.0102 in order to provide new provisions specific to mixtures of used oil and hazardous waste. It is reasonable to make these changes so that the regulated community will understand how mixtures of these fuels are regulated.

The existing reference to "parts 7045.0125, subpart 10," in subpart 1 is being deleted from Minn. Rules pt. 7045.0102. This language was originally incorporated into the hazardous waste rules when the Agency incorporated the federal provisions of HSWA. The Agency believes at this time that it was inappropriate to reference this provision and is now correcting the original error. The existing Minn. Rules pt. 7045.0125, subp. 10 discusses hazardous waste which is beneficially used by burning. Mixtures of hazardous waste are not discussed in this subpart. Therefore, it is reasonable to delete this reference in Minn. Rules pt. 7045.0102.

Existing Items A to G are being placed into a new subpart 2, entitled "Mixtures of hazardous and nonhazardous wastes", and remain unchanged.

An entirely new subpart 3 is added to incorporate provisions specific to mixtures of used oil and hazardous waste. It is entitled "Mixtures of used oil and hazardous waste." Items A and B address used oil and hazardous waste that are intentionally mixed together. Item A of subpart 3 provides that used oil mixed with a hazardous waste exhibiting any of the characteristics of hazardous waste (e.g., ignitability, oxidativity, corrosivity, reactivity, toxicity, and extraction procedure (EP) toxicity) (Minn. Rules pt. 7045.0131, subp. 2 to 7) is regulated as hazardous waste. If the mixture is burned for energy recovery, it is regulated as a hazardous waste fuel under Minn. Rules pt. 7045.0692, provided the mixture continues to exhibit any of those characteristics. If the mixture no longer exhibits any of those characteristics and is burned for energy recovery, it is regulated as used oil fuel under Minn. Rules pt. 7045.0695. Mixtures that no longer exhibit any characteristic and are recycled in some other manner than burning for energy recovery, are not subject to the hazardous waste rules. For example, the oil may be recycled by sending it to a re-refinery to be processed into lubrication oil. Such oils are excluded from further regulation.

Intentionally mixed hazardous waste and used oil is regulated differently from used oil that is contaminated with a hazardous waste merely through its use (see discussion of Minn. Rules pt. 7045.0695). Item B of subpart 3 provides that used oil mixed with hazardous waste listed in Minn. Rules pt. 7045.0135 is a hazardous waste and, if it is to be burned for energy recovery, it is regulated as a hazardous waste fuel under Minn. Rules pt. 7045.0692. It is reasonable to regulate generators of intentionally mixed hazardous waste and oil more stringently because there is a much greater risk

of error or spills occurring during intentional mixing than during mixing which occurs through normal use. Placing the more stringent requirements applicable to hazardous waste fuel on a person mixing used oil and listed hazardous waste is reasonable since it ensures control over the management of these mixtures.

E. Minn. Rules Pt. 7045.0120 Exempt Wastes.

Minn. Rules pt. 7045.0120 identifies certain wastes that are exempt from regulation under the hazardous waste rules. Existing item M is being repealed and the substance of the item is recodified in Minn. Rules pt. 7045.0125. As a result of this change, existing items N, O, P and Q are being labeled as M, N, O and P, respectively.

F. Minn. Rules Pt. 7045.0125 Management of Waste by Use, Reuse, Recycling, and Reclamation.

Minn. Rules pt. 7045.0125 establishes specific requirements for the management of hazardous waste which is recycled or reused.

Minn. Rules pt. 7045.0125, subp. 1 states the purpose of Minn. Rules pt. 7045.0125 and lists specific items that are not regulated under the part. The Agency is proposing to add management requirements for used oil to this part and therefore is amending subpart 1 to reflect this. This part will regulate hazardous waste as well as used oil that is to be recycled. This is reasonable because used oil is not classified as a hazardous waste unless it is mixed with a listed hazardous waste or is improperly managed by not being recycled.

Minn. Rules pt. 7045.0125, subp. 1 is also being amended to indicate that the part does not apply to hazardous waste fuel being burned for energy recovery, or used oil fuel being burned for energy recovery. This is reasonable since each of these activities is addressed in a separate part setting forth specific requirements.

Minn. Rules pt. 7045.0125, subp. 3a is being added to establish management requirements for used oil. Item A establishes a provision for used oil that is recycled in some other manner than being burned for energy recovery. Used oil that is recycled in some other manner is not subject to the requirements of the hazardous waste rules. This is reasonable because used oil that is appropriately recycled does not pose the same threat to the environment and human health as oil that is merely disposed.

Minn. Rules pt. 7045.0125, subp. 3a, item B provides stringent requirements for used oil that is not recycled. This oil is regulated as a hazardous waste and is subject to the applicable requirements of Minn. Rules pts. 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380. It is reasonable to apply these stringent requirements on used oil that is not reused or recycled because it not only helps promote proper recycling of used oil but also protects the ground water and soil from being contaminated.

Minn. Rules pt. 7045.0125, subp. 3a, item C specifies where used oil that is burned for energy recovery and where mixtures of used oil and hazardous waste are further regulated. It is reasonable to reference other locations in the rules where used oil is also regulated, as clarification for the reader.

Minn. Rules pt. 7045.0125, subp. 4 sets forth a list of hazardous wastes that are not subject to the generator, transporter and facility standards of chapter 7045. Because the Agency is adding two new parts (Minn. Rules pts. 7045.0692 and 7045.0695) the language in the first paragraph must be amended to reflect the addition. It is reasonable to make this amendment in order to be consistent with the intent of the original language.

Minn. Rules pt. 7045.0125, subp. 4, items D to J are added to exclude from regulation certain hazardous waste derived fuels produced from the normal petroleum refining, processing and transportation practices. These include

fuels produced from refining of indigenous, oil-bearing hazardous wastes at a petroleum refining facility. For these wastes to be exempt, they must be inserted into a part of the process designed to remove contaminants in the normal operation of the refining process or must meet certain specifications that have been established for processed used oil. The reasonableness for each exemption is discussed below.

Item D exempts fuels produced from the refining of oil-bearing hazardous wastes along with the normal process streams at a petroleum refining facility if the wastes result from normal petroleum refining, production, and transportation practices. This is reasonable if the waste is reintroduced back into the petroleum refinery at a point in the process where contaminants are removed through the normal operation of the refining process. The resulting fuel is no more contaminated than the fuels that are produced from refining crude oil. This is equivalent to the federal exemption located at 40 CFR § 261.6 (a)(3)(v).

Item E exempts oil that is reclaimed from hazardous wastes that are generated from normal petroleum refining, production, and transportation practices, that is to be refined along with normal process streams at a petroleum refining facility. The recovered oil is usually returned to the refining process as a substitute for crude oil but can also be burned directly as a fuel.

Reclaimed oil is exempted at this time because EPA believes that recovered oil needs to be studied further to determine the composition of the resulting oils in relation to the composition of virgin fuels, the particular means of oil recovery from these wastes, and the circumstances under which the oil might not be considered to be a waste. EPA will study this further and may issue additional regulations at a future date. It is reasonable to adopt a

position consistent with EPA pending its future determination regarding reclaimed oil. The proposed exemption is equivalent to the federal exemption located at 40 CFR § 261.6 (a)(3)(vi).

Item F exempts coke and coal tar from the iron and steel industry that contain EPA Hazardous Waste No. K087 listed under Minn. Rules pt. 7045.0135, subp. 3, item L, subitem (2) (decanter tank tar sludge from coking operations) from the iron and steel production process. Decanter tank tar sludge is generated during the recovery of a coal tar by-product produced during the production of coke from coal. The sludge is listed as hazardous waste because of high levels (approximately 1%) of phenol and naphthalene. The sludge is frequently recycled by mixing it with coal before it is charged to a coke oven to produce coke. The coke product is typically used as a fuel in steel blast furnaces. In addition, the sludge is sometimes mixed back into the coal tar by-product which is also frequently used as a fuel.

The sludge is mixed with coal before it is charged to the coke oven and the hazardous constituents in the sludge (phenol and napthalene) are driven off during the coking process along with other volatile compounds formed by the thermal cracking of organic compounds in the coal. These volatile compounds are condensed to recover a coal tar by-product. The tar decanter sludge is produced during recovery of the coal tar and consists of coal tar and inert carbonaceous material carried over from the coking operation. Data indicate that phenol and napthalene are not detectable in the coke where tar decanter sludge is recycled. (American Iron and Steel Institute and Koppers Company, Inc., November 29, 1985, Federal Register, page 49171.) Therefore, it is reasonable to exempt tar decanter sludge which is recycled in the coking process since phenol and napthalene are not present at levels that would pose a

risk to human health and the environment. This is equivalent to the exemption located at 40 CFR § 261.6(a)(3)(vii).

Item G exempts hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from the hazardous wastes, where the hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil, if the resulting fuel meets the used oil specifications under Minn. Rules pt. 7045.0695, subp. 1, item B, subitem (1), and no other hazardous wastes are used to produce the hazardous waste fuel. As stated in the explanation for item D, in order for fuels produced from the refining of oil-bearing hazardous wastes to be exempt they must be inserted back into the refining process where contaminants are removed in the normal process streams. This normally would be prior to the distillation and cracking processes.

This exemption describes fuel that is produced from hazardous wastes that are not reintroduced into a process that removes contaminants in the normal process streams of the refining process and also takes into account fuels that are not produced from crude oil. In order for these fuels to remain exempt, no additional hazardous wastes can be introduced into the process that produces hazardous waste fuels and such fuels must meet the same specifications as the ones applied to fuels produced from processing used oil, a very similar operation. The specifications are intended to provide protection under virtually all burning circumstances. Specifications have been determined for the constituents arsenic, cadmium, chromium, and lead; and a flash point and a level for total halogens has been established. This exemption is reasonable since it will insure that resulting fuels will pose no greater environmental

hazards than virgin fuels. This is equivalent to the exemption located at 40 CFR § 261.6 (a)(3)(viii)(A).

Item H exempts hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining, production, and transportation practices, where the hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, if the fuel meets the used oil fuel specifications under Minn. Rules pt. 7045.0695, subp. 1, item B, subitem (1). This exemption is reasonable for the same reasons stated under item G. This is equivalent to the exemption located at 40 CFR § 261.6 (a)(3)(viii)(B).

Item I exempts oil that is reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, and is burned as a fuel without reintroduction to a refining process, if the reclaimed oil meets the used oil fuel specifications under Minn. Rules pt. 7045.0695, subp. 1, item B, subitem (1). This exemption is reasonable if the fuel meets the used oil fuel specifications because the fuel will pose no greater threat to human health and the environment than if virgin oil is burned in its place. This is equivalent to the exemption located at 40 CFR § 261.6(a)(3)(viii)(C).

Item J exempts petroleum coke produced from petroleum refinery hazardous wastes containing oil at the same facility at which the wastes were generated, unless the resulting coke product exhibits one or more of the characteristics of hazardous waste in Minn. Rules pt. 7045.0131. If the end coke product exhibits a hazardous characteristic, it is considered to be a hazardous waste and must be managed in compliance with the hazardous waste rules. The rule is reasonable because it requires that a product with the same potential for harm as a characteristic hazardous waste be managed so as to prevent any harm. This is equivalent to the exemption located at 40 CFR § 261.6(a)(3)(ix).

Minn. Rules pt. 7045.0125, subp. 5 is being amended to correct two technical errors. Item A currently states that "wastes that are utilized in a manner specified in subitems 1 to 3, are not subject to regulation under parts 7045.0205 to 7045.0685." This reference was intended to provide an exclusion from all of the requirements of the hazardous waste rules that followed Minn. Rules pt. 7045.0205. However, in 1988 the hazardous waste rules were amended to incorporate federal land disposal restrictions. These amendments added new rules to chapter 7045. Whereas chapter 7045 previously covered Minn. Rules pts. 7045.0020 to 7045.0685, the land disposal restriction amendments extended chapter 7045 to include Minn. Rules pts. 7045.1300 to 7045.1380. At the time of the land disposal restriction amendments, the Agency failed to make the necessary correction to this reference in Minn. Rules pt. 7045.0125 and is at this time changing this part to accurately reflect the current extent of chapter 7045.

Second, subpart 5 is unclear in the way it refers to rule titles and parts. Subpart 5 currently states that it "does not apply to wastes being accumulated speculatively as defined in Minn. Rules pt. 7045.0020, or being managed by use constituting disposal, or burning for energy recovery as regulated under part 7045.0665, or subpart 10." Subpart 5 is being amended to clarify that the reference to Minn. Rules pt. 7045.0665, which regulates use constituting disposal, is separate from a reference to subpart 10, which previously regulated burning for energy recovery and which is being renumbered in this rulemaking. Minn. Rules pt. 7045.0665 will be moved to correspond to the provision it addresses, use constituting disposal. Similarly, Minn. Rules pt. 7045.0125, subp. 6 also references Minn. Rules pt. 7045.0125, subp. 10, beneficial use by burning. Minn. Rules pt. 7045.0125, subp. 10 is being

assimilated into the new Minn. Rules pt. 7045.0692 and therefore amending the reference to the new location of the provisions is reasonable.

Minn. Rules pt. 7045.0125, subp. 7 provides that unless the activities of generators of hazardous waste destined for recycling fall within the provisions of Minn. Rules pts. 7045.0125, subps. 4, 5, 6, or 10, they are subject to all generator requirements of Minn. Rules pts. 7045.0205 to 7045.0304. A reference to the new subpart 3a is being added to Minn. Rules pt. 7045.0125, subp. 7. The new Minn. Rules pt. 7045.0125, subp. 3a establishes management requirements for used oil and is appropriately placed in this subpart to reflect further requirements for recycling under this provision. This is reasonable because the requirements of subpart 3a are very specific for used oil management. If a generator complies with the requirements set forth in subpart 3a, it is not necessary to comply with the additional requirements of Minn. Rules pts. 7045.0205 to 7045.0304.

A reference to the new Minn. Rules pt. 7045.0695 is also being added to subpart 7. Minn. Rules pt. 7045.0695 discusses requirements for persons who generate, market, or burn used oil as a fuel. Used oil generators who meet the provisions of the used oil fuel requirements located in Minn. Rules pt. 7045.0695, do not need to comply with the requirements of Minn. Rules pts. 7045.0205 to 7045.0304. This is reasonable for the same reasons discussed above in regard to used oil management in Minn. Rules pt. 7045.0125, subp. 3a.

Minn. Rules pt. 7045.0125, subp. 8 provides that unless the activities of transporters of hazardous waste destined for recycling fall within the provisions of Minn. Rules pt. 7045.0125, subps. 4, 5, 6, or 10, they are subject to all requirements for hazardous waste transporters. Subpart 3a and Minn. Rules pt. 7045.0695 are being added to the existing language for the same reasons as described in the discussion of Minn. Rules pt. 7045.0125, subp. 7.

The references to Minn. Rules pt. 7045.0125, subp. 10 located in subparts 7 and 8 are being deleted from those subparts because the existing subpart 10 does not discuss additional generator (subpart 7) or transporter (subpart 8) activities. It is reasonable to delete existing references to subpart 10 because the provisions do not apply to subparts 7 and 8.

Minn. Rules pt. 7045.0125, subp. 9 sets forth the requirements for owners or operators of facilities that recycle hazardous waste when the waste does not meet the criteria of subparts 4, 5, 6, or 10 of Minn. Rules pt. 7045.0125. Subpart 3a is being added to the existing language and Minn. Rules pt. 7045.0695 is being added for the same reasons as described in the discussion of Minn. Rules pt. 7045.0125, subp. 7.

Minn. Rules pt. 7045.0125, subp. 10 is being repealed. The existing requirements in subp. 10 are being assimilated into Minn. Rules pt. 7045.0692. The existing subpart 10 provides requirements for beneficial use of a hazardous waste by burning. Items A, B, and C, subitem (1) of subpart 10 are being relocated to Minn. Rules pt. 7045.0692, but items C, subitem (2) and D of subpart 10 are superseded by the federal requirements and will not be included in Minn. Rules pt. 7045.0692. Minn. Rules pt. 7045.0692 has been created because of the extensive regulations that are being imposed in this rulemaking. All existing references to Minn. Rules pt. 7045.0125, subp. 10 in subps. 5, 6, and 9 are therefore reasonably changed to reference Minn. Rules pt. 7045.0692.

Discussion of the changes to Minn. Rules pt. 7045.0125, subp. 10, items A, B, and C is provided as part of the discussion of Minn. Rules pt. 7045.0692.

Minn. Rules pt. 7045.0125, subp. 11 is being repealed. The existing subpart 11 provides certain exceptions from the labeling requirements for fuels produced from hazardous wastes indigenous to refining operations. The labeling requirements have been superseded by the November 29, 1985, federal hazardous

waste fuel requirements. The effect of the supersedure is that the exemption no longer applies. It is reasonable, therefore, to repeal the exception.

G. Minn. Rules Pt. 7045.0214 Evaluation of Wastes.

Minn. Rules pt. 7045.0214, subp. 3, item C is being amended to reflect the incorporation of the existing Minn. Rules pt. 7045.0125, subp. 10 into Minn. Rules pt. 7045.0692. This is reasonable since subpart 10 is being repealed and the existing requirements of subpart 10 are now located in Minn. Rules pt. 7045.0692.

Minn. Rules pt. 7045.0214, subp. 3 discusses wastes generated by treatment, storage, or disposal. The existing item A provides an exception for the wastes identified in items B and C. The new item D states "wastes from burning any of the materials exempted from regulation by part 7045.0125, subpart 4, items D to J, are not hazardous wastes." The reasonableness of these exclusions are discussed in this document at Minn. Rules pt. 7045.0125, subp. 4, items D to J. It is reasonable to provide a reference to these excluded wastes at this point in the rules to identify the fact that they are also not subject to the requirement to evaluate for hazardousness.

H. Minn. Rules Pt. 7045.0219 Special Requirements for Small Quantity Generators of Hazardous Waste.

Minn. Rules pt. 7045.0219, subp. 1 is being amended to include the female gender as being a generator. This is reasonable because Minnesota's rulemaking convention, as implemented by the Revisor of Statutes, requires that rules be neutral as to gender.

Minn. Rules pt. 7045.0219, subp. 4 is being amended by deleting the words "set forth." This phrase is redundant in the context that it is used. The meaning of the sentence is not affected by deleting this phrase and therefore the change is reasonable.

Minn. Rules pt. 7045.0219, subp. 4 provides on-site accumulation requirements for small quantity generators of hazardous waste. Item A lists provisions for two groups of small quantity generators that apply to waste not listed as acute hazardous waste. Subitem (1) describes provisions for small quantity generators who in a calendar month generate at least 100 kilograms of waste and subitem (2) describes requirements for small quantity generators who in a calendar month generate less than 100 kilograms of waste.

Minn. Rules pt. 7045.0219, subp. 4, item A, subitem (1) is amended by adding an additional requirement to the existing language. The added provision states, "If the small quantity generators regulated under this subitem mix used oil with hazardous waste, they must meet the requirements under part 7045.0102, subpart 3." As amended in Minn. Rules pt. 7045.0102, subp. 3 establishes requirements applicable to persons who mix used oil and hazardous waste. Subitem (2) is amended by adding references to the rules applicable to these generators who also mix used oil and hazardous waste together. It is reasonable to provide reference to the rules where mixtures of used oil and hazardous waste are further regulated to clarify the regulations applicable to generators who mix used oil and hazardous waste.

Minn. Rules pt. 7045.0219, subp. 5 establishes management requirements for small quantity generators. Item A lists the specific parts of chapter 7045 with which a small quantity generator must comply. Item A is amended to include the applicable parts of Minn. Rules pts. 7045.0692 and 7045.0695 in a new subitem (8). Minn. Rules pt. 7045.0692 contains the new hazardous waste fuel requirements and Minn. Rules pt. 7045.0695 contains the new used oil fuel requirements. It is reasonable to include in item A a reference to the new additional requirements set forth in this rulemaking.

Minn. Rules pt. 7045.0219, subp. 6 currently sets forth requirements for small quantity generators who mix hazardous waste with nonhazardous waste. The existing subpart 6 is being amended to incorporate additional requirements for mixing hazardous waste with used oil. A new item A incorporates most of the existing language and discusses mixing hazardous waste with nonhazardous waste. A new item B provides requirements for mixing ignitable hazardous waste with used oil, and a new item C refers small quantity generators to another part of chapter 7045 for further regulation for mixtures that do not fall under the criteria set forth in item B.

The existing language in subpart 6 is being modified to accommodate the addition of items A, B and C. The existing language referring to mixing nonhazardous waste with hazardous waste is being incorporated into a new item A. The restructured language in item A is amended to designate that "hazardous waste" may be mixed with nonhazardous waste and be subject to the reduced requirements of this rule. The statement is made clearer with the addition of the words "hazardous waste" and is therefore reasonably amended. The new item A also states, "Hazardous waste may be mixed with nonhazardous waste pursuant to Minn. Rules pt. 7045.0102 and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified." The existing statement merely states, "quantity limitations" and does not specify what kind of limitations are being referred to. This is unclear. Therefore, the existing language is amended by specifying the type of limitations as being generation and accumulation limitations. With this addition, there is no longer a need to interpret what type of "quantity limitations" were meant by the existing language and it is therefore reasonable to amend the rule.

Minn. Rules 7045.0219, subp. 6, item B is being added to subpart 6. This new item sets forth criteria that must be met in order for waste that is hazardous solely for the characteristic of ignitability to be mixed with used oil and still have the mixture be regulated under the less stringent requirements of the used oil fuel requirements. Hazardous waste that is mixed with used oil can only exhibit the characteristic of ignitability and must meet the following conditions: (1) the waste must be generated by a small quantity generator who in a calendar month generates a total of less than 100 kilograms of hazardous waste; (2) the ignitable waste must have a flash point of 100 degrees Fahrenheit or greater, must not be a metal bearing paint waste or gasoline; and (3) the concentration of ignitable waste in the used oil must not exceed ten percent by volume.

The characteristic hazardous wastes identified in Minn. Rules ch. 7045 are ignitability, corrosivity, reactivity, oxidativity, Extraction Procedure (EP) toxicity, and toxicity. The provision in subpart 6, item B limits the type of characteristic hazardous waste allowed to be mixed, to waste exhibiting the characteristic of ignitability. Hazardous wastes that exhibit the characteristic of ignitability are wastes that have the ability and readiness to burn under certain conditions. These wastes have flash points less than 60 degrees Celsius (140 degrees Fahrenheit) and can be used as a substitute for other more common fuels, such as natural gas or fuel oil, because they aid the combustion process in burning devices. The most common disposal method for ignitable hazardous waste is disposal by burning at acceptable waste management facilities. It is reasonable to limit the type of waste allowed to be mixed with used oil fuel to ignitable-only hazardous waste because if it is used as a fuel supplement, it is an acceptable method of "recycling." When limited in quantity, the burning of ignitable-only hazardous wastes pose no greater risk

to persons and the environment than would the burning of other virgin fuels. Hazardous wastes displaying other hazardous characteristics are treated differently for disposal than ignitable hazardous waste. For example, a waste that exhibits the characteristic of corrosivity could not be reasonably treated by burning and should instead be treated by neutralization.

It is necessary to place certain controls on the management of mixing ignitable hazardous waste with used oil. By placing the provisions of subpart 6, item B, subitems (1), (2), and (3) on generators of used oil and ignitable hazardous waste, the people who pick up the used oil and market and burn it will be assured that the used oil they handle does not exhibit a characteristic of ignitability. The reasoning for each subitem is discussed below.

Minn. Rules pt. 7045.0219, subp. 6, item B, subitem (1), states, "the ignitable waste is generated by a small quantity generator who in a calendar month generates less than 100 kilograms of hazardous waste." Persons who generate less than 100 kilograms (approximately one half of a 55 gallon drum) per month of ignitable hazardous waste and used oil at the same location are being allowed to mix used oil and ignitable hazardous waste. These are the generators who are conditionally exempted under the federal regulations. They can mix any quantity of hazardous waste with used oil and the mixture is regulated as a used oil fuel. The existing state rules are more stringent by regulating this size of generator, but allow mixing to occur if specific criteria are met for these very small generators. Allowing this provision in subitem (1) is reasonable because the quantity of waste that is generated is so small that many times generators have difficulty obtaining the services of hazardous waste transporters, and if they do, the cost is prohibitively expensive. The difficulty of managing such small quantities encourages improper disposal of ignitable hazardous waste by such means as dumping it on

the ground, down the sewer or mixing it with used oil in unsafe quantities. The addition of unsafe quantities could lower the flash point of a quantity of used oil causing the mixture to be unsafe if not properly managed. This could cause a very "explosive" situation. Allowing generators who generate less than 100 kilograms per month to mix ignitable hazardous waste with used oil is reasonable since: (1) the waste generated is a very small quantity; (2) the mixture is ultimately burned for energy recovery, which is an acceptable recycling method; (3) if the waste meets the additional criteria of subitems (2) and (3), the waste poses no additional hazards that may be of concern when burned; (4) this is an economically feasible method of disposal for this size of generator; and (5) it attempts to eliminate improper disposal of ignitable wastes.

Minn. Rules pt. 7045.0219, subp. 6, item B, subitem (2) provides the second condition for small quantity generators who mix ignitable hazardous waste with used oil. It states that ignitable waste shall not be a metal bearing paint waste, or gasoline, and it must have a flash point of 100 degrees Fahrenheit or greater.

Some paints contain heavy metals such as chromium, cadmium, mercury and lead as ingredients. Solvents are frequently used to clean equipment and the surrounding areas where this type of paint has been used, which then causes the solvent waste to be contaminated with heavy metals. Certain heavy metals are known to cause harm to human health and the environment and, depending on the concentration of contaminant, are considered to exhibit the characteristic of Extraction Procedure (EP) Toxicity. Used oil that has been deliberately mixed with heavy metals and as a result exhibits the characteristic of Extraction Procedure Toxicity, is classified as a hazardous waste. Heavy metals are not destroyed by the burning process. They are only transferred to a different

media, either as air emissions or contaminants in the ash. Therefore, it is reasonable to limit the type of ignitable hazardous waste that can be mixed with used oil to that waste which does not exhibit the characteristic of Extraction Procedure Toxicity.

Subitem (2) also excludes gasoline from being added to used oil. Gasoline is an extremely ignitable hazardous substance (less than 100 degrees Fahrenheit) and if not handled properly can be extremely hazardous. Ignitable hazardous waste is waste that has a flash point less than 140 degrees Fahrenheit. Small quantity generators can only mix ignitable hazardous waste that has a flash point of 100 degrees Fahrenheit or greater. The most common ignitable solvents that are used by small quantity generators who also generate used oil are mineral spirits and stoddard solvents. These are typically used in parts washers to clean parts of engines. The majority of these solvents have a flash point greater than 100 degrees Fahrenheit. There is a concern that mixing wastes with lower flash points could result in a high risk of ignition. However, the management of ignitable-only hazardous waste would not pose any greater danger of fires or explosions than the handling of commercial fuel oils if the minimum flash point were limited to 100 degrees Fahrenheit. It is, therefore, reasonable to limit the flash point of ignitable hazardous waste to 100 degrees Fahrenheit or greater.

Minn. Rules pt. 7045.0219, subp. 6, item B, subitem (3) limits the amount of ignitable hazardous waste that can be mixed with used oil. The entire mixture of used oil/ignitable hazardous waste cannot contain greater than ten percent ignitable hazardous waste.

The Agency has collected a limited amount of data on mixtures of used oil and stoddard solvent that ignites at 100-105 degrees Fahrenheit (exhibit 5). The data indicate that used oil mixed with 32% ignitable solvent exhibits a

flash point of 140 degrees Fahrenheit. A mixture of 20% ignitable stoddard solvent and used oil exhibits a flash point of 165 degrees Fahrenheit. A mixture of 10% ignitable stoddard solvent and used oil exhibits a flash point of 260 degrees Fahrenheit. Because of the limited data available, the Agency has taken a very conservative approach by allowing 10% ignitable hazardous waste to be mixed with used oil. As stated above, the flash point of a mixture of 10% ignitable stoddard solvent and used oil is well above the level of 140 degrees Fahrenheit, the level at which a waste becomes characteristically ignitable. If a generator meets all of the conditions in item B, the generator is not required to conduct an analysis of the mixture to prove that the mixture does not exhibit the characteristic of ignitability. A mixture that actually does exhibit the characteristic of ignitability is a hazardous waste and must be managed as a hazardous waste or as a hazardous waste fuel.

The Agency believes that allowing mixtures of up to 10% ignitable hazardous waste is a fair alternative to an outright prohibition of mixing for this category of generators. The Agency also knows that used oil can be mixed with stoddard solvent in larger amounts and not exhibit the characteristic of ignitability and this is why item C is being added to subpart 6. Item B exists in the rule merely to allow the mixing of certain wastes without requiring testing of the mixture to prove that it does not exhibit the characteristic of ignitability. The provision in subitem (3) is based on the most current available information, and the Agency believes this is a reasonable management approach for persons who generate less than 100 kilograms of hazardous waste.

Minn. Rules pt. 7045.0219, subp. 6, item C is added to subp. 6. Item C refers small quantity generators to Minn. Rules pt. 7045.0102, subp. 3 if the criteria in Minn. Rules pt. 7045.0219, subp. 6, item B is not met. Minn. Rules pt. 7045.0102, subp. 3 regulates mixing used oil and hazardous waste. Mixtures

of used oil and hazardous waste that do not meet the criteria in item B may or may not be hazardous, and since Minn. Rules pt. 7045.0102, subp. 3 regulates mixing used oil and hazardous waste, subpart 6 is therefore reasonably amended.

I. Minn. Rules Pt. 7045.0665 Use Constituting Disposal.

Minn. Rules pt. 7045.0665 applies to hazardous wastes that are used in a manner constituting disposal. This applies to the application or placement of recyclable wastes in or on the land. Subpart 1a is being added to address the application of used oil, waste oil, hazardous waste, and mixtures of hazardous waste in or on the land, for use as a dust suppressant or for use as a road treatment. Item A states that waste oil, used oil, hazardous waste, and mixtures of hazardous waste and other material, waste oil, or used oil may not be placed in mixed municipal solid waste or applied as a dust suppressant or used for road treatment. Item B states that a person may not otherwise place used oil in or on the land, unless approved by the Commissioner (of the Agency). It also states that the application of used oil in or on the land shall only be approved in the case of an accidental oil spill.

On July 15, 1985, the EPA published regulations in response to the HSWA. A provision in this federal regulation prohibits used oil, waste oil or other material mixed with hazardous waste from being used as a dust suppressant or for road treatment. Subpart 1a incorporates this federal provision along with a state statutory provision (Minn. Stat. § 115A.916) which bans used oil from being placed in mixed municipal solid waste or from being applied in or on the land, unless approved by the Agency. The statute was adopted in 1988 to protect the environment and human health from the harmful components of used oil, and to help encourage the recycling of this valuable resource.

Applying used oil, waste oil, or other material contaminated with hazardous waste for use as a dust suppressant or used for road treatment is an

inappropriate use and disposal method for hazardous waste mixed with oil. It is therefore reasonable to prohibit this activity in order to promote proper disposal or recycling, such as burning the mixture for energy recovery.

The statute states that a person may not otherwise place used oil in or on the land, unless approved by the Commissioner. The new subpart is more specific than the statute by limiting the approval of the application of used oil in or on the land only in the case of an accidental oil spill. Used oil that has been spilled will typically, as a part of a cleanup action, be excavated and thin spread on the ground, thus allowing the oil to decompose much faster than if it is left in place. Improperly managed used oil can contribute to ground water and soil contamination. Therefore, it is reasonable to limit the land application of used oil only to those situations where an accidental spill has occurred. This action will help promote the proper management of used oil and will discourage it from being improperly applied to the land.

Since the new subpart 1a incorporates the federal requirement prohibiting the mixing of hazardous waste with used oil, waste oil, or other material, it is appropriate to also incorporate the state statute that bans used oil from being placed in or on the land in order to include in one location all language referring to improper disposal of used oil.

J. Minn. Rules Pt. 7045.0692 Hazardous Waste Burned for Energy Recovery.

Minn. Rules pt. 7045.0692 and Minn. Rules pt. 7045.0695 set forth requirements for persons who market or burn hazardous waste burned for energy recovery and used oil burned for energy recovery. Burning for energy recovery is different from burning for destruction and it is important to distinguish between the two. Burning for legitimate energy recovery exists when fuels have a BTU level greater than wood (5,000-8,000 Btu/lb). Burning low energy

hazardous waste as alleged fuel is not considered to be burning for legitimate energy recovery, even if the low energy hazardous waste is blended with high energy hazardous materials and then burned. Thus, boilers and furnaces burning low energy waste (i.e., having less than 5,000-8,000 Btu/lb heating value, as generated) could be considered to be incinerating, and would be subject to the requirements for hazardous waste incinerators, which are more stringent than the requirements set forth in the new Minn. Rules pts. 7045.0692 and 7045.0695 for boilers and furnaces.

Minn. Rules pt. 7045.0692 is being added to incorporate the federal requirements addressing hazardous waste burned for energy recovery. Portions of this new part contain existing provisions that have been extracted from Minn. Rules pt. 7045.0125, subp. 10. The existing Minn. Rules pt. 7045.0125, subp. 10 discusses hazardous waste which is beneficially used by burning. Since the new part discusses hazardous waste burned for energy recovery, it is appropriate to incorporate the existing provisions on burning for energy recovery into the new part.

Minn. Rules pt. 7045.0692, subp. 1 discusses the scope of the new part. It applies to hazardous waste that is burned for energy recovery in boilers or industrial furnaces that are not regulated by the thermal treatment standards in Minn. Rules pts. 7045.0542 or 7045.0640. This is reasonable because Minn. Rules pts. 7045.0542 and 7045.0640 regulate boilers and furnaces that are burning hazardous waste in order to destroy the waste. Hazardous waste which is being destroyed is subject to the stricter thermal treatment standards than is waste that is being recycled (burned for energy recovery). This is equivalent to 40 CFR § 266.30 (a).

Minn. Rules pt. 7045.0692, subp. 1, items A to E are exceptions to Minn. Rules pt. 7045.0692. Item A exempts gaseous emissions recovered from hazardous

waste management activities when the gas is burned for energy recovery. This applies to gas recovered from landfills that is ultimately burned for energy recovery in boilers or industrial furnaces. This is equivalent to 40 CFR § 266.30(a).

Minn. Rules pt. 7045.0692, subp. 1, item B exempts used oil that exhibits a characteristic of hazardous waste as identified in Minn. Rules pt. 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste. Used oil itself might be a hazardous waste if it exhibits a characteristic of hazardous waste. The most likely characteristic is ignitability. However, EPA intended that recycled used oil that is a hazardous waste solely because it exhibits a characteristic of hazardous waste be regulated as used oil fuel provided that it is not mixed with a hazardous waste. This is reasonable since used oil may be contaminated with characteristic hazardous waste as a result of its use and, if it is properly recycled, it need not be treated as a hazardous waste. An example of used oil that is contaminated through its use is the gasoline engine. A low flash point in the oil drained from a car may be attributable to benzene, toluene, or xylene that is added to crankcase oil as a result of engine blow-by (these are constituents of gasoline) rather than from a spent solvent. These new regulations are intended to discourage intentionally mixing hazardous waste with used oil. The benefit of handling unadulterated used oil is very clear. Used oil is not subject to the same strict requirements as hazardous waste, thus, it can be more readily marketed and managed. It is also more environmentally safe to handle unadulterated used oil versus hazardous waste mixed with used oil that is managed as used oil. This is equivalent to 40 CFR § 266.30(b)(1).

Minn. Rules pt. 7045.0692, subp. 1, item C exempts certain hazardous waste from Minn. Rules pt. 7045.0692. Specifically, it exempts Minn. Rules pts. 7045.0125, subp. 3a and subp. 4, items D to J from regulation. Minn. Rules pt. 7045.0125, subp. 3a lists management requirements for used oil. Subpart 3a, item A states, "used oil that is recycled in some other manner than burning for energy recovery is not subject to the requirements of parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380." Minn. Rules pt. 7045.0125, subp. 4, items D to J list waste derived fuels that are also exempt from Minn. Rules pts. 7045.0205 to 7045.0695. The reasoning for these exemptions is discussed above in Minn. Rules pt. 7045.0125, subp. 4. It is also reasonable to provide a cross reference in this part in order to alert the regulated community to which wastes are not covered by Minn. Rules pt. 7045.0692. This is equivalent to 40 CFR § 266.30(b)(2).

Item D exempts mixtures of used oil and waste that is hazardous solely for the characteristic of ignitability as identified in Minn. Rules pt. 7045.0131, subp. 2, provided the waste is generated by a person who in a calendar month generates less than 100 kilograms of hazardous waste. This type of mixture is regulated under Minn. Rules pt. 7045.0219, subp. 6, and the exemption is reasonable for the same reasons as discussed in that part. Item D continues by referring persons who generate at least 100 kilograms of hazardous waste and who also mix used oil and hazardous waste to the provisions under Minn. Rules pt. 7045.0102, subp. 3, item A. It is reasonable to refer to the location in the hazardous waste rules where mixtures of used oil and hazardous waste are further regulated for this size generator.

Minn. Rules pt. 7045.0692, subp. 1, item E exempts used oil being burned for energy recovery from Minn. Rules pt. 7045.0692. Used oil burned for energy recovery is regulated in Minn. Rules pt. 7045.0695. Used oil that is

intentionally mixed with a hazardous waste is regulated as a hazardous waste fuel if it is burned for energy recovery. Depending on the situation, used oil and hazardous wastes that are used as fuels are either regulated under Minn. Rules pt. 7045.0692 or Minn. Rules pt. 7045.0695. It is, therefore, appropriate to include a reference to Minn. Rules pt. 7045.0695 in order to call attention to the additional requirements for used oil fuel. This is equivalent to 40 CFR § 266.30(b)(2).

Minn. Rules pt. 7045.0692, subp. 2 lists prohibitions for marketers and burners of hazardous waste fuel. Item A, subitem (1) states that a person may market hazardous waste fuel only to a person who has notified the EPA of his hazardous waste fuel activities and who has an EPA identification number. Item A also states that if the fuel is to be burned, it can only be marketed to persons who burn the fuel in boilers and industrial furnaces identified in item B of this subpart. Notification to EPA of waste activities is necessary because EPA must be able to identify those persons engaged in waste-as-fuel activities in order to ensure that these waste fuels are managed properly and not routed to nonindustrial markets. The special waste-as-fuel notification is mandated under RCRA § 3010(a), as amended. An EPA identification number will be assigned to those facilities subject to RCRA regulation for the first time. Hence, this prohibition exists to ensure proper management of hazardous waste fuels and is reasonably added to this part. This is equivalent to 40 CFR § 266.31(a).

Item A, subitem (2) prohibits burning hazardous waste and off-specification used oil fuel in nonindustrial boilers (e.g., boilers located in apartment and office buildings, schools, hospitals) and only allows burning of such fuels in industrial boilers, utility boilers, and industrial furnaces. This prohibition is directed at nonindustrial boilers because burning hazardous waste fuels in

these types of boilers poses the most significant and immediate health risks. Nonindustrial boilers are typically very small and may not achieve complete combustion of toxic organics because of inadequate controls to maintain optimum combustion conditions when firing fuels the boiler is not designed to burn. Further, virtually no nonindustrial boilers are equipped with metals emissions control equipment. The risks from emissions of incompletely burned toxic organic compounds and toxic metals from nonindustrial boilers is compounded because these boilers are typically located in urban areas where sources are frequently clustered closely together. Thus, emission plumes from numerous sources can overlap and increase ambient concentrations of toxic compounds. Further, individuals can be exposed to high ambient levels of emitted toxicants because the individuals can be located close to the sources of toxicants and exposed to the even higher toxicant levels above-ground, for instance, in an apartment building on the third floor. Hence, this prohibition for burning hazardous waste fuel in nonindustrial combustion devices is reasonably added to Minn. Rules pt. 7045.0692 by identifying which boilers and furnaces can burn hazardous waste fuels in item B of this subpart.

The major purpose of these new regulations is to prohibit burning hazardous waste fuel and used oil fuel in nonindustrial combustion devices. It is less confusing to identify boilers and furnaces that are not subject to the prohibitions than to define nonindustrial boilers subject to the prohibitions. Therefore, item B sets out the devices that are allowed to burn these types of fuels. This is equivalent to 40 CFR § 266.30(a)(2).

Item B of subpart 2 states that hazardous waste fuel may be burned for energy recovery only in industrial furnaces that meet the definition in Minn. Rules pt. 7045.0020, subp. 43a, in boilers as defined in the amended Minn. Rules pt. 7045.0020, subp. 6a, or as provided in Minn. Rules pt. 7045.0075,

subp. 4. Boilers must also meet the criteria in subitems (1) or (2), which are discussed below.

A boiler is defined as an enclosed device using controlled flame combustion and having specific characteristics including: (1) The combustion chamber and primary energy recovery section must be of integral design (e.g., waste heat recovery boilers attached to incinerators are not boilers); (2) thermal energy recovery efficiency must be at least 80%; and (3) at least 75% of recovered energy must be "exported" (i.e., not used for internal uses like preheating of combustion air or fuel, or driving combustion air fans or feedwater pumps). Subitem (1) further defines industrial boilers that burn hazardous waste fuel to be ones which are located on the site of an establishment engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes. Subitem (2) further defines utility boilers to be ones that produce electric power, steam, or heated or cooled air or other gases or fluids for sale. Owners and operators of utility boilers are burners regulated in the same way as owners and operators of industrial boilers. Utility boilers are identified separately only as an indirect means of identifying nonindustrial boilers subject to the prohibitions. This is equivalent to 40 CFR § 266.31(b)(2).

Industrial furnaces are enclosed devices that are integral components of a manufacturing process and use a controlled flame to accomplish recovery of materials or energy. Industrial furnaces include cement kilns, lime kilns, aggregate kilns (which include asphalt kilns), blast furnaces, and smelting, melting and refining furnaces. Owners and operators of industrial furnaces are subject to Minn. Rules pt. 7045.0692 when they burn hazardous waste for energy recovery.

It is reasonable to limit the type of combustion device allowed to burn hazardous waste fuel to those that meet the definitions of industrial boilers and industrial furnaces because these identified units: (1) have more sophisticated air emission control equipment than nonindustrial burning devices; (2) are structured to burn these types of fuels, thus eliminating major maintenance problems which can lead to inadvertent air contamination; and (3) must have a Minnesota air quality emissions permit which regulates air emissions and facility operations. This is equivalent to 40 CFR § 266.31(b)(1).

Item B also references Minn. Rules pt. 7045.0075, subp. 4. This existing provision allows a person to petition the Agency's Commissioner to determine if certain enclosed devices using controlled flame combustion meet the definition of a boiler as defined in Minn. Rules pt. 7045.0020, subp. 6a. Certain combustion devices may meet the definition of a boiler, but are not classified as boilers. It is reasonable to include Minn. Rules pt. 7045.0075, subp. 4 in item B for those persons who wish to burn hazardous waste fuel, but who do not own or operate a boiler that meets the definition of boiler as defined in Minn. Rules pt. 7045.0020, subpart 6a.

Minn. Rules pt. 7045.0692, subp. 2, item C prohibits hazardous waste from being burned in cement kilns, unless the cement kiln fully complies with the thermal treatment standards located in Minn. Rules pt. 7045.0542. This provision has been moved and amended from the existing Minn. Rules pt. 7045.0125, subp. 10, item C. The existing Minn. Rules pt. 7045.0125, subp. 10, item C, subitem (1) has the same meaning as Minn. Rules pt. 7045.0692, subp. 2, item C. The parallel federal requirement in 40 CFR § 266.31 (c) requires the imposition of the thermal treatment standards to cement kilns only within municipalities with populations greater than 500,000. (Thermal treatment of hazardous waste uses elevated temperatures in order to destroy the hazardous

waste.) Although Minnesota does not have any municipalities with populations greater than 500,000 nor does it have a cement plant, the provision for cement kilns is included to maintain consistency with the federal requirements. The proposed state rule, however, is more stringent than the federal rule in that it applies to all cement kilns regardless of the location. It is reasonable to apply the thermal treatment standards without regard to population size in order to protect public health and the environment throughout the state. Such a provision will ensure that if a cement kiln is developed in the state, the same standards will apply regardless of location. This is equivalent to 40 CFR § 266.31(c).

Minn. Rules pt. 7045.0692, subp. 3 establishes standards for generators of hazardous waste fuel. Generators of hazardous waste that is used as a fuel or used to produce a fuel are subject to the requirements of Minn. Rules pts. 7045.0205 to 7045.0304, which are the standards applicable to generators of hazardous waste.

It is reasonable to require generators of hazardous waste that is used as a fuel or is used to produce a fuel to comply with the same standards applicable to generators of hazardous waste. Even though the hazardous waste is being used for energy recovery, it is a hazardous waste and it is therefore necessary for the fuel to be managed accordingly. The same concerns exist for the mismanagement of hazardous waste fuel as exist for hazardous waste. The waste fuel may still leak during storage and present a public safety concern as it is accumulated and transported. The Agency is concerned that in many cases the value of the hazardous waste fuel is less than refined virgin fuel and there is less incentive to prevent loss through spillage or mismanagement. The requirement is equivalent to 40 CFR § 266.32(a).

Subpart 3 also refers generators who market hazardous waste fuel to a burner, to the marketer requirements in subpart 5 of this part and refers generators who are burners to the requirements for burners of hazardous waste fuel in subpart 6 of this part. If generators of hazardous waste market the waste as a fuel or burn it as a fuel, they incur additional responsibilities. It is reasonable to require them to comply with the applicable additional requirements set forth in subparts 5 and 6 of this part. This is equivalent to 40 CFR § 266.32(b) & (c).

Minn. Rules pt. 7045.0692, subp. 4 sets forth standards applicable to transporters of hazardous waste fuel. Transporters of hazardous waste fuel and hazardous waste that is used to produce a fuel are subject to the requirements of Minn. Rules pts. 7045.0351 to 7045.0397, which establish requirements applicable to transporters of hazardous waste. The main feature of the requirements is a manifest system which allows regulators to track the movement of hazardous waste. Subjecting transporters of hazardous waste fuel to the same requirements for transporters of hazardous waste allows regulatory officials to track hazardous waste fuel from the point of processing, blending or other treatment to the point of burning, thus making the prohibition on burning in nonindustrial boilers enforceable. Equally important the manifest alerts persons who handle these materials that they are receiving a hazardous waste. Therefore, this provision is reasonable. This is equivalent to 40 CFR § 266.33.

1. Marketer Requirements.

Minn. Rules pt. 7045.0692, subp. 5 sets forth standards applicable to marketers of hazardous waste fuel. A marketer of hazardous waste fuel is a person who offers for sale or gives hazardous waste fuel to another marketer or burner. A marketer includes a generator who markets hazardous waste fuel

directly to a burner, a person who receives hazardous waste from generators and produces, processes, or blends hazardous waste fuel from these hazardous wastes, and a person who distributes but does not process or blend hazardous waste fuel (see amended definition of a marketer in Minn. Rules pt. 7045.0020, subp. 55a). A person who is a marketer is subject to the requirements set forth in items A to F as follows.

Item A requires a marketer of hazardous waste that is used as a fuel or used to produce a fuel to notify the EPA to identify hazardous waste fuel activities. If the marketer has previously notified the EPA of hazardous waste management activities other than hazardous waste fuel activities, the marketer must still renotify specifically to identify any hazardous waste fuel activities. EPA has revised the hazardous waste notification form to accommodate waste-as-fuel activities. The revised notification form provides EPA with the number and location of facilities involved in processing, blending, marketing, and distributing waste fuels and also the number, type and location of burners. The data generated by the requirement to notify EPA of hazardous waste fuel activities will be used to develop a general profile of the waste fuel industry and to assist in future regulatory development, and is therefore reasonably included in this subpart. This is equivalent to 40 CFR § 266.34(b).

Item B requires a marketer to comply with the prohibitions outlined in subpart 2, item A of this part, which identifies to whom hazardous waste fuels can be marketed (persons who have notified EPA and who have an EPA identification number and burners who will burn the fuel in approved burning devices). This requirement merely references subpart 2, item A and is appropriately included here because this subpart discusses marketer

requirements (see subpart 2, item A of this part). This is equivalent to 40 CFR § 266.34(a).

Item C sets forth additional requirements for a marketer. If a marketer is a generator, or becomes a generator by initiating a shipment of hazardous waste fuel, the marketer must comply with the requirements of Minn. Rules pts. 7045.0205 to 7045.0304. As is discussed above, generators of hazardous waste that is used as a fuel or is used to produce a fuel are subject to the standards applicable to generators of hazardous waste. The same concerns exist for generators who are also marketers and this requirement is therefore appropriate. This is equivalent to 40 CFR § 266.34(d).

If the marketer operates a hazardous waste facility, the marketer must comply with the facility requirements of Minn. Rules pts. 7045.0450 to 7045.0534. A marketer who operates a hazardous waste facility that either treats, stores or disposes of hazardous waste and who also manages hazardous waste that is used as a fuel is subject to the facility standards established in Minn. Rules pts. 7045.0450 to 7045.0534. If a marketer is operating a facility under interim status, the marketer must comply with Minn. Rules pts. 7045.0552 to 7045.0632. Again, it is reasonable to include these provisions since hazardous waste fuel is a hazardous waste, and the facilities where such waste is managed present the same concerns for the environment and human health. This is equivalent to 40 CFR § 266.34(c).

A marketer who stores hazardous waste used as a fuel, must comply with the Agency's permitting procedures in chapter 7001 for storage of hazardous waste. It has been argued that hazardous waste fuel is a valuable inventory item and therefore will be stored properly and need not be subject to the storage requirements applicable to hazardous waste that is stored prior to disposal. Despite the fact that they are fuels, hazardous waste fuels in many cases do

not command substantial economic value. In some situations, burners are even paid to accept these materials. The fact that a hazardous waste fuel is being stored as a commodity is insufficient assurance that the waste will be managed to prevent substantial risk. Historically, there have been many damage incidents from product and raw material storage, such as major spills from underground and above-ground product storage tanks, including fuel storage tanks (see 49 Fed. Reg. 29418, July 20, 1984). Leaks and spills from hazardous waste tank storage is always a possibility. The risk to human health and the environment associated with a leak is substantial and requires regulatory control. Therefore, it is reasonable to impose protective storage requirements on hazardous waste fuels. This is equivalent to 40 CFR § 266.34(c).

Items D, E and F establish administrative and recordkeeping requirements for marketers. Item D states, "Before a marketer initiates the first shipment of hazardous waste fuel to a burner or another marketer, a one-time written and signed notice from the burner or marketer must be obtained certifying that: (1) the burner or marketer has notified the Environmental Protection Agency and identified the waste-as-fuel activities; and (2) if the recipient is a burner, the recipient burner will burn the hazardous waste fuel only in an industrial furnace or boiler identified in subpart 2, item B." The reasonableness of this notification requirement and the limitations on the type of burner this fuel can be marketed to is discussed below in conjunction with items E and F. This is equivalent to 40 CFR § 266.34(e)(1).

Item E states, "Before a marketer accepts the first shipment of hazardous waste fuel from another marketer, the receiving marketer must provide the other marketer with a one-time written and signed notice certifying that the receiving marketer has notified the Environmental Protection Agency and identified the receiving marketer's hazardous waste fuel activities." This

requirement is equivalent to 40 CFR § 266.34(e)(2) and is reasonable because it provides EPA with current information on hazardous waste fuel marketing activities. This is further discussed below.

Item F states, "In addition to the applicable record keeping requirements of parts 7045.0205 to 7045.0304, 7045.0450 to 7045.0534, and 7045.0552 to 7045.0632, a marketer must keep a copy of each certification notice received or sent for three years from the date the marketer last engaged in a hazardous waste fuel marketing transaction with the person who sent or received the certification notice." Three years is a reasonable time period to ensure that transactions can be verified and is further discussed below. This is equivalent to 40 CFR § 266.34(f).

To insure compliance with the prohibition on burning hazardous waste fuel in nonindustrial boilers, the prohibition applies not only to the boiler owner and operator, but also to the waste fuel marketer. Thus, a marketer may not sell hazardous waste fuel to a person who burns it in a nonindustrial boiler but must ensure that the fuels are marketed only to persons included in the regulatory system; these are persons who have notified EPA of their waste-as-fuel activities. The requirement for marketers to receive a certification from the burner stating that the purchaser has notified EPA of his waste-as-fuel activities and will burn the fuel only in unrestricted boilers and furnaces is necessary to ensure that the hazardous waste fuel is not being burned in nonindustrial burning devices. It also ensures that the recipient is aware of the regulations applicable to waste fuels and of his or her responsibilities as a burner or fuel marketing intermediary.

The recordkeeping requirements are limited requirements designed primarily to keep track of the movement of hazardous waste fuels. The substantive prohibitions as well as the various administrative requirements would not be

enforceable without these recordkeeping requirements, which are therefore reasonably included in the requirements for marketers of hazardous waste fuels in items D, E, and F.

2. Burner Requirements.

Minn. Rules pt. 7045.0692, subp. 6 establishes standards applicable to burners of hazardous waste fuel. Owners and operators of industrial furnaces and industrial boilers, identified in subpart 2, item B, of this part, who burn hazardous waste fuel are subject to the following requirements in items A to F.

Item A requires a burner to notify the EPA of hazardous waste fuel activities and to obtain an EPA identification number. If a burner has previously notified the EPA of the burner's hazardous waste management activities and obtained an EPA identification number, the burner must renotify EPA of any new management of hazardous waste fuels and identify the specific hazardous waste fuel activity (burning). This notification to EPA is reasonable for the same reasons stated in subp. 5 for marketers of hazardous waste fuel. This is equivalent to 40 CFR § 266.35(b).

Item B requires a burner, before acceptance of the first shipment of hazardous waste fuel, to provide a marketer of hazardous waste fuel a one-time written and signed notice certifying that: (1) the burner has notified the EPA and identified the burner's waste-as-fuel activities; and (2) the burner will burn the fuel only in a boiler or furnace identified in subpart 2, item B of this part. These conditions were previously discussed in Minn. Rules pt. 7045.0692, subp. 5, item D and are reasonable for the same reasons presented there. This is equivalent to 40 CFR § 266.35(d).

Item C establishes a time frame for burners for which records must be retained, such as the certification the burner sends to a marketer identifying

the burner's EPA identification number and the waste-as-fuel activities, and assuring that the hazardous waste fuel will be burned in an industrial boiler, industrial furnace or utility boiler. A burner must keep a copy of each certification notice that the burner sends to a marketer for three years from the date the burner last receives hazardous waste from that marketer.

Burners of hazardous waste fuel who also operate a facility are also subject to the recordkeeping requirements of Minn. Rules pts. 7045.0478 to 7045.0482, facility standards, and Minn. Rules pts. 7045.0584 to 7045.0588, facilities regulated under interim status. A burner's certification requirement to a marketer (item B), the requirement for retaining records for a period of three years (item C), and the applicable recordkeeping requirements under Minn. Rules pts. 7045.0478 to 7045.0482, and 7045.0584 to 7045.0588 (item C) are reasonably added for the same reasons stated above in subpart 5 of this part for marketers. This is equivalent to 40 CFR § 266.35(e).

Item D establishes requirements for generators who accumulate hazardous waste fuel on-site and who also burn it within the allowed accumulation time periods. Generators who accumulate hazardous waste fuel for up to 90 days before burning on-site must comply with the requirements of Minn. Rules pt. 7045.0292. Small quantity generators who accumulate hazardous waste fuel before burning on-site within the accumulation time period allowed in Minn. Rules pt. 7045.0219, must only comply with the requirements of that part. If the hazardous waste fuel accumulated on-site is burned before the designated accumulation time period is up, the generator is not required to obtain a permit from the Agency for storage of hazardous waste fuel. Only when the accumulation time periods are exceeded, are generators required to obtain a storage permit. The existing requirements in chapter 7001 require a storage permit for hazardous waste that is stored past the accumulation time periods

established in Minn. Rules pts. 7045.0292 and 7045.0219. The requirement to obtain a permit acts to protect human health and the environment from the increased risk of mismanagement of long term storage of hazardous waste. It is therefore reasonable to allow generators, who accumulate hazardous waste to be used as a fuel or used to produce a fuel and who also burn it on-site, to accumulate this hazardous waste and not obtain a storage permit, if the accumulation time periods and other requirements of Minn. Rules pts. 7045.0292 and 7045.0219 are met. This is equivalent to 40 CFR § 266.35(c)(1).

Item D also states, "Burning by the generator of a hazardous waste that is a sludge or is or contains a waste listed in part 7045.0135 for reasons other than ignitability or is or contains a waste that is toxic under part 7045.0131, subpart 6, is subject to the additional requirements of item E, subitem (2)." This additional provision is intended for those generators who accumulate hazardous waste fuel, but who burn it before the accumulation time period is up. Item D refers to the requirements in item E, subpart (2) which incorporates the thermal treatment standards if this type of waste is burned for energy recovery. Burning waste which is listed or is toxic presents a risk to human health and the environment if it is not burned efficiently and destroyed sufficiently. Therefore, it is appropriate to subject hazardous waste that is a sludge or is or contains a listed waste other than ignitability or is or contains a toxic waste, to the requirements in item E, subpart (2).

This provision in item D is based on existing requirements under Minn. Rules pt. 7045.0125, subp. 10, items A and B. The existing Minn. Rules pt. 7045.0125, subp. 10 was initially established for hazardous waste being transported or stored before being beneficially used by burning. These existing provisions are being assimilated into items D, E, and F of subpart 6 in the new part on hazardous waste fuels. Transportation of hazardous waste

used as a fuel is discussed in subpart 4 of this part. This is reasonable since it more clearly identifies requirements for generation, transportation, storage and burning of hazardous waste fuel. Item B of Minn. Rules pt. 7045.0125, subp. 10 is now included in item E, subitem (2) of this part.

Item E sets forth requirements for generators who accumulate waste for longer than the time periods allowed in item D of this part. Subpart D refers to Minn. Rules pts. 7045.0292 and 7045.0219, which identify the accumulation time periods. Item E applies to those burners who receive hazardous waste (no matter what type of waste) to be used as a fuel or used to produce a fuel from off-site and who store it. Subitem (1) and (2) outline the requirements these generators are expected to comply with, as follows.

Subitem (1) requires a generator to comply with the Agency's permitting procedures in chapter 7001 for hazardous waste storage facilities, Minn. Rules pts. 7045.0205 to 7045.0536, and Minn. Rules pt. 7045.0544 for generators, transporters and facility owner and operators, Minn. Rules pts. 7045.0552 to 7045.0632 for interim status facility operators, Minn. Rules pts. 7045.1000 to 7045.1030, the county regulations applicable to hazardous waste management, and Minn. Rules pts. 7045.1300 to 7045.1380, the land disposal restrictions. Subitem (1) requires all persons who store hazardous waste prior to burning to obtain a hazardous waste storage facility permit. This requirement for hazardous waste used as a fuel is no different from the existing requirements for hazardous waste beneficially used by burning which are currently located in Minn. Rules pt. 7045.0125, subp. 10. Therefore, the requirement to obtain a storage permit is appropriately moved to this new part discussing hazardous waste burned for energy recovery. Also, the requirement to obtain a storage permit will minimize the risk to public health and the environment from improper management of excessive quantities of hazardous waste to be used as a

fuel. By imposing hazardous waste generator, transporter, and facility standards on the owners or operators of storage facilities, the regulated community, the public at large and regulators will be assured that the hazardous waste fuel is being stored and handled properly. This is equivalent to 40 CFR § 266.35(c)(2) & (3).

The existing Minn. Rules pt. 7045.0125, subp. 10, item B, included Minn. Rules pts. 7045.0205 to 7045.0534 and Minn. Rules pt. 7045.0544 for generators, transporters, and operators of storage facilities, Minn. Rules pts. 7045.0552 to 7045.0632 for operators of storage facilities, and the permit requirements in chapter 7001. The requirement to comply with this chapter and these parts is now addressed in subitem (1) of item E.

Subitem (2) states "if the hazardous waste to be burned is a sludge or is or contains a waste listed in part 7045.0135 for reasons other than ignitability, or is or contains a waste that is toxic under part 7045.0131, subpart 6, then parts 7045.0542, excluding subpart 4, item C, and subpart 7, item A, subitem (2); and 7045.0640 apply." Parts 7045.0542 and 7045.0640 set forth requirements for thermal treatment facilities. This existing requirement has been moved to this part, which deals with hazardous waste burned for energy recovery. Therefore, it is reasonable to add it to this part.

Item F requires a burner to abide by Minnesota and federal air quality regulations. This includes obtaining an air quality permit if necessary. This is an existing requirement that has been incorporated into this part from the existing Minn. Rules pt. 7045.0125, subp. 10. Item F also states, "compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes." This is a reasonable statement because there may be regulations by municipalities, towns or cities which may affect

burners of hazardous waste used as a fuel that the state and federal government do not have.

K. Minn. Rules Pt. 7045.0695 Used Oil Burned for Energy Recovery.

The Agency does not intend to regulate used oil burned for energy recovery as a hazardous waste. Burning for energy recovery is considered to be recycling and, therefore, used oil is not subject to the more stringent requirements of the hazardous waste rules. If used oil is burned for energy recovery, it is subject to the regulations set forth in this part. However, if used oil is deliberately mixed with a hazardous waste, depending on the situation, it may fall under the hazardous waste rules and is regulated accordingly. The requirements of this part are specifically intended to prohibit the burning of contaminated used oil in nonindustrial burning devices. The requirements of this part primarily limit the type of burning device allowed to burn contaminated used oil and place administrative and recordkeeping requirements on marketers and burners of used oil burned for energy recovery. These requirements serve to prohibit the burning of contaminated used oil in nonindustrial burning devices.

This part applies to used oil and fuels produced by processing, blending, or other treatment that are burned for energy recovery in a boiler or furnace that is not operating under RCRA standards for hazardous waste incinerators. "Used oil" means any oil that has been refined from crude oil, used, and as a result of such use, is contaminated by physical or chemical impurities. Used oils include the following: (1) spent automotive lubricating oils, including car and truck engine oil, transmission fluid, brake fluid, and off-road engine oil; (2) spent industrial oils, including compressor, turbine, and bearing oils, hydraulic oils, metalworking oils, gear oils, electrical oils,

refrigerator oils, and railroad drainings; and (3) spent industrial process oils.

This part applies only to used oil and not necessarily to "oily waste." Oily waste, such as bottom clean-out waste from virgin fuel oil storage tanks, or virgin fuel oil spill clean up, are not used oils because the oil was never "used" for its intended purpose. Thus, oily waste is not subject to this part, although as a waste it is subject to other parts of the hazardous waste rules.

Many of the administrative and recordkeeping requirements that are outlined in this part are very similar to the ones previously addressed in Minn. Rules pt. 7045.0692, but will be repeated for purposes of this document.

Minn. Rules pt. 7045.0695, subp. 1 establishes the scope of this new part. It states, "The requirements of this part apply to used oil that is burned for energy recovery in a boiler or industrial furnace that is not regulated under part 7045.0542 or 7045.0640." This statement is reasonable since Minn. Rules pts. 7045.0542 and 7045.0640 strictly regulate certain types of hazardous waste by requiring the burning facility to meet the thermal treatment standards. (Again, thermal treatment of hazardous waste uses highly controlled elevated temperatures to destroy the hazardous waste.) There is no need to subject used oil to these strict burning requirements because burning used oil in boilers and furnaces that do not meet the thermal treatment standards poses no threat to human health and the environment if the boilers and furnaces are operating efficiently. This is equivalent to 40 CFR § 266.40(a).

Subpart 1 continues by stating, "Used oil burned for energy recovery is subject to regulation under this part rather than as hazardous waste fuel under part 7045.0692, even if it exhibits a characteristic of hazardous waste identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste. Used oil intentionally mixed with a

characteristic hazardous waste as identified in part 7045.0131 is regulated as specified in part 7045.0102, subpart 3." As discussed previously, used oil can be contaminated by characteristic hazardous waste during the course of using the oil. This used oil, if recycled, is not subject to regulation as a hazardous waste, but is subject to the requirements of this part. However, if characteristic hazardous waste is deliberately mixed with used oil, it is subject to further regulation under Minn. Rules pt. 7045.0102, subp. 3, which outlines certain mixing requirements for characteristic hazardous waste and listed hazardous waste. It is reasonable to establish less stringent requirements for used oil that is contaminated through its use because if proper collection, marketing and burning of the used oil is accomplished, there is no threat to the environment and human health. It is also reasonable to more stringently regulate used oil that is intentionally mixed with a characteristic hazardous waste in order to maintain safe management practices for the resultant mixtures. This is equivalent to 40 CFR § 266.40(c) & (d).

Item A of subpart 1 lists specific situations in which used oil is not regulated by this part. Subitem (1) states, "Used oil that has been intentionally mixed with a hazardous waste listed in part 7045.0135 is regulated under part 7045.0692 if it is to be burned for energy recovery." A hazardous waste fits into either one of two categories. A waste either exhibits a characteristic of hazardous waste or it is listed for certain properties that are either known or are suspected to be very harmful or toxic to human health and/or the environment. Mixing a listed hazardous waste with used oil will not lessen the adverse effect a listed hazardous waste will have on the environment and/or human health. Thus mixing a listed waste with used oil will only create a larger quantity of listed hazardous waste. If the mixture is to be burned for energy recovery, it is subject to the more

stringent management requirements of hazardous waste fuels and is therefore reasonably prohibited from being managed the same as used oil.

Subitem (2) of item A discusses used oil containing more than 1,000 parts per million (ppm) total halogens. Halogens are commonly found in pesticide wastes and chlorinated solvents. If used oil is found to have over 1,000 ppm of total halogens it is presumed to have been mixed with a hazardous waste listed in Minn. Rules pt. 7045.0135 and is a hazardous waste. It is then subject to the requirements for hazardous waste fuel in Minn. Rules pt. 7045.0692 if it is to be burned for energy recovery. This presumption may be rebutted by a demonstration that the used oil does not contain excessive quantities of halogenated hazardous waste. The provision is reasonable for the reasons stated below. It is equivalent to 40 CFR § 266.40(c).

This provision reiterates the basic principle found in Minn. Rules pt. 7045.0102, which states that if a listed hazardous waste is mixed with a nonhazardous waste, the resultant mixture is a hazardous waste and is subject to the hazardous waste rules. Under Minn. Rules pt. 7045.0102, mixtures of hazardous waste and used oil ordinarily would be classified as hazardous waste. However, because of the nature of used oil, it is not always possible to prove that such mixing has occurred. Analysis of the oil will not always provide a basis for determining whether intentional mixing has occurred.

EPA established the "rebuttable presumption of mixing" in response to the need to develop a simple, objective test to determine when used oil has been mixed with hazardous spent halogenated solvents (or other halogenated hazardous waste) in order to avoid case-by-case confusion as to when mixing has occurred, and to aid in consistent enforcement of the regulation. The "rebuttable presumption of mixing" presumes that used oil containing more than 1,000 ppm total halogens has not been contaminated through use and has been mixed with

hazardous spent halogenated solvents or other hazardous halogenated wastes. Such used oil is therefore a hazardous waste under the provision of the "mixture rule" of 40 CFR § 261.3 and Minn. Rules pt. 7045.0102. The presumption that mixing has occurred may be rebutted by demonstrating to enforcement officials that the oil is not mixed with hazardous waste. The burner or marketer in possession of the contaminated oil may be required to respond to an Agency enforcement action or may have to respond to MnDOT requirements.

Minn. Rules pt. 7045.0695, subp. 1, item B differentiates between oil that is off-specification used oil and oil that is on-specification used oil. Used oil burned for energy recovery and any fuel produced from used oil by processing, blending, or other treatment, is classified as off-specification used oil fuel if it exceeds any of the allowable levels of the constituents and properties set forth in subitem (1) of this item. Subitem (1) lists four constituents and the allowable levels of those constituents, a flash point and a total halogen level for used oil. These specifications are set forth to distinguish between oil that meets the specifications, or on-specification used oil, and oil that does not meet the specifications, or off-specification used oil. The two classifications of used oil are regulated somewhat differently and are addressed in more detail in the following discussion. Item B, however, identifies the requirements for the management of on-specification used oil by stating, "On-specification used oil fuel as defined in part 7045.0020, subpart 60a, is subject only to the analysis and record keeping requirements under subpart 3, item B, subitems (1) and (8)." Subpart 3 discusses standards applicable to marketers of used oil to be burned for energy recovery and item B, subitems (1) and (8), list management requirements for used oil that is

"on-specification used oil" and lists what a marketer must do if he claims that the oil is on-specification used oil.

Subitem (1) lists the specifications for used oil. Used oil that does not meet the allowable levels for the constituent or property listed, is subject to full regulation under this part when burned for energy recovery. Used oil that meets the specification levels is considered to be similar to virgin fuel oil and may be burned without the same extensive regulations as used oil that exceeds the specified levels. On-specification used oil may be burned in unregulated units such as commercial and institutional heating units. Given that oil meeting the specification parameters may be burned in these nonindustrial facilities, the specifications are intended to be protective under virtually all circumstances.

EPA established the specifications for those constituents and properties that may pose increased risks at levels that are cause for concern given the large number of exposed individuals in urban areas (nonindustrial heating units are typically located in urban areas). Constituents that are typically found in used oil at levels greater than in virgin fuel oils were included in the specifications. Higher levels of these constituents could pose substantial risk, and levels lower than those constituents found in virgin fuel oil would not provide greater protection of human health and the environment than if used oil is replaced (as it would be) by virgin oil. Therefore, the specifications were set for those constituents and properties found in used oil that would pose a threat above and beyond the burning of virgin fuel oils. EPA did not propose specification levels for compounds found in used oil at the same or lower levels than are found in virgin refined fuel oil because users could simply switch to virgin oil to replace the recycled product without any environmental benefit. The following allowable levels have been established by

EPA through an extensive evaluation of the components of used oil and are justified in 40 Fed. Reg. 49181 (November 29, 1985).

Total halogens are part of the specification parameters. Total halogens are included because burning fuels with high chlorine levels can have direct and indirect effects on human health and the environment. Hydrogen chloride emissions from burning such fuels can increase ambient levels of hydrochloric acid and contribute to acid rain. Equally important, the chlorine can also accelerate corrosion of boiler components which could decrease combustion efficiency resulting in increased emissions of incompletely burned combustion products. Corrosion of any air emissions control equipment could also be accelerated, reducing control efficiency and directly increasing emissions of pollutants.

The specification level for total halogens is 4,000 ppm and is based on halogen levels in high chlorine coal that is frequently burned as a fuel. This is a reasonable level since burning fossil fuels having the same level of chlorine has not been found to accelerate typical corrosion rates, and thus do not contribute to increased emissions of air pollutants. The specification parameter of 4,000 ppm applies only to used oil fuel after it has been determined that the used oil has not been mixed with a halogenated solvent.

Lead is a constituent included in the specifications. On-specification used oil to be burned in a nonindustrial unit must not exceed 100 ppm. This level was selected for a number of different reasons, the first being that levels higher than 100 ppm could result in ambient lead levels exceeding the National Ambient Air Quality Standard (NAAQS) for lead in densely populated areas where boilers are clustered together and receptors may be close to the sources. EPA is also considering new data which suggests that any level of

lead exposure causes serious health effects which may result in future amendments to alter the lead specification.

Secondly, a specification level lower than 100 ppm could result in used oil currently burned as fuel being diverted to incineration, or perhaps being dumped, because the cost of blending used oil to meet such a stringent specification could be prohibitive. If a lower specification than 100 ppm would cause used oil that is currently being burned as a fuel to be diverted to incineration, the environmental benefits of that policy are questionable. It is not clear that metals emissions from incineration would be adequately controlled given that many hazardous waste incinerators use wet scrubbers and may not control lead emission efficiently. Therefore, it is reasonable to use the level of 100 ppm. The benefits from a reduced lead emission from used oil burned as a fuel will be lost by the increased probability of adverse effects from dumping and the increased diversion of used oil from use as a fuel to incineration.

Arsenic, cadmium and chromium are also included in the specifications. Unrestricted burning of used oil in boilers can result in a substantial increase in ambient levels of these metals since it is known that between 30-75% of the metals in the fuel can be emitted to the atmosphere. These metals are known to be carcinogenic and thus have no threshold or safe level of exposure, and increased ambient concentrations would cause an increased risk of cancer to exposed individuals. The specification levels are based on levels of these metals found in low grade virgin fuel oil. It is reasonable to set the levels based on low grade virgin fuel oil since: (1) higher numbers of persons in urban areas are exposed to emissions from nonindustrial boilers; and (2) lower levels could result in low grade virgin fuel oil displacing used oil as a

fuel source without environmental benefit. Therefore, the level for arsenic is reasonably set at 5 ppm, cadmium at 2 ppm and chromium at 10 ppm.

Flash point. Crankcase oils can be contaminated during use with highly ignitable constituents of gasoline such as benzene, toluene, and xylene from engine blow-by. Used oils can also be mixed after use with gasoline or other highly ignitable nonhalogenated solvents such as xylene. Even low levels of contamination with these low flash point compounds can reduce the flash point of used oil, normally greater than 200 degrees Fahrenheit, to levels lower than 100 degrees Fahrenheit. The level of 100 degrees Fahrenheit is the level established for the specifications since it is the same level used by the American Society for Testing and Materials (ASTM) as the minimum flash point specification level for virgin fuel oils. It is reasonable to use this as the level for off-specification used oil to provide an acceptable measure of safety. Burners are not accustomed to handling low flash point fuels, and used oils with lower flash points may present significant hazards during handling and storage. Wastes with such low flash point used oils need to be controlled by more stringent regulation than is provided for used oil.

Subitem (2) of item B states that the specifications set forth in item B, subitem (1) do not apply to used oil fuel mixed with a listed hazardous waste identified in Minn. Rules pt. 7045.0135. These mixtures are more stringently regulated as a hazardous waste fuel under Minn. Rules pt. 7045.0692. As stated before, used oil that is mixed with a listed hazardous waste still will retain the hazardous property of the listed hazardous waste, thus making the entire mixture a listed hazardous waste. Creating the specifications for used oil establishes a market (nonindustrial burning devices) that can burn used oil safely, thereby reusing a valuable resource. The specifications were selected for constituents and properties similar to those contained in virgin fuel,

thus, establishing a type of used oil that is no greater a threat to human health or the environment than virgin fuel oils. It is therefore reasonable to add this provision to this part in order to protect persons who operate nonindustrial burning devices and those persons who reside in areas near these units.

Subitem (3) of item B discusses further the "rebuttable presumption of mixing." If the presumption of mixing is not successfully rebutted, used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided in item A, subitem (2) of this part. This used oil is subject to Minn. Rules pt. 7045.0692 when burned for energy recovery. If the presumption of mixing is successfully rebutted and the oil is on-specification used oil, it is subject only to the reduced requirements identified in subpart 3, item B, subitems (1) and (8). Used oil that is proven not to have been mixed with a halogenated hazardous waste can have up to 4,000 ppm of total halogens in the used oil. If the used oil meets all the parameters listed in the specifications for used oil and the oil also has 4,000 ppm or less of total halogens, the oil can be marketed as on-specification used oil. This is a reasonable approach if the oil is then managed in accordance with the limited provisions for on-specification used oil. Subpart 1, item B including subitems (1), (2) and (3) is equivalent to 40 CFR § 266.40(e).

Minn. Rules pt. 7045.0695, subp. 2 establishes standards applicable to generators of used oil to be burned for energy recovery. Item A provides that generators who market used oil directly to a burner of used oil function as marketers and are subject to the marketer requirements in subpart 3. Item B states that generators who also burn used oil are subject to the burner requirements in subpart 4. Generators who merely "generate" used oil and who

give their oil to a marketer and/or burner are not subject to any additional requirements of this part. It is reasonable to subject generators of used oil to the marketer and/or burner requirements if they also act as marketers and/or burners. It is also reasonable not to further regulate generators who do not market or burn used oil if the oil they generate is destined for recycling, such as burning for energy recovery. This is equivalent to 40 CFR § 266.42.

1. Marketer Requirements.

Minn. Rules pt. 7045.0695, subp. 3 sets forth standards applicable to marketers of used oil to be burned for energy recovery. Item A lists persons who are not considered marketers. Subitem (1) lists persons who are not marketers as being used oil generators and collectors who transport used oil received only from generators, unless the generator or collector markets the used oil directly to a person who burns it for energy recovery. These persons are considered to be "collectors" (see definition in Minn. Rules pt. 7045.0020, subp. 9a). It is reasonable to exclude these "collectors" from the requirements specified for marketers since the fuel eventually is marketed to burners by legitimate marketers who are subject to the administrative and recordkeeping requirements. These requirements are established to assure that off-specification used oil is not marketed or burned in nonindustrial burning devices.

Subitem (2) of item A in subpart 3 lists the second category of persons who are not considered to be marketers as "Persons who market only on-specification used oil fuel and who are not the first person to claim the used oil meets the specifications of subpart 1, item B" of this part. This is appropriate since persons who are the first to claim that used oil meets the specifications are required to analyze the oil to assure that it meets the specifications, and keep records of the analysis for a period of three years. They are also

required to keep an operating log for a period of three years. These limited requirements are further discussed in item B of this subpart. Used oil meeting the specifications poses no greater risk than virgin fuel oil and once it enters the commercial fuel oil market, should not be regulated differently than virgin fuel oil. There is no need for subsequent marketers of on-specification used oil to comply with the same requirements as initial marketers of this oil and therefore this provision is reasonably added to this item. This is equivalent to 40 CFR § 266.43(a).

Item B discusses the requirements applicable to a marketer of used oil. Subitem (1) states, "Used oil fuel is subject to regulation as off-specification used oil fuel under this part unless the marketer obtains analyses or other information documenting that the used oil is on-specification used oil fuel." It is reasonable to require a person who initially claims used oil meets the specifications to prove the claim since it provides enforcement officials with a basis for determining the applicable level of regulation. If the oil meets the specifications, the oil is not subject to the more stringent off-specification used oil fuel requirements. Allowing "other information" to show that the oil meets the specifications is consistent with a generator's requirements under 40 CFR § 262.11(c), or Minn. Rules pt. 7045.0214, subp. 2, item B, subitem (1), that allow generators to apply knowledge of waste or other information to determine whether a waste is a hazardous waste. As an example, a generator may use knowledge of a previous analysis that proved that oil met the specifications, where the application of the oil has not changed, to prove that the used oil still meets the specifications. Ordinarily, the Agency expects that testing will be used to demonstrate compliance. If a person's determination that used oil meets the specifications is found to be erroneous, the person will be in violation of the regulations, regardless of intent.

The persons required to obtain analyses (or other information) to demonstrate that their used oil fuel meets the specifications include: processors, blenders and burners who treat used oil known to be off-specification to produce specification used oil fuel; and persons who market or burn used oil received directly from generators or collectors as on-specification used oil fuel. Used oil received directly from generators or from collectors who receive oil from generators is presumed to be off-specification unless demonstrated otherwise.

Persons who obtain analysis of used oil to demonstrate compliance with the specifications must ensure that representative samples are obtained and that appropriate analytical procedures are used. This is equivalent to 40 CFR § 266.43(b)(1).

Subitem (2) provides a list of the persons to whom off-specification used oil may be marketed. Unit (a) specifies that these persons must be burners or other marketers who have notified the EPA of their used oil management activities stating the location and general description of those activities, and who also have EPA identification numbers. This notification requirement is reasonable since it informs EPA of who is marketing used oil destined for burning for energy recovery. This notification requirement indirectly enforces the prohibition of burning used oil in nonindustrial burning devices because marketers cannot market used oil to these nonindustrial devices if the oil does not meet the specifications.

Unit (b) of subitem (2) states that a person may market off-specification used oil to burners who burn the used oil in industrial furnaces or boilers identified in subpart 4, item A, subitems (1) and (2). Subpart 4 sets forth standards applicable to burners of used oil burned for energy recovery. Item A, subitems (1) and (2) describe those burning devices in which

off-specification used oil fuel may be burned. They are industrial boilers, industrial furnaces and utility boilers that meet certain criteria listed in item A. The rationale behind this provision is previously discussed in Minn. Rules pt. 7045.0692, subp. 2, item B. This is equivalent to 40 CFR § 266.43(b)(2) and § 266.41(a).

Subitem (3) lists the third requirement with which a marketer must comply. It states, "Even if a marketer has previously notified the Environmental Protection Agency of the marketer's hazardous waste management activities and obtained an EPA identification number, the marketer must renotify the Environmental Protection Agency to identify the marketer's used oil management activities." As discussed above, this notification requirement to EPA is reasonable since it notifies EPA of who is marketing used oil. This information is used by the EPA and state enforcement officials to verify marketers' activities. Further, this requirement acts to indirectly enforce the prohibition for burning off-specification used oil in nonindustrial burning devices. This is equivalent to 40 CFR § 266.43(b)(3)

Subitem (4) requires a marketer who initiates a shipment of off-specification used oil fuel to prepare and send the receiving facility an invoice containing the following information: (a) a unique invoice number; (b) the marketer's own EPA identification number and the EPA identification number of the receiving facility; (c) the names and addresses of the shipping and receiving facilities; (d) the quantity of off-specification used oil fuel to be delivered; (e) the dates of shipment or delivery; and (f) the following statement: "This used oil is subject to EPA regulation under Code of Federal Regulations, title 40, section 266." The invoice requirement will attempt to trace movement of off-specification used oil fuels from the initial marketer through intermediaries to the industrial users who burn the fuel for energy

recovery. This tracking system will create a paper trail that will allow regulatory officials to track the off-specification used oil fuels from the point of processing, blending or other treatment to the point of burning, thus making the prohibition on burning in nonindustrial boilers enforceable. The invoice will also inform persons of the type of fuel they are accepting. The invoice required for marketers is similar to the manifest that accompanies hazardous waste and includes similar information. However, the invoice does not have to accompany each shipment of oil, as does a manifest. The invoice requirement is reasonable since it establishes a way to track off-specification used oil and thus makes the prohibition for burning this oil in nonindustrial burning devices enforceable. This is equivalent to 40 CFR § 266.43(b)(4).

Subitem (5) requires used oil that meets the definition of combustible liquid or flammable liquid in Minn. Rules pt. 7045.0020, subps. 9b and 24b, respectively, to meet the additional requirements of the United States Department of Transportation's hazardous materials regulations in 49 CFR § 100 to 177. Since used oil is transported to different locations by roadway, it is reasonable to reference the existing requirements for transporters of oil in the applicable parts of the federal regulations. This is equivalent to 40 CFR § 266.43(b)(4).

Subitem (6) lists the certification a marketer must make before the first shipment of off-specification used oil fuel can be marketed. The marketer must obtain a one-time written and signed notice from: (a) the burner or other marketer certifying that the burner or marketer has notified the EPA, stating the location and general description of the marketer's used oil management activities; and (b) if the recipient is a burner, the burner will burn the off-specification used oil fuel only in an approved unit such as an industrial furnace, industrial boiler or utility boiler identified in subpart 4, item A,

subitems (1) and (2). This provision is reasonable for the same reasons contained in the description of Minn. Rules pt. 7045.0692, subp. 5, item D, except that in this case the fuel is off-specification used oil. This is equivalent to 40 CFR § 266.43(b)(5).

Subitem (7) requires a marketer, before accepting the first shipment of off-specification used oil fuel from another marketer subject to the requirements of this part, to provide the other marketer with a one-time written and signed notice certifying that the first marketer has notified the EPA of any used oil management activities. This is reasonable for the same reasons contained in the discussion of Minn. Rules pt. 7045.0695, subp. 5, item E, except that the fuel in question is off-specification used oil. This is equivalent to 40 CFR § 266.43(b)(5).

Subitem (8) lists the requirements for marketers who first claim that used oil meets the specifications. Marketers must keep copies of the analysis or other information used to make the determination for a period of three years from the date of analysis. The marketer must also record in an operating log and keep for three years the following information listed in units (a) through (d): (a) the name and address of the facility receiving the shipment; (b) the quantity of used oil fuel delivered; (c) the date of shipment and delivery; and (d) a cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets the specifications required under this subitem. The requirement to obtain analysis or other information and the requirement to keep specific information in an operating log is reasonable since it enables the Agency to enforce the prohibitions on those persons who first claim that the used oil fuel meets the specifications. This is equivalent to 40 CFR § 266.43(b)(6).

Subitem (9) establishes recordkeeping requirements for marketers. A marketer who receives or initiates an invoice under the requirements of this subpart must keep a copy of each invoice for three years from the date the invoice is received or prepared. In addition, a marketer must keep a copy of each certification notice that the marketer received or sent for three years from the date that the marketer last engaged in an off-specification used oil fuel marketing transaction with the person who sent or received the certification notice. This recordkeeping requirement is reasonable since it will keep track of the movement of off-specification used oil fuels. Further, it will provide a means of enforcing the prohibitions set forth in this part. This is equivalent to 40 CFR § 266.43(b)(6).

2. Burner Requirements.

Minn. Rules pt. 7045.0695, subp. 4 establishes standards applicable to burners of used oil that is burned for energy recovery. Owners and operators of devices that burn used oil fuel are subject to the requirements in items A through G, as follows.

Item A identifies boilers and furnaces in which off-specification used oil may be burned. The used oil must be burned for energy recovery and can only be burned in industrial furnaces as defined in Minn. Rules pt. 7045.0020, subp. 43a, or in industrial boilers as defined in Minn. Rules pt. 7045.0020, subp. 6a. A facility may also qualify as a boiler through approval of a petition under Minn. Rules pt. 7045.0075, subp. 4. This provision allows an owner or operator of a burning device to petition the Agency's Commissioner for approval to be regulated as a boiler. The boilers must also meet the criteria identified in subitems (1), (2) and (3). Subitem (1) states "industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component

parts of products, by mechanical or chemical processes." Subitem (2) states "utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale." The reasonableness of this item, except subitem (3), is the same as discussed in Minn. Rules pt. 7045.0692, subp. 2, item B.

Item A, subitem (3) identifies an additional type of burning device where used oil can be burned. A used oil-fired space heater can burn used oil if: (a) the heater burns only used oil that the owner or operator either generates or has received from a do-it-yourself oil changer who generates used oil as a household waste; (b) the heater is designed to have a maximum capacity of 0.5 million Btu per hour; and, (c) the combustion gases from the heater are vented to the out-of-doors.

Used oil space heaters are very small heaters frequently used in service stations and auto repair shops. The units typically burn 1 to 2 gallons of used crankcase oil per hour. Ninety percent of the heaters operate by the vaporization of oil from a pan at the base of the heater while metals and low volatility compounds remain in the pan and are periodically removed. Another type of heater is the atomization type where the oil is sprayed into the combustion chamber. The vaporization units appear to have low metals emissions rates. As little as 5-15% of the metals are emitted. This is comparable to or lower than the metal emissions rates from larger boilers (industrial and nonindustrial). The atomization units appear to have relatively high metals emissions rates, although it is not clear whether this type of unit poses a significant health risk with respect to metal emissions.

The first condition is imposed to ensure that only those facilities that generate used oil, such as automotive service shops, are eligible to burn used oil in oil-fired space heaters. This will preclude the possibility that

persons who are not used oil generators might purchase these units and purchase off-specification used oil from processors or blenders. The second capacity restriction is imposed to limit the legitimate use of used oil-fired space heaters to those used mainly in automotive service shops. An upper size limit of 0.5 million Btu/hr heat input encompasses all used oil space heaters in use today and prevents operators of larger boilers from claiming they are operating used oil-fired space heaters. Finally, the third requirement to vent the heaters to the out-of-doors, will avoid high indoor concentrations of lead and other toxic compounds. Until EPA has a better knowledge of the risks space heaters pose and promulgates more extensive regulations, these limited requirements are reasonably included in this part. This is equivalent to 40 CFR § 266.44(a) and § 266.41(b).

Item B requires burners of off-specification used oil fuel and burners of on-specification used oil fuel who are the first to claim that the oil meets the specifications provided in subpart 1, item B of this part, to notify EPA and state the location and general description of used oil management activities. This is reasonable for the same reasons identified in subpart 3, item B, subitems (1) and (3).

Burners who meet the criteria in subitems (1), (2) and (3) of Minn. Rules pt. 7045.0695, subp. 4, item B do not have to notify the EPA of used oil management activities. Subitem (1) exempts burners of on-specification used oil fuel who receive the oil from a marketer who has previously notified the EPA. This is reasonable since the marketer will have already notified EPA and obtained analysis proving the oil to be on-specification used oil.

Subitem (2) exempts owners and operators of used oil-fired space heaters who burn used oil fuel in space heaters that meet the criteria set forth in item A, subitem (3). EPA intends to research the risk space heaters pose to

human health and the environment. EPA also intends to evaluate regulatory options for any hazards identified from space heaters. It is reasonable to exempt these owners and operators from the notification requirement to EPA at this time since EPA is seeking additional information on the risks associated with space heaters.

Subitem (3) exempts burners who burn on-specification used oil that they generate from the notification requirement to EPA. If the oil is generated on-site and the burner proves that the oil meets the specifications, it is not necessary for the burner to notify EPA of burning activities since on-specification used oil poses no greater threat to human health and the environment than does virgin fuel oil. The provisions in item B are equivalent to 40 CFR § 266.44(b).

Item C states that before a burner accepts the first shipment of off-specification used oil fuel from a marketer, the burner must provide the marketer with a one-time written and signed notice certifying that: (1) the burner has notified the EPA of the location and general description of the burner's used oil management activities; and (2) the burner will burn the used oil only in an industrial furnace or boiler identified in item A, subitems (1) and (2). The certification requirement is consistent with that for a burner of hazardous waste fuels and is reasonable for the same reasons stated in the discussion of Minn. Rules pt. 7045.0692, subp. 6, item B. This is equivalent to 40 CFR § 266.44(c).

Item D requires a person who generates used oil and who also burns it on-site to comply with the regulations of this subpart, unless the person obtains analysis or other information documenting that the oil is on-specification used oil. As previously discussed, a burner who receives used oil from a marketer is subject to the burner requirements. A person burning

used oil generated on-site presents the same environmental concerns as burners who accept oil from a marketer. Therefore, it is reasonable to impose the same requirements on burners of marketed oil as those imposed on burners who burn oil generated on-site. However, a burner who first claims that used oil generated on-site meets the specifications, is reasonably exempted from the burner requirements. Oil that meets the specifications poses no greater threat to human health or the environment than does virgin oil and need not be regulated as stringently as off-specification used oil. This is equivalent to 40 CFR § 266.44(d).

Item E states, "Burners who process, blend, or otherwise manage off-specification used oil to meet the specifications provided under subpart 1, item B, must obtain analyses or other information documenting that the oil is on-specification used oil." Marketers who conduct the same activity are also required to prove the oil meets the specifications in order for the oil to be marketed as on-specification used oil. Therefore, it is reasonable to require burners of on-specification used oil to also prove the oil they are burning truly meets the specifications if it is intended to be burned in nonindustrial burning devices. This is equivalent to 40 CFR § 266.44(d).

Item F establishes recordkeeping requirements. A burner must retain a copy of the marketer's invoice for three years from the date the invoice is received. The marketer must also keep copies of all analyses of used oil fuel, and a copy of each certification notice that the burner sends to a marketer. These records must be kept for three years from the date the burner last received off-specification used oil fuel from that marketer. The recordkeeping requirements for burners are reasonable since, in conjunction with the records kept by marketers, they establish a way to track used oil from the point of

generation to the point of burning for energy recovery. This is equivalent to 40 CFR § 266.44(e).

Item G states, "Burners must abide by Minnesota and federal air quality regulations, including obtaining a permit if necessary. Compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes." The provision is reasonable for the reasons discussed for Minn. Rules pt. 7045.0692, subp. 6, item F.

IV. SMALL BUSINESS CONSIDERATIONS IN RULEMAKING

To comply with Minn. Stat. § 14.115 (1988), the Agency has considered the statutory methods for reducing the impact of the proposed rules on small business. The statute requires that each of the following methods be considered:

1. The establishment of less stringent compliance or reporting requirements;

2. The establishment of less stringent schedules or deadlines for compliance or reporting requirements;

3. The consolidation or simplification of compliance or reporting requirements;

4. The establishment of performance standards for small businesses to replace design or operational standards in the rule; and,

5. The exemption of small businesses from any or all requirements of the rule.

Regarding the first consideration, the Agency does not believe the primary impact of the rules is in reporting requirements. To reduce the reporting requirements, therefore, would not lessen the impact of the result to any beneficial degree. Additionally, the Agency cannot significantly reduce reporting or compliance requirements without jeopardizing its authority to

administer Minnesota's hazardous waste program in lieu of the EPA. Under the federal environmental scheme, the state must be at least as stringent as the EPA in order to establish uniform environmental regulation throughout the country.

The same reasoning applies to the second consideration. The rules focus on waste management rather than on schedules or deadlines, so less stringent schedules or deadlines would not significantly benefit small business. Conversely, less stringent schedules or deadlines could jeopardize state authorization by the EPA.

The third and fourth methods were considered together. Establishing performance standards or simplifying the federal requirements would be a major challenge in light of the requirement that the state rules be as stringent as the federal rules. The federal specifications were based on scientific data. The state simply does not have the resources to duplicate the federal studies with the goal of achieving the same end result through wholly different means.

Additionally, performance standards in the environmental area could impose a tremendous burden on the regulated parties because it could require the regulated party to engineer equipment and to conduct extensive testing to insure particular end results, such as certain emission levels. It is probably easier on the regulated community to require that hazardous waste fuels be burned in certain boilers or furnaces than to allow the fuels to be burned in any device so long as the resultant emission levels are not hazardous to human health and the environment.

The fifth method was rejected because exempting small business from the used oil and hazardous waste fuel rules is contrary to the statutory objective of protecting human health and the environment from the adverse effects of hazardous waste mismanagement. The size of the business may be unrelated to

its used oil or hazardous waste fuel activities. A small business' hazardous wastes can cause the same environmental harm as that of larger businesses. For example, it was a sole proprietor who spread dioxin-contaminated oil on the roads in Times Beach eventually forcing the evacuation and permanent closure of the entire area.

Further, the volume of hazardous waste generated by a business is not directly proportional to the size of the business. Many large businesses generate very small quantities of hazardous waste and, conversely, a small business may generate a very large volume of hazardous waste. Therefore, it may not be reasonable to impose regulations based on the size of the business because this may have little relation to the potential for mismanagement or to the extent of the adverse effects on human health and the environment if the waste is mismanaged.

The MPCA has attempted to involve small business in this rulemaking process through the Used Oil Task Force, and by holding a public meeting, and by publishing a press release and a Notice of Intent to Solicit Outside Opinion. Specifically, marketers of used oil have been instrumental in the development of the rule amendments.

The federal regulations that the Agency is incorporating into its hazardous waste rules are currently in affect federally, except for the exemptions for waste-derived fuels. Therefore these amendments to the state hazardous waste rules will not impose any additional requirements on small businesses that would not already be imposed under the federal program. The Agency believes that these additional regulations are justifiable and do not present an unreasonable burden to small businesses that may be subject to these requirements.

V. CONSIDERATION OF ECONOMIC FACTORS

In exercising its powers, the Agency is required by Minn. Stat. § 116.07, subd. 6 (1988) to give due consideration to economic factors. The statute provides:

> In exercising all its powers the Pollution Control Agency shall give due consideration to the establishment, maintenance, operation, and expansion of business, commerce, trade, industry, traffic, and other economic factors and other material matters affecting the feasibility and practicability of any proposed action, including, but not limited to, the burden on a municipality of any tax that may result therefrom, and shall take or provide for such action as may be reasonable, feasible, and practical under the circumstances.

In proposing the amendments, the Agency has given due consideration to available information on any economic impact the proposed amendments would have. The economic impact of the amendments derive primarily from four new requirements: 1) notification requirements for marketers and burners to identify their waste-as-fuel activities; 2) invoice requirements on all shipments of off-specification used oil fuel; 3) certification requirements for marketers and burners; and 4) chemical analysis requirements for marketers who first claim used oil fuel meets the specifications contained in 40 CFR § 266.40.

Used Oil Fuel

Used oil that is recycled by an appropriate method, such as burning for energy recovery, is not regulated as a hazardous waste. Conversely, used oil that is not recycled is a hazardous waste and must be managed accordingly. Persons who generate used oil are more apt to recycle used oil, than to treat it as a hazardous waste.

Therefore, the amendments will have minimal adverse economic impact for persons managing used oil under the used oil fuel regulations contained in Minn. Rules pt. 7045.0695. The costs for notification, the invoice system,

certification, and testing for used oil fuel specifications could amount to an estimated $3650 per year for fuel sellers and $600 per year for fuel buyers. (The preceding costs were calculated by EPA. The Agency concurs with these estimated costs. However, they were calculated in 1985 and may now be higher due to inflation and minor market fluctuations. For further information on the calculations, see exhibit 6.) EPA estimates that these costs will not have significant impacts on the used oil fuel market. Used oil fuel will still be an attractive substitute for commercial fuel oil and, in general, sale of used oil fuel will remain a profitable enterprise. However, those establishments that have previously sold used oil fuel to residential, commercial, or institutional boiler owners could be slightly affected because the regulations prohibit off-specification used oil from being burned in nonindustrial burning devices. At this time the Agency does not know of any marketers in Minnesota who are selling on-specification used oil to this restricted market.

There are several restrictions that apply to this specific market: 1) used oil mixed with listed hazardous waste cannot be sold to this market; 2) used oil fuel with a flashpoint of less than 100 degrees Fahrenheit cannot be sold to the restricted market; and 3) used oil fuel sold to the restricted market must have less than specified concentrations of arsenic, cadmium, chromium, total halogens and lead as defined by the specifications.

A marketer who, in the future, would like to sell on-specification used oil to nonindustrial burning devices will have to comply with the requirements set forth in the amendments regarding on-specification used oil. The Agency believes that the additional money gained from selling on-specification used oil versus off-specification used oil, will offset the additional cost of analyzing the oil to prove it meets the specifications and a profit will still be made.

EPA has estimated that a person could incur a cost of about $4,240 per year for analysis of used oil (Exhibit 6). This cost depends on the frequency of analysis and on the direct cost associated with it. However, the Agency still believes that a profit will be made with little economic impact from the new used oil fuel rules.

Hazardous Waste Fuel

Persons who manage hazardous waste fuel will experience minimum economic impact. Generators, marketers and burners of hazardous waste fuel are subject to existing requirements for this fuel. The only additional provisions placed on marketers and burners are the waste-as-fuel notification, certification and recordkeeping requirements. The costs associated with these requirements are minimal.

Burners of hazardous waste fuel are already subject to the generator, transporter, storage, and facility requirements and to the thermal treatment standards. The additional cost to burners would consist of the cost of certifying to the supplier that the waste will be burned in an approved burning device, in addition to notifying EPA of their waste-as-fuel activities. No new manifest or storage costs would be incurred, because of existing requirements. EPA has estimated that the one-time notification and the certification to the supplier would be approximately $80 with a recurring cost of $10 per year for keeping copies of records.

The additional costs for marketers are for notifying EPA of waste-as-fuel activities and keeping records of the certifications received from burners. These costs are estimated to be $60 ($50 for notification and $10 for recordkeeping).

VI. CONCLUSION

The Agency has, in this document and its exhibits, made its presentation of facts establishing the need for and reasonableness of the proposed amendments to Minnesota's hazardous waste rules. This document constitutes the Agency's Statement of Need and Reasonableness for the proposed amendments to the hazardous waste rules.

VII. LIST OF EXHIBITS

The MPCA is relying on the following documents to support these amendments:

Agency Ex. No.	Title
1	Federal Register, Vol. 50, No. 230, pages 49164-49211, November 29, 1985.
2	Federal Register, Vol. 52, No. 70, pages 11819-11822, April 13, 1987.
3	Federal Register, Vol. 50, No. 135, pages 28702-28704, 28718, 28739, 28750, July 15, 1985.
4	Federal Register, Vol. 50, No. 161, pages 33541-33543
5	Stoddard Solvent Concentration vs Flash Point
6	Federal Register, Vol. 50, No. 8, pages 1684-1724, January 11, 1985.

Date: August 11, 1989

for Barbara Lindsay Sims
Gerald L. Willet
Commissioner

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of Proposed Rule Amendments Governing the Management, Storage, and Treatment of Hazardous Waste, Minn. Rules Pts. 7001.0520, 7045.0020, 7045.0102, 7045.0120, 7045.0125, 7045.0214, 7045.0219, 7045.0665, 7045.0692, 7045.0695.

AFFIDAVIT OF RECEIVING NO REQUESTS FOR NOTIFICATION OF SUBMISSION OF RULE AMENDMENTS TO THE OFFICE OF THE ATTORNEY GENERAL

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

Gail V. Lund, being duly sworn, deposes and says:

I hereby certify that the Minnesota Pollution Control Agency received no requests from any persons or associations for notification that the rule amendments in the above-entitled matter have been submitted to the Attorney General.

Gail V. Lund

Subscribed and sworn to before me
this 27 day of November, 1989.

Ardith M. Vos
Notary Public

ARDITH M. VOS
NOTARY PUBLIC - MINNESOTA
ANOKA COUNTY
My commission expires 1-12-94

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of the Proposed Rules
Governing the Management, Storage
and Treatment of Hazardous Waste,
Minn. Rules pts. 7001.0520, 7045.0020,
7045.0102, 7045.0120, 7045.0125,
7045.0214, 7045.0219, 7045.0665,
7045.0692, 7045.0695.

DECLARATION OF COUNSEL

I, KATHLEEN L. WINTERS, Special Assistant Attorney General, do hereby declare that I have examined the above-captioned rules and the supporting rulemaking record, and that, based on my examination, the Administrative Procedure Act and Minnesota Rules ch. 2010 have been followed. For Attorney billing purposes, the four-digit docket client code is 0697.

Special Assistant
Attorney General

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of the Proposed Rule Amendments Governing the Management, Storage and Treatment of Hazardous Waste, Minn. Rules Pts. 7001.0520, 7045.0020, 7045.0102, 7045.0120, 7045.0125, 7045.0214, 7045.0219, 7045.0665, 7045.0692, 7045.0695.

FINDINGS OF FACT, CONCLUSIONS, AND ORDER ADOPTING RULES

The above-entitled matter came on for decision before the Minnesota Pollution Control Agency (MPCA) on the twenty-eighth day of November, 1989. After affording all interested persons the opportunity to present written and oral data, statements and arguments to the MPCA, in accordance with statutory requirements regarding the adoption of noncontroversial rules, after considering the Statement of Need and Reasonableness, after considering all of the evidence adduced upon the records, files and proceedings herein, the MPCA, being fully advised in the premises hereby adopts the following Findings of Fact, Conclusions, and Order:

FINDINGS OF FACT

1. Notice of the MPCA's intent to adopt the above-entitled rule amendments without a public hearing was published in the State Register on September 11, 1989 (14 SR 583), and was sent to all persons on the list maintained by the MPCA pursuant to Minn. Stat. §§ 14.14, subd. 1a. and 14.22 (1988) on September 8, 1989.

2. The Statement of Need and Reasonableness was prepared prior to mailing and publication of the notice, and was made available to the public.

3. All persons were given the opportunity to submit comments on the rule amendments for 30 days after notice of proposed rulemaking. The 30 day comment period, as set out in the notice, expired on October 11, 1989.

4. No requests for public hearing were received during the comment period.

5. No requests for notice of submission to the Attorney General were received by the MPCA.

6. During the comment period the MPCA received one written comment letter from the Minnesota State Fire Marshal, dated October 9, 1989, one oral comment from the Metropolitan Waste Control Commission on September 21, 1989, one oral comment from MPCA staff, two comments in memoranda from MPCA staff, both dated October 6, 1989, and one comment from the Office of the Revisor of Statutes. The MPCA finds that six modifications to the proposed rule amendments are justified by the record in this proceeding, as follows:

a. Minn. Rules pt. 7045.0020, subp. 9b.

The first correction is in the proposed amendment to Minn. Rules pt. 7045.0020, subp. 9b. Subpart 9b adds a definition for a combustible liquid.

The definition as proposed references 49 Code of Federal Regulations § 173.115. The Office of the Revisor of Statutes commented that the proposed definition was more limited in scope than 49 Code of Federal Regulations § 173.115. Deleting the language "a liquid that has a flash point below 200 degrees Fahrenheit and equal to or greater than 100 degrees Fahrenheit" in the proposed definition is necessary so as not to cause confusion between the proposed definition and 49 Code of Federal Regulations § 173.115. The definition will continue to reference 49 Code of Federal Regulations § 173.115. The MPCA does not believe this modification is a substantial change; the modification is a clarification.

Minn. Rules pt. 7045.0020, subp. 9b is modified to read:

Subp. 9b. Combustible liquid. "Combustible liquid" has the meaning given in Code of Federal Regulations, title 49, section 173.115.

b. Minn. Rules pt. 7045.0020, subp. 21b.

The second modification is in the proposed amendments to Minn. Rules pt. 7045.0020, subp. 21b. Specifically, subp. 21b adds a definition for EPA identification number. Staff of the Metropolitan Waste Control Commission commented that there should be a comma after the word "treatment." The MPCA agrees with this comment and subpart 21b is modified to include this comma. The modification is not substantive, but merely clarifies that a treatment facility is separate from a storage facility.

Minn. Rules pt. 7045,0020, subp. 21b is modified to read:

Subp. 21b. EPA identification number. "EPA identification number" means the number assigned by the Environmental Protection Agency to each generator, transporter, and treatment, storage and disposal facility.

c. Minn. Rules pt. 7045.0020, subp. 24b.

The third modification is in the proposed amendments to Minn. Rules pt. 7045.0020, subp. 24b. Specifically, subpart 24b adds a definition for a flammable liquid. The definition references 49 Code of Federal Regulations § 173.115. The reasoning for this modification is the same as stated in item a above for the definition of a combustible liquid in Minn. Rules pt. 7045.0020, subp. 9b.

Minn. Rules pt. 7045.0020, subp. 24b is modified to read:

Subp. 24b. Flammable liquid. "Flammable liquid" has the meaning given in Code of Federal Regulations, title 49, section 173.115.

d. Minn. Rules pt. 7045.0102, subp. 1.

The fourth modification is in the proposed amendments to Minn. Rules pt. 7045.0102, subp. 1. Specifically, subpart 1 establishes the scope of the rule and provides exceptions to part 7045.0102. The existing language in the scope refers to part 7045.0665, subpart 5. MPCA staff commented that there is no subpart 5 in part 7045.0665; therefore, the existing reference is incorrect. The MPCA agrees that the reference should be modified to refer to subpart 1 instead of subpart 5. This modification does not constitute a substantial change since,

as proposed, the original reference to "subpart 5" was in error and was intended to be subpart 1. Subpart 1 provides for the regulation of certain mixtures that are not otherwise regulated under part 7045.0102.

Minn. Rules pt. 7045.0102, subp. 1 is modified to read:

Subp. 1. Scope. Except as provided in part 7045.0665, subpart 1, mixtures of wastes are listed in subparts 2 and 3.

Subps. 1 and 2 [Unchanged.]

e. Minn. Rules pt. 7045.0665, subp. 1a, item B.

The fifth modification is in the proposed amendments to Minn. Rules pt. 7045.0665, subp. 1a, item B. Specifically, item B prohibits a person from placing used oil in or on the land, unless approved by the commissioner. It continues by stating that the application of used oil will be approved only in the case of an accidental oil spill. The staff memorandum dated October 6, 1989, identified an error in this item. The application of waste oil is a common cleanup practice when an accidental spill has occurred. In the past the MPCA has approved the application of waste oil to the land and intends to continue to allow this management of waste oil. The words "waste oil" were omitted by error from the proposed rule language as published in the State Register on September 11, 1989. The MPCA agrees that waste oil should be included in the language and is modifying the text. The incorporation of the words "waste oil" will clarify to the regulated community the MPCA's intent for application approval.

Minn. Rules pt. 7045.0665, subp. 1a, item B is modified to read:

Subp. 1a. Land application prohibition.

A. [Unchanged.]

B. A person may not otherwise place used or waste oil in or on the land, unless approved by the commissioner. The application of used or waste oil in or on the land shall only be approved in the case of an accidental spill.

f. Minn. Rules pt. 7045.0695, subp. 1.

The sixth modification is in the proposed amendments to Minn. Rules pt. 7045.0695, subp. 1. Specifically, subpart 1 establishes the scope of this part. The MPCA staff's memorandum to the file states that the rules are unclear regarding the regulation of used oil burned as a fuel in devices which do not meet the criteria for industrial boilers and furnaces. The proposed rules do not clearly state which devices are prohibited from burning used oil as a fuel. The proposed rules instead indicate which burning devices are allowed to burn used oil as a fuel. As proposed, part 7045.0695, subpart 4, item A states, "Off-specification used oil fuel may be burned for energy recovery only in industrial furnaces defined in part 7045.0020, or in boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet the following criteria: ..." Although this statement clearly prohibits used oil from being used as a fuel in devices that do not meet the definitions and criteria, the statement should be additionally located in subpart 1 (scope) to clarify

which burning devices are allowed to burn used oil as a fuel. Locating this statement in the scope will clarify this specific regulation of used oil. The MPCA does not believe this modification constitutes a substantial change. The modification merely clarifies the regulation of used oil burned for energy recovery.

Minn. Rules pt. 7045.0665, subp. 1 is modified to read:

Subp. 1. Scope. The requirements of this part apply to used oil that is burned for energy recovery in a boiler or industrial furnace that is not regulated under parts 7045.0542 or 7045.0640. Burning used oil as a fuel is prohibited except as provided in this part. Used oil burned for energy recovery is subject to regulation under this part rather than as hazardous waste fuel under part 7045.0692, even if it exhibits a characteristic of hazardous waste identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste. Used oil intentionally mixed with a characteristic hazardous waste as identified in part 7045.0131 is regulated as specified in part 7045.0102, subpart 3.

Items A and B. [Unchanged.]

7. The MPCA adopts the Statement of Need and Reasonableness, in its entirety, as the factual basis for the proposed rules. The MPCA hereby incorporates the Statement of Need and Reasonableness into these findings, except as modified in Finding No. 6 above.

8. The above-captioned rule amendments, together with the modifications made by the MPCA in Finding No. 6 above to respond to comments received during the comment period, are needed and reasonable.

CONCLUSIONS

1. The MPCA duly acquired and has jurisdiction over this proceeding.

2. The MPCA published and served due, timely, and adequate notice of the intent to adopt the rule amendments without a public hearing.

3. All relevant legal and procedural requirements of statute and rule have been complied with.

4. The modifications to the proposed rule amendments are supported by the record and do not result in a substantial change in the proposed rule amendments.

ORDER

NOW, THEREFORE, IT IS ORDERED, that the attached amendments to Minn. Rules pts. 7001.0520, 7045.0020, 7045.0102, 7045.0120, 7045.0125, 7045.0214, 7045.0219, 7045.0665, 7045.0692 and 7045.0695, governing the management, storage and treatment of hazardous waste, are adopted pursuant to the authority vested in the MPCA by Minn. Stat. § 116.07, subd. 4 (1988).

Gerald L. Willet

Dated: November 28, 1989

Gerald L. Willet
Commissioner

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of Proposed Rule Amendments Governing Used Oil Burned for Energy Recovery, Hazardous Waste Burned for Energy Recovery, a Land Application Prohibition for Used Oil, and a Technical Correction to Existing Requirements for Recyclable Materials, Minn. Rules Chs. 7001 and 7045

CERTIFICATE OF RESOLUTION ADOPTING RULES

I, Gerald L. Willet, do hereby certify that I am the Commissioner of the Minnesota Pollution Control Agency, an agency duly authorized under the laws of the State of Minnesota, and that the following is a true, complete, and correct copy of the resolution adopted at a meeting of the Minnesota Pollution Control Agency duly and properly called and held on the 28th day of November, 1989, that a quorum was present at said meeting, that a majority of those present voted for the resolution and that said resolution will be set forth in the minutes of said meeting and has not been rescinded or modified:

BE IT RESOLVED, that the Minnesota Pollution Control Agency hereby approves and adopts the attached amendments to the Minnesota Pollution Control Agency's hazardous waste rules governing the management, storage, and treatment of hazardous waste, Minn. Rules pts. 7001.0520, 7045.0020, 7045.0102, 7045.0120, 7045.0125, 7045.0214, 7045.0219, 7045.0665, 7045.0692, and 7045.0695, pursuant to the authority vested in the Minnesota Pollution Control Agency by Minn. Stat. § 116.07, subd. 4 (1988).

BE IT FURTHER RESOLVED, that prior to publishing the rules as adopted in the State Register, the Commissioner is authorized to make any form changes to the rules that the Revisor of Statutes requires the Minnesota Pollution Control Agency to make in order to obtain the Revisor's certification as required by Minn. Stat. § 14.07, subd. 2 (1988).

BE IT FURTHER RESOLVED, that the Minnesota Pollution Control Agency adopts the Findings of Fact, Conclusions, and Order Adopting Rule Amendments and that the Commissioner is hereby authorized to sign the above-mentioned document on behalf of the Minnesota Pollution Control Agency and to perform the necessary acts to provide that the rule amendments shall have the force and effect of law.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 28TH day of November, 1989.

Gerald L. Willet

GERALD L. WILLET
Commissioner

The emergency rules were effective on February 29, 1988, and notice of adoption was published in the *State Register* on March 15, 1988 (12 S.R. 2044). The proposed emergency rules were published on November 30, 1987 (12 S.R. 1138-1146). This continuation is in accordance with *Minnesota Statutes,* section 14.35 (1986). The new expiration date for the emergency rules is February 23, 1989 or the date the emergency rules are replaced by permanent rules, whichever date is earlier.

Gerald L. Willet
Commissioner

Official Notices

Pursuant to the provisions of Minnesota Statutes § 14.10, an agency, in preparing proposed rules, may seek information or opinion from sources outside the agency. Notices of intent to solicit outside opinion must be published in the *State Register* and all interested persons afforded the opportunity to submit data or views on the subject, either orally or in writing.

The *State Register* also publishes other official notices of state agencies, notices of meetings, and matters of public interest.

Department of Finance

Maximum Interest Rate for Municipal Obligations in August

Pursuant to *Minnesota Statutes,* Section 475.55, Subdivision 4, Commissioner of Finance, Tom Triplett, announced today that the maximum interest rate for municipal obligations in the month of August, 1988 would be nine (9) percent per annum. Obligations which are payable wholly or in part from the proceeds of special assessments or which are not secured by General Obligations of the municipality may bear an interest rate of up to ten (10) percent per annum.

Dated: July 27, 1988

Peter Sausen
Assistant Commissioner
Cash and Debt Management

Minnesota Pollution Control Agency

Hazardous Waste Division

Notice of Intent to Solicit Outside Information Regarding Proposed Amendment to *Minnesota Rules* Chapter 7045 Governing the Management of Hazardous Waste

NOTICE IS HEREBY GIVEN that the Minnesota Pollution Control Agency (MPCA) is seeking information or opinions from outside sources in preparing to propose the amendment of rules governing the management of hazardous waste. The MPCA is considering these amendments in response to amendments to the U.S. Environmental Protection Agency (EPA) hazardous waste program promulgated on November 29, 1985, regarding waste fuels. The amendment of the MPCA rules is authorized by *Minnesota Statutes* § 116.07, subd. 4 (1986).

The MPCA is considering proposing amendments to *Minnesota Rules* Chapter 7045 regarding the following:

1. Hazardous waste burned for energy recovery in industrial furnaces, industrial boilers, or utility boilers. The amendments would address the requirements for hazardous waste beneficially used by burning in *Minnesota Rules* Part 7045.0125, subp. 10 to incorporate the additional federal requirements promulgated on November 29, 1985.

2. Used oil burned as fuel. The amendments would establish requirements for the burning of used oil as fuel.

The MPCA requests information and opinions concerning the subject matter of the rules. Interested persons or groups may submit data or views in writing or orally. Written or oral statements or comments should be directed to:

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

Gail V. Lund
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155
Telephone: (612) 296-7955

Oral statements will be received during regular business hours, 8:00 a.m. to 4:30 p.m., Monday through Friday.

All statements of information and opinion will be accepted until September 6, 1988. Any written materials received by the MPCA shall become part of the rulemaking record regarding the proposed amendments to *Minnesota Rules* Chapter 7045 governing the management of hazardous waste.

Gerald L. Willet
Commissioner

Minnesota Pollution Control Agency

Hazardous Waste Division

Notice of Intent to Solicit Outside Information Regarding Proposed Rules Governing the Acceptance of Waste at the Stabilization and Containment Facility to be Sited by Authority of the Waste Management Act

NOTICE IS HEREBY GIVEN that the Minnesota Pollution Control Agency (MPCA) is seeking information or opinions from outside sources in preparation for the development of rules to address the requirements of *Minnesota Statutes* § 115A.175, subd. 5. Pursuant to this authority, the MPCA intends to adopt rules establishing procedures by which a demonstration can be made that waste can be accepted at the facility to be sited in Minnesota for the stabilization and containment of hazardous and industrial waste.

Minnesota Statutes § 115A.175, subd. 4 specifies that no waste may be accepted at the stabilization and containment facility, except the following:

a) Waste rendered nonhazardous;

b) Nonhazardous industrial waste; and

c) Wastes that cannot be accepted under the above criteria but that can meet the following conditions:

- there is no feasible and prudent alternative to containment of the waste that would minimize adverse impact upon human health and the environment;
- the waste has been treated using feasible and prudent technology that minimizes the possibility of migration of any hazardous constituents of the waste;
- the waste meets federal land disposal restrictions; and
- an effort has been made to have the waste rendered nonhazardous as provided in a) above.

The MPCA requests information and opinions concerning the subject matter of the proposed rules. Interested persons or groups may submit data or views in writing or orally. Written or oral statements or comments should be directed to:

Carol Nankivel
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155
Telephone: (612) 296-7260

Oral statements will be received during regular business hours, Monday through Friday. All statements of information and opinion will be accepted until September 5, 1988. Any written materials received by the MPCA shall become part of the rulemaking record in the event that the proposed rules are adopted.

Gerald L. Willet
Commissioner

Minnesota State Retirement System

Board of Directors, Regular Meeting

A meeting of the Board of Directors, Minnesota State Retirement System, will be held on Friday, August 19, 1988 at 8:30 a.m. in the office of the System, 529 Jackson Street, St. Paul, Minnesota.

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of the Proposed Rule Amendments Governing the Management, Storage and Treatment of Hazardous Waste, Minn. Rules Pts. 7001.0520, 7045.0020, 7045.0102, 7045.0120, 7045.0125, 7045.0214, 7045.0219, 7045.0665, 7045.0692, 7045.0695.

FINDINGS OF FACT, CONCLUSIONS, AND ORDER ADOPTING RULES

The above-entitled matter came on for decision before the Minnesota Pollution Control Agency (MPCA) on the twenty-eighth day of November, 1989. After affording all interested persons the opportunity to present written and oral data, statements and arguments to the MPCA, in accordance with statutory requirements regarding the adoption of noncontroversial rules, after considering the Statement of Need and Reasonableness, after considering all of the evidence adduced upon the records, files and proceedings herein, the MPCA, being fully advised in the premises hereby adopts the following Findings of Fact, Conclusions, and Order:

FINDINGS OF FACT

1. Notice of the MPCA's intent to adopt the above-entitled rule amendments without a public hearing was published in the State Register on September 11, 1989 (14 SR 583), and was sent to all persons on the list maintained by the MPCA pursuant to Minn. Stat. §§ 14.14, subd. 1a. and 14.22 (1988) on September 8, 1989.

2. The Statement of Need and Reasonableness was prepared prior to mailing and publication of the notice, and was made available to the public.

3. All persons were given the opportunity to submit comments on the rule amendments for 30 days after notice of proposed rulemaking. The 30 day comment period, as set out in the notice, expired on October 11, 1989.

4. No requests for public hearing were received during the comment period.

5. No requests for notice of submission to the Attorney General were received by the MPCA.

6. During the comment period the MPCA received one written comment letter from the Minnesota State Fire Marshal, dated October 9, 1989, one oral comment from the Metropolitan Waste Control Commission on September 21, 1989, one oral comment from MPCA staff, two comments in memoranda from MPCA staff, both dated October 6, 1989, and one comment from the Office of the Revisor of Statutes. The MPCA finds that six modifications to the proposed rule amendments are justified by the record in this proceeding, as follows:

a. Minn. Rules pt. 7045.0020, subp. 9b.

The first correction is in the proposed amendment to Minn. Rules pt. 7045.0020, subp. 9b. Subpart 9b adds a definition for a combustible liquid.

The definition as proposed references 49 Code of Federal Regulations § 173.115. The Office of the Revisor of Statutes commented that the proposed definition was more limited in scope than 49 Code of Federal Regulations § 173.115. Deleting the language "a liquid that has a flash point below 200 degrees Fahrenheit and equal to or greater than 100 degrees Fahrenheit" in the proposed definition is necessary so as not to cause confusion between the proposed definition and 49 Code of Federal Regulations § 173.115. The definition will continue to reference 49 Code of Federal Regulations § 173.115. The MPCA does not believe this modification is a substantial change; the modification is a clarification.

Minn. Rules pt. 7045.0020, subp. 9b is modified to read:

Subp. 9b. Combustible liquid. "Combustible liquid" has the meaning given in Code of Federal Regulations, title 49, section 173.115.

b. Minn. Rules pt. 7045.0020, subp. 21b.

The second modification is in the proposed amendments to Minn. Rules pt. 7045.0020, subp. 21b. Specifically, subp. 21b adds a definition for EPA identification number. Staff of the Metropolitan Waste Control Commission commented that there should be a comma after the word "treatment." The MPCA agrees with this comment and subpart 21b is modified to include this comma. The modification is not substantive, but merely clarifies that a treatment facility is separate from a storage facility.

Minn. Rules pt. 7045,0020, subp. 21b is modified to read:

Subp. 21b. EPA identification number. "EPA identification number" means the number assigned by the Environmental Protection Agency to each generator, transporter, and treatment, storage and disposal facility.

c. Minn. Rules pt. 7045.0020, subp. 24b.

The third modification is in the proposed amendments to Minn. Rules pt. 7045.0020, subp. 24b. Specifically, subpart 24b adds a definition for a flammable liquid. The definition references 49 Code of Federal Regulations § 173.115. The reasoning for this modification is the same as stated in item a above for the definition of a combustible liquid in Minn. Rules pt. 7045.0020, subp. 9b.

Minn. Rules pt. 7045.0020, subp. 24b is modified to read:

Subp. 24b. Flammable liquid. "Flammable liquid" has the meaning given in Code of Federal Regulations, title 49, section 173.115.

d. Minn. Rules pt. 7045.0102, subp. 1.

The fourth modification is in the proposed amendments to Minn. Rules pt. 7045.0102, subp. 1. Specifically, subpart 1 establishes the scope of the rule and provides exceptions to part 7045.0102. The existing language in the scope refers to part 7045.0665, subpart 5. MPCA staff commented that there is no subpart 5 in part 7045.0665; therefore, the existing reference is incorrect. The MPCA agrees that the reference should be modified to refer to subpart 1 instead of subpart 5. This modification does not constitute a substantial change since,

as proposed, the original reference to "subpart 5" was in error and was intended to be subpart 1. Subpart 1 provides for the regulation of certain mixtures that are not otherwise regulated under part 7045.0102.

Minn. Rules pt. 7045.0102, subp. 1 is modified to read:

Subp. 1. Scope. Except as provided in part 7045.0665, subpart 1, mixtures of wastes are listed in subparts 2 and 3.

Subps. 1 and 2 [Unchanged.]

e. Minn. Rules pt. 7045.0665, subp. 1a, item B.

The fifth modification is in the proposed amendments to Minn. Rules pt. 7045.0665, subp. 1a, item B. Specifically, item B prohibits a person from placing used oil in or on the land, unless approved by the commissioner. It continues by stating that the application of used oil will be approved only in the case of an accidental oil spill. The staff memorandum dated October 6, 1989, identified an error in this item. The application of waste oil is a common cleanup practice when an accidental spill has occurred. In the past the MPCA has approved the application of waste oil to the land and intends to continue to allow this management of waste oil. The words "waste oil" were omitted by error from the proposed rule language as published in the State Register on September 11, 1989. The MPCA agrees that waste oil should be included in the language and is modifying the text. The incorporation of the words "waste oil" will clarify to the regulated community the MPCA's intent for application approval.

Minn. Rules pt. 7045.0665, subp. 1a, item B is modified to read:

Subp. 1a. Land application prohibition.

A. [Unchanged.]

B. A person may not otherwise place used or waste oil in or on the land, unless approved by the commissioner. The application of used or waste oil in or on the land shall only be approved in the case of an accidental spill.

f. Minn. Rules pt. 7045.0695, subp. 1.

The sixth modification is in the proposed amendments to Minn. Rules pt. 7045.0695, subp. 1. Specifically, subpart 1 establishes the scope of this part. The MPCA staff's memorandum to the file states that the rules are unclear regarding the regulation of used oil burned as a fuel in devices which do not meet the criteria for industrial boilers and furnaces. The proposed rules do not clearly state which devices are prohibited from burning used oil as a fuel. The proposed rules instead indicate which burning devices are allowed to burn used oil as a fuel. As proposed, part 7045.0695, subpart 4, item A states, "Off-specification used oil fuel may be burned for energy recovery only in industrial furnaces defined in part 7045.0020, or in boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet the following criteria: ..." Although this statement clearly prohibits used oil from being used as a fuel in devices that do not meet the definitions and criteria, the statement should be additionally located in subpart 1 (scope) to clarify

which burning devices are allowed to burn used oil as a fuel. Locating this statement in the scope will clarify this specific regulation of used oil. The MPCA does not believe this modification constitutes a substantial change. The modification merely clarifies the regulation of used oil burned for energy recovery.

Minn. Rules pt. 7045.0665, subp. 1 is modified to read:

Subp. 1. Scope. The requirements of this part apply to used oil that is burned for energy recovery in a boiler or industrial furnace that is not regulated under parts 7045.0542 or 7045.0640. Burning used oil as a fuel is prohibited except as provided in this part. Used oil burned for energy recovery is subject to regulation under this part rather than as hazardous waste fuel under part 7045.0692, even if it exhibits a characteristic of hazardous waste identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste. Used oil intentionally mixed with a characteristic hazardous waste as identified in part 7045.0131 is regulated as specified in part 7045.0102, subpart 3.

Items A and B. [Unchanged.]

7. The MPCA adopts the Statement of Need and Reasonableness, in its entirety, as the factual basis for the proposed rules. The MPCA hereby incorporates the Statement of Need and Reasonableness into these findings, except as modified in Finding No. 6 above.

8. The above-captioned rule amendments, together with the modifications made by the MPCA in Finding No. 6 above to respond to comments received during the comment period, are needed and reasonable.

CONCLUSIONS

1. The MPCA duly acquired and has jurisdiction over this proceeding.

2. The MPCA published and served due, timely, and adequate notice of the intent to adopt the rule amendments without a public hearing.

3. All relevant legal and procedural requirements of statute and rule have been complied with.

4. The modifications to the proposed rule amendments are supported by the record and do not result in a substantial change in the proposed rule amendments.

ORDER

(9) NOW, THEREFORE, IT IS ORDERED, that the attached amendments to Minn. Rules pts. 7001.0520, 7045.0020, 7045.0102, 7045.0120, 7045.0125, 7045.0214, 7045.0219, 7045.0665, 7045.0692 and 7045.0695, governing the management, storage and treatment of hazardous waste, are adopted pursuant to the authority vested in the MPCA by Minn. Stat. § 116.07, subd. 4 (1988).

Gerald L. Willet

Dated: November 28, 1989

Gerald L. Willet
Commissioner

Pollution Control Agency

Adopted Permanent Rules Relating to Hazardous Waste; Burning of Hazardous Waste and Used Oil

Rules as Adopted

7001.0520 PERMIT REQUIREMENTS.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Permits by rule.** The owner or operator of the following facilities shall be deemed to have obtained a hazardous waste facility permit without making application for it unless the commissioner finds that the following conditions are not met:

A. to D. [Unchanged.]

E. Containers or tanks where generators mix characteristic hazardous waste as identified in part 7045.0131, subpart 2, with used oil if:

(1) the generators who produce at least 1,000 kilograms per calendar month of hazardous waste meet the requirements of part 7045.0292, subpart 1; or

(2) the generators who produce less than 1,000 kilograms per calendar month of hazardous waste meet the requirements of part 7045.0219, subpart 4, item A.

Subp. 4. [Unchanged.]

7045.0020 DEFINITIONS.

Subpart 1. to 6. [Unchanged.]

Subp. 6a. Boiler. "Boiler" means an enclosed device using controlled flame combustion and having the characteristics specified in item A or B. If used oil or hazardous waste is to be used as a fuel in an industrial boiler or a utility boiler, these boilers must meet the additional criteria in items C and D.

A. and B. [Unchanged.]

C. An industrial boiler burning used oil or hazardous waste as a fuel must be located on the site of an establishment engaged in a manufacturing process where substances are

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transformed into new products, including the component parts of products, by mechanical processes.

D. A utility boiler burning used oil or hazardous waste as a fuel must be one that is used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

Subp. 6b. [Unchanged.]

Subp. 6c. **Burner.** "Burner" means an owner or operator of an industrial furnace, industrial boiler, or utility boiler meeting the definition of industrial furnace in subpart 43a or boiler in subpart 6a.

Subp. 7. to 9. [Unchanged.]

Subp. 9a. **Collector.** "Collector" means an initial transporter who receives used oil only from generators and does not market the used oil directly to a person who burns it for energy recovery.

Subp. 9b. **Combustible liquid.** "Combustible liquid" means ~~a liquid that has a flash point below 200 degrees Fahrenheit and equal to or greater than 100 degrees Fahrenheit, as defined~~ has the meaning given in Code of Federal Regulations, title 49, section 173.115.

Subp. 9c. **Commissioner.** "Commissioner" means the commissioner of the Minnesota Pollution Control Agency or the commissioner's designee.

Subp. 9d. **Component.** "Component" means either the tank or ancillary equipment of a tank system.

Subp. 10. to 21a. [Unchanged.]

Subp. 21b. **EPA identification number.** "EPA identification number" means the number assigned by the Environmental Protection Agency to each generator, transporter, and treatment, storage and disposal facility.

Subp. 22. to 24a. [Unchanged.]

Subp. 24b. **Flammable liquid.** "Flammable liquid" means ~~a liquid exhibiting a flash point below 100 degrees Fahrenheit, as defined~~ has the meaning given in Code of Federal Regulations, title 49, section 173.115.

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Subp. 25. to 34. [Unchanged.]

Subp. 34a. **Hazardous waste fuel.** "Hazardous waste fuel" means a hazardous waste that is burned for energy recovery and includes fuel that is produced from hazardous waste by processing, blending, or other treatment, except for those blended fuels described in part 7045.0102, subpart 3.

Subp. 35. to 40. [Unchanged.]

Subp. 40a. **Incidental burner.** "Incidental burner" means a person who burns some used oil fuel for purposes of processing other used oil or treating other used oil to produce used oil fuel for marketing. These persons are considered to be burning incidentally to processing.

Subp. 41. to 55. [Unchanged.]

Subp. 55a. **Marketer.** "Marketer" means a generator who markets hazardous waste fuel or used oil fuel directly to a burner; a person who receives hazardous waste or used oil from generators and produces, processes, or blends hazardous waste fuel from these hazardous wastes, or blends used oil from these oils; a person who distributes but does not process or blend hazardous waste fuel or used oil; and a person who sends blended or processed used oils to brokers or other intermediaries.

Subp. 56. to 58. [Unchanged.]

Subp. 58a. **Mixed municipal solid waste.** "Mixed municipal solid waste" has the meaning given it in Minnesota Statutes, section 115A.03, subdivision 21.

Subp. 59. and 59a. [Unchanged.]

Subp. 59b. **Off-specification used oil.** "Off-specification used oil" means a used oil fuel that exceeds any of the specification levels for the following constituents or has a flash point less than 100 degrees Fahrenheit.

Constituent	Allowable level
Arsenic, total	5 parts per million maximum
Cadmium, total	2 parts per million maximum
Chromium, total	10 parts per million maximum
Lead, total	100 parts per million maximum
Total Halogens	4,000 parts per million maximum

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Subp. 59c. **Onground tank.** "Onground tank" means a device meeting the definition of "tank" in subpart 90 and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.

Subp. 60. [Unchanged.]

Subp. 60a. **On-specification used oil.** "On-specification used oil" means used oil fuel that does not exceed the specification levels for the constituents in subpart 59b, and has a flash point equal to or greater than 100 degrees Fahrenheit.

Subp. 61. to 100a. [Unchanged.]

Subp. 100b. **Used oil fuel.** "Used oil fuel" means used oil that is burned for energy recovery, and includes fuel produced from used oil by processing, blending, or other treatment, except for those blended fuels described in part 7045.0102, subpart 3.

Subp. 101. to 109. [Unchanged.]

7045.0102 MIXTURES OF WASTES.

Subpart 1. **Scope.** Except as provided in part 7045.0665, subpart 5 1, mixtures of wastes are listed in subparts 2 and 3.

Subp. 2. **Mixtures of hazardous and nonhazardous wastes.**

A. to G. [Unchanged.]

Subp. 3. **Mixtures of used oil and hazardous waste.** Items A and B apply to used oil that is intentionally mixed with hazardous waste.

A. Used oil mixed with a hazardous waste that exhibits any of the characteristics of part 7045.0131, subparts 2 to 7, is regulated as hazardous waste. If it is burned for energy recovery, it is regulated as a hazardous waste fuel under part 7045.0692 provided the mixture continues to exhibit any of those characteristics. If the mixture no longer exhibits any of those characteristics and is to be burned for energy recovery, it is regulated as a used oil fuel under part 7045.0695. If the mixture no longer exhibits any of those characteristics and is

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not burned for energy recovery, it is subject to the requirements of part 7045.0125.

B. Used oil mixed with hazardous waste listed in part 7045.0135 is a hazardous waste. If it is to be burned for energy recovery, it is regulated as a hazardous waste fuel under part 7045.0692.

7045.0120 EXEMPT WASTES.

The following wastes may be stored, labeled, transported, treated, processed, and disposed of without complying with the requirements of this chapter:

A. to L. [Unchanged.]

M. a sample of waste, water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition when:

(1) to (6) [Unchanged.]

N. pulping liquors (for example, black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless they are accumulated speculatively as defined in part 7045.0020;

O. spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in part 7045.0020; or

P. secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided that:

(1) to (4) [Unchanged.]

7045.0125 MANAGEMENT OF WASTE BY USE, REUSE, RECYCLING, AND RECLAMATION.

Subpart 1. **Scope.** This part regulates hazardous waste and used oil that is to be recycled except for use constituting disposal as provided in part 7045.0665, hazardous waste used for precious metals recovery as provided in part 7045.0675; spent lead-acid batteries being reclaimed as provided in part 7045.0685; hazardous waste fuel being burned for energy recovery

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as provided in part 7045.0692; or used oil fuel being burned for energy recovery as provided in part 7045.0695.

Subp. 3. [Unchanged.]

Subp. 3a. **Management requirements for used oil.**

A. Used oil that is recycled in some other manner than being burned for energy recovery is not subject to the requirements of parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380.

B. Used oil that is not recycled is regulated as a hazardous waste and is subject to the applicable requirements of parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380.

C. Used oil that is to be burned for energy recovery is regulated under part 7045.0695. Used oil that is mixed with hazardous waste and is burned for energy recovery is regulated under part 7045.0692 and the applicable requirements of part 7045.0102.

Subp. 4. **Management of specific hazardous wastes.** Management of the following wastes when recycled, is not subject to regulation under parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380:

A. industrial ethyl alcohol that is reclaimed, except as provided in subpart 12;

B. used batteries or used battery cells returned to a battery manufacturer for regeneration;

C. scrap metal;

D. fuels produced from the refining of oil-bearing hazardous wastes along with normal process streams at a petroleum refining facility if the wastes result from normal petroleum refining, production, and transportation practices;

E. oil that is reclaimed from hazardous wastes that are generated from normal petroleum refining, production, and transportation practices, and that is to be refined along with normal process streams at a petroleum refining facility;

F. coke and coal tar from the iron and steel industry that contain EPA Hazardous Waste No. K087 listed under part 7045.0135, subpart 3, item L, subitem (2), (decanter tank tar

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sludge from coking operations) from the iron and steel production process;

G. hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from the hazardous wastes, where the hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil if the resulting fuel meets the used oil specification under part 7045.0695, subpart 1, item B, subitem (1), and no other hazardous wastes are used to produce the hazardous waste fuel;

H. hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining, production, and transportation practices, where the hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, if the fuel meets the used oil fuel specification under part 7045.0695, subpart 1, item B, subitem (1);

I. oil that is reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, and is burned as a fuel without reintroduction to a refining process, if the reclaimed oil meets the used oil fuel specification under part 7045.0695, subpart 1, item B, subitem (1); and

J. petroleum coke produced from petroleum refinery hazardous wastes containing oil at the same facility at which the wastes were generated, unless the resulting coke product exhibits one or more of the characteristics of hazardous waste in part 7045.0131.

Subp. 5. Requirements for use of hazardous wastes as feedstock.

A. Except as provided in items B to D, hazardous wastes that are shown to be recycled by being used in a manner specified in subitems (1) to (3), are not subject to regulation under parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380. This subpart does not apply to wastes being accumulated

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speculatively as defined in part 7045.0020, or being managed by use constituting disposal as regulated under part 7045.0665 or burning for energy recovery, as regulated in part 7045.0692. Hazardous wastes are considered to be used as feedstock if they are:

(1) to (3) [Unchanged.]

B. to D. [Unchanged.]

Subp. 6. **Requirements for reclamation of specific hazardous wastes.**

A. [Unchanged.]

B. This subpart does not apply to hazardous wastes being accumulated speculatively as defined in part 7045.0020 or being managed by use constituting disposal, as regulated under part 7045.0665 or being burned for energy recovery as regulated by part 7045.0692.

Subp. 7. **Generator requirements.** Except as provided in subpart 3a, 4, 5, or 6, or part 7045.0695, generators of hazardous waste destined for recycle are subject to the requirements of parts 7045.0205 to 7045.0304.

Subp. 8. **Transporter requirements.** Except as provided in subpart 3a, 4, 5, or 6, or part 7045.0695, transporters of hazardous waste destined for recycle are subject to the requirements of parts 7045.0351 to 7045.0397.

Subp. 9. **Facility requirements.** Except as provided in subpart 3a, 4, 5, or 6, or parts 7045.0692 and 7045.0695, owners or operators of facilities which recycle hazardous waste are subject to the following requirements:

A. and B. [Unchanged.]

Subp. 10. and 11. [See Repealer.]

Subp. 12. [Unchanged.]

7045.0214 EVALUATION OF WASTES.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Wastes generated by treatment, storage, or disposal.** Wastes generated by treatment, storage, or disposal of hazardous waste are as follows:

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A. Except as provided in items B, C, and D, any waste generated from the treatment, storage, or disposal of hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate, but not including precipitation run-off, is a hazardous waste if it meets the criteria of subpart 2 or if it is derived from a waste that is listed in part 7045.0135.

B. [Unchanged.]

C. Materials that have been reclaimed from hazardous wastes and from wastes that have been reclaimed that are beneficially used are not hazardous wastes unless the reclaimed material is used in a manner constituting disposal under part 7045.0665 or burned for energy recovery under part 7045.0692.

D. Wastes from burning any of the materials exempted from regulation by part 7045.0125, subpart 4, items D to J, are not hazardous wastes.

7045.0219 SPECIAL REQUIREMENTS FOR SMALL QUANTITY GENERATORS OF HAZARDOUS WASTE.

Subpart 1. **Applicability; quantities.** A generator is a small quantity generator subject to the requirements of subparts 2 to 6 if, in a calendar month, he or she generates less than:

A. to C. [Unchanged.]

Subp. 2. and 3. [Unchanged.]

Subp. 4. **Accumulation on-site.** A small quantity generator who does not have a permit or interim status may accumulate hazardous waste on-site under the following conditions: if the quantity of hazardous waste accumulated at any time exceeds the quantities in item A or B, whichever applies, the small quantity generator must manage all of the accumulated waste in accordance with all the generator requirements in parts 7045.0205 to 7045.0304, excluding this part, but does not lose the small quantity generator status.

A. The following provisions apply to waste not listed as acute hazardous waste:

(1) A small quantity generator who in a calendar

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month generates at least 100 kilograms of waste not listed as acute hazardous waste in part 7045.0135, subpart 2, 3, or 4, item E, may accumulate that waste on-site for 180 days or less if the quantity of waste accumulated on-site never exceeds 3,000 kilograms and the small quantity generator meets all the requirements of subpart 5. For purposes of this subitem, the time period for accumulation begins when the generator begins accumulation in a container or tank. If the small quantity generators regulated under this subitem mix used oil with hazardous waste, they must meet the requirements under part 7045.0102, subpart 3.

(2) A small quantity generator who in a calendar month generates less than 100 kilograms of waste not listed as acute hazardous waste in part 7045.0135, subpart 2, 3, or 4, item E may accumulate that waste on-site indefinitely until 1,000 kilograms of waste are accumulated, at which point the small quantity generator may only store the waste on-site for a period of 180 days following the date the 1,000 kilogram limit is reached. A small quantity generator accumulating waste under this subitem must meet the requirements of subpart 5, except for subpart 5, item B, subitems (2) to (5). If the small quantity generators regulated under this subitem mix used oil with characteristic hazardous waste, they must meet the requirements under subpart 6. Small quantity generators regulated under this subitem who mix used oil with listed hazardous waste must meet the hazardous waste fuel requirements under part 7045.0692 if the waste is to be burned for energy recovery.

(3) [Unchanged.]

B. [Unchanged.]

Subp. 5. **Management requirements.**

A. Small quantity generators shall comply with the following requirements of this chapter:

(1) to (5) [Unchanged.]

(6) parts 7045.0566 and 7045.0568;

(7) parts 7045.0626 and 7045.0629; and

(8) as applicable, parts 7045.0692 and 7045.0695.

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B. and C. [Unchanged.]

Subp. 6. **Mixtures.** A small quantity generator's hazardous waste may be mixed as specified in items A to C and be subject to the reduced requirements of this rule.

A. Hazardous waste may be mixed with nonhazardous waste pursuant to part 7045.0102 and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity generation and accumulation limitations identified in this rule unless the resultant mixture is hazardous pursuant to part 7045.0102.

B. A waste that is hazardous solely for the characteristic of ignitability may be mixed with used oil that is generated on-site and regulated as used oil fuel under part 7045.0695 if the waste mixed is hazardous solely for the characteristic of ignitability under part 7045.0131, subpart 2, and the following conditions are met:

(1) the ignitable waste is generated by a small quantity generator who in a calendar month generates a total of less than 100 kilograms of hazardous waste;

(2) the ignitable waste has a flash point of 100 degrees Fahrenheit or greater, is not a metal bearing paint waste, or is not gasoline; and

(3) the concentration of ignitable waste in the used oil does not exceed ten percent by volume.

C. Mixtures that do not meet the criteria in item B are subject to part 7045.0102, subpart 3.

7045.0665 USE CONSTITUTING DISPOSAL.

Subpart 1. [Unchanged.]

Subp. 1a. Land application prohibition.

A. The following materials may not be placed in mixed municipal solid waste or applied as a dust suppressant or used for road treatment:

(1) waste oil;

(2) used oil;

(3) hazardous waste; and

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(4) a mixture of hazardous waste and other material, waste oil, or used oil.

B. A person may not otherwise place used or waste oil in or on the land, unless approved by the commissioner. The application of used or waste oil in or on the land shall only be approved in the case of an accidental ~~oil~~ spill.

Subp. 2. to 4. [Unchanged.]

7045.0692 HAZARDOUS WASTE BURNED FOR ENERGY RECOVERY.

Subpart 1. **Scope.** This part applies to hazardous wastes that are burned for energy recovery in a boiler or industrial furnace that is not regulated by the thermal treatment standards in part 7045.0542 or 7045.0640, except:

A. Gaseous emissions recovered from hazardous waste management activities when the gas is burned for energy recovery.

B. Used oil that exhibits a characteristic of hazardous waste as identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste, and is regulated as a used oil fuel in part 7045.0695.

C. Hazardous wastes that are exempt from regulation under part 7045.0125, subparts 3a and 4, items D to J.

D. Mixtures of used oil and waste that is hazardous solely for the characteristic of ignitability in part 7045.0131, subpart 2, provided the waste is generated by a person who in a calendar month generates less than 100 kilograms of hazardous waste. This mixture is regulated as provided in part 7045.0219, subpart 6. If the waste is generated by a person who in a calendar month generates at least 100 kilograms of hazardous waste, part 7045.0102, subpart 3, item A, applies.

E. Used oil being burned for energy recovery as regulated in part 7045.0695.

Subp. 2. **Prohibitions.**

A. A person may market hazardous waste fuel only:

(1) to persons who have notified the Environmental Protection Agency of their hazardous waste fuel

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activities and have an EPA identification number; and

(2) if the fuel is to be burned, to persons who burn the fuel in boilers or industrial furnaces identified in item B.

B. Hazardous waste fuel may be burned for energy recovery only in industrial furnaces as defined in part 7045.0020, or boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet one of the following criteria:

(1) industrial boilers located on the site of an establishment engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes; or

(2) utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

C. Hazardous waste or a fuel that contains a hazardous waste may not be burned in a cement kiln unless the kiln fully complies with the thermal treatment standards of part 7045.0542.

Subp. 3. Standards applicable to generators of hazardous waste fuel. Generators of hazardous waste that is used as a fuel or used to produce a fuel are subject to parts 7045.0205 to 7045.0304. Generators who market hazardous waste fuel to a burner are also subject to subpart 5. Generators who are burners are also subject to subpart 6.

Subp. 4. Standards applicable to transporters of hazardous waste fuel. Transporters of hazardous waste fuel and hazardous waste that is used to produce a fuel are subject to parts 7045.0351 to 7045.0397.

Subp. 5. Standards applicable to marketers of hazardous waste fuel. Marketers are subject to the requirements in items A to F.

A. A marketer of hazardous waste that is used as a fuel or used to produce a fuel must notify the Environmental

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Protection Agency to identify hazardous waste fuel activities. Even if a marketer has previously notified the Environmental Protection Agency of hazardous waste management activities other than hazardous waste fuel activities, a marketer must renotify specifically to identify hazardous waste fuel activities.

B. A marketer must comply with the prohibitions in subpart 2, item A.

C. If a marketer is a generator, or becomes a generator by initiating a shipment of hazardous waste fuel, the marketer must comply with parts 7045.0205 to 7045.0304. If the marketer operates a facility, the marketer must comply with parts 7045.0450 to 7045.0534. If the marketer is operating a facility under interim status, the marketer must comply with parts 7045.0552 to 7045.0632. If the marketer stores hazardous waste, the marketer must comply with the agency's permitting procedures in chapter 7001 for storage of hazardous waste.

D. Before a marketer initiates the first shipment of hazardous waste fuel to a burner or another marketer, a one-time written and signed notice from the burner or marketer must be obtained certifying that:

(1) the burner or marketer has notified the Environmental Protection Agency and identified the waste-as-fuel activities; and

(2) if the recipient is a burner, the burner will burn the hazardous waste fuel only in an industrial furnace or boiler identified in subpart 2, item B.

E. Before a marketer accepts the first shipment of hazardous waste fuel from another marketer, the receiving marketer must provide the other marketer with a one-time written and signed notice certifying that the receiving marketer has notified the Environmental Protection Agency and identified the receiving marketer's hazardous waste fuel activities.

F. In addition to the applicable record keeping requirements of parts 7045.0205 to 7045.0304, 7045.0450 to 7045.0534, and 7045.0552 to 7045.0632, a marketer must keep a copy of each certification notice received or sent for three

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years from the date the marketer last engaged in a hazardous waste fuel marketing transaction with the person who sent or received the certification notice.

Subp. 6. **Standards applicable to burners of hazardous waste fuel.** Owners and operators of industrial furnaces and boilers identified in subpart 2, item B, that burn hazardous fuel are subject to the requirements in items A to F.

A. A burner must notify the Environmental Protection Agency of hazardous waste fuel activities and obtain an EPA identification number. Even if a burner has previously notified the Environmental Protection Agency of the burner's hazardous waste management activities and obtained an EPA identification number, the burner must renotify the Environmental Protection Agency to identify the burner's hazardous waste fuel activities.

B. Before a burner accepts the first shipment of hazardous waste fuel from a marketer, the burner must provide the marketer with a one-time written and signed notice certifying that:

(1) the burner has notified the Environmental Protection Agency and identified the burner's waste-as-fuel activities; and

(2) the burner will burn the fuel only in a boiler or furnace identified in subpart 2, item B.

C. In addition to the applicable record keeping requirements of parts 7045.0478 to 7045.0482 and 7045.0584 to 7045.0588, a burner must keep a copy of each certification notice that the burner sends to a marketer for three years from the date the burner last receives hazardous waste fuel from that marketer.

D. Generators who accumulate hazardous waste fuel before burning on-site within the accumulation time period allowed in part 7045.0292 must comply with that part. Small quantity generators who accumulate hazardous waste fuel before burning on-site within the accumulation time period allowed in part 7045.0219 must comply with that part. Burning by the generator of a hazardous waste that is a sludge or is or

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contains a waste listed in part 7045.0135 for reasons other than ignitability or is or contains a waste that is toxic under part 7045.0131, subpart 6, is subject to the additional requirements of item E, subitem (2).

E. Generators who accumulate waste for longer than the time periods in item D, and burners who receive waste from off-site and store it, must comply with the following requirements:

(1) the agency's permitting procedures in chapter 7001 for hazardous waste storage facilities, parts 7045.0205 to 7045.0536, 7045.0544, 7045.0552 to 7045.0632, 7045.1000 to 7045.1030, and 7045.1300 to 7045.1380; and

(2) if the hazardous waste to be burned is a sludge or is or contains a waste listed in part 7045.0135 for reasons other than ignitability, or is or contains a waste that is toxic under part 7045.0131, subpart 6, then parts 7045.0542, excluding subparts 4, item C, and 7, item A, subitem (2); and 7045.0640 apply.

F. A burner must abide by Minnesota and federal air quality regulations, including obtaining a permit if necessary. Compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes.

7045.0695 USED OIL BURNED FOR ENERGY RECOVERY.

Subpart 1. Scope. The requirements of this part apply to used oil that is burned for energy recovery in a boiler or industrial furnace that is not regulated under part 7045.0542 or 7045.0640. Burning used oil as a fuel is prohibited except as provided in this part. Used oil burned for energy recovery is subject to regulation under this part rather than as hazardous waste fuel under part 7045.0692, even if it exhibits a characteristic of hazardous waste identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste. Used oil intentionally mixed with a characteristic hazardous waste as identified in part 7045.0131 is regulated as specified in part 7045.0102, subpart 3.

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A. The requirements of this part do not apply to subitems (1) and (2), which are regulated as specified.

(1) Used oil that has been intentionally mixed with a hazardous waste listed in part 7045.0135 is regulated under part 7045.0692 if it is to be burned for energy recovery.

(2) Used oil containing more than 1,000 parts per million of total halogens is presumed to have been mixed with a halogenated hazardous waste listed in part 7045.0135 and is a hazardous waste. It is subject to the requirements of part 7045.0692 if it is to be burned for energy recovery. This presumption may be rebutted by a demonstration that the used oil does not contain hazardous waste.

B. Used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment, is subject to regulation as off-specification used oil fuel if it exceeds any of the allowable levels of the constituents and properties in subitem (1). On-specification used oil fuel as defined in part 7045.0020, subpart 60a, is subject only to the analysis and record keeping requirements under subpart 3, item B, subitems (1) and (8).

(1) Used oil exceeding any of the following allowable levels, for the constituent or property listed, is subject to full regulation under this part when burned for energy recovery:

Constituent/property	Allowable level
Arsenic, total	5 parts per million maximum
Cadmium, total	2 parts per million maximum
Chromium, total	10 parts per million maximum
Lead, total	100 parts per million maximum
Flash Point	100 degrees Fahrenheit minimum
Total Halogens	4,000 parts per million maximum

(2) The specifications in subitem (1) do not apply to used oil fuel mixed with a listed hazardous waste identified in part 7045.0135. Such wastes are regulated under part 7045.0692.

(3) If the presumption of mixing is not

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successfully rebutted, used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided in item A, subitem (2). This used oil is subject to part 7045.0692 rather than this part when burned for energy recovery. If the presumption of mixing is successfully rebutted and the oil is on-specification used oil, it is subject only to the reduced requirements identified in subpart 3, item B, subitems (1) and (8).

Subp. 2. **Standards applicable to generators of used oil to be burned for energy recovery.** Except as provided in items A and B, generators of used oil are not subject to this subpart.

A. Generators who market used oil directly to a burner are subject to subpart 3.

B. Generators who burn used oil are subject to subpart 4.

Subp. 3. **Standards applicable to marketers of used oil to be burned for energy recovery.**

A. The following persons are not marketers:

(1) Used oil generators, and collectors who transport used oil received only from generators, unless the generator or collector markets the used oil directly to a person who burns it for energy recovery. Generators and collectors who market to incidental burners are not marketers subject to this subpart.

(2) Persons who market only on-specification used oil fuel and who are not the first person to claim the used oil meets the specifications of subpart 1, item B.

B. Marketers are subject to the following requirements:

(1) Used oil fuel is subject to regulation as off-specification used oil fuel under this part unless the marketer obtains analyses or other information documenting that the used oil is on-specification used oil fuel.

(2) A person may market off-specification used oil for energy recovery only:

(a) to burners or other marketers who have

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notified the Environmental Protection Agency of their used oil management activities stating the location and general description of those activities, and who have an EPA identification number; and

(b) to burners who burn the used oil in an industrial furnace or boiler identified in subpart 4, item A, subitems (1) and (2).

(3) Even if a marketer has previously notified the Environmental Protection Agency of the marketer's hazardous waste management activities and obtained an EPA identification number, the marketer must renotify the Environmental Protection Agency to identify the marketer's used oil management activities.

(4) When a marketer initiates a shipment of off-specification used oil fuel, the marketer must prepare and send the receiving facility an invoice containing the following information:

(a) a unique invoice number;

(b) the marketer's own EPA identification number and the EPA identification number of the receiving facility;

(c) the names and addresses of the shipping and receiving facilities;

(d) the quantity of off-specification used oil fuel to be delivered;

(e) the dates of shipment or delivery; and

(f) the following statement: "This used oil is subject to EPA regulation under Code of Federal Regulations, title 40, section 266."

(5) Used oil that meets the definition of combustible liquid or flammable liquid is subject to the United States Department of Transportation hazardous materials regulations in Code of Federal Regulations, title 49, sections 100 to 177.

(6) Before a marketer initiates the first shipment of off-specification used oil fuel to a burner or other marketer, the marketer must obtain a one-time written and signed

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notice from the burner or marketer certifying that:

(a) the burner or marketer has notified the Environmental Protection Agency stating the location and general description of the marketer's used oil management activities; and

(b) if the recipient is a burner, the burner will burn the off-specification used oil fuel only in an industrial furnace or boiler identified in subpart 4, item A, subitems (1) and (2).

(7) Before a marketer accepts the first shipment of off-specification used oil fuel from another marketer subject to the requirements of this part, the first marketer must provide the other marketer with a one-time written and signed notice certifying that the first marketer has notified the Environmental Protection Agency of the first marketer's used oil management activities.

(8) A marketer who first claims under item B, subitem (1), that used oil fuel meets the specifications must keep copies of analysis, or other information used to make the determination, for three years from the date of analysis. That marketer must also record in an operating log and keep for three years the information in units (a) to (d) on each shipment of on-specification used oil fuel. On-specification used oil fuel is not subject to further regulation, unless it is subsequently mixed with hazardous waste or unless it is mixed with used oil so that it no longer meets the specifications:

(a) the name and address of the facility receiving the shipment;

(b) the quantity of used oil fuel delivered;

(c) the date of shipment and delivery; and

(d) a cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets the specifications required under this subitem.

(9) A marketer who receives or initiates an invoice under the requirements of this subpart must keep a copy

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of each invoice for three years from the date the invoice is received or prepared. In addition, a marketer must keep a copy of each certification notice that the marketer received or sent for three years from the date that the marketer last engaged in an off-specification used oil fuel marketing transaction with the person who sent or received the certification notice.

Subp. 4. **Standards applicable to burners of used oil burned for energy recovery.** Owners and operators of devices that burn used oil fuel are subject to the requirements in items A to G.

A. Off-specification used oil fuel may be burned for energy recovery only in industrial furnaces defined in part 7045.0020, or in boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet the following criteria:

(1) industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

(2) utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale; or

(3) used oil-fired space heaters provided that:

(a) the heater burns only used oil that the owner or operator generates or used oil received from do-it-yourself oil changers who generate used oil as household waste;

(b) the heater is designed to have a maximum capacity of not more than 0.5 million Btu per hour; and

(c) the combustion gases from the heater are vented to the out-of-doors.

B. Burners of off-specification used oil fuel and burners of on-specification used oil fuel who are the first to claim that the oil meets the specifications provided in subpart 1, item B, must notify the Environmental Protection Agency stating the location and general description of used oil

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management activities. Burners who meet the following criteria are not required to notify the Environmental Protection Agency:

(1) burners of on-specification used oil fuel who receive the oil from a marketer who has previously notified the Environmental Protection Agency;

(2) owners and operators of used oil-fired space heaters that burn used oil fuel under item A, subitem (3); and

(3) burners who burn on-specification used oil that they generate.

C. Before a burner accepts the first shipment of off-specification used oil fuel from a marketer, the burner must provide the marketer with a one-time written and signed notice certifying that:

(1) the burner has notified the Environmental Protection Agency stating the location and general description of the burner's used oil management activities; and

(2) the burner will burn the used oil only in an industrial furnace or boiler identified in item A, subitems (1) and (2).

D. A person who burns used oil fuel that has been generated on-site is subject to regulation under this subpart unless that person obtains analysis or other information documenting that the oil is on-specification used oil.

E. Burners who process, blend, or otherwise manage off-specification used oil to meet the specifications provided under subpart 1, item B, must obtain analyses or other information documenting that the oil is on-specification used oil.

F. A burner must retain a copy of the invoice given from a marketer for three years from the date the invoice is received. Burners must also keep for three years copies of all analyses of used oil fuel as may be required by items D and E. In addition, the burner must keep a copy of each certification notice that the burner sends to a marketer for three years from the date the burner last received off-specification used oil fuel from that marketer.

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G. Burners must abide by Minnesota and federal air quality regulations, including obtaining a permit if necessary. Compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes.

REPEALER. Minnesota Rules, parts 7045.0100; and 7045.0125, subparts 10 and 11, are repealed.

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Pollution Control Agency

Proposed Permanent Rules Relating to Hazardous Waste; Burning of Hazardous Waste and Used Oil

Rules as Proposed

7001.0520 PERMIT REQUIREMENTS.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Permits by rule.** The owner or operator of the following facilities shall be deemed to have obtained a hazardous waste facility permit without making application for it unless the commissioner finds that the following conditions are not met:

A. to D. [Unchanged.]

E. Containers or tanks where generators mix characteristic hazardous waste as identified in part 7045.0131, subpart 2, with used oil if:

(1) the generators who produce at least 1,000 kilograms per calendar month of hazardous waste meet the requirements of part 7045.0292, subpart 1; or

(2) the generators who produce less than 1,000 kilograms per calendar month of hazardous waste meet the requirements of part 7045.0219, subpart 4, item A.

Subp. 4. [Unchanged.]

7045.0020 DEFINITIONS.

Subpart 1. to 6. [Unchanged.]

Subp. 6a. **Boiler.** "Boiler" means an enclosed device using controlled flame combustion and having the characteristics specified in item A or B. If used oil or hazardous waste is to be used as a fuel in an industrial boiler or a utility boiler, these boilers must meet the additional criteria in items C and D.

A. and B. [Unchanged.]

C. An industrial boiler burning used oil or hazardous waste as a fuel must be located on the site of an establishment engaged in a manufacturing process where substances are

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transformed into new products, including the component parts of products, by mechanical processes.

D. A utility boiler burning used oil or hazardous waste as a fuel must be one that is used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

Subp. 6b. [Unchanged.]

Subp. 6c. **Burner.** "Burner" means an owner or operator of an industrial furnace, industrial boiler, or utility boiler meeting the definition of industrial furnace in subpart 43a or boiler in subpart 6a.

Subp. 7. to 9. [Unchanged.]

Subp. 9a. **Collector.** "Collector" means an initial transporter who receives used oil only from generators and does not market the used oil directly to a person who burns it for energy recovery.

Subp. 9b. **Combustible liquid.** "Combustible liquid" means a liquid that has a flash point below 200 degrees Fahrenheit and equal to or greater than 100 degrees Fahrenheit, as defined in Code of Federal Regulations, title 49, section 173.115.

Subp. 9c. **Commissioner.** "Commissioner" means the commissioner of the Minnesota Pollution Control Agency or ~~his~~ the commissioner's designee.

Subp. ~~9b.~~ 9d. **Component.** "Component" means either the tank or ancillary equipment of a tank system.

Subp. 10. to 21a. [Unchanged.]

Subp. 21b. **EPA identification number.** "EPA identification number" means the number assigned by the Environmental Protection Agency to each generator, transporter, and treatment storage and disposal facility.

Subp. 22. to 24a. [Unchanged.]

Subp. 24b. **Flammable liquid.** "Flammable liquid" means a liquid exhibiting a flash point below 100 degrees Fahrenheit, as defined in Code of Federal Regulations, title 49, section 173.115.

Subp. 25. to 34. [Unchanged.]

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Subp. 34a. **Hazardous waste fuel.** "Hazardous waste fuel" means a hazardous waste that is burned for energy recovery and includes fuel that is produced from hazardous waste by processing, blending, or other treatment, except for those blended fuels described in part 7045.0102, subpart 3.

Subp. 35. to 40. [Unchanged.]

Subp. 40a. **Incidental burner.** "Incidental burner" means a person who burns some used oil fuel for purposes of processing other used oil or treating other used oil to produce used oil fuel for marketing. These persons are considered to be burning incidentally to processing.

Subp. 41. to 55. [Unchanged.]

Subp. 55a. **Marketer.** "Marketer" means a ~~person who, for the purpose of burning for energy recovery, processes, blends, or distributes waste oil, used oil, or hazardous waste. "Marketer" includes a generator who processes, distributes, or blends such fuel directly to a person who burns it.~~ generator who markets hazardous waste fuel or used oil fuel directly to a burner; a person who receives hazardous waste or used oil from generators and produces, processes, or blends hazardous waste fuel from these hazardous wastes, or blends used oil from these oils; a person who distributes but does not process or blend hazardous waste fuel or used oil; and a person who sends blended or processed used oils to brokers or other intermediaries.

Subp. 56. to 58. [Unchanged.]

Subp. 58a. **Mixed municipal solid waste.** "Mixed municipal solid waste" has the meaning given it in Minnesota Statutes, section 115A.03, subdivision 21.

Subp. 59. and 59a. [Unchanged.]

Subp. 59b. **Off-specification used oil.** "Off-specification used oil" means a used oil fuel that exceeds any of the specification levels for the following constituents or has a flash point less than 100 degrees Fahrenheit.

Constituent	Allowable level
Arsenic, total	5 parts per million maximum
Cadmium, total	2 parts per million maximum

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Chromium, total	10 parts per million maximum
Lead, total	100 parts per million maximum
Total Halogens	4,000 parts per million maximum

Subp. 59c. **Onground tank.** "Onground tank" means a device meeting the definition of "tank" in subpart 90 and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.

Subp. 60. [Unchanged.]

Subp. 60a. **On-specification used oil.** "On-specification used oil" means used oil fuel that does not exceed the specification levels for the constituents in subpart 59b, and has a flash point equal to or greater than 100 degrees Fahrenheit.

Subp. 61. to 100a. [Unchanged.]

Subp. 100b. **Used oil fuel.** "Used oil fuel" means used oil that is burned for energy recovery, and includes fuel produced from used oil by processing, blending, or other treatment, except for those blended fuels described in part 7045.0102, subpart 3.

Subp. 101. to 109. [Unchanged.]

7045.0102 MIXTURES OF ~~HAZARDOUS-AND-NONHAZARDOUS~~ WASTES.

Subpart 1. **Scope.** Except as provided in ~~parts-7045.0125, subpart-10-and~~ part 7045.0665, subpart 5, mixtures of ~~hazardous and-nonhazardous~~ wastes are ~~as-follows:~~ listed in subparts 2 and 3.

Subp. 2. **Mixtures of hazardous and nonhazardous wastes.**

A. to G. [Unchanged.]

Subp. 3. **Mixtures of used oil and hazardous waste.** Items A and B apply to used oil that is intentionally mixed with hazardous waste.

A. Used oil mixed with a hazardous waste that exhibits any of the characteristics of part 7045.0131, subparts 2 to 7, is regulated as hazardous waste. If it is burned for energy recovery, it is regulated as a hazardous waste fuel under

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part 7045.0692 provided the mixture continues to exhibit any of those characteristics. If the mixture no longer exhibits any of those characteristics and is to be burned for energy recovery, it is regulated as a used oil fuel under part 7045.0695. If the mixture no longer exhibits any of those characteristics and is not burned for energy recovery, it is subject to the requirements of part 7045.0125.

B. Used oil mixed with hazardous waste listed in part 7045.0135 is a hazardous waste. If it is to be burned for energy recovery, it is regulated as a hazardous waste fuel under part 7045.0692.

7045.0120 EXEMPT WASTES.

The following wastes may be stored, labeled, transported, treated, processed, and disposed of without complying with the requirements of this chapter:

A. to L. [Unchanged.]

~~M. used oil which does not contain waste listed in part 7045.0135 and is to be recycled;~~

~~N.~~ a sample of waste, water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition when:

(1) to (6) [Unchanged.]

~~O.~~ N. pulping liquors (for example, black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless they are accumulated speculatively as defined in part 7045.0020;

~~P.~~ O. spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in part 7045.0020; or

~~Q.~~ P. secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided that:

(1) to (4) [Unchanged.]

7045.0125 MANAGEMENT OF WASTE BY USE, REUSE, RECYCLING, AND

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RECLAMATION.

Subpart 1. **Scope.** This part regulates hazardous waste and used oil that is to be recycled except for use constituting disposal as provided in part 7045.0665, hazardous waste ~~utilized~~ used for precious metals recovery as provided in part 7045.0675; ~~or~~ spent lead-acid batteries being reclaimed as provided in part 7045.0685; hazardous waste fuel being burned for energy recovery as provided in part 7045.0692; or used oil fuel being burned for energy recovery as provided in part 7045.0695.

Subp. 3. [Unchanged.]

Subp. 3a. **Management requirements for used oil.**

A. Used oil that is recycled in some other manner than being burned for energy recovery is not subject to the requirements of parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380.

B. Used oil that is not recycled is regulated as a hazardous waste and is subject to the applicable requirements of parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380.

C. Used oil that is to be burned for energy recovery is regulated under part 7045.0695. Used oil that is mixed with hazardous waste and is burned for energy recovery is regulated under part 7045.0692 and the applicable requirements of part 7045.0102.

Subp. 4. **Management of specific hazardous wastes.** Management of the following wastes when recycled, is not subject to regulation under parts 7045.0205 to ~~7045.0685~~ 7045.0695 and 7045.1300 to 7045.1380:

A. industrial ethyl alcohol that is reclaimed, except as provided in subpart 12;

B. used batteries or used battery cells returned to a battery manufacturer for regeneration; ~~and~~

C. scrap metal;

D. fuels produced from the refining of oil-bearing hazardous wastes along with normal process streams at a petroleum refining facility if the wastes result from normal petroleum refining, production, and transportation practices;

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E. oil that is reclaimed from hazardous wastes that are generated from normal petroleum refining, production, and transportation practices, and that is to be refined along with normal process streams at a petroleum refining facility;

F. coke and coal tar from the iron and steel industry that contain EPA Hazardous Waste No. K087 listed under part 7045.0135, subpart 3, item L, subitem (2), (decanter tank tar sludge from coking operations) from the iron and steel production process;

G. hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from the hazardous wastes, where the hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil if the resulting fuel meets the used oil specification under part 7045.0695, subpart 1, item B, subitem (1), and no other hazardous wastes are used to produce the hazardous waste fuel;

H. hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining, production, and transportation practices, where the hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, if the fuel meets the used oil fuel specification under part 7045.0695, subpart 1, item B, subitem (1);

I. oil that is reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, and is burned as a fuel without reintroduction to a refining process, if the reclaimed oil meets the used oil fuel specification under part 7045.0695, subpart 1, item B, subitem (1); and

J. petroleum coke produced from petroleum refinery hazardous wastes containing oil at the same facility at which the wastes were generated, unless the resulting coke product exhibits one or more of the characteristics of hazardous waste in part 7045.0131.

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Subp. 5. **Requirements for use of hazardous wastes as feedstock.**

A. Except as provided in items B to D, hazardous wastes that are shown to be recycled by being ~~utilized~~ used in a manner specified in subitems (1) to (3), are not subject to regulation under parts 7045.0205 to ~~7045.0685~~ 7045.0695 and 7045.1300 to 7045.1380. This subpart does not apply to wastes being accumulated speculatively as defined in part 7045.0020, or being managed by use constituting disposal~~,~~ as regulated under part 7045.0665 or burning for energy recovery, ~~as regulated under part 7045.0665, or subpart 10~~ as regulated in part 7045.0692. Hazardous wastes are considered to be used as feedstock if they are:

(1) to (3) [Unchanged.]

B. to D. [Unchanged.]

Subp. 6. **Requirements for reclamation of specific hazardous wastes.**

A. [Unchanged.]

B. This subpart does not apply to hazardous wastes being accumulated speculatively as defined in part 7045.0020 or being managed by use constituting disposal, as regulated under part 7045.0665 or being burned for energy recovery ~~under subpart 10~~ as regulated by part 7045.0692.

Subp. 7. **Generator requirements.** Except as provided in subpart 3a, 4, 5, or 6, or ~~10~~ part 7045.0695, generators of hazardous waste destined for recycle~~,~~ are subject to the requirements of parts 7045.0205 to 7045.0304.

Subp. 8. **Transporter requirements.** Except as provided in subpart 3a, 4, 5, or 6, or ~~10~~ part 7045.0695, transporters of hazardous waste destined for recycle are subject to the requirements of parts 7045.0351 to 7045.0397.

Subp. 9. **Facility requirements.** Except as provided in subpart 3a, 4, 5, or 6, or ~~10~~ parts 7045.0692 and 7045.0695, owners or operators of facilities which recycle hazardous waste are subject to the following requirements:

A. and B. [Unchanged.]

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Subp. 10. and 11. [See Repealer.]

Subp. 12. [Unchanged.]

7045.0214 EVALUATION OF WASTES.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Wastes generated by treatment, storage, or disposal.** Wastes generated by treatment, storage, or disposal of hazardous waste are as follows:

A. Except as provided in items B ~~and~~, C, and D, any waste generated from the treatment, storage, or disposal of hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate, but not including precipitation run-off, is a hazardous waste if it meets the criteria of subpart 2 or if it is derived from a waste that is listed in part 7045.0135.

B. [Unchanged.]

C. Materials that have been reclaimed from hazardous wastes and from wastes that have been reclaimed that are beneficially used are not hazardous wastes unless the reclaimed material is used in a manner constituting disposal under part 7045.0665 or burned for energy recovery under part ~~7045.0125, subpart 10~~ 7045.0692.

D. Wastes from burning any of the materials exempted from regulation by part 7045.0125, subpart 4, items D to J, are not hazardous wastes.

7045.0219 SPECIAL REQUIREMENTS FOR SMALL QUANTITY GENERATORS OF HAZARDOUS WASTE.

Subpart 1. **Applicability; quantities.** A generator is a small quantity generator subject to the requirements of subparts 2 to 6 if, in a calendar month, he or she generates less than:

A. to C. [Unchanged.]

Subp. 2. and 3. [Unchanged.]

Subp. 4. **Accumulation on-site.** A small quantity generator who does not have a permit or interim status may accumulate hazardous waste on-site under the following conditions: if the quantity of hazardous waste accumulated at any time exceeds the

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quantities ~~set-forth~~ in item A or B, whichever applies, the small quantity generator must manage all of the accumulated waste in accordance with all the generator requirements ~~set forth~~ in parts 7045.0205 to 7045.0304, excluding this part, but does not lose the small quantity generator status.

A. The following provisions apply to waste not listed as acute hazardous waste:

(1) A small quantity generator who in a calendar month generates at least 100 kilograms of waste not listed as acute hazardous waste in part 7045.0135, subpart 2, 3, or 4, item E, may accumulate that waste on-site for 180 days or less if the quantity of waste accumulated on-site never exceeds 3,000 kilograms and the small quantity generator meets all the requirements of subpart 5. For purposes of this subitem, the time period for accumulation begins when the generator begins accumulation in a container or tank. If the small quantity generators regulated under this subitem mix used oil with hazardous waste, they must meet the requirements under part 7045.0102, subpart 3.

(2) A small quantity generator who in a calendar month generates less than 100 kilograms of waste not listed as acute hazardous waste in part 7045.0135, subpart 2, 3, or 4, item E may accumulate that waste on-site indefinitely until 1,000 kilograms of waste are accumulated, at which point the small quantity generator may only store the waste on-site for a period of 180 days following the date the 1,000 kilogram limit is reached. A small quantity generator accumulating waste under this subitem must meet the requirements of subpart 5, except for subpart 5, item B, subitems (2) to (5). If the small quantity generators regulated under this subitem mix used oil with characteristic hazardous waste, they must meet the requirements under subpart 6. Small quantity generators regulated under this subitem who mix used oil with listed hazardous waste must meet the hazardous waste fuel requirements under part 7045.0692 if the waste is to be burned for energy recovery.

(3) [Unchanged.]

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B. [Unchanged.]

Subp. 5. **Management requirements.**

A. Small quantity generators shall comply with the following requirements of this chapter:

(1) to (5) [Unchanged.]

(6) parts 7045.0566 and 7045.0568; ~~and~~

(7) parts 7045.0626 and 7045.0629; and

(8) as applicable, parts 7045.0692 and 7045.0695.

B. and C. [Unchanged.]

Subp. 6. **Mixtures.** A small quantity generator's hazardous waste may be mixed as specified in items A to C and be subject to the reduced requirements of this rule.

A. Hazardous waste may be mixed with nonhazardous waste pursuant to part 7045.0102 and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity generation and accumulation limitations identified in this rule unless the resultant mixture is hazardous pursuant to part 7045.0102.

B. A waste that is hazardous solely for the characteristic of ignitability may be mixed with used oil that is generated on-site and regulated as used oil fuel under part 7045.0695 if the waste mixed is hazardous solely for the characteristic of ignitability under part 7045.0131, subpart 2, and the following conditions are met:

(1) the ignitable waste is generated by a small quantity generator who in a calendar month generates a total of less than 100 kilograms of hazardous waste;

(2) the ignitable waste has a flash point of 100 degrees Fahrenheit or greater, is not a metal bearing paint waste, or is not gasoline; and

(3) the concentration of ignitable waste in the used oil does not exceed ten percent by volume.

C. Mixtures that do not meet the criteria in item B are subject to part 7045.0102, subpart 3.

7045.0665 USE CONSTITUTING DISPOSAL.

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Subpart 1. [Unchanged.]

Subp. 1a. **Land application prohibition.**

A. The following materials may not be placed in mixed municipal solid waste or applied as a dust suppressant or used for road treatment:

(1) waste oil;

(2) used oil;

(3) hazardous waste; and

(4) a mixture of hazardous waste and other material, waste oil, or used oil.

B. A person may not otherwise place used oil in or on the land, unless approved by the commissioner. The application of used oil in or on the land shall only be approved in the case of an accidental oil spill.

Subp. 2. to 4. [Unchanged.]

7045.0692 HAZARDOUS WASTE BURNED FOR ENERGY RECOVERY.

Subpart 1. **Scope.** This part applies to hazardous wastes that are burned for energy recovery in a boiler or industrial furnace that is not regulated by the thermal treatment standards in part 7045.0542 or 7045.0640, except:

A. Gaseous emissions recovered from hazardous waste management activities when the gas is burned for energy recovery.

B. Used oil that exhibits a characteristic of hazardous waste as identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste, and is regulated as a used oil fuel in part 7045.0695.

C. Hazardous wastes that are exempt from regulation under part 7045.0125, subparts 3a and 4, items D to J.

D. Mixtures of used oil and waste that is hazardous solely for the characteristic of ignitability in part 7045.0131, subpart 2, provided the waste is generated by a person who in a calendar month generates less than 100 kilograms of hazardous waste. This mixture is regulated as provided in part 7045.0219, subpart 6. If the waste is generated by a person who in a

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calendar month generates at least 100 kilograms of hazardous waste, part 7045.0102, subpart 3, item A, applies.

E. Used oil being burned for energy recovery as regulated in part 7045.0695.

Subp. 2. **Prohibitions.**

A. A person may market hazardous waste fuel only:

(1) to persons who have notified the Environmental Protection Agency of their hazardous waste fuel activities and have an EPA identification number; and

(2) if the fuel is to be burned, to persons who burn the fuel in boilers or industrial furnaces identified in item B.

B. Hazardous waste fuel may be burned for energy recovery only in industrial furnaces as defined in part 7045.0020, or boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet one of the following criteria:

(1) industrial boilers located on the site of an establishment engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes; or

(2) utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

C. Hazardous waste or a fuel that contains a hazardous waste may not be burned in a cement kiln unless the kiln fully complies with the thermal treatment standards of part 7045.0542.

Subp. 3. **Standards applicable to generators of hazardous waste fuel.** Generators of hazardous waste that is used as a fuel or used to produce a fuel are subject to parts 7045.0205 to 7045.0304. Generators who market hazardous waste fuel to a burner are also subject to subpart 5. Generators who are burners are also subject to subpart 6.

Subp. 4. **Standards applicable to transporters of hazardous**

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waste fuel. Transporters of hazardous waste fuel and hazardous waste that is used to produce a fuel are subject to parts 7045.0351 to 7045.0397.

Subp. 5. **Standards applicable to marketers of hazardous waste fuel.** Marketers are subject to the requirements in items A to F.

A. A marketer of hazardous waste that is used as a fuel or used to produce a fuel must notify the Environmental Protection Agency to identify hazardous waste fuel activities. Even if a marketer has previously notified the Environmental Protection Agency of hazardous waste management activities other than hazardous waste fuel activities, a marketer must renotify specifically to identify hazardous waste fuel activities.

B. A marketer must comply with the prohibitions in subpart 2, item A.

C. If a marketer is a generator, or becomes a generator by initiating a shipment of hazardous waste fuel, the marketer must comply with parts 7045.0205 to 7045.0304. If the marketer operates a facility, the marketer must comply with parts 7045.0450 to 7045.0534. If the marketer is operating a facility under interim status, the marketer must comply with parts 7045.0552 to 7045.0632. If the marketer stores hazardous waste, the marketer must comply with the agency's permitting procedures in chapter 7001 for storage of hazardous waste.

D. Before a marketer initiates the first shipment of hazardous waste fuel to a burner or another marketer, a one-time written and signed notice from the burner or marketer must be obtained certifying that:

(1) the burner or marketer has notified the Environmental Protection Agency and identified the waste-as-fuel activities; and

(2) if the recipient is a burner, the burner will burn the hazardous waste fuel only in an industrial furnace or boiler identified in subpart 2, item B.

E. Before a marketer accepts the first shipment of hazardous waste fuel from another marketer, the receiving

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marketer must provide the other marketer with a one-time written and signed notice certifying that the receiving marketer has notified the Environmental Protection Agency and identified the receiving marketer's hazardous waste fuel activities.

F. In addition to the applicable record keeping requirements of parts 7045.0205 to 7045.0304, 7045.0450 to 7045.0534, and 7045.0552 to 7045.0632, a marketer must keep a copy of each certification notice received or sent for three years from the date the marketer last engaged in a hazardous waste fuel marketing transaction with the person who sent or received the certification notice.

Subp. 6. **Standards applicable to burners of hazardous waste fuel.** Owners and operators of industrial furnaces and boilers identified in subpart 2, item B, that burn hazardous fuel are subject to the requirements in items A to F.

A. A burner must notify the Environmental Protection Agency of hazardous waste fuel activities and obtain an EPA identification number. Even if a burner has previously notified the Environmental Protection Agency of the burner's hazardous waste management activities and obtained an EPA identification number, the burner must renotify the Environmental Protection Agency to identify the burner's hazardous waste fuel activities.

B. Before a burner accepts the first shipment of hazardous waste fuel from a marketer, the burner must provide the marketer with a one-time written and signed notice certifying that:

(1) the burner has notified the Environmental Protection Agency and identified the burner's waste-as-fuel activities; and

(2) the burner will burn the fuel only in a boiler or furnace identified in subpart 2, item B.

C. In addition to the applicable record keeping requirements of parts 7045.0478 to 7045.0482 and 7045.0584 to 7045.0588, a burner must keep a copy of each certification notice that the burner sends to a marketer for three years from the date the burner last receives hazardous waste fuel from that

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marketer.

D. Generators who accumulate hazardous waste fuel before burning on-site within the accumulation time period allowed in part 7045.0292 must comply with that part. Small quantity generators who accumulate hazardous waste fuel before burning on-site within the accumulation time period allowed in part 7045.0219 must comply with that part. Burning by the generator of a hazardous waste that is a sludge or is or contains a waste listed in part 7045.0135 for reasons other than ignitability or is or contains a waste that is toxic under part 7045.0131, subpart 6, is subject to the additional requirements of item E, subitem (2).

E. Generators who accumulate waste for longer than the time periods in item D, and burners who receive waste from off-site and store it, must comply with the following requirements:

(1) the agency's permitting procedures in chapter 7001 for hazardous waste storage facilities, parts 7045.0205 to 7045.0536, 7045.0544, 7045.0552 to 7045.0632, 7045.1000 to 7045.1030, and 7045.1300 to 7045.1380; and

(2) if the hazardous waste to be burned is a sludge or is or contains a waste listed in part 7045.0135 for reasons other than ignitability, or is or contains a waste that is toxic under part 7045.0131, subpart 6, then parts 7045.0542, excluding subparts 4, item C, and 7, item A, subitem (2); and 7045.0640 apply.

F. A burner must abide by Minnesota and federal air quality regulations, including obtaining a permit if necessary. Compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes.

7045.0695 USED OIL BURNED FOR ENERGY RECOVERY.

Subpart 1. **Scope.** The requirements of this part apply to used oil that is burned for energy recovery in a boiler or industrial furnace that is not regulated under part 7045.0542 or 7045.0640. Used oil burned for energy recovery is subject to

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regulation under this part rather than as hazardous waste fuel under part 7045.0692, even if it exhibits a characteristic of hazardous waste identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste. Used oil intentionally mixed with a characteristic hazardous waste as identified in part 7045.0131 is regulated as specified in part 7045.0102, subpart 3.

A. The requirements of this part do not apply to subitems (1) and (2), which are regulated as specified.

(1) Used oil that has been intentionally mixed with a hazardous waste listed in part 7045.0135 is regulated under part 7045.0692 if it is to be burned for energy recovery.

(2) Used oil containing more than 1,000 parts per million of total halogens is presumed to have been mixed with a halogenated hazardous waste listed in part 7045.0135 and is a hazardous waste. It is subject to the requirements of part 7045.0692 if it is to be burned for energy recovery. This presumption may be rebutted by a demonstration that the used oil does not contain hazardous waste.

B. Used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment, is subject to regulation as off-specification used oil fuel if it exceeds any of the allowable levels of the constituents and properties in subitem (1). On-specification used oil fuel as defined in part 7045.0020, subpart 60a, is subject only to the analysis and record keeping requirements under subpart 3, item B, subitems (1) and (8).

(1) Used oil exceeding any of the following allowable levels, for the constituent or property listed, is subject to full regulation under this part when burned for energy recovery:

Constituent/property	Allowable level
Arsenic, total	5 parts per million maximum
Cadmium, total	2 parts per million maximum
Chromium, total	10 parts per million maximum
Lead, total	100 parts per million maximum

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Flash Point 100 degrees Fahrenheit minimum

Total Halogens 4,000 parts per million maximum

(2) The specifications in subitem (1) do not apply to used oil fuel mixed with a listed hazardous waste identified in part 7045.0135. Such wastes are regulated under part 7045.0692.

(3) If the presumption of mixing is not successfully rebutted, used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided in item A, subitem (2). This used oil is subject to part 7045.0692 rather than this part when burned for energy recovery. If the presumption of mixing is successfully rebutted and the oil is on-specification used oil, it is subject only to the reduced requirements identified in subpart 3, item B, subitems (1) and (8).

Subp. 2. **Standards applicable to generators of used oil to be burned for energy recovery.** Except as provided in items A and B, generators of used oil are not subject to this subpart.

A. Generators who market used oil directly to a burner are subject to subpart 3.

B. Generators who burn used oil are subject to subpart 4.

Subp. 3. **Standards applicable to marketers of used oil to be burned for energy recovery.**

A. The following persons are not marketers:

(1) Used oil generators, and collectors who transport used oil received only from generators, unless the generator or collector markets the used oil directly to a person who burns it for energy recovery. Generators and collectors who market to incidental burners are not marketers subject to this subpart.

(2) Persons who market only on-specification used oil fuel and who are not the first person to claim the used oil meets the specifications of subpart 1, item B.

B. Marketers are subject to the following requirements:

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(1) Used oil fuel is subject to regulation as off-specification used oil fuel under this part unless the marketer obtains analyses or other information documenting that the used oil is on-specification used oil fuel.

(2) A person may market off-specification used oil for energy recovery only:

(a) to burners or other marketers who have notified the Environmental Protection Agency of their used oil management activities stating the location and general description of those activities, and who have an EPA identification number; and

(b) to burners who burn the used oil in an industrial furnace or boiler identified in subpart 4, item A, subitems (1) and (2).

(3) Even if a marketer has previously notified the Environmental Protection Agency of the marketer's hazardous waste management activities and obtained an EPA identification number, the marketer must renotify the Environmental Protection Agency to identify the marketer's used oil management activities.

(4) When a marketer initiates a shipment of off-specification used oil fuel, the marketer must prepare and send the receiving facility an invoice containing the following information:

(a) a unique invoice number;

(b) the marketer's own EPA identification number and the EPA identification number of the receiving facility;

(c) the names and addresses of the shipping and receiving facilities;

(d) the quantity of off-specification used oil fuel to be delivered;

(e) the dates of shipment or delivery; and

(f) the following statement: "This used oil is subject to EPA regulation under Code of Federal Regulations, title 40, section 266."

(5) Used oil that meets the definition of

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combustible liquid or flammable liquid is subject to the United States Department of Transportation hazardous materials regulations in Code of Federal Regulations, title 49, sections 100 to 177.

(6) Before a marketer initiates the first shipment of off-specification used oil fuel to a burner or other marketer, the marketer must obtain a one-time written and signed notice from the burner or marketer certifying that:

(a) the burner or marketer has notified the Environmental Protection Agency stating the location and general description of the marketer's used oil management activities; and

(b) if the recipient is a burner, the burner will burn the off-specification used oil fuel only in an industrial furnace or boiler identified in subpart 4, item A, subitems (1) and (2).

(7) Before a marketer accepts the first shipment of off-specification used oil fuel from another marketer subject to the requirements of this part, the first marketer must provide the other marketer with a one-time written and signed notice certifying that the first marketer has notified the Environmental Protection Agency of the first marketer's used oil management activities.

(8) A marketer who first claims under item B, subitem (1), that used oil fuel meets the specifications must keep copies of analysis, or other information used to make the determination, for three years from the date of analysis. That marketer must also record in an operating log and keep for three years the information in units (a) to (d) on each shipment of on-specification used oil fuel. On-specification used oil fuel is not subject to further regulation, unless it is subsequently mixed with hazardous waste or unless it is mixed with used oil so that it no longer meets the specifications:

(a) the name and address of the facility receiving the shipment;

(b) the quantity of used oil fuel delivered;

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(c) the date of shipment and delivery; and

(d) a cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets the specifications required under this subitem.

(9) A marketer who receives or initiates an invoice under the requirements of this subpart must keep a copy of each invoice for three years from the date the invoice is received or prepared. In addition, a marketer must keep a copy of each certification notice that the marketer received or sent for three years from the date that the marketer last engaged in an off-specification used oil fuel marketing transaction with the person who sent or received the certification notice.

Subp. 4. **Standards applicable to burners of used oil burned for energy recovery.** Owners and operators of devices that burn used oil fuel are subject to the requirements in items A to G.

A. Off-specification used oil fuel may be burned for energy recovery only in industrial furnaces defined in part 7045.0020, or in boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet the following criteria:

(1) industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

(2) utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale; or

(3) used oil-fired space heaters provided that:

(a) the heater burns only used oil that the owner or operator generates or used oil received from do-it-yourself oil changers who generate used oil as household waste;

(b) the heater is designed to have a maximum capacity of not more than 0.5 million Btu per hour; and

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(c) the combustion gases from the heater are vented to the out-of-doors.

B. Burners of off-specification used oil fuel and burners of on-specification used oil fuel who are the first to claim that the oil meets the specifications provided in subpart 1, item B, must notify the Environmental Protection Agency stating the location and general description of used oil management activities. Burners who meet the following criteria are not required to notify the Environmental Protection Agency:

(1) burners of on-specification used oil fuel who receive the oil from a marketer who has previously notified the Environmental Protection Agency;

(2) owners and operators of used oil-fired space heaters that burn used oil fuel under item A, subitem (3); and

(3) burners who burn on-specification used oil that they generate.

C. Before a burner accepts the first shipment of off-specification used oil fuel from a marketer, the burner must provide the marketer with a one-time written and signed notice certifying that:

(1) the burner has notified the Environmental Protection Agency stating the location and general description of the burner's used oil management activities; and

(2) the burner will burn the used oil only in an industrial furnace or boiler identified in item A, subitems (1) and (2).

D. A person who burns used oil fuel that has been generated on-site is subject to regulation under this subpart unless that person obtains analysis or other information documenting that the oil is on-specification used oil.

E. Burners who process, blend, or otherwise manage off-specification used oil to meet the specifications provided under subpart 1, item B, must obtain analyses or other information documenting that the oil is on-specification used oil.

F. A burner must retain a copy of the invoice given

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from a marketer for three years from the date the invoice is received. Burners must also keep for three years copies of all analyses of used oil fuel as may be required by items D and E. In addition, the burner must keep a copy of each certification notice that the burner sends to a marketer for three years from the date the burner last received off-specification used oil fuel from that marketer.

G. Burners must abide by Minnesota and federal air quality regulations, including obtaining a permit if necessary. Compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes.

REPEALER. Minnesota Rules, parts 7045.0100; and 7045.0125, subparts 10 and 11, are repealed.

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Office of the Revisor of Statutes

Administrative Rules

TITLE: Proposed Permanent Rules Relating to Hazardous Waste; Burning of Hazardous Waste and Used Oil

AGENCY: Pollution Control Agency

MINNESOTA RULES: Chapters 7001 and 7045

The attached rules are approved for publication in the State Register

Carla M. Riehle
Assistant Revisor

Pollution Control Agency

Adopted Permanent Rules Relating to Hazardous Waste; Burning of Hazardous Waste and Used Oil

Rules as Adopted

7001.0520 PERMIT REQUIREMENTS.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Permits by rule.** The owner or operator of the following facilities shall be deemed to have obtained a hazardous waste facility permit without making application for it unless the commissioner finds that the following conditions are not met:

A. to D. [Unchanged.]

E. Containers or tanks where generators mix characteristic hazardous waste as identified in part 7045.0131, subpart 2, with used oil if:

(1) the generators who produce at least 1,000 kilograms per calendar month of hazardous waste meet the requirements of part 7045.0292, subpart 1; or

(2) the generators who produce less than 1,000 kilograms per calendar month of hazardous waste meet the requirements of part 7045.0219, subpart 4, item A.

Subp. 4. [Unchanged.]

7045.0020 DEFINITIONS.

Subpart 1. to 6. [Unchanged.]

Subp. 6a. Boiler. "Boiler" means an enclosed device using controlled flame combustion and having the characteristics specified in item A or B. If used oil or hazardous waste is to be used as a fuel in an industrial boiler or a utility boiler, these boilers must meet the additional criteria in items C and D.

A. and B. [Unchanged.]

C. An industrial boiler burning used oil or hazardous waste as a fuel must be located on the site of an establishment engaged in a manufacturing process where substances are

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transformed into new products, including the component parts of products, by mechanical processes.

D. A utility boiler burning used oil or hazardous waste as a fuel must be one that is used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

Subp. 6b. [Unchanged.]

Subp. 6c. **Burner.** "Burner" means an owner or operator of an industrial furnace, industrial boiler, or utility boiler meeting the definition of industrial furnace in subpart 43a or boiler in subpart 6a.

Subp. 7. to 9. [Unchanged.]

Subp. 9a. **Collector.** "Collector" means an initial transporter who receives used oil only from generators and does not market the used oil directly to a person who burns it for energy recovery.

Subp. 9b. **Combustible liquid.** "Combustible liquid" means ~~a liquid that has a flash point below 200 degrees Fahrenheit and equal to or greater than 100 degrees Fahrenheit, as defined~~ has the meaning given in Code of Federal Regulations, title 49, section 173.115.

Subp. 9c. **Commissioner.** "Commissioner" means the commissioner of the Minnesota Pollution Control Agency or the commissioner's designee.

Subp. 9d. **Component.** "Component" means either the tank or ancillary equipment of a tank system.

Subp. 10. to 21a. [Unchanged.]

Subp. 21b. **EPA identification number.** "EPA identification number" means the number assigned by the Environmental Protection Agency to each generator, transporter, and treatment, storage and disposal facility.

Subp. 22. to 24a. [Unchanged.]

Subp. 24b. **Flammable liquid.** "Flammable liquid" means ~~a liquid exhibiting a flash point below 100 degrees Fahrenheit, as defined~~ has the meaning given in Code of Federal Regulations, title 49, section 173.115.

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Subp. 25. to 34. [Unchanged.]

Subp. 34a. **Hazardous waste fuel.** "Hazardous waste fuel" means a hazardous waste that is burned for energy recovery and includes fuel that is produced from hazardous waste by processing, blending, or other treatment, except for those blended fuels described in part 7045.0102, subpart 3.

Subp. 35. to 40. [Unchanged.]

Subp. 40a. **Incidental burner.** "Incidental burner" means a person who burns some used oil fuel for purposes of processing other used oil or treating other used oil to produce used oil fuel for marketing. These persons are considered to be burning incidentally to processing.

Subp. 41. to 55. [Unchanged.]

Subp. 55a. **Marketer.** "Marketer" means a generator who markets hazardous waste fuel or used oil fuel directly to a burner; a person who receives hazardous waste or used oil from generators and produces, processes, or blends hazardous waste fuel from these hazardous wastes, or blends used oil from these oils; a person who distributes but does not process or blend hazardous waste fuel or used oil; and a person who sends blended or processed used oils to brokers or other intermediaries.

Subp. 56. to 58. [Unchanged.]

Subp. 58a. **Mixed municipal solid waste.** "Mixed municipal solid waste" has the meaning given it in Minnesota Statutes, section 115A.03, subdivision 21.

Subp. 59. and 59a. [Unchanged.]

Subp. 59b. Off-specification used oil. **"Off-specification used oil" means a used oil fuel that exceeds any of the specification levels for the following constituents or has a flash point less than 100 degrees Fahrenheit.**

Constituent	Allowable level
Arsenic, total	5 parts per million maximum
Cadmium, total	2 parts per million maximum
Chromium, total	10 parts per million maximum
Lead, total	100 parts per million maximum
Total Halogens	4,000 parts per million maximum

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Subp. 59c. **Onground tank.** "Onground tank" means a device meeting the definition of "tank" in subpart 90 and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.

Subp. 60. [Unchanged.]

Subp. 60a. **On-specification used oil.** "On-specification used oil" means used oil fuel that does not exceed the specification levels for the constituents in subpart 59b, and has a flash point equal to or greater than 100 degrees Fahrenheit.

Subp. 61. to 100a. [Unchanged.]

Subp. 100b. **Used oil fuel.** "Used oil fuel" means used oil that is burned for energy recovery, and includes fuel produced from used oil by processing, blending, or other treatment, except for those blended fuels described in part 7045.0102, subpart 3.

Subp. 101. to 109. [Unchanged.]

7045.0102 MIXTURES OF WASTES.

Subpart 1. **Scope.** Except as provided in part 7045.0665, subpart 5 1, mixtures of wastes are listed in subparts 2 and 3.

Subp. 2. **Mixtures of hazardous and nonhazardous wastes.**

A. to G. [Unchanged.]

Subp. 3. **Mixtures of used oil and hazardous waste.** Items A and B apply to used oil that is intentionally mixed with hazardous waste.

A. Used oil mixed with a hazardous waste that exhibits any of the characteristics of part 7045.0131, subparts 2 to 7, is regulated as hazardous waste. If it is burned for energy recovery, it is regulated as a hazardous waste fuel under part 7045.0692 provided the mixture continues to exhibit any of those characteristics. If the mixture no longer exhibits any of those characteristics and is to be burned for energy recovery, it is regulated as a used oil fuel under part 7045.0695. If the mixture no longer exhibits any of those characteristics and is

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not burned for energy recovery, it is subject to the requirements of part 7045.0125.

B. Used oil mixed with hazardous waste listed in part 7045.0135 is a hazardous waste. If it is to be burned for energy recovery, it is regulated as a hazardous waste fuel under part 7045.0692.

7045.0120 EXEMPT WASTES.

The following wastes may be stored, labeled, transported, treated, processed, and disposed of without complying with the requirements of this chapter:

A. to L. [Unchanged.]

M. a sample of waste, water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition when:

(1) to (6) [Unchanged.]

N. pulping liquors (for example, black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless they are accumulated speculatively as defined in part 7045.0020;

O. spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in part 7045.0020; or

P. secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided that:

(1) to (4) [Unchanged.]

7045.0125 MANAGEMENT OF WASTE BY USE, REUSE, RECYCLING, AND RECLAMATION.

Subpart 1. Scope. This part regulates hazardous waste and used oil that is to be recycled except for use constituting disposal as provided in part 7045.0665, hazardous waste used for precious metals recovery as provided in part 7045.0675; spent lead-acid batteries being reclaimed as provided in part 7045.0685; hazardous waste fuel being burned for energy recovery

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as provided in part 7045.0692; or used oil fuel being burned for energy recovery as provided in part 7045.0695.

Subp. 3. [Unchanged.]

Subp. 3a. **Management requirements for used oil.**

A. Used oil that is recycled in some other manner than being burned for energy recovery is not subject to the requirements of parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380.

B. Used oil that is not recycled is regulated as a hazardous waste and is subject to the applicable requirements of parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380.

C. Used oil that is to be burned for energy recovery is regulated under part 7045.0695. Used oil that is mixed with hazardous waste and is burned for energy recovery is regulated under part 7045.0692 and the applicable requirements of part 7045.0102.

Subp. 4. **Management of specific hazardous wastes.** Management of the following wastes when recycled, is not subject to regulation under parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380:

A. industrial ethyl alcohol that is reclaimed, except as provided in subpart 12;

B. used batteries or used battery cells returned to a battery manufacturer for regeneration;

C. scrap metal;

D. fuels produced from the refining of oil-bearing hazardous wastes along with normal process streams at a petroleum refining facility if the wastes result from normal petroleum refining, production, and transportation practices;

E. oil that is reclaimed from hazardous wastes that are generated from normal petroleum refining, production, and transportation practices, and that is to be refined along with normal process streams at a petroleum refining facility;

F. coke and coal tar from the iron and steel industry that contain EPA Hazardous Waste No. K087 listed under part 7045.0135, subpart 3, item L, subitem (2), (decanter tank tar

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sludge from coking operations) from the iron and steel production process;

G. hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from the hazardous wastes, where the hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil if the resulting fuel meets the used oil specification under part 7045.0695, subpart 1, item B, subitem (1), and no other hazardous wastes are used to produce the hazardous waste fuel;

H. hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining, production, and transportation practices, where the hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, if the fuel meets the used oil fuel specification under part 7045.0695, subpart 1, item B, subitem (1);

I. oil that is reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, and is burned as a fuel without reintroduction to a refining process, if the reclaimed oil meets the used oil fuel specification under part 7045.0695, subpart 1, item B, subitem (1); and

J. petroleum coke produced from petroleum refinery hazardous wastes containing oil at the same facility at which the wastes were generated, unless the resulting coke product exhibits one or more of the characteristics of hazardous waste in part 7045.0131.

Subp. 5. Requirements for use of hazardous wastes as feedstock.

A. Except as provided in items B to D, hazardous wastes that are shown to be recycled by being used in a manner specified in subitems (1) to (3), are not subject to regulation under parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380. This subpart does not apply to wastes being accumulated

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speculatively as defined in part 7045.0020, or being managed by use constituting disposal as regulated under part 7045.0665 or burning for energy recovery, as regulated in part 7045.0692. Hazardous wastes are considered to be used as feedstock if they are:

(1) to (3) [Unchanged.]

B. to D. [Unchanged.]

Subp. 6. **Requirements for reclamation of specific hazardous wastes.**

A. [Unchanged.]

B. This subpart does not apply to hazardous wastes being accumulated speculatively as defined in part 7045.0020 or being managed by use constituting disposal, as regulated under part 7045.0665 or being burned for energy recovery as regulated by part 7045.0692.

Subp. 7. **Generator requirements.** Except as provided in subpart 3a, 4, 5, or 6, or part 7045.0695, generators of hazardous waste destined for recycle are subject to the requirements of parts 7045.0205 to 7045.0304.

Subp. 8. **Transporter requirements.** Except as provided in subpart 3a, 4, 5, or 6, or part 7045.0695, transporters of hazardous waste destined for recycle are subject to the requirements of parts 7045.0351 to 7045.0397.

Subp. 9. **Facility requirements.** Except as provided in subpart 3a, 4, 5, or 6, or parts 7045.0692 and 7045.0695, owners or operators of facilities which recycle hazardous waste are subject to the following requirements:

A. and B. [Unchanged.]

Subp. 10. and 11. [See Repealer.]

Subp. 12. [Unchanged.]

7045.0214 EVALUATION OF WASTES.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Wastes generated by treatment, storage, or disposal.** Wastes generated by treatment, storage, or disposal of hazardous waste are as follows:

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A. Except as provided in items B, C, and D, any waste generated from the treatment, storage, or disposal of hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate, but not including precipitation run-off, is a hazardous waste if it meets the criteria of subpart 2 or if it is derived from a waste that is listed in part 7045.0135.

B. [Unchanged.]

C. Materials that have been reclaimed from hazardous wastes and from wastes that have been reclaimed that are beneficially used are not hazardous wastes unless the reclaimed material is used in a manner constituting disposal under part 7045.0665 or burned for energy recovery under part 7045.0692.

D. Wastes from burning any of the materials exempted from regulation by part 7045.0125, subpart 4, items D to J, are not hazardous wastes.

7045.0219 SPECIAL REQUIREMENTS FOR SMALL QUANTITY GENERATORS OF HAZARDOUS WASTE.

Subpart 1. **Applicability; quantities.** A generator is a small quantity generator subject to the requirements of subparts 2 to 6 if, in a calendar month, he or she generates less than:

A. to C. [Unchanged.]

Subp. 2. and 3. [Unchanged.]

Subp. 4. **Accumulation on-site.** **A small quantity generator who does *not* have a permit or interim status may accumulate hazardous waste on-site under the following conditions: if the quantity of hazardous waste accumulated at any time exceeds the quantities in item A or B, whichever applies, the small quantity generator must manage all of the accumulated waste in accordance with all the generator requirements in parts 7045.0205 to 7045.0304, excluding this part, but does not lose the small quantity generator status.**

A. The following provisions apply to waste not listed as acute hazardous waste:

(1) A small quantity generator who in a calendar

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month generates at least 100 kilograms of waste not listed as acute hazardous waste in part 7045.0135, subpart 2, 3, or 4, item E, may accumulate that waste on-site for 180 days or less if the quantity of waste accumulated on-site never exceeds 3,000 kilograms and the small quantity generator meets all the requirements of subpart 5. For purposes of this subitem, the time period for accumulation begins when the generator begins accumulation in a container or tank. If the small quantity generators regulated under this subitem mix used oil with hazardous waste, they must meet the requirements under part 7045.0102, subpart 3.

(2) A small quantity generator who in a calendar month generates less than 100 kilograms of waste not listed as acute hazardous waste in part 7045.0135, subpart 2, 3, or 4, item E may accumulate that waste on-site indefinitely until 1,000 kilograms of waste are accumulated, at which point the small quantity generator may only store the waste on-site for a period of 180 days following the date the 1,000 kilogram limit is reached. A small quantity generator accumulating waste under this subitem must meet the requirements of subpart 5, except for subpart 5, item B, subitems (2) to (5). If the small quantity generators regulated under this subitem mix used oil with characteristic hazardous waste, they must meet the requirements under subpart 6. Small quantity generators regulated under this subitem who mix used oil with listed hazardous waste must meet the hazardous waste fuel requirements under part 7045.0692 if the waste is to be burned for energy recovery.

(3) [Unchanged.]

B. [Unchanged.]

Subp. 5. **Management requirements.**

A. Small quantity generators shall comply with the following requirements of this chapter:

(1) to (5) [Unchanged.]

(6) parts 7045.0566 and 7045.0568;

(7) parts 7045.0626 and 7045.0629; and

(8) as applicable, parts 7045.0692 and 7045.0695.

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B. and C. [Unchanged.]

Subp. 6. **Mixtures.** A small quantity generator's hazardous waste may be mixed as specified in items A to C and be subject to the reduced requirements of this rule.

A. Hazardous waste may be mixed with nonhazardous waste pursuant to part 7045.0102 and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity generation and accumulation limitations identified in this rule unless the resultant mixture is hazardous pursuant to part 7045.0102.

B. A waste that is hazardous solely for the characteristic of ignitability may be mixed with used oil that is generated on-site and regulated as used oil fuel under part 7045.0695 if the waste mixed is hazardous solely for the characteristic of ignitability under part 7045.0131, subpart 2, and the following conditions are met:

(1) the ignitable waste is generated by a small quantity generator who in a calendar month generates a total of less than 100 kilograms of hazardous waste;

(2) the ignitable waste has a flash point of 100 degrees Fahrenheit or greater, is not a metal bearing paint waste, or is not gasoline; and

(3) the concentration of ignitable waste in the used oil does not exceed ten percent by volume.

C. Mixtures that do not meet the criteria in item B are subject to part 7045.0102, subpart 3.

7045.0665 USE CONSTITUTING DISPOSAL.

Subpart 1. [Unchanged.]

Subp. 1a. **Land application prohibition.**

A. The following materials may not be placed in mixed municipal solid waste or applied as a dust suppressant or used for road treatment:

(1) waste oil;

(2) used oil;

(3) hazardous waste; and

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(4) a mixture of hazardous waste and other material, waste oil, or used oil.

B. A person may not otherwise place used or waste oil in or on the land, unless approved by the commissioner. The application of used or waste oil in or on the land shall only be approved in the case of an accidental ~~oil~~ spill.

Subp. 2. to 4. [Unchanged.]

7045.0692 HAZARDOUS WASTE BURNED FOR ENERGY RECOVERY.

Subpart 1. **Scope.** This part applies to hazardous wastes that are burned for energy recovery in a boiler or industrial furnace that is not regulated by the thermal treatment standards in part 7045.0542 or 7045.0640, except:

A. Gaseous emissions recovered from hazardous waste management activities when the gas is burned for energy recovery.

B. Used oil that exhibits a characteristic of hazardous waste as identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste, and is regulated as a used oil fuel in part 7045.0695.

C. Hazardous wastes that are exempt from regulation under part 7045.0125, subparts 3a and 4, items D to J.

D. Mixtures of used oil and waste that is hazardous solely for the characteristic of ignitability in part 7045.0131, subpart 2, provided the waste is generated by a person who in a calendar month generates less than 100 kilograms of hazardous waste. This mixture is regulated as provided in part 7045.0219, subpart 6. If the waste is generated by a person who in a calendar month generates at least 100 kilograms of hazardous waste, part 7045.0102, subpart 3, item A, applies.

E. Used oil being burned for energy recovery as regulated in part 7045.0695.

Subp. 2. **Prohibitions.**

A. A person may market hazardous waste fuel only:

(1) to persons who have notified the Environmental Protection Agency of their hazardous waste fuel

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activities and have an EPA identification number; and

(2) if the fuel is to be burned, to persons who burn the fuel in boilers or industrial furnaces identified in item B.

B. Hazardous waste fuel may be burned for energy recovery only in industrial furnaces as defined in part 7045.0020, or boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet one of the following criteria:

(1) industrial boilers located on the site of an establishment engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes; or

(2) utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

C. Hazardous waste or a fuel that contains a hazardous waste may not be burned in a cement kiln unless the kiln fully complies with the thermal treatment standards of part 7045.0542.

Subp. 3. Standards applicable to generators of hazardous waste fuel. Generators of hazardous waste that is used as a fuel or used to produce a fuel are subject to parts 7045.0205 to 7045.0304. Generators who market hazardous waste fuel to a burner are also subject to subpart 5. Generators who are burners are also subject to subpart 6.

Subp. 4. Standards applicable to transporters of hazardous waste fuel. Transporters of hazardous waste fuel and hazardous waste that is used to produce a fuel are subject to parts 7045.0351 to 7045.0397.

Subp. 5. Standards applicable to marketers of hazardous waste fuel. Marketers are subject to the requirements in items A to F.

A. A marketer of hazardous waste that is used as a fuel or used to produce a fuel must notify the Environmental

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Protection Agency to identify hazardous waste fuel activities. Even if a marketer has previously notified the Environmental Protection Agency of hazardous waste management activities other than hazardous waste fuel activities, a marketer must renotify specifically to identify hazardous waste fuel activities.

B. A marketer must comply with the prohibitions in subpart 2, item A.

C. If a marketer is a generator, or becomes a generator by initiating a shipment of hazardous waste fuel, the marketer must comply with parts 7045.0205 to 7045.0304. If the marketer operates a facility, the marketer must comply with parts 7045.0450 to 7045.0534. If the marketer is operating a facility under interim status, the marketer must comply with parts 7045.0552 to 7045.0632. If the marketer stores hazardous waste, the marketer must comply with the agency's permitting procedures in chapter 7001 for storage of hazardous waste.

D. Before a marketer initiates the first shipment of hazardous waste fuel to a burner or another marketer, a one-time written and signed notice from the burner or marketer must be obtained certifying that:

(1) the burner or marketer has notified the Environmental Protection Agency and identified the waste-as-fuel activities; and

(2) if the recipient is a burner, the burner will burn the hazardous waste fuel only in an industrial furnace or boiler identified in subpart 2, item B.

E. Before a marketer accepts the first shipment of hazardous waste fuel from another marketer, the receiving marketer must provide the other marketer with a one-time written and signed notice certifying that the receiving marketer has notified the Environmental Protection Agency and identified the receiving marketer's hazardous waste fuel activities.

F. In addition to the applicable record keeping requirements of parts 7045.0205 to 7045.0304, 7045.0450 to 7045.0534, and 7045.0552 to 7045.0632, a marketer must keep a copy of each certification notice received or sent for three

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years from the date the marketer last engaged in a hazardous waste fuel marketing transaction with the person who sent or received the certification notice.

Subp. 6. **Standards applicable to burners of hazardous waste fuel.** Owners and operators of industrial furnaces and boilers identified in subpart 2, item B, that burn hazardous fuel are subject to the requirements in items A to F.

A. A burner must notify the Environmental Protection Agency of hazardous waste fuel activities and obtain an EPA identification number. Even if a burner has previously notified the Environmental Protection Agency of the burner's hazardous waste management activities and obtained an EPA identification number, the burner must renotify the Environmental Protection Agency to identify the burner's hazardous waste fuel activities.

B. Before a burner accepts the first shipment of hazardous waste fuel from a marketer, the burner must provide the marketer with a one-time written and signed notice certifying that:

(1) the burner has notified the Environmental Protection Agency and identified the burner's waste-as-fuel activities; and

(2) the burner will burn the fuel only in a boiler or furnace identified in subpart 2, item B.

C. In addition to the applicable record keeping requirements of parts 7045.0478 to 7045.0482 and 7045.0584 to 7045.0588, a burner must keep a copy of each certification notice that the burner sends to a marketer for three years from the date the burner last receives hazardous waste fuel from that marketer.

D. Generators who accumulate hazardous waste fuel before burning on-site within the accumulation time period allowed in part 7045.0292 must comply with that part. Small quantity generators who accumulate hazardous waste fuel before burning on-site within the accumulation time period allowed in part 7045.0219 must comply with that part. Burning by the generator of a hazardous waste that is a sludge or is or

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contains a waste listed in part 7045.0135 for reasons other than ignitability or is or contains a waste that is toxic under part 7045.0131, subpart 6, is subject to the additional requirements of item E, subitem (2).

E. Generators who accumulate waste for longer than the time periods in item D, and burners who receive waste from off-site and store it, must comply with the following requirements:

(1) the agency's permitting procedures in chapter 7001 for hazardous waste storage facilities, parts 7045.0205 to 7045.0536, 7045.0544, 7045.0552 to 7045.0632, 7045.1000 to 7045.1030, and 7045.1300 to 7045.1380; and

(2) if the hazardous waste to be burned is a sludge or is or contains a waste listed in part 7045.0135 for reasons other than ignitability, or is or contains a waste that is toxic under part 7045.0131, subpart 6, then parts 7045.0542, excluding subparts 4, item C, and 7, item A, subitem (2); and 7045.0640 apply.

F. A burner must abide by Minnesota and federal air quality regulations, including obtaining a permit if necessary. Compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes.

7045.0695 USED OIL BURNED FOR ENERGY RECOVERY.

Subpart 1. Scope. **The requirements of this part apply to used oil that is burned for energy recovery in a boiler or industrial furnace that is not regulated under part 7045.0542 or 7045.0640.** **Burning used oil as a fuel is prohibited except as provided in this part.** **Used oil burned for energy recovery is subject to regulation under this part rather than as hazardous waste fuel under part 7045.0692, even if it exhibits a characteristic of hazardous waste identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste. Used oil intentionally mixed with a characteristic hazardous waste as identified in part 7045.0131 is regulated as specified in part 7045.0102, subpart 3.**

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A. The requirements of this part do not apply to subitems (1) and (2), which are regulated as specified.

(1) Used oil that has been intentionally mixed with a hazardous waste listed in part 7045.0135 is regulated under part 7045.0692 if it is to be burned for energy recovery.

(2) Used oil containing more than 1,000 parts per million of total halogens is presumed to have been mixed with a halogenated hazardous waste listed in part 7045.0135 and is a hazardous waste. It is subject to the requirements of part 7045.0692 if it is to be burned for energy recovery. This presumption may be rebutted by a demonstration that the used oil does not contain hazardous waste.

B. Used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment, is subject to regulation as off-specification used oil fuel if it exceeds any of the allowable levels of the constituents and properties in subitem (1). On-specification used oil fuel as defined in part 7045.0020, subpart 60a, is subject only to the analysis and record keeping requirements under subpart 3, item B, subitems (1) and (8).

(1) Used oil exceeding any of the following allowable levels, for the constituent or property listed, is subject to full regulation under this part when burned for energy recovery:

Constituent/property	Allowable level
Arsenic, total	5 parts per million maximum
Cadmium, total	2 parts per million maximum
Chromium, total	10 parts per million maximum
Lead, total	100 parts per million maximum
Flash Point	100 degrees Fahrenheit minimum
Total Halogens	4,000 parts per million maximum

(2) The specifications in subitem (1) do not apply to used oil fuel mixed with a listed hazardous waste identified in part 7045.0135. Such wastes are regulated under part 7045.0692.

(3) If the presumption of mixing is not

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successfully rebutted, used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided in item A, subitem (2). This used oil is subject to part 7045.0692 rather than this part when burned for energy recovery. If the presumption of mixing is successfully rebutted and the oil is on-specification used oil, it is subject only to the reduced requirements identified in subpart 3, item B, subitems (1) and (8).

Subp. 2. **Standards applicable to generators of used oil to be burned for energy recovery.** Except as provided in items A and B, generators of used oil are not subject to this subpart.

A. Generators who market used oil directly to a burner are subject to subpart 3.

B. Generators who burn used oil are subject to subpart 4.

Subp. 3. **Standards applicable to marketers of used oil to be burned for energy recovery.**

A. The following persons are not marketers:

(1) Used oil generators, and collectors who transport used oil received only from generators, unless the generator or collector markets the used oil directly to a person who burns it for energy recovery. Generators and collectors who market to incidental burners are not marketers subject to this subpart.

(2) Persons who market only on-specification used oil fuel and who are not the first person to claim the used oil meets the specifications of subpart 1, item B.

B. Marketers are subject to the following requirements:

(1) Used oil fuel is subject to regulation as off-specification used oil fuel under this part unless the marketer obtains analyses or other information documenting that the used oil is on-specification used oil fuel.

(2) A person may market off-specification used oil for energy recovery only:

(a) to burners or other marketers who have

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notified the Environmental Protection Agency of their used oil management activities stating the location and general description of those activities, and who have an EPA identification number; and

(b) to burners who burn the used oil in an industrial furnace or boiler identified in subpart 4, item A, subitems (1) and (2).

(3) Even if a marketer has previously notified the Environmental Protection Agency of the marketer's hazardous waste management activities and obtained an EPA identification number, the marketer must renotify the Environmental Protection Agency to identify the marketer's used oil management activities.

(4) When a marketer initiates a shipment of off-specification used oil fuel, the marketer must prepare and send the receiving facility an invoice containing the following information:

(a) a unique invoice number;

(b) the marketer's own EPA identification number and the EPA identification number of the receiving facility;

(c) the names and addresses of the shipping and receiving facilities;

(d) the quantity of off-specification used oil fuel to be delivered;

(e) the dates of shipment or delivery; and

(f) the following statement: "This used oil is subject to EPA regulation under Code of Federal Regulations, title 40, section 266."

(5) Used oil that meets the definition of combustible liquid or flammable liquid is subject to the United States Department of Transportation hazardous materials regulations in Code of Federal Regulations, title 49, sections 100 to 177.

(6) Before a marketer initiates the first shipment of off-specification used oil fuel to a burner or other marketer, the marketer must obtain a one-time written and signed

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notice from the burner or marketer certifying that:

(a) the burner or marketer has notified the Environmental Protection Agency stating the location and general description of the marketer's used oil management activities; and

(b) if the recipient is a burner, the burner will burn the off-specification used oil fuel only in an industrial furnace or boiler identified in subpart 4, item A, subitems (1) and (2).

(7) Before a marketer accepts the first shipment of off-specification used oil fuel from another marketer subject to the requirements of this part, the first marketer must provide the other marketer with a one-time written and signed notice certifying that the first marketer has notified the Environmental Protection Agency of the first marketer's used oil management activities.

(8) A marketer who first claims under item B, subitem (1), that used oil fuel meets the specifications must keep copies of analysis, or other information used to make the determination, for three years from the date of analysis. That marketer must also record in an operating log and keep for three years the information in units (a) to (d) on each shipment of on-specification used oil fuel. On-specification used oil fuel is not subject to further regulation, unless it is subsequently mixed with hazardous waste or unless it is mixed with used oil so that it no longer meets the specifications:

(a) the name and address of the facility receiving the shipment;

(b) the quantity of used oil fuel delivered;

(c) the date of shipment and delivery; and

(d) a cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets the specifications required under this subitem.

(9) A marketer who receives or initiates an invoice under the requirements of this subpart must keep a copy

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of each invoice for three years from the date the invoice is received or prepared. In addition, a marketer must keep a copy of each certification notice that the marketer received or sent for three years from the date that the marketer last engaged in an off-specification used oil fuel marketing transaction with the person who sent or received the certification notice.

Subp. 4. **Standards applicable to burners of used oil burned for energy recovery.** Owners and operators of devices that burn used oil fuel are subject to the requirements in items A to G.

A. Off-specification used oil fuel may be burned for energy recovery only in industrial furnaces defined in part 7045.0020, or in boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet the following criteria:

(1) industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

(2) utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale; or

(3) used oil-fired space heaters provided that:

(a) the heater burns only used oil that the owner or operator generates or used oil received from do-it-yourself oil changers who generate used oil as household waste;

(b) the heater is designed to have a maximum capacity of not more than 0.5 million Btu per hour; and

(c) the combustion gases from the heater are vented to the out-of-doors.

B. Burners of off-specification used oil fuel and burners of on-specification used oil fuel who are the first to claim that the oil meets the specifications provided in subpart 1, item B, must notify the Environmental Protection Agency stating the location and general description of used oil

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management activities. Burners who meet the following criteria are not required to notify the Environmental Protection Agency:

(1) burners of on-specification used oil fuel who receive the oil from a marketer who has previously notified the Environmental Protection Agency;

(2) owners and operators of used oil-fired space heaters that burn used oil fuel under item A, subitem (3); and

(3) burners who burn on-specification used oil that they generate.

C. Before a burner accepts the first shipment of off-specification used oil fuel from a marketer, the burner must provide the marketer with a one-time written and signed notice certifying that:

(1) the burner has notified the Environmental Protection Agency stating the location and general description of the burner's used oil management activities; and

(2) the burner will burn the used oil only in an industrial furnace or boiler identified in item A, subitems (1) and (2).

D. A person who burns used oil fuel that has been generated on-site is subject to regulation under this subpart unless that person obtains analysis or other information documenting that the oil is on-specification used oil.

E. Burners who process, blend, or otherwise manage off-specification used oil to meet the specifications provided under subpart 1, item B, must obtain analyses or other information documenting that the oil is on-specification used oil.

F. A burner must retain a copy of the invoice given from a marketer for three years from the date the invoice is received. Burners must also keep for three years copies of all analyses of used oil fuel as may be required by items D and E. In addition, the burner must keep a copy of each certification notice that the burner sends to a marketer for three years from the date the burner last received off-specification used oil fuel from that marketer.

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G. Burners must abide by Minnesota and federal air quality regulations, including obtaining a permit if necessary. Compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes.

REPEALER. Minnesota Rules, parts 7045.0100; and 7045.0125, subparts 10 and 11, are repealed.

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EXHIBIT 6

Friday
January 11, 1985

Federal Register

Part III

Environmental Protection Agency

40 CFR Part 266

Hazardous Waste Management System: Standards for the Management of Specific Wastes and Specific Types of Facilities; Proposed Rule and Request for Comment

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 266

[SWH-FRL 2680-4]

Hazardous Waste Management System: Standards for the Management of Specific Wastes and Specific Types of Facilities

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule and request for comment.

SUMMARY: Under this proposal, the Environmental Protection Agency (EPA) would begin to regulate hazardous waste and used oil burned for energy recovery in boilers and industrial furnaces. The proposal contains both substantive controls on actual burning, and administrative controls on persons who market and burn hazardous waste and used oil for energy recovery. The substantive controls on burning would prohibit nonindustrial boilers from burning hazardous waste and off-specification used oil (i.e., used oil that did not meet particular specifications for toxic contaminants and for flash point). The administrative requirements include notification, use of a manifest or invoice system, and recordkeeping. This proposal would also expand coverage of existing storage standards to include storage of processed or blended hazardous waste fuels.

DATE: EPA will accept public comments on this proposed amendment until March 12, 1985.

Public Hearings: Public hearings will be held on the following dates to obtain comments on the issues summarized in Section XIII of the preamble: February 15, 1985, February 21, 1985, and February 26, 1985.

The hearings will begin at 9:30 a.m. (registration at 9:00 a.m.) and will end at 4:30 p.m., unless concluded earlier.

ADDRESSES: The hearings will be held at the following locations:

February 15—U.S. EPA, 26 Federal Plaza, Conference Room 305, New York, New York 10278

February 21, 1985—Ramada Inn Hobby Airport West,* 7777 Airport Boulevard, Houston, Texas 77061, (713) 644-1261

February 26, 1985—Torrance Marriott,* 3625 Fashion Way, Torrance, California 90503, (213) 316-3636

Comments on this proposal should be mailed to the Docket Clerk (Docket No. 3004, Burning of Waste as Fuel), Office of Solid Waste (WH-562), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. Comments received by EPA may be inspected in Room S-212, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. from 9:00 A.M. to 4:00 P.M., Monday through Friday, excluding holidays. EPA encourages all interested persons to attend the public hearings. If you would like to present an oral statement at one of the hearings, please notify in writing Ms. Geraldine Wyer, Office of Solid Waste (WH-562), U.S. EPA, Washington, D.C. 20460.

FOR FURTHER INFORMATION CONTACT: RCRA Hotline, toll free, at (800) 424-9346 or at (202) 382-3000. For technical information, contact David Sussman, Manager, Waste Combustion Program, Waste Management and Economics Division, Office of Solid Waste, WH-565A, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460, Telephone: (202) 382-7917. Single copies of the proposed rule are available by calling the RCRA Hotline at the number above.

SUPPLEMENTARY INFORMATION:

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I. Authority

These regulations are proposed under the authority of Sections 1006, 2002(a), 3001, 3002, 3003, 3004, 3005, 3007, 3010, and 3014 of the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976,

* Hotel rooms have been blocked for the convenience of attendees requiring overnight accommodations. When making reservations, please indicate you are attending the U.S. EPA public hearing.

the Quiet Communities Act of 1978, the Solid Waste Disposal Act Amendments of 1980, the Used Oil Recycling Act of 1980, and the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. 6905, 6912(a), 6921, 6922, 6923, 6924, 6925, 6927, 6930, and 6932.

II. Overview of Today's Proposal

EPA is proposing today to extend the hazardous waste management regulations to apply to marketing and burning for energy recovery of hazardous wastes and used oils. The proposal would prohibit burning of hazardous wastes in nonindustrial boilers. Used oil could be burned in these boilers only if it conformed to specifications for certain toxic constituents and for flash point. For the time being, burning hazardous waste in industrial boilers and furnaces for legitimate energy recovery would continue to be exempt from regulation pending further study by the Agency of what type of regulation is needed to protect human health and the environment.

To enforce the prohibitions on burning these materials, EPA also is proposing administrative requirements that create a tracking system from initial waste fuel marketers, through distributors, to burners. These requirements include notification, receipt of identification number, compliance with manifest or (for used oil) invoice system, and recordkeeping.

Finally, this proposal would also expand coverage of existing storage standards to include storage of processed or blended hazardous waste fuel.

III. Existing Regulations Control Burning in Incinerators but Exempt Burning in Boilers and Industrial Furnaces

The Resource Conservation and Recovery Act ("RCRA" or "the Act") provides for the development and implementation of a comprehensive program to protect human health and the environment from the improper management of hazardous waste. The Act also requires EPA to develop standards to protect the public from hazards associated with recycled oil. The Environmental Protection Agency has, under RCRA, promulgated regulations for determining which wastes are hazardous (Section 3001); standards for generators (Section 3002) and transporters (Section 3003) of hazardous waste; requirements for the treatment, storage, and disposal of hazardous waste (Section 3004); procedures for obtaining a hazardous waste permit (Section 3005); procedures for the authorization of state programs (Section 3006); and requirements for notifying EPA of hazardous waste activity (Section 3010).

One area in which EPA has not yet completed regulatory action involves the burning of hazardous waste for energy recovery. Current regulations provide control for treatment of hazardous waste by incineration (40 CFR Parts 264 and 265, Subpart O), but there are as yet no Federal requirements for burning of hazardous waste for energy recovery in other types of combustion devices (e.g., boilers and industrial furnaces). Burning of used oil for energy recovery is likewise unregulated by Federal rules at the present time. (It should be noted, however, that EPA's regulations do regulate storage and transportation of hazardous waste destined for use as a fuel if the waste is listed in 40 CFR 261.31 or 261.32 or is a sludge (see 40 CFR 261.6(b)).[1] The distinction exists because the Agency needed time to determine whether regulations for burning for energy recovery should differ from those for incineration, in light of the different scope of the practices and the different combustion units and wastes involved.

As a result, burning hazardous waste and used oil as fuel remains a source of potentially hazardous emissions that may adversely affect human health and the environment. The Agency recognizes the need to regulate this burning of hazardous waste and used oil. See 48 FR at 14481–482. Moreover, the recent Hazardous and Solid Waste Amendments of 1984 require the Agency to develop these standards within two years of enactment. (See RCRA amended Section 3004(q)). Today's proposal would begin this process.

[1] EPA has proposed to revise 40 CFR 261.6. (See 48 FR 14472 (April 4, 1983).) Under that proposal, storage and transportation of certain spent materials prior to use to produce a fuel would also be subject to regulation. In addition, the Agency proposed to retain (in § 261.6(b)(1)(v)) the exemption from the hazardous waste incinerator standards for listed wastes, sludges and certain spent materials—and for any fuels produced from these wastes—that are burned for energy recovery. Burning for energy recovery in devices that are not permitted hazardous waste incinerators, however, could be regulated immediately on a case-by-case basis. See generally, proposed §§ 260.10, 261.2(a)(2)(ii), 261.6(b)(vi), 261.6(b)(vii), 261.6(k)(2); 48 FR 14507–511. Note: This footnote and all other references in this preamble to the Agency's intent to amend § 261.6 assumes the amendments have not yet been promulgated. However, given that those amendments and today's notice of proposed rulemaking are moving through the Agency's clearance procedures at the same time, the amendments to § 261.6 may be promulgated before today's rulemaking is proposed.

IV. Regulations Are Needed To Control Burning in Boilers and Industrial Furnaces

EPA today is proposing regulations to control the burning of hazardous waste and used oil for energy recovery because of the potential for substantial harm to human health and the environment from burning and handling these materials. Damage incidents involving these practices confirm this potential for harm. This potential likewise is corroborated by comments of diverse groups including some state officials, the Congress, and various industry and environmental groups, all of whom have strongly urged Agency action to halt a growing environmental problem.

A. Burning Hazardous Waste and Used Oil in Boilers Can Pose Substantial Hazards

Hazardous wastes and used oils pose the potential to cause substantial harm from the time they leave a generator or fuel processor or blender until and including the time they are burned. Used oils frequently arrive at fuel processing or blending facilities heavily contaminated with organic and inorganic toxic materials. These contaminants may be present as a result of use of the oil, or may have been added as a result of deliberate adulteration with hazardous wastes. Some fuel blenders also receive hazardous wastes that they then mix with used oil and sell as a fuel.

These contaminants rarely are removed when the used oils or hazardous wastes are processed to make fuels.[2] The methods of processing hazardous waste or used oil most commonly employed to make a fuel include filtering, settling, and sometimes dehydration. Processing is performed only to meet customer specifications, which are almost always related to the ASTM specifications for various grades of fuel oil (e.g., numbers 2, 4, 5 and 6). Such specifications provide limits on parameters including bottom sediment and water, heat value, flash point, and viscosity. These parameters are related mainly to how well a fuel burns or how easily it can be pumped from storage tanks and fired into the combustion device. The ASTM specifications do not limit toxic metals, chlorine, or any organic contaminants. This is significant because EPA has established that used oil commonly contains high levels of toxic metals and chlorinated organics.

[2] National Enforcement Investigations Center, U.S. EPA, *Summary of Waste Oil Recycling Facility Investigations*, October 1983.

Table 1 shows the composition of typical used oil and represents analyses of crankcase oils from cars and trucks, and industrial oils sampled prior to processing or blending. Hazardous wastes used as fuel may contain these same contaminants, plus many others as well.

Currently, processors and blenders of used oil or hazardous waste have no incentive to remove these potentially harmful contaminants. Product price is typically related only to whether a fuel meets a minimum BTU specification and how easily it can be pumped. Technologies such as distillation or chemical treatment that remove metals and other contaminants do exist, but processors who use these technologies often find themselves at a competitive disadvantage to those who only filter, settle, and blend. This has led the Agency to conclude that the marketplace cannot adequately control the composition of waste fuels and, therefore, that regulatory controls are necessary.

TABLE 1.—CONCENTRATION OF USED OIL CONTAMINANTS

	Number of samples	"Median" concentration at 50th percentile [1] (ppm)	Concentration at 75th percentile [2] (ppm)	Concentration at 90th percentile [3] (ppm)
Metals				
[illegible]	597	5	5	18
Barium	752	48	120	250
Cadmium	744	3	8	10
Chromium	756	6.5	12	35
Lead [4]	835	240	740	1,200
Zinc	810	480	872	1,130
Chlorinated solvents				
Dichlorodifluoromethane	87	20	160	640
Trichlorotrifluoroethane	28	160	1,300	100,000
1,1,1-Trichloroethlene	616	200	1,300	3,500
Trichloroethylene	608	100	200	800
Tetrachloroethylene	599	105	600	1,600
Total chlorine	590	1,600	4,000	9,510
Other organics				
Benzene	236	20	110	300
Toluene	242	380	2,400	4,500
Xylene	235	550	2,400	3,200
Benzo(a)anthracene	27	12	30	40
Benzo(a)pyrene	65	10	13	16
Naphthalene	25	330	580	800
PCB's	753	5	15	50

[1] At the median, 50 percent of the analyzed used oil samples had contaminant concentrations below the given value.
[2] Seventy-five percent of the analyzed used oil samples had contaminant concentrations below the given value.
[3] Ninety percent of the analyzed used oil samples had contaminant concentrations below the given value.
[4] Values for lead were taken from 1979-83 data only.
Source: Franklin Associates, Ltd., *Composition and Management of Used Oil Generated in the United States*, September 1984, p. 1-12.

Estimates of the quantities of waste fuels burned vary greatly. EPA's best estimate is that about 1-2 million tons of hazardous wastes and about 2.4 million tons of used oils are burned annually as fuel.[2,4] It is known that such burning occurs in every conceivable circumstance—in utility, industrial commercial, institutional, and residential sectors, and throughout the country.

The major risk attributable to burning waste fuels is from exposure to emissions of toxic chemicals and toxic metals that are constituents of the fuel. These risks are described in more detail in Section VII-D of this preamble, where we discuss how certain contaminants were selected for the used oil fuel specification. This is by no means the only risk posed, however. Lack of proper labelling leaves burners unprotected, because they are without notice that they are storing and burning a potentially dangerous fuel. Waste fuels also can cause harm if transported without tracking, since they could be misdirected, or even dumped illicitly.

Harm resulting from improper storage or spills of waste fuels also is possible. If the waste fuel has a low flash point, there is risk of fire and explosion. Emissions of volatilized organic constituents could also pose a health hazard to exposed persons.

The residue from burning waste fuels could be heavily contaminated with hazardous wastes, toxic metals, or toxic combustion by products that were neither destroyed during combustion nor emitted from the boiler.[5] It is unlikely that this residue would be handled as a hazardous waste, and its disposal in a sanitary landfill, rather than in a hazardous waste landfill, has potential for harm to those handling the residue as well as to the public and the environment.

Actual damage incidents involving waste fuels have been reported.[6] The best known of these incidents involves the Quanta facility, a used oil fuel blending facility located in New Jersey. This facility accepted contaminated used oil, including PCB-contaminated transformer oil, as well as hazardous wastes such as spent chlorinated solvents. Treatment of the oil was typical of that used in the industry and consisted only of settling out bulk solids and water; contaminants were not removed or neutralized. The blended mixture was marketed as a fuel, sometimes to retail fuel distributors, and in some cases directly to ultimate users, including both residential and industrial users. Investigators of ABC News in fact filmed trucks taking contaminated commercial fuel oil from Quanta to apartment buildings in New York City. Residents of those buildings began complaining of respiratory problems, headaches, nausea, and digestive problems shortly after these fuels began to be burned. Boiler residues at these buildings, when sampled, showed presence of PCBs and chlorinated solvents.[7]

B. States and Congress are Concerned About the Problem

EPA's concern about the potential for harm from burning waste fuels has been echoed by states, the Congress, and some industry and environmental groups. Many of these entities have direct experience in trying to control waste fuels. They are unanimous in urging a strong and immediate Federal regulatory presence to control a serious problem.

Officials of the States of New York, New Jersey, Michigan, California, Alaska, and Wisconsin have voiced special concern to EPA about this problem because of related illegal activities and damage incidents within their jurisdictions. At this time, New York, New Jersey, and Rhode Island have undertaken regulation of the composition of waste fuels.

Legislation to compel EPA action on this problem was introduced in both Houses of Congress in the 1982 session. The recent Hazardous and Solid Waste Amendments of 1984 adopted this legislation and require EPA to develop standards controlling production, distribution, and burning of hazardous waste fuels within two years of enactment. See RCRA amended Section 3004(q).

V. Congress Has Authorized the Agency to Regulate Burning in Boilers and Furnaces

In this proposal, the Agency would regulate the burning of used oil and hazardous wastes used as fuels. Authority to establish a fuel specification for hazardous constituents and fuel properties is contained in both the User Oil Recycling Act of 1980 and in the other provisions of RCRA itself.

[2] Based on data in: WESTAT, Inc., *Survey of Burners of Used or Waste Oil and Waste-Derived Fuel Material*, October 1984 (Draft report).
[4] Franklin Associated, Ltd., *Composition and Management of Used Oil Generated in the United States*, September 1984, p. 1-9.
[5] GCA Corp., *Environmental Characterization of Disposal of Waste Oils in Small Combustors*, May 1984, pp. 14 and 15.
[6] Hazardous Waste Treatment Council, *Damage Cases*, 1983 (Unpublished data).
[7] Transcript of ABC 20/20 Broadcast on Dec. 17, 1981; EPA Staff Interview with Kenneth Mansfield, Manager, Quanta facility, February 25, 1983.

Section 3014 of RCRA, added by the Used Oil Recycling Act, requires the Agency to promulgate "performance standards and other requirements" necessary to protect against hazards associated with "recycled oil". "Recycled oil" (Section 1004 (37)) means contaminated oil which is reused for any purpose, including burning. Thus, the Agency has express authority to control burning of used oil by means of performance standards. (See also S. Rep. No. 96–879, 96th Cong. 2nd Sess. 1, Stressing that the purpose of the Used Oil Recycling Act is to discourage improper burning of used oils; see also H. Rep. No. 98–198, 98th Cong. 1st Sess. 68, stating that EPA has authority to specify toxicant concentration levels for used oil being recycled.) The Agency also notes that this authority does not depend on whether used oil or used oil fuels are identified or listed as hazardous wastes. The authority granted in Section 3014 is over used oil being recycled.

Authority to regulate burning of hazardous waste fuels is provided explicitly by the Hazardous and Solid Waste Amendments of 1984. See RCRA amended Section 3004(q).

VI. Discussion of Major Regulatory Options

The Agency considered several nonregulatory approaches to address the hazards that can be posed by burning waste fuels in boilers and industrial furnaces and determined that they would be ineffective and impractical. Therefore, we are proposing regulatory controls that include substantive controls on burning, administrative controls for all marketers and burners, and storage controls for hazardous waste fuels. The controls on burning would, for the time being, focus on nonindustrial boilers—boilers that are used in residential, commercial, and institutional settings. The problems with nonregulatory approaches and the basis for proposing to control burning at this time only in nonindustrial boilers are discussed below.

A. Nonregulatory Alternatives are Ineffective and Impractical

The Agency has evaluated nonregulatory alternatives for managing recycled used oil (Sobotka & Company, Inc., *An Assessment of Nonregulatory Approaches for Encouraging the Recycling and Proper Use of Waste Lube Oil*, December 1981). We considered whether economic incentives would be preferable to regulatory controls in channeling used oil to desirable users such as refiners or "acceptable" burners. Given the large number of generators, collectors, processors, blenders, distributors, and burners, incentives could be preferable to regulatory controls. Regulatory controls aimed at all handlers could be very expensive to implement and could leave generators and collectors with little incentive to recycle (or properly dispose of) their used oil.

The Sobotaka Study concluded that the most promising incentive approach of several studied would be a tax-rebate system. Producers of virgin lube oils would pay a tax for every gallon of lube oil they produce, and preferred used oil users (e.g., rerefiners, "acceptable" burners) would receive a rebate on their taxes for every gallon of used oil they use. The total revenues received by the U.S. Treasury from the tax ideally would match tax rebates.

The agency believes that this approach would be ineffective in protecting human health and the environment and impractical to implement. The system would be ineffective in that it would create an incentive for any used oil, no matter how contaminated, to be channeled to preferred users without any pretense of assurance or any mechanism to determine that the incentive is adequate in fact to ensure that no used oil goes to unacceptable users. Used oil marketers may find it profitable to discount their used oil fuel by an amount equivalent to the rebate and continue to sell it to unacceptable users. Moreover, we do not believe that there are "acceptable" burners of used oil, without regard for the level of contamination of the oil. Used oil may be intentionally adulterated with hazardous waste or may contain high concentration of metals that were added to the oil during use. Such used oil may not be acceptable for burning in boilers without adequate controls. However, any burner who burns used oil fuel that meets the specification contained in the proposed rule would be considered "acceptable".

The tax/rebate system would be impractical for a number of reasons: (1) Many acceptable burners (of specification used oil) do not pay taxes; (2) Congress must set and periodically adjust the tax on virgin lube oil; (3) IRS must implement and enforce the rebate system; and (4) the administative costs to the federal government for a tax/rebate system to "control" burning in boilers and industrial furnaces may be far greater than the costs of a regulatory system.

B. Basis for Regulating Boilers by Boiler Use

The proposed regulation singles out nonindustrial boilers because EPA believes that burning hazardous waste and highly contaminated used oils in these boilers can frequently pose a severe and immediate hazard. Although burning of these materials in industrial boilers and furnaces (and utility boilers) can also pose substantial hazards, EPA believes that there are situations where many hazardous wastes and used oils can be burned without significant risk. We are not ready to propose controls for industrial boilers and furnaces, however, because we have not completed ongoing investigations to determine under that conditions such burning may be appropriate.

1. *Need for Immediate Controls for Nonindustrial Boilers.* The burning of hazardous wastes and contaminated used oils in nonindustrial boilers can pose substantial and unnecessary risks to human health and the environment for a number of reasons. First, nonindustrial establishments typically have very small boilers that are used for space heating or cooling. The small size of these boilers may increase the probability of incomplete combustion of toxic materials. Approximately 98% of commercial and institution boilers and virtually all residential boilers have a heat input capacity of less than 10 million BTU/hr—about the size of a boiler servicing a large hospital or large apartment or office building with a total floor area of approximately 190,000 ft.[2] EPA believes that these very small boilers may not achieve the combustion and destruction efficiencies that large boiler can provide. Combustion controls on small boilers are much less sophisticated than those for large boilers. Larger boilers can be operated at peak combustion efficiency by maintaining optimum fuel and air flow rates under a wide range of boiler loads, and are usually equipped with devices to measure and control fuel firing rate, combustion temperature, and oxygen content in the flue gas. (Larger boilers also typically have trained operators in attendance.) The limited combustion controls on very small boilers make it very difficult to maintain maximum combustion efficiency as variations in fuel viscosity, heat value, and other properties typical of waste fuels affect fuel feed rate, flame temperature, and combustion air requirements.

In addition, very small boilers have a shorter residence time—the time that combustion gases are exposed to high temperatures in the combustion zone of the boiler. Thus, toxic organic

[2] Based on data in PEDCo Environmental, Inc., *A Risk Assessment of Waste Oil Burning in Boilers and Space Heaters*, August 1984, p. 3-3.

compounds are exposed to the highest temperatures in the firebox for a shorter period of time.

The risks posed by nonindustrial boilers from emissions of incompletely combusted toxic organic constituents in waste fuels and from emissions of toxic metal constituents in waste fuels is compounded because of the typical location of nonindustrial boilers. The number of nonindustrial boilers located in a given area can be expected to increase as population density and commercial activity increases. This can result in a series of compounding factors that can pose a severe hazard to public health. Stack emission plumes from multiple sources can overlap, increasing the ambient concentrations of toxic compounds. In addition, exposed individuals are frequently located above ground in apartment and office buildings (e.g., exposure through open windows or from building air in-take systems located on the roof) which can expose them to higher concentrations than if they were at ground level. In urban areas, some exposed individuals will also be located extremely close to the source, perhaps as close as 25 meters to smaller sources such as a boiler in a small apartment building, church, or school (i.e., less than 10 million BTU/hr sources). Finally, even in situations where a small boiler may have a tall stack simply because the stack projects from the roof of a multi-story apartment or office building, any dispersion that would have been provided by a tall stack may be negated by the "down-wash" typically associated with emissions from stacks that have tall structures nearby, as would be expected in most urban areas. Turbulence created by nearby structure that are as tall or taller than the stack can cause stack emissions to drop to near ground level immediately downwind from the stack.

The fact that most nonindustrial boilers are located in densely populated urban areas also increases the risk from spills, fires, and explosions during transportation storage and handling. These boilers are not subject to the same degree of zoning control as industrial boilers, increasing the possibility of large numbers of facilities storing and handling waste fuels containing toxic and highly ignitable materials in densely populated areas. This risk is compounded by the fact that nonindustrial boiler owners or operators rarely know that they are obtaining waste fuels and do not realize that a potential hazard exists.

Finally, nonindustrial boilers, because of their small size, are typically not controlled by federal, state and local point source air pollution standards. Even when the larger units are subject to a state or local standard, those standards do not specifically address the organic compounds and metals found in hazards waste and used oil. Although ambient air pollution standards potentially cover all sources, regardless of size, the implementation by state and local governments of source controls to meet these ambient standards usually focuses on larger sources for reasons of regulatory efficiency. Furthermore, existing ambient standards do not address most of the organic compounds and metals found in hazardous waste and used oil.

2. *Schedule for Regulating Industrial Boilers and Furnaces.* The Agency began an investigation of burning wastes in industrial boilers and industrial furnaces in fall 1982. The investigation includes emissions testing of various waste/boiler scenarios to determine under what conditions such burning does not pose significant risk to human health and the environment. That investigation and the subsequent analyses of control alternatives are not yet complete. The Agency intends to complete those analyses and propose technical controls (called "Phase II" controls in this preamble) for these units in 1985. In the interim, the Agency is today proposing administrative and storage controls for industrial boilers and furnaces. Today's proposed rules for nonindustrial boilers would in no way adversely affect the consideration of options under study to control burning in industrial burners.

B. Consideration of Other Approaches

The Agency considered other approaches to identify those high risk boilers that should be subject to immediate controls. Boiler size is one factor that is likely to affect the risk posed from emissions for reasons discussed above. The Agency is specifically asking for comments on extending the proposed prohibitions to include very small industrial boilers (see discussion in Section VII–G–1 of this preamble). However, we do not believe that boiler size is the single determinant of risk posed and, thus, do not believe that large nonindustrial boilers should be exempt from the prohibitions in the absence of any assurance that particular boilers achieve suitable destruction of toxic organics (e.g., 99.99% destruction) and that metal emissions are controlled (e.g., by a particulate emissions standard). Even though large boilers can generally achieve better destruction efficiences (for reasons discussed above), not all large boilers will be operated and maintained to achieve the 99.99% destruction and removal efficiency of toxic organic compounds required for hazardous waste incinerators. Given that nonindustrial boilers (both large and small) are typically located in densely populated areas, emissions of toxic organic compounds and metals can pose a significant and immediate hazard.

In addition to size of boiler, factors that can affect destruction efficiency include waste firing method, ratio of waste fuel to fossil fuel fired, heat value of waste fuel, boiler load, and too little or to much combustion air. The Agency is considering these factors in developing the Phase II controls for burning hazardous waste in boilers and industrial furnaces scheduled to be proposed in late 1985. That proposed rule is likely to include a range of controls on boilers depending on the factors listed above and irrespective of whether the boiler is a nonindustrial boiler or industrial boiler or whether the waste is burned for purposes of energy recovery or destruction. The proposed controls may range from controls virtually identical to those required for hazardous waste incinerators to controls that allow waiver of a trial burn for particular hazardous wastes when certain boiler design and operating conditions are met. In the interim, an owner or operator of a nonindustrial boiler who wants to burn hazardous waste may elect to consider his boiler an incinerator for regulatory purposes and comply with the hazardous waste incinerator standards of 40 CFR Parts 264 265.

VII. Proposed Substantive Controls on Burning

A. An Overview of the Proposed Controls on Burning

This proposed regulation would prohibit the burning of hazardous waste and used oil that does not meet certain specifications (hereafter referred to as "offspecification used oil") in nonindustrial boilers unless the boiler is permitted as a hazardous waste incinerator. The specification being proposed for used oil fuel sets allowable levels for lead, arsenic, chromium, cadmium, and flash point.[9] Used oil fuel that meets the specification and is not mixed with hazardous waste can be marketed and burned without restriction in any boiler. Used oil fuel that is mixed with hazardous waste would generally be subject to regulation as hazardous

[9] The specification also references the *de minimis* PCB concentration for waste PCBs established in 40 CFR Part 761 under authority of the Toxic Substances Control Act (TSCA).

waste.[10] To provide an objective test for determining whether mixing has occurred, a rebuttable presumption of mixing with chlorinated hazardous waste is proposed where used oil containing more than 4,000 ppm total chlorine is found. We are also proposing administrative controls to provide a tracking system to enforce the prohibitions and hazardous waste fuel storage controls. Those proposed controls are discussed in Sections VIII and IX, respectively, of this preamble.

The rules proposed today do not provide technical controls on burning waste fuels for energy recovery in industrial boilers and industrial furnaces. As stated above, the Agency intends to propose such controls for these units in late 1985.

Finally, we are specifically requesting comments on several issues including the following: (1) A lead specification for used oil fuel; (2) extending the universe of boilers prohibited from burning hazardous waste and off-specification used oil fuels to include industrial boilers with a heat input capacity of less than 5–10 million BTU/hr; and (3) conditionally exempting ignitable-only hazardous waste fuels with a flash point of 100°F or more from the prohibition on burning in nonindustrial boilers.

B. A Summary of the Prohibitions

This rule proposes to prohibit a person from burning hazardous waste amd off-specification used oil in a nonindustrial boiler.[11] With certain exceptions, it would also require marketers such as processors, blenders, and distributors to market such fuels only to persons who have notified the Agency of their waste-as-fuel activities and obtained an EPA identification number (e.g., to other processors, blenders, distributors, or to burners).

These proposed rules would require fuel marketers to manage as a hazardous waste any fuel that is or contains a hazardous waste, with limited exceptions discussed below. Not only are fuel marketers naturally situated to exert control, but they are far less numerous than subsequent burners, and are dealing with materials not yet so widely commingled as to be difficult to identify and track.

It should be noted that these prohibitions (and the related administrative standards) ordinarily have no applicability to generators because generators usually do not produce waste fuels; rather, they generate a waste which is sent to another person (i.e., a processor or blender) who determines to market the waste as a fuel. The initial generator thus would be subject to regulation under 40 CFR Part 262 like other generators. Generators would be affected by the new requirements in these regulations only when they deal directly with the persons who burn their hazardous waste or used oil, or when they burn these materials themselves. In these cases, they not only are generators, but also are fuel marketers or burners. (See H.R. Rep. 98–198 at 40, supporting this view).

C. Materials and Combustion Units to Which the Regulation Applies

The regulations proposed today would apply to "hazardous waste fuel" and "used oil fuel". These terms are explained in the following sections.

1. *Definition of Hazardous Waste Fuel.* These rules would apply to hazardous waste, and fuels produced by processing, blending, or other treatment of hazardous waste, that are burned for energy recovery in a boiler or industrial furnace that does not have a permit under the RCRA incinerator regulations. In this rule, such waste is termed "hazardous waste fuel".

On April 4, 1983, EPA proposed that all spent materials and sludges and listed by-products, burned for energy recovery were solid wastes, and if hazardous, hazardous wastes. (Proposed § 261.2(a)(2)(ii), 48 FR at 14508.) Based on public comment and further analysis, the Agency is considering asserting RCRA jurisdiction over *all* hazardous waste by-products, spent materials, and sludges that are burned for energy recovery. Accordingly, today's proposal should be read to include all such materials as hazardous waste fuels when so recycled.

The April 4 proposal also stated that a fuel that is produced from hazardous waste is itself a hazardous waste. (*Id.*) Such fuel is likewise included as hazardous waste fuel under today's proposal.

The Agency is aware that certain petroleum refineries reintroduce hazardous wastes generated during petroleum refining (such as EPA Hazardous Waste K048–K052) back into the refining process in order to recover the oil contained in the wastes. Fuels from the process are hazardous waste fuels for purposes of this regulation because they contain hazardous wastes as ingredients. We have had several discussions with American Petroleum Institute (API) representatives regarding recycling practices within the industry and the effect of recycling on levels of toxic constituents in commercial fuel oils. We understand that API is gathering data for our consideration that they believe will show that contaminants in the recycled waste do not add significant concentrations of contaminants to the fuel product. This is because the contaminants are either substantially removed by the refining process, or (when wastes are reintroduced at a point in the process where contaminants are not removed) do not significantly increase the level of contaminants in the fuels (i.e., the contaminants in the recycled waste are so diluted by the relatively large volumes of fuel oils produced that the concentrations of contaminants already present in the oil (originally present in the crude oil or added by other refinery operations) do not increase significantly). If the Agency obtains data during the comment period for this proposed rule that substantiates this premise, we intend to exempt in the final promulgation of this rule petroleum fuel products produced at refineries under the conditions discussed below. The Agency will notice in the Federal Register the availability of such data for public review and comment.

If granted, the exemption would be conditioned narrowly. It would apply only to petroleum fuel products containing hazardous waste that is generated by the refining process itself. It would not apply to fuels containing other wastes generated at a refinery such as spent solvents or discarded pesticides. These refining process wastes also would have to be reintroduced into the refining process and converted into petroleum fuel products along with normal process streams. Finally, the exemption would apply only to the hazardous waste fuel. It would not apply to the wastes before they are reintroduced into the refining process. Thus, generators would have to store these wastes in compliance with either 40 CFR 262.34 or the facility standards in 40 CFR Parts 265 and 265. Hazardous wastes sent off site for

[10] Used oil mixed with hazardous waste generated by a small quantity generator and exempt from regulation as hazardous waste under 40 CFR 261.5 would be regulated as used oil fuel when so recycled.

[11] The Agency considered developing a specification that would apply to all or certain nonindustrial boilers to identify hazardous waste that could be burned in these units without significant risk. We rejected this option because any such specification would be quite unwieldy, potentially addressing many of the constituents in 40 CFR Part 261, Appendix VIII. Not only are many of these compounds insufficiently characterized to develop toxic specification levels, but the burden of analyzing for these constituents would be expensive and time consuming. Given these difficulties, we have rejected the idea of a hazardous waste fuel specification.

reintroduction to another refining process would still need to be manifested and carried by a Part 263 transporter.

A similar situation exists in the iron and steel industry, where some plants take decanter tank tar sludge (EPA Hazardous Waste K067) and mix it with coal before charging to a coke oven, which produces coke. The coke, in turn, is used as a fuel in steel blast furnaces. The coke, so produced, is a hazardous waste fuel under this proposal. EPA will consider exempting it under the same circumstances as the hazardous waste fuels from petroleum refining.

2. *Determining When a Waste is Burned for Energy Recovery and Applicability of the Proposed Rules to Burning for Materials Recovery.* Today's regulations apply to hazardous waste burned for "energy recovery." This limitation raises two issues: how to distinguish burning for energy recovery from burning for destruction, and determining how to regulate if burning is conducted to recover materials.

The Agency has already addressed in part what is meant by burning for legitimate energy recovery. In a statement of Enforcement Policy issued January 18, 1983 (printed *at 48 FR 11157* (March 16, 1983)), EPA stated that as a general matter, subject to individualized consideration of particular circumstances, burning of low energy hazardous waste as alleged fuel is not considered to be burning for legitimate energy recovery. This is the case even if the low energy hazardous waste is blended with high energy materials and then burned. Thus, under these principles, boilers and industrial furnaces burning low energy wastes could be considered to be incinerating them, and so be subject to regulation as hazardous waste incinerators. (See 48 FR at 11158 and 11159.)

Today's proposal leaves the principles of the statement in force. In the statement, EPA, however, indicated that sham burning was easiest to determine when burning occurs in nonindustrial boiler. We also said that larger industrial boilers are more efficient at recovering energy and so could be deemed, somewhat more often, to be burning lower energy wastes legitimately. (*Id.* at 11159.) Today's proposal would prohibit burning of hazardous wastes in nonindustrial boilers and thus supercedes the enforcement policy in that instance. If we were to apply the Enforcement Policy Statement to industrial boilers and furnaces, we would seek to enforce in situations where low energy hazardous waste adulteration was deliberate and massive. (We note, however, that the Policy Statement does not address burning for material recovery, or situations where a waste is burned for both material and energy recovery. In this situation, the fact that low energy wastes are involved would not necessarily indicate that legitimate recycling is not occurring, because material recovery also is involved.)

There also are other indicators of whether or not burning is for legitimate energy recovery. Obvious sham situations are when no usable heat is recovered from the combustion unit, or when the heat recovered is used only to preheat combustion air. Since no meaningful energy recovery ever occurs, we would maintain that these situations involve waste destruction.[12]

A second question is the scope of these regulations when burning involves material recovery. We address this question separately with respect to burning in boilers and burning in industrial furnaces. The Agency views today's regulations as applying whenever hazardous wastes are burned in boilers (unless the boilers are regulated as incinerators, in accordance with the discussion above). Boilers, by definition, recover energy. If materials are also recovered, this recovery is ancillary to the purpose of the unit, and so does not alter the regulatory status of the activity. (See proposed § 260.10—definition of "boiler" in 48 FR at 14357 (April 4, 1983).) Today's regulations also would apply when an industrial furnace burns hazardous wastes for energy recovery. The newly enacted Hazardous and Solid Waste Amendments of 1984 in fact require the Agency to regulate industrial furnaces burning hazardous waste fuels. See RCRA amended section 3004(q) and H.R. Rep. 98-198 at 40. Although the actual burning in the furnace is not addressed by today's regulations, hazardous waste fuel sent to an industrial furnace would be subject to notification, manifest, and interim status storage requirements.

The regulations also would apply when an industrial furnace burns the same material for both energy and material recovery. Examples are when blast furnaces burn organic wastes to recover both energy and carbon values, or when a cement kiln burns chlorinated wastes as a source of energy and chlorine. In general, EPA believes that RCRA expresses a strong mandate to take an expansive view of what constitutes hazardous waste management activities, and to regulate as necessary to protect human health and the environment.[13] See RCRA sections 1004(2), 1004(22), 1004(23), and 1004(24) (statutory definitions stating that secondary materials burned for energy recovery are solid wastes, and therefore, if hazardous, hazardous wastes); H.R. Rep. No. 94-1491, 94th Cong. 2d Sess. at 4 (Congress's concern in promulgating subtitle C of RCRA was to "eliminat[e] that last remaining loophole in environmental law", not to create new loopholes). The newly enacted RCRA reauthorization legislation likewise directs the Agency to regulate burning of hazardous waste fuels within a mandated time frame—by November 1986. We believe this mandate applies to industrial furnaces burning to recover energy and materials.

Burning solely for material recovery in industrial furnaces (as defined in 46 FR at 14507), however, raises different kinds of issues, principally the question of whether the purpose of burning affects either the Agency's jurisdiction or the Agency's regulatory strategy. The Agency will address this issue further as part of the Definition of Solid Waste rulemaking and the Phase II boiler and industrial furnace rulemaking. We note, however, that if the secondary material being burned is a hazardous waste, the purpose for which it is burned is not a factor in determining whether and how to regulate its burning. The issue is whether the burning needs to be regulated to protect human health and the environment, not whether the purpose of burning is destruction, energy recovery, or material recovery. We thus intend to develop regulations for industrial furnaces burning hazardous wastes—regardless of purpose—as part of the Phase II regulations for boilers and industrial furnaces discussed above.

3. *Identification of Used Oil Fuel Subject to Regulation.* Used oil would be subject to regulation under the proposed rules if the used oil, including any material produced from it by processing, blending or other treatment, is used as

[12] The Phase II controls for boilers and industrial furnaces scheduled to be proposed in late 1985 would regulate burning in these units irrespective of whether the waste is burned for energy recovery or destruction. However, our current thinking is to propose to regulate industrial furnaces and those boilers that burn low energy wastes (as well as other boilers that do not meet certain design and operating conditions) much like incinerators. For example, owners and operators could be required to demonstrate 99.99% destruction and removal efficiency of toxic organics. Thus, the enforcement policy (i.e., burning low energy waste is subject to the hazardous waste incinerator standards) is still consistent in outcome with current thinking on the technical controls for burning in boilers and industrial furnaces.

[13] EPA realizes that some of this discussion is inconsistent with a footnote in the preamble to the redefinition of solid waste. See 48 FR at 14495 n 19 (April 4, 1983). EPA withdraws the earlier footnote, to the extent it is inconsistent.

fuel for energy recovery in a boiler or industrial furnace that does not have a permit under RCRA incinerator regulations.

"Used oil" means any oil that has been refined from crude oil, used, and as a result of such use, contaminated by physical or chemical impurities. (See RCRA section 1004(36).) Used oils include the following: (1) Spent automotive lubricating oils (including car and truck engine oil), transmission fluid, brake fluid and off-road engine oil; (2) spent industrial oils, including compressor, turbine, and bearing oils, hydraulic oils, metal-working oils, gear oils, electrical oils, refrigeration oils, and railroad draining and (3) spent industrial process oils.

These proposed rules would apply only to used oil and not necessarily to "oily waste." An oily waste, such as bottom clean-out waste from commercial fuel oil storage tanks, is not used oil because the oil was never "used" and, thus, would not be subject to these proposed rules (provided it is not mixed with used oil and that it is not a hazardous waste).

Today's proposal marks the first time the Agency has used the regulatory authorities created by the Used Oil Recycling Act of 1980 (UORA). (UORA is codified substantially as sections 1004 (36)–(39) and 3014 of RCRA.) UORA requires the Agency to establish "performance standards and other requirements as may be necessary to protect the public health and the environment from hazards associated with recycled oil." (See RCRA section 3014.) Burning used oil for energy recovery—the subject of this proposal—is an example or recycling. (See RCRA, section 1004 (37).)

The regulation of used oil fuels raises the legal question of how the provisions of UORA are to be integrated with other RCRA provisions. EPA believes that UORA authorities may be used independent of or as a supplement to Subtitle C of RCRA. If recycled used oil (called "recycled oil" under RCRA section 1004 (37)) is not also a hazardous waste, it is subject to regulation under the provisions of Section 3014 rather than sections 3001–3006, 3008, and 3016. This has certain significant implications. For example, permits are not necessarily required to manage recycled oil, the criminal enforcement provisions of section 3008 (d) do not apply, and the regulatory program may not be delegable to states under section 3006. (See Section XI of this preamble for a discussion of the impact of this rule on authorization of state programs.)

If recycled oil is also a hazardous waste, many of the Subtitle C regulations for other hazardous wastes (40 CFR parts 262–266 may apply. Section 3014, as amended the Hazardous and Solid Waste Amendments of 1984, provides detailed guidance on regulating recycled oil that is a hazardous waste.

4. *Distinguishing Between Hazardous Waste and Used Oil.* It is important to determine whether a waste fuel is a hazardous waste fuel or a used oil fuel because they would be regulated differently under today's rule. For example, hazardous waste fuel could not be burned in nonindustrial boilers under the proposed rules even if it were processed or blended to meet the specifications for used oil fuel.[14] Off-specification used oil could be processed or blended to meet the specification and then burned in nonindustrial boilers.

There are situations where it is difficult to tell if a waste is used oil or hazardous waste, particularly when a used oil contains toxic constituents. The Agency believes that it has discretion to determine whether a waste is to be classified as hazardous waste or as used oil.[15] See Rep. No. 98–284, 98th Cong. 1st Sess. at 38. In exercising this discretion, we are guided by three principles:

(1) Where possible, clear, objective tests are needed for classifying hazardous waste and used oil;

(2) The Agency should not adopt a scheme whereby most used oil would be classified as a hazardous waste ineligible for regulation under the section 3014 standards; [16] and

(3) Any objective test should ensure that massive adulteration of used oil with hazardous waste results in the mixture being defined as a hazardous waste not eligible for the special standards for recycled oil.[17]

We discuss below how we apply these principles to used oil containing chlorinated wastes, to used oil generated by small quantity generators, and to used oil that exhibits a characteristic of hazardous waste.

Used Oil Containing Chlorinated Wastes. Today's rule reiterates the principle found in § 261.3(a)(2) of the existing regulations that a hazardous waste mixed with a solid waste is a hazardous waste. Thus, under the proposed rule, mixtures of hazardous waste and used oil ordinarily are classifed as hazardous waste. It is not always possible, however, to prove (or to be sure) that mixing has occurred, particularly when no one has observed the act of mixing. Used oil containing small amounts of chlorinated compounds is an example where there may be uncertainty.

Since chlorinated compounds—many of them hazardous wastes—are frequently found in used oil (see Table 1 above), the Agency believes that a simple, objective test is needed to determine when used oil has been mixed with hazardous spent halogenated solvents (or other chlorinated hazardous waste) to avoid case-by-case confusion as to when mixing has occurred, and to aid in consistent enforcement of the regulation. The Agency is proposing a rebuttable presumtion that used oil containing more than 4,000 ppm total chlorine has been mixed with hazardous spent halogenated solvents(i.e., EPA Hazardous Waste No's. F001 and F002) or other hazardous chlorinated wastes and, therefore, is a hazardous waste under provision of the "mixture rule" of 40 CFR 261.3 (i.e., a mixture of a listed hazardous waste and other material is a hazardous waste unless delisted under provisions of 40 CFR 260.20). The presumption can be rebutted by demonstrating to enforcement officials that the chlorine content is inorganic or

[14] *Although the used oil fuel specification (particularly flash point) in conjunction with the rebuttable presemption on mixing with chlorinated hazardous wastes address contaminants that we believe are frequently added to used oil by mixing with hazardous waste, the specification by no means comprehensively addresses the hazardous constituents that could be added if fixing were condoned. A specification that identified hazardous waste suitable for burning in nonindustrial boilers would need to consider the risks posed by burning the hundreds of toxic constituents listed in Appendix VIII of 40 CFR Part 261, an extremely difficult task given. For example, it would be difficult to set de minimis concentration levels for many constituents given limited dose-response health effects data at extremely low levels of exposure. Even if such a comprehensive specification could be developed, analytical costs to demonstrate compliance would likely discourage its use.*

[15] *Were used oil to be listed as a hazardous waste, we would have discretion to determine whether a waste is hazardous used oil or some other hazardous waste ineligible for the possibly special standards for recycled oil developed after consideration of section 3014 of RCRA.*

[16] *We think this principle evident because otherwise the Used Oil Recycling Act would have little meaning.*

[17] *The legislative history to the Used Oil Recycling Act indicates that Congress was especially concerned with environmental hazards created when toxic wastes are added to used oil, and was concerned that these mixtures were not identified or listed as RCRA hazardous wastes. (See, e.g., H.R. Rep. No. 96–1415, 96th Cong. 2d Sess., at 4–5.) The principle in the text also effectuates the objectives of RCRA to promote the protection of human health and the environment by regulating hazardous waste management. (See, e.g., RCRA Section 1003(4).)*

that the chlorinated organics were not constituents of hazardous wastes.

We are proposing a total chlorine level of 4,000 ppm for the presumption because we are virtually certain that used oil with higher levels of chlorine has been massively adulterated with chlorinated solvents or other chlorinated hazardous waste. Such fuel would be ineligible for regulation under the potentially special standards under section 3014 (unless the presumption were rebutted) scheduled to be proposed in 1985 (i.e., the used oil listing/management proposed rule). Although used automotive oils can contain on the order of 3,000 ppm inorganic chlorine (from leaded gasoline blowby), higher chlorine levels would almost certainly indicate mixing with chlorinated solvents.[18] Used industrial oils, other than certain metalworking oils,[19] are not know to contain chlorinate compounds unless chlorinated wastes are addes. In addition, sampling data from hundreds of samples of all types of used oil indicated that both total hazardous spent solvent concentrations and total chlorine concentrations exceed 4,000 ppm 25% of the time.[20] Based on these data, the Agency believes that the level of 4,000 ppm is within the range or reasonable levels it could have selected to indicate hazardous waste adulteration. In addition, burning used oil with less than 4,000 ppm of chlorinated solvents will not pose a significant risk from emissions of either incompletely burned solvents (i.e., boilers will destroy from 99% to 99.99% of the solvent) or hydrochloric acid.[21]

The Agency solicists comments as to whether alternate chlorine levels are a more appropriate indicator of hazardous waste adulteration.[22]

Used Oil Generated by Small Quantity Generators. A large percentage, probably a majority, of used oil is generated by small quantity generators.[23] Some of this used oil is a hazardous waste under presen regulations, either because it is mixed with hazardous waste or because it exhibits a characteric of hazardous waste. The Agency believes that Congress ordinarily intended used oil from small quantity generators to be classified as used oil subject to regulation under section 3014, not as hazardous waste ineligible for regulations under that section. See, e.g., H.R. Rep. No. 96-1415 at 6 assuming that automotive oil is used oil. Section 241 of the Hazardous and Soild Waste Amendments of 1984 likewise requires the Agency to deal with small quantity generators as a class in promulgating regulations for recycled used oil, and further states that recyled oil is not subject to otherwise applicable rules for small quantity generators. See RCRA amended section 3014(c); see also H.R. Rep. 98-198, *supra*, at 65-66 mandating speical administrative rules for small quantity generators of used oil.

Relying on both the Used Oil Recycling Act and the new legislation, we are stating in the rule in proposed § 266.40(c) that used oil generated by a small quantity generator is subject to regulation as used oil fuel (when so recycled). This is true even if the used oil exhibits a characteristic fo hazardous waste, or is mixed with a small quantity generator's hazardous waste.[24]

We do not think that this reading is inconsistent with the principle that used oil not be massively adulterated with hazardous waste because, as a factual matter, used oil from small quantity generators is generally not massively adulterated. Metals in the waste are present from use of the oil, not from adulteration. Analyses also indicate that small quantity generators--particularly automotive service and repair shops--are unlikely to generate used oil that contains more than on the order of 1000 ppm of halogenated solvents.[25]

As stated in the previous section, used oils containing greater than 4000 ppm chlorine are presumed under the regulation to be hazardous waste subject to full regulation. A marketer, blender or user might argue that the material is exempt from the hazardous waste regulations and remains a used oil because it was generated by a small quantity generator. They would have the burden of proof on this issue. See, e.g., *SEC* v. *Ralston Purina Co.*, 345 U.S. 119, 126 (1953) (party claiming the benefits of an exception to a broadly remedial statutory or regulatory scheme has the burden of proof to show that they meet the terms of the exception). As part of this burden, they would have to show that the used oil has never been commingled with hazardous waste (including used oil containing greater than 4000 ppm chlorine) from large quantity generators. Since used oil from small quantity generators is not typically adulterated at these levels, we do not think this burden can be satisfied other than in exceptional cases.[26]

Used Oil That Exhibits a Characteristic of Hazardous Waste. Used oil itself might be hazardous waste if it exhibits a characteristic of hazardous waste. The most likely

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[18] Based on 26 samples of used oil taken from automotive service and repair shops (and, thus, known not to be adulterated with hazardous waste by collectors or processors/blenders). See Franklin Associates, Ltd., *Composition of Used Oil*, Appendix A. Also see NBS Technical Note 1130—*Test Procedures for Recycled Oil Used as Burner Fuel*, August 1980, p. 51.

[19] Some metalworking oils contain extreme pressure additives that are parafinic compounds with high chlorine levels. Thus, used metalworking oils may contain chlorine levels higher than 4,000 ppm even through they are not mixed with hazardous halogenated solvents. However, these oils comprise less than 3% of recycled used oil and, are typically disposed of because of their high water, sulfur, and chlorine content. (See Richard J. Bigda & Assoc., *Review of all Lubricants Used in the U.S. and Their Re-Refining Potential*, June 1980, pp. 63-70 and Franklin Associates, Ltd., *Composition of Used Oil*, p. 3-11 through 3-15.) Nevertheless, if a used oil processor were to manage such oil, he could rebut the presumption that it was a hazardous waste by showing that the chlorine was not attributable to hazardous solvents or other hazardous wastes.

[20] Frankling Associates, Ltd., *Composition of Used Oil*, p. 1-12.

[21] PEDCo, *Risk Assessement of Waste Oil Burning*, pp. 5-1 through 5-8.

[22] Used oil containing less than 4,000 ppm total chlorine could still be found to contain hazardous waste. The Agency, however, is not presuming that it is a hazardous waste in every case.

[23] Roughly 60% of used oil burned as fuel (the principle means of recycling used oil) is automotive oil, most of which is generated by automotive service and repair shops who are small quantity generators. (See Franklin Associates Ltd., *Composition of Used Oil*, p. 1-4.)

[24] The Agency notes that there are alternative approaches to classification of used oil from small quantity generators. One alternative—based on the legislative history of the 1980 Act cited above—would be to classify all automotive oil as used oil, even if it is adulterated with hazardous waste. Other used oil generated by small quantity generators would be classified as hazardous waste ineligible for regulation under Section 3014 standards. A second approach would be to classify small quantity generators used oil as a hazardous waste if it is massively adulterated with small quantity generator hazardous waste. This would be based on the principle, noted above, that massive, deliberate adulteration should result in used oil/hazardous waste mixtures being classified as hazardous waste ineligible for regualtion under Section 3014 special standards. The Agency solicits comments on these alternative approaches.

[25] Analysis of 26 samples of used oil generated by automotive service and repair shops reveals that none contained more than a total of 1000 ppm of chlorinated solvents such as trichloroethane, trichloroethylene, tetrachloroethylene, carbon tetrachloride, and methylene chloride and 50% contained less than a total of 5 ppm chlorinated solvents (40% did not contain any of the chlorinated solvents analyzed). See Franklin Associates, Ltd., *Composition of Used Oil*, pp. 3-33.

[26] The Agency solicits comments on the extent to which small quantity generators may, in fact, generate used oil containing more than 4000 ppm total chlorine because of mixing with chlorinated hazardous waste. Further, given that such mixtures would be regulated as used oil fuel rather than hazardous waste fuel (unless mixed with large quantity generator hazardous waste), the Agency solicits comments on whether an allowable level for chlorine (e.g., 4000 ppm) as an indicator of mixing with chlorinated wastes should be included in the used oil fuel specification to ensure that such adulterated oil—like such mixtures generated by large quantity generators—is not burned in nonindustrial boilers.

possibility is EPA toxicity for lead, arsenic, cadmium, or chromium. These metals are present in used oil almost invariably as a result of the oil's use.

EPA intends that used oil that is hazardous waste solely because it exhibits a characteristic of hazardous waste be regulated as used oil fuel (where so recycled), provided that it is not mixed with a hazardous waste.[27] The legislative history of the Used Oil Recycling Act indicates clearly that used oil that is contaminated during use is to be classified as used oil and, if recycled, be subject to regulation under section 3014. See H.R. Rep. 96–1415 at 6. The specification for used oil fuel suitable for burning in nonindustrial boilers addresses these contaminants by setting specific levels for them.

Used oil also may exhibit the characteristic of ignitability, either through contamination during use or through adulteration with ignitable wastes (such as ignitable spent solvents or discarded gasoline). We are proposing that ignitable used oil be regulated as used oil, and be prohibited from burning in nonindustrial boilers when its flashpoint is less than that of commercial fuel. We are considering whether a flashpoint this low serves as a presumptive indication of mixing with hazardous waste, and therefore, that such mixtures should be regulated as hazardous wastes ineligible for regulation under section 3014 standards.

Used oil exhibiting a hazardous waste characteristic is a hazardous waste under existing EPA regulations. We note that the proposed regulations for burning used oil fuels would provide a level of environmental protection analogous to that provided by the proposed regulations for burning hazardous waste *fuels*. Neither hazardous waste fuel nor off-specification used oil fuel *could* be burned in nonindustrial boilers. Although used oil fuel meeting the specification could be burned in nonindustrial boilers, the specification ensures that such burning would not pose significantly greater risk than burning virgin fuel oil. Use of a specification to identify used oil fuel that may be safely burned in nonindustrial boilers is possible because of the relatively small number of significant toxic contaminants typically found in used oil (i.e., used oil not mixed with hazardous waste). A specification is not practicable for hazardous waste fuel because a large number of toxic contaminants—virtually any of the hundreds of hazardous constituents listed in Appendix VIII of 40 CFR Part 261—may be found in concentrations that could pose significant hazard.

5. *Definition of Nonindustrial Boiler or Furnace.* The regulation proposed today would prohibit burning hazardous waste fuel and off-specification used oil fuel in nonindustrial boilers. The term "nonindustrial" boiler or furnace is used to refer to units such as those located at: (1) Single or multifamily residences; (2) commercial establishments such as hotels, office buildings, laundries, or service stations; and (3) institutional establishments such as colleges, hospitals, and prisons.

For convenience, the proposed regulation identifies the boilers and industrial furnaces that may burn hazardous waste fuel and off-specification used oil fuel and prohibits the burning of these fuels in other boilers or furnaces. These waste fuels may be burned for energy recovery in only the following stationary combustion devices: (1) Industrial furnaces; (2) industrial boilers; or (3) utility boilers. (Off-specification used oil fuel may also be burned by the generator in a used oil-fired space heater.) The term "industrial furnace" is defined in the proposed amendment to 40 CFR 260.10 (see 48 FR 14507 (April 4, 1983)) and means those devices that are integral components of manufacturing processes and that use flame combustion or elevated temperature to accomplish recovery of energy or materials. The Administrator would identify and list devices considered to be industrial furnaces. Devices to be listed include cement kilns, lime kilns, aggregate kilns, phosphate kilns, coke ovens, blast furnaces, and smelting furnaces.

The term "industrial boiler" means any boiler that produces electric power, steam, or heated or cooled air or other gases or fluids for use in a manufacturing process. The term "boiler" is defined in the proposed amendment to § 260.10 (see 48 FR 14507 (April 4, 1983)). (In response to comments, the Agency is considering modifying the proposal to use quantified levels of heat transfer to *implement* the integral design standard, rather than the radiant heat transfer test of the *proposed* rule. The Agency also is considering including process heaters and fluidized bed combustion units as boilers. Today's proposal should be read to include these changes.) The term "manufacturing process" means the mechanical or chemical transformation of substances into new products, including the component parts of products. Manufacturing processes are generally limited to those operations classified under SIC 20 through 39 of the Office of Management and Budget Standard Industrial Classification Manual. To qualify, a boiler must actually be used to provide energy to operate equipment or drive chemical or other reactions to affect the transformation of substances into products. Boilers that produce energy for use *solely* for space heating or cooling in a manufacturing plant, or for space heating or cooling or other purposes in an administrative office or auxiliary unit at a manufacturing establishment or other facility owned or occupied by a manufacturing business, are *not* used in a manufacturing process for purposes of this regulation.

Such boilers are virtually identical in operation and use as those located at commercial and institutional establishments. Thus, boilers used solely to heat or cool a building in which a manufacturing business conducts supporting services (including research, development, testing laboratories, warehouses, and garages), rather than actual manufacturing, are nonindustrial boilers for purposes of this regulation, and could not burn hazardous waste fuel or off-specification used oil fuel. Boilers used to provide energy for a manufacturing process as well as for space heating or other nonmanufacturing purposes are considered to be industrial boilers.

D. Selection of Parameters and Levels for the Specification

The Agency has developed a specification for use oil fuel that may be burned without regulation in nonindustrial boilers and other boiler or furnace. As an alternative to the specification, EPA considered banning all used oil burning in non-industrial boilers, just as the Agency is proposing to ban burning of hazardous waste. It could be argued that a ban may be more protective because: (1) A specification necessarily limited in scope to be practicable may not ensure that, in fact, hazardous waste is not mixed with used oil sold to nonindustrial boilers; [28] and

[27] Except that mixtures of small quantity generators exempt hazardous waste and used oil are subject to regulation as used oil, as discussed above.

[28] We believe, however, the specification and rebuttable presumption will detect and control hazardous wastes mixed with used oil at levels that could pose significant risk when the oil is burned. Metals would be controlled directly by specification levels. Adulteration with nonhalogenated, ignitable solvents would be controlled by the flash point specification. Adulteration with halogenated solvents would be controlled by the rebuttable presumption. The Agency also has examined whether other hazardous wastes are typically

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(2) a ban would not allow an increase in emissions of metals and organic compounds over those from burning virgin fuel oils (as discussed below, the specification could allow higher lead levels than found in virgin fuel oils, levels of arsenic, cadmium and chromium levels comparable to the 95th percentile levels found in virgin fuel oils, and low concentrations of chlorinated spent solvents and PCBs, neither of which are found in virgin fuel oils). The ban approach was rejected because we believe that the used oil fuel specification in conjunction with the rebuttable presumption of mixing with chlorinated wastes would adequately prevent the burning of used oils that the Agency believes pose significant risk when burned for energy recovery, as discussed below. Given that some used oils can either meet the specification as generated or can be economically blended to meet the specification,[29] the Agency believes that a ban on burning these oils would be an unnecessary impediment to recycling of used oil in a manner that poses no greater risk to human health and the environment than burning virgin fuel oils. The Agency specifically solicits comments on whether all used oil burning in nonindustrial boilers should be banned as an alternative to using a specification (in conjunction with the rebuttable presumption of mixing with chlorinated hazardous waste) to identify used oil fuel acceptable for burning in nonindustrial boilers.

The used oil fuel specification includes limits for certain metals, PCBs, and flash point and the rebuttable presumption on mixing chlorinated wastes limits total chlorine. EPA relied mainly on three studies in selecting the specification parameters and levels: (1) Reviews of available data on the composition of used oils being used as fuel [Franklin Associates, Ltd., *Composition and Management of Used Oil Generated in the United States,* September 1984]; (2) a review of used oil combustion testing data [Draft report by GCA Corp., *Environmental Characterization of Disposal of Waste Oil by Combustion in Small Commercial Boilers,* August 1983]; and (3) an air modeling and risk assessment study of used oil burning sources to evaluate the potential environmental impacts of certain used oil burning practices [Draft report by PEDCo Environmental, Inc., *A Risk Assessment of Used Oil Burning in Boilers and Space Heaters,* September 1983].

Used oil fuel meeting the proposed specification would be unregulated and could be burned in any boiler including residential, institutional, and commercial boilers. EPA, therefore, is proposing a specification that is intended to be protective under virtually all circumstances (provided that used oil is not illegally adulterated with hazardous waste that would not be detected and controlled by the specification or the chlorine limit of the rebuttable presumption). What follows is an explanation of how EPA selected parameters for inclusion in the specification, and then how actual levels for those parameters were determined.

1. *Selection of Parameters.* EPA has reviewed analytical data from over 1000 used oil samples, many of which were being used as, or to produce, used oil fuels. These data, along with other published sources on composition of new and used lubricants, have allowed EPA to characterize the physical and chemical properties of used oils. Used oils contain a variety of contaminants picked up through use, as well as certain constituents present in the petroleum basestocks and additive packages of the lubricants themselves. Analytical data also confirmed that other materials, in particular chlorinated degreasing solvents, are frequently added to used oil after it is generated. EPA considered the typical concentrations of these contaminants in used oil as well as the toxicity and other chemical properties of the constituents, and thereby identified several constituents that are typically present in used oil as being potentially hazardous pollutants when used oil is burned as a fuel.

EPA reviewed available used oil combustion testing data to determine the amounts of these constituents that are released during used oil combustion. In come areas, EPA found available data to be insufficient and sponsored a series of test burns in late 1982 and early 1983 to obtain additional data. EPA determined that when used oil is burned in boilers, 30–75% of the metals present in the used oil fuel are emitted to the air.[30] However, EPA also determined that organic contaminants, such as chlorinated degreasing solvents (including even hard-to-burn compounds such as carbon tetrachloride) are destroyed at 99–99.9% efficiency even when the units are not operated at peak combustion efficiency as evidenced by occasional flue gas smoke episodes. Thus, less than 1% of the organic compounds present in the used oil may be emitted to the atmosphere.[31]

EPA also conducted air modeling and risk assessment studies to estimate ambient concentrations of pollutants that may be associated with used oil burning. EPA made certain assumptions in the modeling intended to reasonably simulate certain used oil burning practices. The risk studies that have been conducted modeled emissions from used oil fuel usage in hypothetical situations to determine two types of impacts: (1) Area-wide impacts where many small, uncontrolled sources with short stacks are located in an urban area; and (2) "hot-spot" impacts in the vicinity of single sources and clusters of sources. The area-wide analysis assumed the sources were located throughout the urban area, with their locations and density approximating population and fuel use patterns. This scenario simulates a fairly common used oil burning practice, as documented by investigations conducted by EPA, New York City, and New Jersey. The modeling study provided a general indication of the ambient ground level impacts that could potentially be associated with the widespread use of used oil fuel in residential, institutional, and commercial boilers in an urban area. The "hot-spot" impacts analysis modeled emissions from boilers burning 100% used oil. Boiler sizes and stack heights were varied to represent the range of boilers located in urban areas. Emissions from clusters of 4 and 16 sources evenly spaced 50 or 100 meters apart in a square were also modeled to simulated conditions in highly urbanized and commercialized areas. Ground level impacts of burning used oil with various concentrations of pollutants were determined. (For lead, ambient levels were also modeled for elevated and close-in receptors.)

Finally, EPA considered available data on the composition of virgin, commercial fuel oil, which used oil fuel replaces. EPA made comparisons of the

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added to used oil, and has not found such evidence. Preliminary screening of approximately 50 used oil samples for a wide range of hazardous constituents (other than solvents and metals already known to be found in used oil), including 6 pesticides, 2 herbicides and approximately 80 other organic compounds, did not reveal appreciable levels of compounds other than those typically found in virgin fuels. See Franklin Associates, Ltd., *Composition of Used Oil.*, pp. 3–44 through 3–53.

[29] Preliminary analysis indicates that from 8 to 19% of 132 used oil samples that were burned for fuel could meet a lead specification at either end of the proposed range, 10 and 100 ppm, respectively. In addition, from 30 to 86% of the samples could meet a specification of 10 or 100 ppm, respectively, after blending with 90% virgin fuel oil with mean metals content. Source: Franklin Associates, Ltd., (unpublished data). April 27, 1984 memorandum to EPA.

[30] GCA Corp, *Environmental Characterization of Waste Oil Combustion*, p. 9, and PEDCo, *Risk Assessment of Waste Oil Burning*, p. 3–20.

[31] GCA Corp, *Environmental Characterization of Waste Oil Combustion*, pp. 14–20.

types and levels of contaminants found in used oil fuel versus other fuel oils. For some contaminants, EPA has found used oil fuel to be very similar to other fuel oils. In general, however, significant differences exist. EPA determined that used oil fuel typically contains certain contaminants, such as cholorinated degreasing solvents, not found at all in commercial fuel oils. Also, used oil fuel typically contains certain toxic metals, (such as lead) at levels higher than typically found in commercial fuel oils.

After considering information provided by all of the studies described above, EPA has determined that certain contaminants present in used oil fuel are released during combustion in amounts high enough to present potential health hazards, while other contaminants do not appear to present such hazards. In general, EPA considered establishing a specification for any toxic contaminant that is typically present in used oil fuel at concentrations higher than typical for virgin fuel oils. EPA determined that regulation of toxicants at the same or lower levels than found in virgin oil would not result in protection of human health and the environment since virgin oil would be substituted for used oil as a fuel.

EPA then evaluated the potential harm to human health that could result from burning used oil containing these contaminants. In making this determination, the Agency assessed whether burning used oil fuel under reasonably typical conditions could significantly increase the ambient concentration of the pollutant, and whether the increment that would be added to the ambient air by burning used oil fuel could be associated with adverse health impacts. What follows is a discussion of several parameters considered for inclusion in the proposed specification, and the rationale for including or not including each parameter. EPA requests comments on the rationale for selecting parameters, as well as on those actually selected.

(a) *Barium and Zinc.* EPA considered setting specification levels for barium and zinc. These metals are typically present in used oil at 50–300 and 500–1100 ppm, respectively. These levels are 10–100 times greater than would be found in virgin fuel oils. In workplace settings, exposure to high amibient levels of barium has been associated with irritability and baritosis, while zinc has caused metal fume fever. EPA has determined that in the case of zinc, emissions from the widespread burning of used oil in urban areas would significantly add to ambient levels of zinc; however, these ambient levels are still nowhere near the threshold response level that triggers metal fume fever.[32] In the case of barium EPA has determined that emissions from the widespread burning of used oil fuel in urban areas could also significantly increase ambient levels of barium. Ambient levels attributable to burning used oil under reasonable worse case conditions could be on the order of 0.35 micrograms per cubic meter.[33] However, EPA again has concluded that the health effects resulting from exposure to such concentrations and by the airborne route are not likely to be significant. Chronic exposure to low levels of airborne barrium compounds does not appear to be a serious health hazard. Dusts of barium oxide are considered potential agents of dermal and nasal irritation.[34] However, occupational exposure to barium sulfate dust and barium carbonate can result in baritosis, a benign pneumoconiosis that is not incapacitating. Although it does produce radiologic changes in the lungs, the changes are reversible with cessation of exposure.[35] Thus, EPA has proposed no specification for either barium or zinc. However, the Agency specifically solicits comments on the health risks from low ambient levels of zinc and barium and whether either should be included in the specification.

(b) *Polynuclear Aromatic Hydrocarbons.* EPA evaluated the hazards posed by benzo(a)pyrene and other polynuclear aromatic hydorcarbons (PAH's). Benzo(a)pyrene, as well as other PAH's, have been identified as carcinogens by EPA. Comparable levels of benzo(a)pyrene and other PAH's are normally present in used oil and virgin fuel oil. (Residual, or "number 6" oil often has higher levels of benzo(a)pyrene than does used oil.) EPA also reviewed data on emissions from used oil and virgin fuel oil burning. The levels of PAH's are comparable.[36] EPA has determined that the burning of any fuel oil is associated with the emissions of small amounts of PHA's. Thus, the burning of used oil fuel is not associated with significantly greater incremental amounts of PAH emissions than if virgin fuel oil were bruned, and should not lead to a significant increase over background levels of benzo(a)pyrene or any other PAH. EPA, therefore, has not proposed a specification for any polynuclear aromatic hydrocarbon.

(c) *Lead, Arsenic, Cadmium, and Chromium.* Existing data show that used oil fuel typically contains higher concentrations of lead, arsenic, cadmium, and chromium than levels typically found in virgin fuel oils. Table 2 compares levels of these metals in used oil versus other virgin fuel oils. EPA's test burns have confirmed that a large percentage of the metals present in used oil (as much as 75%) are emitted when used oil is burned in uncontrolled boilers.

TABLE 2.—CONCENTRATIONS OF SELECTED METALS IN USED OIL AND FUEL OILS

(Values in ppm)

Contaminant	Used oil	Fuel oils
Arsenic	5–18	2–5
Cadmium	3–10	ND–2
Chromium	7–35	1–10
Lead	240–1,200	2–10

Median and 95th Percentile values are shown for used oil.
Median and 95th Percentile values are shown for fuel oils.

Source: Franklin Associates, Ltd., *Composition and Management of Used Oil Generated in the United States*, September 1984, p. 5–11.

EPA conducted a modeling study of a hypothetical urban area where used oil fuel was being burned across the city in residential, institutional, and commercial boilers.[37] The results of this study show that lead emissions from burning used oil fuel result in ambient concentrations of lead that are of potential public health concern. For example, EPA assumed that used oil being burned contained 1000 ppm of lead. Ambient concentrations of lead associated with the used oil burning were estimated to be over 0.7 micrograms per cubic meter (ug/m^3) in certain sections of the urban study area. Thus, this source would contribute nearly 50% of the National Ambient Air Quality Standard for lead (1.5 ug/m^3) established by EPA under the Clean Air Act. In combination with the background levels present in most urban areas (which are typically 0.5—1 ug/m^3 but exceed 1 ug/m^3 for several urban areas),[38] used oil emissions could cause the ambient standard to be exceeded. (However, it is not clear to what extent current background levels already include lead attributable to used oil burning.) Moreover, ambient lead levels in the vicinity of large single sources and clusters of small sources (i.e., sources spaced close enough (50 m) so

[32] PEDCo Environmental, Inc., *A Risk Assessment of Waste Oil Burning*, pp. 43–10, 4–24, 4–33, 4–51.

[33] PEDCo Environmental, Inc., *A Risk Assessment of Waste Oil Burning*, p. 5–2.

[34] American Conference of Governmental Industrial Hygienists, *Documentation of the Threshold Limit Values*, 1982.

[35] *Casarett and Doull's Toxicology: The Basic Science of Poisons*, 1980, p. 438.

[36] PEDCo Environmental, Inc., *Risk Assessment of Waste Oil Burning*, pp. D–5 through D–15.

[37] PEDCo Environmental, Inc., *Risk Assessment of Waste Oil Burning*.

[38] Office of Air Quality Planning and Standards, US EPA, 1982 (Unpublished data).

that their emission plumes overlap) can exceed the NAAQS considering only used oil burning emissions.[39]

The Agency believes that a specification for lead in used oil burned in nonindustrial boilers is needed notwithstanding the State Implementation Plan (SIP) program for implementing the lead National Ambient Air Quality Standard (NAAQS). This is because the great majority of these boilers are not major sources of lead emission (i.e., individually) and so are not ordinarily subject to review under the SIP process to ensure attainment and maintenance of the lead standard in the vicinity of the boiler. Further, urban air monitoring required under the SIPs may not control these units because the "hot spots" that they can create (i.e., areas in the vicinity of single sources or clusters of sources where ambient levels exceed the NAAQS) may not be detected under the SIP monitoring program.[40]

EPA also studied three other toxic metals. In the first instance, EPA assumed used oil contaminated with 28 ppm of chromium (the 90th percentile concentration of data available at the time of the study) was being burned across the city and that the chromium was emitted in its hexavalent state.[41] Under this scenario, used oil burning would be associated with an increased risk of cancer. The portion of the population within 5 km of the center of the urban area would be exposed to nearly 0.01 ug.m^3 of chromium, which is associated with a cancer risk of roughly 1 in 10,000.

EPA's modeling study also shows that under certain conditions, used oil burning could be associated with significantly increased cancer risk due to the presence of candium and arsenic. The incremental cancer risk associated with increased levels of these metals when burning used oil containing 4 ppm cadmium and 16 ppm arsenic (the 90th percentile concentrations of data available at the time of the study) could be about 1 in 500,000 for cadmium and 1 in 50,000 for arsenic.[42]

The scenarios employed by EPA in its modeling study were based on conservative, but reasonable assumptions. Although modeling and risk assessment do not provide precise results, such studies do provide a general indication of the extent of hazard a practice may pose. In this case, EPA has determined that the widespread, uncontolled burning of used oil in residential, institutional, and commercial boilers can be associated with an increase in ambient levels of arsenic, cadmium, chromium, and lead. For the first three metals, these increased ambient levels may lead to an increased risk of cancer for exposed individuals to levels that are cause for concern. Given the large number of exposed persons located in urban areas, the Agency believes that emissions of these metals should be controlled. In the case of lead, ambient lead levels could exceed the National Ambient Air Quality Standard in the vicinity of large single sources and clusters of smaller sources. Therefore, specifications have been proposed for each of these metals. The setting of acceptable concentrations for these metals is discussed below.

(d) *Chlorinated Solvents.* Analyses of over 600 samples of used oil from various sources revealed that more than 60% were contaminated with chlorinated solvents listed as EPA Hazardous Waste No's. F001 and F002 (e.g., trichloroethane, trichloroethylene, and tetrachloroethylene).[43] Such used oil/solvent mixtures are hazardous waste under provisions of the "mixture rule" of 40 CFR 261.3. Thus, such mixtures would be regulated as hazardous waste fuel when burned for energy recovery, unless the spent solvent was generated by a small quantity generator and exempt from regulation as hazardous waste under provisions of 40 CFR 261.5.[44]

As discussed previously in Section VII–C–4 of this preamble, the Agency is proposing a rebuttable presumption of mixing with hazardous wastes to avoid case-by-case confusion of when mixing has occurred. Under the presumption, used oil with more than 4,000 ppm total chlorine is presumed to be mixed with hazardous wastes. The person accumulating the used oil could rebut the presumption by demonstrating to enforcement officials what the oil has not been mixed with hazaardous waste.

Chlorinated solvent levels in used oil fuel suitable for burning in nonindustrial boilers need not be restricted to levels below 4,000 ppm (e.g., by chlorine specification). As stated previously, air emissions modeling has shown that used oil containing 4,000 ppm of hazardous chlorinated solvent will not pose a significant risk when burned in nonindustrial boilers either from emissions of unburned solvent or hydrochloric acid.

(e) *Benzine, Napthalene and Toluene.* Used oil may contain higher levels of benzene, napthalene and toluene than virgin fuel oils. Benzene and napthalene are picked up from gasoline or diesel fuel through use and are typically found in used oil in concentrations of 100–200 ppm and 300–100 ppm, respectively. Toluene is a widely used nonhalogenated solvent and can also be picked up from gasoline through use. Toluene concentrations in used oil may range from 1000–5000 ppm. EPA assumed in its modeling study that only 97 percent of these compounds were destroyed during combustion. (This is a worst case assumption, since EPA has established that organic contaminants are typically destroyed at 99–99.9 percent efficiency, even in very small boilers.) EPA has concluded that emissions from burning used oil containing benzene, napthalene, and toluene at the levels typically found would not significantly increase ambient levels of these compounds, and that the small increments that would be added do not present serious health hazards.[45] Therefore, specification levels have not been proposed for these compounds.

(f) *Ignitability.* Although specifications for benzene, napthalene, and toluene have not been proposed to address the toxicity of these compounds, these compounds have a low flash point (less than 50° F) and are highly ignitable. Gasoline, which often contaminates used motor oils during or after their use, and the nonhalogenated solvent xylene, which is also frequently mixed with used oil, also have a very low flash point. Used oil fuel contaminated by these materials may have a flash point less than 100° F. This is a lower flash point than any commercial fuel oil would have.[46] A material with such a low flash point may present significant hazards during handling and storage. Most importantly, such materials may readily volatilize and ignite, or even explode, unless special precautions are taken beyond the precautions normally

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[39] PEDCo Environmental, Inc., *Risk Assessment of Waste Oil Burning.*

[40] The SIP urban air monitoring program focuses on lead emissions from automobiles. Thus, monitoring stations are generally located close to major traffic corridors. These stations may not detect emissions from burning used oil.

[41] The Agency believes it is reasonable to assume under conservative conditions that chromium will be emitted in its hexavalent state since burning is an oxidizing environment. However, we specifically solicit comments on this assumption and the risk posed by burning chromium-bearing fuels.

[42] PEDCo Environmental, Inc., *Risk Assessment of Waste Oil Burning*, p. 5–7.

[43] Franklin Associates, Ltd., *Oil Composition of Used Oil*, p. 1–12.

[44] Used oil mixed with exempted small generator hazardous waste is subject to regulation as used oil fuel. See Section VII–C–4 of this preamble for rationale.

[45] PEDCo Environmental, Inc., *Risk Assessment of Waste Oil Burning*, pp. 5–2, 5–6, 5–7.

[46] The American Society for Testing and Materials' Standard Specification for Fuel Oils (D 396–76) calls for a minimum flash point of 100° F.

taken when handling any fuel oil. Consequently, EPA has proposed a minimum flash point, discussed below as a part of its specification for used oil fuel.[47]

(g) *Sulfur.* Used oil fuel may contain as much as 1% sulfur, though 0.1–0.5% is more typical. No specification has been proposed for sulfur because residual fuel oils (e.g., fuel oil number 6 and heavy number 4) frequently contain 1–3% sulfur. Several states and many urban areas, however, already have established sulfur limits for fuel oils; used fuel usually meets these limits and in fact is sometimes blended with residual fuel oil to allow the residual fuel to meet local sulfur limits.

(h) *PCBs.* EPA has included a specification for PCBs of 50 ppm. Used oil fuel with PCBs exceeding these level is subject to the existing waste PCB rules in 40 CFR Part 761 promulgated under authority of the Toxic Substances Control Act (TSCA). EPA is not proposing this limit for used oil, but is including the PCB limit in this rule for the reader's convenience.[48] Thus, used oil fuel that is off-specification solely because it contains more than 50 ppm PCBs remains subject to the existing rules in Part 761, and is not subject to today's proposal. Although the Part 761 rules do not provide the administrative controls included in today's proposal, Part 761 includes stringent requirements on burning waste PCBs.[49]

The Agency has indicated its intent to integrate the TSCA waste PCB rules under Part 761 with the RCRA Subtitle C rules to avoid overlap of regulatory control (e.g., for used oil fuel that is both a waste PCB and off-specification for other reasons). (See 45 FR at 33086 and 33173 (May 19, 1980).)

2. *Determination of Specification Levels.* As indicated above, EPA is proposing specification levels for the following parameters in used oil fuels: Arsenic, cadmium, chromium, lead, and flash point. This section explains how levels were selected for each parameter in the proposed specification.[50]

Under today's proposal, a used oil fuel would have to meet all of the specifications in order to be burned in a nonindustrial boiler. EPA has determined, as discussed earlier in this preamble, that these boilers are generally not suited for burning contaminated waste fuels. In general, EPA agrees with the House Committee on Energy and Commerce, which reported the finding that operators of facilities with nonindustrial boilers expect to receive and are equipped to handle only commercial grade fuel oil (See H.R. Rep. No. 98-198 at 39, 42.) However, EPA does not believe it is necessary for used oil fuel to be physically and chemically identical to virgin fuel oils in every respect.

As discussed previously, EPA has determined that certain used oil contaminants can pose a serious risk when the oil is burned in nonindustrial boilers in urban areas. EPA has determined that the concentrations of some of these contaminants should be limited to levels found in commercial fuel oils. However, the health risk from other contaminants would not be serious if used oil concentrations are limited to levels higher than found in commercial fuel oil. The basis for these determinations are discussed below.

(a) *Arsenic, Cadmium, and Chromium.* As described earlier, emissions from the widespread burning of used oil fuel in an urban area, (such as when residential, insitutional, and commercial boilers burn used oil fuel) can be associated with increases in ambient levels of arsenic, cadmium, and chromium. These metals are carcinogens, with no known threshold or "safe" level of exposure. Any increased or incremental emissions of these metals would lead to an increased risk of cancer to exposed individuals. As described above, EPA has concluded that the increased risks associated with emissions of these metals are cause for concern and can lead to an increased risk of cancer in large numbers of exposed individuals. Therefore, the Agency has proposed stringent limitations on these metals, intended to correspond to concentrations typically found in commercial fuel oils. (See Table 3.) The Agency's theory is that there is no protection to human health and the environment if recycled products are replaced by virgin products that are identical in terms of toxicant concentration, and therefore that specification levels should ordinarily be no more stringent than levels found in the commercial products that would be used in place of the recycled product. See 45 FR at 44971 (August 8, 1980) (exemption of spent pickle liquor used as a wastewater conditioner).

TABLE 3.—PROPOSED USED OIL FUEL SPECIFICATIONS FOR METALS THAT ARE NONTHRESHOLD POLLUTANTS

Contaminant	Maximum allowable level (ppm)
Arsenic	5.0
Cadmium	2.0
Chromium	10

The proposed levels for arsenic, cadmium, and chromium represent the 95th percentile concentrations based on 40-50 analyses of commercial fuel oils.[51] Thus, 95 percent of the commercial fuel oil sampled meets the specification. We are proposing to base the specification on the 95th percentile virgin fuel oil levels to ensure that most virgin oils would meet the specification but that abnormally high virgin oil levels (i.e., "outliers") would not unduly bias the specification. EPA specifically requests comments on whether the 95th percentile concentrations are appropriate for setting specification levels.

Another benefit from setting stringent limits is to prevent contamination of boiler ash with toxic metals. Although this ash may exhibit EP toxicity and, if so, should ordinarily be managed as hazardous waste, operators of nonindustrial boilers such as those in apartment and office buildings and hospitals may not be aware of their obligations and may not manage the residues as hazardous wastes.[52] The fuel specification for these metals should help assure that the ash is in fact nonhazardous.

(b) *Lead.* Lead is a pollutant associated with nervous system damage and renal damage. The Agency established the NAAQS for lead of 1.5 $\mu g/m^3$ to prevent exposure of most members of the sensitive population (young children) to ambient lead levels that can cause interference with development of red blood cells.[53]

[47] As noted above, we solicit comments on whether used oil with a flash point lower than 100° F should be subject to regulation as hazardous waste fuel rather than off-specification used oil fuel. The reasons could be that the oil was mixed with hazardous ignitable wastes (e.g., ignitable solvents), and that the flash point is an indication of massive adulteration that did not occur during use of the oil.

[48] PCB concentrations in used oil typically range from 7 to 50 ppm. Emissions modeling has shown that ambient PCB levels resulting from burning used oil with these PCB levels in nonindustrial boilers is not likely to pose a serious health hazard. Lifetime cancer risk would increase less than 1×10^{-6} (i.e., 1 in 1,000,000). See PEDCo Environmental Inc., *Risk Assessment of Waste Oil Burning*, pp. 5-6 and 5-7.

[49] Under provisions of 40 CFR Part 761, waste PCBs may be burned in a fossil fuel fired boiler provided that the unit has a capacity of at least 50 million Btu/hr and is monitored to ensure it is operating at peak combustion efficiency. In addition, prior approval is required from the Administrator to burn certain waste PCBs in a boiler.

[50] The basis for including PCBs and for the PCB limit is discussed above.

[51] Franklin Associates, Ltd., *Composition of Used Oil*, p. 5-11.

[52] GCA Corp., *Environmental Characterization of Waste Oil Combustion*, p. 14.

[53] The NAAQS is intended to prevent young children from exceeding a blood lead level of 30

Continued

EPA has estimated ambient levels under various scenarios of boiler size and location, receptor location, and used oil concentration to determine a concentration that would provide reasonable assurance that ambient lead levels would not exceed the NAAQS under realistic, worst-case conditions.[54] Lead emissions were modeled from single boilers with capacities varying from less than 1 million Btu/hr to 250 million Btu/hr. In addition, to simulate some of the realistic, worst-case conditions typical of highly urbanized and commercialized areas where most nonindustrial boilers are located, emissions from clusters of four and sixteen units equally spaced at 50 or 100 meters in a square were modeled for units with capacities up to 50 million Btu/hr. In some scenarios, receptors (i.e., exposed individuals) were assumed to be exposed to ambient air that is above ground level as occurs with windows or air intake systems in multi-story structures (i.e., "elevated receptors") and to be close to the source (25 to 50 meters) (i.e., "close receptors"). The boilers were assumed to be burning 100% used oil with lead concentrations ranging from 10 to 1000 ppm and to be operating at 50% capacity to simulate worst-case conditions during the winter heating season. Wind conditions modeled were historical conditions for January at a point in a major urban area.

Modeling results indicate that burning used oil with a lead concentration of 1000 ppm (the 90th percentile concentration of data available at the time of the study) in nonindustrial boilers in urban areas can cause "hot spots" (areas where ambient levels exceed the NAAQS) under a number of typical scenarios: (1) Single large boilers (250 million Btu/hr) with short stacks; (2) small clusters of medium size boilers (50 million Btu/hr) in situations where persons are exposed to ambient air above ground level through windows or air intake systems of multistory buildings (i.e., elevated receptors); (3) single small boilers (10 million Btu/hr), again considering elevated receptors; and (4) large clusters of very small boilers (1 million Btu/hr), again considering elevated receptors. At a lead concentration of 250 ppm (roughly the 50th percentile value), several scenarios that are not typical but probably not infrequent can still create "hot spots": (1) Small clusters of medium size boilers considering both elevated and close receptors (i.e., persons are exposed to ambient air above ground level *and* at a distance of 25 to 50 meters from the stack); (2) small clusters of small boilers considering both elevated and close receptors; and (3) large clusters of small boilers considering only elevated receptors. A lead concentration of 100 ppm would prevent "hot spots" in all but a few conceivable but exceptional scenarios where small or medium boilers are clustered together and where receptors are down wind, elevated (at the height of the stack) *and* extremely close to the source (within 25 meters). A lead concentration of 10 ppm (the 95th percentile virgin fuel oil lead concentration) results in ambient levels well below the NAAQS in virtually all situations.

EPA believes that a lead specification of 100 ppm ensure that ambient lead levels in the vicinity of both large and small single and clustered sources would be well below the NAAQS, on the order of 50% of the standard. Only in unique and truly extreme scenarios would ambient levels be expected to exceed the standard.[55]

Although background ambient lead levels in urban areas are considered to range from 0.5 to 1.0 $\mu g/m^3$ and are above 1 $\mu g/m^3$ for several urban areas, only those used oil burning scenarios that are likely to cause ambient levels to approach or exceed the standard were considered for a number of reasons: (1) It is not clear to what extent the ambient air monitoring stations typically located next to traffic corridors are measuring lead levels from used oil burning as well as from automobiles; (2) urban air lead levels are thought to be decreasing as more automobiles burn unleaded fuel; and (3) many of the high lead levels resulting from modeling used oil burning were found at elevated locations where background levels from automotive exhausts should be minimal.

Although limiting lead levels to 100 ppm should ensure that nonindustrial boilers would not cause ambient lead levels to exceed the NAAQS, the Agency is, nonetheless, concerned that such a 100 ppm lead specification for used oil fuel would not be a protective as is reasonable. The document the Agency used to develop the NAAQS, *Air Quality Criteria for Lead*, and the NAAQS itself are currently under review as required by Sections 108 and 109 of the Clean Air Act (42 U.S.C. 7408 and 7409). Any amendments to the NAAQS are scheduled to be proposed in 1986.

The existing NAAQS is based on findings by EPA and the Centers for Disease Control (CDC) that 30 $\mu g/dl$ blood lead levels should be prevented in children. At this time, EPA and other federal agencies, including CDC, are reviewing new data that report IQ effects in children exposed to lead levels below 30 $\mu g/dl$. In addition, there are other effects below 30 $\mu g/dl$, including changes in heme synthesis, changes in brain wave patterns, reduced nerve conductive velocity, and reduced Vitamin D levels in children. Should the peer review process find that these data are persuasive, the ambient standard may be revised accordingly.

In addition, the Agency is requiring the phase-down of lead in gasoline—the primary source of ambient lead in urban areas. Because sources of lead are additive, and exposure to lead among the general population is widespread, constituting a national health problem, the Agency believes that it is reasonable that efforts be made to reduce preventable sources of lead exposure.[56]

In light of these concerns, the Agency has considered proposing a used oil fuel specification for lead at the level found in virgin fuel oil, 10 ppm (i.e., 95% or 50 samples of virgin fuel oil contained less than 10 ppm lead). This would address our health concerns and would ensure that there would not be a significant increase in lead emissions when used oil fuels displace commercial fuel oil. However, we are concerned that a lead specification as low as 10 ppm would effectively preclude most burning of used oil as fuel because: (1) Only about 30% of used oil could meet the specification, either as generated or after blending with 90% virgin fuel oil containing mean metal concentrations (blending with more than 90% virgin fuel oil is not considered to be generally economical); (2) most used oil would, thus, be precluded from burning in

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$\mu g/dl$. Blood levels above 30 $\mu g/dl$ are associated with impairment of heme synthesis in cells indicated by elevated erythrocyte protoporphyrin. In addition, there are other adverse effects associated with blood levels above 30 $\mu g/dl$ which can result from exposure to concentrations well above the NAAQS, including encephalopathy and renal damage. (See 43 FR 46246–261 (October 5, 1978)).

[54] PEDCo Environmental Inc., *Risk Assessment of Waste Oil Burning*.

[55] For example, the standard could be exceeded in a situation where several 50 million Btu/hr, medium sized boilers serving very large high-rise structures with about 800,000 ft^2 of-floor space are spaced about 100 meters apart, where all of the boilers burn used oil with 100 ppm lead concentration, and where an individual is exposed to air through a window or air intake system that is located close to the stack (about 50 meters), and at a height equal to the boiler stack height, and directly down wind from at least two of the stacks.

[56] See 47 FR 38070–38078 (August 27, 1982) where the Agency discusses the bases for the gasoline lead phasedown regulation and the lead NAAQS, the relationship between gasoline lead phasedown and ambient air levels, and studies of the effects of low level lead exposure on intelligence or behavior of children.

nonindustrial boilers; and (3) industrial boilers and furnaces may also be largely precluded from burning used oil fuel under the Phase II technical controls on boilers and industrial furnaces. (Under the Phase II rules for boilers and industrial furnaces, the Agency is considering applying the used oil fuel metals specification proposed today—as one regulatory option—to boilers and industrial furnaces that do not have air pollution control equipment because the units can pose risks similar to nonindustrial boilers. Boilers and industrial furnaces with air pollution control equipment may be allowed to burn used oil fuel that contains higher levels of metals provided that the control equipment has a collection efficiency such that controlled emissions are not greater than if specification used oil fuel were burned.) In comparision, the amount of used oil that could meet a specification with other allowable lead levels is as follows:

	Lead specification			
	10 ppm	50 ppm	100 ppm	200 ppm
Percent of used oil that can meet specification	30	50	66	67

At allowable lead levels greater than 100 ppm, the amount the used oil that can meet the specification does not increase substantially.

At a lead specification level of 10 ppm, 70% of used oil, about 350 million gallons per year, could be diverted from burning. Even if the amount of used oil that is rerefined is doubled, only about 100 million gallons of used oil million gallons per year of used oil burned as fuel could be diverted to that use. Thus, large quantities of used oil heretofore recycled could be diverted to disposal. Not only would this waste a valuable resource, but it could result in health risks if generators or collectors disposed of their used oil improperly rather than incur the cost of proper management under existing and pending rules.[57] See H.R. Rep. No. 98-198 at 65. Given the huge number of generators and collectors, enforcement efforts may be limited and illicit activities may go undetected until serious problems are caused.

The Agency had decided to propose a lead specification range of 10 to 100 ppm to encourage public comment on the issues presented here and to allow final promulgation of a lead level that represents: (1) A level of 100 ppm based on ensuring that nonindustrial boilers do not cause ambient lead levels to exceed the NAAQS; (2) a level of 10 ppm based on commercial fuel oil levels that would limit lead emissions as much as possible; or (3) an intermediate level that balances the concerns of whether the NAAQS-based level is as protective of public health as is reasonable and whether a level lower than 100 ppm would severely disrupt used oil recyling and result in dumping.

The Agency also specifically requests comments on the following issues: (1) Whether other factors or scenarios should be considered that might suggest that another limit would be required to ensure ambient lead levels do not exceed the NAAQS; (2) whether a two-tiered specification would be more appropriate where a very low limit (e.g., 10 ppm) is required (or used oil burning is banned) for boilers within highly urbanized and commercialized areas (which could, perhaps, be identified by using the Bureau of Census list of cities with more than 25,000 population) and a higher limit (e.g. 100 ppm) is allowed for other areas where sources and receptors are more widely spaced and, thus, where individuals are likely to be exposed to lower ambient levels attributable to the source.

The Agency also considered whether specifications for arsenic, cadmium, and chromium would be needed if a lead level at the low end of the range were selected for promulgation. At a very low lead limit, used oil would be much more likely to fail the specification (even after 90% blending with virgin fuel oil) because of lead rather than arsenic, cadmium, and chromium as follows:

Lead specification	Percent [1]
10 ppm	95
50 ppm	80
100 ppm	60

[1] Percent of used oil failing specification (after 90% blending with virgin fuel oil) because of lead content.

Source: Based on data in Franklin Associates, Ltd., *Composition of Used Oil*, Appendix.

The Agency believes that specifications for arsenic, cadmium, and chromium are needed even if a lead limit as low as 10 ppm were promulgated for a number of reasons. Used oil lead levels are expected to decrease over the next several years as a result of the Agency's leaded gasoline phasedown program. (Lead in used oil is largely attributable to contamination of crankcase oil with lead from leaded gasoline "blow-by".) Thus, although less and less used oil would fail the specification for lead over time, that oil could have high arsenic, cadmium, or chromium levels. In addition, as discussed above, the Agency is considering in the Phase II technical controls for boilers and industrial furnaces applying the used oil fuel specification proposed today to used oil burned in those units as well. However, under one regulatory option being considered, burning of off-specification used oil fuel would be allowed in units with air pollution control equipment that controls emissions to levels that would occur if specification used oil were burned. Thus, controls are needed for all constituents in used oil that can pose a health hazard when the oil is burned—arsenic, cadmium, and chromium as well as lead. The Agency specifically requests comments on whether arsenic, cadmium, and chromium specifications are needed if a low lead specification level is selected for promulgation.

(d) *Flash Point.* EPA is proposing that used oil fuel with a flash point over 100 °F be exempt from regulation, provided that it meets the specification levels for metals and PCBs. Such fuel could, therefore, be burned in residential, institutional, and commercial boilers. The basis for this is that fuels with flash points as low as 100 °F—the ASTM specification for Number 2 distillate fuel—are routinely handled by fuel transporters and users, including residential, institutional, and commercial boiler owners. EPA believes that used oil fuel that otherwise meets the proposed specification is essentially equivalent to commercial fuel oil with respect to hazards posed during handling (and risks posed by burning) and that it will be handled with the same care as commercial fuel oil.

Used oil with a flash point of less that 100 °F would be subject to regulation as off-specivication used oil fuel. Fuels with a flash point below 100 °F are not routinely handled by fuel transporters or users and are inherently very hazardous. (According to ASTM specifications, no commercial grade fuel oil should have a flash point below 100 °F.) Thus, such fuels would be regulated as off-specification used oil fuel and would be subject to the notification, invoice and certification requirements and could be burned only in industrial boilers and furnaces.[58] As discussed previously in

[57] Used oil that exhibits a characteristic of hazardous waste or that is mixed with hazardous waste is subject to regulation as hazardous waste when disposed under existing rules. In addition, the Agency is developing controls for recycled used oil under authority of the Used Oil Recycling Act amendments to RCRA, and is considering whether used oil should be listed as hazardous waste. These rules are scheduled to be proposed in 1985.

[58] At first glance, setting the specification at 100 °F may appear inconsistent with the current definition for the characteristic of ignitability found in 40 CFR 261.21, which states that a liquid having a flash point below 140 °F is an ignitable hazardous waste. However, the Agency has determined that

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footnote 47, we are also soliciting comments on whether used oil with a flash point lower than 100 °F should be regulated as hazardous waste. If the final rule for used oil fuel is promulgated with such low flash point oils regulated as off-specification oil rather than hazardous waste fuel, the Agency will propose to control the handling hazards such oil poses during storage and transportation in the used oil listing/management rules scheduled to be proposed in late 1985.

E. Basis for Deferring Regulation of Used Oil Space Heaters

The prohibition on burning off-specification used oil fuel in nonindustrial boilers does not apply at this time to used oil-fired space heaters. We are deferring regulation of these units until we better understand the hazards they may pose and evaluate options to address any such hazards. In the interim, EPA is proposing a conditional exemption for these units.

The Agency believes that roughly 35,000 used oil space heaters have been sold nationwide to automotive service shops and other generators of crankcase oil.[58] These units are designed to burn 100% crankcase oil and are very small. They burn 0.1 to 4 gallons per hour of used oil and the largest units have a maximum heat input capacity of 0.5 million BTU per hour. Approximately 90% of used oil space heaters are the vaporization type where volatile organics in the oil are vaporized and ignited, while metals, sediment and heavy organic compounds remain in a pan at the base of the unit. Vaporization units appear to have low metals emissions rates—5 to 15% of the metals in the used oil are emitted from the stack.[60] Other used oil space heaters are the atomization type where the oil is "sprayed" into the combustion zone. Atomization units appear to have relatively high metals emission rates—75 to 95%.

Preliminary assessments indicate that vaporization units may not pose a significant health hazard. However, it is not clear whether atomization units pose a significant health risk with respect to metals emissions. In a situation where four atomization units may be spaced in a square 50 meters apart (as around an intersection) and emission plumes overlap, it appears that ambient lead levels would increase by about 10 percent of the National Ambient Air Quality Standard. In addition, emissions of arsenic, cadmium, and chromium from atomization units may pose a cancer risk to the most exposed individual on the order of 1 in 100,000.[61]

The Agency is considering whether these risk levels are significant and, if so, what approaches could be used to reduce the risk. If the atomization units alone are considered to pose a significant risk, the burning of off-specification used oil in those uits could be banned. Under this approach, EPA must determine how to handle the atomization units currently in operation and how to clearly differentiate between atomization and vaporization units. Alternatively, EPA could prohibit burning of off-specification used oil in space heaters that cannot meet an emissions performance standard (e.g., requirement that heaters emit less than 10% of the metals in the fuel). Finally, the Agency could determine that the risk posed by these units is not significant or only marginally significant and thus not worth the Agency and state resources that would be required to implement and enforce a regulatory system to effectively reduce the risk.

The Agency will address the regulation of used oil space heaters beyond the requirement for outside venting proposed today in the used oil listing/management rule scheduled to be proposed in 1985. In the interim, the Agency encourages comments on whether the risks of burning used oil in space heaters are significant, and, if so, on approaches to reduce risks.

To be excluded (at this time) from the prohibition on burning off-specification used oil, owners and operators of used oil-fired space heaters would have to meet three conditions: (1) the heater must have a maximum heat capacity of less than 0.5 million BTU/hr; (2) the heater must burn only used oil that the owner or operator generates on-site or receives used oil from individuals who change the oil in their automobiles or other equipment (i.e., "household waste" generated by "do-it-yourself" oil changers); and (3) the heater must be vented to the outside atmosphere. The capacity restriction is imposed to limit the exemption to legitimate used oil-fired space heaters used by automotive service shops. An upper size limit of 0.5 million BTU/hr heat input encompasses all used oil space heaters in use today and prevents operators of larger boilers from claiming they are operating used oil-fired space heaters. The second condition is imposed to ensure that only facilities that generate used oil, such as automotive service shops, and that might normally purchase such heaters are eligible for the exemption. This will preclude the possibility, albeit remote, that persons who are not used oil generator might purchase these units and purchase off-specification used oil from processors or blenders. Finally, we are requiring that the heaters be vented outside to avoid high indoor concentrations of lead and other toxic compounds.[62]

F. Prohibition on Cement Kilns in Urban Areas Burning Hazardous Waste Fuel

The Hazardous and Solid Waste Amendments of 1984 prohibit cement kilns located in cities with populations greater than 500,000 from burning hazardous waste fuels unless they comply with the standards applicable to hazardous waste incinerators. See RCRA amended Section 3004(1). This requirement takes effect by operation of law, and so applies although EPA is not presently proposing to restrict burning of hazardous waste fuels in other types of industrial furnaces. (EPA is in the process of adopting regulatory language adding the bill's requirements for such cement kilns to the Subtitle C regulations.) Since this prohibition takes effect by operation of law, it is not part of today's proposal.

G. Request for Comments on Issues Pertaining to the Prohibition

EPA specifically requests comments on the two issues discussed below.

1. *Request for Comments on Prohibiting the Burning of Waste Fuels*

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regulation of used oil fuels having a flash point between 100–140 °F is not necessary (provided they meet the specification) for the reasons discussed in the text. In addition, the "ignitability" characteristic for hazardous waste was intended mainly to identify "wastes capable of causing fires during routine transportation, storage, and disposal and wastes capable of severely exacerbating a fire once started." (See 45 *FR* 33108 (May 19, 1980).) The 140 °F limit was selected because such an ambient temperature is regularly encountered during landfill disposal, and in such environments, liquid wastes with flash points lower than 140 °F will readily volatilize and can easily be ignited by the numerous ignition sources to which wastes are exposed during management.

[58] Development Planning and Research Associates, Inc., *Selected Characteristics of the Waste Oil Space Heater Industry*, July 1983.

[60] GCA Corporation, *The Fate of Hazardous and Nonhazardous Wastes in Used Oil Recycling*, April 1983, p. VI-10. Draft Report.

[61] Metals emissions, ambient levels, and risks are about an order of magnitude lower for vaporization units. In addition, the cancer risk from emissions of unburned chlorinated solvents does not appear to exceed 1 in 1,000,000 for either vaporization or atomization units. See PEDCo. Environmental Inc., *Risk Assessment of Waste Oil Burning*, pp. 4–22 through 4–24 and 5–5 through 5–6.

[62] EPA also plans to issue an advisory under authority of the Toxic Substances Control Act (TSCA) to alert automotive service and repair shops of the hazards posed by indoor venting and the requirements of this proposed rule.

in Small Industrial Boilers. There are some common characteristics shared by many very small industrial and nonindustrial boilers that can tend to make their hazard potential similar. Many industrial boilers are similar in size, operation, and location to most of the nonindustrial boilers.[63] Nearly 90% of the approximately 125,000 industrial oil fired boilers, like more than 98% of the approximately 265,000 commercial and institutional oil fired boilers (and virtually all residential boilers), are very small units with a heat input capacity of less than 5–10 million BTU/hr.[64] These small industrial boilers are identical in type and operation to most nonindustrial boilers. They are mostly firetube or cast iron boilers with unsophisticated combustion controls. In addition, from 50 to 75 percent of industrial boilers are located in urban areas like nearly all nonindustrial boilers.[65] Further, the smaller industrial boilers are likely to be disproportionately located in urban areas given that "heavy" industries can be expected to use the larger units and to have a disproportionately large percentage of establishments located in nonurban areas.

Given these factors, the Agency is requesting comments on whether the prohibitions included in the regulations proposed today should be extended to include very small industrial boilers. A size cut-off in the range of 5 to 10 million BTU/hr heat capacity seems reasonable because boilers smaller than that range typically have relatively crude combustion controls (e.g., on-off controls and fixed linkage between fuel firing rate and combustion air flow rate) and may not be able to maintain peak combustion efficiency (and, thus, destruction efficiency) when burning hazardous waste.[66] Although nearly 90 percent of all industrial boilers that burn fuel oil are smaller than that size and would be restricted, the approximately 15,000 unrestricted boilers represent 80.90% of the industrial boiler oil burning capacity.[67] These unrestricted industrial boilers would have more than enough capacity to burn all of the used oil and hazardous waste currently used as fuel (even assuming no used oil meets, or is blended to meet, the specification and thus, no used oil is burned in nonindustrial or restricted industrial boilers). Only approximately 10% of the unrestricted industrial boiler capacity (i.e., boilers larger than 5–10 million BTU/hr) would be required to burn all used oil fuel and hazardous waste fuel assuming boiler load factors averaged 25 to 50% (i.e., on a yearly average, the boiler operates at 25 to 50% of its capacity).

The Agency is currently conducting tests of industrial boilers burning hazardous wastes and intends to propose technical controls on burning hazardous waste and used oil in these boilers (as well as industrial furnaces) in late 1985 (i.e., the Phase II controls discussed previously). Nonetheless, we are requesting comments on whether small industrial boilers should be included in the prohibition proposed in today's rule, or whether regulation should be deferred until a more definitive determination of their impacts, and appropriate regulatory controls, is completed.

2. *Request for Comments on Exempting Ignitable Wastes from the Prohibition on Burning in Nonindustriol Boilers.* The Agency is considering and exemption from the prohibition on burning in nonindustrial boilers for hazardous waste that is hazardous solely because it ignitable. Such wastes would pose no greater fire or explosion hazard during handling than commercial fuel oils if the minimum flash point allowed for the exemption was 100° F, the minimum flash point for commercial fuel oils. In addition, stack emissions should not pose a hazard if the waste is hazardous solely because it exhibits the characteristic of ignitability in Subpart D of 40 CFR Part 261. However, given that the Agency has not completed its efforts to list waste that are hazardous because they contain toxic compounds, wastes that are *currently* hazardous solely because they exhibit the characteristic of ignitability may, in fact, contain toxic compounds. See 46 FR at 7673 (January 23, 1981). If so, these wastes can pose a hazard during handling (e.g., from spills, fires), and emissions from the combustion of these wastes could expose the public to toxic compounds. To ensure that "ignitable-only" wastes do not contain significant concentrations of toxic compounds, those toxic compounds of concern must be identified, acceptable concentrations must be determined, analysis procedures must be prescribed, and recordkeeping procedures must be required. Further, to make the exemption cost-effective to the burner, it probably should be self-implementing.

The toxic compounds of concern are the hazardous constituents the Agency has listed for toxicity in Appendix VIII of 40 CFR Part 261. A maximum concentration of 100 ppm appears to be protective for most organic constituents given that, at that concentration, stack gas concentrations of the constituent are likely to be just at the detectable limits given destruction efficiencies of 99 to 99.99 percent typically found in nonindustrial boilers. However, lower allowable concentrations may be needed for highly toxic compounds. In addition, the fuel should meet the used oil fuel specification for metals to ensure that it poses no greater hazard than exempted used oil fuel (i.e., on-specification used oil).

It is not clear what levels would be appropriate for other metals and inorganic constituents. In addition, it is not clear whether a self-implementing exemption would be enforced adequately. Yet requirements for interaction by regulatory officials would amount to a permitting or approval system and probably would not be cost-effective for burners.

The Agency is specifically requesting comments on the need for an exemption for "ignitable-only" fuels and how a self-implementing, yet effective, exemption can be structured.

Finally, the Agency has considered whether such "ignitable-only" wastes with a flash point not less than 100 °F should be exempted from all of the requirements proposed today or just the prohibition on burning in nonindustrial boilers. Such wastes could require different types of handling and burning than commercial fuel oils even though they are ignitable with a flash point similar to No. 2 and No. 4 commercial fuel oil. Thus, boiler operators may need to be put on notice that the fuel is not commercial fuel oil but rather a hazardous waste fuel that may not handle and burn like a commercial fuel.

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[63] As discussed in Section VI–B–1 of this preamble, nonindustrial boilers can pose significant health risks because: (1) They are typically very small and may not achieve complete combustion of toxic organics (e.g., 99.99% destruction) because of inadequate controls to maintain optimum combustion conditions when firing hazardous waste and because of short residence time of toxic organics in the combustion zone; and (2) the risk from incomplete combustion is compounded because non-industrial boilers are typically located in urban areas where sources are frequently clustered together which causes emissions plumes to overlap and increases ambient concentrations of toxic compounds, and where individuals can be exposed to high ambient levels of emitted toxicants because they can be located close to the source and exposed to above-ground level ambient air (e.g., through windows or building air intake systems).

[64] PEDCo Environmental, Inc., *Risk Assessment of Waste Oil Burning*, pp. A–6, A–18.

[65] PEDCo Environmental, Inc., *Risk Assessment of Waste Oil Burning*, pp. A–2 through A–17.

[66] The New York State Department of Environmental Conservation has developed regulations for the composition and use of waste fuels (Subpart 225–2). Those regulations essentially ban burning of hazardous waste and used oil in a boiler with a capacity less than 20 million BTU/hr.

[67] Estimates based on data in PEDCo Environmental Inc., *Risk Assessment of Waste Oil Burning*, pp. A–6 and A–7.

To provide this notice to boiler operators, we might subject the waste to the manifest and other administrative controls applicable to hazardous waste fuels.

VIII. Proposed Administrative Controls

A. An Overview of the Proposed Administrative Controls

In addition to the substantive controls on burning discussed above and the controls on storage discussed in Section IX of this preamble, EPA today is proposing that hazardous waste fuel and off-specification used oil fuel be subject to certain administrative requirements. These requirements include one-time notification to identify waste-as-fuel activities and to obtain an EPA identification number (notification of waste-as-fuel activites is required even if a person has previously notified the Agency and obtained an EPA identification number), compliance with a manifest system (a new requirement for blended hazardous waste fuels), or an invoice system (for off-specification used oil fuel), and recordkeeping. In addition, persons receiving a shipment of hazardous waste fuel or off-specification used oil fuel would have to certify to the person initiating the shipment that they have notified EPA of their activities and that they may lawfully burn the waste fuel.

In general, these proposed controls serve two purposes. They make it possible to administer and enforce the prohibitions against burning in nonindustrial boilers and provide for proper tracking of the materials.

These administrative requirements would apply to hazardous waste fuel and off-specification used oil fuel marketers and burners. Hazardous waste and used oil generators who send their wastes directly to a person who burns them for energy recovery act as marketers and would be subject to the proposed controls.[68] Generators who send their hazardous waste or used oil to a person who does not burn them for energy recovery would not be subject to the proposed controls for marketers, even though the wastes may subsequently be burned for energy recovery by another person. The hazardous waste generator, however, would be subject to the 40 CFR Part 262 regulations ordinarily applicable to generators.[69]

Hazardous waste fuel transporters would be subject to the full set of Part 263 requirements. This proposal would regulate for the first time transporters of hazardous waste fuel that is neither listed waste nor a sludge. These hazardous wastes are currently exempt from regulation under provision of 40 CFR 261.6(a), a provision that would be superseded by the new Part 266 standards proposed today.

Used oil fuel transportation would be exempt from these proposed controls to avoid piecemeal regulation of used oil transporters.[70] If used oil fuel transporters were regulated while other used oil transporters were not, transporters could avoid complying by claiming that the used oil is intended for other purposes. The Agency plans to propose comprehensive controls for used oil management in 1985, and will address regulation of transporters at that time.

The following table (Table 4) summarizes the controls that would be required under today's proposal:

TABLE 4.—PROPOSED CONTROLS FOR WASTE FUELS

	Hazardous waste fuel[1]	Off-specification used oil fuel
Generators[2]	Part 262[3]	Exempt
Marketers[2]	N,RN,P,M,C,R,S	N,RN,P,I,C,R
Transporters	Part 263[3]	Exempt
Burners	N,RN,P,M,C,R,S	N,RN,P,I,C,R

[1] Hazardous wastes that are listed wastes or sludges are subject to storage and transportation requirements under existing rules (40 CFR 261.6) prior to use as fuel or used to produce a fuel. Today's rules would extend storage and transportation requirements as well as the waste fuel requirements indicated here to all hazardous wastes used as fuel or used to produce a fuel and to all hazardous waste-derived fuels produced from hazardous waste by processing, blending or other treatment.

[2] Hazardous waste and used oil generators would not be regulated as marketers unless they market directly to a burner.

[3] Generators who send their hazardous waste to waste fuel marketers would be subject to Part 262 standards as ordinary generators. See proposed § 262.20(a). Generators who market their hazardous waste to burners would be subject to the Part 262 generator standards as well as to the waste fuel marketer requirements indicated here. See proposed § 266.34(c).

[4] Hazardous waste fuel transporters would be subject to regulation as ordinary transporters. Thus, they would not be required to notify or report for waste-as-fuel activities. However, they would notify for their hazardous waste fuel transportation activities if they have not notified already.

Key:
N—Notification and identification number
RN—Renotify for waste-as-fuel activities
P—Prohibitions on marketing to, or burning in, nonindustrial boiler.
M,I—Compliance with manifest (M) or invoice, (I)
C—Provide or receive certification of compliance with standards for burning
R—Recordkeeping
S—Storage standards

B. Discussion of the Proposed Notification Requirements

1. *Purpose of the Notification Requirement.* To ensure that waste fuels are managed properly and not routed to nonindustrial markets, EPA must be able to identify those persons who engage in waste-as-fuel activities. The notification requirement proposed here serves this purpose. This type of notification is mandated under the recently-enacted RCRA reauthorization legislation and is authorized under the provisions of Sections 3010 and 3014.[71]

The notification process will identify the people subject to regulation. It also will serve to inform these persons that these fuels are no longer exempt from RCRA requirements. In addition, for persons and facilities that are not now part of the RCRA system, notification will result in the assignment of an EPA identification number. An identification number is needed for compliance with various requirements of this package.

2. *Who Must Notify.* Under this proposal, the following persons must notify the Agency of their waste-as-fuel activities: (1) Marketers of hazardous waste fuel or off-specification used oil fuel (e.g. third-party processors, blenders, and distributors, and those generators who market directly to burners); (2) burners of hazardous waste fuel or off-specification used oil fuel[72];

[68] Many used oil processors burn used oil as fuel to provide heat for purposes of treatment (e.g., enhance settling or separation of water, evaporation of volatiles). Such burning is incidental to the primary function of the facility: processing and market of used oil. Thus, such processors are not considered "ultimate burners" and generators and transporters who sell oil to such processors are not subject to regulation as marketers. These processors are considered to be manufacturers and their boilers are considered to be industrial boilers eligible to burn off specification used oil see Section VII-C-1 above.

[69] Hazardous wastes that are listed wastes or sludges are currently subject to storage and transportation controls prior to use to produce a fuel and prior to marketing as a fuel. (See 40 CFR 261.6(a)). Today's proposal would extend regulation to all hazardous wastes and so would include unlisted by-products and spent materials as well as any fuel containing any of these wastes as an ingredient. See Section VII-C-1 above.

[70] Many used transporters (collectors) pick up used oil from several small generators and aggregate the oil at satellite storage facilities prior to shipment in larger tankers to used oil processors or rerefiners. Such transporters are not considered marketers for purposes of today's proposed rules unless: (1) They ship used oil directly to a person who burns the oil for energy recovery; or (2) they process used oil at the storage facility. Any blending of used oils resulting from accumulation in the transporters's storge tanks is indicental to the primary function of accumulation and is not considered blending or processing for purposes of producing used oil fuel.

[71] EPA interprets notifications to be required under Section 3010 whenever the Agency amends a Part 261 regulation to bring additional persons into the hazardous waste management system, not just when additional characteristics or Listings are promulgated. See 48 FR at 14496 n.51 (April 4, 1983). Since EPA is proposing to increase the coverage of the system by amending Part 261 requirements, authority lies under Section 3010 to require notifications for hazardous waste fuels. The Agency also believes the plenary authority over recycled used oil contained in Section 3014 provides authority to obtain notifications. EPA's information collection authority in Section 3007, requiring persons handling wastes that may be hazardous to "furnish information relating to such wastes" to EPA, and general rule-making authority in Section 2002(a)(1) likewise justify obtaining notifications pertaining to used oil.

[72] Except generator who burn their oil in space heaters under provisions of proposed § 261.41(b)(4)

(3) marketers of used oil fuel that meets the specification but who receive off-specification used oil fuel and treat it to produce used oil fuel that meets the specification; and (4) marketers of used oil fuel that meets the specification and who receive used oil from a generator (or from a transporter who receives used oil from generators) irrespective of whether the used oil they receive meets the specification.[73] If any of these persons has previously notified the Agency of any hazardous waste management activities and obtained an EPA identification number, they must nonetheless renotify and may use the amended notification form (see discussion below) to identify their waste-as-fuel activities. Notification must be provided concurrently to all States whose hazardous waste programs have received final authorization. See Section 204(a)(1) of the Hazardous and Solid Waste Amendments of 1984 (RCRA amended Section 3010).

Certain persons are not affected by the proposed special notification requirement for waste-as-fuel activities: (1) Hazardous waste generators who neither burn nor market their waste fuels directly to a burner are not required to notify regarding their waste-as-fuel activities because these generators need not and may not know the end use of the hazardous waste; however, they must notify regarding their generation activities if they have not notified already); (2) hazardous waste fuel transporters (transporters must notify only regarding their transportation activities (assuming they have not notified already) but not regarding waste-as-fuel activities for the same reason given above for generators); and (3) used oil generators and transporters (unless they also market directly to a burner).

The notification requirement also does not apply to owners and operators of nonindustrial boilers (e.g., residential, institutional, and commercial boilers) who burn used oil that meets the specification. Since EPA is today proposing to restrict the composition of fuels being burned in these types of combustion units to fuels that pose no greater risk than virgin fuel oil, there is no need to receive notifications from these entities.

3. *Use of the Amended Hazardous Waste Notification Form.* Persons who must file notifications with EPA (or renotify) because of their waste-as-fuel activities may use revised EPA form 8700–12: "Notification to EPA of RCRA Subtitle C Activity" (see the Appendix to the proposed rule). This form, a revised version of the existing hazardous waste notification form, has been amended to accommodate the requirements for a waste-as-fuel notification as well as notification of hazardous waste activity. The Agency intends to use this revised form for all future notifications.

Use of this form offers a standardized approach for persons required to file notifications and assists EPA in the orderly input of data into its data management system. While use of the form is encouraged, it is not mandatory. Notifiers who do not use the form must include all required information, including the certification in Item XI of the form, signed by the person notifying or by his authorized representative.

The amended notification form will provide the Agency with two types of additional information: (1) The number and location of facilities engaged in the marketing of hazardous waste fuel and used oil fuel, including the processing, blending and distribution of these fuels; and (2) the number, type, and location of facilities that burn hazardous waste fuel and off-specification used oil fuel. This information will be used to develop a general profile of the nature and scope of the waste fuel industry and to identify those persons who must comply with the other requirements proposed today or in the future.

Such information cannot be derived from data already submitted to the Agency because many persons that would be required to notify because of their waste-as-fuel activities were not previously subject to the notification requirements. In addition, the information available on those persons required to notify previously is inadequate because neither the original notification form, nor the Part A Permit Application, include questions that are specifically relevant to waste-as-fuel activities.

4. *Notification Procedures and Implementation.* EPA estimates that there are, at most, 20,000–30,000 persons that may be required to file notifications. While EPA does not intend to carry out a mass mailing to potentially affected parties, the Agency will widely announce the notification requirements of these rules through the press and trade journals.

EPA is today soliciting public comments on the waste-as-fuel notification process and revised form concurrently with the proposed waste-as-fuel rules. After the Agency has reviewed public comments on the proposed rules and notification form; we will issue a final notice in the Federal Register requiring persons subject to the waste-as-fuel notification to submit a notification to EPA. Due to possible statutory time requirements, this final notice requiring notification may be issued before promulgation of final waste-as-fuel regulations.[74]

The Agency plans to distribute the notification forms through the RCRA/SUPERFUND Industry Assistance Hotline. Each requestor will receive a complete notification package, including a form and accompanying instructions, to assist him in filing his notification.

EPA will return to each notifier an acknowledgement of receipt of the notification, and will issue an EPA identification number if one was not previously assigned. This acknowledgement in no way constitutes an endorsement by EPA of the adequacy of the notification or of the notifier's business practices; rather it serves as a confirmation that EPA received the notification.

5. *Legal Significance of Notification.* EPA is promulgating the notification requirement for hazardous waste fuels and used oil fuels under the authority of Sections 3010 and 3014 of RCRA, respectively. The notification is a prerequisite for RCRA interim status (see RCRA Section 3005(e)(2)) for owners and operators of hazardous waste fuel storage facilities. (See H.R. Rep. No. 98–198 *supra* at 41, likewise specifying that notification of management of hazardous waste fuels serves as a prerequisite for interim status.)

C. Proposed Transportation Controls

EPA is proposing today to adopt a system to track movement of hazardous waste fuel and off-specification used oil fuels from the initial marketer (e.g., generators who market to burners; processors; blenders) through intermediaries (e.g., transporters, distributors) to the industrial users who burn the fuel for energy recovery.[75] This

[73] Although the used oil fuel marketed by such persons meets the specification and is exempt from regulation either because the used oil, as generated, meets the specification or because of processing or blending, such marketers must nonetheless notify EPA of their waste-as-fuel activities. These marketers would be required to analyze their used oil fuel to document that it meets the specification. See proposed § 266.43(a)(2) and (b)(1). Such notification, analysis, and retention of analysis records is required in an effort to ensure that EPA can monitor persons who first claim that used oil fuel meets the specification.

[74] As noted above, the Hazardous and Solid Waste Amendments of 1984 amend RCRA to require waste-as-fuel notifications within 15 months. Conceivably, notification could be required before the final waste-as-fuel regulations are promulgated.

[75] The system is already in place for certain hazardous waste fuels—namely listed wastes and

Continued

We note that hazardous waste fuels stored by a marketer would be subject to regulation under the proposal. Thus, storage of both incoming hazardous waste and outgoing hazardous waste fuels would be regulated. Many marketers are already subject to regulation as storage facilities because they store listed wastes and sluges (used as feedstock to produce hazardous waste fuel), and may be operating under interim status standards. These marketers would need to seek an authorization to expand their interim status operations to include the waste fuel storage area.

X. Examples of How These Regulations Would Operate

The following hypothetical examples illustrate how the proposed rules would operate:

1. Generator G generates a hazardous waste and sends it to burner B who stores it in a tank prior to burning in an industrial boiler for energy recovery.

G is a hazardous waste fuel marketer because he markets directly to a burner. Assuming that G is a large quantity generator (and EPA is unaware of situations where small quantity generators sends hazardous wastes directly to burners), he must comply with the requirements for marketers, including the manifest and storage requirements of Part 262, and notification as a hazardous waste fuel marketer. Prior to sending the first shipment (after the effective date of this rule), he must also obtain a certification from B that B has notified EPA of his waste-as-fuel activities and that he will burn the fuel only in unrestricted units (i.e., industrial boilers, industrial furnaces and utility boilers). B is a hazardous waste fuel burner and a RCRA storage facility. He must comply with interim status standards for storage (including submitting a Part A permit application). He must also notify EPA of his waste-as-fuel activities and provide G with the certification discussed above prior to receiving the first shipment. B will have one identification number for storage and burning.

2.A. Generator G, a large quantity generator, generates a hazardous waste but sends it to an intermediate processor P, who mixes it with other wastes and sells the mixture to a burner B who stores it in a tank prior to burning in an industrial boiler for energy recovery.

G is subject to regulation under Part 262 as a generator and must comply with the manifest system and applicable storage requirements. He is not subject to the requirements for marketers. P is a marketer. He must obtain a storage permit to store the hazardous wastes received from the generator. The blended mixture is hazardous waste fuel and is subject to the storage controls under Parts 264 and 265. P and B must notify EPA of their waste-as-fuel activities, and must comply with the certification requirements. B is a hazardous waste fuel burner who has a RCRA storage facility subject to the interim status controls of Part 265.

2.B. G, a large quantity generator, generates a hazardous waste and mixes it with used oil. The mixture is sent to P, who does further blending with used oil, and then sends the mixture to B where it is burned as in the previous example.

The controls would operate in this situation just as in the previous example. A mixture of hazardous waste and used oil is subject to regulation as hazardous waste (unless the hazardous waste is generated by a small quantity generator).

2.C. G is a small quantity generator who generates a hazardous waste and mixes it with used oil, as in example 2.B. G sends the mixture to processor P, who processes the material further and sells the processed oil as fuel. The fuel meets the specification for used oil fuel. It then is sold to retail fuel dealers and to industrial and nonindustrial users.

In this situation (i.e., where a small quantity generator mixes hazardous waste with used oil), the mixture is exempt from regulation as hazardous waste under the provisions of 40 CFR 261.5 but is subject to regulation as used oil when obtained by a used fuel marketer, P. Thus, G (who incidentally is not a marketer) may send the used oil to P without a manifest) or an invoice). P is a marketer of used oil fuel. He must notify EPA of his waste-as-fuel activities and obtain an EPA identification number. He also must document with analyses that the used oil fuel he markets meets the specification since he receives used oil from a generator (or from a transporter who receives oil from a generator) and markets used oil fuel as specification used oil fuel. The used oil fuel is exempt from regulation and may be sent to burners or retail fuel dealers (i.e., distributors) who do not have EPA identification numbers, and who may sell the fuel on an unrestricted basis.

If, as is more likely, P determines that the used oil fuel does not meet the specification, P could only send it to persons who have certified to him that they have notified EPA of their waste-as-fuel activities and will burn the fuel only in industrial boilers, utility boilers, or industrial furnaces. P would have to prepare and send invoices for the used oil fuel. The retail fuel dealers (i.e., distributors) who receive the off-specification used oil fuel are marketers and could not send the fuel to nonindustrial users unless it was processed further to meet the fuel specification (and they documented with analyses that the fuel meets the specification). Marketers and burners must keep records of invoices and certifications sent and received and fuel analyses documenting compliance with the fuel specification (where required).

3.A. P is a used oil processor who receives used oil from a variety of sources and blends them to make fuels. The blended fuel that P produces is off-specification for lead. P sends this fuel to R, a retail fuel dealer. R blends the fuel further so that it meets the lead specification. R then sells the fuel to industrial and nonindustrial users.

P is a marketer of used oil fuel. Because the used oil fuel is off-specification, it can be sent only to a person (e.g., R) who has certified to P that he has notified EPA of his waste-as-fuel activities (and obtained an EPA identification number), and P must send an invoice to that person. R is also a marketer because he receives off-specification used oil fuel. Since R markets the used oil fuel as specification fuel (by marketing to nonindustrial boilers, or by marketing to industrial boilers without complying with the invoice, notification, and other requirements), he must document with analyses that the fuel meets the specification. Marketers and burners must keep records as discussed previously.

3.B. Processor P receives used oil from different generators, and also receives spent halogenated solvents that are listed as hazardous waste. P blends the hazardous solvents with the used oil. Some of the spent halogenated solvents were generated by large quantity generators. The blended used oil fuel contains less than 4000 ppm chlorine and meets the specification. P sells this blended fuel to R, as in example 3A.

P is a marketer of hazardous waste fuel because he has mixed hazardous waste (generated by a large quantity generator) with used oil. There is no need to invoke the presumption of mixing with hazardous waste (based on total chlorine levels) because it is known on these facts that hazardous waste has been mixed. (As explained in Section VII–C–4, it is not always certain when used oil is mixed with hazardous waste. In those situations, EPA is employing a rebuttable presumption of mixing with chlorinated hazardous waste when chlorine levels exceed 4000 ppm because this level is a very strong indication of mixing.) The used oil fuel

meets the specification. Copies of the analyses must be retained for three years. Marketers required to obtain analyses of their used oil fuel product include: (1) Processors and blenders who treat off-specification used oil to produce specification used oil fuel; and (2) generators and collectors (i.e., transporters who receive used oil directly from generators) who market specification used oil fuel directly to burners. Such analyses and recordkeeping are required to enable the Agency to enforce the prohibitions on those persons who first claim that used oil fuel meets the specification. Marketers must obtain analyses of representative samples of the fuel to ensure that the fuel meets the specification. (Guidance on sampling and analysis is provided in: EPA, *Test Methods for Evaluating Solid Waste*, July 1982, SW-846.)[79]

All records must be retained at the facility for three years, except that certification notices that a person is required to send or receive must be kept for three years from the date a person last engages in a waste fuel marketing transaction with the person who sent or received the certification notice. These records must be available for inspection by any officer, employee, or representative of EPA (see RCRA Section 3007).

IX. Storage Requirements for Hazardous Waste Fuel

Today's proposal would expand existing requirements for storage so that all storage of all hazardous waste fuels is subject to regulation.[80] Under existing provisions of 40 CFR 261.6, hazardous wastes that are listed wastes or sludges are subject to the storage standards of Parts 262, 264, and 265, when stored prior to use as a fuel and prior to use to produce a fuel. Hazardous waste fuel produced by a marketer by processing, blending, or other treatment of hazardous waste presently is exempt from regulation. (Such hazardous waste fuel is termed "hazardous waste-derived fuel" for purposes of this discussion.)

We are proposing to require that all hazardous waste used to produce fuel and all hazardous waste fuel (including hazardous waste-derived fuel) be subject to storage requirements for the reasons given below.

A. Which Hazardous Wastes Should Be Subject to Storage Requirements

The Agency is proposing today to regulate the storage (and transportation) of *any* hazardous waste used to produce a fuel and of any hazardous waste fuel (both hazardous waste used directly as fuel and hazardous waste-derived fuel). We, thus, are proposing to eliminate the current distinction between listed wastes and sludges on the one hand and unlisted spent materials and unlisted by-products on the other. These distinctions are not environmentally justifiable, and exist only because of the Agency's initial uncertainty (in 1980) about an appropriate regulatory regime for recycled wastes. See 48 FR at 14475 (April 4, 1983). It is now our view that a hazardous waste classification as sludge, by-product, or spent material, or listed vs unlisted (characteristic) hazardous waste has no relation to the type of hazard the waste poses when stored, and therefore, that storage of all of these wastes should be regulated uniformly. (*Id.*)

The Agency in fact has already proposed that all hazardous wastes going from a generator to a fuel processor be subject to regulation. See proposed § 261.6(b)(v), 48 FR at 14510 (April 4, 1983). We did not propose a parallel change for unlisted, nonsludge hazardous wastes going from a generator directly to a burner. See 48 FR at 14485. However, we have now decided to expand applicability of the storage standards uniformly, and so are proposing in today's rules to eliminate the distinctions between listed wastes and sludges and other hazardous wastes.

B. Eliminating the Exemption for Storage of Hazardous Waste-Derived Fuels

The rules proposed today would subject hazardous waste-derived fuels to storage (and other) controls. This includes storage by the initial marketer (e.g., processors, blenders), storage by subsequent marketers (e.g., distributors), and storage by burners.

The present regulatory regime provided by 40 CFR 261.6 whereby hazardous waste-derived fuel is exempt from regulation exists for historical reasons and is not environmentally justifiable. (See 48 FR at 14475.) The argument that hazardous waste fuels function as valuable inventory in a burner's hands and so will be stored safely does not appear tenable. Hazardous waste fuels in many cases do not command substantial economic value; in some situations, burners are even paid to accept these materials. In addition, the fact that a hazardous waste fuel is being stored as a commodity is sufficient to prevent substantial risk. There have been many damage incidents from product and raw material storage, examples being spills from underground and above-ground product storage tanks, including fuel storage tanks. See 49 FR 29418 (July 20, 1984). See also Section 601 of the Hazardous and Solid Waste Amendments of 1984 requiring EPA to regulate underground storage tanks storing products. The Agency also has been told by State regulatory officials and used oil fuel dealers that hazardous waste fuels are suspected of causing a number of fires in the New York City and New Jersey areas. The agency, thus, does not see any reason to regulate this type of hazardous waste storage differently from other hazardous waste storage.

Today's proposed rule would subject all storage of all hazardous waste fuels to the standards provided by 40 CFR Parts 262 (for short-term accumulation of fuels by a generator who burns his waste on site or who markets directly to a burner), 264, and 265, with one exception. We are not proposing to subject hazardous waste fuel storage by an existing burner to the final permitting standards of 40 CFR Part 264 at this time for several reasons.[81] Given that we intend to regulate burning of hazardous waste fuels in a manner that would require some form of permitting, we do not want to issue a permit to a burner for storage and then have to issue a second permit in the near future for burning. We thus plan to delay adopting final permitting storage standards for existing burners until a single permit proceeding can address both burning and storage.

[79] The Agency is revising digestion procedures for organic liquids prior to analysis for metals. Revised procedures will be available before these rules are promulgated.

[80] No permit presently is required to store used oil. EPA is not proposing storage requirements for used oil fuel at this time because the Agency wishes to avoid the piecemeal regulation of used oil storage which would result were we to regulate used oil fuel storage in advance of other types of used oil storage. Storage requirements may be proposed when the Agency proposes comprehensive regulations for used oil in 1985. Storage of mixtures of hazardous waste and used oil, however, would be subject to regulation as hazardous waste under today's proposed rule unless the hazardous waste is generated by a small quantity generator.

[81] On-site storage by burners of any hazardous waste fuel would be subject only to the interim status standards of 40 CFR Parts 265 and 270 (Part A permit application). This applies to hazardous waste fuels newly regulated by today's proposal as well as to listed wastes and sludges marketed by a generator to a burner which are currently subject to interim status as well as final permitting (i.e., Part 264) standards under provisions of 40 CFR 261.6. Thus, this proposal would temporarily reduce storage controls for those burner storage facilities (storing listed waste or sludges) currently subject to final permitting standards (i.e., Part 264). Such storage facilities would become subject to final permit standards along with other burner storage facilities when controls on burning are promulgated.

tracking system would create a paper trail allowing regulatory officials to track a hazardous waste fuel or off-specification used oil fuel from point of processing, blending, or other treatment to point of burning, thus making the prohibition on burning in nonindustrial boilers enforceable. Equally important, the tracking document (either a manifest or an invoice) would put persons who handle these materials on notice that they are receiving a hazardous waste or off-specification used oil fuel.

Consequently, EPA today is proposing that all shipments of hazardous waste fuel be accompanied by a manifest. Hazardous waste fuel marketers would be subject to the transportation (and pre-transport) requirements of 40 CFR Part 262 and transporters would be subject to the requirements of 40 CFR Part 263.

We are proposing a slightly different system for off-specification used oil, whereby marketers (e.g., processors, blenders, distributors) offering off-specification used oil fuel for sale would have to prepare and send an invoice to the fuel buyer, but would not have to have the invoice physically accompany each shipment. This distinction (i.e., invoice in lieu of a manifest) is needed to avoid piecemeal regulation of used oil transporters.[76]

Information to be included on invoices includes the shipment date, the shipment initiator's name, address and identification number, the receiving facility's name, address, and identification number and the quantity of used oil fuel shipped. All of this information is currently required to be included in the standard EPA hazardous waste manifest.

In a situation where an off-specification used oil fuel goes from a processor or blender to an intermediate distributor, the Agency intends that the distributor must reinstitute a new invoice to accompany any fuel it sells that is produced from or otherwise contains the used oil (unless the used oil fuel now meets the specification). This requirement is consistent with those found in other parts of the RCRA regulations whereby intermediate storage facilities must reinitiate a manifest. See, e.g., 40 CFR 264.71(c) and 262.10(f).

The Hazardous and Solid Waste Amendments of 1984 amended RCRA to require producers, distributors, and marketers of hazardous waste fuels to include a warning label on the invoice or bill of sale for the fuel. See RCRA amended Section 3004(r). The requirement takes effect within 90 days of enactment, and remains in effect until EPA promulgates superseding regulations. *Id.* The Agency believes that the proposed requirement of a manifest achieves the same purpose as the warning label—to put the user or distributor on notice that he is receiving hazardous waste fuel. Receipt of a fuel accompanied by a hazardous waste manifest achieves this result. Further, the manifest would also put the transporter on notice that he is handling hazardous waste because the manifest must accompany the shipment. The invoice or bill of sale with the warning label may not accompany the shipment. Consequently, the Agency views the proposed requirement of a manifest as superseding the warning label requirement. Should this proposal be adopted, therefore, warning labels will no longer be required for hazardous waste fuels.

D. Proposed Notice and Certification Requirement

To enforce the prohibition on burning hazardous waste fuel and off-specification used oil fuel in nonindustrial boilers, the prohibition applies not only to the boiler owner and operator, but also to the waste fuel marketer. Thus, a marketer such as a processor, blender, or distributor (or a generator marketing directly to a burner) may not sell hazardous waste fuels or off-specification used oil fuel to a person who burns it in a nonindustrial boiler. Marketers must also ensure that they market these fuels only to persons in (and, thus, aware of) the regulatory system: persons who have notified EPA of their waste-as-fuel activities. In addition, marketers are responsible for determining whether their waste fuel is subject to regulation (i.e., whether their product fuel contains hazardous waste or is off-specification used oil).

To comply with these requirements, marketers need to know whether the person receiving a shipment of hazardous waste fuel or off-specification used oil fuel has notified EPA of his waste-as-fuel activities and whether he intends to burn the fuel only in a utility boiler or industrial boiler or furnace. Thus, the proposed rules include a provision requiring that a marketer of hazardous waste fuel or off-specification used oil fuel receive a certification from the fuel purchaser stating that the purchaser has notified EPA of his waste-as-fuel activities and will burn the fuel only in unrestricted boilers or furnaces. This certification is a one-time notice and would be required before sending the initial shipment (after the effective date of this rule). Similarly, the purchaser would be required to send the certification before receiving the first shipment from a marketer. This will ensure that the recipient is aware of the regulations applicable to waste fuels and of his responsibilities as a burner (or intermediary).[77]

Hazardous waste and used oil generators (and transporters receiving waste from generators) who market their waste to a person who is not a burner would not be subject to this (or any other) requirement for marketers. Consequently, such a recipient of the generator's hazardous waste or used oil would not be required to provide the generator with a certification notice.

E. Proposed Recordkeeping Requirements

The recordkeeping requirements that the Agency is proposing are limited requirements that are designed primarily to keep track of the movement of hazardous waste fuels and off-specification used oil fuels. The substantive prohibitions proposed today, as well as the various administrative requirements would not be enforceable without these recordkeeping requirements. These requirements would require each person who would be subject to these proposed rules as a marketer (i.e., producers, distributors and certain generators) or burner to keep a copy of the manifest or invoice (for used oil) that accompanies or that applies to each fuel shipment.[78] In addition, marketers and burners would be required to retain copies of certification notices that they initiate or receive.

Finally, marketers of used oil fuel who first claim the oil meets the specification are required to obtain analysis of their used oil fuel product to document that it

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sludges when sent directly from the generator to a burner. See 40 CFR 261.6(a). Today's proposal would expand the system to *all* hazardous waste fuels managed by *all* marketers and burners (i.e., to all hazardous wastes burned directly and to all fuels produced from hazardous waste by processors/blenders).

[76] Regulation of used oil fuel transporters at this time probably would not be enforceable as a practical matter, even if considered desirable, given that only one group of used oil transporters would be subject to the requirements—those that transport oil destined not only for recyling rather than disposal, but only for one particular type of recycling (i.e., used as fuel for energy recovery).

[77] Incidentally, simply requiring a recipient only to have an EPA identification number is not adequate to ensure that he has notified the Agency of his waste-as-fuel activities, and is, therefore, aware of applicable regulatory controls. This is because EPA identification numbers are assigned for reasons other than waste-as fuel activities.

[78] Transporters of hazardous waste fuel must keep copies of manifests under provisions of 40 CFR Part 263. Transporters of off-specification used oil fuel are not subject to regulation.

specification does not apply to the mixture.

XI. State Authority

A. Applicability of Rules in Authorized States

Under Section 3006 of RCRA, EPA may authorize qualified States to administer and enforce the RCRA program within their States. (See 40 CFR Part 271 for the standards and requirements for authorization.) Authorization, either interim or final, may be granted to State programs that regulate the identification, generation, and transportation of hazardous wastes and the operation of facilities that treat, store, or dispose of hazardous waste. Interim authorization is granted to States with programs that are "substantially equivalent" to the Federal program (Section 3006(c)). Final authorization is granted to States with programs that are equivalent to the Federal program, consistent with the Federal program and other State programs, and that provide for adequate enforcement (Section 3006(b)).

Under RCRA, prior to the Hazardous and Solid Waste Amendments of 1984, once EPA authorizes a State program, EPA suspends administration and enforcement within the State of those parts of the Federal program for which the State is authorized. In authorized States, EPA does retain enforcement authority under Sections 3008, 7003, and 3013 of RCRA, although authorized States have primary enforcement responsibility. However, under Section 3006(g) of the Hazardous and Solid Waste Amendments of 1984, any requirement pertaining to hazardous wastes promulgated pursuant to the Amendments is effective in authorized States at the same time it is effective in other States. EPA will administer and enforce the requirements in each State until the State is authorized with respect to such requirement.

When ultimately promulgated, the hazardous waste fuel standards proposed today would be applicable in all States since the requirements are imposed pursuant to the Amendments. Thus EPA will implement the hazardous waste fuel standards until authorized States revise their programs to adopt these rules.

The used oil fuel standards proposed today would also be applicable in all States when promulgated. Section 3014 provides for the regulations on used oil fuel to take effect in all States. Section 3006 does not bear on the used oil fuel standards since used oil fuel, by itself, is not currently a hazardous waste covered by the Subtitle C program. However, as discussed previously, the Agency plans to propose to list used oil as a hazardous waste in 1985. If used oil were, in fact, listed as hazardous waste in a subsequent promulgation, the used oil fuel rules—amended as necessary to conform with the listing—would be applicable in all States, by virtue of Section 3006(g) as well as Section 3014. At the point, authorized States would be required to revise their programs to adopt these rules.

B. Effect on State Authorizations

The hazardous waste fuel rules ultimately promulgated under this rulemaking will apply in authorized States under Federal law until the State receives interim or final authorization under Section 3006(g)(2) of 3006(b), respectively, on the basis of providing controls for hazardous waste fuels that are substantially equivalent or equivalent to EPA's. The procedures and schedule for State adoption of these regulations is described in 40 CFR 271.21. See 49 FR at 21678 (May 22, 1984).

Applying § 271.21(e)(2), States that have final authorization must revise their programs within a year of promulgation of EPA's hazardous waste fuel regulations if only regulatory changes are necessary, or within two years of promulgation if statutory changes are necessary. These deadlines can be extended in exceptional cases. See 40 CFR 271.21(e)(3).

States that submit official applications for final authorization less than 12 months after promulgation of EPA's regulations for hazardous waste fuels may be approved without including standards equivalent to those promulgated. However, once authorized, a State must revise its program to include hazardous waste fuel standards substantially equivalent or equivalent to EPA's within the time period discussed above.

XII. Regulatory Impacts

A. EPA Regulatory Impacts Studies

As a result of the impacts analysis conducted to accompany today's proposed rules, EPA has reached four key conclusions. First, today's proposal is not a "major rule" within the meaning of Executive Order 12291, and, therefore, no Regulatory Impacts Analysis is required. EPA reached this conclusion in part after determining that the rules proposed today will not have an annual impact on the national economy in excess of $100 million. The estimated maximum costs of today's proposal are an initial (one-time) cost of $6 million and annual costs of $20.9 million. Maximum estimated annualized costs are $21.3 million per year. In addition, the proposal will not lead to major increases in costs; no facility affected by today's proposal should incur more than $7000 per year in annualized costs to comply with the proposed rules. In fact, the great majority of facilities affected by the proposal would incur less than $1000 per year in additional costs. Finally, today's rules do not affect competition, employment, productivity, or innovation to any significant extent. These proposed rules have been submitted to the Office of Management and Budget (OMB) for review per Section 6 of Executive Order 12291. Any comments from OMB to EPA and any response to those comments are available for viewing at the Office of Solid Waste Docket, Room S-212, U.S. E.P.A., 401 M St., SW, Washington, D.C. 20460.

Second, today's proposed rules will not have a significant impact on a substantial number of small entities. Therefore, no Regulatory Flexibility Analysis (RFA) is required under the Regulatory Flexibility Act. EPA has determined that although a substantial number of small entities would be affected by some parts of today's proposed rules, even the maximum costs that could be imposed would not amount to 5% of product price or cause a closure rate of 5% (the criteria used by the Act to define when an RFA is needed.)

Third, today's proposed rules, to the extent they affect the used oil industry, do not discourage the recycling or recovery of used oil. EPA has concluded that today's proposed rules will not discourage recycling because the rules only restrict used oil entering one market, the nonindustrial fuel market, and the Agency has determined that any used oil not sold to this market can be sold as industrial fuel or rerefining feedstock. Therefore, used oil affected by today's proposal will still be recycled, not disposed of.

Fourth, EPA has considered the requirements of the Paperwork Reduction Act of 1980 (PRA), 44 U.S.C. 3501 *et seq.* in developing these proposed rules. The reporting and recordkeeping requirements are the minimum EPA believes necessary to implement and enforce the controls. Pursuant to provisions of the PRA, the information collection requirements in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB). Submit comments on these requirements to the office of Information and Regulatory Affairs; OMB; 726 Jackson Place, N.W.;

Washington, D.C. 20503 marked "Attention: Desk Officer for EPA". The final rule will respond to any OMB or public comments on the information collection requirements.

What follows are more detailed discussions explaining the data used by EPA to make the determinations summarized above. First, cost data are presented for each control proposed today. Second, the expected impacts of the proposed rules on used oil recycling are described. EPA requests comments on the regulatory impacts studies performed for this proposal, both in terms of the extent of analysis performed, and the conclusions reached through the studies.

B. Cost Data

The cost impacts of these regulations derive primarily from four new requirements. These are: (1) Notification requirements for marketers and burners to identify waste-as-fuel activities; (2) manifest requirements (for hazardous waste fuel) or invoice requirements (for off-specification used oil fuel) for all shipments; (3) certification requirements for marketers and burners that require a recipient to certify to the supplier before he receives the first shipment that he has notified EPA of his waste-as-fuel activities and will burn the waste fuel only in an unrestricted boiler or furnace; and (4) storage requirements for hazardous waste fuel. In addition, marketers who first claim used oil fuel meets the specification and is exempt from regulation (e.g., marketers who process or blend off-specification used oil to produce used oil fuel that meets the specification, and marketers who receive oil from generators or from collectors and who manage the oil as specification used oil fuel) must obtain analyses documenting that the used oil meets the specification. It should be noted that EPA has not attempted to determine the costs of two important impacts of today's proposal: (1) The cost to marketers of treating used oil to meet the used oil fuel specification; and (2) the costs to nonindustrial boiler owners of having to buy specification used oil fuel or commercial fuel oil instead of hazardous waste fuel or off-specification used oil fuel.

EPA has not attempted to determine the cost to marketers of treating used oil to meet the used oil fuel specification because we do not know how much used oil currently meets the specification either as-generated or after processing/blending.[84] However, it is clear that processors and blenders who sell to the nonindustrial market will experience increased costs at a minimum for sampling and analysis of their product and to some extent, their used oil feedstock (until assured of its composition). Any blending over current practice that is required to meet the specification would also involve additional costs. However, these costs are discretionary. Processors and blenders have the choice of incurring the additional cost of analyses (and perhaps blending) and continuing to sell to the nonindustrial market or to avoid those costs by selling to the industrial market.[85]

EPA has not determined the cost impacts on nonindustrial fuel users of having to stop using hazardous waste fuel and off-specification used oil fuel for the following reasons. First, EPA is not sure that many of these users are actually receiving price discounts for their purchase of these waste fuels. Investigations by New York City, New Jersey and EPA indicate that, often, nonindustrial buyers are not informed they are buying waste fuel. Without such knowledge, it seems unlikely that fuel buyers would be able to obtain discounts. Second, although some nonindustrial users may be receiving price discounts for waste fuel and, therefore, will bear the cost of buying higher priced fuel due to today's proposal, EPA believes that the fuel displaced from the nonindustrial markets will be channelled to industrial users who can be expected to receive similar price discounts. Therefore, there should be no net increase in costs to society due to these fuel shifts.

1. *Unit Costs.* The unit costs for these proposed regulatory requirements are estimated to be as shown in Table 5.

TABLE 5.— UNIT COST ESTIMATES

Notification to EPA	$50 (a one-time cost).
Manifest system for hazardous waste fuel.	
Start-up	$100 (a one-time cost)
Supervision	$600/year for marketers.
	$530/year for burners
Recordkeeping	$170/year.
Fuel shipments/deliveries	$6/manifest for marketers
	$2/manifest for burners
Invoice system for off-specification used oil fuel.	
Start-up	$100 (a one time cost)
Supervision	$560/year.
Recordkeeping	$170/year.
Fuel shipments	$2/invoice for marketers
Certification to waste fuel supplier of compliance with waste-as-fuel rules:	
Prepare notice	$30 (a one-time cost).
Recordkeeping by initiator and recipient	$10/yr.
Testing for used oil fuel specifications (including total chlorine test).	
Analysis	$150/test.
Supervision	$530/year.
Recordkeeping	$170/year.
Storage tank interim status standards for industrial boilers and furnaces burning hazardous waste fuel [86]	
General facility standards	$4,200 one-time and $900/year.
Preparedness and prevention	$2,800 one-time and $200/year.
Contingency and emergency procedures	$300 one-time and $100/year.
Manifest, recordkeeping	(See manifest system costs above)
Closure plan	$200 one-time.
Financial requirements	$2,000 one-time and $2,000/year.
Tank inspection	$2,500 one-time and $2,000/year.
Part A permit application	$400 one-time.

[86] Based on data in Pope-Reid Assoc., Inc., *Unit Cost Analysis of Part 264 and Part B Tank and Container Storage Standards*, April 1983.

2. *Costs for Typical Facilities.*

(a) *Marketers of Hazardous Waste Fuel.* Generators who market their waste directly to a burner are subject to most of the proposed requirements under existing rules. (We assume that nearly all hazardous waste fuels contain listed wastes or sludges, and, thus, are subject to storage and transportation controls under existing rules.) The only additional cost to these generator/marketers would be for the waste-as-fuel notification and recordkeeping of burner certifications.

Third-party marketers (i.e., marketers who did not generate the waste) usually market hazardous waste fuel to a single large burner customer (e.g., cement

[84] We have estimated, however, that based on about 130 used oil samples which were analyzed for all four metals included in the specification, from 8 to 10% of used oil may meet the specification, depending on where the lead specification level will be set within the range of 10–100 ppm. If these samples were blended with 90% virgin fuel oil with a median metals content, from 30 to 86% of the samples would meet the specification, again depending on promulgation of a lead specification within the range of 10–100 ppm. Source: Franklin Associates, Ltd., (Unpublished data), April 27, 1984 memorandum to EPA.

[85] Although the cost of analyzing for chlorine to determine if used oil will be presumed to be hazardous waste under the rebuttable presumption is not considered a discretionary cost, chlorine analysis costs should not be substantial. We are verifying the accuracy of a simple field test where a copper wire is dipped into the sample and observed for color when passed over a flame (Beilstein's test). In addition, analytical kits for field testing of oil to determine chlorine content at various detection limits are commercially available and cost only about $3.00 per analysis. Even when a very small tank truck is sampled (e.g., 2000 gallon capacity), this test would cost only about 0.1 cent per gallon. When a more rigorous analytical test is needed, costs could approach 2.5 cents per gallon for a 2000 gallon tanker. However, we believe that after generator and collector credibility has been established, processors/blenders would use the inexpensive tests coupled with spot analytical checks to ensure the 4000 ppm chlorine level is not exceeded. These costs are not considered substantial given that generators are typically paid 15 cents per gallon for their oil.

kiln or blast furnace) after processing or blending. These marketers usually receive hazardous waste feedstock directly from generators. Given that virtually all of these marketers most likely accept wastes already subject to storage controls (i.e., listed wastes and sludges), their feedstock storage areas are already subject to regulation. However, these proposed rules would subject hazardous waste fuel product (i.e., hazardous waste-derived fuel) storage areas to regulation for the first time. Thus, the costs of these controls to a third-party marketer of hazardous waste fuel would consist of the costs for renotification, compliance with the manifest system for the fuel marketed, keeping a record of the certifications received from burners, and compliance with storage requirements for product hazardous waste fuel. Each facility would incur a one-time cost of $50 for notification. Even though these marketers must already comply with the manifest system for hazardous waste they receive from generators (because the wastes are likely to contain listed wastes or sludges), to estimate maximum cost of compliance with the proposed rule we have estimated their manifest system costs as if they are not now in compliance. Thus, manifest system expenses would consist of the costs for start-up (a one-time expense of $100), and manifest handling, supervision, and record-keeping ($970 per year). It is assumed that a typical facility originates 24 shipments of hazardous waste fuel per year. Thus, recurring cost for preparing manifests would total $144 per year ($6 x 24 manifests). In addition, the facility would incur a recurring cost of $10 per year to keep a record of the certifications received from burners. The cost of complying with the storage requirements for the hazardous waste fuel produced depends on whether the marketer's hazardous waste feedstock storage facility is still in interim status or has been fully permitted. If it is still in interim status, the cost of including the hazardous waste fuel storage area in the interim status permit should be minimal (e.g., about $2000 to amend the contingency and closure plans and the Part A application). If the feedstock storage facility has already been fully permitted (under a Part B application), a worst case cost scenario would be where the permit must be amended to such an extent that much of the permitting process must be repeated. Given that the cost of complying with the Part B permit procedures is estimated to be a one-time cost of $10,000 for a storage tank facility, the cost to a marketer of complying with the new storage requirements could range from about $2,000 (where the storage facility is still in interim status) to a one-time cost of $10,000 (where the storage facility has received a permit and the permit process must be essentially repeated).

The typical facility in this category would incur $2,150 to $10,150 in initial costs as well as annual costs of $1110. (Most marketers would incur the lower initial cost given that only about one-third of storage facilities have been permitted and that only one-third might incur one-time costs on the order of $10,150.) If one-time costs are annualized over 20 years, total annual costs to these marketers would range from $1200 to $1800. If a marketer initiates 24—4,000 gallon shipments per year of hazardous waste fuel, the cost of these regulations would range from about one cent to less than two cents per gallon of fuel.

(b) *Burners of Hazardous Waste Fuel.* All burners of hazardous waste fuel would incur the cost of notification or renotification. For the estimated 1600 generators that burn hazardous waste fuel on site, the only expense to them as burners of such fuel would be a one-time cost of $50 to renotify the Agency to identify their waste-as-fuel activities (i.e., burning).

For the estimated 200 facilities that burn hazardous waste fuel already subject to storage and transportation controls (virtually all unprocessed, unblended fuels), the cost of these regulations would consist of the cost of the certification to the supplier in addition to the cost of renotifying EPA as a hazardous waste fuel burner. No new manifest or storage costs are incurred because it is assumed that burners invariably receive hazardous waste fuel subject to manifest and storage requirements under existing rules (i.e., listed wastes and sludges). Thus, the costs of these regulations would be a one-time initial cost of $80 for renotification to EPA and the certification to the supplier and a recurring cost of $10 per year for keeping a copy of the notice.

For the estimated 200 facilities that burn hazardous waste-derived fuel (i.e., hazardous waste fuel produced by processing, blending, or other treatment of hazardous waste), the costs of these regulations would consist of the expenses of the manifest system, certification to the marketer, notification to EPA, and compliance with storage requirements. Manifest system costs would be those for manifest handling ($2 per fuel delivery) and for supervision and recordkeeping ($700 per year). If it is assumed that a typical burner receives 24 deliveries of hazardous waste fuel annually, manifest handling costs would be $50 per year. The cost of notifying the fuel marketer would be a one-time cost of $30, and the cost of keeping a copy of the notice would be a recurring cost of $10 per year. Storage requirement costs would be a one-time cost of $12,400 and a recurring cost of $5,200. Therefore, the typical facility in this category could incur $12,500 in initial (i.e., one-time) costs as well as annual expenses of $6,000. Thus, the annualized cost for these facilities could total approximately $7,000, which represents a cost of 7 cents per gallon of hazardous waste fuel burned.

(c) *Marketers of Used Oil Fuel That Meets the Specification.* This is a summary of the costs of these requirements to a person who markets used oil fuel that meets the specification (and that does not contain more than 4000 ppm total chlorine), and who is: (1) A generator marketing to a burner, (2) a marketer who receives any used oil from a generator or from a collector (who receives used oil from a generator); or (3) a marketer who receives off-specification used oil from another marketer and who produces specification used oil fuel by processing, blending, or other treatment. The costs to these marketers would consist of the costs for notification and testing (including supervision and recordkeeping). Notification entails a one-time expense of $50. The costs for testing for lead, arsenic, chromium, cadmium, PCBs, total chlorine content, and flash point are at most $150 per sample.[87] The costs for supervision of testing and recordkeeping are $700 per year. It is assumed that the typical facility of this kind handles 400,000 gallons of used oil annually and originates 100 shipments of used oil fuel per year, and that the operator would test large batches (e.g., a 30,000 gallon tank) of used fuel oil rather than each shipment, amounting to approximately 12–14 analyses pr year ($2000/yr). In addition, it is assumed that the marketer would test each truck load of used oil he receives to ensure that it contains less than 4000 ppm chlorine and thus would not be considered (automatically) to be hazardous waste under the rebuttable presumption of mixing. To estimate

[87] This assumes the sample is analyzed by a contract laboratory. In-house testing would be less costly. Costs for testing for PCBs is not included because existing rules (See 40 CFR Part 761) limit PCBs to 50 ppm (i.e., wastes with more than 50 ppm PCBs are already subject to regulation when burned for energy recovery).

chlorine testing costs, it is assumed that: (1) Individual 2000 tank trucks of incoming used oil are sampled and analyzed; (2) 10% of the oil is analyzed by ASTM analytical methods at $50 per analysis (or 2.5 cents/gallon of oil); and (3) 90% of the oil is analysed using field kits of prepared indicator solutions at $3 per analysis (or 0.15 cents/gallon of oil). Under these assumptions, testing of incoming used oil for total chlorine would cost $1540 annually. Therefore, the typical facility in this category would incur $50 in initial one-time costs as well as up to $4240 in annual costs, which would add about 1 cent per gallon to the cost of used oil fuel.[**]

(d) *Marketers of Off-Specification Used Oil Fuel.* The costs of these regulations to a marketer of off-specification used oil fuel would consist of the costs for notification to EPA, the invoice system, keeping copies of certifications from product purchasers (i.e., burners or other marketers), and analyses for total chlorine to ensure the oil is not presumed to be hazardous waste under the rebuttable presumption of mixing. Each facility would thus incur a one-time cost of $50 for notification. In addition, there would only be an incremental cost for the invoice system required by these regulations because, under current, common practice, invoices are already prepared for shipments of fuel. The incremental costs would consist of costs for start-up (a one-time expense of $100), invoice preparation ($2 per fuel shipment or $200 annually if a typical facility handles 400,000 gallons of used oil annually and originates 100 shipments of used oil fuel annually), and supervision and recordkeeping ($530 per year). The facility would also incur the $10 per year cost of keeping a record of the certification from the product purchaser.

Finally, the facility owner/operator may choose to test the used oil he receives and his used oil fuel product to ensure that it contains less than 4000 ppm chlorine and, thus, would not be considered (automatically) to be hazardous waste under the rebuttable presumption of mixing. Although some marketers may choose to test only the oil they receive, others may sample and analyze the used oil fuel product as well to assure purchasers that it does not contain chlorinated hazardous waste. To provide a worst-case cost estimate, it is assumed that: (1) All incoming used oil and product used oil fuel is tested for chlorine; (2) individual 2000 gallon tank trucks of incoming used oil are sampled and analyzed; (3) 10% of incoming used oil is analyzed by ASTM analytical methods at $50 per analysis (or 2.5 cents/gallon of oil); (4) 90% of incoming used oil is analyzed using field kits of prepared indicator solutions at $3 per analysis (or 0.15 cents/gallon of oil); (5) used oil fuel product is sampled from 30,000 gallon tanks and is analyzed by ASTM analytical methods at $50 per analysis (or 0.17 cents/gallon of fuel); and (6) supervision of testing costs $530 annually and recordkeeping of analyses costs $170 annually. Chlorine testing could cost $2900 annually under these assumptions ($2200 for analyses plus $700 for supervision and recordkeeping).

Therefore, a marketer of off-specification used oil fuel could incur $150 in one-time initial costs plus $3640 in annual costs, which would add about 0.9 cents to a gallon of used oil fuel.

The costs of these proposed rules to marketers (e.g., distributors) who receive off-specification used oil fuel from other marketers would be the same as presented above, except these marketers would incur the additional one-time expense of $30 to prepare certifications to suppliers. Thus, the total costs to these marketers could be an initial cost of $180 plus $3640 in annual costs. (Given that 80% of the annual cost estimate is for testing for chlorine content, the annual cost estimate may be grossly overstated for distributors because they receive used oil from other marketers who have already tested for chlorine under the assumptions of the previous scenario).

(e) *Burners of Used Oil Fuel that Meets the Specification.* Burners of used oil fuel that meets the specification would not be subject to any new requirements under these regulations. Therefore, they would not incur any new costs.

(f) *Burners of Off-Specification Used Oil Fuel.* All burners of off-specification used oil fuel would incur the one-time cost of notification. For facilities that burn off-specification used oil fuel which is generated on site, the only expense to them as burners of such fuel would be a one-time cost of $50 for notification to EPA.

For facilities that burn off-specification used oil fuel that is delivered to them, the expenses that would be incurred because of these regulations are the costs of notification, compliance with the invoice system, and providing the certification to the supplier. The incremental costs of the invoice system would be for supervision and recordkeeping ($530 per year), and the cost of invoice handling ($50 per year at $2/invoice and assuming 24 deliveries per year). The one-time cost of the notice (certification) to the supplier would be $30, and the recordkeeping cost for the notice would be $10 annually. Therefore, the typical facility in this category would incur an initial one-time cost of $80 as well as annual expenses of $590.

3. *Estimated National Costs.* In the absence of complete data on the universe of facilities that market and burn hazardous waste and used oil fuels, it is impossible to estimate with a high degree of precision the national cost impacts of these regulations. The notification process will enable EPA to identify the affected facilities and to estimate more accurately the costs of compliance with the rules proposed today as well as the costs of the technical regulations on burning in industrial boilers and furnaces that will be proposed in 1985.

These cost estimates are based on assumptions that reflect worst-case conditions with respect to number of marketers and burners subject to regulation. For example, we believe that the estimate of the number of off-specification used oil fuel burners is high. The figure estimated (30,000) may approximate the number of burners of used oil fuel but some of that used oil is likely to meet the specification and be exempt from regulation. Thus, the number of burners subject to these rules is probably overstated. *As a result, these estimates are conservative and more closely approximate maximum rather than actual costs.* These costs are summarized in Table 6.

TABLE 6.—Summary of National Cost Estimates

(Dollars in thousands)

Requirement	One-time cost	Recurring cost (yearly)	Annual total cost (1983 dollars)
Notification	$1,658		$111
Manifest system	20	$372	393
Invoice system	76	16,875	16,950
Certification to suppliers	882	301	360
Used oil analysis			
Specification oil		322	322
Off-specification oil		1,984	1,984
Storage	3,408	1,040	1,248
Total	6,044	20,894	21,239

(a) *Notification Costs.* Hazardous waste fuel and off-specification used oil fuel marketers and burners would be required to notify (or renotify) to identify their waste-as-fuel activities.

The universe of marketers probably includes persons in the following categories: Hazardous waste processors and blenders, hazardous waste generators who market hazardous waste

[**] This assumes that the marketer does not incur additional processing and blending costs to bring off-specification oil into specification.

fuel to burners, used oil collectors who sell directly to burners, used oil processors and rerefiners, and wholesale and retail dealers of virgin fuel oil who continue to handle off-specification used oil fuel. The universe of marketers is estimated to number about 1200.[89] (See Table 7.)

TABLE 7.—ESTIMATED NUMBER OF MARKETERS AND BURNERS THAT WOULD BE REGULATED

	Number
Hazardous waste	
Marketers	400
Generators marketing to burners	200
Other marketers (third-party processors, blenders, distributors)	200
Burners	2,000
On site	1,600
Off site	
Receive fuel from generators	200
Receive fuel from third-party marketers (processors, blenders, distributors)	200
	2,400
Off-Specification Used Oil Fuel	
Marketers	760
Generators marketing to burners	0
Other marketers:	
Third-party processors, blenders, distributors	500
Collectors marketing to burners	250
Rerefiners	10
Burners	30,000
On site	1,500
Off site	28,500
	30,760
Total	33,000

The universe of burners that would be subject to the notification requirement consists of all facilities in the utility and industrial sectors that burn hazardous waste or off-specification used oil fuel. (Under these regulations, burning of these fuels would be allowed in utility and industrial boilers and industrial furnaces, but would be prohibited in boilers at residential, institutional, and commercial locations.) To estimate maximum impact, we assume that used oil fuel is burned in a maximum of 30,000 boilers and that all of the boilers burn off-specification used oil fuel.[90] Finally, we estimate that hazardous waste is burned in 2000 industrial boilers and furnaces. Although many facilities burn waste in more than one burner, only one notification would be required for each facility. Therefore, we estimate the maximum size of the burner universe is about 32,000. The maximum total number of notifiers (i.e., marketers and burners) is estimated at 33,000. Therefore, the maximum cost of notification, at $50 per facility, would be $1.650 million.[91] (This is a one-time cost.)

(b) *Manifest System Costs.* The Agency made a number of assumptions to estimate the cost of complying with the manifest system: (1) 200 facilities burn hazardous waste-derived fuel (i.e., hazardous waste fuel produced by processing, blending, or other treatment of hazardous waste) that is currently exempt from regulation; (2) each burner of hazardous waste-derived fuel receives 24 deliveries fo fuel annually; (3) each of the 200 marketers of hazardous waste-derived fuel originates 24 shipments of fuel per year; and (4) there are 4,800 shipments of hazardous waste-derived fuel annually.

Based on these assumptions, the manifest system requirement for shipments of hazardous waste-derived fuel would entail the following costs: (1) Initial one-time start-up costs ($100 × 200 marketers); and (2) annual costs for manifest handling ($8 × 4,800 manifests), and for system supervision and recordkeeping by marketers ($970 × 200 marketers) and by fuel burners ($700 × 200 burners). Therefore, the estimated (incremental) national costs of the manifest system requirement would be an initial one-time cost of $20,000 plus annual costs of $372,000.

(c) *Invoice System Costs.* The Agency made the following assumptions to estimate the incremental costs of complying with the invoice system for off-specification used oil shipments (costs in addition to those already incurred as a result of typical business practice): (1) The number of *facilities* that burn used oil fuel is the same as the number of *boilers* that burn used oil (30,000) even though a facility may have several boilers that burn used oil; (2) all 30,000 burners burn off-specification used oil; (3) 95% of the burners (i.e., 28,500) accept off-specification used oil fuel generated off site (i.e., they are off-site burners); and (4) each burner receives 24 deliveries of used oil annually so that annual shipments total 684,000 nationally.

Based on these assumptions, compliance with the invoice system for shipments of off-specification used oil would entail the following costs: (1) Initial start-up costs ($100 × 760 marketers); and (2) annual costs for invoice preparation ($2 × 684,000 shipments of off-specification used oil fuel), and for system supervision and recordkeeping by intermediaries ($530 × 760 marketers) and burners ($530 × 28,500 burners). Therefore, the estimated maximum costs of the invoice requirement would be an initial (i.e., one-time) cost of $76,000 plus annual costs of $16.875 million

(d) *Cost of Certification to Suppliers.* The Agency made the following assumptions to estimate the cost of providing a certification to suppliers (and for recordkeeping by both parties) indicating that a recipient has notified EPA of his waste-as-fuel activities: (1) 400 burners receive hazardous waste fuel from off site and must comply; (2) 400 hazardous waste fuel marketers sell to off-site burners and must comply; (3) 28,500 burners receive off-specification fuel from off site and must comply; (4) all used oil fuel marketers (except collectors who market to burners) receive off-specification used oil from other marketers at some time during their operations and, therefore, must comply; (5) used oil fuel marketers, except collectors who market to burners, number 510 facilities (see Table 7); and (6) used oil collectors who sell directly to burners number 250 (and must obtain notices from those burners).

Based on these assumptions, the cost of providing certifications and recordkeeping would be an initial (one-time) cost of $982,000 and a recurring cost of $301,000 per year. (See Table 8.)

TABLE 8.—COST OF CERTIFICATION REQUIREMENTS

Person	Number of persons	One-time cost/fac (dollars)	National one-time costs (dollars in thousands)	Annual cost/fac. (dollars)	National annual costs (dollars in thousands)
Burners (offsite)	28,900	30	867	10	239
Hazardous waste fuel marketers	400			10	4
Used oil marketers other than collectors	510	30	15	10	5
Used oil collector/marketers	250			10	3
Total			882		301

[89] Estimates of used oil marketers (700) are from Franklin Associates, Ltd., *Composition of Used Oil*, pp. 4-4 through 4-20.

[90] The number of hazardous waste fuel and used oil fuel burners was estimated from preliminary results of the mail questionnaire survey.

[91] This does not include the notification cost that would be incurred by hazardous waste fuel transporters not already subject to regulation—those that transport hazardous waste-derived fuel. We believe that there are fewer than 200 of these transporters and the cost of complying with the 40 CFR Part 263 requirements is relatively insignificant: national one time cost of $10,000 for notification and $2,000 annual cost for manifest recordkeeping.

(c) *Used Oil Analyses.* The Agency made the following assumptions to develop a worst-case cost estimate for analyzing used oil to determine if it meets the specification and if it contains more than 4000 ppm total chlorine (and would be considered hazardous waste under the rebuttable presumption of mixing): (1) 10% of the estimated 760 used oil fuel marketers market specification used oil fuel and would be required to test for the specification parameters; (2) 90% of the used oil fuel marketers market off-specification used oil fuel and would not be required to test for the specification parameters; and (3) even though analysis of used oil for total chlorine is not required, all used oil fuel marketers test all incoming used oil and all outgoing used oil fuel product for total chlorine because of the consequences of being in possession of used oil with more than 4000 ppm chlorine (i.e., under the rebuttable presumption, such oil is hazardous waste). As discussed above, a marketer of specification used oil fuel could incur the following costs under these assumptions: (1) $700 annual cost for supervision of testing and recordkeeping; (2) $2000 annual cost for testing of used oil fuel product for specification parameters as well as for chlorine (assuming facility markets 400,000 gallons of used oil fuel annually, operators sample and analyze 30,000 gallon tank "batches" of fuel, and analytical tests cost $150/test); and (3) $1540 annual cost for testing used oil received from others (assuming 2000 gallon tank truck loads are sampled and analyzed, 10% of incoming used oil is analyzed by ASTM analytical procedures at $50/test, and 90% of incoming used oil is analyzed using field kits of prepared indicator solutions at $3/test). Thus, marketers of specification used oil fuel could incur a national cost for analyses of $322,000 annually (76 facilities × $4240).

Marketers of off-specification used oil fuel could incur the following costs under these assumptions: (1) $700 annually for testing supervision and recordkeeping; (2) $667 annually for testing used oil fuel product for chlorine (assuming facility markets 400,000 gallons of used oil fuel annually, operators sample and analyze 30,000 gallon tank "batches" of fuel, and analytical tests cost $50/test); and (3) $1540 annually for testing used oil received from others (assuming 2000 gallon tank truck loads are sampled and analyzed, 10% of incoming used oil is analyzed by ASTM analytical procedures at $50/test, and 90% of incoming used oil is analyzed using field kits of prepared indicator solutions at $3/test). Thus, marketers of off-specification used oil fuel could incur a national cost for analyses of $1,904 million annually (684 facilities × $2900).

(f) *Storage Costs for Burners.* The Agency made the following assumptions to estimate the cost for hazardous waste fuel burners to comply with the interim status storage standards: (1) Of the estimated 400 burners of hazardous waste fuel received from off site, 200 are assumed to be receiving processed or blended fuels (such fuel is exempt from storage (and transportation) standards under existing rules); and (2) none of these 200 burners is currently subject to RCRA storage, treatment or disposal standards for other hazardous waste (and, thus, the facility has not already complied with some of the hazardous waste management facility standards).

Based on these assumptions and the unit costs presented above, the cost of compliance with interim status storage standards for hazardous waste fuel burners (not already subject to storage standards under existing rules) would be an initial (one-time) cost of $2.48 million ($12,400 x 200 burners) and a recurring cost of $1.04 million per year ($5,200 x 200).

The one-time cost can be annualized over 20 years at a real interest rate (i.e., without considering inflation) of 3% to spread out the cost burden. Thus, the resulting annual cost could be $1.2 million for storage in 1983 dollars (annualized one-time cost of $167,000 plus annual costs of $1,040 million.

(g) *Storage Costs for Marketers.* The proposed rule would regulate for the first time the storage of a marketer's hazardous waste fuel produced by processing, blending, or other treatment of hazardous waste. As explained elsewhere, since we believe virtually *all* marketers use hazardous waste feedstock that contains listed waste or sludges that are subject to storage and transportation controls under existing rules, their feedstock storage areas are already subject to RCRA storage standards. However, these proposed rules would for the first time subject their hazardous waste fuel product storage area to regulation.

The Agency made the following assumptions to estimate the cost of the new storage controls for these marketers: (1) Hazardous waste feedstock storage areas for one-third of the 200 such marketers have already been fully permitted (under Part B application procedures) and would incur a cost of $10,000 to repeat the permitting process to include waste fuel product storage areas; and (2) the remaining marketers whose feedstock facilities are still in interim status would incur a cost of $2000 to amend the Part A application and plans for closure, emergency procedures, financial assurance, training, and inspections to include the waste fuel product storage area. Thus, the national cost of compliance with the proposed storage controls for these marketers would be a one-time cost of $928,000 (200 x .33 x $10,000 for permitted facilities plus (200 x .67 x $2000 for facilities in interim status). This is equivalent to an annualized national cost (over 20 years) of $62,360.

C. Impacts on the Used Oil Recycling Industry

EPA is required by Section 3014 of RCRA to: (1) Establish regulations necessary to protect the public health and the environment from hazards associated with recycled oil; and (2) determine the effect of the regulations on environmentally acceptable types of recovery or reuse of used oil. What follows is a summary of EPA's determinations concerning impacts of the rules proposed today on used oil recycling and the oil recycling industry.

1. *Description of the regulated universe.* The rules proposed today pertain to only one market for recycled oil: Use as fuel. Although much used oil is used as fuel (about 520 million of the 1.2 billion gallons generated each year), significant quantities are also used for dust suppression and rerefining to produce lubricants. EPA estimates that approximately 750 marketers have as their primary business the collection, processing, or blending of off-specification used oil that is ultimately burned as fuel. Some data also suggest that a significant (but undetermined) number of establishments whose primary business is the distribution of virgin commercial fuel oil are also buying used oil, blending it with fuel oil, and subsequently reselling the blended fuel. EPA estimates that as much as 200 million gallons of used oil fuel passed

through commercial fuel oil establishments in 1982. EPA does not know how much of this used oil fuel was then sold to industrial versus nonindustrial boiler owners. However, investigations by New Jersey, New York City, Philadelphia, Pennsylvania, and the U.S. Environmental Protection Agency have produced data that confirm the allegation made by several parties that used oil fuel has been sold to residential, institutional, and commercial boiler owners in the northeastern United States. EPA believes that in some cases boiler owners are offered discount prices for the used oil fuel (10% is reportedly the common discount) but that in other cases, the used oil fuel is sold as "fuel oil" at the full market price, often without the knowledge of the buyer.

The previous discussion pertained to the types of marketers and burners that would be affected by today's proposed used oil rules. With respect to the types of used oils that would be affected by the proposed rule, EPA has found that all used oils would be affected to some extent. Both automotive and industrial used oils may contain metals at or above the specification levels, chlorine at or above the level for the presumption of mixing,[92] and flash point below the specification level. However, used crankcase oil from cars burning leaded gasoline would be affected to a greater extent than other used oils. This is because the lead levels in these oils can exceed the specification level by one or two orders of magnitude (depending on where the lead specification is selected within the range of 10 to 100 ppm for final promulgation), while metals concentrations in other used oils would not generally exceed any of the specification levels by more than half an order of magnitude. Thus, used crankcase oil from leaded gasoline engines would require more blending or treatment to meet the specification.

2. *Impacts at the facility level.*

(a) *General impacts.* A large percentage of the facilities in the used oil recycling industry would be affected to some degree by today's proposed rules because most of these facilities, at one time or another, handle used oil that is ultimately used as fuel. Nearly all of the estimated 250 used oil processors produce used oil fuel products. Some used oil collectors market used oil fuel directly to burners; rerefiners also produce fuel by-products. An estimated 30,000 facilities are currently burning oil fuel. However, the impacts of today's proposed rules on most of these facilities would be minor. As was described earlier, the costs for notification, the invoice system, certifications, and chlorine testing under today's proposal could amount to about $3650 per year for fuel sellers and $600 per year for fuel buyers. EPA does not expect these costs to have significant impacts on the used oil fuel market. Used oil fuel would still be an attractive substitute for commercial fuel oil, and in general, sale of used oil fuel would remain a profitable enterprise. However, those establishments that have been selling used oil fuel to residential, commercial, or institutional boiler owners could be affected to a significant extent by portions of today's proposed rules as discussed below. Likewise, facilities that have been supplying used oil to distributors for resale could also be affected by restrictions on sales to nonindustrial fuel users.

(b) *Impacts of restrictions on sale to nonindustrial boilers.* EPA is proposing several restrictions on the sale of used oil fuel to residential, institutional, and commercial boiler owners. First, used oil mixed with hazardous waste (other than exempt hazardous waste generated by small quantity generators) cannot be sold to this market. Second, used oil fuel with a flashpoint of less than 100° F cannot be sold to the restricted market. And third, used oil fuel sold to the restricted market must have less than specified concentrations of arsenic, cadmium, chromium, lead, and PCBs, as defined by the used oil fuel specification. In addition, total chlorine would be limited by the presumption of mixing chlorinated wastes.

The facilities currently selling used oil fuel directly to the restricted market would, under today's proposal, have to undertake special procedures in order to continue these sales. Before selling to the restricted market, the distributor would have to ensure that the used oil fuel met all of the criteria described above. In general, the facilities currently selling to the restricted market have only limited treatment capabilities. These facilities have been blending used oil and virgin fuel oil; this treatment method does not remove contaminants and it is not clear how many operators can economically produce used oil fuel that meets the specification. EPA expects that under today's proposal most of the facilities currently selling used oil/virgin fuel oil blends to the restricted market would follow one of two possible courses: (1) They would continue to accept off-specification used oil fuel but would resell it only to the industrial boiler market; or (2) they would accept only used oil fuel that already met the specification (or that they could blend down to meet the specification) and would continue sales of blended oils to the restricted market.

Used oil processors would either have to segregate used oils low in metals, or process or blend the used oil to reduce the concentration of these contaminants in order to supply distributors selling to the nonindustrial market. It is not clear how much "clean" (specification) used oil fuel would be produced by these practices. Current used oil collection practice is to pick up used oil from many diverse sources without segregation. Processors with their own vehicles could segregate clean oils to some extent, depending on their fleet and tank capacity. The common treatment methods employed in the used oil recycling industry do not remove the contaminants included in the proposed specification to any significant degree. An exception is that dehydration (the stripping of water and low oiling hydrocarbons through heating), which is practiced by some processors and rerefiners, does produce a light fuel stream which is low in metals. (However, if chlorinated solvents are present in incoming used oil, this fuel stream will be high in chlorine.)[93] EPA expects that it may not be economically feasible to blend some used oils to meet the specification for arsenic, cadmium, chromium and, particularly, lead. The only process that removes metals to the degree necessary to meet the proposed specification is distillation. Distillation is currently employed by only a handful of facilities; and these facilities use distillation to produce lubricants, not fuels.

If used oil fuel, either segregated or treated, is to be sold as specification oil, processors will also have to make arrangements for analysis. Neither processors nor distributors typically have laboratory capabilities on site that could show compliance with today's proposed specification; however, contract laboratories do offer services for the parameters in the specification.

[92] Although crankcase oils generated by typical automotive service and repair shops do not exceed the 4000 ppm chlorine level for the rebuttable presumption of mixing, crankcase oil is often mixed with spent chlorinated solvents by collectors or used oil processors/blenders.

[93] The used oil fuel produced would be subject to regulation as hazardous waste fuel if it is known that the used oil feedstock contained hazardous waste (other than exempt small quantity generator hazardous waste), or if the used oil fuel itself contained more than 4000 ppm total chlorine and the processor could not demonstrate that the used oil feedstock did not contain hazardous waste (other than exempt small quantity generator hazardous waste).

As indicated in the "Cost Data" section of this preamble, EPA estimates that a facility could incur a cost of about $4240 per year due to today's proposed rules, which could add about 1 cent per gallon to the cost of used oil fuel (exclusive of costs that may be incurred for additional processing or blending to meet the specification).

Despite the difficulties described above in producing a specification fuel product from some used oils, it can be expected that some processors would produce a specification fuel product and they would still be able to enter into long-term agreements with distributors selling to the nonindustrial markets. Processors who cannot produce such a fuel would either have to market their fuel directly to industrial users, or enter into agreements with distributors servicing the industrial market.

3. *National Scale Impacts.* Based on the discussions above, EPA has concluded that under today's proposed specification a significant portion of the used oil fuel currently being sold to the residential, institutional, and commercial market would no longer be sold to this market. EPA estimates that as much as 100 million gallons of used oil is sold to this market annually. Even if all of this total is no longer sold to the restricted market, EPA believes that alternative uses exist and that no used oil would be disposed of due to today's proposed rules. One alternative use is the industrial fuel market. EPA estimates that about 500 of the 600 million gallons of used oil fuel burned each year is burned in industrial boilers. In 1975, the industrial fuel market consumed over 5 billion gallons of residual fuel oil. The 100 million gallons of used oil fuel potentially displaced by today's proposal could easily be absorbed by the industrial fuel market. The other alternative use for used oil is as a feedstock for rerefining. Used automotive oil, which would be significantly affected by today's proposed lead specification, is a very desirable feedstock *for* rerefiners. To the extent the used oil fuel market is restricted by today's proposal, rerefiners should be able to obtain more used oil as feedstock. (Rerefiners are currently not operating at full capacity. A major reason for this is that due to the great demand for used oil as fuel, they are unable to obtain sufficient feedstock at prices low enough to produce competitively-priced lubricants.)

In summary, EPA has determined that today's proposed rules would not discourage the recycling or reuse of used oil. Less used oil would be sold to nonindustrial fuel users, but that oil should be sold to industrial fuel users or to rerefiners.

XIII. Solicitation of Public Comment and Announcement of Public Hearings

The Agency invites comment on any and all aspects of this proposed regulation. EPA specifically requests comment on issues including the following: The used oil fuel specification parameters and allowable levels, including in particular, the lead specification; the total chlorine level selected for the rebuttable presumption of mixing chlorinated hazardous waste with used oil; risks posed by used oil space heaters and the practicality of control options; prohibiting the burning of hazardous waste and off-specification used oil in very small industrial boilers; and, exemption from the prohibition on burning in nonindustrial boilers of "ignitable-only" hazardous waste fuel with a flash point greater than 100° F.

In addition, the Agency requests comments on the following effective dates for the final rule. Given that the final rulemaking is scheduled to be published in the Federal Register in late 1985, the Agency intends to expedite implementation of the rule to make the requirements effective for as much of the 1985–86 heating season as possible. Winter is the prime burning season for waste fuels and risks are highest at that time. The following effective dates will expedite implementation while allowing time for the regulated community to comply with the requirements and the Agency and the States to administer the rule.

1. *Prohibitions.* The following prohibitions would be effective 10 days after publication of the final rule in the Federal Register: (a) Prohibition on marketing hazardous waste fuel and off-specification used oil fuel to owners and operators of nonindustrial boilers (see §§ 266.31(a)(2) and 266.41(a)(2)); and (b) prohibition on burning hazardous waste fuel and off-specification used oil fuel in nonindustrial boilers (see §§ 266.31(b) and 266.41(b)).

2. *Notification.* Hazardous waste fuel and off-specification used oil fuel marketers and burners would have 30 days after publication of the final rule in the Federal Register to notify regarding their waste-as-fuel activities (see §§ 266.34(b), 266.35(b), 26.42(b)(2), 266.43(b)(3) and 266.44(b)).

3. *Storage Controls.* The storage controls for hazardous waste fuels (see §§ 266.34(c) and 266.35(c)) would be effective 180 days after publication of the final rule in the Federal Register. We believe it is not practical to shorten this effective date given that owners and operators may be required to prepare permit applications, develop plans and procedures for training, emergency response, etc, and, in some cases, complete physical changes to facilities (e.g., fencing, signs).

4. *Other Provisions.* All other provisions (e.g., manifest and invoice requirements, used oil analyses, recordkeeping) would be effective 90 days after publication of the final rule in the Federal Register.

The Agency will hold the following public hearings:

February 15, 1985

U.S. EPA, 26 Federal Plaza, Conference Room 305, New York, New York 10278

February 21, 1985

Ramada Inn Hobby Airport West,* 7777 Airport Boulevard, Houston, Texas 777061 (713) 644–1261

February 25, 1985

Torrance Marriott,* 3635 Fashion Way, Torrance, California 90503 (213) 316–3636

The hearings will begin at 9:30 a.m. (registration at 9:00 a.m.) and will end at 4:30 p.m., unless concluded earlier. EPA encourages all interested persons to attend the public hearings. If you would like to present an oral statement at one of the hearings, please notify in writing, Ms. Geraldine Wyer, Office of Solid Waste (WH-562), U.S. EPA Washington, D.C. 20460.

Oral and written statements may be submitted at the public hearings. Persons who wish to make oral presentations must restrict their presentations to 10 minutes and are encouraged to have written copies of their complete comments for inclusion in the official record.

XIV. List of subjects in 40 CFR Part 266

Hazardous materials.

Dated: January 2, 1985.

William D. Ruckelshaus,

Administrator.

It is proposed to amend 40 CFR Part 266 by adding Subparts D and E to read as follows. Conforming revisions to 40 CFR 261.6 would also be required but are not presented here given that the Agency is in the process of promulgating extensive revisions to that section. (See proposal to revise § 261.6 in 48 FR 14472 (April 4, 1983).)

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*Hotel rooms have been blocked for the convenience of attendees requiring overnight accommodations. When making reservations, please indicate you are attending the U.S. EPA public hearing.

PART 266—STANDARDS FOR THE MANAGEMENT OF SPECIFIC WASTES AND SPECIFIC TYPES OF FACILITIES

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Subpart D—Hazardous Waste Burned for Energy Recovery

Sec.
266.30 Applicability.
266.31 Prohibitions.
266.32 Standards applicable to generators who burn or market hazardous waste fuel.
266.33 Standards applicable to transporters of hazardous waste fuel.
266.34 Standards applicable to marketers of hazardous waste fuel.
266.35 Standards applicable to burners of hazardous waste fuel.
Appendix to Subpart D—Form—Notification to EPA of RCRA Subtitle C Activity (EPA Form 8700-12 (Revised))

Subpart E—Used Oil Burned for Energy Recovery

Sec.
266.40 Applicability.
266.41 Prohibitions.
266.42 Standards applicable to generators who burn or market used oil fuel.
266.43 Standards applicable to marketers of used oil fuel.
266.44 Standards applicable to burners of off-specification used oil fuel.
Appendix to Subpart E—Form—Notification to EPA of RCRA Subtitle C Activity (EPA Form 8700-12 (Revised))

Authority: Sections 1006, 2002(a), 3001, 3002, 3003, 3004, 3005, 3007, 3010, and 3014 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA); the Quiet Communities Act of 1978; the Solid Waste Disposal Act Amendments of 1980; the Used Oil Recycling Act of 1980; and the Hazardous and Solid Waste Amendments of 1984 (42 U.S.C. 6905, 6912(a), 6921, 6922, 6923, 6924, 6925, 6927, 6930, and 6932).

Subpart D—Hazardous Waste Burned for Energy Recovery

§ 266.30 Applicability.

(a) The regulations of this subpart apply to persons who manage hazardous waste that is burned for energy recovery in any boiler or industrial furnace that is not regulated under Subpart O of Part 264 or 265 of this chapter, except as provided by paragraph (b) of this section. Such hazardous waste is termed "hazardous waste fuel". Hazardous waste fuel includes any fuel produced from hazardous waste by processing, blending, or other treatment.

(b) The following hazardous waste is not subject to regulation under this subpart:

(1) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in Subpart C of Part 261 of this chapter, provided it is not mixed with a hazardous waste. Such used oil is subject to regulation under Subpart E of Part 266 rather than this subpart;

(2) Hazardous waste that is exempt from regulation under § 261.4 of this chapter and hazardous waste that is subject to the special requirements for small quantity generators under § 261.5 of this chapter.

§ 266.31 Prohibitions.

(a) A person may market hazardous waste fuel only:

(1) To persons who have notified EPA of their hazardous waste fuel activities under Section 3010 of RCRA and have an EPA identification number; and

(2) If the fuel is burned, to persons who burn the fuel in boilers or furnaces identified in paragraph (b) of this section.

(b) Hazardous waste fuel may be burned for energy recovery in only the following boilers or furnaces:

(1) Industrial furnaces;

(2) Industrial boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for use in a manufacturing process; or

(3) Utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

§ 266.32 Standards applicable to generators who burn or market hazardous waste fuel.

(a) Generators who send hazardous waste to a marketer are subject to Part 262 of this chapter.

(b) Generators who market hazardous waste fuel to a burner are subject to Part 262 of this chapter and the requirements for marketers under § 266.34.

(c) Generators who burn hazardous waste fuel on site are subject to Part 262 of this chapter and to the requirements for burners under § 266.35.

§ 266.33 Standards applicable to transporters of hazardous waste fuel.

Transporters of hazardous waste fuel are subject to regulation under Part 263 of this chapter.

§ 266.34 Standards applicable to marketers of hazardous waste fuel.

Persons who market hazardous waste fuel are termed "marketers", and are subject to the following requirements:

(a) *Prohibitions.* The prohibitions under § 266.31(a);

(b) *Notification.* Notification requirements under Section 3010 of RCRA for hazardous waste fuel activities. Upon notification, an EPA identification number will be issued. EPA form 8700-12, as revised, may be used to notify EPA of waste-as-fuel activities (See the Appendix to this subpart). Even if a marketer has previously notified EPA of his hazardous waste management activities and obtained an EPA identification number, he must renotify to identify his hazardous waste fuel activities;

(c) *Storage.* The applicable provisions of § 262.34, and Subparts A through L of Part 264, Subparts A through L of Part 265, and Part 270 of this chapter;

(d) *Off-site shipment.* The standards for generators in Part 262 of this chapter when a marketer initiates a shipment of hazardous waste fuel;

(e) *Required notices.* (1) Before a marketer initiates the first shipment of hazardous waste fuel to a burner or another marketer, he must obtain a one-time written and signed notice from the burner or marketer certifying that:

(i) The burner or marketer has notified EPA under Section 3010 of RCRA and identified his waste-as-fuel activities; and

(ii) If the recipient is a burner, the burner will burn the hazardous waste fuel only in a boiler or industrial furnace identified in § 266.31(b).

(2) Before a marketer accepts the first shipment of hazardous waste fuel from another marketer, he must provide the other marketer with a one-time written and signed certification that he has notified EPA under Section 3010 of RCRA and identified his hazardous waste fuel activities; and

(f) *Recordkeeping.* In addition to the applicable recordkeeping requirements of Parts 262, 264, and 265 of this chapter, a marketer must keep a copy of each certification notice he receives or sends for three years from the date he last engages in a hazardous waste fuel marketing transaction with the person who sends or receives the certification notice.

§ 266.35 Standards applicable to burners of hazardous waste fuel.

Owners and operators of furnaces and boilers identified in § 266.31(b) that burn hazardous waste fuel are "burners" and are subject to the following requirements:

(a) *Prohibitions.* The prohibitions under § 266.31(b);

(b) *Notification.* Notification requirements under Section 3010 of RCRA for hazardous waste fuel activities. Upon notification, an EPA identification number will be issued. EPA form 8700-12, as revised, may be used to notify EPA of waste-as-fuel activities (see the Appendix to this subpart). Even if a burner has previously notified EPA of his hazardous waste

management activities and obtained an EPA identification number, he must renotify to identify his hazardous waste fuel activities;

(c) *Storage.* (i) For short term accumulation by generators who burn their hazardous waste fuel on site, the applicable provisions of § 262.31 of this chapter;

(ii) For existing storage facilities, the applicable provisions Subparts A through L of Part 265, and Part 270 of this chapter; and

(iii) For new storage facilities, the applicable provisions of Subparts A through L of Part 264, and Part 270 of this chapter;

(d) *Required notices.* Before a burner accepts the first shipment of hazardous waste fuel from a marketer, he must provide the marketer a one-time written and signed notice certifying that:

(i) He has notified EPA under Section 3010 of RCRA and identified his waste-as-fuel activities; and

(ii) He will burn the fuel only in a boiler or furnace identified in § 266.31(b); and

(e) *Recordkeeping.* In addition to the applicable recordkeeping requirements of Parts 264 and 265 of this chapter, a burner must keep a copy of each certification notice that he sends to a marketer for three years from the date he last receives hazardous waste fuel from that marketer.

Appendix to Subpart D—Format for Notification to EPA of RCRA Subtitle C Activity (EPA Form 8700–12 (Revised))

Subpart E—Used Oil Burned for Energy Recovery

§ 266.40 Applicability.

(a) The regulations of this subpart apply to persons who manage used oil that is burned for energy recovery in any boiler or industrial furnace that is not regulated under Subpart O of Part 264 or Part 265 of this chapter, except as provided by paragraphs (c) and (e) of this section. Such used oil is termed "used oil fuel". Used oil fuel includes any fuel produced from used oil by processing, blending, or other treatment.

(b) "Used oil" means any oil that has been refined from crude oil, used, and, as a result of such use, is contaminated by physical or chemical impurities.

(c) Except as provided by paragraph (d) of this section, used oil fuel that is mixed with a hazardous waste is subject to regulation as hazardous waste fuel under Subpart D of Part 266. Used oil containing more than 4000 ppm total chlorine is presumed to be a hazardous waste because it is mixed with chlorinated hazardous waste listed in Subpart D of Part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous chlorinated spent solvents (EPA Hazardous Wastes F001 and F002) or any other chlorinated hazardous waste.

(d) Used oil fuel is subject to regulation under this subpart rather than as hazardous waste fuel under Subpart D of Part 266 if it is a hazardous waste solely because it:

(1) Exhibits a characteristic of hazardous waste identified in Subpart C of Part 261 of this chapter, provided that it is not mixed with a hazardous waste; or

(2) Contains only hazardous waste generated by a person subject to the special requirements for small quantity generators under § 261.5 of this chapter.

(e) Used oil fuel is subject to regulation under this subpart only if it exceeds any of the allowable levels of the constituents and properties in the specification shown in the following table, and provided that it is not mixed with hazardous waste other than small quantity generator hazardous waste, as provided by paragraph (d)(2) of this section. Used oil fuel that does not meet the specification is termed "off-specification". Used oil fuel that meets the specification is not subject to regulation under this subpart.

USED OIL FUEL SPECIFICATION [1]

Constituent/property	Allowable level
Arsenic	5 ppm maximum.
Cadmium	2 ppm maximum.
Chromium	10 ppm maximum.
Lead	10–100 ppm maximum [2]
PCBs	50 ppm maximum. [3]
Flash Point	100° F minimum.

[1] The specification applies only to used oil that is not mixed with a hazardous waste other than small quantity generator hazardous waste exempt from full regulation under § 261.5. Used oil containing more than 4000 ppm total chlorine is considered a hazardous waste. (See § 266.40(c).)

[2] Level to be selected from range of 10 to 100 ppm for promulgation.

[3] Used oil containing 50 ppm or more PCBs is subject to regulation as a waste PCB under Part 761 of this chapter. Used oil containing less than 50 ppm of PCBs because of dilution is also subject to regulation as a waste PCB. (See § 761.1(b).)

§ 266.41 Prohibitions.

(a) A person may market off-specification used oil fuel for energy recovery only:

(1) To persons who have notified EPA of their used oil fuel activities stating the location and general description of such activities, and who have an EPA identification number; and

(2) If the used oil fuel is burned, to persons who burn the used oil in a boiler or furnace identified in paragraph (b) of this section.

(b) Off-specification used oil fuel may be burned for energy recovery in only the following boilers or furnaces:

(1) Industrial furnaces;

(2) Utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale;

(3) Industrial boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for use in a manufacturing process; or

(4) Used oil-fired space heaters provided that:

(i) The heater burns only used oil that the owner or operator generates on site;

(ii) The heater is designed to have a maximum capacity of not more than 0.5 million Btu per hour; and

(iii) The combustion gases from the heater are vented to the ambient air.

§ 266.42 Standards applicable to generators who burn or market used oil fuel.

(a) Generators of used oil are not subject to regulation under this subpart unless they burn the used oil fuel for energy recovery or market the used oil fuel directly to a person who burns the fuel for energy recovery.

(b) Generators who burn off-specification used oil fuel are subject to the following requirements:

(1) *Prohibitions.* The prohibitions under § 266.41(b); and

(2) *Notification.* Notification to EPA stating the location and general description of used oil fuel activities, except that generators who burn their used oil in used oil-fired space heaters under the provisions of § 266.41(b)(4) are exempt from these notification requirements. Upon notification, an EPA identification number will be issued. EPA form 8700–12, as revised, may be used to notify EPA of waste-as-fuel activities (see the Appendix to this subpart). Even if a burner has previously notified EPA of his hazardous waste management activities under Section 3010 of RCRA and obtained an EPA identification number, he must renotify to identify his used oil fuel activities.

(c) Generators who market off-specification used oil fuel directly to the person who burns it are subject to the requirements of § 266.43 for marketers, unless the burner is a used oil fuel marketer who burns some of the used oil for purposes of processing or other treatment to produce used oil fuel, and who markets such used oil fuel.

§ 266.43 Standards applicable to marketers of used oil fuel.

(a) Persons who market used oil fuel are termed "marketers." A marketer is subject to the requirements of this section if:

(1) He is a used oil generator or transporter who markets used oil fuel

directly to a burner, unless the burner is a used oil fuel marketer who burns some of the used oil for purposes of processing or other treatment to produce used oil fuel, and who markets such used oil fuel;

(2) He is the owner or operator of a facility that stores or treats used oil received directly from a generator, or received directly from a transporter who received used oil directly from a generator; or

(3) He receives off-specification used oil fuel from another marketer.

(b) Marketers identified in paragraph (a) of this section are subject to the following requirements:

(1) *Analysis of fuel.* Used oil fuel must be managed as off-specification used oil fuel unless the marketer obtains analyses documenting that the used oil fuel meetsthe specification provided by § 266.40(e);

(2) *Prohibitions.* The prohibitions under § 266.41(a);

(3) *Notification.* Notification to EPA stating the location and general description of used oil fuel activities. Upon notification, an EPA identification number will be issued. EPA form 8700–12, as revised, may be used to notify EPA of waste-as-fuel activities (see the Appendix to this subpart). Even if a marketer has previously notified EPA of his hazardous waste management activities under Section 3010 of RCRA and obtained an EPA identification number, he must renotify to identify his used oil fuel activities;

(4) *Invoice system.* When a marketer initiates a shipment of off-specification used oil fuel, he must prepare and send the buyer an invoice containing the following information:

(i) An invoice number;

(ii) His own EPA identification number and the EPA identification number of the facility to receive the used oil fuel;

(iii) The names and addresses of the shipping and receiving facilities;

(iv) The quantity of used oil fuel to be delivered;

(v) The date(s) of shipment or delivery; and

(vi) The following statement: "This used oil does not meet the EPA used oil fuel specification provided in 40 CFR Part 266";

Note to paragraphs (b)(4) (i) through (vi) of this section: Used oil that meets the definition of combustible liquid (flash point below 200°F but at or greater than 100°F) or flammable liquid (flash point below 100°F) is subject to Department of Transportation Hazardous Materials Regulations at 49 CFR Parts 100–177.

(5) *Required notices.* (i) Before a marketer initiates the first shipment of off-specification used oil fuel to a burner or other marketer, he must obtain a one-time written and signed notice from the burner or marketer certifying that:

(A) The burner or marketer has notified EPA stating the location and general description of his used oil fuel activities; and

(B) if the recipient is a burner, the burner will burn the used oil fuel only in a boiler or furnace identified in § 266.41(b); and

(ii) Before a marketer accepts the first shipment of off-specification used oil from another marketer subject to the requirements of this section, he must provide the marketer with a one-time written and signed notice certifying that he has notified EPA of his used oil fuel activities; and

(6) *Recordkeeping.* A marketer who receives or initiates an invoice under the requirements of this section must keep a copy of each invoice for three years from the date the invoice is received or prepared. Marketers must also keep for three years copies of analyses of fuel required under paragraph (b)(1) of this section. In addition, a marketer must keep a copy of each certification notice that he receives or sends for three years from the date he last engages in a used oil fuel marketing transaction with the person who sends or receives the certification notice.

§ 266.44 Standards applicable to burners of off-specification used oil fuel.

Owners and operators of facilities that burn off-specification used oil fuel are "burners" and are subject to the following requirements:

(a) *Prohibition.* The prohibition under § 266.41(b);

(b) *Notification.* Notification to EPA stating the locating and general description of used oil fuel activities, except that owners and operators of used oil-fired space heaters that burn off-specification used oil under the provisions of § 266.41(b)(4) are exempt from these notification requirements. EPA form 8700–12, as revised, may be used to notify EPA of waste-as-fuel activities (see the Appendix to this subpart). Upon notification, the burner will be issued an EPA identification number. Even if a burner has previously notified EPA of his hazardous waste management activities under Section 3010 of RCRA and obtained an EPA identification number, he must renotify to identify his used oil fuel activities;

(c) *Required notices.* Before a burner accepts the first shipment of used oil fuel from a marketer, he must provide the marketer a one-time written and signed notice certifying that:

(1) He has notified EPA stating the location and general description of his used oil fuel activities; and

(2) He will burn the used oil fuel only in a boiler or furnace identifed in § 266.41(b); and

(d) *Recordkeeping.* A burner who receives an invoice under the requirements of this section must keep a copy of each invoice for three years from the date the invoice is received. In addition, he must keep a copy of each certification notice that he sends to a marketer for three years from the date he last receives used oil fuel from that marketer.

Appendix to Subpart E—Form—Notification To EPA or RCRA Subtitle C Activity (EPA Form 8700–12 (Revised))

BILLING CODE 6560-50-M

Please print or type with ELITE type (12 characters/inch) in the unshaded areas only

U.S. ENVIRONMENTAL PROTECTION AGENCY

NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

INSTRUCTIONS: Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested here is required by law. (Section 3010 of the Resource Conservation and Recovery Act).

FOR OFFICIAL USE ONLY

COMMENTS

INSTALLATION'S EPA I.D. NUMBER | APPROVED | DATE RECEIVED (yr., mo., & day)

I. NAME OF INSTALLATION

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX

CITY OR TOWN | ST. | ZIP CODE

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER

CITY OR TOWN | ST. | ZIP CODE

IV. INSTALLATION CONTACT

JOB TITLE | PHONE NO. (area code & no.)

V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER

B. TYPE OF OWNERSHIP (enter the appropriate letter into box)

F = FEDERAL
M = NON-FEDERAL

VI. TYPE OF WASTE ACTIVITY (enter "X" in the appropriate box(es))

☐ A. HAZARDOUS WASTE ACTIVITY

- ☐ 1. GENERATION
- ☐ 2. TRANSPORTATION
- ☐ 3. TREAT/STORE/DISPOSE
- ☐ 4. UNDERGROUND INJECTION
- ☐ 5. MARKET OR BURN HAZARDOUS WASTE FUELS (see Part B)

☐ B. WASTE-AS-FUEL ACTIVITIES

- ☐ 6. GENERATOR MARKETING TO BURNER
  - ☐ Hazardous Waste Fuel
  - ☐ Used Oil Fuel
- 7. OTHER MARKETER
  - ☐ Hazardous Waste Fuel
  - ☐ Used Oil Fuel
- 8. BURNER (see ITEM VII)
  - ☐ Hazardous Waste Fuel
  - ☐ Used Oil Fuel

VII. WASTE FUEL BURNING: TYPE OF COMBUSTION DEVICE (Enter "X" in all appropriate boxes to indicate types of combustion device(s) in which hazardous waste fuel or used oil fuel is burned. See instructions for definitions of waste fuels and combustion devices.)

☐ UTILITY BOILER ☐ INDUSTRIAL BOILER ☐ INDUSTRIAL FURNACE

CONTINUE ON REVERSE

I.D. – FOR OFFICIAL USE ONLY

VII. MODE OF TRANSPORTATION *(transporters only – enter "X" in the appropriate box(es))*

A. AIR (01) B. RAIL (02) C. HIGHWAY (03) D. WATER (04) E. OTHER *(specify)* (05)

IX. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your installation's EPA I.D. Number in the space provided below.

A. FIRST NOTIFICATION B. SUBSEQUENT NOTIFICATION *(complete item C)*

C. INSTALLATION'S EPA I.D. NO.

X. DESCRIPTION OF HAZARDOUS WASTES *(continued from front)*

A. HAZARDOUS WASTES FROM NON–SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.31 for each listed hazardous waste from non–specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
7	8	9	10	11	12

B. HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four–digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48

D. LISTED INFECTIOUS WASTES. Enter the four–digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

E. CHARACTERISTICS OF NON–LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non–listed hazardous wastes your installation handles. *(See 40 CFR Parts 261.21 – 261.24.)*

1. IGNITABLE (D001) 2. CORROSIVE (D002) 3. REACTIVE (D003) 4. TOXIC (D004 – D017)

XI. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE	NAME & OFFICIAL TITLE *(type or print)*	DATE SIGNED

EPA Form 8700-12 (6-80) REVERSE

BILLING CODE 6560-50-C

PREVIOUS EDITIONS OBSOLETE

Instructions for Filing "Notification to EPA of RCRA Subtitle C Activity" (EPA Form 8700-12)

I. Who Must File

The Resource Conservation and Recovery Act (RCRA) and regulations implementing the Act as promulgated at 40 CFR Parts 260-266 require persons engaging in the following activities to notify EPA of their activity:

A. Persons who generate, transport, or own or operate facilities that treat, store, or dispose of hazardous waste destined for incineration or disposal;

B. Persons who generate, transport, or store certain hazardous wastes that are destined for use, reuse, or reclamation;

C. Persons who market or burn hazardous waste for use as a fuel for energy recovery; and

D. Persons who market or burn used oil for use as a fuel for energy recovery.

This includes individuals, trusts, firms, joint stock companies, corporations (including government corporations), partnerships, associations, states, municipalities, commissions, interstate bodies and Federal agencies. If you engage in a waste management activity outlined above without filing a notification, you may be subject to civil and criminal penalties.

Persons who own or operate underground injection wells that dispose of hazardous waste and who must notify under RCRA are not required to submit a separate notification under the Safe Drinking Water Act. However, you are still required to fill out inventory and other forms required under the Safe Drinking Water Act. For further information, affected persons should consult the Chief, Water Supply Branch at the nearest EPA Regional Office.

II. How to Determine if You Handle a Subtitle C Regulated Material Subject to the Notification Requirement

Persons who generate, transport, treat, store, dispose of, use, re-use, or reclaim discarded material must determine if the material is solid waste subject to the Subtitle C hazardous waste regulations. In addition, persons who burn used oil or hazardous waste for energy recovery and who market used oil or hazardous waste for use as a fuel for energy recovery must determine if they are subject to the Subtitle C notification requirements for hazardous waste fuel and used oil fuel. These determinations can be made as follows:

A. *Determine If You Handle a Hazardous Waste Subject to the Notification Requirements of 40 CFR Parts 260-266.*

1. First, *determine if you handle a solid waste.* A solid waste is defined at 40 CFR 261.2 as any garbage, refuse, sludge or any other waste material (including materials that are used, re-used or reclaimed) which is not excluded under § 261.4(a).

2. *Determine if the solid waste is a hazardous waste.* A solid waste is hazardous if it is not excluded by § 261.4(b) and it meets the criteria of § 261.3(a)(2).

3. *Determine if the hazardous waste is excluded from the notification requirement.* The following hazardous wastes are exempt from the notification requirements:

a. *Small quantity generator hazardous wastes.* Hazardous waste generated by small quantity generators may be exempt from notification (and other) requirements under provisions of § 261.5.

b. *Hazardous wastes that are used, re-used, or reclaimed.* Certain hazardous wastes that are used, re-used, or reclaimed are exempt from notification (and other) requirements under provisions of § 261.6.

c. *Other exemptions.* Waste generated within a manufacturing system is exempt from the notification requirements under provisions of § 261.4(c). As explained in § 261.4(d), a sample of solid waste which is collected for the sole purpose of testing to determine its characteristics or composition is exempt from the notification (and other) requirements.

B. *Determine If You Must Notify Of Your Waste Fuel Activities Because You Market Or Burn Hazardous Waste Fuel Or Used Oil Fuel For Energy Recovery.*

Section 261.6 does *not* exempt from notification (and other) requirements persons who recycle hazardous waste by marketing or burning hazardous waste fuel for energy recovery. Hazardous waste fuel marketers and burners are required to notify EPA of their waste-as-fuel activities under provisions of Section 3010 of RCRA and rules promulgated under 40 CFR Part 266, Subpart D. In addition, marketers and burners of used oil fuel are required to notify EPA of their waste-as-fuel activities under authority of Section 3014 of RCRA and rules promulgated at 40 CFR Part 266, Subpart E. For notification purposes, hazardous waste fuel and used oil fuel are considered to be burned for energy recovery if they are burned in a boiler or industrial furnace that is not regulated as a hazardous waste incinerator under Subpart O of 40 CFR Parts 264 and 265.

Even if a person has previously notified EPA of his hazardous waste management activity and obtained an EPA identification number, he must re-notify to identify his waste-as-fuel activities. Any person who markets or burns these materials must notify EPA within 30 days of promulgation of final notice requiring notification, unless they are specifically exempted below. (EPA has determined that these exemptions are consistent with the purpose and intent of the Act.)

Persons exempted from the waste-as-fuel notification:

1. *Persons who burn used oil fuel in nonindustrial boilers.* These persons need not notify because rules promulgated at 40 CFR Part 266, Subpart E permit burning of used oil fuel in nonindustrial boilers (with one exception) only if it meets a specification (and is not mixed with hazardous waste other than small quantity generator hazardous waste). Used oil fuel that meets the specification is exempt from regulation. However, off-specification used oil fuel may be burned in used oil-fired space heaters that are vented to the ambient air. Persons who burn used oil fuel in such units are exempt from the notification requirements of Subpart E (provided the used oil is not mixed with hazardous waste).

Subpart D of 40 CFR Part 266 *prohibits* burning of hazardous waste fuel in nonindustrial boilers.

2. *Persons who generate hazardous waste or use it [illegible] the material solely to a person who does not burn it for energy recovery.* These generators are exempt from the waste-as-fuel notification requirements because they are not marketing a fuel. (However, all hazardous waste generators are subject to the standard notification requirements for generators.) In such situations, it is the recipient who makes the decision to market the materials as a fuel, typically after processing or blending. (Used oil generators who send their oil to a person who processes or blends it to produce used oil fuel and who incidentally burns used oil to provide energy for the processing or blending are also exempt from the notification requirement. This is because such recipients are considered to be primarily fuel producers and marketers, and only incidental burners.)

III. What Information Must Be Filed

When filing a notification, you must identify the type of regulated wastes that you handle and give a general description of your activity, including its location. You may submit all this information by completing the enclosed EPA Form 8700-12, "Notification to EPA of RCRA Subtitle C Activity".

IV. How Many Forms Should Be Filed

You need submit only one Notification Form per site or location, provided that you describe all the activities at that site or location. If you conduct a waste activity (see Section I) at more than one site or location, you must submit a *separate* form for each site or location.

If you transport waste as discussed in Section I, and do not generate, treat, store or dispose of these wastes, you may submit one form which covers all transportation activities your company conducts. This form should be submitted to the EPA Regional Office that serves the area where your company has its headquarters or principal place of business. However, if you are a transporter who also generates, treats, stores or disposes of these regulated wastes, you must complete and submit separate Notification Forms to cover each installation.

V. When To File

1. *Within 90 days of Regulating a Waste You Manage:* From time to time EPA may subject additional hazardous wastes to the notification requirement by expanding the list or characteristics of hazardous waste, or by deleting an existing exemption from the notification requirement. These changes will be codified in 40 CFR Part 261. If as a generator or transporter you were not required to notify previously, but you handle wastes that are newly subject to the notification requirement, you must file a notification covering those wastes within 90 days after the amendment is published. Ordinarily, facility owners/operators may submit Part A of the RCRA Permit obligations. However, hazardous waste fuel and used oil fuel marketers and burners must notify of their waste-as-fuel activities within 90 days of promulgation of final notice requiring notification of waste-as-fuel activities.

2. *New Generators and Transporters:* As discussed in 40 CFR Part 262, a generator must not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an EPA Identification Number from the Administrator. Similarly, if you desire to transport hazardous waste and have not previously filed a notification as a transporter, you must comply with the regulations published under 40 CFR Part 263 before you move any hazardous waste. Transporters need not complete the reverse side of the Notification Form as they may not know which wastes they will be handling.

3. *New Treatment, Storage or Disposal Facilities:* If you are an owner or operator of a hazardous waste treatment, storage, or disposal facility (subject to the permit requirements of Parts 264, 265, or 266) that was not in existence on November 19, 1980, you will not be allowed to begin hazardous waste activity until you obtain a RCRA Permit. (To obtain a permit you must file Parts A and B of the RCRA Permit Application).

VI. Confidential Business Information

All information you submit in a notification can be disclosed to the public, according to the Freedom of Information Act and EPA Freedom of Information Regulations. Because notification information is very general, EPA believes it is unlikely that any information in your notification could qualify to be protected confidentiality by printing the word "confidential" on both sides of the Notification Form and on any attachments. In addition, *at the time of notification*, you must submit written answers to each of the following questions:

1. Which portions of the information do you claim are entitled to confidential treatment?

2. How long do you want this information treated as confidential?

3. What measures have you taken to guard against undesired disclosure of the information to others?

4. To what extent has the information been disclosed to others, and what precautions have you taken in connection with that disclosure?

5. Has EPA or any other Federal Agency made a pertinent confidentiality determination? (If so, include a copy of this determination or reference to it, if available).

6. Will disclosure of the information be likely to substantially harm your competitive position? If so, what would the harm be, and why should it be viewed as substantial? What is the relationship between disclosure and the harm?

VII. Where To File

Notifications should be mailed to the EPA Regional Office that serves the area where your regulated waste activity is located. The mailing addresses for the EPA Regional Offices are listed below:

EPA region	Area served	Mailing address
I	CT, ME, MA, RI, VT, NH.	EPA Region I, State Programs Branch, P.O. Box 6743, Boston, MA 02203
II	NJ, NY, VI, PR	EPA Region II, Permits Administration Branch, 26 Federal Plaza, New York, NY 10278
III	DE, DC, MD, PA, VA, WV.	EPA Region III, Permits Branch, 6th and Walnut Streets, Philadelphia, PA 19106
IV	AL, FL, GA, KY, MS, NC, SC, TN	EPA Region IV, Waste Management Branch, 345 Courtland, N.E., Atlanta, GA 30365.
V	IL, IN, MI, MN, OH, WI	EPA Region V, Waste Management Branch, 240 S Dearborn St. NE., Chicago, IL 60604
VI	AR, LA, NM, OK, TX	EPA Region VI, Waste Programs Branch, 1201 Elm Street, First International Bldg., Dallas, TX 75270
VII	IA, KS, MO, NE	EPA Region VII, Waste Management Branch, 324 E. 11th St., Kansas City, MO 64106
VIII	CO, MT, ND, SD, UT, WY.	EPA Region VIII, Waste Management Branch, 1860 Lincoln Street, Denver, CO 80295
IX	AZ, CA, HI, NV, GU, American Samoa, Commonwealth of the Northern Marianas	EPA Region IX (T-2-2), Waste Management Branch, 215 Fremont Street, San Francisco, CA 94105
X	AL, ID, OR, WA	EPA Region X (M.S. 533), Waste Management Branch, 1200 6th Avenue, Seattle, WA 98101.

Line-By-Line Instructions For EPA Forms 8700–12

How To Complete This Form

Type using ELITE type or print in ink all terms except X(A), "Signature", leaving a blank box between words. When typing (with elite type), hit the space bar once between characters and three times between words. If you must use additional sheets, indicate clearly the number of the item on the form to which the information on the separate sheet applies.

Example:

I. NAME OF INSTALLATION			
SMITH MANUFACTURING COMPANY			
II. INSTALLATION MAILING ADDRESS			
STREET OR P.O. BOX			
PO BOX 8719			
CITY OR TOWN	ST.	ZIP CODE	
Urbana	IL	61801	
III. LOCATION OF INSTALLATION			
STREET OR ROUTE NUMBER			
1201 6th Street			
CITY OR TOWN	ST.	ZIP CODE	
Urbana	IL	61801	

Items I Through III

NAME, MAILING ADDRESS, AND LOCATION OF INSTALLATION: Complete each line following directions above. If the mailing address and location of the installation are the same, print "SAME" in the "Street or Route No." boxes of item III.

Item IV

INSTALLATION CONTACT: Enter the title and business telephone number of the person who should be contacted regarding information submitted on this form.

Item V

OWNERSHIP: (A) Enter the name of the legal owner of the installation. Use additional sheets if necessary to list more than one owner. (B) Enter an "F" in the box if the installation is owned by a Federal Agency. Enter an "M" if the installation is not owned by a Federal Agency. An installation is Federally owned if the owner is the Federal Government, even if it is operated by a private contactor.

Item VI

TYPE OF WASTE ACTIVITY: HAZARDOUS WASTE ACTIVITY

Mark "X" in the appropriate box(es) to indicate the hazardous waste activity or activities at the installation. Hazardous waste generators and owners and operators of facilities for treating, storing or disposing of hazardous waste must mark item D if an injection well is located at their installation. An injection well is defined as any hole in the ground that is deeper than it is wide and that is used for the subsurface placement of fluids, INCLUDING SEPTIC TANKS. Persons who market or burn hazardous waste fuel *must* mark box #5 in this section, and the appropriate boxes in the Waste-As-Fuel section.

TYPE OF WASTE ACTIVITY: WASTE-AS-FUEL ACTIVITY

Mark an "X" in the appropriate box(es) to indicate whether you are (1) a generator who markets waste fuel directly to a burner; (2) a marketer other than a generator marekting directly to a burner; or (3) a burner of waste fuels. A person may be both a marketer and a burner. If you market or burn waste fuels, mark "X" in the appropriate box(es) to indicate the type of waste fuel handled.

Item VII

TYPE OF WASTE FUEL BURNING DEVICE: If you burn waste fuel for energy recovery in a device that is not regulated as a RCRA permitted hazardous waste incinerator (i.e., under Subpart O of 40 CFR Parts 264 or 265), mark "X" in the appropriate box(es) to identify the device(s).

Item VIII

MODE OF TRANSPORTATION: Complete this item only if you are a transporter of hazardous waste to indicate the mode(s) of transportation you use.

Item IX

FIRST OR SUBSEQUENT NOTIFICATION: A person is required to notify for each regulated waste management activity. Place an "X" in the appropriate box to indicate whether this is your first or a subsequent notification. If you have filed a previous notification, enter your EPA Identification Number in the boxes provided.

Item X

DESCRIPTION OF HAZARDOUS WASTE: You must read Title 40 CFR Part 261 in order to complete this item (see Appendix I). Part 261 identifies those solid wastes that EPA defines to be hazardous wastes. Part 261 identifies hazardous wastes in two ways:

(1) A number of hazardous wastes are listed by name in various tables and appendices. EPA has assigned a four-digit number to each waste that is listed to make it easier to identify the wastes.

(2) Part 261 also lists the general characteristics of hazardous wastes. EPA has also assigned a four-digit number to these characteristics.

As you will note, Item X on the form is divided into five sections. You should use Sections A through D to identify any listed hazardous wastes which you handle; use Section 3 to identify those characteristics of the nonlisted hazardous wastes which you handle. Hazardous waste fuel is a generic type of Hazardous waste. Thus, if you manage hazardous waste fuel, you must complete this section to identify the individual hazardous wastes that the fuel contains.

You should include in Sections A through E all hazardous wastes you handled during the three month period preceding the date of notification. If you occasionally handle a hazardous waste, but did not handle that waste during the three month period preceding the date of notification, you may also include that waste (or wastes) in Sections A through E.

If you are a new generator applying for an EPA Identification Number under the provisions of 40 CFR Part 262, you should describe the wastes which you believe you will be generating.

If you are a new transporter applying for an EPA Identification Number under the provisions of 40 CFR Part 263, you are not required to complete Item X.

The specific instructions for Sections A through E are:

SECTION A: If you handle hazardous wastes from the non-specific sources listed in

Part 261.31, enter the appropriate four-digit numbers in the boxes provided.

SECTION B: If you handle hazardous wastes from the specific industrial sources listed in Part 261.32, enter the appropriate four-digit numbers in the boxes provided.

SECTION C: If you handle any of the commercial chemical products or manufacturing intermediate or material listed in Part 261.33 as wastes, enter the appropriate four-digit numbers in the boxes provided.

Manufacturers may include the products or raw materials that can be reasonably anticipated to require treatment, storage or disposal as wastes from time to time even though you may not have handled them in the past three months.

SECTION D: If you handle any of the hazardous wastes from hospitals, veterinary hospitals, or medical and research laboratories listed in Part 261.34, enter the appropriate four-digit numbers in the boxes provided.

SECTION E: If you handle hazardous wastes which are not listed in Subpart D of Part 261, you should describe these wastes by the characteristics in Subpart C of Part 261. For purposes of notification, it is not necessary to use the four-digit numbers for each characteristic. Rather, you should place an "X" in the box next to the characteristic of those non-listed wastes which you handle.

Item: XI

CERTIFICATION: This certification must be signed by the owner or operator or an authorized representative of your installation. An "authorized representative" is a person responsible for the overall operation of the facility—for example—a plant manager or superintendent, or a person of equivalent responsibility.

Definitions

The following definitions are provided to help clarify the notification requirements and to assist you in completing the Notification Form. If you need a more detailed discussion of the definitions you should obtain a copy of 40 CFR Part 260 from the EPA Regional Office serving your area.

ACT or RCRA means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. Section 6901 et seq.

AUTHORIZED REPRESENTATIVE means the person responsible for the overall operation of the facility or an operational unit (i.e. part of a facility), e.g., the plant manager, superintendent or person of equivalent responsibility.

BOILER means an enclosed device using controlled flame combustion and having the following characteristics: (1) the unit has physical provisions for recovering and exporting energy in the form of steam, heated fluids, or heated gases; (2) the unit's combustion chamber and primary energy recovery section(s) are of integral design (i.e., they are physically formed into one manufactured or assembled unit); (3) the unit continuously maintains an energy recovery efficiency of at least 60 percent, calculated in terms of the recovered energy compared with the thermal value of the fuel; and (4) the unit exports and utilizes at least 75 percent of the recovered energy, calculated on an annual basis (excluding recovered heat used internally in the same unit to, for example, preheat fuel or combustion air or drive fans or feedwater pumps).

BURNER means the owner or operator of a utility boiler, industrial boiler or industrial furnace that burns waste fuel for energy recovery and that is not regulated as an RCRA hazardous waste incinerator.

DISPOSAL means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

DISPOSAL FACILITY means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure.

EPA IDENTIFICATION (I.D.) NUMBER means the number assigned by EPA to each generator, transporter, and treatment, storage, or disposal facility.

EXISTING HAZARDOUS WASTE MANAGEMENT FACILITY or EXISTING FACILITY means a facility which was in operation or for which construction had commenced, as of November 19, 1980. Construction had commenced if:

(1) The owner or operator had obtained all necessary Federal, State, and local preconstruction approvals or permits; and

(2)(i) A continuous physical, on-site construction program had begun; or

(ii) The owner or operator had entered into contractual obligations which cannot be cancelled or modified without substantial loss for construction of the facility to be completed within a reasonable time.

FACILITY Means all contiguous land, and structures, other appurtanences, and improvements on the land, used for treating, storing, or disposing or hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them).

GENERATOR means any person, by site, whose act or process produces hazardous waste identified or listed in Part 261 of this chapter or whose act first causes a hazardous waste to become subject to regulation.

HAZARDOUS WASTE means a hazardous waste as defined in 40 CFR Part 261.

HAZARDOUS WASTE FUEL means hazardous waste, and any fuel produced by processing, blending, or other treatment of hazardous waste, that is burned for energy recovery in a boiler or industrial furnace that is not subject to regulation as a RCRA hazardous waste incinerator. However, the following hazardous waste fuels are subject to regulation as used oil fuels and should be considered used oil fuels for purposes of notification:

(1) Used oil fuel that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in Subpart C of 40 CFR Part 261, provided it is not mixed with hazardous waste; and

(2) Used oil fuel mixed with hazardous wastes generated by a small quantity generator subject to the exemption provided by 40 CFR 261.5.

INDUSTRIAL BOILER means a boiler used to produce electric power, steam or heated or cooled air (or other fluids or gases) for use to operate equipment or drive chemical or other reactions in a manufacturing process where substances are transformed into products. A boiler used to provide space heating as well as energy for a manufacturing process is considered to be an industrial boiler.

INDUSTRIAL FURNANCE means any of the following enclosed devices that are integral components of manufacturing processes and that use controlled flame combustion to accomplish recovery of materials or energy: cement kilns, lime kilns, aggregate kilns, phosphate kilns, coke ovens, blast furnances, smelting furnaces, refining furnances, titanium dioxide chloride process oxdation reactors, and methane reforming furnances (and other devices as the Administrator may add to this list).

MARKETER means a person who markets hazardous waste fuel or used oil fuel. However, generators and initial transporters (i.e., transporters who receive hazardous waste or used oil directly from generators) are considered marketers only if they market directly to a burner. Off-site waste fuel processors, blenders and distributors are also marketers.

NEW HAZARDOUS WASTE MANAGEMENT FACILITY means a facility which began operation, or for which construction commenced after October 21, 1976.

OPERATOR means the person responsible for the overall operation of a facility.

OWNER means a person who owns a facility or part of a facility.

STORAGE means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

TRANSPORTATION means the movement of hazardous waste by air, rail, highway, or water.

TRANSPORTER means a person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

TREATMENT means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

USED OIL means any oil that has been refined from crude oil, used, and as a result of such use, is contaminated by physical or chemical impurities. Wastes that contain oils that have not been used (e.g., virgin fuel oil storage tank bottom clean-out wastes) are not used oil unless they are mixed with used oil.

USED OIL FUEL means any used oil burned for energy recovery, including any fuel produced from used oil by processing, blending or other treatment, and that does not contain hazardous waste other than that generated by a small quantity generator and

exempt from regulation as hazardous waste under provisions of 40 CFR 261.5. Used oil fuel may itself exhibit a characteristic of hazardous waste and remain subject to regulation as used oil fuel provided it is not mixed with hazardous waste (other than exempt small quantity generator hazardous waste).

UTILITY BOILER means a boiler that is used to produce electricity, steam or heated or cooled air or other gases or fluids for sale.

WASTE FUEL means hazardous waste fuel or used oil fuel.

[FR Doc. 85-590 Filed 1-10-85; 8:45 am]
BILLING CODE 6560-50-M

EXHIBIT 5

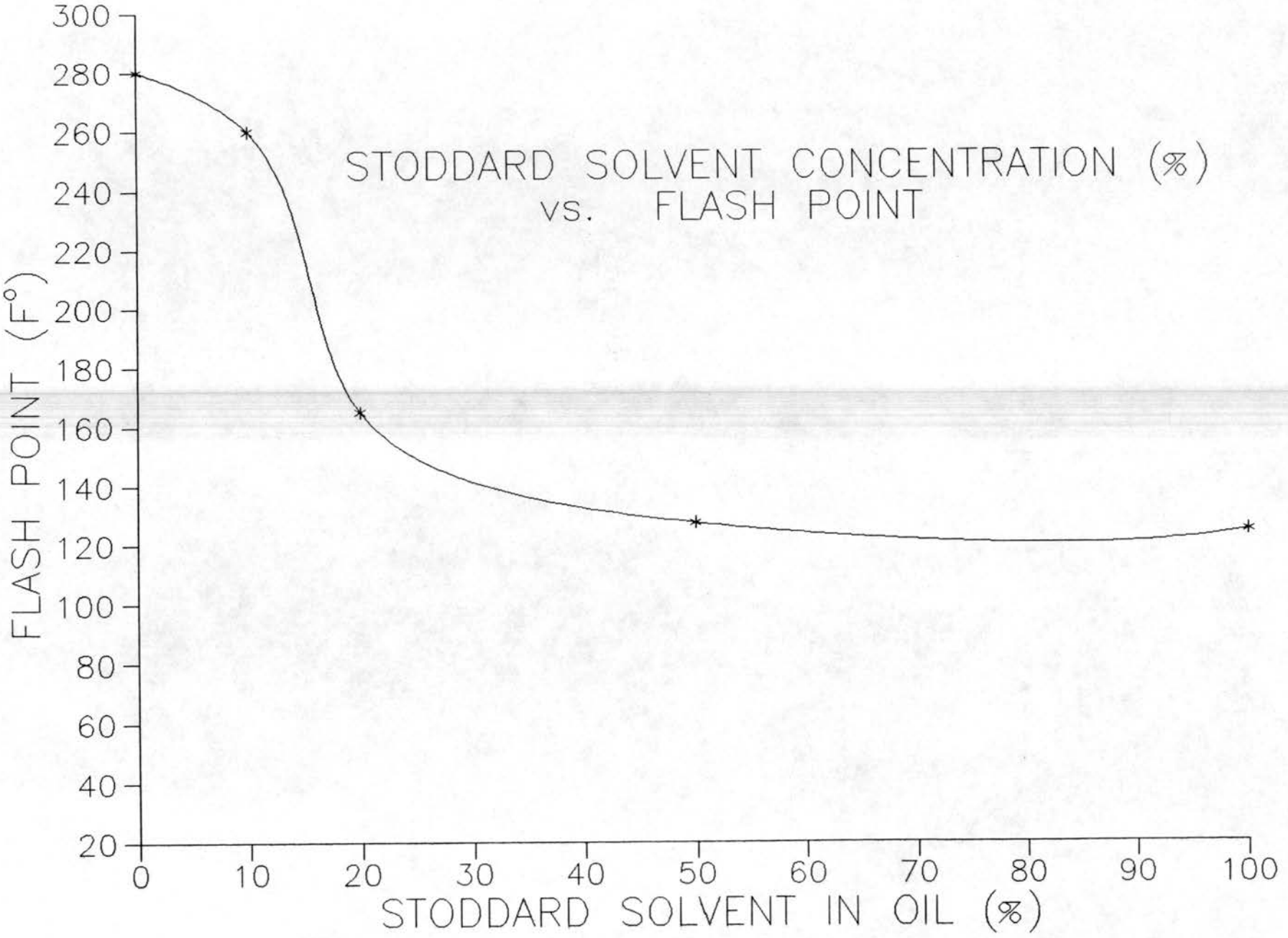
STODDARD SOLVENT CONCENTRATION (%)
vs. FLASH POINT
FLASH POINT (F°)
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
10
20
30
40
50
60
70
80
90
100
STODDARD SOLVENT IN OIL (%)

EXHIBIT 4

40 CFR Parts 261 and 266

[SWH-FRL-2883-8]

Hazardous Waste Management System; Definition of Solid Waste; Technical Corrections

AGENCY: Environmental Protection Agency.

ACTION: Technical Corrections to the Definition of Solid Waste Final Rulemaking.

SUMMARY: On January 4, 1985, EPA promulgated a final rule which dealt with the question of which materials being recycled (or held for recycling) are solid and hazardous wastes. This rule also provided general and specific standards for various types of hazardous waste recycling activities. EPA issued technical corrections to this rule on April 11, 1985. Since that time, EPA has identified several other provisions that require technical correction or clarification. This notice makes these changes and modifies the previous publication accordingly.

EFFECTIVE DATE: These corrections become effective on August 20, 1985.

FOR FURTHER INFORMATION CONTACT: RCRA Hotline, toll free, at (800) 424-9346 or at (202) 382-3000. For technical information contact Matthew A. Straus, Office of Solid Waste [WH-562B], U.S. Environmental Protection Agency, 401 M St. SW., Washington, D.C. 20460, (202) 475-8551.

SUPPLEMENTARY INFORMATION:

II. Technical Corrections to Rule

A. *Interim Exemption for Hazardous Waste-Derived Fuels Produced From Wastes From Petroleum Refining, Production, or Transportation*

On January 4, 1985, EPA amended its existing definition of solid waste. 50 FR 614. This rulemaking defined which materials being recycled (or held for recycling) are solid wastes. EPA promulgated certain technical amendments to these rules on April 11, 1985. 50 FR 14216. One of these corrections concerned the regulatory status of hazardous waste-derived fuels produced from oil-bearing hazardous wastes from petroleum refining, production, and transportation. The technical amendment clarified that such fuels are presently exempt from regulation, pending a substantive decision as to whether regulation is necessary to protect human health and the environment. See 50 FR 14218; see also 50 FR 28389, June 26, 1985, likewise stating that such fuels are presently exempt from regulation.

There is a drafting error in the April 11 technical rule, however, in that the interim exemption was placed in § 266.30 of the regulations. This provision applies to hazardous waste fuels burned in boilers or industrial furnaces; thus, the interim exemption would appear to apply only when the hazardous waste-derived fuel from petroleum refining is to be burned in these types of devices. But fuels can be burned in other devices—in certain space heaters or engines not of integral design, for example—and the Agency intended that these hazardous waste-derived fuels be exempt without regard for the type of unit in which they are burned. We consequently are placing the interim exemption in § 261.6(a)(3), which provision exempts recyclable materials from regulation. These particular hazardous waste fuels thus are presently exempt from regulation without regard for the nature of the device in which they are burned.

This exemption is also applicable to oil reclaimed from petroleum refining hazardous wastes prior to insertion or reinsertion into the petroleum refining process (and, as already stated in the preceding paragraph, to fuels resulting from refining of the reclaimed oil). Such reclaimed oil, *i.e.*, oil reclaimed from petroleum refining hazardous waste, is not presently subject to regulation. This leaves in place the regulatory scheme of the May 19, 1980 rules, whereby such reclaimed oils are exempt from regulation. See 50 FR 647/3. The Agency is determining if and how to regulate such reclaimed oil as part of the rulemaking on hazardous waste fuels proposed on January 11, 1985. See 50 FR 1684.

There are two further points of clarification. As drafted in the April 11 notice, the interim exemption applied to all fuels exempt from the labeling requirements of RCRA section 3004(r). Section 3004(r) applies to hazardous waste-derived fuels produced from, or otherwise containing, oil-bearing hazardous wastes from petroleum refining, production, and transportation that are reintroduced into particular parts of the petroleum refining process. Questions have been raised about the precise scope of some of the terms in section 3004(r). On reflection, EPA does not believe it necessary to refer to section 3004(r) to express its intent to provide an interim exemption. Consequently, we are revising the interim exemption to refer to fuels from petroleum refining that include as ingredients (i.e., that are produced from or otherwise contain) oil-bearing hazardous wastes from normal petroleum refining, production, or transportation practices. We note that these hazardous wastes can be generated off-site, and the resulting fuels are covered by the interim exemption. (Cf. section 3004(r)(3) which also is not limited to wastes generated on-site.) We also note, as we did on April 11 (50 FR at 14218/2), that these wastes must be indigenous to the petroleum refining, production, or transportation process, and so would not include such wastes as spent pesticides.

Second, certain persons have raised the question of whether there is any regulatory distinction between fuels "produced from" hazardous waste and those "containing" hazardous waste, as these terms are used in amended 40 CFR 261.2(c)(2) (B) and (C). The Agency intends no such distinction. Nor did the Congress. See RCRA amended section 3004(q), noting that hazardous waste fuels are those produced from hazardous waste, or that "*otherwise* contai(n)" hazardous waste (emphasis added). Fuels produced from hazardous waste thus are a subset of the class of fuels containing hazardous waste. EPA's amended definition of secondary materials that are wastes when burned for energy recovery is coextensive with this statutory provision. 50 FR 630 (January 4, 1985). The Agency also stated repeatedly in the preamble to the amended definition of solid waste that it claimed authority over all hazardous waste-derived fuels, without regard for how they are generated. Thus, EPA indicated that any fuels that "include hazardous wastes as ingredients" are themselves wastes; that any fuels "derived from these [hazardous] wastes [are] defined as solid wastes"; and that when hazardous wastes are "incorporated into fuels . . . fuels containing these wastes . . . remain solid wastes." 50 FR at 625 n.12, 629/2, and 636/1. Consequently, when a person uses a hazardous waste as a component in the fuel process, the output of the process is defined as a waste (assuming listed wastes are involved, or that the waste-derived fuel exhibits a hazardous waste characteristic). (The question of if and how to regulate such wastes remains for future rulemakings.)

The Agency also notes that these same principles apply with respect to waste-derived products that are used in a manner constituting disposal—they are wastes when a hazardous waste is used as a component of the process that produces them. See, e.g., 50 FR 627-628 (rejecting a standard based on simple mixing) and amended § 266.20(b) (EPA has jurisdiction over hazardous waste-derived products even where incorporated wastes have been

chemically reacted and are not separable by physical means).

In order to eliminate any possible uncertainty on this point, however, the Agency has decided to revise the language of § 261.2(c)(1) (use constituting disposal) and (c)(2) (burning for energy recovery) to recite the language from the Hazardous and Solid Waste Amendments of 1984 (HSWA). Thus, (a) hazardous secondary materials used to produce a fuel or used to produce a material that is applied to the land are defined as wastes; and (b) hazardous secondary materials otherwise contained in such waste-derived products are defined as wastes. In both cases, the waste-derived product is defined as a waste (assuming it too is hazardous as provided in § 261.3) and is potentially subject to regulation under Subtitle C of RCRA.

B. Interim Exemption for Hazardous Waste-Derived Fuels From Iron and Steel Production

On April 11, 1985, EPA also clarified that hazardous waste-derived coke from the iron and steel industry is not subject to regulation when the only hazardous wastes used in the coke-making process and from iron and steel production. This interim exemption was also placed in § 266.30(b) and so is limited by the type of unit in which the waste-derived coke is burned. To avoid any unintended limitation on the scope of this interim exemption, we are now placing it in § 261.6(a)(3).

C. Regulation of the Process of Recycling

EPA stated in the preamble to the final rule that EPA does not presently regulate the actual process of recycling (with the exception of certain uses constituting disposal), only the storage, transport, and generation that precedes it. 50 FR 642/1. The Agency included this thought in §§ 261.6(c)(2) and 266.35 of the regulations, but forgot to include it in § 261.6(c)(1). We consequently are amending § 261.6(c)(1) to state that the enumerated requirements only apply to recyclable materials stored before they are recycled.

D. Correction to Subpart G of Part 266

Subpart G of Part 266 contains rules for spent lead-acid batteries being reclaimed. Due to a typographical error, this provision was misnumbered as "§ 266.30". The correct numbering is § 266.80. Today's notice corrects this error.

E. Clarification of Part A Permit Requirements

In the April 11, 1985 notice, EPA indicated that facilities located in States which do not have finally authorized or interim authorized permit programs need to submit new or amended Part A permit applications to EPA by July 5, 1985. 50 FR 14217/3. Although accurate for States without any EPA authorization, this statement was not correct with respect to Phase I interim authorized States. If a State has any form of authorization, its universe of wastes (as approved by EPA) defines the universe of RCRA regulated entities within the State. Program Implementation Guidance 82-1, November 20, 1981. Thus, a person managing a waste that is not yet part of such an authorized State's universe of hazardous waste is not presently required to submit a Part A application. The new or amended application would have to be submitted when the State's universe of wastes has been amended to reflect changes to Part 261 and has been authorized by EPA.

II. Regulatory Impact

Under Executive Order 12291, EPA must judge whether a regulation is "major" and therefore subject to the requirements of a Regulatory Impact Analysis. Since this notice simply makes typographical and technical corrections and *does not* change the previously approved final rule, *this rule is* not a major rule, and, therefore no Regulatory Impact Analysis was conducted.

List of Subjects in 40 CFR Parts 261 and 266

Hazardous wastes, Recycling.

Dated: August 12, 1985.

Allyn M. Davis,

Acting Assistant Administrator for Solid Waste and Emergency Response.

For the reasons set out in the preamble, Title 40 of the Code of Federal Regulations is amended as follows:

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

1. The authority section for Part 261 continues to read as follows:

Authority: Secs. 1006, 2002(a), 3001, and 3002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6902, 6912(a), 6921, and 6922).

2. In § 261.2(c)(1)(i), paragraph (B) is revised to read as follows:

§ 261.2 Definition of solid waste.

* * * * *

(c) * * *

(1) * * *

(i) * * *

(B) Used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which cases the product itself remains a solid waste).

* * * * *

3. In § 261.2(c)(2)(i), paragraph (C) is removed and paragraph (B) is revised to read as follows:

§ 261.2 Definition of solid waste.

* * * * *

(c) * * *

(2) * * *

(i) * * *

(B) Used to produce a fuel or are otherwise contained in fuels (in which cases the fuel itself remains a solid waste).

* * * * *

4. In § 261.6(a)(3), paragraphs (v), (vi), and (vii) are added to read as follows:

§ 261.6 Requirements for recyclable materials.

* * * * *

(a) * * *

(3) * * *

(v) Fuels produced from the refining of oil-bearing hazardous wastes along with normal process streams at a petroleum refining facility if such wastes result from normal petroleum refining, production, and transportation practices;

(vi) Oil reclaimed from hazardous waste resulting from normal pertoleum refining, production, and transportation practices, which oil is to be refined along with normal process streams at a petroleum refining facility; or

(vii) Coke from the iron and steel industry that contains hazardous waste from the iron and steel production process.

* * * * *

5. In § 261.6(c) paragraph (1) is amended to read as follows:

§ 261.6 Requirements for recyclable materials.

* * * * *

(c)(1) Owners or operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of Subparts A through L of Parts 264 and 265 and Parts 270 and 124 of this Chapter and the notification requirement under section 3010 of RCRA, except as provided in paragraph (a) of this section. (The recycling process itself is exempt from regulation.)

* * * * *

PART 266—STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES

6. The authority citation for Part 266 continues to read as follows:

Authority: Secs. 1006, 2002(a), and 3004 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), and 6924).

7. Section 266.30(b) is amended by deleting paragraphs (b)(3) and (b)(4).

8. FR Doc. 85–3 published in the Federal Register of January 4, 1985 (50 FR 614), is corrected by changing the section number "266.30" under Subpart G to "266.80" on page 667.

[FR Doc. 85–19708 Filed 8–19–85; 8:45 am]

BILLING CODE 6560-50-M

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40 CFR Part 799

[OPTS–42012B; TSH–FRL 2815–5b]

Identification of Specific Chemical Substance and Mixture Testing Requirement; Diethylenetriamine

Correction

In FR Doc. 85–12422, beginning on page 21398, as Part III, in the issue of Thursday, May 23, 1985, make the following correction:

On page 21412, second column, § 799.1575(c)(2)(i)(C), the fifth line should have read: "section or in the *in vivo* cytogenetics test conducted pursuant to paragraph (c)(2)(i)(B) of this section produces a positive result."

BILLING CODE 1505-01-M

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 2 and 97

Modification of Footnote US275 to the Table of Frequency Allocations

AGENCY: Federal Communications Commission.

ACTION: Order.

SUMMARY: The Federal Communications Commission amends Parts 2 and 97 of its Rules to prohibit secondary amateur operations in the 902–928 MHz band in the White Sands Missile Range. This action will provide protection to essential primary radiolocation and control operations at White Sands Missile Range.

EFFECTIVE DATE: September 29, 1985.

ADDRESS: Federal Communications Commission, 2035 M Street NW., Washington, D.C. 20554.

FOR FURTHER INFORMATION CONTACT: Mr. Fred Thomas, Office of Science and Technology, 1919 M Street NW., Washington, D.C. 20554, (202) 653–8162.

SUPPLEMENTARY INFORMATION:

List of Subjects

47 CFR Part 2

Frequency allocations.

47 CFR Part 97

Amateur radio.

Order

In the matter of amendment of parts 2 and 97 of the Commission's rules to prohibit amateur use of the 902–928 MHz band at White Sands Missile Range in southern New Mexico.

Adopted: August 5, 1985.

Released: August 15, 1985.

By the Commission.

1. This action restricts amateur operations in the 902–928 MHz band in the vicinity of White Sands Missile Range. In the Second Report and Order of General Docket 80–739, Implementation of the Final Acts of the 1979 WARC, the Commission allocated the 902–928 MHz band to the amateur service on a secondary basis; it allocated the band on a primary basis for Government radiolocation and for industrial, scientific and medical applications.[1] This band has recently been added by the Report and Order in PR Docket 84–960 to the frequencies listed in Part 97 as being available for amateur use.[2] However, the Department of the Army has informed the Commission that several critical radiolocation operations, including tracking and control operations of unmanned aircraft, require the use of frequencies in the 902–928 MHz band at the White Sands Missile Range in New Mexico and that amateur operations in this area could impair or seriously disrupt these operations. Therefore, the Army has requested that the Commission place restrictions on amateur operations in the 902–928 MHz band around the White Sands area.

2. In order to protect these critical military operations we are modifying footnote US275 to the Table of Frequency Allocations, § 2.106 of the Commission's Rules, and modifying § 97.7 of the Commission's Rules to restrict amateur operations in this band. The restrictions are as follows: In the band 902–928 MHz the amateur service is prohibited in the area of Texas and New Mexico bounded by latitude 31°41′ N. on the south, longitude 104°11′ W. on the east, latitude 34°30′ N. on the north and longitude 107°30′ W. on the west; in addition, outside this area but within 150 miles of these boundaries of White Sands Missile Range, New Mexico, the service is limited to a maximum peak envelope power output of 50 watts from the transmitter. The necessary amendments to Sections 2.106 and 97.7 of the Commission's Rules are contained in the Appendix.

3. In accordance with section 553 of the Administrative Procedures Act, which excludes matters involving military functions from the notice process (U.S.C. 553(a)(1)), no Notice of Proposed Rule Making will be issued in this matter.

4. Accordingly, it is ordered, that §§ 2.106 and 97.7 are amended as set forth in the Appendix. Authority for this action is contained in section 4(i) and 303(r) of the Communications Act of 1934, as amended. These amendments become effective September 29, 1985.

5. Point of contact on this matter is Fred Thomas, (202) 653–8162.

Federal Communications Commission.

William J. Tricarico,

Secretary.

Appendix

Parts 2 and 97 of Chapter I of Title 47 of the Code of Federal Regulations are amended as follows:

The authority citations in Parts 2 and 97 continue to read:

Authority: Secs. 4, 303, 48 Stat. 1066, 1082 as amended; 47 U.S.C. 154, 303.

PART 2—FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

Section 2.106 is amended by revising the text of footnote US275 as follows:

§ 2.106 Table of frequency allocations.

* * * * *

US275 The band 902–928 MHz is allocated on a secondary basis to the amateur service subject to not causing harmful interference to the operations of Government stations authorized in this band or to Automatic Vehicle Monitoring (AVM) systems. Stations in the amateur service must tolerate any interference from the operations of industrial, scientific and medical (ISM) devices. AVM systems and

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[1] See Second Report and Order in General Docket No. 80–739 FCC 83–511, 49 FR 2357 (adopted November 8, 1983).

[2] See Report and Order in PR Docket No. 84–960 FCC 85–460 (adopted August 9, 1985).

EXHIBIT 2

confidential source, including a State, local or foreign agency or authority or any private institution which furnished information on a confidential basis, and, in the case of a record or information compiled by a criminal law enforcement authority in the course of a criminal investigation, or by an agency conducting a lawful national security intelligence investigation, information furnished by a confidential source; (5) would disclose techniques and procedures for law enforcement investigations or prosecutions, or would disclose guidelines for law enforcement investigations or prosecutions if such disclosure could reasonably be expected to risk circumvention of the law; or (6) could reasonably be expected to endanger the life or physical safety of any individual.

* * * * *

4. Section 212.42 is added to read as follows:

§ 212.42 Exemption from 5 U.S.C. 552.

Whenever a request is made which involves access to records described in paragraph (g) of § 212.41 and the investigation or proceeding involves a possible violation of criminal law; and there is reason to believe that the subject of the investigation or proceeding is not aware of its pendency, and disclosure of the existence of the records could reasonably be expected to interfere with enforcement proceedings, the Agency may, during only such time as that circumstance continues, treat the records as not subject to the requirements of 5 U.S.C. 552 and this subpart.

Dated: March 3, 1987.

Rhea Johnson,

Director, Office of Public Affairs, Bureau for External Affairs.

[FR Doc. 87-8126 Filed 4-10-87; 8:45 am]

BILLING CODE 6116-01-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 261 and 266

[SW-FRL-3183-3]

Hazardous Waste Management System; Burning of Waste Fuel and Used Oil Fuel in Boilers and Industrial Furnaces; Technical Corrections

AGENCY: Environmental Protection Agency.

ACTION: Technical corrections to hazardous waste fuel/used oil fuel rules.

SUMMARY: On November 29, 1985, EPA promulgated a final rule regulating hazardous waste fuels and certain used oil fuels. EPA has since identified several provisions that require correction or clarification. This notice makes those changes and modifies the previous package accordingly.

EFFECTIVE DATE: April 13, 1987.

FOR FURTHER INFORMATION CONTACT: RCRA Hotline, toll free, at (800) 424-9346 or (202) 382-3000. For technical information contact Robert Holloway, Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

SUPPLEMENTARY INFORMATION:

I. Technical Corrections to Rule

A. Notification

The rules of hazardous waste fuels indicate that *marketers* and burners of hazardous waste fuels must submit a one-time notification to EPA describing their waste as fuel activities. See §§ 266.34(b) and 266.35(b). Marketers, transporters, and burners of off-specification used oil fuel likewise are required to file a one-time notification. See §§ 266.43(b)(3) and 266.44(b). This requirement first took effect on January 29, 1986, and also applies to facilities commencing hazardous waste fuel or off-specification used oil fuel *management* activities after that date. Section 3010(a) of RCRA, as amended by the 1984 amendments, requires producers, marketers and burners of hazardous waste or used oil fuel to notify the Agency "(n)ot later than fifteen months after the date of enactment" of the statutory amendments of February 8, 1986. This statutory notification is a prerequisite to interim status. H. Rep. No. 198 at 41. The Administrator may waive the statutory notification *requirement* for certain types of facilities. RCRA section 3010(a).

There is considerable confusion in the regulations as to whether the notification requirement in the rules implements the section 3010(a) requirement (and hence is a prerequisite to interim status), or whether it implements general information-gathering authorities (e.g., section 3007(a)). In addition, neither the statute nor the regulation clearly indicate which facilities are subject to the section 3010(a) *notification* requirement. The *statutory* requirement could apply to facilities in existence on November 8, 1984, or to those in existence on the date when notification is due, February 8, 1986. In today's notice, EPA clarifies both of these issues.

With respect to the issue of which facilities were subject to the section 3010 notification requirement, neither the statutory language nor its legislative history provides these alternatives, and EPA did not address the issue in the November 29, 1985, rules. Indeed, the issue may have been further confused by the addition of a regulatory notification requirement which took effect on January 29, 1986, and continued thereafter for facilities commencing activities after that date.

To avoid further confusion, EPA is taking the following positions. First, the notification requirements in the regulation are in addition to, not in replacement of, the statutory 3010 notification requirements. Second, because of the lapsed time since the publication of the rule and the date of statutory notification and because EPA believes a facility could reasonably have chosen either interpretation, EPA believes that a facility will have failed to meet the section 3010(a) requirement only if it was in existence on *both* November 8, 1984, and February 8, 1986, and did not notify by February 8, 1986. (In this regard, facilities notifying on January 29, 1986, who were in existence on November 8, 1984, would be deemed to satisfy this requirement.)

The most important clarifying change we are making today is to indicate that the notification requirement in the regulations does not implement section 3010(a), and so is *unrelated* to eligibility for interim status. This is shown by the commencement of the regulatory requirement on January 29, 1986, for facilities in existence on November 29, 1985 (rather than any of the possible statutory dates), and by the fact that the regulatory notification applies to facilities commencing waste fuel activities after February 8, 1986.

However, section 3010(a) notification, where required, is still a prerequisite for interim status. Thus, facilities in existence on November 8, 1984, and February 8, 1986, must have provided a 3010(a) notice by February 8, 1986, in order to qualify for interim status. (Conversely, facilities not in existence on both of these dates are not required to notify as a prerequisite to obtaining interim status.)

Since §§ 266.31, 266.34, and 266.35 indicate erroneously that the notification requirement applies "under section 3010", we are striking this reference. Thus, the notification continues to be required under the regulations but is not a prerequisite for interim status. (Notification may continue to be provided on EPA Form 8700-12. We note, however, that this form refers to section 3010(a). It should be understood that this reference does not apply in all cases, and that the notification is in reality required

pursuant to other RCRA information-gathering authorities.)

B. Regulation of Hazardous Waste Fuel Blending Tanks

Another feature of the November 29 rules that could be better articulated involves regulation of tanks used to blend hazardous waste fuels. These tanks are found most often at hazardous waste fuel marketers' facilities, where hazardous wastes are blended with oil and other materials to produce hazardous waste fuels. Tanks can also be used to settle out impurities such as bulk solids and water in the course of hazardous waste fuel production.

Several persons have questioned whether these tanks are considered to be exempt recycling units. We believe a fair reading of the rules reflects the Agency's intent that these tanks be regulated, not exempt.

The current rules require marketers and burners to comply with all "applicable" storage standards, and thus do not address specifically the case of hazardous waste fuel blending tanks. See §§ 266.34(c), 266.35(c). The preamble likewise does not speak directly to the issue of fuel blending tanks. The preamble does, however, articulate a strong policy to regulate hazardous waste fuels cradle to grave, to regulate hazardous waste fuel marketers strictly, and to remove certain existing regulatory anomalies that had resulted in gaps in regulatory coverage. Thus, EPA stated that

> c[']/ storage of *all* hazardous waste fuels is subject to regulation. . . The Agency is today regulating the storage (and transportation) of any hazardous waste used to produce a fuel and of any hazardous waste fuel so produced. . . As proposed, today's rules subject hazardous waste fuels to storage (and other) controls. This includes storage by the initial marketers (e.g., processors, blenders), storage by subsequent marketers (e.g., distributors), and storage by burners. 50 FR at 49198 (emphasis original).

In the same discussion, the Agency emphasized that it was eliminating existing regulatory exemptions for non-sludge wastes which *are* hazardous solely because they exhibit a characteristic of hazardous waste. *Id.* The Agency also eliminated an exemption for blended hazardous waste fuels produced by a person who neither generated nor burned the fuel. *Id.* at 49168/1. The Agency took these steps because the exemptions were without environmental basis, and interfered with the announced goals of controlling hazardous waste fuels cradle to grave. Such exemptions also interfered with another stated Agency goal of strictly controlling hazardous waste fuel marketers' activities, and making certain that storage of both marketers' incoming hazardous waste and outgoing hazardous waste fuels is fully regulated. *Id.* at 49199.

Given that a chief, articulated purpose of the November 29 rules was to control storage of hazardous wastes used to produce fuels, to further control storage of the hazardous waste fuels once produced, and that the Agency was at pains to remove anomalous exemptions relating to storage from the rules, the Agency believes it clear that storage controls apply to hazardous waste fuel blending tanks. It simply makes no sense to enact a cradle to grave regulatory system but to leave a gap for the blending operation. The Agency notes further that where it wished an activity relating to hazardous waste fuel management to remain exempt, it provided a specific regulatory exemption, as for the act of burning. There is no explicit exemption for blending tank storage. We consequently are clarifying in today's notice that the reference to "applicable" storage standards in the hazardous waste rules subjects hazardous waste fuel blending tanks (along with all other hazardous waste fuel storage devices) to storage regulations.

C. Exemption of Coke and Coal Tar Produced From Coal Tar Deconter Sludge by the Iron and Steel Industry

It has come to the Agency's attention that certain iron and steel facilities may be combining various hazardous wastes with their coke and coal tar and claiming that the resulting fuel is exempt from regulation. This practice is not intended to result in an exempt fuel except when EPA Hazardous Waste No. K087 is involved. In response to industry comment, EPA exempted from regulation coke and coal tar produced from iron and steel industry coal tar decanter sludge (Hazardous Waste K087) on the grounds that coke and coal tar so produced contain the same concentrations of hazardous constituents as coke and coal tar produced without the hazardous waste sludge. 50 FR at 49170–171. The Agency was absolutely explicit that coke and coal tar produced from Hazardous Waste K087 were the only waste fuels being exempted. *Id.* Likewise, the comments on this issue, from the American Iron and Steel Institute and from Koppers, referred only to coke and coal tar produced from Hazardous Waste K087.

EPA mistakenly codified this exemption as applying to iron and steel industry coke and coal tar produced from *any* iron and steel industry hazardous waste, rather than just from waste K087. This obviously was neither the Agency's intent, nor commenters', since all discussion on this issue has involved exclusively use of K087 in the coking and coal tar processes. We consequently are correcting the language of the exemption to indicate that it applies only to coke and coal tar produced from coal tar decanter sludge (EPA Hazardous Waste K087).

D. Notification by Burners of Used Oil Meeting the Fuel Specification

EPA indicated in the preamble to the final regulations that "burners who first claim that used oil fuel meets the specifications" must notify EPA or an authorized state of their used oil fuel management activity. 50 FR at 49195/3. The Agency neglected, however, to include this requirement in the used oil fuel burner regulations (although the parallel notification requirement for marketers who first claim that used oil fuel meets the specification is included in the rules for used oil fuel marketers. See § 266.43(a)(2)).

The Agency also indicated, however, that notification requirements ordinarily do not apply to burners of specification used oil fuel. 50 FR 49195, 49196. This language only apparently conflicts with the preamble language cited above. EPA intended that burners who generate and burn their own specification oil are not required to notify. In contrast, burners who receive off-specification oil from a marketer and blend it themselves must notify, since they are otherwise prohibited from receiving shipments of off-specification used oil from marketers. See § 266.43(b)(5)(A). Accordingly, we are also clarifying in today's rule that burners who generate and burn their own specification used oil fuel—the only burners not affected by the requirement in § 266.43(b)(5)(A)—are not required to notify.

In light of the Agency's clear intent and inadvertent omission, we feel justified in conforming the rule for burners to reflect the preamble statement and parallel regulations. Thus, used oil fuel burners who are the first person to claim that used oil fuel meets the specification—but do not themselves generate such oil—must file a one-time notification of their activities with the Agency. As a practical matter, we expect this requirement to affect only burners engaged in blending activities.

E. Change to § 261.3(c)

The final rules included a conforming change to § 261.3(c)(2)(ii)(B) referring to materials exempted under

"§ 261.3(a)(3)(iv), (vi), (vii), or (viii)". This reference should be to the wastes exempted by § 261.6(a)(3)(v)–(ix). We are correcting this erroneous reference in today's notice.

F. Definition of Marketer

Marketers of hazardous waste fuels and off-specification used oil fuels are subject to a number of regulatory requirements including notification, invoice (for used oil), certification, manifest (for hazardous waste), and storage standards for hazardous waste. A question has been raised whether processors and blenders who send used oil to brokers or distributors rather than to ultimate burners are marketers of used oil fuels.

These types of processors and blenders are marketers under the rules. The rules for hazardous waste fuel marketers indicate explicitly that "persons who receive hazardous waste from generators and produce, process or blend hazardous waste from these hazardous wastes" are marketers. See § 266.34. Although the parallel provision for used oil fuel marketers does not contain this language (due to inadvertent omission), the Agency was at pains to indicate that intermediate processors and blenders are marketers, notwithstanding lack of sale to burners. Thus, the Agency stated that "EPA is adopting today a system to track hazardous waste fuel and off-specification used oil fuel from the initial marketers (e.g., processors, blenders, distributors, or generators who market to burners) through intermediaries (e.g., transporters, distributors) to the industrial users who burn the fuel for energy recovery." 50 FR at 49196/2. To the same effect, see 50 FR 49198/2 (storage controls apply to "storage by the initial marketer (e.g. processors, blenders), storage by subsequent marketers (e.g. distributors), and storage by burners").

The only persons who are *not* marketers are initial generators and transporters who do not not sell directly to burners, and subsequent transporters and brokers who do not take ownership of the oil. Section 266.43(a)(1) and 50 FR 49195/1. An example is an industrial facility that generates used oil in the course of its operations. This type of initial generator does not know that its oil could be a fuel. Processors and blenders, on the other hand, are in the used oil business and know that fuel use is the only reasonable disposition of the used oil they process. Thus, virtually by definition, processors and blenders produce a used oil or fuel. We note that Congress took this view in the 1984 RCRA amendments, stating that hazardous waste fuel requirements applied to both "blenders and distributors". H. Rep. No. 198 at 40. Likewise, in discussing used oil, Congress provided an example of a used oil processor removing contaminants from used oil and selling the processed oil to a retail dealer as an entity to be regulated as a used oil fuel facility. *Id.* at 69. (Should any blenders or processors deal exclusively with the handful of rerefiners in the country, or if they are processing used oil exclusively for road oiling (an illegal activity in many jurisdictions) they could conceivably argue that they are not marketing used oil fuel. These are very unlikely scenarios, and the Agency knows of no other circumstances when a processor or blender would be dealing with intermediaries and not be producing a used oil fuel.)

In light of the Agency's explicit statements, Congressional statements in legislative history, and the fact that any reading eliminating processors and blenders from the existing rules would result in the very type of unintended loophole the rules and statute were intended to prevent, we think the only sensible reading of the current rules is that initial blenders and processors of used oil (except those who generate the waste itself and send it to a person who does not burn it) are marketers. We have added one clarifying sentence to the current rules to make this point more explicit, and incorporated the parallel language from the definition of marketer for hazardous waste fuel.

G. Typographical Errors

Today's notice also corrects several miscellaneous typographical errors and omissions in the rule.

II. Regulatory Impact

Under Executive Order 12291, EPA must judge whether a regulation is "major" and therefore subject to the requirements of a Regulatory Impact Analysis. Since this notice makes technical corrections and does not change the previously approved final rule, this rule is not a major rule, and, therefore no Regulatory Impact Analysis is required.

List of Subjects in 40 CFR Parts 261 and 266

Hazardous waste, Recycling.

J. W. McGraw,

Acting Assistant Administrator for Solid Waste and Emergency Response.

For the reasons set out in the Preamble, Title 40 of the Code of Federal Regulations is amended as follows:

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

1. The authority citation for Part 261 continues to read as follows:

Authority: Sections 1006, 2002(a), 3001, and 3002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended [42 U.S.C. 6905, 6912(a), 6921, and 6922].

2. Section 261.3 is amended by revising paragraph (c)(2)(ii)(B) to read as follows:

§ 261.3 Definition of hazardous waste.

* * * * *

(c) * * *

(2) * * *

(ii) * * *

(B) Waste from burning any of the materials exempted from regulation by § 261.6(a)(3)(v–ix).

* * * * *

2. Section 261.6 is amended by revising paragraph (a)(3)(vii) to read as follows:

§ 261.6 Requirements for recycable materials.

(a) * * *

(3) * * *

(vii) Coke and coal tar from the iron and steel industry that contains EPA Hazardous Waste No. K087 (Decanter tank tar sludge from coking operations) from the iron and steel production process;

* * * * *

PART 266—STANDARDS FOR THE MANAGEMENT OF SPECIFIC WASTES AND SPECIFIC TYPES OF WASTE MANAGEMENT FACILITIES

1. The authority citation for Part 266 continues to read as follows:

Authority: Sections 1006, 2002(a), 3004, and 3014 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended [42 U.S.C. 6905, 6912(a), 6924, and 6934].

Subpart D—Hazardous Waste Burned for Energy Recovery

2. Section 266.31 is amended by revising paragraph (a)(1) to read as follows:

§ 266.31 Prohibitions.

(a) * * *

(1) To persons who have notified EPA of their hazardous waste fuel activities and have a U.S. EPA Identification Number; and

* * * * *

3. Section 266.34 is amended by revising paragraphs (e)(1)(i), (ii) and the

first sentence of paragraph (b) to read as follows:

§ 266.34 Standards applicable to marketers of hazardous waste fuel.

* * * * *

(b) *Notification.* Notification of hazardous waste fuel activites. * * *

* * * * *

(e) * * *

(1) * * *

(i) The burner or marketer has notified EPA and identified his waste-as-fuel activities; and

(ii) If the recipient is a burner, the burner will burn the hazardous waste fuel only in an industrial furnace or boiler identified in § 266.31(b).

* * * * *

4. Section 266.35 is amended by revising the introductory paragraph and paragraphs (c)(3), (d)(1) and the first sentence of paragraph (b) to read as follows:

§ 266.35 Standards applicable to burners of hazardous waste fuel.

Owners and operators of industrial furnaces and boilers identified in § 266.31(b) that burn hazardous waste fuel are "burners" and are subject to the following requirements:

(b) *Notification.* Notification of hazardous waste fuel activities. * * *

(c) * * *

(3) For new storage facilities, the applicable provisions of Subparts A through L of Part 264, and Parts 270 and 124 of this chapter;

(d) * * *

(1) He has notified EPA and identified his waste-as-fuel activities; and

* * * * *

Subpart E—Used Oil Burned for Energy Recovery

5. Section 266.43 is amended by revising paragraph (a) introductory text to read as follows:

§ 266.43 Standards applicable to marketers of used oil burned for energy recovery.

(a) Persons who market used oil fuel are termed "marketers". Except as provided below, marketers include generators who market used oil fuel directly to a burner, persons who receive used oil from generators and produce, process, or blend used oil fuel from these used oils (including persons sending blended or processed used oil to brokers or other intermediaries), and persons who distribute but do not process or blend used oil fuel. The following persons are not marketers subject to this subpart:

* * * * *

6. Section 266.44 is amended by revising the first sentence of paragraph (b) to read as follows:

§ 266.44 Standards applicable to burners of used oil burned for energy recovery.

* * * * *

(b) *Notification.* Burners of off-specification used oil fuel, and burners of used oil fuel who are the first to claim that the oil meets the specification provided under § 266.40(e), except burners who burn specification oil that they generate, must notify EPA stating the location and general description of used oil management activities. Burners of used oil fuel that meets the specification who receive such oil from a marketer that previously notified EPA are not required to notify. Owners and operators of used oil-fired space heaters that burn used oil fuel under the provisions of § 266.41(b)(2) are exempt from this notification requirement. * * *

* * * * *

[FR Doc. 87-8033 Filed 4-10-87; 8:45 am]

BILLING CODE 6560-50-M

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40 CFR Part 721

[OPTS-50532A; FRL-3185-3]

Methyl n-Butyl Ketone; Determination of Significant New Use

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is promulgating a significant new use rule (SNUR) under section 5(a)(2) of the Toxic Substances Control Act (TSCA) that requires persons to notify EPA at least 90 days before commencing the manufacture, import, or processing of methyl n-butyl ketone (MBK) (CAS Number 591-78-6) for any use. EPA believes that this action is necessary because MBK may be hazardous to human health, and any use of MBK and activities associated with such use may result in significant human exposure. The required notice will furnish EPA with the opportunity to evaluate the intended use, and, if necessary, prohibit or limit that activity before it occurs.

DATES: In accordance with 40 CFR 23.5 (50 FR 7271), this rule shall be promulgated for purposes of judicial review at 1 p.m. eastern time on April 27, 1987. This rule becomes effective on May 27, 1987.

FOR FURTHER INFORMATION CONTACT: Edward A. Klein, Director, TSCA Assistance Office (TS-799), Office of Toxic Substances, Environmental Protection Agency, Rm. E-543, 401 M St., SW., Washington, DC 20460, Telephone: (202-554-1404).

SUPPLEMENTARY INFORMATION:

I. Authority

Section 5(a)(2) of TSCA (15 U.S.C. 2604(a)(2)) authorizes EPA to determine that a use of a chemical substance is a significant new use. This determination is made by rule after consideration of all relevant factors, including those listed in section 5(a)(2). Once a use is determined to be a significant new use, persons must, under section 5(a)(1)(B), submit a notice to EPA at least 90 days before they commence the manufacture, import, or processing of the substance for that use.

Persons subject to this SNUR must comply with the same notice requirements and EPA regulatory procedures as submitters of premanufacture notices (PMNs) under section 5(a)(1)(A) of TSCA. In particular, these requirements include the information submission requirements of section 5(b) and (d)(1), the exemptions authorized by section 5(h)(1), (2), (3), and (5), and the regulations at 40 CFR Part 720. Once EPA receives a SNUR notice, the Agency may take regulatory action under section 5(e), 5(f), 6, or 7 to control the activities for which it has received a SNUR notice. If EPA does not take action, section 5(g) of TSCA requires the Agency to explain in the **Federal Register** its reasons for not taking action.

Persons who intend to export a substance identified in a proposed or final SNUR are subject to the export notification provisions of TSCA section 12(b). The regulations that interpret section 12(b) appear at 40 CFR Part 707. Persons who intend to import a substance are subject to the TSCA section 13 import certification requirements, which are codified at 19 CFR 12.118 through 12.127 and 127.28. Persons who import a substance identified in a final SNUR must certify that they are in compliance with the SNUR requirements. The EPA policy in support of the import certification requirements appears at 40 CFR Part 707.

II. Applicability of General Provisions

In the **Federal Register** of September 5, 1984 (49 FR 35011), EPA promulgated general regulatory provisions applicable to SNURs (40 CFR Part 721, Subpart A). The general provisions are discussed in detail in the cited **Federal Register** document, and interested persons should refer to that document for further information. These general provisions apply to this SNUR, except as provided

EXHIBIT 3

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260, 261, 262, 264, 265, 266, 270, 271, and 280

[SWH-FRL 2724-6]

Hazardous Waste Management System; Final Codification Rule

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: On November 8, 1984, the President signed into law the Hazardous and Solid Waste Amendments of 1984 (HSWA). This new statute makes many changes to EPA's existing hazardous waste management program. The purpose of this rule is to amend EPA's existing hazardous waste regulations to reflect those statutory provisions that have immediate or short-term effects on the regulated community. This rule also adds Part 280 to the EPA regulations to incorporate the interim prohibition of new section 9003(g), added by the 1984 Amendments. This section prohibits the installation of any new underground storage tank for regulated substances unless the tank is protected against corrosion and structural failure and is compatible with the substance to be stored.

EFFECTIVE DATE: These rules become effective July 15, 1985.

ADDRESSES: The official record for this rulemaking is located in Room S-212A, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460, and is available for viewing from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding Holidays.

FOR FURTHER INFORMATION CONTACT: For technical information, contact Jim O'Leary, Office of Solid Waste (WH-562B), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460. Toll free: RCRA Hotline (800-424-9346). In Washington, D.C.: (202-382-3000).

SUPPLEMENTARY INFORMATION:

Preamble Outline

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I. Hazardous Waste Exports
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VI. Regulatory Analysis
A. Executive Order 12291: Regulatory Impact Analysis
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C. Paperwork Reduction Act
D. Estimated Cost of the Final Rule

I. Authority

These regulations are issued under authority of sections 2002(a), 3001, 3002, 3004, 3005, 3006, 3010, 3015, 3017, 3019, 9001, and 9003 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6912(a), 6921, 6922, 6924, 6925, 6926, 6930, 6935, 6937, 6939, 6991, and 6993.

II. Background

On November 8, 1984, the President signed into law the Hazardous and Solid Waste Amendments of 1984 (HSWA), a major new statute that will require profound changes in the way that this country manages hazardous wastes. A brief summary of the new law's major provisions indicates the magnitude of the changes:

1. A new program for banning wastes from land disposal.

2. Prohibitions against certain land disposal practices (e.g., placement of liquids in landfills; placement of waste in salt bed formations, mines, and caves; use of hazardous waste as a dust suppressant; and certain types of underground injection).

3. Minimum technological measures for landfills, surface impoundments, and incinerators.

4. Expanded requirements for ground-water monitoring and cleanup at permitted facilities.

5. Requirements for retrofitting certain existing surface impoundments with liners.

6. Authority to expedite permits for new and innovative treatment technologies to foster research and development.

7. Authority to require permit conditions beyond the scope of EPA's existing regulations.

8. Tighter controls on small quantity generators of hazardous waste.

9. Requirements to identify additional hazardous wastes.

10. A full assessment of the hazards posed by a waste before EPA may delist it.

11. Requirements for thorough inspections of State and Federal facilities.

12. Enhanced Federal enforcement authorities (including the ability to issue "corrective action orders" to interim status facilities).

13. Specific controls on the burning and blending of hazardous wastes as fuels.

14. Specific requirements for the regulation of used oil.

15. Tighter controls on the export of hazardous wastes.

16. A new program for identifying the health risks presented by surface impoundment and landfill facilities.

17. An expanded program for the regulation of solid waste management facilities.

18. Greater citizen involvement in "imminent and substantial hazard" cases under section 7003.

19. A major new program for regulating underground storage tanks.

20. The establishment of a National Ground Water Commission.

These comprehensive amendments are all the more significant because of the ambitious schedules the Congress has established for the imposition of these requirements. Many of the provisions are already in effect; others go into effect within very short time frames. Other sections of the statute establish "hammer" provisions (i.e., requirements that go into effect by statute if EPA fails to issue regulations by certain dates).

These new amendments present serious new challenges to EPA, the regulated community, and the public at large. The first of these challenges is the

task of developing a working understanding of the new statute's provisions. To fully appreciate the changes to EPA's hazardous waste program that have been made by this statute, one must not only become familiar with the specifics of individual provisions but also must understand the interrelationships that exist among the various sections of the law.

As will be described in more detail in the next section, today's rule is EPA's effort to facilitate such an understanding of the new amendments to RCRA. In EPA's view, an early, clear articulation of the regulated community's new responsibilities is an essential step in any strategy for the effective implementation of the Congress' will.

III. Purpose of Today's Rule

The purpose of today's rule is to incorporate into the existing Subtitle C regulations a set of requirements from the new RCRA amendments that become effective as a matter of statute in the short term. EPA is making these modifications to the existing rules through a final rule that will be immediately effective. In addition, EPA is adding a new interim prohibition on the installation of certain new underground storage tanks. In light of the fact that this rule is being issued before there has been an opportunity for public comment, EPA has, for the most part, simply codified into the regulations the statutory language associated with each provision.

Specifically, today's rule addresses the following provisions of the RCRA amendments:

1. The ban on placement of bulk liquid hazardous waste and nonhazardous liquids in landfills.
2. The permitting and interim status requirements for double liners and leachate collection systems at surface impoundments and landfills.
3. The redefinition of "regulated unit" for purposes of the ground-water monitoring and response program.
4. The obligation to institute corrective action for solid waste management units at permitted facilities.
5. The elimination of the double liner variance from the ground-water monitoring and response program allowed for landfills, surface impoundments, and waste piles.
6. The variance from ground-water monitoring allowed for certain engineered structures.
7. The ban on disposal in certain salt dome formations, caves, and underground mines.
8. The ban on use of materials mixed with dioxins or other hazardous waste for dust suppression.
9. The interim measures (i.e., manifest and destination requirements) for small quantity generators producing between 100 and 1000 kilograms of waste per month.
10. The preconstruction ban with the variance for PCB facilities having EPA approvals under TSCA.
11. The restrictions on a facility's permit life.
12. The authority to add conditions to a permit beyond those provided for in regulations.
13. The extension of interim status to facilities that become subject to permitting requirements because of new regulatory requirements.
14. The loss of interim status for facilities failing to submit Part B applications within specific deadlines and for failure to self-certify compliance with ground-water monitoring and financial responsibility requirements.
15. The ban on the burning of hazardous wastes in certain cement kilns.
16. The requirement to label hazardous waste fuels.
17. The exclusion for certain wastes burned at resource recovery facilities.
18. The additional criteria (i.e., other constituents or factors) that must be evaluated before a waste can be delisted.
19. The authority to foster innovative research and development by the issuance of special treatment permits.
20. Extending the life of interim authorization for State programs by one year.
21. The requirement that State programs assure the public availability of information.
22. The identification of the new requirements that will go into effect in authorized States prior to State authorization.
23. The requirements concerning recordkeeping for hazardous waste exports.
24. The requirements for generators and owners or operators of treatment, storage, and disposal facilities to certify that they have instituted a waste minimization program.
25. The interim prohibition on the installation of any new underground storage tank for regulated substances unless the tank is protected against corrosion and structural failure and is compatible with the substance to be stored.

EPA recognizes that many of these provisions raise interpretive questions. For the most part, EPA has avoided adding regulatory language to resolve interpretive questions. This is in keeping with EPA's view that the principal purpose of today's rule is to codify the new statutory requirements. EPA has articulated in the preamble, however, its view of what Congress intended these new requirements to be. Such statements of statutory interpretation are derived from the legislative history and EPA's view of Congressional purposes for the new requirements.

In addition, EPA intends to prepare a companion proposed rule to today's final rule that proposes modifications to the existing regulations to assist in implementing the new statutory provisions. This proposal will deal with issues that are logical outgrowths of the new provisions rather than matters addressed directly by the statutory language.

While it recognizes the importance of public comment in its rulemaking activity, EPA believes that the circumstances presented by the new RCRA amendments create a need for swift administrative action before public comment can be obtained. The Administrative Procedures Act, 5 U.S.C. 551, *et seq.*, specifically recognizes that there will be situations where an administrative agency need not go through a round of public comment before issuing a substantive rule. Under 5 U.S.C. § 553(b)(3)(B), a rule is exempt from notice and public comment requirements "when the agency for good cause finds (and incorporates the finding and a brief statement of reasons therefore in the rules issued) that notice and public procedures thereon are impractical, unnecessary, or contrary to the public interest."

The Administrative Conference of the United States has recently summarized the case law that has developed on the use of the "good cause" exemption by offering the following guidance to administrative agencies:

> Examples of the types of situations requiring use of the exemption are those in which (1) advance notice of rulemaking will defeat the regulatory objective, (2) immediate action is necessary to reduce or avoid health hazards of imminent harm to persons or property, (3) immediate action is required to prevent serious dislocation in the marketplace, and (4) delay in promulgation will cause an injurious inconsistency between an agency rule and a newly enacted statute or judicial decision. ACUS Recc. 83-2: *The "Good Cause" Exemption from APA Rulemaking Requirements*, 1 CFR Part 305.83-2 (1984).

An examination of the circumstances presented by the new amendments and the limited objectives of this rule indicates that EPA may properly invoke

the good cause exemption from the notice and comment requirements of the APA. First of all, the Congress has specifically indicated that it expects EPA to make use of the good cause exemption in the early stages of its implementation program. The Conference Report on the statute [H.R. Report No. 1133, 98th Cong., 2d Sess., 112 (1984)] states:

> For those provisions of this Act which are immediately effective, it would be contrary to the public interest and impractical for EPA to engage in the time-consuming rulemaking procedures required by Section A of the APA, 5 U.S.C. Section 553, to carry out swiftly its statutory mandate. Therefore, for such immediately effective provisions, EPA appropriately may invoke the "good cause" exemption of 5 U.S.C. Section 553(b)(B) and (d)(3), in issuing final substantive or interpretative rules to implement those provisions. This will enable the Agency to put into place swiftly the enacted requirements.

Second, immediate action serves important public policy objectives. The Congress has clearly indicated in the new statute that many of its provisions are to go into effect immediately or within a very short period of time. If that objective is to be met, it is vital that the regulated community become aware of the new requirements and fully understand how their operations must change. EPA's regulations provide the most effective vehicle for officially communicating the will of Congress. The regulated community has been working with EPA's regulations for several years now. Those regulations have become the touchstone for the hazardous waste program, defining the basic requirements that must be met. Many permits that have been issued to owners and operators of treatment, storage, and disposal facilities reference specific sections of the regulations. Many State regulatory programs are modeled after EPA's regulations; some States even incorporate EPA's regulations by reference.

Thus, by modifying the current EPA regulations to reflect the new statutory amendments, EPA is translating those requirements into the regulatory parlance with which the interested public is most familiar. This step should help to eliminate much of the confusion that would result if individual members of the regulated community had to struggle on their own to understand the effect of the new amendments on their responsibilities. They certainly would have difficulty understanding which parts of the existing regulations had been superseded by new requirements and which had not.

This effort to bring EPA's regulations into line with the new statutory provisions also has important benefits for the Agency's enforcement efforts. An important aspect of any effective enforcement program is an effort to put regulated parties on notice of what the law says so that they cannot claim that they were confused about their responsibilities.

By reducing confusion about the program and clarifying responsibilities for enforcement purposes, EPA is ultimately serving the basic purposes of the statute—the protection of human health and the environment. An atmosphere of confusion about the content of a new environmental law can only paralyze efforts by responsible segments of the regulated community to move ahead to meet their responsibilities and can only provide another excuse for those segments of the regulated community that are not inclined to comply with the law. Neither result advances the Congress' objective of promptly reducing the threats to human health and the environment posed by hazardous waste management. Thus, EPA's efforts to codify the new amendments into its regulations should provide important immediate benefits for protecting human health and the environment.

A third consideration is that EPA has tried to minimize the need for public comment on the final rule by codifying the exact statutory language for most of the provisions. Given this approach, the need for public comment on the final rule is much reduced.

For the reasons described above, EPA has concluded that there is good cause to issue today's rule prior to receiving public comment because, under the circumstances, notice and comment procedures would be impracticable, unnecessary, and contrary to the public interest under 5 U.S.C. 553(b)(B). For the same reasons, EPA believes that it has good cause to make today's rule immediately effective, instead of effective within 30 days, as provided for in 5 U.S.C. 553(d)(3). EPA also believes it has a sound basis for suspending the statutory six-month effective date for regulations under RCRA provided by section 3010(b). The Hazardous and Solid Waste Amendments of 1984 amended section 3010(b) to provide that EPA may shorten or provide for an immediate effective date where (1) the regulated community does not need six months to come into compliance, (2) the regulation responds to an emergency situation, or (3) there is other good cause. For the reasons described above, EPA believes there is a good cause to make today's rule immediately effective.

IV. Other Elements of EPA's Strategy for Implementing Amendments

EPA's effort to communicate with the public about these new requirements has not and will not be limited to the promulgation of today's rule. A variety of activities have already taken place or are planned to ensure that EPA receives the feedback from Regions and States and from other interested parties necessary for intelligent implementation of the new RCRA program. These activities include:

1. A working conference held on October 24 and 25, 1984, to discuss with the Regions and States options for implementing the early enactment provisions.
2. A December 11, 1984, teleconference held on the new amendments with all ten Regions, and anyone else with a satellite hook-up.
3. A series of informal meetings with State interests and with industrial and environmental groups to further explore major implementation decisions.
4. Mailing of draft guidance to the Regions, States, and outside interests for review prior to publication.
5. A series of regional and public meetings (scheduled for April 1985) to describe implementation plans.
6. Date of Enactment Alert (RSI #1) mailed November 9, 1984, to the Regions and States to inform them of the immediate impact of new provisions on permitting.
7. A series of pamphlets, brochures, and papers to further describe new provisions to affected interests.
8. Direct mailing to treatment, storage, and disposal facilities informing them of the new requirements for which they will be responsible.
9. Direct mailing to small quantity generators informing them of the manner in which they will be affected by new provisions of law.

6. Dust Suppression

New section 3004(1) prohibits use of hazardous waste (except hazardous wastes exhibiting the characteristic of ignitability and not hazardous for any other reason) mixed with waste oil, used oil, or other material for dust suppression or for road treatment. The provision is codified in a new Subpart C to Part 266, a subpart reserved for regulation of hazardous waste uses constituting disposal.

The statutory language raises a number of issues. The first pertains to the reference of dioxin: "[t]he use of waste oil or used oil or other material which is contaminated with dioxin or any other hazardous waste. * * *" The issue is whether dioxin must be present as a result of being added as hazardous waste, or if the language refers to dioxin contamination from any source. The Agency believes that the ban applies only when the dioxin is present as a result of being added as a constituent in a hazardous waste. This is indicated by the fact that Congress placed the provision in section 3004—where regulatory jurisdiction is generally limited to hazardous wastes identified or listed in section 3001—and also by the explanation in the legislative history that the ban is for "hazardous waste contaminated materials * * *" S. Rep. No. 284, 98th Cong., 1st. *Sess.* 23.

A second issue is the reference to "waste oil or used oil." Waste oil is virgin oil that has been discarded before use. The Agency believes the term was used purposely (since the phrase is otherwise redundant), so that if virgin oil is mixed with hazardous waste, it cannot be used legally as a dust suppressant or for treatment.

The prohibition applies on its face to hazardous wastes that are mixed with other materials, but does not explicitly ban the use of *unmixed* hazardous wastes (i.e., hazardous wastes applied directly as dust suppressants). The Agency believes the provision should be read as banning this type of direct application. This appears to be the only sensible reading because an unmixed waste is likely to be more hazardous than a mixed, diluted one. Moreover, the Conference Report states that the provision "bans the use of * * * any * * * hazardous waste as a dust suppressant." H.R. Rep. No. 1133, 98th Cong., 2nd Sess. 86 (1984).

A final issue is the question of what is used oil and what is hazardous waste. The bill's prohibition applies on its face only to used oil that is contaminated with hazardous waste, not to used oil applied directly, even if the used oil is contaminated through use. At this time, determining whether used oil is contaminated by use or through adulteration with a hazardous waste is a question of fact to be decided on a case-by-case basis. EPA plans to address this issue in future rulemakings, including those dealing with hazardous waste fuels and with standards for recycled oil.

firms that buy the oil for re-use and recycling. The highest value use of the oil is as a dust suppressant applied to roads. EPA estimates that approximately 68.5 million gallons of this type of used oil are applied to roads each year. Under the final rule, generators will no longer be able to sell the oil for use as a dust suppressant. Firms that apply oil to roads will have to find an alternative to used oil and pay the additional cost of the alternative.

Unit Costs—The cost to generators depends on the number and type of alternate uses for the oil. For the lower bound, EPA estimates that generators can simply sell the oil to other users at no loss of revenue. The upper bound is that the oil has no resale value and the generators lose the revenue they earned on the sale of the oil to road oilers. The most likely estimate reflects the fact that the oil has some value, at least for its BTU content, but no higher value than it had as a dust suppressant (or the generators would have sought out the higher value use).

For road oilers, the lower bound cost assumes that they will switch to calcium chloride. This means a higher cost per gallon and a higher application rate. The upper bound cost includes the same assumptions plus a 50 percent higher application frequency.

Total Costs—The lower bound cost is $16 million and is the same each year. The upper bound is $35 million and the most likely cost is the average of the two, approximately $26 million.

8. Dust Suppression

Provision—The final rule prohibits the use of used oil, mixed with hazardous waste, as a dust suppressant.

Affected Population—The provision affects two distinct groups: first, firms that generate the used oil and second,

§ 265.254 Design requirements.

The owner or operator of a waste pile is subject to the requirements for liners and leachate collection systems or equivalent protection provided in § 264.251 of this chapter, with respect to each new unit, replacement of an existing unit, or lateral expansion of an existing unit that is within the area indentified in the Part A permit application, and with respect to waste received beginning May 8, 1985.

49. Part 265 is amended by adding a new § 265.301 to read as follows:

§ 265.301 Design requirements.

(a) The owner or operator of a landfill must install two or more liners and leachate collection systems above and between such liners in accordance with § 264.301(c) of this chapter, with respect to each new unit, replacement of an existing unit, or lateral expansion of an existing unit that is within the area identified in the Part A permit application, and with respect to waste received beginning May 8, 1985.

(b) The owner or operator of each unit referred to in paragraph (a) of this section must notify the Regional Administrator at least sixty days prior to receiving waste. The owner or operator of each facility submitting notice must file a Part B application within six months of the receipt of such notice.

(c) Paragraph (a) of this section will not apply if the owner or operator demonstrates to the Regional Administrator, and the Regional Administrator finds for such landfill, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as such liners and leachate collection systems.

(d) The double liner requirement set forth in paragraph (a) of this section may be waived by the Regional Administrator for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the EP toxicity characteristics in § 261.24 of this chapter; and

(2)(i) (A) The monofill has at least one liner for which there is no evidence that such liner is leaking;

(B) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in § 144.3 of this chapter); and

(C) The monofill is in compliance with generally applicable ground-water monitoring requirements for facilities with permits under RCRA § 3005(c); or

(ii) The owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(e) In the case of any unit in which the liner and leachate collection system has been installed pursuant to the requirements of paragraph (a) of this section and in good faith compliance with paragraph (a) of this section and with guidance documents governing liners and leachate collection systems under paragraph (a) of this section, no liner or leachate collection system which is different from that which was so installed pursuant to paragraph (a) of this section will be required for such unit by the Regional Administrator when issuing the first permit to such facility, except that the Regional Administrator will not be precluded from requiring installation of a new liner when the Regional Administrator has reason to believe that any liner installed pursuant to the requirements of paragraph (a) of this section is leaking.

§ 265.314 [Amended]

50. Paragraphs (b) and (c) of § 265.314 are redesignated as paragraphs (c) and (e), respectively, and paragraph (d) is reserved.

51. Section 265.314 is amended by revising the introductory text of paragraph (a), and by adding new paragraph (b) to read as follows:

§ 265.314 Special requirements for liquid bulk and containerized waste.

(a) Bulk or non-containerized liquid waste or waste containing free liquids may be placed in a landfill prior to May 8, 1985 only if:

* * * * *

(b) Effective May 8, 1985, the placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not absorbents have been added) in any landfill is prohibited.

* * * * *

52. Section 265.314 is amended by revising newly designated paragraph (e), adding a new paragraph (f), and adding an OMB control number to the end of the section to read as follows:

§ 265.314 Special requirements for bulk and containerized waste.

* * * * *

(e) The date for compliance with paragraph (a) of this section is November 19, 1981. The date for compliance with paragraph (c) of this section is March 22, 1982.

(f) Effective November 8, 1985, the placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the Regional Administrator, or the Regional Administrator determines, that:

(1) The only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, which contains, or may reasonably be anticipated to contain, hazardous waste; and

(2) Placement in such owner or operator's landfill will not present a risk of contamination of any underground source of drinking water (as that term is defined in § 144.3 of this chapter).

(The reporting and recordkeeping requirements contained in this section were approved by OMB under control number 2050-0037)

PART 266—STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES

53. The authority citation for Part 266 continues to read as follows:

Authority: Secs. 1006, 2002(a), and 3004, of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), and 6924).

54. In Part 266, Subpart C, the text of 266.23 is redesignated as paragraph (a) and a new paragraph (b) is added to read as follows:

§ 266.23 Standards applicable to users of materials that are used in a manner that constitutes disposal.

* * * * *

(b) The use of waste or used oil or other material, which is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment is prohibited.

55. In Part 266, Subpart D is amended by adding § 266.31 as set forth below.

§ 266.31 Prohibitions.

(a) [Reserved]

(b)(1) Except as provided in paragraph (b)(2) of this section, no fuel which contains any hazardous waste may be burned in any cement kiln which is located within the boundaries of any incorporated municipality with a population greater than 500,000 (based on the most recent census statistics)

EXHIBIT 1

federal register

Friday
November 29, 1985

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WASTE DIVISION

Corrections from 2-11-86

Part II

Environmental Protection Agency

40 CFR Parts 260, 261, 264, 265, 266, 270, 271, and 302

Hazardous Waste Management System; Used Oil; Final Rule and Proposed Rules

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 261, 264, 265, 266, and 271

[SWH-FRL 2910-1]

Hazardous Waste Management System; Burning of Waste Fuel and Used Oil Fuel in Boilers and Industrial Furnaces

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: On January 11, 1985, EPA proposed under Subtitle C of the Resource Conservation and Recovery Act (RCRA) to begin regulation of hazardous waste and used oil burned for energy recovery in boilers and industrial furnaces. The proposal provided administrative controls for those persons who market and burn hazardous waste and used oil fuels. Most of the requirements are being finalized as proposed, but some modifications have been made in response to comment.

The final rule prohibits the burning in nonindustrial boilers of both hazardous waste fuel and of used oil that does not meet specification levels for certain hazardous contaminants and flash point. It also provides administrative controls to keep track of marketing and burning activities. These controls include notification to EPA of waste-as-fuel activities, use of a manifest, or, for used oil, an invoice system for shipments, and recordkeeping. Hazardous waste fuels, including processed or blended hazardous waste fuels, are also subject to storage requirements.

DATES: *Effective Dates:* The effective dates for the regulations are:

1. *Prohibitions.* The prohibitions on marketing and burning of hazardous waste fuel and off-specification used oil fuel in nonindustrial boilers in §§ 266.31(a) (2) and (b), and 266.41 (a) (2) and (b) are effective on December 9, 1985. To implement and enforce the prohibitions, the following provisions are also effective on December 9, 1985:

(a) The used oil fuel specification in §266.40(e), except for the specification level for lead which is effective May 29, 1986.

(b) The rebuttable presumption of mixing hazardous halogenated wastes with used oil in §266.40(c); and

(c) The used oil analysis requirements and attendant record keeping requirements in §§266.43(b) (1) and (6), and 266.44 (d) and (e);

2. *Storage Controls.* The storage controls for hazardous waste fuels in §§266.34(c) and 266.35(c) are effective on May 29 1986; and

3. *All Other Provisions.* The effective date for all other provisions of these regulations (e.g., manifests and, for off-specification used oil fuel, invoice requirements for shipments; certification notices to suppliers; and recordkeeping of manifests or invoices, and certification notices) is March 31, 1986. At that time, the manifest or invoice requirements supersede and apply in lieu of the warning label requirements of RCRA section 3004(r).

Compliance Dates: The compliance dates for the regulation are:

1. *Notification.* Marketers and burners of hazardous waste fuel and off-specification used oil fuel are required to notify EPA regarding their waste-as-fuel activities under §§ 266.34(b), 266.35(b), 266.43(b)(3), and 266.44(b). These persons must so notify either EPA or States authorized by EPA to operate the hazardous waste program by January 29, 1986; and

2. *Submission of Part A Permit Applications.* All existing marketers and burners (see provisions in 40 CFR 270.2 and 270.70(a)) who store hazardous waste fuels and who are not currently operating pursuant to interim status (section 3005(e) of RCRA), must file a notification of their storage activities with EPA by January 29, 1986 and submit a Part A permit application to EPA by May 29, 1986.

In addition, marketers and burners already operating pursuant to interim status, but who operate existing hazardous waste fuel storage facilities newly subject to regulation by today's rule, must file a notification of their storage activities with EPA by January 29, 1986 and submit an amended Part A permit application to EPA (with an informational copy to the authorized State) by May 29, 1986.

Explanation for these effective dates and compliance dates is provided in Part Five, section III of this preamble.

ADDRESSES: The official record for this rulemaking is in Room S-212, U.S. Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. The record may be viewed from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding holidays.

FOR FURTHER INFORMATION CONTACT: RCRA Hotline, toll free, at (800) 424-9346 or (202) 382-3000. For Technical information, contact Robert Holloway, Waste Combustion Program, Waste Management and Economics Division, Office of Solid Waste, WH-565A, U.S. Environmental Protection Agency, 401 M St. SW., Washington, DC 20460. Telephone: (202) 382-7917. Single copies of the final rule can be obtained by calling the RCRA Hotline number above.

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Today's preamble is organized into five major sections. Part I contains background information that summarizes major provisions of the rule. It also describes how the rule fits into the Agency's strategy for regulating other types of used oil recycling and disposal and for regulating the actual burning of hazardous waste and off-specification used oil in industrial boilers and industrial furnaces. In addition, this section discusses nonregulatory approaches to the problems considered by EPA.

Part II describes when a waste is burned for energy recovery and identifies those hazardous wastes and used oils subject to this regulation. It also discusses the basis for exempting a number of waste-derived fuels and for not exempting others. In addition, it describes the test for distinguishing between used oil and hazardous waste fuels. Further, this section defends the risk assessment used to identify used oil constituents included in the specification, and explains the basis for the final specification. Finally, this section responds to a number of comments regarding allowing the blending of used oil fuel to meet the specification, availability of analytical procedures for used oil, and the regulatory status of combustion residuals.

Part III identifies those boilers and industrial furnaces subject to this regulation and explains the basis for regulating nonindustrial boilers immediately. It also discusses how nonindustrial boilers can continue to burn hazardous waste under permit standards for hazardous waste incinerators. Finally, this section discusses controls for used oil space heaters and EPA's intent to provide additional controls for these devices in future rulemakings.

Part IV discusses the administrative controls on marketers and burners that provide a tracking system for shipments and otherwise provide for implementation and enforcement of the prohibitions. This section also discusses the basis for applying the storage standards to all hazardous waste fuels and general permit procedures. Finally, this section provides examples of how the rule operates.

Part V discusses how the rules operate immediately, even in states authorized to operate the hazardous waste program. This section also discusses the economic impacts on the regulated community, and particularly, the used oil recycling industry.

PART ONE: BACKGROUND

I. Legal Authority

These regulations are promulgated today under the authority of sections 1006, 2002(a), 3001, 3002, 3003, 3004, 3005, 3007, 3010, and 3014 of the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976, the Quiet Communities Act of 1978, the Solid Waste Disposal Act Amendments of 1980, the Used Oil Recycling Act of 1980, and the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. 6905, 6912(a), 6921, 6922, 6923, 6924, 6925, 6927, 6930, and 6932.

II. Overview of the Final Rule

With today's rulemaking, EPA begins to regulate those hazardous wastes and used oil that are marketed and burned for energy recovery. The chief purpose of these rules is to prohibit the burning of hazardous waste and contaminated used oil in nonindustrial boilers. The prohibitions are implemented and enforced by placing administrative controls on marketers and burners of these fuels.

Today's rule also establishes a rebuttable presumption that used oil that contains more than 1000 ppm total halogens is mixed with halogenated hazardous waste and, therefore, is a hazardous waste. The presumption may be rebutted by showing the used oil has not been mixed with hazardous wastes (e.g., by showing it does not contain significant levels of halogenated hazardous constituents). Used oil presumed to be mixed with hazardous waste is subject to regulation as hazardous waste fuel when burned for energy recovery.

In addition, the rule establishes a specification for used oil fuel (i.e., used oil not mixed with hazadous waste) that is essentially exempt from all regulation and may be burned in nonindustrial boilers. The specification sets allowable levels for designated toxic constituents, flash point, and total halogens.

Burning of hazardous waste fuel and off-specification used oil fuel in industrial and utility boilers and industrial furnaces continues to be exempt from regulation. The Agency intends to regulate such burning under permit standards to be proposed in 1986, as discussed below.

Administrative requirements such as notification, receipt of identification number, and compliance with manifest or invoice (for off-specification used oil fyel) systems are being promulgated today to enforce the prohibitions on burning of hazardous waste fuel and offspecification used oil in nonindustrial boilers.

Today's rule also applies RCRA hazardous waste storage standards to facilities storing hazardous waste fuels. Such waste-derived fuels have heretofore been exempt (on an interim basis) from storage standards when produced by a person other than the generator. See §§ 266.30(a) and 266.34(c), 50 FR at 667 (January 4, 1985).

Several modifications have been made to the proposed rule in response to comments. These include: the rebuttable presumption of mixing hazardous halogenated solvents with used oil is based on a total halogen level of 1000 ppm rather than a total chlorine level of 4000 ppm; a specification for total halogens is added to the used oil fuel specification at a level of 4000 ppm; and the effective date of the lead specification level (set at 100 ppm) is deferred for six months, while the other specification parameters are effective ten days after promulgation.

The Agency is also developing two other rulemakings that will regulate the blending and burning of used oil and hazardous waste for energy recovery. EPA will soon be proposing a rule that would list used oil as hazardous waste and establish special management standards for recycled oil, including oil burned for energy recovery. Those rules would go beyond today's final rule by providing standards for used oil generators and collectors, and by regulating the transportation and storage of used oil. Today's final rule

places administrative controls only on marketers and burners of used oil burned for energy recovery, and does not regulate the transportation and storage of used oil.

In 1986, we are scheduled to propose permit standards for the actual burning of hazardous waste and used oil in boilers and industrial furnaces. Under those permit standards, hazardous waste could be burned in any boiler or industrial furnace, irrespective of purpose (i.e., hazardous waste could be burned for energy recovery, material recovery, or destruction).[1] Burning of contaminated (i.e., off-specification) used oil would be permitted under special permit-by-rule standards.

III. Nonregulatory Alternatives

EPA carefully examined a number of nonregulatory strategies for managing used oil, but failed to identify any that would be as protective as these regulations. See 50 FR at 1687 (January 11, 1985). The most promising approach considered was a tax rebate system. Under this system, a tax on virgin lube oil would be rebated to "acceptable" users of used oil (e.g., rerefiners, "acceptable" burners). We explained in the proposal, however, why a tax rebate system would be ineffective in protecting human health and the environment and impractical to implement.

In response to EPA's discussion on nonregulatory alternatives, one commenter suggested a program whereby "do-it-yourself" oil changers would voluntarily bring their used oil to gas stations to be sold to rerefiners. While the Agency is strongly in favor of of rerefining, EPA's objective in promulgating today's regulations is to begin to regulate used oil management to ensure that it is managed in an environmentally acceptable manner. See RCRA section 3014. This provision does not authorize EPA to determine preferential recycling approaches and to direct used oil to those approaches, provided alternative types of recycling are conducted in a manner that protects human health and the environment.[2]

[1] Hazardous waste may be burned for destruction, previously and under today's rule, only under RCRA hazardous waste incinerator standards found in 40 CFR Parts 264 and 265.

[2] We believe that today's regulations will, in fact, result in a substantial increase in used oil rerefining. Used oil that does not meet the specification and that is currently burned for energy recovery in nonindustrial boilers must either be blended to meet the specification or diverted to industrial or utility boilers or industrial furnaces. We expect that a substantial amount of this oil will find its way to rerefiners. We note also that EPA anticipates proposing in Spring 1986 Federal procurement guidelines under authority of RCRA Section 6002 regarding procurement of recycled lubricating oils.

PART TWO: MATERIALS THAT ARE REGULATED

I. Overview

Today's rules apply to hazardous waste and used oil burned for energy recovery. When so recycled, these wastes, and materials that are produced from or otherwise contain these wastes as a result of blending, processing, or other treatment, are termed hazardous waste fuel or used oil fuel. These terms are defined in this section. We also discuss how to determine when a waste is burned for energy recovery and the applicability of these rules to burning for materials recovery. In addition, we discuss when combustion residuals from boilers and industrial furnaces burning hazardous waste and used oil are subject to regulation as hazardous waste. Finally, we discuss, in response to comments, our plans to give special consideration to regulating the on-site burning of *de minimis* quantities of hazardous waste fuel and off-specification used oil in the development of permit standards for boilers and industrial furnaces scheduled to be proposed in early 1986.

In defining "hazardous waste fuel", we discuss the basis for exempting certain hazardous waste fuels from these regulations—petroleum refinery fuel products derived from hazardous waste produced by refining and ancillary operations, and coke and coal tar derived from hazardous waste produced by coal coking operations in the iron and steel industry—and why we are rejecting arguments by some commenters to exempt or exclude other hazardous waste fuels.

In defining "used oil fuel", we define used oil and explain the difference between used oil and "oily waste." In addition, we discuss the specification for used oil that may be burned in nonindustrial boilers, and explain why we added total halogens to the proposed specification at a level of 4,000 ppm and why PCBs were deleted from the proposed specification. We also respond to comments regarding why other parameters were not added to the specification and why certain specification levels were selected. We also discuss how to distinguish between hazardous waste fuel and used oil when the used oil may have been mixed with hazardous halogenated solvents, when used oil may be mixed with small quantity generator hazardous waste, and when used oil exhibits a characteristic of hazardous waste. Finally, we respond to comments on allowing blending of used oil to meet the specification, banning all burning of used oil in nonindustrial boilers, and the availability of analytical testing procedures to determine conformance with the specification.

II. Determining When a Waste is Burned for Energy Recovery

Today's regulations apply to hazardous waste and used oil burned for "energy recovery." This limitation raises two questions: how to distinguish burning for energy recovery from burning for destruction, and determining how to regulate if burning is conducted to recover materials.

In the January 11, 1985 proposal (see 50 FR at 1690), we explained that the Agency had already addressed what is meant by burning for legitimate energy recovery. We explained that burning of low energy hazardous waste as alleged fuel is not considered to be burning for legitimate energy recovery, even if the low energy hazardous waste is blended with high energy materials and then burned. Thus, boilers and industrial furnaces burning low energy wastes (i.e., having less than 5,000–8,000 Btu/lb heating value, as generated) [3] could be considered to be incinerating them, and so be subject to regulation as hazardous waste incinerators.

Although today's rule prohibits the burning of hazardous waste fuel and off-specification used oil fuel in nonindustrial boilers, the principles of the statement remain in force. We have indicated, however, that if we were to apply the Enforcement Policy Statement to industrial (and utility) boilers and industrial furnaces, we would seek to enforce in situations where low energy hazardous waste adulteration was deliberate and massive. This is because we have said that larger industrial boilers are more efficient at recovering energy and so could be deemed, more often, to be burning lower energy wastes legitimately. (See 48 FR at 11159 (March 16, 1983).)

A second question is the scope of these regulations when burning involves material recovery. Normally, the purpose for which a material is burned makes no difference in environmental effect. Hence, EPA envisions an ultimate regulatory scheme where regulation of burning applies (as may be necessary to protect human health and the environment) regardless of purpose in all situations within the Agency's jurisdiction. We now address this

[3] See Statement of Enforcement Policy issued January 18, 1983 (printed at 48 FR 11157 (March 16, 1983)).

question as it applies to burning in boilers, burning for a dual purpose in industrial furnaces, and burning in industrial furnaces solely for material recovery.

We explained in the January 11, 1985 preamble that since boilers, by definition, have as their primary purpose the recovery of energy, if materials are also recovered, this recovery is ancillary to the purpose of the unit, and so does not alter the regulatory status of the activity. (See also definition of "boiler" in 50 FR at 661 (January 4, 1985).) We also explained that the regulations apply when an industrial furnace burns the same material for both energy and material recovery (e.g., when blast furnaces burn organic wastes to recover both energy and carbon values).

Today's regulations, however, do not apply to hazardous wastes burned in industrial furnaces solely for material recovery. In large part, this is because the primary focus of today's regulations is on waste burning in nonindustrial settings (apartment buildings, hospitals, etc.). In addition, as discussed in the January 4, 1985 preamble to the definition of solid waste and the preamble to the proposed rule in this proceeding, there are certain situations where control of burning for material recovery in industrial furnaces could lead to an impermissible intrusion into the production process and so be beyond EPA's authority under RCRA. See 50 FR 630, 1690. These situations are limited, and involve circumstances where the secondary material being burned is indigenous to the process in which the industrial furnace is used, for example, because the secondary material contains the same types and concentrations of constituents (particularly hazardous constituents listed in Appendix VIII of Part 261) as the raw materials normally burned in the industrial furnace. *Id.*[4] In EPA's forthcoming regulations establishing permit standards for burning in boilers and industrial furnaces, EPA will establish permit standards for industrial furnaces burning for material recovery (as well as for energy recovery or destruction) in all situations not beyond EPA's regulatory authority.

[4] An example could be a smelting furnace resmelting one of its own listed process residues. In such situations, the secondary material would not be a solid waste at the time of burning in the industrial furnace even though it is classified as a solid waste for purposes of storage prior to burning. Note further that the derived-from rule (§ 261.3(c)(2)(i)) thus would not apply to wastes generated by the burning.

III. Hazardous Waste Subject to Regulation

A. Definition of Hazardous Waste Fuel

1. *Hazardous Waste Fuel.* With certain exceptions discussed below, these rules apply to hazardous wastes (and fuels that are produced from or otherwise contain hazardous waste as a result of processing, blending, or other treatment), that are burned for energy recovery in a boiler or industrial furnace that is not operating under RCRA standards for hazardous waste incinerators.[5] Such fuel is termed "hazardous waste fuel".[6]

Certain commenters questioned whether these rules (and by extension RCRA section 3004(q)) would apply when energy recovery from burning hazardous wastes is merely incidental, or when energy recovery is not the principal purpose of burning. Today's rules apply where energy recovery is significant or purposeful. The Agency stated as long ago as 1983 in a Statement of Enforcement Policy (48 FR 11159 (March 16, 1983)) that ordinarily burning low energy (less than 5,000 Btu lb.) hazardous waste is not considered to involve energy recovery, in spite of incidental energy release. See also 50 FR at 630 (January 4, 1985), and 50 FR 1690 (January 11, 1985) reiterating this principle. Thus, if boilers or industrial furnaces burn hazardous wastes containing organic constituents these rules would not invariably apply.

These rules do apply, however, if hazardous wastes (*viz.* any hazardous secondary material (see § 261.2(c)(2), January 4, 1985 and August 20, 1985)) are burned in industrial furnaces or boilers both to recover energy (i.e., to provide substantial, useful heat energy) and for some other recycling purpose, even if energy recovery is not the predominant purpose of the burning. EPA already has taken this position in the rules codifying section 3004(q) of RCRA. 50 FR 28724 (July 15, 1985). In addition, as noted above, the Agency is moving away from tests based on purpose because the purpose of burning normally is unrelated to its environmental effect. Indeed, the argument that these rules (as well as RCRA section 3004(q)) should apply only where energy recovery is the principal purpose of burning would resurrect the discredited "primary purpose" test formerly used by EPA to distinguish recycling from incineration. As both the Agency and the Congress have stated, this standard was largely irrelevant for evaluating environmental effects of burning, and proved exceedingly difficult to administer. See 48 FR 14483 (April 4, 1983); S. Rep. No. 284, 98th Cong. 1st Sess. at 36 (1983). Nor is section 3004(q) of RCRA limited to situations where energy is the principal purpose of burning, the plain language of the statute applying to hazardous waste burned "for purposes of energy recovery" (RCRA section 3004(q)(1)(B)), or "burned to recover useful energy" (RCRA section 3004(q)(2)(B)). The statute also classifies hazardous waste-derived petroleum coke as a section 3004(q) fuel (see RCRA section 3004(q)(2)(A)), even though petroleum coke is burned for several purposes, only one of which (and not necessarily the most important) is energy recovery. See S. Rep. No. 284, *supra* at 39.[7]

Consequently, these rules apply where hazardous wastes are burned in boilers or industrial furnaces and provide substantial, useful heat energy. Such burning is considered to involve a hazardous waste fuel within the meaning of RCRA section 3004(q).

2. *Eliminating Certain Existing Regulatory Exemptions for Hazardous Waste Fuels.* These rules expand the

[5] If a waste that is hazardous only because it exhibits a characteristic is used as an ingredient in a fuel, and the waste-derived fuel does not exhibit a characteristic, the waste-derived fuel would not be considered to be a hazardous waste. (See § 261.3(d)(1).)

[6] Several commenters suggested that "hazardous waste fuel" is an inappropriate term to use to describe these fuels since it creates a stigma that will discourage the use of the fuel because of the perceived increased risks associated with hazardous waste. Commenters believed that the negative association of hazardous waste with the fuel would cause many users to stop burning such fuels and, therefore, depress the business of those marketing these fuels, particularly used oil mixed with hazardous waste. Several commenters suggested that the Agency use a different term with less negative connotation (e.g., "regulated" or "RCRA-regulated fuel").

We acknowledge that we have previously (see § 261.6(a)(1), 50 FR 665 (January 4, 1985)) termed hazardous wastes that are recycled as "recyclable materials". We continue to believe, however, that hazardous waste burned for energy recovery should be termed "hazardous waste fuel" for a number of reasons. The warning label provision of section 3004(r) of the Hazardous and Solid Waste Amendments of 1984 (HSWA) requires that an invoice or bill of sale for hazardous waste fuel bear a statement that the fuel contains hazardous waste. Although that provision is superseded by the manifest requirement promulgated today, we believe that Congress intended that EPA controls for such fuels make it clear that the fuels are, or contain, hazardous waste. In addition, although the January 4, 1985 promulgation termed recycled hazardous waste as "recyclable materials", that rule also provided basic controls for hazardous waste burned for energy recovery (expanded by today's rule) and, in fact, first defined such waste as "hazardous waste fuel". See Subpart D of Part 266, 50 FR 667.

[7] Section 3004(q) also applies on its face to cement kilns burning hazardous waste even though these industrial furnace do not burn wastes for the sole purpose of energy recovery. RCRA section 3004(q)(2)(C).

universe of hazardous waste subject to RCRA regulation when burned for energy recovery by removing two exemptions. Although the Agency has jurisdiction to regulate under RCRA all spent materials, sludges, by-products, and § 261.33 commercial chemical products, all fuels to which these materials are added, and all fuels derived from or otherwise containing these materials when they are transported, stored, and burned for energy recovery (see 50 FR 630 (January 4, 1985), and 50 FR 33541 (August 20, 1985)), EPA currently regulates the storage and transportation of hazardous waste burned for energy recovery only on a limited basis. Thus, the following hazardous waste fuels are provisionally exempt: (1) Spent materials and by-products exhibiting a characteristic of hazardous waste; and (2) hazardous waste fuels produced from hazardous waste by blending or other treatment by a person who neither generated the waste nor burns the fuel. (See §§ 266.30 and 266.36 in 50 FR 667 (January 4, 1985).) Under the first exemption, only listed wastes and sludges (both listed and characteristic) are currently regulated.[8] Thus, nonsludge, characteristic-only wastes are currently exempt. Under the second exemption, waste-derived fuels produced by off-site, third-party marketers are currently exempt. Today's rules remove both of these exemptions so that the transportation, storage, and other controls apply to *all* hazardous waste fuels.

We have also explained why neither exemption is environmentally justifiable. See 50 FR 1705 (January 11, 1985). There is no general distinction between potential adverse effects of burning listed or characteristic hazardous wastes. Nor is there any general distinction between hazardous waste fuels marketed directly by generators or by marketers unrelated to those generators. These exemptions, in fact, have always been provisional, and exist because of the Agency's initial uncertainty (in 1980) about an appropriate regulatory regime for recycled wastes. *Id.* Although the Agency promulgated a regulatory regime for many recycling activities on January 4, 1985, we decided to remove these exemptions in today's rulemaking dealing solely with burning for energy recovery rather than in the January 4, rulemaking to avoid confusion or disruption that would result from extensive, piecemeal changes of the current (i.e., May 19, 1980) rules. See 50 FR 632 (January 4, 1985).

B. Consideration of Exemption for Ignitable-Only Hazardous Waste

In the proposed rule, we solicited comments on whether wastes that are hazardous only because of their ignitability should be exempted from the prohibition on burning in nonindustrial boilers. (See 50 FR 1701 (January 11, 1985.) We also asked if these "ignitable-only" wastes should be exempt from all controls (including storage and transportation), or just the prohibition on burning in nonindustrial boilers.

We reasoned that burning such wastes would not pose any greater danger of fires or explosions than commercial fuel oils if the minimum flash point was limited to 100° F. However, we also noted that ignitable-only wastes may actually contain significant levels of toxic compounds because the Agency has not completed its listing of wastes that are hazardous because of their toxicity. Therefore, we indicated that as a part of any exemption scheme those toxic compounds of concern must be identified, acceptable concentrations must be determined, analysis procedures must be prescribed, and recordkeeping procedures must be required.

For a number of reasons, today's rule does not provide an exemption for ignitable-only hazardous waste. Although commenters acknowledged the need to ensure that the waste does not contain significant levels of toxic constituents, they were not helpful in suggesting a rational approach for setting safe levels for the constituents or an implementation scheme that would avoid the expense of analyzing shipments for virtually every compound on Appendix VIII of Part 261. Several commenters suggested that the presence of Appendix VIII compounds that occur naturally in virgin fuel (e.g., toluene, xylene, benzene, metals) should be considered in setting acceptable levels for an exemption. For "non-fuel" compounds, several commenters suggested a maximum level of 100 ppm while one commenter suggested 1 ppm, and another suggested that acceptable levels be based on assessment of risk. As we indicated in the proposal, 100 ppm may be an appropriate level for some constituents while a lower level, perhaps 1 ppm, would be appropriate for the more toxic constituents. Commenters provided no insight on how acceptable levels would be assigned to the various compounds of concern. Moreover, even if it were assumed that acceptable levels for all Appendix VIII compounds could be determined, commenters did not focus on the analytical burden they would face to endure that shipments met the conditional exemption.

We have concluded that a conditional exemption would be very difficult to develop and very expensive to the regulated community to implement. Moreover, it is not clear that a substantial amount of hazardous waste would even be eligible for an exemption conditioned on the presence of only very low levels of the Appendix VIII constituents not normally present in virgin fuel oil.

We note, however, that we are considering whether special permit standards would be appropriate for ignitable-only wastes under the Phase II permit standards for boilers and industrial furnaces to be proposed in 1986. Such special standards could be fashioned after the current standards for burning ignitable-only waste in incinerators. See §§ 264.340(b) and (c). Under the incinerator standards, site-specific factors such as quantity of waste and location of the facility may be used to determine if measurable, but low, levels of Appendix VIII compounds may pose a hazard to public health or the environment. Wastes found to be ignitable-only with insignificant levels of Appendix VIII compounds are exempt from the performance and operating standards for incinerators. Although waste analysis is required, the analytic burden is minimized by considering only the Appendix VIII compounds that could reasonably be expected to be found in the waste. Thus, consideration of an exemption on a case-by-case basis as part of a permit proceeding provides a rational approach to consider the significance of low levels of Appendix VIII compounds and allows for cost-effective (i.e., limited) waste analyses.

C. Regulation of Fuels Derived From Petroleum Refinery Waste

1. *Petroleum Refineries that Reintroduce Hazardous Wastes From Petroleum Refining, Production, and Transportation to the Refining Process.* EPA solicited comment on the status of fuels from petroleum refineries that reintroduced oil-bearing hazardous wastes from petroleum refining, production and transportation to the refining process. See 50 FR 1689–1690. Although we proposed to define these materials as hazardous waste fuel, we

[8] Listed commercial chemical products, however, are not solid wastes (or hazardous wastes) when burned for energy recovery if they are themselves fuels or normal components of commercial fuels. See 40 CFR 261.33, 50 FR 28744 (July 15, 1985). An example is pipeline interface generated from the transport of toluene, when the interface is burned for energy recovery.

solicited comment on the extent to which the hazardous waste contaminants are removed by the refining process, or are so diluted by the process that they do not significantly increase the level of contaminants present in fuel. *Id.* If this is the case, EPA believes it has the ultimate authority to exclude the derived fuels from being solid wastes, since the more waste-derived fuels from a process are like products from the same process produced by virgin materials, the less likely EPA is to classify the waste-derived fuel as a waste. (It is clear, however, that EPA possesses jurisdiction under RCRA to make these determinations. See RCRA section 3004(r).) The American Petroleum Institute (API) submitted relevant data on these points which EPA noticed for public comment on June 26, 1985. 50 FR 26389.

These data, though limited, seem to indicate that at large, sophisticated refineries, these recycling practices do not significantly contribute to metals levels in the refined fuels. However, EPA cannot as yet determine whether this is due to the refining process itself, or whether the amounts of waste reintroduced into the process are so low as to be diluted. In particular, API's data indicated that less than one percent of hazardous waste (*i.e.*, chiefly oil reclaimed from hazardous wastes) is reintroduced into the refining stream at a crude petroleum refinery. Based on these data, they show that the increase in metals content in the final product is minimal. For example, cadmium levels increased from 0.11 ppm to 0.12 ppm while lead levels increased from 0.89 ppm to 0.91 ppm. (See Table 3, p. 16 of API's submission on comments on reopening of comment period dated June 12, 1985.) Thus, when only a small percentage of waste is reintroduced back into the refining process, it does not appear to appreciably effect metals levels in the final refined products. However, the Agency is concerned that if contaminants are simply being diluted, then if there were a significant increase in the amount of hazardous waste feed, resulting fuels could be significantly contaminated since the wastes being reintroduced contain concentrations of toxic metals far greater than those in most crude oils. In fact, the Agency has some preliminary data from its petroleum refining industry study which indicates that for at least some metals—arsenic and cadmium—the distillation process does not necessarily remove the metals from the fuels.

The Agency is considering an approach which would indicate that if the amount of hazardous waste that was reintroduced back into the petroleum refinery was minimal (*i.e.*, less than one percent), the fuel produced at the refinery would be excluded (*i.e.*, would not be a solid waste). In the short term there are certain implementation difficulties with this idea, particularly the difficulties of determining compliance for each batch since refining is a continuous process. The Agency is continuing to evaluate this possibility, however.

Rather, EPA believes that more time is needed to study these questions. In particular, EPA intends to examine further the question of whether removal actually occurs as a result of refining. This would have bearing not only on the question of whether regulation is justified, but also on the question of whether resulting fuels should be classified as products or as wastes. EPA particularly wishes to examine the extent to which these wastes can influence the composition of fuels from smaller, less sophisticated refineries which may remove fewer metals from the wastes, and also may use a higher percentage of wastes as feed-stocks.

At present, however, since there is no persuasive evidence that reintroduction of these indigenous hazardous wastes into the refining process actually contributes significant concentrations of metals to the resulting fuels, EPA is leaving in place the existing exemption for such fuels contained in § 261.6(a)(3)(v).[9] See 50 FR 33542 (August 20, 1985). Another factor influencing continuation of the exemption is that fuels produced only from virgin crude oil can have higher levels of toxic metals than fuels partially produced from these hazardous wastes.[10] See 50 FR 1695 (January 11, 1985).

Thus, fuels produced from refining of indigenous, oil-bearing hazardous wastes at a petroleum refining facility will continue to be exempt. By "petroleum refining facility" EPA means to include any facility that produces hydrocarbon products (*e.g.* gasoline, kerosene, distillate fuel oils, residual fuel oil, etc.) from crude oil or its immediate fractionation products through straight distillation of crude oil or other intermediate products (*e.g.*, gas oils, naphtha, etc.) (This is the definition of the Petroleum Refining Standard Industrial Classification (SIC 2911).). For these hazardous wastes to be considered to be refined, they must be inserted into a part of the process designed to remove contaminants in the normal operation of the refining process. See 50 FR 28725 (July 15, 1985). As we explained there, this would mean insertion of the wastes prior to distillation or catalytic cracking. (The distillation process is used to split the feedstock into fractions based on the various boiling points of the feedstock components. The data submitted by API indicates that most of the metals concentrate in the heavier (high boiling point) fractions. Many times these fractions are not used for fuels but rather to produce asphalt or petroleum coke. Therefore, there is a significant probability of contaminant removal from many fuel fractions if there is distillation in the process.) In addition, without distillation or insertion of the wastes into another part of the process designed to remove contaminants, there will be no removal of contaminants at all, and Congress regarded some removal as one of the prerequisites for exemption. See RCRA sections 3004 (r)(2)(B) and (r)(3)(A), and 50 FR at 28725 (July 15, 1985). Consequently, if a facility takes an oil-bearing hazardous waste and processes it without distillation to produce a fuel, the resulting fuel is *not* covered by this exemption and so could be subject to regulation. Similarly, if a refinery inserts the waste into a part of the process after distillation or catalytic cracking (as explained above), resulting fuels are *not* automatically exempt.[11]

Under EPA's proposal, such fuels (i.e., fuels derived from petroleum refining wastes which fuels are produced by processes *not* using distillation, or the fuels resulting when petroleum refining waste are inserted into the refining process after points at which any contaminant removal can occur) were classified as hazardous waste fuel (assuming they were derived from listed refinery wastes, or exhibit a hazardous

[9] As explained in detail in the preamble to the proposed rule, this provision does *not* exempt the hazardous wastes before they are reintroduced into the refining process (50 FR at 1689).

[10] EPA also considers these waste-derived fuels to remain petroleum, rather than hazardous substances, for purposes of the comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). See CERCLA section 101(14) (excluding petroleum from definition of hazardous substances). In light of the widespread nature of these recycling practices, to do otherwise would potentially read the exclusion for petroleum out of CERCLA. In addition, there is no indication that Congress meant for these waste-derived fuels to be considered hazardous substances when it added sections 3004(r) (2) and (3) to RCRA (which provisions indicate that such fuels remain hazardous wastes).

[11] Incidentally, certain used oil-based processes produce used oil fuel from processes that use distillation. These processes are not refining operations (in spite of the use of distillation) because they do not produce fuels *from crude oil*. Fuels from such a process thus are not automatically exempt from regulation, but would be if they meet the specification for used oil fuel. If this type of processor should also use oilbearing petroleum refining hazardous waste as a feed material, the resulting fuels would be exempt if they meet the used oil fuel specification, since the operation is comparable to those described in the following paragraph in the text.

waste characteristic) subject to all the regulatory requirements for such fuels. EPA has modified this position in the final rule so that such fuels are *not* subject to regulation if they meet the same specification applied to fuels produced from processing used oil—a very similar operation. (In fact, the Agency is aware of operations that blend petroleum refining hazardous wastes and used oil.) We have added an exemption to §261.6(a)(3) to make this point. This will ensure that the resulting fuels will pose no greater environmental hazard than the virgin fuels that would be burned in their place.[12] [13] EPA thus believes this is the proper means of controlling this potential problem. If the waste-derived fuel should exceed the fuel specification, it would be subject to all of the rules applicable to hazardous waste fuels. (As a hazardous waste fuel which is not completely derived from used oil, the fuel is not eligible to be regulated under the special standards reserved for used oil. See RCRA section 3014. This position is consistent with the one taken in the proposed rule.)

2. *Oil Recovered from Petroleum Refining Hazardous Wastes that is Returned to the Refining Process.* A related question is the status of oil that is recovered from hazardous wastes generated during normal petroleum refining, production, or transportation practices. The recovered oil is usually returned to the refining process as a substitute for crude oil but can also be burned directly as a fuel. Under amended § 261.3(c)(2) (see 50 FR 664 (January 4, 1985) and 50 FR (August 20, 1985)), such oil remains in the hazardous waste system (if it is to be used to produce fuel or is burned for energy recovery). EPA solicited additional comment on this issue on May 13, 1985 (50 FR 19956).

EPA is not yet able to amend the rules to state under what circumstances reclaimed oil might not be considered to be a waste. This is largely because available data (which are limited) show that the oil can contain higher metals levels than virgin fuel oil.[14] EPA thus needs to study further the particular means of oil recovery from these wastes, and the composition of the resulting oils in relation to composition of virgin fuels.[15]

EPA is prepared, however, to continue the existing exemption (in § 261.6(a)(3)(vi)) for these recovered oils, and for fuels from petroleum refining which are partially produced from these recovered oils. The data submitted by API appear to show that the recovered oil does not contribute significant levels of metals to the refined fuels. (The Agency is continuing to investigate whether this is due to dilution or removal incident to refining.) Nor does the Agency believe it appropriate at this time to regulate the recovered oil prior to reintroduction to the refining process in light of the incomplete characterization of the oil's composition, the likelihood of similar handling practices for recovered oil as for crude oil, and the possibility of disproportionate impact of such regulation on off-site facilities recovering oil from these wastes vis-a-vis refineries recovering oil from their own wastes (which recovered oil is almost invariably piped directly back to the refining process and so would not be regulated under current EPA rules.[16]

However, if the recovered oil is to be burned directly as a fuel, EPA has determined that the oil should be regulated as a hazardous waste fuel unless the oil meets the specification for used oil fuel. The situation is exactly analogous to hazardous waste fuels produced by processing (rather than refining) these oil-bearing wastes. We have explained above why it is appropriate to apply the fuel specification to these waste-derived fuels, rather than (as at proposal) to regulate them as hazardous waste fuels regardless of composition. We also are including an exemption in § 261.6(a)(3) for recovered oil burned directly that meets the used oil fuel specification.

4. *Statutory, Conditioned Exemption of Coke Derived from Indigenous Petroleum Refinery Wastes.* The petroleum refining industry also produces coke from refinery process wastes. If the coke is produced from or contains listed hazardous waste, the coke produced from such wastes is a hazardous waste. The Hazardous and Solid Waste Amendments (HSWA) of 1984, however, exempted from regulation as hazardous waste fuel such-derived coke provided: (1) The Hazardous waste used to produce the coke is indigenous to petroleum refining; (2) the coke is produced at the same facility that generated the hazardous waste; and (3) the coke does not exhibit a characteristic of hazardous waste. (See section 3004(q)(2)(A). This statutory exemption is codified at § 266.31(b)(2) [17] and is redesignated in today's rule as § 266.1(a)(3)(ix).

D. Exemption of Coke and Coal Tar Produced From Coal Tar Decanter Sludge by the Iron and Steel Industry

EPA indicated in the proposed rule that it would consider granting an exemption to coke produced from coal tar decanter sludge [EPA Hazardous Waste K087] if commenters provided data that demonstrate that hazardous contaminant levels in the coke are not appreciably increased by recycling the tar sludge. (See 50 FR 1690.) Today's rule exempts such waste-derived coke (a hazardous waste fuel even though not burned exclusively or necessarily primarily for energy recovery (see section III.A.1 above)) from regulation as hazardous waste and also excludes coal tar produced from coal tar decanter sludge.

Tar decanter sludge is generated during the recovery of a coal tar by-product produced during the production of coke from coal. The sludge is listed as hazardous waste because of high levels (about 1%) of phenol and naphthalene. The sludge is frequently recycled by mixing it with coal before it is charged to a coke oven to produce coke. The coke product is typically used as a fuel in steel blast furnaces. In addition, the sludge is sometimes mixed back into the coal tar by-product which is also

[12] See preamble section IV-C of Part Two for discussion on basing the used oil fuel specification levels for metals on levels found in virgin fuel oils. It should be noted that the specification level for lead is higher than levels found in virgin fuel. EPA is subjecting nonexempt fuels derived from petroleum industry wastes to the higher lead specification, at least as an interim measure, because many of the facilities potentially affected also process used oil. For the moment, therefore, EPA will apply all of the used oil fuel specification to the resulting fuels. The Agency, however, is studying this question further in preparing its Phase II rules.

[13] EPA could not normally apply this logic to fuels derived from hazardous wastes because the types of hazardous constituents potentially present are much more numerous, and could be present in much higher concentrations, than those found in oil-bearing wastes from petroleum refining, production, and transportation (or in used oil). See 50 FR 1691 n.14. Hazardous constitutents in other wastes also would not correspond to hazardous contaminants in virgin fuels.

[14] See comments from American Petroleum Institute (Table 3, p. 16) dated June 12, 1985.

[15] EPA solicited comment on the applicability of the variance for closed-loop processes contained in amended § 260.31(b). It is possible that a parrallel variance (to be applied on an industry-wide basis if appropriate) for materials that are reclaimed but must be reclaimed further before final recovery (§ 260.31(c)) is appropriate. The Agency also is continuing to assess the relationship of these situations to RCRA section 3004(r) (2) and (3). Other comments to the Agency's notice (particularly those on the existing regulatory status of recovered oil and on whether there is any difference in fuels "produced from" or "containing" hazardous waste) were answered in the Agency's August 20 notice. See 50 FR 33541.

[16] As noted above, hazardous wastes from which oil is recovered are regulated until the point of oil recovery. Distinguishing between recovered oil and listed hazardous wastes (i.e., API Separator Sludge, Slop Oil Emulsion Solids, etc.) will not always be an easy decision. In making this distinction, the Agency will consider a number of factors, including water content, solids content, and, in some cases, metals content. Thus, wastes with high water or solids content will generally be perceived as hazardous wastes subject to regulation and not as recovered oil. For example, if an oily waste is sent off-site to be dewatered, this material would not be considered a recoverd oil (exempt from regulation) but a waste subject to regulation, if this material were also hazardous.

[17] See 50 FR 28751 (July 15, 1985).

frequently used as a fuel. Both of these waste-derived fuels are exempted from today's rules for the reasons discussed below.

The American Iron and Steel Institute (AISI) and Koppers Company, Inc. provided comments explaining the coking operation and how tar decanter sludge is recycled. In particular, when the sludge is mixed with coal before it is charged to the coke oven, the hazardous constitutents in the sludge (phenol and naphthalene) are driven off during the coking process along with other volatile compounds formed by the thermal cracking of organic compounds in the coal. These volatile compounds are condensed to recover a coal tar by-product. The tar decanter sludge is produced during recovery of the coal tar and consists of coal tar and "inert carbonaceous material carried over from the coking operation". (See AISI comments, page 3.) AISI and Koppers provided analyses of the waste-derived coke product indicating that phenol and naphthalene were not detected in the coke at detectable levels ranging from less than 1 ppm to as high as 20 ppm.

We conclude that phenol and naphthalene are not present in such coke at levels that would pose substantial risk to human health and the environment, particularly considering that the coke is burned as fuel and that any trace levels of these compounds would be readily combustible.

AISI also indicates that the same principle (i.e., if recycling a waste does not increase levels of toxic constituents in a waste-derived product, the product should be exempt from regulation) should be applied to coal tar mixed with tar decanter sludge. AISI states that when tar decanter sludge is mixed back into the coal tar (after passing through a ball mill to produce a uniform material), the phenol and naphthalene content of the coal tar by-product is not significantly affected. AISI argues that coal tar itself contains significant levels of these hazardous compounds (typically 1% phenol and 10% naphthalene), and that tar decanter sludge is simply a mixture of coal tar and carbonaceous material. Further, the sludge is mixed with the coal tar in small volumes representing about 1% of the coal tar by-product. We, therefore, conclude that such recycling does not increase levels of phenol and napthalene in the coal tar by-product, and the coal tar should be exempt from today's rules when burned for energy recovery.

These exemptions apply only to the waste-derived products, and only when derived from tar decanter sludge. Thus, tar decanter sludge is subject to full RCRA regulation prior to recycling, and the exemption does not extend to coke or coal tar derived from hazardous waste (e.g., spent solvents) other than tar decanter sludge designated as EPA Hazardous Waste KO87.

E. Status of Gas Recovered from Landfills

We are indicating that today's final rules on hazardous waste fuels do not apply to gas recovered from landfills that is burned for energy recovery in boilers or industrial furnaces. Although it is clear that EPA has authority to regulate gaseous emissions from hazardous wastes (see, *e.g.*, RCRA Section 3004(n)), EPA has not yet addressed whether there are any limits on this authority, and, if there are limits, what the extent might be. Nor has the Agency received comment on these questions sufficient to make a considered decision. In light of the absence of a record and the potential difficulty of the question, we are not deciding the question in today's rule but instead are indicating that recovered landfill gas is not regulated under today's rules.

F. Request for Exclusion of Cadence Product 312

Several commenters requested EPA to exclude Cadence product 312 from regulation as a hazardous waste fuel. Cadence product 312, better known under its former trademark name of "CHEM-FUEL" (hereinafter termed "Cadence product"), is a blend of hazardous spent solvent recovery still bottoms and other hydrocarbon-based hazardous waste that is patented for use in blast furnaces by Cadence Chemical Resources, Inc. (hereinafter termed "Cadence").

Cadence product is produced by licensees of the Cadence process who blend spent solvents generated by others as well as solvent recovery still bottoms that they generate by their reclamation activities. The licensees ensure that the blend meets specifications set by furnace operators for parameters including heating value (10,500–14,000 Btu/lb) and chlorine content (1–5%). Thus, the mix can contain up to 5% chlorinated spent solvents, most of which are carcinogenic. The entire mix is then sent to the blast furnace for burning.

Many commenters argued that Cadence product is not subject to regulation as a hazardous waste fuel because it is not burned in the blast furnace for energy recovery. Rather, they argue that Cadence product is burned as an ingredient in the iron-making process to provide carbon, hydrogen, and chlorine and that it only provides incidental energy to the furnace. Commenters further argue that Cadence product is a valuable product used in a major commodities market, and, hence that EPA does not have authority under RCRA to regulate it. They assert that it is a commercial product with recognized specifications and procedures for its production.

For the reasons given below (and as provided further in the Response to Comment Background Document), we either disagree with the commenters' claims or find them irrelevant to the question of whether Cadence product is subject to regulation as a hazardous waste fuel. Specifically, we find that Cadence product is burned partially for energy recovery because the heat energy contributed by the product to a blast furnace is substantial and useful. In addition, the Cadence product has the attributes of an inherently waste-like material, and is the type of secondary material EPA is empowered to investigate and regulate as may be necessary to protect human health and the environment. Both of these points are discussed below.

1. *Cadence Product is Burned Partially for Energy Recovery.* Cadence argues that their product is burned in a blast furnace to provide ingredients necessary to drive furnace reactions and to enhance furnace operations. In particular, Cadence argues, and we agree, that the product has the beneficial effect of *cooling* flame temperatures in the combustion zone of the furnace and of providing hydrocarbons that are converted to gases needed to react with the iron ore to produce iron. Cadence also argues that the chlorine in the product has a beneficial effect on furnace operations, and, thus, also acts as an ingredient.[18] Cadence also argues, however, that the heat energy released from burning the product in a blast furnace is "incidental and unavoidable" (Cadence comments dated March 12, 1985, p. 11), and, thus, the product is not burned for energy recovery. We disagree with Cadence on this point and will show below that the

[18] Cadence claims that the chlorine from the product reacts with "alkali compounds to prevent their deleterious action on the coke and ore particles" and to prevent furnace wall scale. See statement by John Elliot dated March 11, 1985 (pp. 3–4) attached to Cadence comments dated March 12, 1985. Although not relevant to EPA's argument that Cadence product is burned partially for energy recovery, EPA questions whether such chlorine results in substantial improvement in furnace operations and, thus, constitutes a *bona fide* (i.e., necessary) ingredient given that it is not common practice to inject chlorine-bearing materials in a blast furnace.

product, in fact releases substantial, useful heat energy to a blast furnace and, thus, is burned partially for energy recovery within all reasonable understanding of the term. Although we agree that energy recovery is not the sole purpose for burning Cadence product in a blast furnace, the fact that substantial, useful energy is recovered subjects Cadence product to regulation as hazardous waste fuel. (See discussion above in section III.A.1 where we explain that regulation of burning for energy recovery does not turn on the sole or primary purpose of burning.)

a. *General Description of Blast Furnace Operations.* Iron blast furnaces are used to smelt iron ores to produce crude iron (pig iron) suitable for steelmaking. The iron blast furnace is a large, shaft (vertical) reactor. Iron ores along with coke and fluxes such as limestone and dolomite are charged into the top of the reactor. A large volume of air preheated to 2000 °F (termed "hot blast") is injected into the bottom of the furnace to burn the coke to produce the heat and reducing gas needed to drive furnace reactions. Temperatures in the combustion zone at the bottom of the furnace range from 3700–3900 °F. The coke provides both the primary source of heat and the primary source of carbon used to produce the reducing gas carbon monoxide. The carbon monoxide reduces the iron ore by (net) energy absorbing reactions to produce pig iron. About 1000 lbs of coke are required to produce a ton of pig iron. Gases drawn off the top of the furnace contain excess carbon monoxide to give the gas a heating value of about 90 Btu/ft^3. About one third of this furnace gas is used as a fuel in stoves to preheat the combustion air (i.e., the hot blast). The remainder of the furnace top gas is used as a fuel in a boiler plant or in other heating applications within the steel plant. Melted iron and liquid slag are drawn off from the bottom of the furnace.

b. *Modern Methods of Reducing Coke Rates.* Coke has become increasingly expensive since the early 1960's because of the rising price of metallurgical coals needed to produce suitable coke and the rising cost of coking operations because of environmental and other concerns. Reducing coke rates is also advantageous because furnace productivity is increased by increasing the iron ore to coke volume ratio charged to the furnace (i.e., coke can be replaced by iron ore, thus increasing iron output).

The two principle methods of reducing coke rates are to increase hot blast temperatures and to inject fuels[19] through tuyeres (i.e., firing nozzles) into the combustion zone at the base of the furnace. Both approaches generally are employed together because fuel injection enables operators to control flame temperatures in the combustion zone (raised by increasing hot blast temperatures) to optimum levels. In addition the injection of hydrocarbon fuels replaces the carbon in the displaced coke and ensures that appropriate furnace gas composition conducive to iron ore reduction is maintained. The heat energy of the hydrocarbon fuels also replaces the heat energy of the displaced coke. Given that coke is both the primary fuel and the primary source of reducing gas (carbon in the coke is converted to the reducing gas carbon monoxide), when the coke rate is decreased substantially (i.e., by increasing hot blast temperature and using fuel injectants) the heat energy and source of reducing gas supplied by the displaced coke must be provided by some other source.[20] [21] This source is the tuyere-injected fuels like the Cadence product.

c. *Although Fuel Injectants Cool Flame Temperatures, They Provide Substantial, Useful Heat Energy.* Before we explain how liquid fuel injectants with substantial heating value like No. 6 fuel oil or Cadence product contribute substantial heat energy to a blast furnace, we will explain how they, at the same time, actually cool flame temperatures in the combustion zone. Combustion zone temperatures are maintained at 3700–3900 ° F by the combustion of coke in the presence of the 2000 ° F hot blast (i.e., preheated combustion air). The net reaction of injected fuels is endothermic (heat absorbing) in this zone. Injected liquid fuels first undergo endothermic vaporization, then exothermic combustion to (ideally) carbon dioxide and water where sensible heat is released, and finally, endothermic dissociation[22] and reduction in the presence of excess carbon provided by the coke to form the reducing gases carbon monoxide and hydrogen.

Cadence argues that these liquid fuel injectants are not burned for energy recovery because tuyere-injected fuels undergo net endothermic (i.e., heat-absorbing) reactions in the combustion zone which reactions actually cool flame temperatures, and that any heat energy released from subsequent reactions is incidental and unavoidable. Cadence's argument ignores the fact that fuel injectants first behave as *bona fide* fuels by combusting to (ideally) carbon dioxide and water. The amount of sensible heat released during this combustion phase is measured by a fuel injectant's heating value in Btu/lb. Immediately after the fuel is combusted, the combustion products act as ingredients to furnace reactions by being converted to the reducing gases carbon monoxide and hydrogen during endothermic reactions. The fact that fuel injectants release substantial heat energy while providing hydrocarbons for reactions enables operators to reduce coke rates.[23] (As noted above, coke is both the primary fuel and primary source of carbon to the blast furnace.)

The heat energy released from subsequent (i.e., outside the combustion zone) reactions of fuel injectant hydrocarbons is in fact substantial, intentional, and useful contrary to Cadence's claim that it is incidental and unavoidable. As discussed above, furnace top gas is used as fuel in stoves to heat the hot blast, in a boiler plant, or in other heating applications within the steel plant. The excess reducing gas contained in the top gas that was not used to reduce the iron ore gives the top gas substantial heating value. The excess reducing gas is contributed by

[19] Cadence's terminology notwithstanding, tuyere-injected materials with substantial heating value are invariably termed fuels in the technical literature.

[20] "The same atoms of carbon are involved in reactions that generate the heat for the furnace as are involved as the reducing agent (as carbon monoxide) to convert the ore to metallic iron." Statement by John Elliot in reference to his review of an EPA internal, deliberative, draft document. Mr. Elliot's comments are contained in correspondence from counsel to Cadence, to Winston Porter, Assistant Administrator for the Office of Solid Waste and Emergency Response, dated October 31, 1985. (Release of this internal, post comment period EPA document was not intended.)

[21] Steam had been a popular (nonfuel) injectant in the 1960's because it was relatively cheap and readily available, and it introduced hydrogen for reduction. (Hydrogen supplements carbon monoxide as a reducing gas in the furnace.) The use of steam as an injectant, however, consumes coke in the combustion zone thereby reducing the overall effectiveness of any increase in blast temperature. Fuel oil injection, however, not only acts as a coolant, allowing the use of higher blast temperatures, but also replaces a portion of the coke. *Source:* "Fuel-Oil Injection Into Blast Furnaces: A Literature Review", Journal of the Institute of Fuel, vol. 49, n 399, June 1976, p. 73.

[22] At the 3700–3900 ° F temperatures in the combustion zone, a fraction of the carbon dioxide and water vapor is thermally dissociated to form carbon monoxide, hydrogen, and oxygen. See Babcock and Wilcox, *Steam, Its Generation and Use*, 1978, p. 6–7.

[23] "Injection of hydrocarbons through the tuyeres of a blast furnace is carried out (a) to replace coke by cheaper sources of fuel and reductions; (b) to increase (by lowering the proportion of coke in the charge) the amount or iron ore in the furnace shaft." *Source:* Peacey, J.G. and Davenport, W.G., *The Iron Blast Furnace*, p. 140, included in comments submitted by Cadence on October 25, 1985.

the coke and fuel injectants, roughly in proportion to the amount of hydrocarbons each provides to the furnace. As shown in the table below, furnace top gas is a substantial fuel source in that only about one-third of the fuel gas is used to heat the hot blast while two-thirds is available for other uses.

Empirical demonstration that burning fuel injectants supplies substantial energy to blast furnaces is provided by standard literature references. The table below shows an energy balance for a modern 28-foot diameter hearth furnace operating at a hot blast temperature of 2000 ° F with a coke rate of 870 lb/ton of hot metal (i.e., pig iron) and using fuel oil injected at a rate of 170 lb/ton of hot metal. The fuel injectant provides about 22% of the heat input to the furnace. The amout of coke needed to supply this energy (and reductants) to a furnace producing 4,000 tons per day of hot metal would be more than 300 tons per day. Thus, it is clear that fuel injectants provide substantial, useful heat to the furnace.

BLAST FURNACE ENERGY BALANCE

	Millions of Btu per ton of hot metal
Energy input:	
Calorific value of coke	10.9
Calorific value of tuyere-injected fuel oil	3.1
Total	14.0
Energy output:	
Calorific value of top gas	[1](5.2)
Top gas consumed in heating blast air	[1](1.8)
Net top gas energy available for other uses	3.5
Heat for chemical reactions, heat loss, and sensible heat of hot metal and slag	10.5
Total	14.0

[1] Energy obtained from coke and fuel oil (in the form of excess carbon monoxide and hydrogen) and partially recycled as hot blast.

Source: Based on data in Kirk-Othmer Encyclopedia of Chemical Technology, v 13, p. 742. (1981).

Injectants that have no heating value like steam, or minimal heating value,[24] provide no or minimal heat energy to the furnace and, thus, are not considered to be fuel injectants. Thus, injectants with no or minimal heating value are not considered to be burned for energy recovery.

Cadence's argument in fact proves too much. It is clear that net furnace reactions are endothermic—heat from the coke and fuel injectants is required to drive reactions that reduce iron ore to metallic iron. Under Cadence's logic that a material involved in an endothermic reaction is not a fuel irrespective of its heating value, the coke would not be a fuel. Yet it is the primary fuel source to the furnace. The fact is that both coke and fuel injectants like the Cadence product serve a dual purpose of providing substantial needed energy and reductants.

d. *Use of Cadence Product as a Fuel Injectant.* Cadence product is blended with No. 6 fuel oil in a volume ratio of about 50/50 for use as a fuel injectant. Cadence product is a fuel injectant, rather than a nonfuel injectant (e.g., steam), because it has a heating value by specification of 10,500 to 14,000 Btu/lb, which is comparable to the heating value of coke and coal. Cadence product, like other liquid fuel injectants, cools flame temperatures in the combustion zone. It also provides hydrocarbons for conversion to the reducing gases carbon monoxide and hydrogen, provides substantial, useful heat energy to the blast furnace, and thus enables operators to reduce the coke rate.[25]

In addition, we note that Cadence itself has informed the Agency, the Congress, and the public on many occasions that Cadence product is burned by blast furnaces (at least partially) as a fuel. Cadence's President Mr. Reese so stated in testimony to Congress. Cadence's comments to the Agency in the definition of solid waste rulemaking (Cadence comments dated August 1, 1983, p. 16) refer to the product as "CHEM-FUEL" and stressed this point:

. . . CHEM-FUEL, like coke, is both a raw material and an energy source when used in the blast furnace. Its principal components are hydrocarbons which provide the essential carbon and hydrogen for ore reduction and energy generation. (Emphasis original)

Cadence's licensees also stressed this point when dealing with EPA's enforcement officials, making the emphatic point that high Btu hazardous wastes were utilized so that the burning legitimately recovered energy. Cadence's patent application states that the material is used to support combustion in blast furnaces. Even in the present rulemaking, a number of Cadence's suppliers indicated that the Cadence product (to which their hazardous wastes contributed) "is used as a fuel by steel producers . . .". (Comments of Detroit Edison, March 11, 1985; to the same effect, see comments 37, 73, and 87 to this rulemaking.) Indeed, the Cadence material was marketed for years under the tradename "CHEM-FUEL". The Agency thus believes that the company's own pronouncements, as well as those of its licensees and customers, indicate strongly that Cadence product is burned (partially) for energy recovery.

2. *Cadence Product Is the Type of Recycled Material Over Which EPA has Jurisdiction.* Stepping back for the moment from the intricacies of blast furnace operations, it is apparent to the Agency that the Cadence product is the type of material EPA is empowered to evaluate and regulate if necessary to protect human health and the environment due to the nature of the Cadence product, its similarity to other waste-derived fuels concededly within EPA's authority, and the nature of the end recycling practice. Cadence product is produced by Cadence's licensees essentially by the simple blending of hazardous solvent still-bottoms and other hydrocarbon-based hazardous wastes to meet a specification for parameters of concern to blast furnace operators, including heating value and chlorine content. Some of the hazardous wastes are collected from generators while other hazardous wastes (e.g., solvent recovery still-bottoms) are generated by the licensee. The specification limits heating value of Cadence product to 10,500–14,000 Btu/lb and chlorine content to 1–5%. Thus, Cadence product is similar (or, according to companies in the blending business, identical) in production and content to hazardous waste fuels burned in other industrial furnaces like cement kilns.

Cadence claims that:

the waste-derived materials used to manufacture Cadence Product 312 are not suitable for direct use in blast furnaces; they first must be analyzed and then fully processed to finished goods specifications in a Cadence manufacturing facility. The production of Cadence Product 312 is completely analogous to many well-recognized manufacturing operations.

These unsupported assertions overstate the sophistication of the Cadence "manufacturing process". In fact, we understand that, other than simple blending, the only processing that is sometimes used at facilities that produce Cadence product is the distillation of spent solvents to recover solvent. This process, wholly unrelated to the "manufacture" of Cadence product, generates still bottoms that are blended with other petroleum-based wastes to produce the product. Although Cadence licensees conduct analyses of waste feedstocks and blended product to ensure conformance with specifications, other waste blenders that market hazardous waste fuels (e.g., for use in cement kilns) also conduct analyses of feedstocks and fuel product

[24] The Agency always considers a material with a minimum heating value of 5,000–6,000 Btu/lb to be a *bona fide* fuel. See section II in the text.

[25] "There is no question that Cadence Product 312 adds to the sensible heat of the heat and material balance of the process and that energy is recovered." *Source:* Nickel, Melvin E., "Comments on the Injection of Auxiliary Fuels in the Tuyeres of the Iron Blast Furnace", September 30, 1985, p. 4 (unpublished report).

to meet a specification. Thus, the blending of wastes to produce Cadence product is similar to other waste-derived fuel operations.

Cadence's operations thus raise the troubling question of what degree of processing can transform a waste into a product. The Cadence process involves relatively minimal processing. No significant resources are recovered from the Cadence product until it actually is burned. The Agency always has been leery of the notion that minimal processing of hazardous wastes prior to recovery of resources from them (in this case, energy) transforms wastes into products. It was for this reason that EPA amended § 261.3(c) (2) on January 4, 1985 to state that materials reclaimed from hazardous wastes remain hazardous wastes when burned for energy recovery, and indicated in the same rule that hazardous wastes that are partially but not fully reclaimed remain hazardous wastes (see § 260.30(c).) These provisions illustrate the general principle that minimal processing before final recovery does not ordinarily transform a hazardous waste into a product. Cadence's process appears to raise analogous problems of using a relatively minimal processing step as a means of insulating hazardous waste recycling from RCRA jurisdiction. When this fact is coupled with the fact that the form of end recycling of the Cadence product closely resembles incineration (in the sense that hazardous wastes are burned by controlled flame combustion), it is apparent to the Agency that RCRA jurisdiction over the burning exists.

Even more fundamentally, EPA does not believe that the question of jurisdiction over the Cadence product (or other similar waste-derived materials) need turn narrowly on the question of whether it is burned partially for energy recovery. Cadence product is composed of toxic chlorinated solvent still bottoms which (on a nationwide basis) are typically disposed of or incinerated. These still bottoms are not similar to raw materials customarily used in the iron-making process (i.e., toxic chlorinated solvents are not a typical feed or energy source to the iron-making process). The recycling practice, as well as prior transportation and storage has the potential to cause substantial harm to human health and the environment if conducted improperly.[26]

EPA believes that recycling of hazardous secondary materials that are so different from the raw materials customarily utilized in the process is a prototypical situation it is empowered to control under RCRA Subtitle C. This is particularly true in this case because the recycling involves burning (viz. controlled flame combustion), and so resembles incineration. The recycling activity also is not part of a continuous industrial process, but rather involves unrelated parties and processes (i.e., the hazardous waste generators who generate spent solvents and hazardous still bottoms, intervening processors (who not only process but add additional hazardous still bottoms to the mixture), and the steel mill), in addition to involving secondary materials normally unrelated to the ironmaking process. For these reasons, EPA is prepared to exercise its authority to designate Cadence product, and all similar materials, as solid wastes pursuant to § 261.2(d) when recycled via controlled thermal combustion in processes not customarily utilizing chlorinated toxicants as a fuel or raw material should this ever prove necessary. In light of the Agency's judgment that Cadence product is burned partially for energy recovery and so is subject to regulation as hazardous waste fuel, it is unnecessary to exercise this authority at the present time.[27]

3. *Conclusion.* In closing on this issue, EPA stresses that it is not finding that Cadence is engaging in an unsafe or undesirable recycling practice. Quite the opposite—Cadence has found a means of utilizing resources in wastes, coupled with destruction of the wastes toxic constituents, that appears to be environmentally beneficial. What EPA is finding in this proceeding is that the Agency is empowered—that is, has the jurisdiction—to evaluate the potential risks posed by this recycling activity and to prescribe regulatory standards if the Cadence product, managed improperly (see RCRA section 1004(5)), could pose a substantial hazard to human health and the environment. This is how EPA always has read its overriding statutory duty to regulate hazardous waste management "as *may* be necessary to protect human health and the environment." It may be that due to the mechanics of blast furnace operation, substantially tailored (or even no standards) are needed to ensure waste destruction. EPA is investigating this question as part of its Phase II rulemaking on burning hazardous wastes. EPA is asserting here that it has jurisdiction to make this evaluation.

IV. Used Oil Subject to Regulation

A. Definition of Used Oil Fuel

These rules apply to used oil, and fuels produced by processing, blending, or other treatment of used oil, that are burned for energy recovery in a boiler or industrial furnace that is not operating under RCRA standards for hazardous waste incinerators. "Used oil" means any oil that has been refined from crude oil, used, and, as a result of such use, contaminated by physical or chemical impurities. See RCRA section 1004(36).[28] Used oils include the following: (1) Spent automotive lubricating oils (including car and truck engine oil), transmission fluid, brake fluid, and off-road engine oil; (2) spent industrial oils, including compressor, turbine, and bearing oils, hydraulic oils, metalworking oils, gear oils, electrical oils, refrigerator oils, and railroad drainings; and (3) spent industrial process oils.

These rules apply only to used oil and not necessarily to "oily waste". Oily wastes, such as bottom clean-out waste from virgin fuel oil storage tanks, or virgin fuel oil spill clean-up, are not used oils because the oil was never "used" for its intended purpose. Thus, oily waste is not subject to these rules

[26] Preliminary results of EPA's emissions test for a blast furnace burning Cadence material indicate that these devices may be able to destroy 99.99% of toxic organic constituents in the material. If confirmed, this means that these devices may be able to safely burn toxic organic wastes under appropriate conditions. This does not mean, however, that these devices could always be expected to achieve 99.99% destruction efficiency, absent regulatory controls on operating conditions. Storage of Cadence Product also has the potential to cause substantial harm. As discussed in the text in section II of Part Four, the fact that a hazardous waste fuel is being stored as a commodity is insufficient to prevent substantial risk.

[27] There is another point in Cadence's presentation that is deeply troubling to the Agency. Cadence is arguing that when they blend and process chlorinated hazardous wastes, the resulting processed material is a product excluded from RCRA so long as there are specifications (such as for total chlorine) on the end "product" and so long as all components of that "product" are put to beneficial use when burned. This argument applies with equal force if the chlorinated hazardous wastes being processed were dioxin or chlorophenoxy pesticide wastes (rather than carcinogenic solvents): the blended product would still be used as a reducing agent in iron-making, toxic organic compounds would provide hydrocarbons to the iron-making process, and chlorine would remove accumulated wall scale within the furnace. Although these types of hazardous wastes are not blended into Cadence product to our knowledge, the point is that their argument does not preclude such use. Cadence's argument would in fact be identical. It thus seems to the Agency that Cadence's argument proves far too much, and seeks to preclude EPA from exercising authority well within the Agency's purview.

[28] The Agency will soon be proposing to modify the definition of used oil in the Used Oil Listing and Management Standards rulemaking.

(provided it is not mixed with used oil and that it is not a hazardous waste).

Today's rule marks the first time the Agency has used the regulatory authorities created by the Used Oil Recycling Act of 1980 (UORA). (UORA is codified substantially as sections 1(04 (36)–(39) and 3014 of RCRA.) UORA requires the Agency to establish "performance standards and other requirements as may be necessary to protect public health and the environment from hazards associated with recycled oil." See RCRA section 3014(a). Burning used oil for energy recovery—the subject of this rule—is an example of recycling. See RCRA, section 1004 (37).

The regulation of used oil fuels raises the legal question of how the provisions of UORA are to be integrated with other RCRA provisions. As we stated at proposal, EPA believes that UORA authorities may be used independent of, or as a supplement to, Subtitle C of RCRA. If recycled used oil (called "recycled oil" under RCRA section 1004 (37)) is not also a hazardous waste, it is subject to regulation under the provisions of section 3014 rather than sections 3001–3006, 3008, and 3010. As noted at proposal, this has significant implications. For example, permits are not necessarily required to manage recycled oil, the criminal enforcement provisions of section 3008(d) do not apply, and the regulatory program cannot be delegated to the States under section 3006. (See Part Five of this preamble for a discussion of the impact of this rule on authorization of State programs.)

If recycled oil is also a hazardous waste, many of the Subtitle C regulations for other hazardous wastes (40 CFR Parts 262–266) may apply. Section 3014, as amended by the Hazardous and Solid Waste Amendments of 1984, provides detailed guidance on regulating recycled oil that is a hazardous waste.

Today's rule establishes a specification for used oil that is substantially excluded from regulation [29] and that may be burned without restriction in nonindustrial boilers or any other boiler or industrial furnace.Used oil exceeding any of the specification levels for toxic metals, flash point, or total halogens is termed "off-specification used oil" and is subject to regulatory controls. The specification and issues pertaining to implementing the specification are discussed below.

Of major importance is how to distinguish between used oil and hazardous waste given that used oil has been frequently found to contain hazardous halogenated spent solvents and given that hazardous waste fuel is regulated differently than used oil under today's rule (as well as under the RCRA statutory scheme). For example, hazardous waste fuel is not subject to the specification and so may not be burned in nonindustrial boilers (unless the boiler operates under RCRA hazardous waste incinerator standards), and hazardous waste fuel is subject under today's rules to storage controls.[30]

Issues pertaining to distinguishing between used oil and hazardous waste are discussed below.

B. Distinguishing Between Used Oil and Hazardous Wastes

A number of commenters took issue with EPA's discussion of how it intends to distinguish between hazardous waste and used oil (or if used oil is listed as a hazardous waste, between used oil and other hazardous wastes). See 50 FR 1690–1693. EPA indicated that there are situations where it is difficult to tell if a waste is used oil or a hazardous waste. The difficulty is in determining whether a used oil was mixed with a hazardous waste, or whether the oil became contaminated during its (the oil's) use. The legislative history of the Used Oil Recycling Act indicates clearly that used oil that is contaminated during use is to be classified as used oil and, if recycled, be subject to regulation under section 3014. See H.R. Rep. No. 96–1415 at 6.

We noted in the proposed rule that the Agency is delegated discretion in determining how to classify these situations, and set out the general principles that will guide the Agency's exercise of discretion. These are: (1) Where possible, clear, objective tests should be used to classify hazardous waste and used oil; (2) the Agency should not adopt a scheme whereby most used oil is classified as a hazardous waste ineligible for regulation under the Section 3014 standards; and (3) any objective test should ensure that massively adulterated used oils are classified as hazardous waste. See 50 FR 1691.

The Agency adheres to this analysis in today's final rule, and indeed, this position had the support of most of the commenters. Several commenters argued, however, that EPA's approach showed an unwarranted bias against regulating used oil as hazardous waste, and so would lead to situations where used oil is not regulated adequately to protect human health and the environment because most of the RCRA Subtitle C standards would not apply. One commenter even went so far as to suggest that the Agency was misreading its legal mandate under the HSWA to regulate used oil as a hazardous waste.

These commenters misapprehend both the law and EPA's stated approach. In the first place, RCRA as amended draws clear distinctions between hazardous waste and used oil. The statute contains a separate provision dealing with used oil as a distinct class and authorizes separate standards for its management. (See RCRA section 3014.) Nor does the statutory directive that EPA decide whether to list used oil as a hazardous waste (RCRA section 3014(b)) obliterate this distinction. Even if EPA lists used oil as a hazardous waste (and the Agency intends to propose such action later this year), used oil would still be subject to regulation under different standards than apply to other hazardous wastes. See RCRA sections 3004(a) and 3014(c), (d). Thus, it remains necessary to distinguish between used oil and other hazardous waste.

It also is clear that EPA has discretion on how to make these distinctions. The legislative history to the 1984 amendments is explicit on this point. See S. Rep. No. 98–284, 98th Cong. 1st Sess. at 36, 38; see also the Conference Report, H. Rep. No. 98–1133, 98th Cong. 2d Sess., which speaks of used oil contaminated with hazardous waste as used oil to be regulated under Section 3014 (i.e., as a used oil, not as a hazardous waste).[31]

EPA takes sharp issue with the commenters' assumption that its proposed (and now final) exercise of discretion in classifying used oil leads to a reduction in environmental protection. With respect to buring used oil, the rule promulgated today establishes a used oil fuel specification that regulates as necessary to protect human health and the environment, within the meaning of RCRA section 3014, when the used oil is burned in nonindustrial boilers. (See

[29] The person who first claims used oil burned for energy recovery meets the specification is subject to notification, used oil analysis, and recordkeeping requirements. In addition, he must keep records of the name and address of the facility receiving each shipment, the date of delivery, and quantity delivered. See § 266.43(b) (1) and (6).

[30] As noted at proposal, a nazardous waste fuel specification is not a feasible option because of the hundreds of hazardous constituents that would have to be addressed and the difficulties of analyzing for all of these constituents.

[31] Specific comments that EPA exercised its discretion improperly with regard to used oil containing halogenated hazardous substances and used oil from small quantity generators are addressed in the preamble sections dealing with these issues.

section IV.C above.) With respect to other management standards for recycled used oil, EPA will soon be proposing cradle to grave management standards for such oil consistent with Section 3014. EPA is not doing so in this rulemaking because the Agency wishes to avoid piecemeal regulation of the used oil management community wherever possible.[32] The commenters are incorrect, however, that this temporary deferral will lead to an ultimate reduction in environmental protection.

We discuss below how we apply the principles for distinguishing between used oil and hazardous waste to: Used oil containing halogenated wastes; used oil containing hazardous waste generated by small quantity generators; and used oil that exhibits a characteristic of hazardous waste.

1. *Used Oil Containing Halogenated Wastes.* Today's rule, like the proposed rule, reiterates the principle found in § 261.3(a)(2) of the existing regulations that a hazardous waste mixed with a solid waste is a hazardous waste. Thus, under this rule, mixtures of hazardous waste and used oil ordinarily are classified as hazardous waste. It is not always possible, however, to prove—or even to be sure—that such mixing has occurred, particularly when no one has observed the act of mixing. Used oil containing small amounts of hazardous halogenated compounds is an example where there may be uncertainty.

Since hazardous halogenated compounds—many of them hazardous waste—are frequently found in used oil (see Table 1 in the proposal (50 FR 1686)), the Agency believes (and virtually all commenters agreed) that a simple, objective test is needed to determine when used oil has been mixed with hazardous spent halogenated solvents (or other halogenated hazardous waste) in order to avoid case-by-case confusion as to when mixing has occurred, and to aid in consistent enforcement of the regulation. To this end, EPA proposed, and is adopting today a rebuttable presumption as to when mixing with hazardous wastes has occurred.

a. *The Rebuttable Presumption: The Standard and Means of Rebuttal.* Today's rule establishes a rebuttable presumption that used oil containing more than 1,000 ppm total halogens has been mixed with hazardous spent halogenated solvents (i.e., EPA Hazardous Waste No's. F001 and F002) or other hazardous halogenated wastes and, therefore, is a hazardous waste under provision of the "mixture rule" of 40 CFR 261.3 (i.e., a mixture of a listed hazardous waste and other material is a hazardous waste unless delisted under provisions of 40 CFR 260.20).

In response to comment that EPA clarify the available means of rebutting this presumption, the final rule states that the presumption can be rebutted by demonstrating to enforcement officials that the oil is not mixed with hazardous waste. One such approach in making this demonstration is to show that the used oil does not contain significant levels of halogenated hazardous constituents. See § 266.40(c). Thus, the presumption can be rebutted successfully even if some hazardous halogenated compounds are present in the oil. We believe that oil containing less than on the order of 100 ppm of any individual hazardous halogenated compound listed as a hazardous spent solvent (i.e., EPA Hazardous Waste Numbers F001 and F002) should not be presumed to be mixed with spent solvent. As the Agency stated at proposal (50 FR 1691) and as confirmed by a number of comments, when these compounds are present at such low levels, it is difficult or impossible to pinpoint the source of the contamination. Such low levels found at the generator's site certainly do not indicate deliberate mixing with solvents.[33] Both used oil and hazardous halogenated solvents are frequently generated by the same facility, and some incidental contamination is probably inevitable. It should be noted that burning used oil with such levels of solvent will not pose significant risk from emissions of either incompletely burned solvents or hydrochloric acid.[34]

Presence of a compound listed as a hazardous halogenated spent solvent at levels between 100 and 1000 ppm may indicate mixing with spent solvent depending on circumstances specific to individual cases. For example, if the used oil in question is from a large tank at a processing facility where oil from a number of generators has been mixed, even low solvent levels may be indicative of adulterative mixing. Used oil mixed with significant levels of solvent by a generator may have been diluted with unadulterated oil from other generators, or spent solvent collected from a generator may have been mixed (illegally) into the used oil by a collector or the processor.

Mixing of used oil with *nonsolvent* halogenated hazardous waste, however, could be indicated by the presence of hazardous constituents at levels lower than 100 ppm. For example, if a waste is not typically cogenerated with used oil, incidental contamination is not likely. Other factors include whether the hazardous constituents could be added or formed during use of the oil. Thus, if a used oil contains greater than 1000 ppm total halogens, and some of the halogens are (for example) chlorophenoxy pesticides, the presumption of mixing would not necessarily be overcome by showing that the pesticide is present at levels less than 100 ppm.

b. *Explanation of Changes in the Rebuttable Presumption Between Proposal and Final Rule.* The rebuttable presumption of mixing hazardous halogenated solvents with used oil promulgated today differs from the proposal in two respects: total halogens rather than total chlorine is used as the basic indicator, and the indicator level has been lowered from 4000 ppm to 1000 ppm. Total halogens are used as the indicator because commenters noted that common chlorine tests actually measure total halogens reported as total chlorine. The change, thus, is essentially a technical correction because the used oil analyses available to the Agency and used to support the rule already reported presence of total halogens as total chlorine.

We lowered the indicator level from 4000 ppm to 1000 ppm because many commenters argued that the higher level would allow and even encourage significant mixing of hazardous halogenated solvents with used oil (contravening one of EPA's enumerated principles). More importantly, this level correlates sufficiently well with presence of significant levels of hazardous halogenated spent solvents as to justify use of a presumption, as discussed below. The 1000 ppm total halogen level was in fact recommended by a number of commenters, including the State of New York which has substantial experience with this issue.

We have reviewed the more than eleven hundred used oil analyses available in the record for the proposed rule and the additional data submitted by commenters and concluded that used

[32] EPA is adopting the used oil fuel specification for nonindustrial boilers in advance of other rules for recycled oil to meet the most pressing environmental concern with respect to recycled oil management, and because the prohibitions on hazardous waste burning would have little practical significance unless coupled with controls on burning recycled oils

[33] For example, if 100 ppm of a solvent is detected in 200 gallons of used oil (the quantity frequently generated over a month by a service station, prior to pick up by a collector), only 0.002 gallons, or *0.25 ounces* of solvent have been mixed. Such small amounts could not possibly represent the monthly quantity of spent solvent from degreasing operations at the service station.

[34] PEDCO, Environmental Inc., *A Risk Assessment of Waste Oil Burning in Boilers and Space Heaters*, August 1984, pp. 5-1 through 5-8.

oil will generally contain less than 1000 ppm of total halogens *unless* it is mixed with hazardous chlorinated solvents or is metalworking oil containing chlorinated additives.[35] Eighty-seven percent (87%) of the samples from a wide range of sources—generators, processors, distributors, burners—that contain more than 1000 ppm total chlorine (halogens) also contained significant levels of hazardous chlorinated solvents (e.g., more than 100 ppm of any particular solvent).[36, 37] Some of the 13% of the samples containing more than 1000 ppm total chlorine but no chlorinated solvents are known to be metal-working oils (either because they were obtained from generators known to be involved in metal-working or because of their extremely high chlorine content) containing nonhazardous chlorinated additives. Others may be mixed with these highly chlorinated metalworking oils such that chlorine levels are greater than 1000 ppm but lower than typical for metalworking oils, or the chlorine may be from some other source.[38] Based on these data showing a high percentage of correlation, and on the supporting comments, it is EPA's opinion that the 1000 ppm total halogen level is a valid indicator for presence of mixing with listed halogenated hazardous waste.

EPA expressed concern at proposal that certain used oils might contain levels of *inorganic* halogens greater than 1000 ppm, and therefore, that a higher level was appropriate for the presumption. The Agency no longer believes this to be a valid concern. The Agency stated at proposal that used oil, particularly crankcase oil from leaded gasoline engines, could occasionally contain up to 3000 ppm inorganic chlorine (or bromine) levels [39, 40] and that the higher level of 4000 ppm would indicate mixing with chlorinated solvents. Chlorine or bromine are added to leaded gasoline to "scavenge" lead from engine components and, thus, reduce wear and improve engine performance. The chlorine or bromine form inorganic lead compounds, some of which end up in crankcase oil from engine blow-by. Commenters suggested, however, that little used oil has levels of these inorganic halogens exceeding 1000 ppm. As further corroboration, EPA's own data on used oil sampled at generators' sites (including both crankcase and industrial oil, but excluding highly chlorinated metalworking oil or oil adulterated with hazardous halogenated solvents) indicates that the oil contained less than 1000 ppm total halogens in 32 of 36 cases.[41, 42] In addition, as lead is phased out of gasoline, chlorine and bromine additives also will be lowered, thus reducing inorganic halogen levels. EPA consequently believes that very few used oils will trip the presumption due to inorganic halogen content of over 1000 ppm. Moreover, as just discussed, there is a strong correlation between halogen levels of 1000 ppm and high levels of hazardous halogenated solvents, even in EPA's present data base which does not reflect the lead phasedown.

Nor do most used oils contain high levels of ...*ganic* halogens without also containing high levels of halogenated spent solvents. The only used oils that might are metalworking oils, which comprise a small segment of the used oil fuel market. See 50 FR at 1692 (January 11, 1985). Metalworking oils can contain extreme pressure additives that are nonhazardous chlorinated paraffinic compounds that can result in organic chlorine levels of several percent. These organic chlorinated compounds are not toxic (i.e., they are not listed as constituents of hazardous waste in Appendix VIII of Part 261), and, thus, the hazard from incomplete combustion of these compounds is not of concern.[43] The issue here is application of the presumption to these oils.

We believe that the rebuttable presumption of mixing halogenated solvents with used oil should still apply to persons who manage highly chlorinated metalworking oils. In the first place, these oils can still be mixed with hazardous halogenated solvents (as confirmed both by data and by comments on the proposed rule). Metalworking operations often use large quantities of degreasing solvents. Second, metalworking oils also can be adulterated with halogenated hazardous wastes after leaving the site of generation. Finally, persons managing used metalworking oils that are not adulterated should have readily available means of rebutting the presumption.[44]

c. *Additional Response to Comment on the Rebuttable Presumption.* (1) *Basis for Not Setting the Halogen Indicator Level on Risk.* Some commenters maintained that the chlorine level for the presumption of mixing should be based on risk posed by the solvent/oil mixture, rather than on the basis of mixing, *per se*. These

[35] Some metalworking oils contain extreme pressure additives that are nonhazardous highly chlorinated paraffinic compounds. Thus, used metalworking oils may contain halogen levels higher than 1000 ppm even though they are not mixed with hazardous halogenated solvents. See discussion in text regarding application of the rebuttable presumption to these metalworking oils.

[36] Based on review of analyses in Franklin Associates Ltd., *Composition of Used Oil*, Appendix A. Of the more than 1100 used oil analyses, 311 samples contained more than 1000 ppm of halogens and were analyzed for halogenated solvents. Eighty-seven percent of those samples contained significant levels of solvent. We presumed that samples with high lead levels, no halogenated solvents, and low halogen levels (but more than 1000 ppm of halogens) would contain less than 1000 ppm halogens when lead is phased out of gasoline, because chlorine or bromine is added to gasoline only to scavenge lead from engine components. Thus, halogen levels will fall as lead is phased out of gasoline. Thus, 26 such samples are excluded from the samples containing more than 1000 ppm of halogens.

[37] The Texas Air Control Board submitted comments on the proposed rulemaking that included a report entitled, *Analysis of Fuel Oils and Waste Oils for Sulfur, Organochlorides, and Lead*, August 1984. Data in Table VI of that report indicate that 77% of used oils (27 of 35 samples) containing more than 1000 ppm total halogens also contained significant levels of hazardous halogenated solvents.

[38] Although used-oil samples have been found to contain hazardous halogenated compounds listed in Appendix VIII of Part 261 (e.g., dichloroethane, tetrachloroethane) that are are not listed as F001 or F002 hazardous halogenated solvents, these samples invariably also contain significant levels of the F001 or F002 solvents. See Table VI of the Texas Air Control Board report referenced in note 27, and data in GCA Corporation, *The Fate of Hazardous and Nonhazardous Wastes in Used Oil Disposal and Recycling*, October 1983, p. 43.

[39] NBS Technical Note 1130—*Test Procedures for Recycled Oil Used as Burner Fuel*, August 1980, p. 51.

[40] Franklin Associates, Ltd., *Composition of Used Oil*, Appendix A.

[41] Based on review of used oil analyses in Franklin Associates, Ltd., *Composition of Used Oil*, Appendix A. We should note that 3 crankcase oil samples contained 1000 to 1500 ppm total halogens (and no halogenated solvents). We presume the halogens were attributable to leaded gasoline additives because those oils had high lead levels—1000 to 3000 ppm. We presume that those oils would in the future contain less than 1000 ppm total halogens as lead is phased out of gasoline (beginning July 1985), and, concurrently and necessarily, halogen gasoline additives are also reduced. Therefore, we believe it is reasonable to exclude these 3 samples form the total halogens so that 35 of 36 unadulterated, nonmetalworking samples contianing more than 100 ppm total halogens.

[42] Data in GCA Corporation, *The Fate of Hazardous and Nonhazardous Wastes in Used Oil Disposal and Recycling*, October 1983, p. 43, also indicate that used oil generally contains less than 1000 pm total halogens.

[43] We are, however, concerned about the acid-forming potential of these compounds when combusted, and the resultant emissions of hydrochloric acid and the effects of accelerated corrosion on boiler parts and any emission control equipment. These oils will fail the used oil fuel specification for total halogens and are subject to regulation as off-specification used oil (see section IV.C of text).

[44] As noted earlier, the final rule indicates that one way the presumption may be rebutted is by showing that the oil does not contain significant levels of halogenated hazardous constituents.

comments mistake the Agency's purpose: to distinguish used oil from hazardous waste. As EPA pointed out in the preamble to the proposed rule, the basis of the presumption is not a new concept. Section 261.3(b) says that when a solid waste is mixed with a hazardous waste, the mixture is a hazardous waste unless it does not exhibit a characteristic of hazardous waste, or, if the hazardous waste was a listed waste (like many halogenated solvents), unless the mixture is delisted under petitioning provisions of 40 CFR 260.20 and 260.22. The rebuttable presumption merely provides a simple, objective test for when the Agency will presume such mixing has occurred. The risks posed by burning both hazardous waste (including adulterated used oil) and off-specification used oil are addressed in today's rule with respect to burning in nonindustrial boilers and will be addressed further by the permit standards for burning such fuels in industrial boilers and industrial furnaces.

We note further that a number of commenters erred by considering the rebuttable presumption level for total halogens to fix the level at which used oil containing halogens would be subject to regulation (assuming no other source of adulteration). The rebuttable presumption is not a measure of when regulation is necessary, but a measure of when mixing can be presumed to have occurred. Used oil containing halogens at less than the presumption level could still be regulated as hazardous waste, but the burden would be on EPA to prove that such used oil is a hazardous waste by virtue of mixing with a listed hazardous waste. See 50 FR 1692, n. 22. EPA's burden would not automatically be satisfied by showing evidence of halogen levels in the used oil.

(2) *Organic Versus Total Halogens as the Indicator Level.* Several commenters suggested that organically-bound chlorine (or, more correctly, halogens) rather than total chlorine should be used for the presumption of mixing because it avoids the problems with inorganic halogens discussed above (i.e., some oils with insignificant hazardous halogenated solvent levels may contain more than 1000 ppm total halogens because of presence of inorganic chlorine). After serious consideration, we have decided to base the presumption on total halogen levels due to the problems of implementing a standard based on organic halogens.

We know of no quick, simple method for determining organically-bound halogen levels in used oil. The sample must be "washed" to remove inorganic halogens before determining organic halogen levels. Moreover, we have only just recently investigated techniques for washing to remove inorganic halogens from used oil and are not yet ready to recommend a procedure. Even if an acceptable technique were available, washing would add substantially to the time required to determine halogen levels. (See discussion of analytical procedures in section IV-F of Part Two of this preamble.) The need for washing also would raise analytical costs unnecessarily.

In addition, organic halogens would be a more accurate measure of presence of hazardous halogenated solvents than total halogens only if used oil often contains more than 1000 ppm of inorganic halogens. We have discussed above, however, that the data indicate that inorganic halogen levels are generally lower than 1000 ppm. Finally, use of organic halogens rather than total halogens does not avoid the problem of occasional false-positives caused by nonhazardous organic chlorine additives found in metalworking oils.

In summary, a presumption based on organic halogen levels offers few advantages and has serious problems.

2. *Used Oil Containing Hazardous Waste Generated by Small Quantity Generators.* EPA proposed that used oil containing hazardous waste generated by small quantity generators be regulated as used oil. 50 FR 1692. The Agency reasoned that in exercising its discretion as to how to classify used oil (i.e., as used oil or as hazardous waste), EPA should avoid a scheme whereby most used oil was classified as hazardous waste ineligible for regulation under the special standards for used oil. EPA was concerned that this might result if small quantity generator hazardous waste-used oil mixtures were classified as hazardous waste. *Id.* At the same time, EPA solicited comments on alternative approaches, including regulating such mixtures as hazardous waste or classifying only automotive oil containing small quantity generator waste as used oil. *Id.* at n. 24.

Comments were divided. Although some commenters supported the Agency, others were critical, maintaining that EPA's proposal could encourage adulteration of used oil, and lead to significant enforcement problems.

EPA has decided to modify its proposal, in part due to the public comments. More importantly, however, our re-evaluation of available data indicates that few small quantity generators are presently mixing hazardous waste with used oil. Analyses indicate that fewer than 15% of the generators of crankcase oil (who are presumed to be small quantity generators), and fewer than 12% of the generators of industrial oils (some of whom may have been small quantity generators), generate used oil that is mixed with significant levels of halogenated hazardous solvents.[45] In addition, the average vehicle maintenance shop or service station, according to EPA's data,[46] produces an average of 50 kg/month of hazardous waste in the form of spent solvents, and 500 kg/month of used oil. Intentional mixing would yield a contamination rate of 10%, or 100,000 ppm. The data in the following table show that actual contamination at the generator site, with few exceptions, is orders of magnitude lower and so probably results from inadvertent, and perhaps unavoidable, contamination during use of the oil or handling of used oil.[47]

[45] Analysis of 21 samples of crankcase oil known to be obtained from the generator (e.g., service stations, auto repair shops, truck dealer, construction equipment facility), and thus not adulterated with solvents by collectors or processors, reveals that only 3 contain significant levels of hazardous halogenated solvents. Analysis of 26 samples of industrial oil known to be obtained from the generator indicate only 3 contain significant levels of hazardous halogenated solvents. Analysis of data in Franklin Associates, Ltd., *Composition of Used Oil*, Appendix A.

[46] Industrial Economics, Inc., *Draft Regulatory Analysis for Proposed Regulations Under RCRA for Small Quantity Generators of Hazardous Waste*, February 1985, Draft Report, Exhibit 3-1.

[47] Several commenters mistakenly criticized EPA's statement at proposal (50 FR 1692) that small quantity generators do not massively adulterate their used oil. They reasoned that because most used oil comes from small quantity generators, and much is adulterated, that the generators are doing the adulteration. In fact, all data indicate that *collectors* and *processors* are the principal source of hazardous waste contamination. Comparison of used oil sampling data from generators and from processing facilities in the table below shows a dramatic increase in halogenated solvent levels at used oil processing facilities.

Solvent Concentrations Increase Dramatically as Used Oil Moves From the Generator to Processing Facilities

	Solvent Concentrations, ppm (90th percentile levels)		
	Solvent A[1]	Solvent B[2]	Solvent C[3]
Oil sampled at generator site:			
Automotive oil	16	11	55
Industrial oil	33	30	60
Oil sampled at processing facility:			
Automotive oil	6,000	800	3,000
Industrial oil	3,500	600	2,200

[1] 1,1,1-Trichloroethane.
[2] Trichloroethylene.
[3] Tetrachloroethylene.

Source: Franklin Associates, Ltd., *Composition of Used Oil*, pp. 3-33 to 3-36.

TABLE 1.—SOLVENT CONCENTRATIONS IN USED OIL AT GENERATOR FACILITIES

Type of generator	Solvent Concentrations, ppm (90th percentile levels)		
	Solvent A [1]	Solvent B [2]	Solvent C [3]
Automotive oil	16	11	55
Industrial oil	33	33	60

Notes:
[1] 1,1,1-Trichloroethane
[2] Trichloroethylene
[3] Tetrachloroethylene
Source: Franklin Associates, Ltd., *Composition of Used Oil*, pp. 3-33 to 3-36.

Consequently, it does not appear that classifying small quantity generator waste-used oil mixtures as hazardous waste would result in classifying large percentages of used oil as ordinary hazardous waste. As a factual matter, EPA's stated concern at proposal thus does not appear to be present.

The final rule thus states that this type of mixture is to be *classified* as a hazardous waste. (But, as explained below, at least for purposes of this rulemaking, these mixtures are subject to regulation as used oil fuel when burned for energy recovery.) We have decided, however, at least for the time being to regulate this (usually exempt) small quantity generator waste regardless of the quantity generated when it is mixed with used oil as part of a waste-derived fuel. EPA is taking this step for a number of reasons. To do otherwise would create the very situation feared by the commenters whereby the rules would create an incentive to adulterate and be much more difficult to enforce. This is because if small quantity generator waste could be mixed with otherwise-regulated used oil and the mixture was exempt from regulation, people undoubtedly would take advantage of the opportunity to escape regulation, or raise the issue of mixing as a defense in enforcement actions. Potentially large volumes and percentages of recycled used oil could go unregulated, in derogation of Congressional intent.[48] Thus, the final rule contains an amendment to § 261.5 indicating that small quantity generator hazardous waste-used oil mixtures are not exempt from regulation when burned for energy recovery but are subject to Subpart E of Part 266.

This means that, at least on an interim basis, such mixtures can be burned in nonindustrial boilers if they meet the fuel specification. These mixtures also are subject to the administrative controls for off-specification used oil fuels should they fail to meet the fuel specification. Generators of these mixtures would *not* be subject to regulation unless they are also marketers of used oil fuel. (See Part Four below.)

EPA has not reached a final decision on which controls should apply to this type of hazardous waste. We also wish to examine further, and seek comment on, the impacts on small businesses should all of these hazardous wastes be regulated at various levels of control. See RCRA section 3001(d). Because we believe further comment on an ultimate regulatory regime is appropriate, we have decided to retain as an interim measure the regulatory scheme initially proposed whereby this type of small quantity generator waste remains subject to all of the controls applicable to used oil fuel. This will ensure that there is no outright exemption while the Agency evaluates an ultimate resolution in its consideration of comment on the comprehensive rules for recycled oil soon to be proposed.

3. *Used Oil that Exhibits a Characteristic of Hazardous Waste.* Used oil itself might be a hazardous waste if it exhibits a characteristic of hazardous waste. The most likely possibility is ignitability.[49, 50] As discussed at proposal (see 50 FR at 1693), EPA intends that used oil that is a hazardous waste solely because it exhibits a characteristic of hazardous waste be regulated as used oil fuel (where so recycled), provided that it is not mixed with a hazardous waste.[51] Ignitable used oil is regulated as used oil under today's rule and is prohibited from burning in nonindustrial boilers when its flash point is less than that of commercial fuel (i.e., 100 °F).

We have considered whether a low flash point serves as a presumptive indication of mixing with hazardous waste, and therefore, that such mixtures should be regulated as hazardous wastes ineligible for regulation under section 3014 standards for used oil. We conclude that low flash point is not an indicator of mixing for a number of reasons and that such oil should be regulated as used oil.

Low flash point may not be indicative of mixing with hazardous waste because the low flash point may be attributable to benzene, toluene, or xylene added to crankcase oil from engine blow-by (these compounds are constituents of gasoline) rather than as spent solvent. Low flash point could also be attributable to mixing gasoline from tank drainings at auto service and repair shops with used oil. Gasoline is a commercial chemical product exhibiting a characteristic of hazardous waste. When gasoline (or any commercial chemical product) is discarded, it is subject to regulation as hazardous waste. But when a commercial chemical fuel is recycled (e.g., mixed with used oil and burned for energy recovery), it is not discarded (within the meaning of the rule) and so is not a hazardous waste. See § 261.33 (July 15, 1985) and 50 FR 618 (January 4, 1985).

In addition, today's rule for burning low flash point used oil (or any off-

[48] The Agency is also of the initial view that if used oil is listed as a hazardous waste then *unmixed* recycled used oil should continue to be regulated, regardless of quantity generated. (Regulation probably would begin once used oil is aggregated.) EPA's reasoning for regulating this type of hazardous waste differently from other small quantity generator hazardous wastes will be set out more fully in the soon-to-be-proposed regulations listing used oil as a hazardous waste and proposing management standards for recycled oil, but in summary:

- Exempting small quantity generator used oil (used oil generated in quantities of 0–100 kg per month) would exempt approximately 9 per cent of all used oil generated. In contrast, the exemption for small quantity generator hazardous waste (hazardous waste generated in monthly quantities of 0–100 kg per month) exempts only 0.05 percent of all hazardous waste. EPA does not believe such a result consistent with Congressional intent that recycled oil be regulated as necessary to protect human health and the environment, particularly in light of statements of evident legislative intent that crankcase oil (which is generated by small quantity generators) be regulated. See RCRA section 3014(b); H.R. Rep. 96-1415 at 6.
- The total volume of recycled used oil generated by small quantity generators is significantly greater than that of all other small quantity generator hazardous wastes combined: 340,000 tons/year vs. 180,000 tons/year;
- Unregulated small quantity generator used oil could have greater potential for coming into direct human contact than other small quantity generator wastes because such a large volume is burned in the residential market.

Thus, the Agency sees important distinctions between small quantity generator used oil and other small quantity generator hazardous waste. This reasoning also applies to regulating recycled oil in today's final rule—prior to recycled oil being a hazardous waste—without regard for quantity generated. (The Agency is not reaching the question of whether, assuming there was no difference between small quantity generator used oil and other small quantity generator hazardous waste, other hazardous waste generated in volumes of 0–100 kg per month should be regulated.)

[49] Although most used oils have a flash point greater than 200 °F, 28% of the used oil samples had a flash point less than 140 °F. *Source:* Franklin Associates Ltd., *Composition of Used Oil*, p. 3-56.

[50] Although used oil may contain high levels of lead, arsenic, cadmium, chromium, or barium, oil does not often exhibit the characteristic of EP Toxicity for these metals. In addition, these metals are present in used oil almost invariably as a result of the oil's use, not as a result of adulteration with hazardous waste. Nevertheless, since these metals can pose a hazard when used oil is burned for energy recovery, the specification for used oil that may be burned in nonindustrial boilers limits levels of arsenic, cadmiu, chromium, and lead. Barium levels are not considered to pose a substantial health hazard and, thus, barium is not included in the specification. (See section IV.C in the text.)

[51] Except that mixtures of small quantity generator hazardous waste and used oil are subject to regulation as used oil, as discussed above.

specification used oil) provides a level of environmental protection analogous to that provided by the rules for burning hazardous waste fuels. Neither hazardous waste fuel nor off-specification used oil fuel may be burned in nonindustrial boilers. The only area where the classification as used oil results in less regulation is with respect to storage and transportation of off-specification used oil. Although not regulated by today's rule, storage and transportation of off-specification used oil is addressed in the Used Oil Listing/Management Standards soon to be proposed. The purpose of today's rule is to begin regulation of blending and burning activities by prohibiting burning of hazardous waste and contaminated used oil in nonindustrial boilers. Other rulemakings will propose comprehensive regulations under section 3014 for storage and transportation of used oil, and for the actual burning of off-specification used oil and hazardous waste fuels in industrial boilers and industrial furnaces. Thus, the primary purpose of today's final rule is met by regulating low flash point oils as off-specification used oil rather than as hazardous waste, while decisions on appropriate controls (and impacts) for storage and transportation of off-specification used oil are left to the rulemaking specific to used oil that will be proposed under section 3014.

Commenters asked whether used oil known to be mixed with a characteristic hazardous waste is regulated as used oil fuel or hazardous waste fuel if the mixture exhibits a characteristic. As discussed above, used oil mixed with hazardous waste is regulated as hazardous waste fuel.[52] It is only when we are uncertain that mixing has occurred that we give the benefit of doubt (e.g., low flash point used oil and used oil containing less than 1000 ppm total halogens) and do not presume that mixing has occurred. Thus, when used oil has been mixed with a characteristic hazardous waste, the mixture is regulated as hazardous waste fuel if it continues to exhibit a characteristic. If the resultant mixture no longer exhibits a characteristic of hazardous waste, it is regulated as used oil.[53] This is merely a statement of the "mixture rule" in § 261.3.

Some used oils may exhibit a characteristic of hazardous waste but meet the specification for used oil fuel exempt from regulation.[54] Examples are used oil fuel with a flash point less than 140 °F, the hazardous waste characteristic, but greater than 100 °F, the specification level, and (much less frequently) used oil fuel with metals levels (particularly lead) greater than the EP toxic characteristic levels, but less than the specification levels. Although such used oils are exempt from regulation and may be burned in nonindustrial boilers, the specification ensures that such burning would not pose significantly greater risk than burning virgin fuel oil.

C. The Specification for Used Oil That May Be Burned in Nonindustrial Boilers

The Agency has developed a specification for used oil fuel that may be burned without regulation (i.e., burned without regulation in nonindustrial boilers as well as other boilers or industrial furnaces). Given that oil meeting specification parameters may be burned in nonindustrial facilities like apartment and office buildings, the specification is intended to be protective under virtually all circumstances.

In this section of the preamble, we discuss comments on EPA's risk assessment, the basis for selecting specification parameters and levels, and explain the changes made in the specification in response to comments. We also explain why we rejected certain commenters' arguments that off-specification used oil should not be blended to meet the specification and that all burning of used oil in nonindustrial boilers should be prohibited. Finally, we provide guidance on analytical procedures and testing frequency to determine conformance with the specification and the rebuttable presumption of mixing hazardous halogenated solvents.

1. *Comments on EPA's Risk Assessment.* EPA considered regulating any contaminant typically found in used oil in higher concentrations than in virgin oil, and which also was determined to pose a significant risk to human health and the environment when burned. Some commenters argued that EPA's risk assessment approach is overly conservative resulting in unnecessarily stringent regulations, while others argued that the assessment did not adequately consider all risks.

The Agency believes the PEDCo risk assessment [55] adequately indicates the potential for substantial risk from burning used oil in uran areas. The risk assessment, with one exception, is used to indicate potential risk, not to actually set specification levels based on some qualification of risk.[56] We used the risk assessment to identify those constituents that may pose increased risks at levels that are cause for concern given the large number of exposed individuals in urban areas. When those constituents are typically found in used oil at levels greater than in virgin fuel oils (i.e., the 95th percentile level in No's. 2–6 fuel oils), they were included in the specification at their 95th percentile levels in virgin fuel oils. We reasoned that higher levels could pose substantial risk, and levels lower than found in virgin fuel oil would not provide protection of human health and the environment if used oil is replaced (as it would be) by virgin oil.

The PEDCo risk assessment is fully documented in a published report, a copy of which is in the public docket. The assessment is also summarized in some detail in the proposal. See 50 FR 1693–1700. The primary inputs to the emissions models were actual data (e.g., composition of used oil based on hundreds of analyses; emissions were modeled for the New York City urban area considering actual meteorological conditions and projections of used oil burning based on actual density and location of multi-family dwelling units). Boiler emissions were projected assuming 97% destruction of organics and a 75% emission rate for metals. The Agency considers the 97% destruction efficiency for organics reasonable but conservative given that test burn data indicate that very small boilers can achieve 99% to 99.99% destruction efficiency for hard-to-burn chlorinated compounds.[57] Although data on metals emissions rates are very limited, the available data indicate that metals emissions rates average 31 to 75%, with chromium having the lowest rate and lead the highest.[58] We thus consider a

[52] Except that mixtures of small quantity generator hazardous waste and used oil are subject on an interim basis to regulation as used oil (although classified as hazardous waste fuel).

[53] It should be noted that mixing a characteristic hazardous waste with another material to render the waste nonhazardous constitutes treatment of hazardous waste subject to applicable standards under 40 CFR Parts 264–265 and 270, and the notification requirements of section 3010 of RCRA.

[54] We have noted above that the rule provides the same level of protection for burning hazardous waste fuel and for burning used oil exhibiting a characteristic of hazardous waste that also is off-specification used oil fuel. This is because neither hazardous waste fuel nor off-specification used oil fuel may be burned in nonindustrial boilers.

[55] PEDCo Environmental Inc., *A Risk Assessment of Waste Oil Burning in Boilers and Spoce Heaters*, August 1984.

[56] For lead, the risk assessment is used to estimate the high end of the proposal specification range. See 50 FR 1697–1699 (January 11, 1985).

[57] GCA Corp., *Environmental Characterization of Waste Oil Combustion*. May 1984, pp. 16 and 20.

[58] PEDCo Environmental Inc., *Risk Assessment of Waste Oil Burning*. January 1894, pp. 3–17 and 3–20.

75% emissions rate for metals to be a realistic, but reasonably conservative assumption.

The two air dispersion models used to estimate ground level concentrations of contaminants are routinely used by EPA for that purpose. Estimated ambient levels were used to project the increased risk from carcinorganic compounds and to determine whether levels of other compounds that have a safe or threshold level of exposure (i.e., thershold compounds) would be likely to cause substantial adverse health effects. The compounds considered to be carcinogenic and their potency factors were obtained from EPA's Carcinogen Assessment Group. To determine whether chronic exposure to the estimated ambient levels of threshold compounds would pose a health hazard, Environmental Exposure Limits (EEL's) were calculated. EEL's are based primarily on workplace threshold limit values (TLV's) published by the American Conference of Governmental Industrial Hygienists. The TLV's are adjusted mathematically for use in assessing enviromental exposure by considering a number of factors including: exposure duration, population susceptibility, and the nature and conditions of the experimental health effects data. TLV's are typically used by the Agency to project safe levels of exposure when more appropriate animal health effects data are not available. The limitations of using TLV's to determine EEL's are well documented by PEDCo[59].

Although some assumptions were necessary as with any risk assessment, and it can be argued that those assumptions were too conservative or too lenient, the Agency does not believe (and commenters did not show) that the use of alternate, but reasonable, assumptions would affect the outcome of the assessment.

Specific comments on particular aspects of the risk assessment are discussed below.

2. *Specification Parameters.* As discussed above, EPA identified typical contaminants of used oil and proposed specification levels for those compounds found in higher concentrations in used oil than in virgin refined fuel oil and which could also pose a significant health risk when burned. (See Table 2 below.) We did not propose specification levels for compounds foud in used oil at the same or lower levels than are found in virgin refined fuel oil because users could simply switch to virgin oil to replace the recycled product without any environmental benefit.

We have added total halogens and deleted PCBs from the specification, as discussed below. We also respond below to comments that a number of other constituents should be added to the specification.

TABLE 2.—USED OIL FUEL SPECIFICATION[1]

Constituent/ property	Proposal allowable level	Final rule allowable level
Arsenic	5 ppm maximum	5 ppm maximum.
Cadmium	2 ppm maximum	2 ppm maximum.
Chromium	10 ppm maximum	10 ppm maximum.
Lead	10-100 ppm maximum [2].	100 ppm maximum.
PCBs	50 ppm maximum	
Total halogens		4000 ppm maximum.
Flash point	100 °F minimum	100 °F minimum.

[1] The specification applies only to used oil that is not mixed with hazardous waste other than small quantity generator hazardous waste.

[2] EPA proposed to a select level from the range of 10 to 100 ppm for promulgation. Lead is limited to 100 ppm by today's final rule.

a. *Total Halogens.* We have added total halogens to the specification because burning fuels with high chlorine levels can have direct and indirect effects on human health and the environment. As noted in background documents to the proposed rule, and as observed by a number of commenters, hydrogen chloride emissions from burning such fuels can increase ambient levels of hydrochloric acid and contribute to acid rain. Equally significant, the chlorine can also accelerate corrosion of boiler components which could decrease combustion efficiency resulting in increased emissions of incompletely burned combustion products. Corrosion of any air emissions control equipment could also be accelerated, reducing control efficiency and directly increasing emissions of pollutants. (See also H.R. Rep. 98–198 at 42 noting this concern.)

We selected a specification level of 4,000 ppm for total halogens [60] based on halogen levels in high chlorine coal. We believe that limiting halogen levels to the highest levels found in fossil fuels will ensure that burning used oils with equivalent or lower halogen levels will not accelerate corrosion rates.[61]

Although used oil normally replaces virgin fuel oil that has very low halogen levels (less than 100 ppm), we do not believe burning used oil with halogen levels found in coal will substantially increase corrosion rates. In fact, many boilers burning fuel oil were originally designed to burn coal and were converted to oil burning to meet air emissions standards.

Used oil fuel (not mixed with hazardous waste) can contain high levels of halogens from two sources. As discussed above metalworking oils are sometimes processed to produce fuel. These metalworking oils can contain extreme pressure additives that are highly chlorinated, but nonhazardous, organic compounds. Total chlorine levels in these used oils can be several percent.

In addition, "light ends" from the distillation (e.g., rerefining) of used oil can contain high levels of halogenated compounds. Although the used oil feedstock entering the distillation process contains less than 1000 ppm of total halogens and is not presumed to be a hazardous waste, the oil can contain insignificant levels of volatile, halogenated compounds (e.g., less than 100 ppm of halogenated compounds listed as hazardous spent solvents). The light ends produced from such oil will contain much higher levels of halogenated compounds due to the concentrating effect of the distillation process. These light ends are a by-product of used oil rerefining to produce recycled lube oil and are often burned on-site as fuel. These light ends are regulated as used oil rather than as hazardous waste even though their total halogen content exceeds 1000 ppm and they contain substantial levels of halogenated compounds listed as hazardous spent solvents. This is because the halogenated compounds are present in significant levels as a result of processing (i.e., they are concentrated), not as a result of mixing with halogenated hazardous waste.[62]

When light ends containing less than 4000 ppm total halogens (but perhaps up to 4000 ppm of halogenated compounds that are listed as hazardous spent solvents) are burned, emissions of

[59] PEDCo Environmental Inc., *A Risk Assessment of Waste Oil Burning*, pp. E-2 through E-15.

[60] It is only by coincidence that this is the same level originally proposed for the rebuttable presumption. The specification parameters apply only to used oil fuel after it has been determined that the used oil is not mixed with hazardous waste (e.g., by applying the presumption of mixing). Thus, the total halogen specification level is based on different principles and is used for different purposes than the total halogen level for the presumption of mixing.

[61] Boiler manufacturers become concerned about excessive corrosion rates when coal chlorine levels exceed 2,500 ppm. A boiler burning used oil containing about 4,000 ppm chlorine would be exposed to the same quantity of chlorine per hour as it would be if it were burning coal containing 2,500 ppm chlorine. This is because the heating value of used oil is higher than that of coal (16,500 vs. 11,000 Btu/lb) and, thus, less used oil is required to provide a given boiler heat input.

[62] Although low levels of halogenated compounds (e.g., less than 100 ppm of tetrachloroethylene) in the used oil feedstock to the distillation process may sometimes result from mixing with hazardous spent solvents, the levels are too low to *presume* such mixing has occurred.

hydrogen chloride or incompletely burned halogenated compounds will not pose a substantial risk to human health and the environment.[63] Light ends with more than 4000 ppm total halogens are regulated under today's rule as off-specification used oil, and as such, cannot be burned in nonindustrial boilers. We are developing permit standards for burning such oil (scheduled to be proposed in 1986) that would consider the hazard posed by the presence of hazardous halogenated constituents. (Permit standards for burning such used oil may in fact be similar to the standards for burning hazardous waste fuels.)

b. *PCBs.* EPA included polychorinated byphenyls (PCBs) in the proposed specification only as a reference to the Agency's rules regulating PCBs. PCBs are regulated under the Toxic Substances Control Act (TSCA) and the rules are codified at 40 CFR Part 761. Those rules include controls for the use and disposal of materials containing PCBs.

PCBs are not included in the final specification promulgated today, however, because commenters indicated that the crossreference caused confusion. Specifically, commenters were concerned that setting a specification level could encourage dilution of PCBs in an attempt to avoid regulation under TSCA. Dilution to avoid regulation is expressly prohibited under the TSCA rules. See § 761.1(b).

If used oil fuel contains PCBs and also does not meet the used oil fuel specification provided by today's rules, then it is subject to the more stringent of the applicable TSCA PCB rules and today's used oil fuel rules.

c. *Other Constituents.* Commenters suggested that other used oil constituents should be included in the specification nothwithstanding our arguments that these constituents either are not likely to pose substantial health risk or that they are not present in used oil at significantly greater levels than virgin oil (and lower specification levels could result in a virgin product displacing the recycled product with no environmental benefit).

(1) *Barium and Zinc.* Although we found that barium and zinc are present in used oil in concentrations 10–100 times greater than in virgin fuel oil, the Agency's risk assessment indicated that the resulting increased levels of barium and zinc would produce insignificant risks to human health and the environment.

Several commenters expressed concern over what they considered the serious health impacts of high levels of barium and zinc, and argued that EPA should err on the overprotective side by prescribing specifications for these metals. EPA continues to believe that the presence of these metals in used oil does not pose significant risk for the reasons discussed below.

EPA's risk assessment indicates that maximum ambient levels of zinc from burning used oil could represent about 2% of the Environmental Exposure Limit (EEL).[64] Thus, zinc does not have a serious impact on air quality near single or multiple sources, or in high-density urban areas.

Although the case is less clear with barium, the Agency concludes that barium likewise does not pose a serious health risk. The PEDCo risk assessment indicates that maximum ambient levels of barium could represent 80% of the EEL (*Id*). Given that the inhalation of barium can cause toxic effects (primarily an increase in muscle excitability, particularly in the cardiac muscle), the Agency specifically asked for comment on whether barium should be added to the specification.

For a number of reasons, however, the PEDCo risk assessment overstates the risk posed by barium. The PEDCo analysis used an early survey of used oil analyses to determine barium levels in used oils. The most recent and expanded data base includes 752 barium analyses compared to the 400 analyses in the data base used by PEDCo. The 90th percentile barium levels used in the risk assessment (based on the 400 analyses) was 485 ppm, while the 90th percentile barium level in the expanded data base is only 251 ppm, about 50% lower. Given that composition data based on the expanded data base are considered more representative, the PEDCo analyses overstates ambient barium levels by a factor of two.

In addition, the PEDCo assessment estimates a safe level for lifetime exposure to airborne barium based primarily on the workplace threshold limit value (TLV). This safe level is called an Environmental Exposure Limit (EEL). See discussion above on EELs. The barium ELL calculated for the risk assessment is more than 50% lower than the safe level calculated from the interim Acceptable Daily Intake set by EPA.[65] The ADI-based safe exposure level is considered more appropriate than the TLV-based EEL because the ADI is based on a comprehensive review of pertinent toxicologic and environmental data. EELs are commonly used for risk assessments only when ADI's have not been determined (or cannot be determined because of inadequate data). Thus, the risk posed by barium has been overstated by more than a factor of two for this reason as well.

In summary, the PEDCo assessment overstates the risk posed by barium by more than a factor of four. When these factors are considered, the maximum ambient levels (assuming clustered boilers with overlapping emission plumes, another conservative assumption) would be 0.18 $\mu g/m^3$ while the ADI-based safe level for chronic exposure is 1 $\mu g/m^3$.[66] When background ambient barium levels are added to the maximum levels from used oil burning, total ambient barium levels could range from 0.18 to 0.43 $\mu g/m^3$.[67] As with lead emissions discussed elsewhere, ambient barium levels thus would not be expected to pose significant risk except in extreme and unique "hot spot" situations (e.g., where boilers are clustered together, and receptors are located directly downwind, very close to the boilers, and at the centerline of the emissions plume), which would occur only very rarely.

(2) *PNAs.* A few commenters indicated the need to set specification levels for polynuclear aromatic compounds (PNAs).[68] A major environmental commenter was critical of EPA's risk assessment in general, and was particularly concerned with EPA's conclusion that specification levels were not needed for PNAs. The commenter argued that data cited by the Agency did

[63] As discussed above, even very small boilers can achieve 99% to 99.99% destruction efficiency for halogenated compounds.

[64] PEDCo Environmental Inc., *A Risk Assessment of Waste Oil Burning*, p. 5–2.

[65] EPA Environmental Criteria and Assessment Office, *Health Effects Assessment for Barium*, June, 1984, p. 13 (Draft), and Peer Consultants, Inc., *Health Effects and Ambient Data for Barium*, October 1984, p. 9 (Unpublished Report).

[66] This comparison still overstates the risk because the PEDCo assessment calculates maximum ambient levels for the month of January when used oil burning is greatest. The ADI-based safe level of exposure, however, assumes constant exposure over a lifetime. Thus, average annual ambient levels (including summer months when little used oil is burned) should actually be used for comparison to the ADI-based safe exposure level.

[67] Op Cit., Peer Consultants, Inc., p. 4. It should be noted however, that it is not clear to what extent the background barium levels already include barium from used oil burning. Thus, adding the so-called background levels to levels from used oil burning also may overstate the risk.

[68] PNAs are a subset of organic compounds known as polyaromatic hydrocarbons (PAHs). PNAs are of particular concern because some are known carcinogens. PAHs are compounds with two or more benzene rings, the basic structure that separates aromatic or "ringed" compounds from aliphatic or "chain" compounds. PNAs are compounds with two benzene rings fused together so that they share two carbon atoms.

not show, as the Agency indicated at proposal,[69] that PNA levels in used oil and virgin fuel oil are comparable, and that PNA emissions from burning used oil and virgin fuel oil are comparable.

We have reviewed the data used to support our decision at proposal and continue to believe that the risk posed by PNAs from burning used oil and virgin fuel oil is comparable. The following data (Table 3) show that levels of benzo(a)anthracene and benzo(a)pyrene, the PNAs typically of concern due to their carcinogenicity, in used oil and virgin fuel oil are comparable:

TABLE 3.—PNA LEVELS IN USED OIL AND VIRGIN FUEL OIL

Compound	Concentration in used oil (ppm) [90th percentile]	Concentration in virgin fuel oil (ppm) [range]
Benzo(a)anthracene	40	18-97
Benzo(a)pyrene	16	29-44

Source: Franklin Associates, Ltd., *Composition of Used Oil*, pp 1-12 and 5-9.

Although PNA levels in distillate virgin fuels (e.g., No. 2 oil) are much lower than in residual No. 6 oil, it is reasonable to compare used oil levels in No. 6 oil because used oil frequently (indeed, most often) displaces No. 6 oil.

In addition both Recon and GCA [70] reported that they could not find detectable levels of benzo(a)pyrene (BaP) in used oil emissions during a total of 13 test burns. The BaP detectable levels ranged from 6–9 $\mu g/m^3$ for the GCA tests. Further, emissions of total PNAs from burning used oil and virgin oil appear comparable. Emissions of PNAs, mostly naphthalene compounds, measured by GCA during a number of test burns at each of six sites averaged 92 $\mu g/hr$ [71]. If virgin fuel oil had been burned rather than used oil and if total PNA emissions were 46 $\mu g/btu$, as reported by PEDCO (See PEDCO, *Risk Assessment of Waste Oil Burning*, p. D–7) as typical for residual fuel oil boilers with capacities less than 250×10^6 btu/hr, PNA emissions from virgin oil burning for those 6 test sites would have averaged about 96 $\mu g/hr$.

Given that it appears that the concentration of PNAs of primary concern are comparable in used oil and virgin fuel oil, and that total PNA emissions from burning used oil and virgin fuel oil are comparable, we have not set specification levels for PNAs.

(3) *Benzene, Toluene and, Naphthalene.* One commenter argued that EPA did not adequately consider the risk posed by emissions of benzene, toluene, and naphthalene. The PEDCo risk assessment concluded that ambient levels of toluene and naphthalene would be less than 1% of the Environmental Exposure Limit (EEL) considering emissions from point sources of various sizes, from point sources clustered very closely together, and multiple point sources located in high density urban areas.[72] PEDCo also concluded that ambient levels of the carcinogen, benzene, would pose an increased risk to the most exposed individual of 2.7×10^{-6} (1:37,000,000).[73] It should be noted that PEDCo's risk assessment is considered conservative in some respects, including the assumption that boilers burning used oil will achieve a destruction efficiency of only 97% although test burn data indicate that even very small boilers when operated properly appear to achieve 99 to 99.99% destruction efficiency. Nonetheless, the commenter suggested that the Agency consider conducting the so-called "hot spot" exposure analysis for those compounds similar to the analysis conducted for lead.[74]

The hot spot analysis considers what may be considered truly "worst case" situations where two sources are located close together, and the receptor (exposed person) is located directly downwind from the sources, very close to the sources (i.e., 25–50 meters from the source), and elevated to the height of the emission plume (i.e., as though the emission plume were blowing into the air intake of a building's ventilation system). We have used this scenario to project ambient levels of benzene, toluene, and naphthalene in those situations. Even under those extreme and very rare situations, and conservatively assuming 97% destruction efficiency, ambient levels of toluene and naphthalene still do not exceed 1% of the EEL for those compounds. Ambient levels of benzene do not exceed levels that would pose an increased risk of 1×10^{-5} (1: 100,000). If the destruction efficiency of benzene were assumed more realistically to be 99% rather than 97%, the increased risk would be less than 4×10^{-6} (1:250,000). Given the remote likelihood that the modeled situations would occur, and that risks are still not very high even under these worst case conditions, we conclude that presence of these compounds does not pose a significant health risk when used oil is burned for energy recovery.[75]

As a final note, although we do not have data on benzene, toluene, and naphthalene levels in virgin fuel oils, we would expect to find high levels of volatile benzene and toluene in distillate oils (e.g., No. 2) and high levels of naphthalene in residual oils (e.g., No. 6). Given that used oil and used oil blends are substituted for all grades of oil (i.e., No's 2–6), the levels of these compounds in used oil are likely to be comparable to levels in virgin oil.

(4) *ASTM Specifications.* A few commenters suggested that EPA include specification parameters such as viscosity and bottom sediment and water set by the American Society for Testing and Materials (ASTM) to ensure proper boiler operation. ASTM specifications vary according to fuel oil grade (e.g., No. 2 distillate oil though No. 6 residual oil). Commenters argued that the ASTM specifications were needed to ensure optimum boiler operation and, thus, optimum combustion of used oil which would minimize emissions of incompletely burned toxic compounds (e.g., PNAs as discussed above).

We understand the issue commenters are raising but do not believe it is, in fact, a frequent problem. We presume that burners purchase fuel, including used oil and blends of virgin oil and used oil, specified by the standard fuel oil grade that their boilers are designed to burn. Further, we presume that fuel oil, whether virgin or containing used oil, must meet the ASTM specifications for the designated grade or be in breach of contract. Thus, the marketplace already should ensure application of the ASTM specification. We will, however, reconsider this point if during implementation of today's rule enforcement officials determine that misrepresented used oil is frequently being sold and existing laws are inadequate to prevent abuses and we

[69] See 50 FR 1695 (January 11, 1985).

[70] Recon Systems, Inc., and ETA Systems, Inc., *Used Oil Burned as Fuel*, 1980, p. 4–6; and GCA Corp., *Environmental Characterization of Waste Oil Combustion*, pp. 19, 120, 128, 132, 138, 144, and 150. Both of these reports were part of the Agency's record at proposal.

[71] Tests are cited in previous note. One test at one site had 5 times the average PNA emissions at that site during unstable combustion conditions. (The contractor deliberately induced these conditions as part of the test program.) Results from that test are not included in calculating the 92 $\mu g/hr$ average. When the results from that test are included, the average PNA emissions increase to 106 $\mu g/hr$. See GCA Corp., p. 120.

[72] PEDCO Environmental Inc., *Risk Assessment of Waste Oil Burning*, p. 5–2.

[73] Id., p. 5–6.

[74] Id., pp. 4–39 through 4–43.

[75] Although believe that the levels of toluene, benzene, and naphthalene do not present a hazard when used oil is burned (and thus specification levels are not needed), these toxicants may still present a significant hazard when used oil is stored and transported. We therefore, consider these hazards when we will soon propose to list used oil as a hazardous waste.

determine that the practice can result in substantial increases in emissions of toxic compounds at levels that pose a significant risk to human health and the environment.

Another reason we are not addressing this potential problem in today's rule is that there does not appear to be a simple remedy. We cannot require that all used oil meet the ASTM specifications for a particular fuel oil grade because different boilers are designed to burn different grades. To address the problem, the responsible burner must simply now that the used oil (or virgin/used oil blend) he is purchasing meets the grade his boiler is designed to burn. This could be accomplished, perhaps, by requiring that the invoice or bill of sale indicate the grade of fuel, and if necessary, a statement that the oil meets the ASTM specifications for that grade. On the other hand, the burner who is trying to save on his fuel costs may try to burn lower grade (or ungraded) used oil provided that his increased maintenance costs do not off-set his fuel savings. He is not concerned about emissions of incompletely burned compounds. If this were the problem, a solution would be to require that the marketer determine the grade of his oil by ASTM specification and sell the used oil only to a burner with a boiler designed to burn that grade of oil. Similar requirements could be placed on burners (i.e., they could burn only that fuel oil grade the boiler is designed to burn). We believe that it is clear that the implementation and enforcement of provisions such as these would be a massive undertaking and would intrude substantially on the marketing and use of what is essentially a commercial product—used oil meeting the specification established in today's rule. Before seriously considering any such remedies, we would need to much better define the "problem".

(4) *Other Compounds.* A few commenters suggested that the following compounds also be included in the specification: nickel, beryllium, mercury, sulfur, nitrogen, and phosphorous. None of these compounds are included for the reasons discussed below.

Nickel is not included in the specification because the 90th percentile nickel level in used oil is lower than the level found in virgin residual fuel oil (40 ppm).[76] Although limited, data on beryllium in virgin fuel oils indicate that beryllium levels average much less than 1 ppm, while analyses of 263 used oil samples indicate that the 90th percentile beryllium level in used oil is less than 0.3 ppm. (Ibid.) Similarly, limited data on mercury indicate that levels can range from 0.005 to 0.4 ppm in virgin fuel oils and are less than 0.1 ppm in used oils. (Ibid.) Clearly, beryllium and mercury are not found in used oils at levels of concern, and nickel emissions (and any health risk posed) or lower from burning used oil than virgin fuel oil.

Levels of sulfur and nitrogen are somewhat higher in virgin fuel oil than in used oil.[77] Thus, sulfur and nitrogen oxide emissions from burning used oils would not be higher. Although we do not have data on phosphorous levels in used oils and virgin fuel oils, phosphorous is neither a designated hazardous waste constituent on Appendix VIII of Part 261 nor does it interfere with boiler efficiency at the levels found in used oil.

3. *Specificaton Levels.* A number of commenters provided suggestions on specification levels for the metals for which EPA proposed a specification level and for flash point. The basis for the specification levels for these parameters is discussed below.

a. *Lead.* EPA proposed to select a specification level for lead from the range of 10–100 ppm, and specifically requested comments on an appropriate level. As discussed in the preamble to the proposal (see 50 FR 1697–1699 (January 11, 1985)), levels higher than 100 ppm could result in ambient lead levels exceeding the National Ambient Air Quality Standard (NAAQS) for lead in densely populated areas where boilers are clustered together and receptors may be close to the sources. Although 100 ppm appears to be protective with respect to the NAAQS, that level may not be protective because health effects data available since the lead NAAQS was established indicate that lead causes serious, but apparently noncancerous, health effects at any level of exposure (i.e., lead appears to be a "nonthreshold" pollutant). EPA is considering these new health effects data in its current efforts to determine whether the existing lead NAAQS is adequately protective. In addition, because of the new health effects data, EPA believes that it is resonable to reduce preventable sources of lead exposure. This policy led to the Agency's phasedown of lead in gasoline—by January 1, 1986, lead levels in "leaded" gasoline must be reduced to less than 10% of the levels previously allowed. For these reasons, we believe that a lead specification level should be considered that is lower than that which ensures the current NAAQS would not be exceeded. Thus, we proposed a level of 10 ppm at the low end of the range, which is the 95th percentile lead level in virgin fuel oil. A lower level was not proposed because used oil could be displaced with virgin oil with higher lead levels with no environmental benefit.

We also discussed in the proposal our concern that a specification level lower than 100 ppm could result in used oil currently burned as fuel being diverted to incineration, or perhaps being dumped, because the cost of blending used oil to meet a stringent specification could be prohibitive and because of the difficulty of finding new industrial (and utility) markets for oil that exceeds the specification. If lowering the lead specification level below 100 ppm diverted used oil currently burned as a fuel to incineration, the environmental benefits of that policy are questionable. It is not clear that metals emissions from incineration would be adequately controlled given that many hazardous waste incinerators use wet scrubbers that may not control lead emission efficiently.[78]

We therefore indicated that in considering a specification level lower than 100 ppm, the benefits from reduced lead emissions from used oil burned as fuel must be balanced against the probability of (and adverse effects from) dumping and the diversion of used oil from use as a fuel to incineration.

We also specifically solicited comments on three other points (in addition to an appropriate specification level): (1) Whether factors other than those we considered need to be considered in determining the lead level that would ensure that the lead NAAQS is not exceeded; (2) whether a two-tiered specification, with a lower limit for more populous areas and a higher level for less urban locations, would be

[76] Sources: Franklin Associates Ltd., *Composition of Used Oil*, Appendix A; TRW Environmental Engineering Division. Emissions *Assessment of Conventional Stationary Combustion Systems: Volume III. External Combustion Sources for Electricity Generation*, November 1980, p. 134; US EPA, *Listing Waste Oil As Hazardous Waste*—Report to Congress, January 1981 (SW-909); Yen, T.F., *The Role of Trace Metals in Petroleum*, Ann Arbor Science Publishers, Ann Arbor, Michigan, 1975, P. 107; Valkovic, Vlado, *Trace Elements in Petroleum*, Petroleum Publishing Company, 1980, p. 91; and American Petroleum Institute, *Task Force on Utilization of Waste Lubricating Oils*, October 1975, pp. 21–33.

[77] PEDCO Environmental Inc., *A Risk Assessment of Waste Oil Burning*, p. 3–18.

[78] The Agency intends to control metals emissions from boilers and industrial furnaces burning off-specification used oil and hazardous waste under the permit standards to be proposed in 1986. Once that rulemaking is initiated, the Agency intends to consider whether metals emissions from hazardous waste incinerators are adequately controlled.

appropriate; and (3) whether specification levels for arsenic, cadmium, and chormium would be necessary if a low level is promulgated because used oil that fails the specification levels for these other metals would also be expected to exceed a low lead specification level.

A large number of comments were received concerning the lead specification. They are discussed below.

(1) *Selecting a Level from the Proposed Range.* Most commenters argued that EPA's proposed range of 10 to 100 ppm is too stringent. Commenters stated that it would be difficult for used oil to pass a lead specification of less than 100 ppm, which, they asserted, would not only severely restrict used oil burning, but lead to illegal dumping. It was also suggested (by a State commenter with substantial experience in regulating used oil burning) that a lead specification of 100 ppm would be unlikely to cause an exceedance of the lead NAAQS.

Some commenters concurred with EPA's selected range, favoring the high end of the range. A specification of 100 ppm should be acceptable in all but the most densely populated areas, according to these commenters.

Selection of a relatively low level from the range, such as 10 or 20 ppm, was recommended by a few commenters. Some opposed allowing any lead at all in used oil, except in *de minimis* quantities.

(2) *Phase-in a Lower Specification Level as Gasoline Lead Levels are Lowered.* The majority of commenters recommended that EPA set an initial specification for lead at a relatively high level, and then phase in lower levels in incremental steps, tied to the EPA mandated lowering of lead concentration in gasoline which was promulgated on March 7, 1985 (see 50 FR 9386 and 9400). Commenters argued that it would be illogical and unfair for EPA to require lead to pass low specifications in used oil, since most of the lead in used oil originates from the lead in gasoline. Suggested initial levels ranged from the lead in gasoline. Suggested initial levels ranged from 500–1,000 ppm. Commenters also suggested that EPA build a time-lag into such a phasedown program, in which a certain minimum time after the effective date of the March 7, 1985 standards would be allowed to elapse before EPA would effect a lower level for used oil. Such a time-lag would accommodate the delay between the actual use of the lowered lead in gasoline being sold and burned in automobiles, and changing of the oil.

(3) *Risk-Based Specification Level.* Several commenters urged EPA to base its specification for lead primarily, if not solely, on health effects data and risk from lead exposure, rather than on the current lead NAAQS or the 95th percentile concentration in virgin fuel oil. These commenters argued that regardless of typical contamination levels of lead in virgin fuel oil, EPA is not justified in allowing the burning of used oil with lead levels that may cause serious health effects. Raised blood lead levels in young children and the danger of lead poisoning to pregnant women were cited. Commenters emphasized that lead is bioaccumulative, meaning that repeated intake over time results in additive levels in the body.

(4) *Two-Tiered Approach.* Only a few commenters addressed the suggested two-tiered approach to regulating lead. Commenters stated that it would only cause cleaner, nonurban areas to become more polluted.

(5) *The Need to Regulate Arsenic, Cadmium, and Chromium if a Low Lead Specification Level is Selected.* Most commenters recommended that arsenic, cadmium, and chromium be regulated, even if a low lead level is promulgated. In general, commenters argued that it has not been shown that the level of these metals varies proportionately with lead. Used oil could conceivably have a low concentration of lead, but higher levels of one or more of these three metals. Restrictions for arsenic, cadmium, and chromium were suggested as a safeguard.

(6) *Response to Comments.* After evaluation of these comments, we have decided to promulgate a lead specification of 100 ppm, but to delay the effective date by six months. (The other specification parameters are effective 10 days after the date of publication.) As discussed at proposal, we believe that this level will ensure that nonindustrial boilers do not cause ambient levels to exceed the current NAAQS except in unique and truly extreme scenarios. See 50 FR at 1698 (January 11, 1985). Moreover, we are concerned that promulgation of a level lower than 100 ppm at this time could cause major disruptions to the used oil recycling industry resulting in diversion of oil or dumping with uncertain and potentially adverse environmental trade-offs. (Similar concerns were raised by the House Energy and Commerce Committee in their report on the RCRA amendments. See H.R. Rep. No. 98–198 at 66.)

The 100 ppm lead specification level promulgated today is intended as an interim measure. The Agency believes that this lead level may not be as protective as reasonably possible given the new health effects data mentioned above. On the other hand, until we know more about the impacts of the other two rules affecting management of used oils (the soon-to-be proposed recycled oil management standards and the permit standards for boilers and industrial furnaces that will be proposed in 1986) on the used oil industry and, ultimately, on used oil flows, we are concerned that a lower level may cause impacts that could result in dumping or incineration of used oil with uncertain environmental trade-offs. Therefore, the Agency will evaluate the risks and costs of a lower lead level in conjunction with the third rule of the series—permit standards for boilers and industrial furnaces—scheduled to be proposed in 1986. Thus, the Agency's final position on the lead specification will be included in the permit standards rulemaking.[7a]

In response to commenters' concerns that a lead specification level as low as 100 ppm could cause major disruptions of the industry and could result in dumping, the effective date of the lead specification is delayed six months. By that time, the Agency's gasoline lead phase-down standards will result in lowered lead levels in used crankcase oil so that a major disruption of the industry will be avoided, as discussed below.

On March 7, 1985, EPA promulgated standards restricting lead levels in gasoline (see 50 FR 9386 and 9400). The standards require that lead be reduced from the previous limit of 1.1 grams/gallon to 0.5 g/gal by July 1985, and to 0.1 g/gal by January 1986. This reduction of lead in gasoline should result in a

[7a] We note that the Regulatory Impact Analysis (RIA) developed to support the recycled oil management standards soon to be proposed includes a preliminary analysis of the cost and benefits of lower lead levels. The analysis was initiated before the Agency decided to select 100 ppm as an interim lead specification and to make its final decision on the lead specification in the permit standards rulemaking. In addition, that RIA attempts to predict used oil flows, and thus regulatory impacts of the proposed rule, assuming all three rulemakings are in place. Thus, the RIA makes the best assumptions possible at the time on the cost of compliance with anticipated controls for boilers and industrial furnaces burning off-specification used oil fuel. Nonetheless, that preliminary analysis appears to indicate that lead specification levels lower that 100 ppm would be cost-effective. The Agency intends to review that analysis, up-date assumptions on permit standards and "flow" changes as necessary, and to include a comprehensive analysis of the cost and benefits of lower lead specification levels in the RIA for the permit standards rulemaking. In the interim, the RIA for the recycled oil management standards will be in the public docket for that rulemaking once it is proposed. Comments received on that portion of the RIA dealing with cost and benefits of lower lead specification levels will be considered in developing the Agency's position on this issue in the permit standards rulemaking.

concomitant reduction in lead levels in used oil. We have analyzed the potential impacts of imposing the 100 ppm specification either immediately along with the other specification parameters or in the Spring of 1986, roughly six months after promulgation.[79] Using a data base of 143 used oils sampled in 1983, we extrapolated resulting lead concentrations to the 1985–86 and 1986–87 heating seasons. Based on the July 1985 reduction of lead in leaded gasoline to 0.5 g/gal, we assumed an average lead concentration (for leaded and unleaded gasoline) of 0.2 g/gal for gasoline affecting used oil to be burned in the 1985–86 heating season. Similarly, based on the January 1986 reduction of lead in leaded gasoline to 0.1 g/gal, we assumed an average lead concentration (for leaded and unleaded gasoline) of 0.05 g/gal for gasoline affecting used oil that would be burned in the 1986–87 heating season. The average lead levels in gasoline were estimated assuming a ratio of 40% leaded to 60% unleaded gasoline consumption for the 1985–86 heating season, and a ratio of 37.5% leaded to 62.5% unleaded gasoline consumption for the 1986–87 heating season. (We also assumed that lead levels in all used oils would decrease because of the gasoline lead phasedown.)

This analysis demonstrates that delay of the implementation of the specification will provide time for the lead phasedown in gasoline and, consequently, in used oil. Significantly more used oil can pass the lead specification in May 1986 than today. The table below illustrates the drop in lead levels in used oil as the lead is reduced in gasoline.

TABLE 4.—PROJECTED CHANGES IN LEAD CONCENTRATION IN USED OIL AS LEAD IS REDUCED IN GASOLINE (PPM)

Percentile	1983	Late 1985	May 1986
35	114	69	39
40	177	115	44
50	490	217	67
75	856	337	95
80	940	367	104
95	1,417	546	248

Source: Franklin Associates Ltd., *Effects of Delay in the Implementation of a Lead Specification on the Ability of Used Oil to Pass the Specification*, June 4, 1985.

As shown, only about 40% of the used oil can pass the lead specification of 100 ppm now. Delay for six months increases the total quantity passing the lead specification to about 80%.

[79] Franklin Associates, Ltd., *Effects of a Delay in the Implementation of a Lead Specification on the Ability of Used Oil to Pass the Specification*, June 4, 1985.

Delaying the effective date of the lead specification has a corresponding effect on the amount of used oil that can pass the specification levels for all of the metals (i.e., lead, arsenic, cadmium, and chromium). As shown in the table below, we estimate that the amount of unblended used oil that can meet the metals specification levels more than doubles if the effective date of the lead specification is delayed six months to May 1986 (i.e., 20% vs. 46%).

TABLE 5.—EFFECTS OF DELAYING THE EFFECTIVE DATE OF THE LEAD SPECIFICATION ON THE PERCENT OF SAMPLES THAT PASS THE SPECIFICATIONS FOR ALL METALS

Percent of samples passing metals specifications assuming—	Nov. 1985 (percent)	May 1986 (percent)
Unblended used oil	20	46
75 pct Virgin/25 pct used oil	59	69
90 pct Virgin/10 pct. used oil	91	91

Source: Franklin Associates, Ltd., *Effects of a Delay in the Implementation of a Lead Specifcation on the Ability of Used Oil to Pass the Specification*, June 4, 1985.

Although the effect of delaying the lead specification is much less significant when used oil is blended with virgin oil (e.g., 59% of used oil blended 75%/25% with virgin oil (75% virgin oil) could meet the metals specification in November 1985 while 69% could pass in May 1986), the Agency is uncertain whether substantial quantities of used oil will be blended with high percentages of virgin oil in the future. We believe that "virgin oil" distributors historically have done much of the blending at the higher ratios (e.g., 90% virgin and 10% used oil) in order to sell the mixture to the nonindustrial market as virgin oil. It is not clear, however, whether these distributors will continue to handle used oil given that they would have to comply with the notification (and other) requirement(s) of today's rules, which would make their used oil management activities public knowledge. Although blending used oil with high percentages of virgin oil to meet today's specification may be economical in the future in some cases, especially by persons currently considered primarily used oil processors, we are concerned that it may take some time for these heretofore (primarily) processors to increase their blending capacity and to find markets for used oil blended with high percentages of virgin oil. (Such "processors" would essentially become fuel oil distributors as well.) Thus, substantial quantities of used oil may not be blended with high percentages of virgin oil in the near term (if ever). Consequently, delaying the effective date of the lead specification is expected to substantially increase the quantity of used oil that can meet the metals specification levels.

In summary, we believe that a six-month delay in implementing the lead specification is more responsible than making it effective immediately, and may, in fact, result in greater environmental benefit than immediate implementation.

With regard to other lead specification issues, we have decided against development of a two-tiered lead specification level for urban versus rural areas in this rulemaking. Commenters did not support the approach, it would be difficult to develop, support, and implement, and it would encourage burning of dirty fuels in areas with clean air.

Specification levels for arsenic, cadmium, and chromium are also retained. As noted in the proposal, we are concerned that once lead levels in used oil begin to drop, oil will increasingly fail the specification because of one of these other metals. Without the lead specification, burning of these oils would not be controlled.

b. *Arsenic, Cadmium, and Chromium.* In the preamble to the proposal, EPA stated that widespread, unrestricted burning of used oil in boilers can result in a substantial increase in ambient levels of the metals arsenic, cadmium, and chromium since 30–75% of the metals in the fuel can be emitted. Because these metals are carcinogenic, and thus, have no known threshold or safe level of exposure, these increased ambient concentrations would cause an increased risk of cancer to exposed individuals. Specification levels were based on levels of these metals found in dirty virgin fuel oil (i.e., 95th percentile metals levels) because we argued that: (1) Higher levels could result in substantial risk (i.e., 10^{-4}) given that large numbers of persons in urban areas are exposed to emissions from nonindustrial boilers; and (2) lower levels could result in dirty virgin fuel oil displacing used oil without environmental benefit. (See 50 FR at 1697 (January 11, 1986).)

Several comments specifically questioned EPA's rationale for setting specification levels based on the 95th percentile level of those contaminants in virgin fuel oil. A few commenters stated that because these metals can cause serious health problems, specification levels should be based directly on risk to health rather than on concentration in virgin oil. Other commenters (including a major environmental group), however, supported our decision to use the 95th percentile of virgin fuel oil as a reference point. A few respondents

argued that the specification levels selected on the basis of the 95th percentile in virgin oil were too stringent, and that EPA was being overly conservative in assuming that there are no safe levels of exposure for these metals. Workplace threshold limit values (TLVs) and safe drinking water standards were cited as more reasonable for use as specification levels.

These arguments are unpersuasive. For the reasons discussed in the preamble to the proposed rule and summarized above, we continue to believe that limiting levels of these metals to 95th percentile levels in virgin fuel oil is appropriate.

Several commenters also disagreed with the assumptions used to assess risk from chromium (i.e., that all chromium is emitted in its carcinogenic, hexavalent state and, thus, can cause increased cancer risk to exposed individuals). These commenters protested EPA's assumption that chromium is emitted in the hexavalent form following combustion. Comments ranged from assertions that EPA had no data or informtion to make such an assumption to theoretical arguments that when combusted, trivalent chromium would not be converted to hexavalent chromium. In general, these commenters suggested that EPA defer specifying a level for chromium until the Agency conducts studies to definitively determine what happens to chromium when burned in boilers.

We agree that only the hexavalent form of chromium has been proven to be carcinogenic, although it is a very potent carcinogen. The data are inadequate to classify the trivalent chromium compounds as to their carcinogenicity.[80] However, we believe that assuming all chromium compounds emitted from burning used oil in boilers are hexavalent chromium is a conservative, but reasonable assumption. Ibid. Although it is likely that a mixture of the two forms is emitted, information is not adequate to specify the form or the relative quantities of each. Ibid. EPA has initiated an extensive study to better understand the amount of hexavalent chromium and total chromium being emitted from major sources including coal and oil fired boilers and municiple incinerators. In addition, EPA has formally called for information on issues pertinent to the risk posed by airborne chromium emissions including: (1) Are there adverse health effects associated with exposure to trivalent chromium?; (2) does trivalent chromium transform in the atmosphere or in the environment to hexavalent chromium and vice versa?; and (3) what is the relative quantity of hexavalent and trivalent chromium emitted from chromium sources? Ibid.

The Agency, however, cannot postpone regulatory action, given especially that used oil contains significantly higher chromium levels than virgin fuel oil. Until more information is available on these issues, the Agency will therefore continue to assume that chromium emissions are in the hexavalent form.[81]

c. *Flash Point.* Used crankcase oils can be contaminated with highly ignitable constituents of gasoline such as benzene, toluene, and xylene from engine blow-by. Used oils can also be mixed after use with gasoline or other highly ignitable nonhalogenated solvents such as xylene. Even low levels of contamination with these low flash point compounds can reduce the flash point of used oils, normally greater than 200°F, to levels lower than 100°F. Nearly 7% of 650 used oil samples had a flash point below 100°F.[82]

EPA proposed a specification of 100°F because it is the American Society for Testing and Materials' (ASTM) minimum flash point specification level for virgin fuel oils. EPA reasoned that burners are not accustomed to handling such fuels and so used oils with a lower flash point may present significant hazards during handling and storage. Thus, such low flash point oils need to be controlled. EPA specifically requested comment on whether such low flash point used oils should be regulated as off-specification used oil fuel as proposed, or as hazardous waste fuel.

One commenter argued that low flash point used oil should be subject to regulation as hazardous waste fuel to provide adequate controls during storage and transportation. While share the commenter's concerns, we have decided that low flash point oil should be regulated as off-specification used oil, not hazardous waste fuel. This final rule is therefore the first step in the Agency's efforts to regulate the blending and burning of hazardous waste and used oils fuels. Storage and transportation controls for used oil, including off-specification used oil burned for energy recovery, are soon to be proposed and controls (i.e., permit standards) on the actual burning of hazardous waste and off-specification used oil fuels are scheduled to be proposed in 1986. Thus, we believe it may be confusing to the regulated community and may preempt regulatory options in these future rulemakings to subject in piecemeal fashion used oil off-specification only for flash point to regulation as hazardous waste fuel. As a matter of fact, the recycled oil management standards propose that used oil, including off-specification used oil fuel, be subject to the same substantive storage and transportation controls for hazardous waste in many situations.

As a final note on this point, low flash point used oil cannot be presumed to be hazardous waste under the mixture rule (i.e., because the oil is mixed with ignitable hazardous waste). As explained in section IV.B.3 above, the low flash point may be attributable to low flash point constituents of gasoline (e.g., benzene, toluene, or xylene) added to crankcase oil during use.

Several commenters argued that a specification level of 100 °F is inconsistent with the definition of ignitable hazardous waste that uses a flash point of 140 °F or below to define ignitability. See 40 CFR 261.21. We explained at proposal the basis for the difference. See 50 FR 1699, n. 58. The 140 °F flash point limit defining an ignitable waste was based primarily on the hazard posed during land disposal. Given that virgin fuel oils can have a flash point as low as 100 °F, we believe that used oils with flash points of 100 °F to 140 °F pose no greater hazard than virgin fuels (provided they meet the other specification limits).

D. Comments on Allowing Blending to Meet the Specification

The Agency received a large number of comments for and against allowing blending of used oil to meet the used oil fuel specification. Operators of used oil rerefineries and some State environmental officials argued against allowing blending primarily because: (1) Blending does not reduce the total quantity of metals emitted from used oil burning in an urban area—blending limits the emissions from individual sources but allows (in theory) a larger number of sources to burn blended oil so that the same quantity of used oil is burned annually in a given area (and the same quantity of metals are emitted); and (2) allowing blending creates an economic disincentive to remove metals from used oil by rerefining to produce lube oil (and a low-metal content fuel

[80] See EPA's public notice of "Intent to List Chromium or Hexavalent Chromium as a Hazardous Air Pollutant (50 FR 24317-19 (June 10, 1985)).

[81] See also: U.S. EPA, *The Air Toxics Problem in the United States: An Analysis of Cancer Risks For Selected Pollutants*, May 1985.

[82] Franklin Associates Ltd., *Composition of Used Oil*, Appendix A.

by-product)[82] because blending for marketing as fuel is often more profitable than substantial processing.

On the other hand, processors and blenders argued that blending should be allowed because it results in a used oil fuel product that, in general, poses no greater health risk than virgin fuel oils. They argued further that grossly contaminated used oil cannot be economically blended to meet the specification and will go to rerefiners for production of lube oil or to industrial boilers and industrial furnaces for use as a fuel.[83]

Processors and blenders also argued that without blending, alternate markets may not be available to handle the used oil diverted from burning potentially leading to adverse environmental effects (see section IV.C.3 above). Industrial boilers and industrial furnaces may not be able or willing to burn off-specification used oil given the Agency's plans to regulate such burning (beginning with the notification and other administrative controls provided by today's rule). Further, rerefiners cannot be presumed to be an unlimited outlet for used oil. Although many rerefineries are operating below capacity today, and could perhaps double their capacity within a few years to handle the increased supply if blending were prohibited, profitability of rerefining depends on more than an available supply of used oil. Marketing factors such as demand for recycled lube products and price fluctuations in virgin lube products (resulting from fluctuations in crude oil prices or other factors) are also critical. These marketing factors may have played as large a role historically in limiting the viability of used oil rerefining as has the problem of inadequate supply of used oil feedstock due to competition from the largely unregulated used oil fuel market. Thus, processors and blenders believe that without blending, neither the industrial fuel market nor the rerefining market would be able to handle the used oil that would exceed the specification.

The Agency agrees with points made by both sides. The rule does potentially encourage blending, blending creates a disincentive to remove metals by rerefining, and blending *per se* does not reduce (in theory) mass emissions of metals in an urban area. However, we believe that some highly contaminated used oils cannot be economically blended and will go to rerefining or to industrial boilers or industrial furnaces that control metal emissions (either currently, or eventually under rules the Agency will propose in 1986). In addition, as discussed above, it is not clear that rerefineries and the industrial fuel market would have the capacity to handle the used oil exceeding the specification if blending were not allowed. In that case, used oil diverted would be incinerated or dumped, with uncertain environmental trade-offs (i.e., compared to allowing blending). Although blending does not reduce (in theory) mass-emissions in an urban area, blending of used oil to meet the specification reduces the risk to the most exposed individuals. Finally, and most significantly, we believe that blending results in a product that can pose no greater hazard than dirty virgin fuel oil.

For these reasons, today's final rule allows blending. It should be noted, however, that this rule is only the first of three rules that will significantly affect the used oil recycling industry. As we develop these rules, we will examine "flow changes" caused by the regulations (e.g., increase in rerefining, decrease in road oiling, etc.). At that point, we will be better able to determine whether our rules only serve to promote dilution versus removal of metals (e.g., by rerefining or by burning in devices with adequate emissions control equipment). We cannot, at this time, conduct such an assessment, and for the reasons cited above, can find no basis to prohibit blending.

E. Consideration of a Total Ban on Burning Used Oil in Nonindustrial Boilers

At proposal, EPA requested comments on whether all used oil burning in nonindustrial boilers should be banned. See 50 FR 1693–94. EPA was primarily concerned that used oil could be mixed with hazardous waste and illegally marketed as used oil fuel meeting the specification.

Several commenters argued for banning all used oil burning in nonindustrial boilers. These commenters were concerned that used oil would be illegally adulterated with hazardous waste once the used oil is outside the regulatory system (i.e., once a collector, processor, or blender documents the used oil meets the specification). These commenters reasoned that illegal adulteration is inevitable given the current practice, particularly in the Northeast, of mixing hazardous spent solvents with used oil for marketing as virgin fuel oil (usually after blending with virgin oil),[84] given the nature of the used oil and waste management industry (again, particularly in the Northeast),[85] and given the profitability of illegal adulteration. It should be noted that the issue these commenters raise here is whether the proposed regulatory scheme (i.e., allowing burning of unregulated used oil meeting the specification in nonindustrial boilers) can be adequately enforced, not whether the specification itself, in conjunction with the rebuttable presumption of mixing halogenated wastes, is protective *per se*.

Other commenters opposed an outright ban on burning used oil in nonindustrial boilers. These commenters were concerned that a ban could lead to illegal dumping or incineration of used oil with adverse or uncertain environmental trade-offs. For reasons discussed above, rerefinery capacity and the industrial fuel market may be inadequate to handle used oil diverted from nonindustrial boilers under a ban.

Today's rule therefore allows burning of used oil meeting the specification in nonindustrial boilers (or any other boiler or industrial furnace) for a number of reasons. We continue to believe that the specification, in conjunction with the rebuttable presumption of mixing, will detect and control used oil illegally adulterated with hazardous waste. See 50 FR 1693, n. 28. In addition, these rules have been developed with an understanding of the current practices of the industry and should result in cost-effective enforcement. Specifically, the controls are focused primarily on the several hundred marketers of these fuels rather than the potentially thousands of burners. These marketers must determine whether they are handling hazardous waste fuel, off-specification used oil, or unregulated used oil that meets the specification, and must manage the fuel accordingly. The rebuttable presumption of mixing hazardous chlorinated waste with used oil, and the use of oil fuel specification will enable both marketers and

[82] Once used oil is processed to remove metals, it is considered more profitable to further process the oil to produce lube oil rather than to market it as fuel oil.

[83] Potential hazards posed by burning of off-specification used oil in these devices should be temporary. The Agency intends to propose permit standards for burning off-specification used oil fuel (and hazardous waste fuel) that will require that the owners and operators of all boilers and industrial furnaces burning these fuels limit metal emissions.

[84] National Enforcement Investigations Center, *U.S. EPA, Summary of Waste Oil Recycling Facility Investigations*, October 1983.

[85] *Proceedings of the New York State Assembly Standing Committee on Environmental Conservation Public Hearing on the Unlawful Disposal of Solid and Hazardous Wastes:* September 24–26, 1984 at the New York Chamber of Commerce and Industry, New York (Volumes I, II, III B, and III C), and September 19–21, 1984 at the Orange County Government Center, Goshen, New York (Volume I, II, and III).

enforcement officials to make a clear, objective determination of the type of fuel in question, and thus, the applicable controls. Further, the tracking system for fuel shipments, used oil analysis requirements, and recordkeeping requirements are intended to foster efficient and effective enforcement.

It should be noted that, in response to commenters' concerns about enforceability and tracking of used oil that meets the specification, today's rule expands the recordkeeping requirements for used oil meeting the specification. In addition to records of analysis required by the proposed rule, the person who first claims used oil fuel meets the specification must also keep a record of pertinent information regarding the shipment of the used oil including: name and address of the receiving facility, date of shipment, and quantity shipped. See § 266.43(b)(6)(i). This will enable enforcement officials to track movements one step beyond the initial marketer. We considered applying recordkeeping requirements to all subsequent marketers (e.g., distributors) until the used oil fuel is ultimately burned. We decided not to, however, given that the used oil fuel poses no greater risk than virgin fuel oil and, once it enters the commercial fuel oil market, should not be regulated differently than virgin fuel oil. (We note, however, that subsequent adulteration with hazardous waste or off-specification used oil makes specification used oil subject to regulation as either hazardous waste fuel or off-specification used oil fuel.)

Moreover, in response to commenters' concerns discussed above, we reasoned that hazardous waste could be illegally mixed with *virgin* fuel oil, as well as with used oil fuel, and sold to nonindustrial boilers. (Comments of the State of New Jersey illustrate that this type of illegal mixing is presently occurring.) Thus, the risk of adultering legitimate fuels with hazardous waste is not unique to used oil. In light of these considerations, there is no compelling reason to further regulate specification used oil fuel by additional recordkeeping or by a ban on burning in nonindustrial boilers.

F. Analytical Testing to Demonstrate Compliance with Specification Levels and the Rebuttable Presumption

At proposal, EPA indicated that general guidance on sampling and analysis is provided in EPA, *Test Methods for Evaluating Solid Waste*, July 1982, SW–846 (U.S. GPO). See 50 FR 1705. EPA indicated further that the Agency is revising digestion procedures recommended by SW–846 for organic liquids prior to determination of metals concentrations. We were aware that the digestion procedures specified by Methods 3030 and 3050 do not result in good recovery of metals in some oily matrices. Finally, EPA indicated at proposal that it was verifying the accuracy and precision of two field tests for total chlorine that are quick and inexpensive—an adaptation of the Beilstein flame colormetric test, and a field test kit using chemical colormetric procedures.

A number of commenters requested that EPA specify acceptable analytical procedures for halogens, metals, and flash point, and to prescribe acceptable testing frequency. Several commenters also indicated that the Beilstein chlorine test is neither quantitative nor reliable (because of interferences with contaminants) and, thus, not a useful test.

The following sections specify recommended analytical procedures and discuss the Agency's position on sampling procedures.

1. *Chlorine.* EPA's test methods manual, SW–846, does not include an analytical technique for determining total halogens (reported as total chlorine) in oil. Until a total halogen technique for oils is formally added to SW–846 as an approved test, EPA recommends the broadly accepted ASTM D808–81 method (i.e., oxygen bomb followed by titrimetric halogen determination.

The Agency is also evaluating automated halogen determinators and believes that they may prove to be acceptable in many situations. In addition, the Agency is continuing to evaluate the flame and chemical colormetric field tests and believes that the chemical colormetric test in particular may prove to be acceptable in many situations.

The Agency anticipates it will formally propose in early 1986 to add the ASTM D808–81 chlorine determination method to SW–846 as an approved test. The Agency will also decide at that time whether information is adequate to propose to add either field test or the automated determinators to SW–846 as approved tests.

2. *Metals.* EPA is aware that digestion procedures specified by SW–846 for sedimentaceous oils prior to metals determinations (i.e., methods 3030 and 3050) do not result in complete digestion and release of metals in some oily matrices. EPA is evaluating revised digestion procedures and anticipates proposing revisions to the procedures in early 1986. In the interim, EPA recommends using digestion method 3050 followed by the determination method appropriate for specific metals (see Table 6). For non-sedimentaceous oils, however, the solvent dissolution procedures of method 3040 may be used in lieu of digestion method 3050.

TABLE 6.—RECOMMENDED ANALYTICAL PROCEDURES

Parameter	Method		Source
Total halogens	D808–81		ASTM.
Flash point	1010		*SW–846* and *Proposed Test Methods for Evaluating Solid Waste*†.
	Preparation	*Determination*	
Arsenic	3040*/3050	7060	*SW–846* and *Proposed Test Methods for Evaluating Solid Waste*†.
Cadmium	3040*/3050	6010 7131 7131	Do.
Chromium	3040*/3050	6010 7191 7191	Do.
Lead	3040*/3050	6010 7420 7421	Do.

Notes:
*Recommended only for non-sedimentaceous oils.
†SW–46 (*Test Methods for Evaluating Solid Waste*) is available from the U.S. Government Printing Office. *Proposed Test Methods for Evaluating Solid Waste* is available from NTIS under order No. PB8–103–026.

3. *Flash Point.* Procedures for flash point determinations are provided by Method 1010 in SW–846. Method 1010 uses the Pensky-Martens closed cup tester.

4. *Frequency of Testing.* Many commenters asked EPA to prescribe a minimum testing frequency that would eliminate the liability associated with the question of how much testing is enough to demonstrate that the halogen level for the rebuttable presumption of mixing or the specification is not exceeded. Commenters were also concerned that EPA consider the cost and practicability of testing when establishing a minimum testing frequency. A few commenters requested that generators, collectors, and processors be allowed to certify that the used oil meets the specification and has not been mixed with hazardous waste in lieu of testing.

We address the certification question first and then the issue of specifying frequency of testing.

a. *Certification in Lieu of Testing.* Testing is not specifically required to demonstrate conformance with the rebuttable presumption of mixing hazardous halogenated wastes. Thus a, certification passed from party to party stating that hazardous waste has not been added to the used oil appears to be a prudent business approach. Nonetheless, the certifications would

not lessen the burden to rebut the presumption of mixing if in fact the used oil were found, for example by EPA enforcement officials, to contain more than 1000 ppm of total halogens. Given the profitability of mixing hazardous waste with used oil (i.e., charging generators for waste disposal and selling the waste, after blending with oil, as a fuel), the nature of the industry (see note 85), and past practices of illegal mixing of hazardous waste with used oil (see note 84), the Agency will not necessarily accept any claim or certification from any party. Nor would such an approach be consistent with other long-established hazardous waste rules. See, e.g., 40 CFR 262.11 (generators must determine if their wastes are hazardous and are in violation of regulations if their determination is erroneous). We think that the rebuttable presumption promulgated today provides an objective means of distinguishing between used oil and hazardous waste whenever a question exists and we plan to use the presumption routinely during inspections of used oil facilities.

When a person first claims used oil fuel meets the specification, today's rule requires that he obtain an analysis or other information to support the claim. Thus, testing is not specifically required to demonstrate compliance with the specification. (Ordinarily, however, we expect that testing will be used to demonstrate compliance.) The "other information" could include personal, special knowledge of the source and composition of the used oil [86] or a certification from a generator to the processor claiming the oil meets the specification. As explained above, however, if a person who claims used oil fuel meets the specification based on "other information" and the determination is found to be erroneous (i.e., if testing reveals that the oil fails the specification), he is in violation of the regulations.

It should be noted further that if a marketer claims used oil fuel meets the specification when in fact it does not when analyzed by EPA or State enforcement officials at any point until ultimately burned, it is not a defense that the recipient (or subsequent recipients) reasonably believed the oil met the specification. (Again, this approach is identical to that used for hazardous waste.)

EPA and State enforcement officials also have the authority under RCRA section 3007 to enter the premises of a person believed to be handling used oil fuel (including trucks in the process of transport) and to collect samples of fuel oil, irrespective of whether the person reasonably believes his used oil fuel meets the specification, for the purposes of determining compliance with the marketing requirements of today's rule. Thus, a person may not deny access because he believes the used oil fuel he manages meets the specification and is no longer subject to regulation.

b. *Frequency of Testing.* The frequency of testing necessary to ensure conformance with today's rules will vary from situation to situation depending on factors including: (1) Type of, and changes in, sources of used oil; (2) historical results of tests; (3) tank filling and drawdown practices; and (4) tank capacities. Although today's rule does not necessarily require that each incoming shipment of used oil be analyzed for conformance with the presumption of mixing, or that each outgoing shipment of specification used oil fuel be analyzed for conformance with the specification (or that testing be conducted at all), the marketer must be satisfied that each such shipment so conforms. In short, testing must be conducted as often as necessary, and the burden is necessarily on the marketer to determine how often is often enough. (This is comparable to a generator's responsibility to determine whether the wastes he generates are hazardous. See 40 CFR 262.22.) Therefore, we believe it is not practicable to prescribe a testing frequency that is appropriate for all situations.

IV. Regulation of Combustion Residuals

Some commenters asked whether residuals (e.g., fly ash, bottom ash) from burning hazardous waste or used oil for energy recovery are subject to regulation as hazardous waste. Unless specifically excluded from regulation as hazardous waste as discussed below, such residuals are hazardous waste if: (1) The residuals (from burning either hazardous waste or used oil) exhibit a characteristic of hazardous waste; or (2) the residuals result from burning listed hazardous waste and the residual has not been "delisted" under petitioning procedures of § 260.20 (see § 261.3(c)(2)).

These are not new requirements (and are not being revised in any manner by today's rules). These residuals have been subject to regulation as hazardous waste since the RCRA standards were promulgated in 1980. Although the actual burning for energy recovery is a type of recycling currently exempt from RCRA regulation, the exemption does not extend to solid waste generated by recycling.

RCRA Section 3001 temporarily excludes specific combustion residuals from regulation as hazardous waste. The exclusion is codified at § 261.4(b)(4) and applies to residuals from combustion of primarily fossil fuels. The Agency has temporarily interpreted this exclusion to mean that the following solid wastes are not hazardous wastes: "fly ash, bottom ash, boiler slag and flue gas emission control wastes resulting from (1) the combustion solely of coal, oil, or natural gas, (2) the combustion of any mixture of these fossil fuels, or (3) the combustion of any mixture of coal and other fuels, including hazardous waste or used oil fuels, up to a 50 percent mixture of such other fuels." Thus, until the boiler and industrial furnace rules address this issue in 1986, residuals from burning the fossil fuels oil or gas with any quantity of hazardous waste fuel or used oil fuel are not excluded from regulation under § 261.4(b)(4). Residuals from burning coal and up to 50% hazardous waste fuel, however, are excluded.[87, 88, 89]

[86] Repeated testing may not be warranted in every situation. For example, a generator who burns on-site his used oil that testing shows meets the specification may elect to eliminate or reduce the frequency of testing if, for example, the processes that generate the oil do not change. In this case, the generator is using "other information" in lieu of testing. Nonetheless, if his determination is erroneous, he is in violation of the regulations, as explained in the text

[87] Taken from correspondence from Gary N. Dietrich, Associate Deputy Assistant Administrator for Solid Waste, EPA to Paul Emler, Jr. Chairman, Utility Solid Waste Activities Group, dated January 13, 1981. Mixtures of coal and up to 50% of other fuels are excluded from regulation (at this time) because any contaminants from the other fuels (e.g., hazardous waste) would be largely diluted by the coal combustion residuals. This may not be the case with oil or gas combustion given the low volumes of bottom and fly ash generally produced from combustion of these fuels.

[88] These residuals may in fact contain only minimal levels of toxic organic compounds in situations where boilers (and industrial furnaces) are operated to achieve maximum combustion efficiency. The Agency is considering during development of the permit standards for boilers and industrial furnaces modifying the derived-from rule to exempt noncharacteristic residuals in cases where we are certain that residuals do not contain significant levels of toxic organics.

[89] We note that the exclusions (from regulation as hazardous waste) for certain large volume wastes produced by facilities under the "mining waste" exclusion of § 261.4(b)(7) may apply to certain industrial furnaces burning hazardous waste or used oil. Any such exclusions apply (pending development of the boiler and industrial furnace permit standards) irrespective of whether the devices burn hazardous waste or used oil for energy recovery given the likely effect of dilution of any contaminants attributable to the hazardous waste or used oil. Similarly, the exclusion for cement kiln dust provided by § 261.4(b)(8) applies irrespective of whether the kiln burns hazardous waste or used oil for energy recovery.

EPA also is providing that residues from burning hazardous waste fuels that are exempt from regulation under § 261.6(a)(3)(v)-(ix) (i.e. hazardous waste fuels derived from petroleum industry wastes, petroleum coke derived from certain petroleum industry hazardous waste, and coke and coal tar derived from steel industry decanter tank tar sludge) are not covered by the derived from rule. With respect to burning petroleum industry fuels derived from petroleum industry wastes, these fuels may be no different in composition than virgin fuels (at least when low volumes of wastes are introduced into the refining process). See sections III.C.1 and 2 above. Under these circumstances, wastes from burning these fuels also would be no different than from burning virgin fuels, so the derived-from rule should not apply.

EPA is exempting from the derived-from rule wastes from burning petroleum coke to further Congressional intent that the coke is subject to regulation only if it exhibits a characteristic of hazardous waste. RCRA section 3004(q)(2)(A). Thus, consistent with § 261.3 (c)(2) and (d)(1), wastes from burning the coke should only be considered hazardous when they exhibit a hazardous waste characteristic. With respect to the iron and steel coke and coal tar, EPA has found that these waste-derived fuels are not significantly different than the virgin fuels for which they substitute (and that the organic toxicants in these fuels are likely destroyed by burning as well). Thus, the derived-from rule should not apply to the wastes from burning, which also would be comparable to the wastes from burning virgin coke and coal tar.

V. Consideration of Special Requirements for De Minimis Quantities Burned On Site

Several commenters suggested that EPA establish a *de minimis* quantity of off-specification used oil fuel and hazardous waste fuel that could be burned without regulation. Although commenters suggested various quantity levels to qualify for an exemption, the majority recommended a limit of 0.5–1% of the total fuel consumption of the boiler or industrial furnace. Some commenters also urged EPA to institute a permit-by-rule program for facilities burning small quantities of hazardous waste fuel or off-specification used oil fuel that are generated on-site.

Section 3004(q)(2)(B) of RCRA explicitly allows EPA to exempt facilities that burn *de minimis* quantities of waste as fuel, provided that the wastes are generated on-site, are burned for energy recovery, and are burned in a device with sufficient destruction and removal efficiency not to present a significant risk to human health and the environment. EPA is presently examining the issue of *de minimis* burning in developing the Phase II permit standards for owners and operators of boilers and industrial furnaces. Although we may propose to exempt *de minimis* quantities from the Phase II permit standards, the basic administrative controls promulgated today (e.g., notification) would probably still apply to on-site burning.[90] Therefore, today's rule does not provide a *de minimis* quantity exemption since, for industrial burners, the rule only addresses these administrative controls.

A few commenters argued that hazardous waste fuel and off-specification used oil fuel burned on-site should not be subject to regulation *irrespective of quantity*. These commenters argued that storage of hazardous waste fuels is adequately controlled by State and local governments and that burning of either hazardous waste fuels or off-specification used oil fuel is adequately controlled by State or local air pollution permits. We find these arguments without merit. The hazards posed by handling and burning hazardous waste fuels and off-specification used oil fuels are substantial and essentially the same irrespective of whether the fuels were generated at that site. EPA has made this finding for years with respect to other hazardous wastes, and no arguments have been presented distinguishing hazardous waste fuels from all other hazardous wastes managed on site. The commenters' argument also was rejected in the legislative history to the HSWA. See S. Rep. 98–284, 98th Cong. 2nd Sess. at 38. Moreover, the storage of hazardous waste fuels and the burning of either hazardous waste fuel or off-specification used oil fuels can pose much greater risk to human health and the environment than storage and burning of virgin fossil fuels. State and local controls on storage and burning of virgin fuels are not intended to provide the level of control of releases of toxic constituents from storage facilities or from boilers or industrial furnaces that EPA's regulations will provide, starting with today's final rule.

[90] It should be noted that today's rule does not regulate storage of used oil fuel. Although storage of hazardous waste fuel is regulated by today's rule, special (i.e., reduced) standards are already provided for on-site storage in tanks and containers of hazardous waste by generators (see § 262.34). Further, small quantity generators are already exempt from storage standards under § 261.5.

PART THREE: COMBUSTION DEVICES THAT ARE REGULATED

I. Overview

In this section, we identify boilers and industrial furnaces subject to regulation and distinguish between nonindustrial boilers and industrial or utility boilers. We also explain the basis for regulating nonindustrial boilers immediately in advance of controls for industrial boilers and industrial furnaces. In addition, we discuss how these nonindustrial boilers can continue burning hazardous waste when they operate under permit standards for hazardous waste incinerators. Finally, we discuss controls for used oil space heaters and EPA's intent to provide additional controls for these devices in the rulemaking proposing permit standards for burning in boilers and industrial furnaces scheduled for 1986.

II. Regulation of Boilers

A. Basis for Regulating Boilers by Boiler Use

Today's rule prohibits the burning of hazardous waste and off-specification used oil fuel in nonindustrial boilers (e.g., located in apartment and office buildings, schools, hospitals) and, for the time being, continues to allow burning of such fuels without substantive controls in industrial and utility boilers (and industrial furnaces). As EPA stated at proposal, the rule singles out nonindustrial boilers because burning hazardous waste fuels and off-specification used oil fuels in these boilers can pose the most significant and immediate health risks. See 50 FR 1687–1688 and 1701, n. 63. Nonindustrial boilers are typically very small and may not achieve complete combustion of toxic organics (e.g., 99.99% destruction) because of inadequate controls to maintain optimum combustion conditions when firing fuels the boiler is not designed to burn. Further, virtually no nonindustrial boilers are equipped with emissions control equipment that would control (at least to some extent) metals emissions, while many industrial furnaces and some industrial boilers are so equipped. The risks from emissions of incompletely burned toxic organic compounds and toxic metals from nonindustrial boilers is compounded because these boilers are typically located in urban areas where sources are frequently clustered closely together. Thus, emission plumes from numerous sources can overlap and increase ambient concentrations of toxic compounds. Further, individuals can be exposed to high ambient levels of emitted toxicants because they can be

located close to the sources and exposed to the even higher toxicant levels above-ground (e.g., if the individual is exposed to above-ground air through a window in a multi-story apartment or office building).

EPA also stated at proposal that there may be many situations where industrial (and utility) boilers and industrial furnaces can burn hazardous waste fuel or off-specification used oil fuel without posing significant risks. See 50 FR 1688. For example, large boilers or industrial furnaces may be operated by trained operators and equipped with combustion controls sophisticated enough to maintain peak combustion efficiency when burning fuels the unit is not designed to burn.

Further, many industrial furnaces and some boilers are equipped with particulate control equipment that may adequately control emissions from metal-bearing waste fuels. The Agency has recently completed a testing program to determine under what operating conditions boilers and industrial furnaces can burn waste fuels without posing significant health risks. As a result of that effort, EPA plans to propose technical, permit standards for burning hazardous waste fuels and off-specification used oil fuels in boilers and industrial furnaces in 1986 taking into account when and how these wastes can be burned safely in these devices.

One commenter questioned whether burning hazardous waste fuels in a nonindustrial boiler is prohibited if the boiler can comply with the permit standards for hazardous waste incinerators. Other commenters suggested that criteria other than boiler use (e.g., boiler size) should be used to identify those boilers subject to the prohibition. These issues are discussed below.

1. *Conditional Exemption for Nonindustrial Boilers Burning Hazardous Waste Fuel.* EPA explained at proposal that there may be particular nonindustrial boilers that may burn hazardous waste fuels (we know of one location) effectively due to the unit's operating conditions, type of hazardous waste fuel, etc. To allow such burning to continue, EPA said that the owner or operator must comply with the hazardous waste incinerator standards of Subpart O of 40 CFR Parts 264 or 265. See 50 FR 1688. The owner or operator must also comply with the requirements for burners in today's rule (e.g., storage standards). See § 266.35. We are making a conforming amendment to Subpart O to make clear that this possibility exists.

Owners and operators of nonindustrial boilers currently burning hazardous waste fuel are eligible for the interim status incinerator standards of Part 265 because they first become subject to those regulations today. Those interim status standards will reduce the hazards posed by these operations by prohibiting burning during start-up and shut-down and by applying the general facility standards (e.g., closure, financial requirements) for hazardous waste management facilities.

The Regional Administrator has the discretion to permit these facilities under Part 264, Subpart O (and applicable storage provisions) by calling in their Part B permit applications. We do not expect, however, that nonindustrial boilers that continue to burn hazardous waste fuel under the interim status standards of Subpart O of Part 265 will be formally permitted under Part 264, except in exceptional circumstances. Rather, we expect that any such nonindustrial boilers would be ultimately permitted under the permit standards for boilers and industrial furnaces to be proposed in early 1986. Those permit standards will likely control emissions of toxic organics, toxic metals, and hydrogen chloride. We believe the standards would be protective when applied to any device—e.g., industrial or nonindustrial boilers. Moreover, those boilers and industrial furnace standards will be equally or more protective than the incinerator standards under Subpart O of Part 264 (e.g., the Agency may propose direct control of metals emissions from boilers and industrial furnaces while particulate controls are used for incinerators to indirectly control metals).

2. *Consideration of Other Criteria for Identifying Boilers Subject to the Prohibitions.* At proposal, EPA explained why the prohibitions on burning hazardous waste fuel and off-specification used oil fuel would apply to boilers based on boiler use—the prohibitions would apply to nonindustrial boilers. Burning these fuels in nonindustrial boilers can pose substantial and immediate risks for the reasons discussed above. EPA explained further that it plans to propose permit standards in 1986 for industrial and utility boilers and industrial furnaces. Nonetheless, EPA specifically requested comments on whether small industrial boilers should also be prohibited from burning hazardous waste and off-specification used oil fuels, given that very small boilers, whether industrial or nonindustrial, may typically be equipped with less sophisticated combustion controls and may be less rigorously operated and maintained to achieve peak combustion efficiency.

Many commenters said that large nonindustrial boilers can burn hazardous waste fuel as efficiently as large industrial boilers and should not be prohibited from doing so. These commenters apparently did not understand that EPA said as much in the preamble to the proposal and said that these boilers may continue burning hazardous waste fuel if they comply with the standards for hazardous waste incinerators, until we promulgate permit standards for boilers as discussed above. We believe that it is reasonable to require such nonindustrial boilers to comply with the incinerator standards now and postpone regulation of industrial boilers until we promulgate permit standards for boilers because nonindustrial boilers as a class are likely to pose greater risks because they are more likely to be located within densely populated areas. (Although industrial boilers are frequently located in urban areas, nonindustrial boilers are almost always so located.)

Many commenters argued for and against prohibiting burning small industrial boilers using the issues EPA discussed in the preamble to the proposal. See 50 FR at 1700–1701. Today's rule does not prohibit burning in small industrial boilers. Although it can be argued that nonindustrial and industrial boilers of the same size are likely to burn hazardous waste fuel with similar destruction efficiency, we believe that nonindustrial boilers as a class pose a greater hazard for the reasons given above. Thus, as discussed above and at 50 FR 1687–1688, it is reasonable to require nonindustrial boilers to comply with the incinerator standards now and postpone regulation of industrial boilers until we promulgate permit standards for boilers.

Several commenters recommended that EPA prescribe design and operating conditions, or performance standards, or consider boiler location rather than prohibiting burning in particular devices. The permit standards for boilers that we plan to propose in 1986, in fact, would use performance standards, or alternative operating conditions, to permit burning of hazardous waste fuel in *any* boiler. However, until those standards are promulgated, nonindustrial boilers will be subject to the conditional prohibition for the reasons given above.

Boiler location has been considered in supporting immediate regulation of nonindustrial boilers—they are typically located within highly populated areas. Persons in less densely populated areas would have a lower exposure; thus, we could use site-specific risk assessments

to support alternative, reduced controls. Given the complexity of quantitative risk assessments (i.e., assessments that are used to support particular controls for particular facilities) and the number of boilers that burn off-specification used oil fuel and hazardous waste fuel, a regulatory program based on site-specific risk assessment would be difficult to implement with current and foreseeable resources. Thus, we have not included a variance procedure based on risk assessment in today's rule.

B. Definition of Industrial Boiler

Today's rule, like the proposal, uses the terms industrial boilers, utility boiler, and industrial furnace to identify combustion devices that are not nonindustrial boilers subject to the prohibition. We believe it is less confusing to define the devices that are not subject to the prohibition than to attempt to define and identify the various types of nonindustrial boilers (e.g., residential, commercial, institutional).

EPA defined the term "industrial boiler" at proposal as any boiler that produces electric power, steam or heated or cooled air, or other gases or fluids for use in a manufacturing process. Further, EPA has defined "boiler" as an enclosed device using controlled flame combustion and having specific characteristics including' (1) The combustion chamber and primary energy recovery section must be of integral design (e.g., waste heat recovery boilers attached to incinerators are not boilers); (2) thermal energy recovery efficiency must be at least 60% and (3) at least 75% of recovered energy must be "exported" (i.e., not used for internal uses like preheating of combustion air or fuel, or driving combustion air fans or feedwater pumps). See 50 FR at 661 (Jan. 4, 1985).

Some commenters requested that EPA include in the definition of industrial boiler those boilers which are physically located on the premises of a manufacturing facility but which recover energy solely for space heating rather than manufacturing. Commenters argued that these boilers are often the same size and are operated no differently than other boilers at the facility producing energy used for actual manufacturing. Further, such boilers are often located in industrially zoned areas, thus reducing the probability of large numbers of persons being close to the source and being exposed to above-ground level concentration as would be typical of many nonindustrial boilers. Thus, commenters argued that since the burning characteristics and risks are similar for all boilers located at manufacturing facilities, the boilers should be regulated in the same manner. EPA agrees and has amended the regulations accordingly. Section 266.31(b)(2)(i) has been modified from proposal to define an industrial boiler as any boiler located on the site of a manufacturing facility.

Although we believe this definition of industrial boiler will enable the vast majority of boiler owners and operators to clearly catagorize their boilers, there may be situations where it is not so clear. If an owner or operator is not sure whether his boiler meets today's definition of industrial boiler, he should contact the Regional Administrator for a determination.

C. Definition of Utility Boiler

EPA defined utility boilers at proposal as boilers used to produce electric power, steam, heat or cooled air, or other gases or fluids for sale. Owners and operators of utility boilers are burners regulated in the same way as owners and operators of industrial boilers.

We identified utility boilers separately from industrial boilers only as an indirect means of identifying nonindustrial boilers subject to the prohibitions (i.e., it is less confusing to identify boilers *not* subject to the prohibitions than to define nonindustrial boilers subject to the prohibitions). Clearly, utility boilers are not nonindustrial boilers and have never been identified as such.

A few commenters requested that EPA distinguished between industrial and utility boilers on the basis that utility boilers achieve good combustion efficiency and have emission control equipment thereby leading to safe and efficient burning of off-specification used oil fuel. The commenters, however, did not specify what practical regulatory distinctions should be made.

Any special design, operation, or emissions control features that utility boilers may have that will reduce risk posed by burning used oil will be considered during development of the permit standards for burning hazardous waste fuel and off-specification used oil fuel in boilers and industrial furnaces scheduled to be proposed in 1986. EPA can see no reason why utility boilers should not be subject to the rules promulgated today.

D. Nonindustrial Boilers

In the proposal, EPA explained that nonindustrial boilers include those located at: (1) Single or multifamily residences; (2) commercial establishments such as hotels, office building, laundries, or service stations; and (3) institutional establishments such as colleges, hospitals, and prisons,. To avoid the problem of providing a clear, encompassing, and unambiguous definition of nonindustrial boiler, we have identified and defined those devices not subject to today's prohibition: industrial boilers, utility boilers, and industrial furnaces.

E. Marine and Diesel Engines

Used oil may be burned in other devices such as diesel or marine engines. These devices may not meet the definition of a boiler and are not listed as industrial furnaces under § 260.10. See 50 FR at 661 (January 4, 1985). Used crankcase oil from diesel engines is frequently blended with virgin diesel fuel and burned in diesel engines (e.g., tractor-trailer engines). In addition, used oil is sometimes used as fuel for ship engines. Although such burning is for the purpose of energy recovery (i.e., the used oil provides substantial, useful heat energy, and in fact replaces virgin fuels), the burning of used oil in these devices was not considered during development of the proposed rule. Given that it is not clear that diesel and marine engines meet the definition of a boiler, that EPA has not taken comment on whether such devices meet the definition, and that today's rules apply to used oil that is burned in a boiler (or industrial furnace) for energy recovery, today's rules do not apply to marketers and burners of such used oil. Thus, the used oil fuel specification and the invoice and certification recordkeeping system do not apply to such used oil.[91]

With respect to notification requirements, we have determined that owners and operators of these devices need not notify the Agency (this type of exemption if expressly allowed under Section 3010(a)). We do not think it serves any practical purpose for owners and operators of marine engines (many of which are under foreign ownership) or other diesel engines such as the thousands of diesel trucks [92] to notify of

[91] It should be noted that if a person markets off-specification used oil fuel exempt from today's rules because it is burned in marine diesel engines, that person has the burden of proof to demonstrate that in fact, such exempt used oil will be burned in those devices. See 50 FR 1692 (January 11, 1985) and 50 FR 642 (January 4, 1985). Ordinarily, invoices that track a shipment of off-specification used oil to the end user (i.e., marine or diesel engine owner or operator) will be required to carry this burden.

[92] Further, even if such used oil burned in diesel trucks were subject to today's used oil fuel specification, the oil would not likely exceed the specification as burned. As will be discussed in some detail in the used oil listing/management standards rulemaking that will soon be proposed, used diesel crankcase oil is typically mixed with

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their used oil burning activities at this time, and EPA does not need such information to assess what rules may ultimately be appropriate.

Marketers of used oil that is burned in marine or diesel engines, on the other hand, must comply with the notification requirement. EPA needs to know who these marketers are to be able to investigate whether these marketers are mixing hazardous waste with used oil. Hazardous waste, including used oil mixed with hazardous waste, cannot be burned in maring or diesel engines unless the devices are permitted as hazardous waste incinerators. (Devices that burn hazardous waste by means of controlled flame combustion and that are neither boilers nor industrial furnaces are considered to be incinerators for regulatory purposes. See §260.10 in 50 FR 661 (January 4, 1985).) Thus, used oil marketed for use as fuel in marine and diesel engines is (like other used oils) subject to the presumption of mixing hazardous waste established by today's rule.)

It should also be noted that although the used oil fuel specification and the invoice and certification recordkeeping system established by today's rule do not apply to used oil marketed for use as fuel in marine or diesel engines, such used oil would be subject to the transportation and storage controls for recycled oil that will soon be proposed. When promulgated, those controls will supersede today's rules for used oil fuels and will apply to all recycled oils.

III. Regulation of Industrial Furnaces

EPA has defined "industrial furnace" as those devices specifically listed by the Administrator as enclosed devices that are integral components of a manufacturing process and that use a controlled flame to accomplish recovery of materials or energy. See 50 FR 661 (January 4, 1985). The Agency has also identified criteria for listing other devices as industrial furnaces. To date, the list of industrial furnaces includes cement kilns, lime kilns, aggregate kilns (including asphalt kilns), blast furnaces, and smelting, melting and refining furnaces.

Owners and operators of these industrial furnaces are subject to today's rules for burners (see § 266.35) when they burn hazardous waste or off-specification used oil for energy recovery or for both energy recovery and another recycling purpose (see section II of this preamble).

IV. Regulation of Used Oil Space Heaters

As proposed, today's rule provides a conditioned exemption from the prohibition on burning off-specification used oil fuel in used oil space heaters. EPA stated at proposal (see 50 FR at 1700) that it is deferring regulation of these devices until it better understands the risk they pose and evaluates regulatory options to address any such hazards. EPA stated further that it would address regulation of these devices in future rulemakings. In the interim, these space heaters may continue to burn off specification used oil fuel provided that they vent the heater to the outdoors and burn only used oil they generate or receive from do-it-yourself oil changes.[93]

As EPA explained at proposal, used oil space heaters are very small heaters frequently used in service stations and auto repair shops. The units typically burn 1 to 2 gallons of used crankcase oil per hour. NInety percent (90%) of the heaters are the vaporization type where the oil is vaporized from a pan at the base of the heater while metals and heavy, low volatility compounds remain in the pan (and are cleaned out periodically). The other heaters are the atomization type where the oil is sprayed into the combustion chamber. Vaporization units appear to have low metals emissions rates—5 to 15% of the metals are emitted. This is comparable to (or lower than) the metals emission rate from larger boilers (industrial or nonindustrial). Atomization units, however, appear to have relatively high metals emissions rates—75% to 95%. EPA concluded that vaporization units probably do not pose a health risk while it is not clear whether atomization units pose significant risks given the small size of the units.

Most commenters supported the exemption and believed that no further regulation is necessary. Supporters argued that vaporization units comprise 90% of the units in operation and emit only low levels of metals. Supporters of the exemption were silent with respect to atomization units.

Opponents to the exemption used various arguments and proposed various regulatory alternatives. Many commenters were concerned that the risk from metals and toxic organic emissions could be significant given that these space heaters are frequently operated in residential areas. They argued that it would be premature to grant an exemption until further risk assessment is conducted.[94] Some opponents suggested that atomization heaters be banned entirely and others suggested application of emissions standards to both atomization and vaporization units. In addition, some commenters suggested that an exemption would actually cause a proliferation of space heaters since they could be viewed as a cheap, easy method of providing heat as well as getting rid of used oil. Thus, EPA should consider "grandfathering" existing space heaters rather than granting a blanket exemption. Commenters were also concerned that space heaters could provide a loophole for disposal of hazardous waste generated at service stations and auto repair shops by mixing with the used oil to be burned.

EPA continues to believe that atomization space heaters may pose significant risk in unique situations (e.g., where multiple atomization units burning used oil with high levels of metals are clustered together, and persons are located close to the sources) while the much more prevalent vaporization units probably do not pose significant risks. Thus, we do not believe there is a compelling reason to take the extreme measure at this time of virtually banning the use of these devices which would result if they were not exempted from the prohibition on burning off-specification used oil fuel. We intend to include regulations for these devices, as deemed necessary, when we propose permit standards for all boilers and industrial furnaces in 1986. Thus, we can ensure that controls on burning in these devices are consistent with controls, particularly for metals emissions, on other boilers and industrial furnaces. In addition, by that time, we will have proposed the comprehensive management standards for recycled oil which would regulate generators and collectors, as well as the marketers and burners (except for permit standards for burning) regulated by today's rule. At that time, we can consider the regulatory impact on generators, as

95% virgin diesel fuel before use as a diesel fuel. The blended fuel is likely to meet the used oil fuel specification. Thus, owners and operators of such engines would be burning a used oil that meets the specification and that would be exempt from regulation.

[93] The exemption is also conditioned on the unit having a capacity of less than 0.5 million Btu/hr. This encompasses all used oil space heaters in use today and prevents operators of larger boilers from claiming they operate used oil space heaters.

[94] Harvard University submitted information about research they have been conducting regarding the effect of emissions from used oil on mammalian lung tissue. Various dosages were applied in a short-term inhalation study utilizing hamsters. Harvard reported results showing lung damage from metals and other toxic constituents from both vaporization and atomization heaters, and recommended further study to develop rational risk estimates.

required by RCRA section 3014(c), of regulating used oil space heaters in conjunction with the entire regulatory scheme for recycled oil.

As a final note, a few commenters suggested that proposed § 266.41(b)(4)(i) be revised to conform with explicit preamble language that allows the owners or operators of exempted space heaters to burn used oil received from "do-it-yourself" oil changers as well as used oil they generate. We agree and have modified that provision in the final rule at § 266.41(b)(2)(iii).

PART FOUR: ADMINISTRATIVE AND STORAGE STANDARDS

I. Administrative Standards

A. Overview

Hazardous waste fuels and off-specification used oil fuels are subject to certain administrative requirements, including a one-time notification to identify waste-as-fuel activities and to obtain a U.S. EPA Identification Number. Even if an individual has previously notified the Agency, and already has a U.S. EPA Identification Number he must renotify to identify his waste-as-fuel activities (although his Identification Number remains the same). Other administrative requirements include compliance with a manifest system (for hazardous waste fuels), or an invoice system (for off-specification used oil fuel) and recordkeeping. In addition, persons receiving shipments of hazardous waste fuel or off-specification used oil fuel must certify to the shipper that they have notified EPA of their waste-as-fuel activities, and that they may legally burn the fuel. These controls make it possible to administer and enforce the prohibitions against burning in nonindustrial boilers, and provide for proper tracking of the materials.

The administrative requirements apply to both marketers and burners of hazardous waste fuel and off-specification used oil fuel. Generators of hazardous waste or used oil who send their waste directly to an individual who burns those wastes are considered to be marketers and are subject to these controls. Conversely, generators who send their hazardous waste or used oil to an individual who does not burn the waste for energy recovery are not considered to be marketers, even if the waste is burned later for energy recovery by another person. (Such generators of hazardous waste, however, are subject to 40 CFR Part 262 as ordinary hazardous waste generators.)

Hazardous waste fuel transportation is subject to the full set of Part 263 requirements. This rule regulates for the first time transporters of hazardous waste fuel that is neither a listed waste nor a sludge. These hazardous wastes are currently exempt from regulation under § 266.36 (see 50 FR 667 (January 4, 1985)), a provision that is superseded by today's new Part 266 standards. Used oil transportation is exempt from the administrative requirements in order to avoid piecemeal regulation of used oil transporters.[95] If used oil fuel transporters are regulated while other used oil transporters are not, transporters could avoid complying by claiming that the used oil is intended for other purposes. EPA will address regulation of transporters in its recycled oil management standards scheduled to be proposed later this year.

The following table summarizes the controls required under today's rule:

TABLE 7.—CONTROLS FOR WASTE FUELS

	Hazardous waste fuel	Off-specification used oil fuel
Generator[1]	Part 262[2]	Exempt.
Marketers[1]	N,RN,P,M,C,R,S	N,RN,P,I,C,R.
Transporters	Part 263[3]	Exempt.
Burners	N,RN,P,M,C,R,S	N,RN,P,I,C,R.

Note:

[1] Hazardous waste and used oil generators are not regulated as marketers unless they market directly to a burner.

[2] Hazardous waste generators who send their waste to a hazardous waste fuel marketer are subject to Part 262 standards as ordinary generators. See §266.32(a). Generators who market their hazardous waste fuel to burners are subject to the Part 262 generator standards as well as today's hazardous waste fuel marketer requirements. See § 266.32(b).

[3] Hazardous waste fuel transporters are subject to regulation as ordinary hazardous waste transporters. Thus, they are not required to notify or re-notify for their waste-as-fuel activities. However, they must notify for their hazardous waste transportation activities if they have not notified already.

Key

N—Notification and identification number.
RN—Renotify for waste-as-fuel activities.
P—Prohibitions on marketing to, or burning in, nonindustrial boilers.
M,I—Compliance with manifest (M) or invoice (I).
C—Provide or receive certification of compliance with standards for burning.
R—Recordkeeping.
S—Storage Standards.

B. Notification Requirements

1. *Purpose of Notification.* Notification is necessary because EPA must be able to identify those persons who engage in waste-as-fuel activities in order to ensure that waste fuels are managed properly and not routed to nonindustrial markets. The special waste-as-fuel notification is mandated under RCRA section 3010(a), as amended. A U.S. EPA Identification Number will be assigned to those facilities subject to RCRA regulation for the first time.

2. *Who Must Notify.* The following persons must notify either EPA or an authorized state[96] to identify their waste-as-fuel activities: (1) Marketers of hazardous waste fuel or off-specification used oil fuel (e.g., third-party processors, blenders, and distributors, and generators marketing directly to burners); (2) burners of hazardous waste fuel or off-specification used oil fuel, except generators who burn their oil in space heaters under § 266.41(b)(2)(iii); and (3) marketers (or burners) who first claim used oil fuel meets the specification and so is exempt from subsequent regulation. If any of these individuals has previously notified the Agency of any hazardous waste management activities and obtained a U.S. EPA Identification Number, they must renotify, and may use the revised notification form to do so (see discussion below).

EPA explained at proposal that the following persons need not comply with the waste-as-fuel notification requirement: (1) Hazardous waste generators who neither burn their wastes for energy recovery nor market their wastes for energy recovery directly to a burner, because they may not know the end use of their waste; (2) hazardous waste fuel transporters, for the same reason given for generators;[97] and (3)

[95] Many used oil transporters (collectors) pick up used oil from several small generators and aggregate the oil at satellite storage facilities prior to shipment in larger tankers to used oil processors or rerefiners. These transporters are not considered marketers unless: (1) They ship used oil directly to a person who burns the oil for energy recovery; or (2) they process used oil to produce a fuel at the storage facility. Any blending of used oils resulting from accumulation in the transporter's storage tanks is incidental to the primary function of accumulation and is not considered to be blending or processing in this rule.

[96] EPA is allowing notifiers to notify either EPA or States authorized to operate the hazardous waste program even though amended section 3010(a) requires that *both* EPA and authorized States be notified. EPA is deviating from the statutory provision for practical reasons. EPA and authorized States have developed a system for handling section 3010 notifications that heretofore could be submitted to either EPA or the State. Under that system, the State automatically forwards notifications it receives to EPA for processing and assignment of an identification number. If waste-as-fuel notifications were submitted to both EPA and the authorized State, a facility could inadvertently be assigned two identification numbers. Thus, simultaneous notifications to both EPA and States not only will not further environmental protection, but could be counter-productive. In addition, the requirement that persons notify both EPA and States was to provide that regulations implementing the HSWA take effect immediately even in authorized States, a concern later addressed directly by amended section 3006(g). By amending section 3006(g), Congress eliminated the need for dual notification.

[97] Hazardous waste generators and transporters are nonetheless subject to the notification (and other requirements) of Parts 262 and 263 as ordinary generators and transporters. Thus, the significance of the discussion in the text is that generators and transporters need not *renotify*.

used oil generators and transporters (unless they also market directly to a burner).[88]

Notification also does not apply to owners and operators of boilers or furnaces, including but not limited to nonindustrial boilers, who burn used oil fuel that meets the specification.

3. *Use of the Hazardous Waste Notification Form.* Persons required to file notifications (or renotify) with EPA or authorized States because of their waste-as-fuel activities may use EPA Form 8700–12 (revised 11/85): "Notification of Hazardous Waste Activity." See the appendix to today's regulation. This form is a revision of the existing notification form which was modified to include waste-as-fuel notification requirements. The Agency made minor changes to the proposed form to make it clear that persons who first claim that the used oil fuel they market meets the specification are subject to the requirements (including notification, used oil analysis, and recordkeeping) provided under § 266.43. See preamble discussion in section IV.E of Part Two.

The revised notification form provides EPA with the number and location of facilities involved in processing, blending, marketing, and distributing of waste fuels, and the number, type, and location of burners. These data will be used to develop a general profile of the waste fuel industry and assist in future regulatory development.

Several commenters suggested revisions to the proposed notification form. One commenter argued that language requiring the signer of the form to be personally familiar with and responsible for the veracity of the responses places an undue burden on managers of facilities who may not be aware of all operations of their facility on a day-to-day basis. This requirement has been in place since the notification form was first used for the RCRA hazardous waste program in 1980. It is not a special requirement pertaining to notification of waste-as-fuel activities. EPA sees no compelling reasons to modify its longstanding position that one person must ultimate take responsibility for a facility's operation and compliance with federal regulations.

Another commenter suggested that the reference to "listed infectious waste" on the proposed form be dropped, since no such category exists. This was an oversight on EPA's part, and has been deleted from the final form.

4. *Notification Procedures and Implementation.* As EPA indicated at proposal, it estimates that there are, at most, 20,000–30,000 persons that may be required to file notifications. While EPA does not intend to carry out a mass mailing to potentially affected parties, the Agency will widely announce the notification requirements of these rules through the press and trade journals.

Persons required to notify under today's rule should consider this **Federal Register** notice their final notice to submit a notification. To obtain a notification form, you should contact your authorized State hazardous waste agency or your U.S. EPA Regional Office. Each requester will receive a complete notification package, including a form and accompanying instructions, to assist him in filing his notification.

EPA will return to each notifier an acknowledgment of receipt of the notification, and will issue a U.S. EPA Identification Number if one was not previously assigned. This acknowledgement in no way constitutes an endorsement by EPA of the adequacy of the notification or of the notifier's business practices; rather, it serves as a confirmation that EPA received the notification.

5. *Legal Significance of Notification.* EPA is promulgating the notification requirement for hazardous waste fuels and off-specification used oil fuels under the authority of Section 3010(a) of RCRA, as amended. The notification is a prerequisite for RCRA interim status (see RCRA section 3005(e)(2)) for owners and operators of hazardous waste fuel storage facilities. See H.R. Rep. No. 98–198 at 41, likewise specifying that notification of management of hazardous waste fuels serves as a prerequisite for interim status.)

C. Transportation Controls

As proposed, EPA is adopting today a system to track movement of hazardous waste fuel and off-specification used oil fuel from the initial marketers (e.g., processors, blenders, distributors, or generators who market to burners through intermediaries (e.g., transporters, distributors) to the industrial users who burn the fuel for energy recovery.[89] This tracking system allows regulatory officials to track a hazardous waste fuel or off-specification used oil fuel from point of processing, blending, or other treatment to point of burning, thus making the prohibition on burning in nonindustrial boilers enforceable. Equally important, the tracking document (either a manifest or an invoice) alerts persons who handle these materials that they are receiving a hazardous waste or off-specification used oil.

Consequently, EPA today is finalizing its proposal that all shipments of hazardous waste fuel be accompanied by a manifest. Hazardous waste fuel marketers are subject to the transportation (and pre-transport) requirements of 40 CFR Part 262 and transporters are subject to the requirements of 40 CFR Part 263.

We are requiring a slightly different system for off-specification used oil fuel, whereby marketers (e.g., processors, blenders, distributors, and generators who market to burners) offering off-specification used oil fuel for sale must prepare and send an invoice to the fuel buyer, but do not have to have the invoice physically accompany each shipment. (Transporters thus will not have to comply with any invoice requirement.) This distinction (i.e., invoice in lieu of a manifest) is needed to avoid piecemeal regulation of used oil transporters, as explained at proposal. See 50 FR 1704 n. 76.

The invoice must include the shipment initiator's name, address and identification number, the receiving facility's name, address, and identification number and the quantity of off-specification used oil fuel shipped. All of this information is currently required in the standard EPA hazardous waste manifest.

As EPA stated at proposal, in a situation where an off-specification used oil fuel goes from a processor or blender to an intermediate distributor, the distributor must reinstitute a new invoice to accompany any fuel it sells that is produced from or otherwise contains the used oil (unless the used oil fuel now meets the specification). This requirement is consistent with those found in other parts of the RCRA regulations whereby intermediate storage facilities must reinitiate a manifest. See, e.g., 40 CFR 264.71(c) and 262.10(f).

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[88] As noted at proposal, however (see 50 FR 1702, n. 68), used oil generators and transporters who send used oil to marketers that burn some used oil are not considered to be marketing used oil fuel directly to a burner for purposes of today's rule. Thus, these generators and transporters are not regulated (and not required to notify) as marketers. This is because the burning at the marketers' facility is considered incidental to the primary function of the marketers' facility: processing and marketing of used oil fuel.

[89] The system is already in place for certain hazardous waste fuels—namely listed wastes and sludges when sent directly from the generator to a burner. See Subpart D of Part 266 in 50 FR 667 (January 4, 1985). Today's rule expands the system to *all* hazardous waste fuels managed by *all* marketers and burners, except those specifically exempted under § 261.6(a)(3) as revised in today's rule.

As described in the proposal, the Hazardous and Solid Waste Amendments of 1984 amended RCRA to require producers, distributors, and marketers of hazardous waste fuels to include a warning label on the invoice or bill of sale for the fuel. The requirement became effective in February 1985, but is superseded by today's rule. The Agency believes that the requirement for an invoice or a manifest achieves the same purposes as a warning label—to alert the user or distributor that he is receiving hazardous waste fuel. The manifest also notifies the transporter that he is handling hazardous waste because the manifest must accompany the shipment. No comments disagreed with the Agency's conclusion that an invoice or manifest is an adequate replacement for the statutory warning label.

Several comments were received on the proposed invoice/manifest requirement. Commenters suggested that transfer of waste fuels from site to site within the same company should be exempt from the invoice and manifesting requirements. Commenters pointed out that such transfers are routine; thus, they reasoned that invoices or manifests are unnecessary. At the very least, commenters requested that EPA consider a simplified manifest or invoice for such transactions.

EPA believes that the manifest requirement for hazardous waste fuels serves essentially the same purpose as the current manifest requirement for other hazardous waste—to alert transporters (and emergency response officials) as well as facility operators (e.g., burners) of the fire and explosion hazards posed by the shipment and to establish a paper trail that will enable enforcement officials to implement and enforce the regulations. Given similar purposes and that off-site, but intracompany, shipments of other hazardous waste are subject to full manifest requirements, EPA sees no compelling reason to modify manifest requirements specifically for hazardous waste fuel. See also 50 FR 28724–28725 (July 15, 1985) where the Agency adopted the same position with regard to the warning label required by RCRA section 3004(r)(1).

D. Notice and Certification Requirements

To enforce the prohibition on burning hazardous waste fuel and off-specification used oil fuel in nonindustrial boilers, the prohibition applies not only to the boiler owner and operator, but also to the waste fuel marketer. Thus, a marketer (a processor, blender, distributor, or a generator marketing directly to a burner) may not sell hazardous waste fuels or off-specification used oil fuel to a person who burns it in a nonindustrial boiler but must ensure that they market these fuels only to persons in (and, thus, aware of) the regulatory system: persons who have notified EPA of their waste-as-fuel activities. In addition, marketers are responsible for determining whether their waste fuel is subject to regulation (i.e., whether their product fuel contains hazardous waste or is off-specification used oil).

As EPA explained at proposal, to comply with these requirements, marketers need to know whether the person receiving a shipment of hazardous waste fuel or off-specification used oil fuel has notified EPA of his waste-as-fuel activities and whether he intends to burn the fuel only in a utility boiler or industrial boiler or industrial furnace. Thus, the rules include a provision requiring that a marketer of hazardous waste fuel or off-specification used oil fuel receive a certification from the fuel purchaser stating that the purchaser has notified EPA of his waste-as-fuel activities and will burn the fuel only in unrestricted boilers or furnaces. This certification is a one-time notice and is required before sending the initial shipment. Similarly, the purchaser is required to send the certification before receiving the first shipment from a marketer. This will ensure that the recipient is aware of the regulations applicable to waste fuels and of his responsibilities as a burner (or intermediary). Hazardous waste and used oil generators (and transporters receiving waste from generators) who market their waste to a person who is not a burner are not subject to this (or any other) requirement for marketers and a recipient of the generator's hazardous waste or used oil is not required to provide the generator with a certification notice. (Hazardous waste generators and their transporters are, however, subject to regulation as ordinary hazardous waste generators and transporters under 40 CFR Parts 262 and 263 respectively.)

E. Used Oil Analysis Requirements for Marketers

Marketers who first claim used oil meets the specification and is essentially exempt from further regulation [100] must document by analyses or other information that the oil in fact meets the specification. Although the proposal required testing for documentation, the final rule allows the use of other information to show that the oil meets the specification. See previous discussion in Part Two, section IV.F. This is consistent with a generator's requirements under 40 CFR 262.11(c) to use testing or other information to determine whether his solid waste is hazardous waste. Ordinarily, however, we expect that testing will be used to demonstrate compliance. If a person's determination that used oil meets the specification is found to be erroneous, he is in violation of the regulations regardless of intent.

Persons required to obtain analyses (or other information) to demonstrate that their used oil fuel meets the specification include processors and blenders (and burners) who treat used oil known to be off-specification to produce specification used oil fuel and persons who market or burn as specification used oil fuel used oil received directly from generators or collectors. (Used oil received directly from generators or from collectors who receive oil from generators is presumed to be off-specification unless demonstrated otherwise.) EPA explained at proposal that such analyses and recordkeeping are required to enable the Agency to enforce the prohibitions on those persons who first claim that used oil fuel meets the specification.

Persons who obtain analyses of used oil to demonstrate compliance with the specification must ensure that representative samples are obtained and that appropriate analytical procedures are used. Sampling and analysis of used oil is discussed above in section IV.F.

F. Recordkeeping Requirements

The recordkeeping requirements are limited requirements designed primarily to keep track of the movement of hazardous waste fuels and off-specification used fuels. The substantive prohibitions as well as the various administrative requirements would not be enforceable without these recordkeeping requirements. As proposed, marketers and burners must keep a copy of the manifest or invoice (for used oil) that accompanies or that applies to each fuel shipment. In addition, marketers and burners are

[100] As discussed in the text in Part Two, section IV.E. such marketers must keep records of the initial shipment of specification used oil. Also, as discussed in section IV.F. EPA and State enforcement officials have the authority to enter the premises of a person believed to be handling used oil fuel and to collect samples of fuel oil, irrespective of whether the person reasonably believes his used oil fuel meets the specification, for the purposes of determining compliance with today's rule.

required to retain copies of certification notices that they initiate or receive.

EPA also proposed that marketers of used oil fuel who first claim the oil meets the specification are required to obtain analyses of their used oil fuel product to document that it meets the specification. Copies of the analyses must be retained for three years. As discussed above, today's final rule allows the use of other information to document that used oil meets the specification. Such other information must also be retained for three years.

In response to commenters' concerns about the enforceability of the proposed rule, the final rule includes additional recordkeeping requirements for persons who first claim used oil fuel meets the specification. See section IV.E of this preamble. Today's rule requires these persons to also keep records on initial shipments of specification used oil fuel. Subsequent shipments (e.g., by distributors) are not subject to regulation.

As proposed, all records must be retained at the facility for three years, except that certification notices must be kept for three years from the date a person last engages in a waste fuel marketing transaction with the person who sent or received the certification notice. These records must be available for inspection by an officer, employee, or representative of EPA (see RCRA section 3007).

II. Storage Requirements for Hazardous Waste Fuel

As explained at proposal, today's rule expands existing requirements for storage so that *all* storage of *all* hazardous waste fuels is subject to regulation. Under previously existing provisions of 40 CFR 261.6, and continued under the solid waste definition rulemaking at Subpart D of Part 266 (see 50 FR 667 (January 4, 1985)), hazardous wastes that are listed wastes or sludges are subject to the storage standards of Parts 262, 264, and 265, when stored prior to use as a fuel and prior to use to produce a fuel. Nonsludge wastes that are hazardous only because they exhibit a characteristic of hazardous waste, and hazardous waste fuel produced by an off-site marketer by processing, blending, or other treatment of hazardous waste, were exempt from regulation prior to today's rule. All hazardous waste used to produce fuel and all hazardous waste fuel so produced are subject to today's storage requirements for the reasons given below.

A. Which Hazardous Wastes Are Subject to Storage Requirements

The Agency is today regulating the storage (and transportation) of any hazardous waste used to produce a fuel and of any hazardous waste fuel so produced. We are thus eliminating the current distinction between listed wastes and sludges on the one hand and unlisted spent materials and unlisted byproducts on the other. As explained at proposal, these distinctions are not environmentally justifiable, and exist only because of the Agency's initial uncertainty (in 1980) about an appropriate regulatory regime for recycled wastes. See 48 FR 14475 (April 4, 1983). It is now our view that a hazardous waste classification as sludge, by-product, or spent material, or listed vs. unlisted (characteristic) hazardous waste has no relation to the type of hazard the waste poses when stored, and therefore, that storage of all of these should be regulated uniformly. *Id.*

B. Eliminating the Exemption for Storage of Hazardous Waste Fuel Produced by Persons Who Did Not Generate the Waste

As proposed, today's rules subject all hazardous waste fuels to storage (and other) controls. This includes storage by the initial marketer (e.g., processors, blenders), storage by subsequent marketers (e.g., distributors), and storage by burners. (Hazardous waste storage by ordinary generators whose waste is destined to be burned for energy recovery, but who do not market directly to burners, is also subject to regulation.)

The present regulatory regime provided by Subpart D of Part 266 (see 50 FR 667 (January 4, 1985)) whereby hazardous waste fuel produced by a person who neither generated the waste nor burns the fuel is exempt from regulation was intended only as an interim measure and cannot be defended on environmental grounds. The argument that hazardous waste fuels function as valuable inventory in a burner's hands and so will be stored safely does not appear tenable, and already has been rejected by the Agency. See 50 FR 617–618, 632, 643 (January 4, 1985). Hazardous waste fuels in many cases do not command substantial economic value; in some situations, burners are even paid to accept these materials. In addition, the fact that a hazardous waste fuel is being stored as a commodity is insufficient to prevent substantial risk. There have been many damage incidents from product and raw material storage, examples being spills from underground and above-ground product storage tanks, including fuel storage tanks. See 49 FR 29418 (July 20, 1984). Indeed, the Agency has found that leaks and spills from hazardous waste tank storage is very likely, and that this risk is substantial and requires regulatory control. See also Section 601 of the Hazardous and Solid Waste Amendments of 1984 requiring EPA to regulate underground storage tanks storing products. The Agency also has been told by State regulatory officials and used oil fuel dealers that hazardous waste fuels are suspected of causing a number of fires in the New York City and New Jersey areas. Another commenter described a "major accident at a cement kiln using waste-derived fuels." The Agency thus does not see any reason to regulate this type of hazardous waste storage differently from other hazardous waste storage.

Today's rule subjects all storage of all hazardous waste fuels to the storage standards provided by 40 CFR Parts 262 (for short-term accumulation of fuels by a generator who burns his waste on site or who markets directly to a burner), 264, and 265, with one exception. As proposed, we are not subjecting hazardous waste fuel storage by an existing burner to the final permitting standards of 40 CFR Part 264 at this time for several reasons. Because we intend to regulate most burning of hazardous waste fuels in a manner that would require some form of permitting, we do not want to issue a permit to a burner for storage and then have to issue a second permit in the near future for burning. We thus plan to delay adopting final permitting storage standards for existing burners until a single permit proceeding can address both burning and storage. Thus, existing burners will be subject only to the storage standards for tanks and containers contained in Part 265.

In addition, as proposed, a permit is not presently required to store off-specification used oil fuel. EPA is not imposing storage requirements on used oil fuel at this time because the Agency wishes to avoid the piecemeal regulation of used oil storage which would result were we to regulate used oil fuel storage in advance of other types of used oil storage. Storage requirements will be proposed when the Agency proposes comprehensive regulations for recycled oil on the next future.

Hazardous waste fuels stored by a marketer are subject to regulation. Thus, as explained at proposal, storage of both incoming hazardous waste and outgoing hazardous waste fuels are regulated.

Many marketers are already subject to regulation as storage facilities because they store incoming listed wastes and sludges, and may be operating under interim status standards. These marketers need to amend their Part A storage applications to seek an authorization to expand their interim status operations to include the waste fuel storage area. See § 270.72.

Numerous comments were received on the proposed storage requirements. Many commenters opposed compliance with the storage standards for industrial boiler owners and operators because they believed they were unnecessary since industrial boiler owners and operators are well aware of the hazards of storage and handling of hazardous waste. Compliance with the storage standards would cause them to incur large costs for little reason, they argued. We disagree. We have noted above that burner storage facilities have been exempt from regulation only as an interim measure and the exemption cannot be defended on environmental grounds. See also 50 FR 643 (January 4, 1985) where the Agency discussed why it was unable to eliminate any requirements from Part 265 (or 264) storage standards for recycled hazardous wastes.

Other commenters suggested class permitting of storage facilities. EPA will consider issues concerning permitting of burner storage facilities when the permit standards for existing burners (and storage) are proposed in 1986. Today's rule applies only the interim status Part 265 standards to existing burner storage facilities (the predominant class of storage units affected by this rule).

III. Examples of How These Regulations Operate

The following hypothetical examples illustrate how the rules operate:

1. Generator G generates a hazardous waste and sends it to burner B who stores it in a tank prior to burning in an industrial boiler for energy recovery.

G is a hazardous waste fuel marketer because he markets directly to a burner. Assuming that G is a large quantity generator (and EPA is unaware of situations where small quantity generators send hazardous wastes directly to burners), he must comply with the requirements for marketers, including the manifest and storage requirements, and notification as a hazardous waste fuel marketer. Prior to sending the first shipment, he must also obtain a certification from B that B has notified EPA of his waste-as-fuel activities and that he will burn the fuel only in unrestricted units (i.e., industrial boilers, industrial furnaces and utility boilers). B is a hazardous waste fuel burner and a RCRA storage facility. Assuming he already is engaging in hazardous waste management activities as a facility, he must comply with the interim status standards for storage (including submitting a Part A permit application). If B is a new storage facility (i.e., is not in existence as a facility at the time these rules become effective), he must obtain a storage permit prior to storing the hazardous waste fuel. He must also notify EPA of his waste-as-fuel activities and provide G with the certification discussed above prior to receiving the first shipment. B will have one identification number for storage and burning.

2.A. Generator G, a large quantity generator, generates a hazardous waste but sends it to an intermediate processor P, who mixes it with other wastes and sells the mixture to a burner B who stores it in a tank prior to burning in an industrial boiler for energy recovery.

G is subject to regulation under Part 262 as a generator and must comply with the manifest system and applicable storage requirements. He is not subject to the requirements for marketers. P is a marketer. He must obtain a storage permit to store the hazardous wastes received from the generator. The blended mixture is hazardous waste fuel and is subject to the storage controls under Parts 264 and 265. P and B must notify EPA of their waste-as-fuel activities, and must comply with the certification requirements. B is a hazardous waste fuel burner who has a RCRA storage facility subject to the interim status controls of Part 265 (assuming the facility is in existence at the time the rule is effective).

2.B. G, a large quantity generator, generates a hazardous waste and mixes it with used oil. The mixture is sent to P, who does further blending with used oil, and then sends the mixture to B where it is burned as in the previous example.

The controls operate in this situation just as in the previous example. A mixture of large quantity generator hazardous waste and used oil is subject to regulation as hazardous waste.

2.C. G is a small quantity generator who generates a hazardous waste and mixes it with used oil, as in example 2.B. G sends the mixture to processor P, who processes the material further and sells processed oil as fuel. The fuel meets the specification for used oil. It then is sold to retail fuel dealers and to industrial and nonindustrial users.

In this situation (i.e., where a small quantity generator mixes its hazardous waste with used oil), the mixture is exempt (for the time being) from regulation as hazardous waste under the provisions of 40 CFR 261.5 but (for the time being) is subject to regulation as used oil when obtained by a used oil fuel marketer, P. Thus, G (who incidentally is not a marketer) may send his used oil to P without an invoice. P is a marketer of used oil fuel. He must notify EPA of his waste-as-fuel activities and obtain a U.S. EPA Identification Number. He also must document with analyses (or other information) that the used oil fuel he markets meets the specification since he receives used oil from a generator (or from a transporter who receives oil from a generator) and markets used oil fuel as specification used oil fuel. In addition, he must keep records of the shipment and the person to whom the oil is first sent. The used oil fuel is exempt from further regulation and may be sent to burners or retail fuel dealers (i.e., distributors) who do not have EPA identification numbers, and who may sell the fuel on an unrestricted basis.

If, as is more likely, P determines that the used oil fuel does not meet the specification, P can only send it to persons who have certified to him that they have notified EPA of their waste-as-fuel activities and will burn the fuel only in industrial boilers, utility boilers, or industrial furnaces. P would have to prepare and send invoices for the off-specification used oil fuel. The retail fuel dealers (i.e., distributors) who receive the off-specification used oil fuel are marketers and cannot send the fuel to nonindustrial users unless it is processed further to meet the fuel specification (and they document with analyses or other information that the fuel meets the specification and keep records of the shipment and the person to whom the oil is first sent). Marketers and burners must keep records of invoices and certifications sent and received and fuel analyses (or other information) documenting compliance with the fuel specification (where required).

3.A. P is a used oil processor who receives used oil from a variety of sources and blends them to make fuels. The used oil is not mixed with hazardous waste. The blended fuel that P produces is off-specification for lead. P sends this fuel to R, a retail fuel dealer. R blends the fuel further so that it meets the lead specification. R then sells the fuel to industrial and nonindustrial users.

P is a marketer of used oil fuel. Because the used oil fuel is off-specification, it can be sent only to a person (e.g., R) who has certified to P that he has notified EPA of his waste-as-

fuel activities (and obtained a U.S. EPA Identification Number), and P must send an invoice to R. R is also a marketer because he receives off-specification used oil fuel. Since R markets the used oil fuel as specification fuel (by marketing to industrial boilers without complying with the invoice, notification, and other requirements), he must document with analyses or other information that the fuel meets the specification. R must also keep records of the shipment and the person to whom the specification used oil fuel is first sent. Marketers and burners must keep records as discussed previously.

3.B. Processor P receives used oil from different generators, and also receives spent halogenated solvents that are listed as hazardous waste. P blends the hazardous solvents with the used oil. Some of the spent halogenated solvents were generated by large quantity generators. The mixture contains less than 1000 ppm total halogens and meets the specification for all other constituents and parameters. P sells this blended fuel to R, as in example 3.A.

P is a marketer of hazardous waste fuel because he has mixed hazardous waste with used oil. There is no need to invoke the presumption of mixing with hazardous waste (based on total halogen levels) because it is known on these facts that hazardous waste and used oil have been mixed. (As explained in section IV–B of Part II of this preamble, it is not always certain when used oil is mixed with hazardous waste. In those cases, EPA is employing a rebuttable presumption of mixing with halogenated hazardous waste when halogen levels exceed 1000 ppm.) Finally, the used oil fuel specification does not apply to hazardous waste and, thus, does not apply to the mixture.

4.A. Petroleum refinery G generates API separator sludge (Hazardous Waste K052) and reintroduces it to the refining process upstream from distillation.

All resulting fuels (including petroleum coke) from the refining process are exempt from regulation at this time because the API separator sludge is a hazardous waste from petroleum refining which is introduced to refining process. The API separator sludge is not automatically exempt from regulation until it is reintroduced.

4.B. Petroleum refinery G generated API separator sludge, and sends it to a different refinery where it is reintroduced to the refining process upstream from distillation.

All resulting rules are exempt for the same reason as in 4.A. The API separator sludge is not automatically exempt until it is reintroduced.

4.C. Petroleum refinery G generates API separator sludge and sends it to fuel processor P who processes the sludge along with used oil in a process that accepts crude oil but does not include distillation as a process step. The resulting fuels meet the used oil fuel specification.

The fuels produced by processor P are not subject to regulation (aside from P maintaining a record of the first person to whom the fuels are sent). They would be subject to regulation as hazardous waste fuels if they failed to meet the fuel specification. In addition, processor P needs a storage permit or interim status to store the API separator sludge.

5.A. Same facts as in 4.A. above, except that refinery G reclaims oil from the API separator sludge and reintroduces the recovered oil to the refining process.

Both the reclaimed oil (which is to be refined) and the resulting fuels are exempt from regulation.

5.B. Same facts as in 4.B. above, except that reclaimed oil (i.e., oil reclaimed from the API separator sludge) is sent to the other refinery.

Both the reclaimed oil and the resulting fuels are exempt from regulation.

5.C. Same facts as in 4.C. above, except that reclaimed oil is sent to fuel processor P.

Here, the reclaimed oil is *not* automatically exempt, because it is not being refined (since the fuel processor is not using distillation as a process step). The resulting fuel is exempt (aside from a recordkeeping step for P) if it meets the used oil fuel specification.

6. Processor P obtains contaminated used oil which it processes via distillation to produce a fuel. Oil-bearing hazardous wastes from petroleum refining are also used in the process. The resulting fuel meets the used oil fuel specification.

The fuel is exempt because it meets the used oil fuel specification. See § 261.6(a)(3)(viii)(A). If the used oil fuel did not meet the fuel specification, it would be considered hazardous waste fuel and be subject to full regulation. This situation should be distinguished from one where oil-bearing hazardous wastes from refining are reintroduced to a *refining* process. The process here is *not* considered to be refining, in spite of the use of distillation, because it does not produce products from crude oil.

PART FIVE: ADMINISTRATIVE, ECONOMIC, AND ENVIRONMENTAL IMPACTS, AND LIST OF SUBJECTS

I. State Authority

A. Applicability of Rules in Authorized States

Under section 3006 of RCRA, EPA may authorize qualified States to administer and enforce the RCRA program within the State. (See 40 CFR Part 271 for the standards and requirements for authorization.) Following authorization EPA retains enforcement authority under sections 3008, 7003 and 3013 of RCRA, although authorized States have primary enforcement responsibility.

Prior to the Hazardous and Solid Waste Amendments of 1984 (HSWA) amending RCRA, a State with final authorization administered its hazardous waste program entirely in lieu of EPA administering the Federal program in that State. The Federal requirements no longer applied in the authorized State, and EPA could not issue permits for any facilities in the State which the State was authorized to permit. When new, more stringent Federal requirements were promulgated or enacted, the State was obligated to enact equivalent authority within specified time frames. New Federal requirements did not take effect in an authorized State until the State adopted the requirements as State law.

In contrast, under newly enacted section 3006(g) of RCRA, 42 U.S.C. 6926(g), new requirements and prohibitions imposed by the HSWA take effect in authorized States at the same time that they take effect in nonauthorized States. EPA is directed to carry out those requirements and prohibitions in authorized States, including issuing permits, until the State is granted authorization to do so. While States must still adopt HSWA-related provisions as State law to retain final authorization, the HSWA applies in authorized States in the interim.

Today's rule, with respect to hazardous waste fuels, (40 CFR 266.30–266.35) is promulgated pursuant to section 3004(q), a provision added by HSWA. Thus it is being added to Table 1 in § 271.1(j) which identifies the Federal program requirements that are promulgated pursuant to HSWA and thus are immediately effective in authorized States. States may apply for either interim or final authorization for the HSWA provisions identified in Table 1 as discussed in the following section of this preamble.

The used oil fuel standards adopted today at 40 CFR 266.40–266.44 also are applicable in all States, although for a different reason. Used oil fuel is not presently regulated as a hazardous waste under section 3001. Instead, today's regulations are promulgated pursuant to the Used Oil Recycling Act (codified as section 3014(a) of RCRA) which directs EPA to regulated recycled used oil even if used oil is not a hazardous waste. Section 3014(a) requirements apply in all States as Federal law and operate independently of sections 3001 through 3006. EPA, however, is about to propose to list used oil as a hazardous waste pursuant to authority contained in section 3014(b) of RCRA, a provision added by HSWA. Should EPA adopt this listing as a final rule, all rules regarding management of recycled used oil thus would be applicable in all States by virtue of section 3006(g) as well as section 3014. At that point, authorized States would be required to revise their programs to adopt these rules as discussed below.

B. Effect on State Authorizations

As noted above, the hazardous waste fuel rules promulgated today are effective in all States. Thus, EPA will implement the standards in nonauthorized States and in authorized States until they revise their programs to adopt these rules and the revision is approved by EPA.

A State may apply to receive either interim or final authorization to administer and enforce the hazardous waste fuel rules under section 3006(g)(2) or 3006(b), respectively, on the basis of requirements that are substantially equivalent or equivalent to EPA's. The procedures and schedule for State program revisions under section 3006(b) are described in 40 CFR 271.21. See 49 FR at 21678 (May 22, 1984). The same procedures should be followed for section 3006(g)(2).

Applying § 271.21(e)(2), States that have final authorization must revise their programs within a year from today if only regulatory changes are necessary, or within two years of promulgation if statutory changes are necessary. These deadlines can be extended in exceptional cases (40 CFR 271.21(e)(3)).

States with authorized RCRA programs already may have requirements similar to those in today's rule. These State regulations have not been assessed against the Federal regulations being promulgated today to determine whether they meet the tests for authorization. Thus, a State is not authorized to carry out these requirements in lieu of EPA until a State program revision is submitted and approved. Of course, States with existing standards may continue to administer and enforce their standards as a matter of State law. In implementing the Federal program EPA will work with States under cooperative agreements to minimize duplication of efforts. In many cases EPA will be able to defer to the States in their efforts to implement their programs, rather than take separate actions under Federal authority.

States that submit official applications for final authorization less than 12 months after promulgation of EPA's regulations may be approved without including standards equivalent to those promulgated. However, once authorized, a State must revise its program to include standards substantially equivalent or equivalent to EPA's within the time periods discussed above.

II. Regulatory Impacts

A. Results of Regulatory Impact Studies

1. *Executive Order 12291.* As defined by Executive Order 12291, today's regulation is not a "major rule". Therefore, no Regulatory Impacts Analysis (RIA) is required. This rule will not have an annual impact on the national economy greater than $100 million. The estimated maximum costs of today's rule are an initial (one-time) expenditure of $6 million and annual costs of $20.9 million. The majority of affected facilities will incur less than $1000 in additional costs with the maximum expenditure for any one facility expected to be approximately $7000 per year. In addition, these regulations will not significantly affect competition, employment, productivity or innovation.

This rule was submitted to the Office of Management and Budget (OMB) for review under Executive Order 12291.

2. *Regulatory Flexibility Act.* We have determined that today's rule will not have a significant impact on a substantial number of small businesses and that, therefore, no Regulatory Flexibility Analysis (RFA) is required under the Regulatory Flexibility Act. Although a large number of small businesses managing used oil will be affected by some parts of the rules, we estimate that the maximum costs that could be imposed will be less than 5% of product price and will not cause a 5% closure rate. Cost of compliance data presented at proposal (see 50 FR 1708–1712) indicate that the rules may increase the cost of a marketer's used oil fuel by 1 to 3 cents per gallon. EPA does not consider this a significant increase given that generators are paid 15 to 25 cents per gallon for their used oil, and marketers charge burners 50 to 75 cents per gallon for used oil fuel.

3. *Paperwork Reduction Act.* The requirements of the Paperwork Reduction Act of 1980 (PRA), 44 U.S.C. 3501 et. seq., were considered in developing these regulations. We believe that the reporting and recordkeeping required by today's rules are the minimum necessary to implement and enforce the regulations.

The information collection requirements contained in this rule have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* and have been assigned OMB control numbers 2050–0028 (notification), 2050–0009 (storage permits), 2050–0039 (manifest shipping papers, and 2050–0047 (invoice shipping papers, certification, and used oil analysis).

B. Impacts on the Recycling Industry

1. *Used Oil Fuel.* In the proposal, we stated that we did not believe that these regulations would discourage the recycling or recovery of used oil. The rules only restrict used oil entering the nonindustrial fuel market. EPA stated in the proposal that any used oil not sold to this market could be sold to industrial users or used as rerefining feedstock.

Many comments were received on the subject of the impact of the rules, as proposed, on the used oil industry. Most of the parties who commented were concerned that the Agency underestimated costs and impacts. Commenters related impacts to decreased value of used oil and the absence of viable markets for displaced used oil. The Agency maintains that the costs and impacts presented in the proposed rulemaking (50 FR 1707–1714) are generally complete and reasonable projections. We predict that today's rule will have minimal impacts on net recycling because significant alternative markets exist.[101]

The Agency also received a number of comments stressing the need to maintain viable recycling markets, particularly for used oil. Commenters frequently discussed impacts on their particular industry or practices. EPA maintains that this proposal will not reduce net

[101] It should be noted that the effective date of the lead specification is delayed six months expressly to avoid major disruption of the used oil recycling industry that could result in dumping. As shown in Table 5 in the text, delaying the effective date of the lead specification is expected to more than double the amount of (unblended) used oil that can meet the specification for metals.

recycling. This proposal does not restrict combustion of hazardous wastes or recycled oil in industrial devices. Nor does it restrict other recycling, such as used oil rerefining and solvent reclamation. We recognize that the regulation will cause some market shifts, but maintain that net recycling will not decrease. Commenters confused impacts of this proposal with those of more extensive regulations of the Phase II standards that include industrial burners—which this rule does not address. Many commenters apparently presumed that recycled oil was banned from industrial boilers. The Agency may apply a similar specification to recycled oil burned in boilers under the Phase II regulations. The costs and impacts of that rule, however, will be presented when that rule is proposed. Those costs and impacts are not part of today's rule. We maintain that today's regulation does not impose major impacts that require an RIA.

2. *Hazardous Waste Fuel.* Commenters suggested that permits for small hazardous waste storage facilities may cost $25,000, not the $10,000 we suggested in the proposal.[102] EPA estimated a $10,000 expenditure because we utilized the cost of amending an existing Part B permit in our cost estimate, not the cost of obtaining a new permit. The rule requires Part B storage permits only for facilities marketing hazardous waste fuels (and for new hazardous waste fuel burner facilities). We have assumed virtually all hazardous waste fuel contains listed hazardous waste. Thus, the marketer's feedstock tanks (i.e., tanks for incoming wastes) are already subject to regulation, the marketer's facilities affected by today's rule would already have RCRA permits.

In the proposal, the Agency applied unit costs to represent the total incremental costs of these requirements above current requirements and practices. The costs related to this regulation are not the total investments, revenues, or value of products of associated businesses, as some commenters suggested. We estimate that this regulation will impose direct costs of up to $21 million per year (annualized). This is one of the reasons why this regulation is not a major rule and does not require an RIA.

[102] It should be noted that these storage facility cost estimates do not include the cost of providing secondary containment (or alternate equivalent controls), a requirement EPA recently proposed for hazardous waste storage facilities. See 50 FR 26444–26504 (June 26, 1985).

III. Explanation of Compliance Dates

At proposal (see 50 FR 1714), EPA expressly requested comment on staggering the compliance dates for the regulatory requirements to make them effective as soon as practicable during the 1985–86 heating season. Although commenters did not indicate that the compliance dates were unreasonable, we have decided that the proposed 30 day compliance date for notifications may not give notifiers enough time to request and receive notification applications from their State hazardous waste agency, and to complete and submit the form. Thus, the final rule allows notifiers two months after today to notify regarding their waste-as-fuel activities.

We are making a corresponding change to the compliance date for the manifest (or invoice) system. Given that marketers and burners must include their U.S. EPA Identification Number (assigned after receipt of notification) on manifests and invoices, and that it may take as long as two months after receipt of an application to apprise a notifier of his Identification Number, (if he is not renotifying to identify waste-as-fuel activities) the compliance date for the manifest (or invoice) system is four months after today. (The proposed compliance date was 90 days after publication.)

Compliance dates for the prohibitions (i.e., 10 days after today) and for the storage controls (i.e., six months after today) are adopted as proposed.

The compliance date for each regulatory requirement is shown in the "DATES" section at the beginning of this preamble.

IV. List of Subjects

40 CFR Part 261

Hazardous waste, Recycling.

40 CFR Part 264

Hazardous waste, Insurance, Packaging and containers, Reporting and recordkeeping requirements, Security measures, Surety bonds.

40 CFR Part 265

Hazardous waste, Insurance, Packaging and containers, Reporting and recordkeeping requirements, Security measures, Surety bonds, Water supply.

40 CFR Part 266

Hazardous waste, Recycling.

40 CFR Part 271

Administrative practice and procedure, Confidential business information, Hazardous materials transportation, Hazardous waste, Indian lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Water pollution control, Water supply.

Dated: November 8, 1985.

Lee M. Thomas,

Administrator.

For the reasons set out in the Preamble, Title 40 of the Code of Federal Regulations is amended as follows:

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

1. The authority citation for Part 261 continues to read as follows:

Authority: Secs. 1006, 2002(a), 3001, and 3002, of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), 6921, and 6922).

2. Section 261.3 is amended by adding to paragraph (c)(2)(ii) the following (B):

§ 261.3 Definition of hazardous waste.

* * * * *

(c) * * *

(2) * * *

(ii) * * *

(B) Wastes from burning any of the materials exempted from regulation by § 261.6(a)(3) (iv), (vi), (vii), or (viii).

* * * * *

3. Section 261.5 is amended by revising paragraph (b) to read as follows:

§ 261.5 Special requirements for hazardous waste generated by small quantity generators.

* * * * *

(b) Except for those wastes identified in paragraphs (e), (f), (g), (h), and (k) of this section, a small quantity generator's hazardous wastes are not subject to regulation under Parts 262 through 266 and Parts 270 and 124 of this chapter, and the notification requirements of Section 3010 of RCRA, provided the generator complies with the regulations of paragraphs (f), (g), (h), and (k) of this section.

* * * * *

4. Section 261.5 is amended by adding a new paragraph (k) to read as follows:

§ 261.5 Special requirements for hazardous waste generated by small quantity generators.

* * * * *

(k) If a small quantity generator's hazardous wastes are mixed with used oil, the mixture is subject to Subpart E of Part 266 of this chapter if it is destined to be burned for energy recovery. Any material produced from such a mixture by processing, blending, or other

treatment is also so regulated if it is destined to be burned for energy recovery.

5. Section 261.6 is amended by revising paragraphs (a)(2)(iii), and (a)(3)(iii), and adding new paragraphs (a)(3) (viii) and (ix). Although only the above changes are made under this rulemaking, the entire § 261.6, including provisions not affected by today's rules, is printed here for the reader's convenience.

§ 261.6 Requirements for recyclable materials.

(a)(1) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of paragraphs (b) and (c) of this section, except for the materials listed in paragraphs (a)(2) and (a)(3) of this section. Hazardous wastes that are recycled will be known as "recyclable materials."

(2) The following recyclable materials are not subject to the requirements of this section but are regulated under Subparts C through G of Part 266 of this chapter and all applicable provisions in Parts 270 and 124 of this chapter:

(i) Recyclable materials used in a manner constituting disposal (Subpart C);

(ii) Hazardous wastes burned for energy recovery in boilers and industrial furnaces that are not regulated under Subpart O of Part 264 or 265 of this chapter (Subpart D);

(iii) Used oil that exhibits one or more of the characteristics of hazardous waste and is burned for energy recovery in boilers and industrial furnaces that are not regulated under Subpart O of Part 264 or 265 of this chapter (Subpart E);

(iv) Recyclable materials from which precious metals are reclaimed (Subpart F);

(v) Spent lead-acid batteries that are being reclaimed (Subpart G).

(3) The following recyclable materials are not subject to regulation under Parts 262 through Parts 266 or Parts 270 or 124 of this chapter, and are not subject to the notification requirements of section 3010 of RCRA:

(i) Industrial ethyl alcohol that is reclaimed;

(ii) Used batteries (or used battery cells) returned to a battery manufacturer for regeneration;

(iii) Used oil that exhibits one or more of the characteristics of hazardous waste but is recycled in some other manner than being burned for energy recovery;

(iv) Scrap metal;

(v) Fuels produced from the refining of oil-bearing hazardous wastes along with normal process streams at a petroleum refining facility if such wastes result from normal petroleum refining, production, and transportation practices;

(vi) Oil reclaimed from hazardous waste resulting from normal petroleum refining, production, and transportation practices, which oil is to be refined along with normal process streams at a petroleum refining facility;

(vii) Coke and coal tar from the iron and steel industry that contains hazardous waste from the iron and steel production process;

(viii) (A) Hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from such hazardous wastes, where such hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil so long as the resulting fuel meets the used oil specification under § 266.40(e) of this chapter and so long as no other hazardous wastes are used to produce the hazardous waste fuel;

(B) Hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining production, and transportation practices, where such hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, so long as the fuel meets the used oil fuel specification under § 266.40(e) of this chapter; and

(C) Oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used oil fuel specification under § 266.40(e) of this chapter; and

(ix) Petroleum coke produced from petroleum refinery hazardous wastes containing oil at the same facility at which such wastes were generated, unless the resulting coke product exceeds one or more of the characteristics of hazardous waste in Part 261, Subpart C.

(b) Generators and transporters of recyclable materials are subject to the applicable requirements of Parts 262 and 263 of this chapter and the notification requirements under section 3010 of RCRA, except as provided in paragraph (a) of this section.

(c)(1) Owners or operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of Subparts A through L of Parts 264 and 265 and Parts 266, 270, and 124 of this chapter and the notification requirements under section 3010 of RCRA, except as provided in paragraph (a) of this section. (The recycling process itself is exempt from regulation.)

(2) Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to the following requirements, except as provided in paragraph (a) of this section:

(i) Notification requirements under section 3010 of RCRA;

(ii) Sections 265.71 and 265.72 (dealing with the use of the manifest and manifest discrepancies) of this chapter.

PART 264—STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

6. The authority citation for Part 264 continues to read as follows:

Authority: Secs. 1006, 2002(a), 3004, 3005, of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), 6924, and 6925).

7. Section 264.340 is amended by revising paragraph (a)(2) to read as follows:

§ 264.340 Applicability.

(a) * * *

(2) Owners or operators who burn hazardous waste in boilers or in industrial furnaces in order to destroy them, or who burn hazardous waste in boilers or in industrial furnaces for any recycling purpose and elect to be regulated under this subpart.

* * * * *

PART 265—INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES

8. The authority citation for part 265 continues to read as follows:

Authority: Secs. 1006, 2002(a), 3004, and 3005 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6924, and 6925).

9. Section 265.340 is amended to revise paragraph (a)(2) to read as follows:

§ 265.340 Applicability.

(a) * * *

(2) Owners or operators who burn hazardous waste in boilers or in industrial furnaces in order to destroy them, or who burn hazardous waste in boilers or in industrial furnaces for any

recycling purpose and elect to be regulated under this subpart.

* * * * *

PART 266—STANDARDS FOR THE MANAGEMENT OF SPECIFIC WASTES AND SPECIFIC TYPES OF WASTE MANAGEMENT FACILITIES

10. The authority citation for Part 266 is revised to read as follows:

Authority: Secs. 1006, 2002(a), 3004, and 3014 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), 6924, and 6934).

11. Subpart D is revised to read as follows:

Subpart D—Hazardous Waste Burned for Energy Recovery

Sec.

266.30 Applicability.
266.31 Prohibitions.
266.32 Standards applicable to generators of hazardous waste fuel.
266.33 Standards applicable to transporters of hazardous waste fuel.
266.34 Standards applicable to marketers of hazardous waste fuel.
266.35 Standards applicable to burners of hazardous waste fuel.

Subpart D—Hazardous Waste Burned for Energy Recovery

§ 266.30 Applicability.

(a) The regulations of this subpart apply to hazardous wastes that are burned for energy recovery in any boiler or industrial furnace that is not regulated under Subpart O of Part 264 or 265 of this chapter, except as provided by paragraph (b) of this section. Such hazardous wastes burned for energy recovery are termed "hazardous waste fuel". Fuel produced from hazardous waste by processing, blending, or other treatment is also hazardous waste fuel. (These regulations do not apply, however, to gas recovered from hazardous waste management activities when such gas is burned for energy recovery.)

(b) The following hazardous wastes are not subject to regulation under this subpart:

(1) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in Subpart C of Part 261 of this chapter. Such used oil is subject to regulation under Subpart E of Part 266 rather than this subpart; and

(2) Hazardous wastes that are exempt from regulation under §§ 261.4 and 261.6(a) (3) (v)–(ix) of this chapter, and hazardous wastes that are subject to the special requirements for small quantity generators under § 261.5 of this chapter.

§ 266.31 Prohibitions.

(a) A person may market hazardous waste fuel only:

(1) To persons who have notified EPA of their hazardous waste fuel activities under section 3010 of RCRA and have a U.S. EPA Identification Number; and

(2) If the fuel is burned, to persons who burn the fuel in boilers or industrial furnaces identified in paragaraph (b) of this section.

(b) Hazardous waste fuel may be burned for energy recovery in only the following devices:

(1) Industrial furnaces identified in § 260.10 of this chapter;

(2) Boilers, as defined in § 260.10 of this chapter, that are identified as follows:

(i) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes; or

(ii) Utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

(c) No fuel which contains any hazardous waste may be burned in any cement kiln which is located within the boundaries of any incorporated municipality with a population greater than 500,000 (based on the most recent census statistics) unless such kiln fully complies with regulations under this chapter that are applicable to incinerators.

§ 266.32 Standards applicable to generators of hazardous waste fuel.

(a) Generators of hazardous waste that is used as a fuel or used to produce a fuel are subject to Part 262 of this chapter.

(b) Generators who market hazardous waste fuel to a burner also are subject to § 266.34.

(c) Generators who are burners also are subject to § 266.35.

§ 266.33 Standards applicable to transporters of hazardous waste fuel.

Transporters of hazardous waste fuel (and hazardous waste that is used to produce a fuel) are subject to Part 263 of this chapter.

§ 266.34 Standards applicable to marketers of hazardous waste fuel.

Persons who market hazardous waste fuel are termed "marketers", and are subject to the following requirements. Marketers include generators who market hazardous waste fuel directly to a burner, persons who receive hazardous waste from generators and produce, process, or blend hazardous waste fuel from these hazardous wastes, and persons who distribute but do not process or blend hazardous waste fuel.

(a) *Prohibitions.* The prohibitions under § 266.31(a);

(b) *Notification.* Notification requirements under section 3010 of RCRA for hazardous waste fuel activities. Even if a marketer has previously notified EPA of his hazardous waste management activities and obtained a U.S. EPA Identification Number, he must renotify to identify his hazardous waste fuel activities.

(c) *Storage.* The applicable provisions of § 262.34, and Subparts A through L of Part 264, Subparts A through L of Part 265, and Part 270 of this chapter;

(d) *Off-site shipment.* The standards for generators in Part 262 of this chapter when a marketer initiates a shipment of hazardous waste fuel;

(e) *Required notices.* (1) Before a marketer initiates the first shipment of hazardous waste fuel to a burner or another marketer, he must obtain a one-time written and signed notice from the burner or marketer certifying that:

(i) The burner or marketer has notified EPA under Section 3010 of RCRA and identified his waste-as-fuel activities; and

(ii) If the recipient is a burner, the burner will burn the hazardous waste fuel only in an industrial furnace or boiler identified in § 261.31(b).

(2) Before a marketer accepts the first shipment of hazardous waste fuel from another marketer, he must provide the other marketer with a one-time written and signed certification that he has notified EPA under section 3010 of RCRA and identified his hazardous waste fuel activities; and

(f) *Recordkeeping.* In addition to the applicable recordkeeping requirements of Parts 262, 264, and 265 of this chapter, a marketer must keep a copy of each certification notice he receives or sends for three years from the date he last engages in a hazardous waste fuel marketing transaction with the person who sends or receives the certification notice.

(The notification requirements contained in paragraph (b) of this section were approved by OMB under control number 2050–0028. The storage requirements contained in paragraph (c) of this section were approved by OMB under control number 2050–0009. The manifest and invoice requirements contained in paragraph (d) of this section were approved by OMB under control numbers 2050–0039 and 2050–0047, respectively. The certification requirements contained in paragraph (e) of this section

were approved by OMB under control number 2050–0047. The recordkeeping requirements contained in paragraph (f) of this section were approved by OMB under control number 2050–0047.)

§ 266.35 Standards applicable to burners of hazardous waste fuel.

Owners and operators of industrial furnaces and boilers identified in § 266.31(b) that burn hazardous fuel are "burners" and are subject to the following requirements:

(a) *Prohibitions.* The prohibitions under § 266.31(b);

(b) *Notification.* Notification requirements under section 3010 of RCRA for hazardous waste fuel activities. Even if a burner has previously notified EPA of his hazardous waste management activities and obtained a U.S. EPA Identification Number, he must renotify to identify his hazardous waste fuel activities.

(c) *Storage.* (1) For short term accumulation by generators who burn their hazardous waste fuel on site, the applicable provisions of § 262.34 of this chapter;

(2) For existing storage facilities, the applicable provisions of Subparts A through L of Part 265, and Parts 270 and 124 of this chapter; and

(3) For new storage facilities, the applicable provisions of Subparts A through L of Part A 264, and Parts 270 and 124 of this chapter;

(d) *Required notices.* Before a burner accepts the first shipment of hazardous waste fuel from a marketer, he must provide the marketer a one-time written and signed notice certifying that:

(1) He has notified EPA under section 3010 of RCRA and identified his waste-as-fuel activities; and

(2) He will burn the fuel only in a boiler or furnace identified in § 266.31(b).

(e) *Recordkeeping.* In addition to the applicable recordkeeping requirements of Parts 264 and 265 of this chapter, a burner must keep a copy of each certification notice that he sends to a marketer for three years from the date he last receives hazardous waste fuel from that marketer.

(The notification requirements contained in paragraph (b) of this section were approved by OMB under control number 2050–0028. The storage requirements contained in paragraph (c) of this section were approved by OMB under control number 2050–0009. The certification requirements contained in paragraph (d) of this section were approved by OMB under control number 2050–0047. The recordkeeping requirements contained in paragraph (e) of this section were approved by OMB under control number 2050–0047.)

12. Subpart E is added as follows:

Subpart E—Used Oil Burned for Energy Recovery

Sec.

266.40 Applicability.
266.41 Prohibitions.
266.42 Standards applicable to generators of used oil burned for energy recovery.
266.43 Standards applicable to marketers of used oil burned for energy recovery.
266.44 Standards applicable to burners of used oil burned for energy recovery.

Subpart E—Used Oil Burned for Energy Recovery

§ 266.40 Applicability.

(a) The regulations of this subpart apply to used oil that is burned for energy recovery in any boiler or industrial furnace that is not regulated under Subpart O of Part 264 or Part 265 of this chapter, except as provided by paragraphs (c) and (e) of this section. Such used oil is termed "used oil fuel". Used oil fuel includes any fuel produced from used oil by processing, blending, or other treatment.

(b) "Used oil" means any oil that has been refined from crude oil, used, and, as a result of such use, is contaminated by physical or chemical impurities.

(c) Except as provided by paragraph (d) of this section, used oil that is mixed with hazardous waste and burned for energy recovery is subject to regulation as hazardous waste fuel under Subpart D of Part 266. Used oil containing more than 1000 ppm of total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Subpart D of Part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix VIII of Part 261 of this chapter).

(d) Used oil burned for energy recovery is subject to regulation under this subpart rather than as hazardous waste fuel under Subpart D of this part if it is a hazardous waste solely because it:

(1) Exhibits a characteristic of hazardous waste identified in Subpart C of Part 261 of this chapter, provided that it is not mixed with a hazardous waste; or

(2) Contains hazardous waste generated only by a person subject to the special requirements for small quantity generators under § 261.5 of this chapter.

(e) Except as provided by paragraph (c) of this section, used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment, is subject to regulation under this subpart unless it is shown not to exceed any of the allowable levels of the constituents and properties in the specification shown in the following table. Used oil fuel that meets the specification is subject only to the analysis and recordkeeping requirements under §§ 266.43(b) (1) and (6). Used oil fuel that exceeds any specification level is termed "off-specification used oil fuel".

USED OIL EXCEEDING ANY SPECIFICATION LEVEL IS SUBJECT TO THIS SUBPART WHEN BURNED FOR ENERGY RECOVERY [a]

Constituent/property	Allowable level
Arsenic	5 ppm maximum.
Cadmium	2 ppm maximum.
Chromium	10 ppm maximum.
Lead	100 ppm maximum.
Flash Point	100 °F minimum.
Total Halogens	4,000 ppm maximum. [b]

[a] This specification does not apply to used oil fuel mixed with a hazardous waste other than small quantity generator hazardous waste.

[b] Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under § 266.40(c). Such used oil is subject to Subpart D of this part rather than this subpart when burned for energy recovery unless the presumption of mixing can be successfully rebutted.

§ 266.41 Prohibitions.

(a) A person may market off-specification used oil for energy recovery only:

(1) To burners or other marketers who have notified EPA of their used oil management activities stating the location and general description of such activities, and who have an EPA identification number; and

(2) To burners who burn the used oil in an industrial furnace or boiler identified in paragraph (b) of this section.

(b) Off-specification used oil may be burned for energy recovery in only the following devices:

(1) Industrial furnaces identified in § 260.10 of this chapter; or

(2) Boilers, as defined in § 260.10 of this chapter, that are identified as follows:

(i) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

(ii) Utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale; or

(iii) Used oil-fired space heaters provided that:

(A) The heater burns only used oil that the owner or operator generates or used oil received from do-it-yourself oil

changers who generate used oil as household waste;

(B) The heater is designed to have a maximum capacity of not more than 0.5 million Btu per hour; and

(C) The combustion gases from the heater are vented to the ambient air.

§ 266.42 Standards applicable to generators of used oil burned for energy recovery.

(a) Except as provided in paragraphs (b) and (c) of this section, generators of used oil are not subject to this subpart.

(b) Generators who market used oil directly to a burner are subject to § 266.43.

(c) Generators who burn used oil are subject to § 266.44.

§ 266.43 Standards applicable to marketers of used oil burned for energy recovery.

(a) Persons who market used oil fuel are termed "marketers". However, the following persons are not marketers subject to this Subpart:

(1) Used oil generators, and collectors who transport used oil received only from generators, unless the generator or collector markets the used oil directly to a person who burns it for energy recovery. However, persons who burn some used oil fuel for purposes of processing or other treatment to produce used oil fuel for marketing are considered to be burning incidentally to processing. Thus, generators and collectors who market to such incidental burners are not marketers subject to this subpart;

(2) Persons who market only used oil fuel that meets the specification under § 266.40(e) and who are not the first person to claim the oil meets the specification (i.e., marketers who do not receive used oil from generators or initial transporters and marketers who neither receive nor market off-specification used oil fuel).

(b) Marketers are subject to the following requirements:

(1) *Analysis of used oil fuel.* Used oil fuel is subject to regulation under this subpart unless the marketer obtains analyses or other information documenting that the used oil fuel meets the specification provided under § 266.40(e).

(2) *Prohibitions.* The prohibitions under § 266.41(a);

(3) *Notification.* Notification to EPA stating the location and general description of used oil management activities. Even if a marketer has previously notified EPA of his hazardous waste management activities under section 3010 of RCRA and obtained a U.S. EPA Identification Number, he must renotify to identify his used oil management activities.

(4) *Invoice system.* When a marketer initiates a shipment of off-specification used oil, he must prepare and send the receiving facility an invoice containing the following information:

(i) An invoice number;

(ii) His own EPA identification number and the EPA identification number of the receiving facility;

(iii) The names and addresses of the shipping and receiving facilities;

(iv) The quantity of off-specification used oil to be delivered;

(v) The date(s) of shipment or delivery; and

(vi) The following statement: "This used oil is subject to EPA regulation under 40 CFR Part 266";

Note.—Used oil that meets the definition of combustible liquid (flash point below 200 °F but at or greater than 100 °F) or flammable liquid (flash point below 100 °F) is subject to Department of Transportation Hazardous Materials Regulations at 49 CFR Parts 100–177.

(5) *Required notices.* (i) Before a marketer initiates the first shipment of off-specification used oil to a burner or other marketer, he must obtain a one-time written and signed notice from the burner or marketer certifying that:

(A) The burner or marketer has notified EPA stating the location and general description of his used oil management activities; and

(B) If the recipient is a burner, the burner will burn the off-specification used oil only in an industrial furnace or boiler identified in § 266.41(b); and

(ii) Before a marketer accepts the first shipment of off-specification used oil from another marketer subject to the requirements of this section, he must provide the marketer with a one-time written and signed notice certifying that he has notified EPA of his used oil management activities; and

(6) *Recordkeeping*—(i) *Used Oil Fuel That Meets the Specification.* A marketer who first claims under paragraph (b)(1) of this section that used oil fuel meets the specification must keep copies of analysis (or other information used to make the determination) of used oil for three years. Such marketers must also record in an operating log and keep for three years the following information on each shipment of used oil fuel that meets the specification. Such used oil fuel is not subject to further regulation, unless it is subsequently mixed with hazardous waste or unless it is mixed with used oil so that it no longer meets the specification.

(A) The name and address of the facility receiving the shipment;

(B) The quantity of used oil fuel delivered;

(C) The date of shipment or delivery; and

(D) A cross-reference to the record of used oil analysis (or other information used to make the determination that the oil meets the specification) required under paragraph (b)(6)(i) of this section.

(ii) *Off-Specification Used Oil Fuel.* A marketer who receives or initiates an invoice under the requirements of this section must keep a copy of each invoice for three years from the date the invoice is received or prepared. In addition, a marketer must keep a copy of each certification notice that he receives or sends for three years from the date he last engages in an off-specification used oil fuel marketing transaction with the person who sends or receives the certification notice.

(The analysis requirements contained in paragraph (b)(1) of this section were approved by OMB under control number 2050–0047. The notification requirements contained in paragraph (b)(3) of this section were approved by OMB under control number 2050–0028. The invoice requirements contained in paragraph (b)(4) of this section were approved by OMB under control number 2050–0047. The certification requirements contained in paragraph (b)(5) of this section were approved by OMB under control number 2050–0047. The recordkeeping requirements contained in paragraph (b)(6) of this section were approved by OMB under control number 2050–0047.)

§ 266.44 Standards applicable to burners of used oil burned for energy recovery.

Owners and operators of facilities that burn used oil fuel are "burners" and are subject to the following requirements:

(a) *Prohibition.* The prohibition under § 266.41(b);

(b) *Notification.* Burners of off-specification used oil fuel must notify EPA stating the location and general description of used oil management activities, except that owners and operators of used oil-fired space heaters that burn used oil fuel under the provisions of § 266.41(b)(2) are exempt from these notification requirements. Even if a burner has previously notified EPA of his hazardous waste management activities under Section 3010 of RCRA and obtained an identification number, he must renotify to identify his used oil management activities.

(c) *Required notices.* Before a burner accepts the first shipment of off-specification used oil fuel from a marketer, he must provide the marketer a one-time written and signed notice certifying that:

(1) He has notified EPA stating the location and general description of his used oil management activities; and

(2) He will burn the used oil only in an industrial furnace or boiler identified in § 266.41(b); and

(d) *Used oil fuel analysis.* (1) Used oil fuel burned by the generator is subject to regulation under this subpart unless the burner obtains analysis (or other information) documenting that the used oil meets the specification provided under § 266.40(e).

(2) Burners who treat off-specification used oil fuel by processing, blending, or other treatment to meet the specification provided under § 266.40(e) must obtain analyses (or other information) documenting that the used oil meets the specification.

(e) *Recordkeeping.* A burner who receives an invoice under the requirements of this section must keep a copy of each invoice for three years from the date the invoice is received. Burners must also keep for three years copies of analyses of used oil fuel as may be required by paragraph (d) of this section. In addition, he must keep a copy of each certification notice that he sends to a marketer for three years from the date he last receives off-specification used oil from that marketer.

(The notification requirements contained in paragraph (b) of this section were approved by OMB under control number 2050–0028. The certification requirements contained in paragraph (c) of this section were approved by OMB under control number 2050–0047. The analysis requirements contained in paragraph (d) of this section were approved by OMB under control number 2050–0047. The recordkeeping requirements contained in paragraph (e) of this section were approved by OMB under control number 2050–0047.)

PART 271—REQUIREMENTS FOR AUTHORIZATION OF STATE HAZARDOUS WASTE PROGRAMS

12. The authority citation for Part 271 is revised to read as follows:

Authority: Secs. 1006, 2002(a), and 3006 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), and 6926).

13. Section 271.1(j) is amended by changing the table heading and by adding the following entry to Table 1 in chronological order by date of publication:

TABLE 1.—REGULATIONS IMPLEMENTING THE HAZARDOUS AND SOLID WASTE AMENDMENTS OF 1984

Date of publication in the FEDERAL REGISTER	Title of regulation
• • • • •	
Nov. 29, 1985	Standards for the Management of Specific Wastes and Specific Types of Facilities.
• • • • •	

Appendix—Form—Notification of Hazardous Waste Activity

EPA Form 8700–12 (Revised 11/85)

(This form will not appear in the Code of Federal Regulations.)

BILLING CODE 6560-50-M

Please print or type with ELITE type *(12 characters per inch)* in the unshaded areas only

Form Approved OMB No 2050-0028 Expires 9 30 88
GSA No 0246 EPA OT

United States Environmental Protection Agency
Washington, DC 20460

EPA Notification of Hazardous Waste Activity

Please refer to the *Instructions for Filing Notification* before completing this form. The information requested here is required by law *(Section 3010 of the Resource Conservation and Recovery Act)*

For Official Use Only

Comments

C C

Installation's EPA ID Number (C F) | T/A (C 1) | Approved | Date Received (yr. mo. day)

I. Name of Installation

II. Installation Mailing Address

Street or P.O. Box (C 3)

City or Town | State | ZIP Code (C 4)

III. Location of Installation

Street or Route Number (C 5)

City or Town | State | ZIP Code (C 6)

IV. Installation Contact

Name and Title *(last, first, and job title)* | Phone Number *(area code and number)* (C 2)

V. Ownership

A. Name of Installation's Legal Owner | B. Type of Ownership *(enter code)* (C R)

VI. Type of Regulated Waste Activity *(Mark 'X' in the appropriate boxes. Refer to instructions.)*

A. Hazardous Waste Activity

- ☐ 1a. Generator ☐ 1b. Less than 1,000 kg/mo.
- ☐ 2. Transporter
- ☐ 3. Treater/Storer/Disposer
- ☐ 4. Underground Injection
- ☐ 5. Market or Burn Hazardous Waste Fuel *(enter 'X' and mark appropriate boxes below)*
  - ☐ a. Generator Marketing to Burner
  - ☐ b. Other Marketer
  - ☐ c. Burner

B. Used Oil Fuel Activities

- ☐ 6. Off-Specification Used Oil Fuel *(enter 'X' and mark appropriate boxes below)*
  - ☐ a. Generator Marketing to Burner
  - ☐ b. Other Marketer
  - ☐ c. Burner
- ☐ 7. Specification Used Oil Fuel Marketer (Or On-Site Burner) Who First Claims the Oil Meets the Specification.

VII. Waste Fuel Burning: Type of Combustion Device *(enter 'X' in all appropriate boxes to indicate type of combustion device(s) in which hazardous waste fuel or off-specification used oil fuel is burned. See instructions for definitions of combustion devices.)*

☐ A. Utility Boiler ☐ B. Industrial Boiler ☐ C. Industrial Furnace

VIII. Mode of Transportation *(transporters only — enter 'X' in the appropriate box(es))*

☐ A. Air ☐ B. Rail ☐ C. Highway ☐ D. Water ☐ E. Other *(specify)*

IX. First or Subsequent Notification

Mark 'X' in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your installation's EPA ID Number in the space provided below.

☐ A. First Notification ☐ B. Subsequent Notification *(complete item C)*

C. Installation's EPA ID Number

ID — For Official Use Only

C W | T/A | C 1

IX. Description of Hazardous Wastes *(continued from front)*

A. Hazardous Wastes from Nonspecific Sources. Enter the four-digit number from 40 *CFR* Part 261.31 for each listed hazardous waste from nonspecific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
7	8	9	10	11	12

B. Hazardous Wastes from Specific Sources. Enter the four-digit number from 40 *CFR* Part 261.32 for each listed hazardous waste from specific sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

C. Commercial Chemical Product Hazardous Wastes. Enter the four-digit number from 40 *CFR* Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48

D. Listed Infectious Wastes. Enter the four-digit number from 40 *CFR* Part 261.34 for each hazardous waste from hospitals, veterinary hospitals, or medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

E. Characteristics of Nonlisted Hazardous Wastes. Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles. *(See 40 CFR Parts 261.21 — 261.24)*

☐ 1. Ignitable *(D001)* ☐ 2. Corrosive *(D002)* ☐ 3. Reactive *(D003)* ☐ 4. Toxic *(D000)*

X. Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature	Name and Official Title *(type or print)*	Date Signed

EPA Form 8700-12 (Rev. 11-85) Reverse

BILLING CODE 6560-50-C

IV. Line-by-Line Instructions for Completing EPA Form 8700-12

Type or print in black ink all items except Item XI, "Signature," leaving a blank box between words. When typing, hit the space bar once between characters and three times between words. If you must use additional sheets, indicate clearly the number of the item on the form to which the information on the separate sheet applies.

Items I–III—Name, Mailing Address, and Location of Installation:

Complete Items I–III. Please note that the address you give for Item III, "Location of Installation," must be a physical address, *not a post office box or route number.* If the mailing address and physical facility location are the same, you can print "Same" in box for Item III.

Item IV—Installation Contact:

Enter the name, title, and business telephone number of the person who should be contacted regarding information submitted on this form.

Item V—Ownership:

(A) *Name:* Enter the name of the legal owner(s) of the installation, including the property owner. Use additional sheets if necessary to list more than one owner.

(B) *Type:* Using the codes listed below, indicate the legal status of the owner of the facility:

FF = Federally Owned, Federally Operated
FC = Federally Owned, Operated By A Private Contractor to the Federal Government
FP = Federally Owned, Privately Operated
PF = Privately Owned, Constructed For Use By The Federal Government and Operated By The Federal Government
PL = Privately Owned, Leased And Operated By The Federal Government
PI = Privately Owned, Indian Land
FI = Federally Owned, Indian Land
C = County
D = District
M = Municipal
P = Private
S = State

Item VI—Type of Regulated Waste Activity:

(A) *Hazardous Waste Activity:* Mark the appropriate box(es) to show which hazardous waste activities are going on at this installation.

(1) *Generator:* (a) If you generate a hazardous waste that is identified by characteristic or listed in 40 CFR Part 261, mark an "X" in this box.

(b) In addition, *if you generate less than 1000 kilograms of non-acutely-hazardous waste per calendar month, mark an "X" in this box.*

(2) *Transporter:* If you move hazardous waste by air, rail, highway, or water then mark an "X" in this box. All transporters must complete Item VIII. Transporters do not have to complete Item X of this form, but must sign the certification in Item XI. Refer to Part 263 of the CFR for an explanation of the Federal regulations for hazardous waste transporters.

(3) *Treater/Storer/Disposer:* If you treat, store or dispose of regulated hazardous waste, then mark an "X" in this box. You are reminded to contact the appropriate addressee listed for your State in Section III(C) of this package to request Part A of the RCRA Permit Application. Refer to Parts 264 and 265 of the CFR for an explanation of the Federal regulations for hazardous waste facility owners/operators.

(4) *Underground Injection:* Persons who generate and/or treat or dispose of hazardous waste must place an "X" in this box if an injection well is located at their installation. An injection well is defined as any hole in the ground, including septic tanks, that is deeper than it is wide and that is used for the subsurface placement of fluids.

(5) *Market or Burn Hazardous Waste Fuel:* If you market or burn hazardous waste fuel, place an "X" in this box. Then mark the appropriate boxes underneath to indicate your specific activity. *If you mark "Burner" you must complete Item VII —"Type of Combustion Device."*

Note.—Generators are required to notify for waste-as-fuel activities only if they market directly to the burner.

"Other Marketer" is defined as any person, other than the generator marketing his hazardous waste, who markets hazardous waste fuel.

(B) Used Oil Fuel Activities: Mark an "X" in the appropriate box(es) below to indicate which used oil fuel activities are taking place at this installation.

(6) Off-Specification Used Oil Fuel: If you market or burn off-specification used oil, place an "X" in this box. Then mark the appropriate boxes underneath to indicate your specific activity. *If you mark "Burner" you must complete Item VII—Type of Combustion Device."*

Note.—Used oil generators are required to notify only if marketing directly to the burner.

"Other Marketer" is defined as any person, other than a generator marketing his or her used oil, who markets used oil fuel.

(7) Specification Used Oil Fuel: If you are the first to claim that the used oil meets the specification established in *40 CFR* Part 266.40(e) and is exempt from further regulation, you must mark an "X" in this box.

Item VII—Waste-Fuel Burning: Type of Combustion Device:

Enter an "X" in all appropriate boxes to indicate type(s) of combustion devices in which hazardous waste fuel or off-specification used oil fuel is burned. (Refer to definition section for complete description of each device.)

Item VIII—Mode of Transportation:

Complete this item only if you are the transporter of hazardous waste. Mark an "X" in each appropriate box to indicate the method(s) of transportation you use.

Item IX—First or Subsequent Notification:

Place an "X" in the appropriate box to indicate whether this is your first or a subsequent notification. If you have filed a previous notification, enter your EPA Identification Number in the boxes provided.

Note.—When the owner of a facility changes, the new owner must notify U.S. EPA of the change, even if the previous owner already received a U.S. EPA Identification Number. Because the U.S. EPA ID Number is "site-specific," the new owner will keep the existing ID number. If the facility moves to another location, the owner/operator must notify EPA of this change. In this instance a new U.S. EPA Identification Number will be assigned, since the facility has changed locations.

Item X—Description of Hazardous Waste:

(Only persons involved in hazardous waste activity (Item VI(A)) need to complete this item. Transporters requesting a U.S. EPA Identification Number do not need to complete this item, but must sign the "Certification" in Item XI.)

You will need to refer to Title 40 CFR Part 261 (enclosed) in order to complete this section. Part 261 identifies those wastes that EPA defines as hazardous. If you need help completing this section please contact the appropriate addressee for your state as listed in Section III(C) of this package.

Section A—If you handle hazardous wastes that are listed in the "nonspecific sources" category in Part 261.31, enter the appropriate 4-digit numbers in the boxes provided.

Section B—If you handle hazardous wastes that are listed in the "specific industrial sources" category in Part 261.32, enter the appropriate four-digit numbers in the boxes provided.

Section C—If you handle any of the "commercial chemical products" listed as wastes in Part 261.33, enter the appropriate four-digit numbers in the boxes provided.

Section D—Disregard, since EPA has not yet published infectious waste regulations.

Section E—If you handle hazardous wastes which are not listed in any of the categories above, but do possess a hazardous characteristic, you should describe these wastes by their hazardous characteristic. (An explanation of each characteristic found at Part 261.21–261.24.) Place an "X" in the box next to the characteristic of the wastes that you handle.

Item XI—Certification:

This certification must be signed by the owner, operator, or an authorized representative of your installation. An "authorized representative" is a person responsible for the overall operation of the facility (i.e., a plant manager or superintendent, or a person of equal responsibility). *All notifications must include this certification to be complete.*

V. Definitions

The following definitions are included to help you to understand and complete the Notification Form:

Act or RCRA—means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. Section 6901 *et seq.*

Authorized Representative—means the person responsible for the overall operation of the facility or an operational unit (i.e., part of a facility), e.g., the plant manager,

superintendent or person of equivalent responsibility.

Boiler—means an enclosed device using controlled flame combustion and having the following characteristics:

(1) The unit has physical provisions for recovering and exporting energy in the form of steam, heated fluids, or heated gases;

(2) The unit's combustion chamber and primary energy recovery section(s) are of integral design (i.e., they are physically formed into one manufactured or assembled unit);

(3) The unit continuously maintains an energy recovery efficiency of at least 60 percent, calculated in terms of the recovered energy compared with the thermal value of the fuel; and

(4) The unit exports and utilizes at least 75 percent of the recovered energy, calculated on an annual basis (excluding recovered heat used internally in the same unit to, for example, preheat fuel or combustion air or drive fans or feedwater pumps).

Burner—means the owner or operator of a utility boiler, industrial boiler or industrial furnace that burns waste-fuel for energy recovery and that is not regulated as a RCRA hazardous waste incinerator.

Disposal—means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

Disposal Facility—means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure.

EPA Identification (I.D.) Number—means the number assigned by EPA to each generator, transporter, and treatment, storage, or disposal facility.

Facility—means all contiguous land, and structures, other appurtenaces, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them).

Generator—means any person, by site, whose act or process produces hazardous waste identified or listed in Part 261 of this chapter or whose act first causes a hazardous waste to become subject to regulation.

Hazardous Waste—means a hazardous waste as defined in 40 CFR Part 261.

Hazardous Waste Fuel—means hazardous waste and any fuel that contains hazardous waste that is burned for energy recovery in a boiler or industrial furnace that is not subject to regulation as a RCRA hazardous waste incinerator. However, the following hazardous waste fuels are subject to regulation as used oil fuels:

(1) Used oil fuel that is also a hazardous waste solely becasue it exhibits a characteristic of hazardous waste identified in Subpart C of 40 CFR Part 261, provided it is not mixed with hazardous waste; and

(2) Used oil fuel mixed with hazardous wastes generated by a small quantity generator subject to 40 CFR Part 261.5.

Industrial Boiler—means a boiler located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes.

Industrial Furnace—means any of the following enclosed devices that are integral components of manufacturing processes and that use controlled flame combustion to accomplish recovery of materials or energy: cement kilns, lime kilns, aggregate kilns (including asphalt kilns), phosphate kilns, coke ovens, blast furnaces, smelting furnaces, refining furnaces, titanium dioxide chloride process oxidation reactors, and methane reforming furnaces (and other devices as the Administrator may add to this list).

Marketer—means a person who markets hazardous waste fuel or used oil fuel. However, the following marketers are not subject to waste-as-fuel requirements (including notification) under Subparts D and E of 40 CFR Part 266:

(1) Generators and initial transporters (i.e., transporters who receive hazardous waste or used oil directly from generators including initial transporters who operate transfer stations) who do not market directly to persons who burn the fuels; and

(2) Persons who market used oil fuel that meets the specification provided under 40 CFR 266.40(e) and who are not the first to claim the oil meets the specification.

Off-Specification Used Oil Fuel—means used oil fuel that does not meet the specification provided under 40 CFR 266.40(e).

Operator—means the person responsible for the overall operation of a facility.

Owner—means a person who owns a facility or part of a facility, including land owner.

Specification Used Oil Fuel—means used oil fuel that meets the specification provided under 40 CFR 266.40(e).

Storage—means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

Transportation—means the movement of hazardous waste by air, rail, highway, or water.

Transporter—means a person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

Treatment—means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

Used Oil—means any oil that has been refined from crude oil, used, and as a result of such use, is contaminated by physical or chemical impurities. Wastes that contain oils that have not been used (e.g., fuel oil storage tank bottom clean-out wastes) are not used oil unless they are mixed with used oil.

Used Oil Fuel—means any used oil burned (or destined to be burned) for energy recovery including any fuel produced from used oil by processing, blending or other treatment, and that does not contain hazardous waste (other than that generated by a small quantity generator and exempt from regulation as hazardous waste under provisions of 40 CFR 261.5). Used oil fuel may itself exhibit a characteristic of hazardous waste and remain subject to regulation as used oil fuel provided it is not mixed with hazardous waste.

Utility Boiler—means a boiler that is used to produce electricity, steam or heated or cooled air for sale.

Waste Fuel—means hazardous waste fuel or off-specification used oil fuel.

[FR Doc. 85-27903 Filed 11-27-85; 8:45 am]
BILLING CODE 6560-50-M

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of Proposed Rule
Amendments Governing the Managment
of Used Oil Burned for Energy Recovery,
Hazardous Waste Burned for Energy Recovery,
A Land Application Prohibition
for Used Oil, and A Technical
Correction to Existing Requirements
for Recyclable Materials,
Minn. Rules Chs. 7001 and 7045.

AFFIDAVIT OF MAILING

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

Gail V. LUND, being duly sworn, deposes and says:

That on the 8TH day of September, 1989, at the City of St. Paul, County of Ramsey, State of Minnesota, she served the attached Notice of Hearing and Notice of Intent to Cancel Hearing if Fewer than 25 Persons Request a Hearing in Response to Notice of Intent to Adopt Rules Without a Public Hearing, and Notice of Intent to Adopt Rules Without a Public Hearing and Notice of Intent to Adopt Rules With a Public Hearing if 25 or More Persons Request a Hearing, by depositing in the State of Minnesota Central Mail System or in the United States mail for first class mailing at said City of St. Paul, a copy thereof, properly enveloped, with postage prepaid, on all persons and associations who have requested that their names be placed on file with the Minnesota Pollution Control Agency for the purpose of receiving notice of the proposed adoption of rules by the Minnesota Pollution Control Agency and on all persons and associations listed on the attached mailing list who have expressed interest to Minnesota Pollution Control Agency staff regarding the proposed rules.

Gail V. Lund

Subscribed and sworn to before me
this 8 day of September, 1989.

Ardith M. Vos
Notary Public

ARDITH M. VOS
NOTARY PUBLIC - MINNESOTA
ANOKA COUNTY
My commission expires 1-12-94

Moss & Barnett
4800 Norwest Center
90 South Seventh Street
Minneapolis, MN 55402-4119
Attn: Michael J. Ahern

Mr. Stewart C. Allen
Wilbur-Ellis Company
191 West Shaw Avenue
Suite 107
Fresno, CA 93704

Mr. Donald Anderson
Oil Services, Inc.
13808-293rd Avenue
Zimmerman, MN 55398

Mr. Jeffrey Anderson
Blooming Prairie
4644 IDS Center
80 South Eighth Street
Minneapolis, MN 55402

Ms. Christine Babka
PPG Industries, Inc.
260 Kappa Drive
Pittsburgh, PA 15238

Ms. Marian J. Barnes
Groundwater Technology, Inc.
2113 Stonington Avenue
Hoffman Estates, IL 60195

Mr. David A. Becker
Kolstad Company, Inc.
2507 Walnut Street
St. Paul, MN 55113

Mr. Joe Becker
Becker HiWay Frate
Route 5, Box 10 B
Albert Lea, MN 56007

Mr. Conrad Berg
3636 Lakeside Drive
Eveleth, MN 55734

D. J. Berg
D. J. Berg-Consulting Serv.
P.O. Box 12082
New Brighton, MN 55112

Mr. Edward Besaw
Fiberite Corporation
501 West 3rd Street
P.O. Box 468
Winona, MN 55987

Mr. William Bider
Trans World Airlines
Room 1-482 MCI
P.O. Box 20126
Kansas City, MO 64195

Mr. David Bonistall
Champion International
100 East Sartell Street
P.O. Box 338
Sartell, MN 56377

Mr. David Brickley
Circuit Chemistry
5129 Industrial Street
P.O. Box 476
Maple Plain, MN 55359

Ms. Patricia Bursay IO
Minnesota Department of
Transportation
704 Transportation Bldg
St. Paul, MN 55155

Mr. Tim Butler
Lindquist & Vennum
4200 IDS
80 South 8th Street
Minneapolis, MN 55402

Mr. David Carlson
McLaughlin Gormley King Co.
8810 Tenth Avenue North
Minneapolis, MN 55427

Ms. Diane Carlton
Minnesota Power
30 West Superior Street
Duluth, MN 55802

Mr. David Cera IO
MPCA-Office of Waste Mgmt.
1350 Energy Lane
St. Paul, MN 55108

Mr. Gary Christiansen
Minnesota Department of
Transportation, District 9
3485 Hadley Avenue North
Oakdale, MN 55109

J.C. Clasing
Amoco Corporation
200 East Randolph Drive
MC 1604
Chicago, Illinois 60601

Mr. Robert Clough
Northern States Power Co.
414 Nicollet Mall
Minneapolis, MN 55401

Mr. Richard Clute
WCI Freezer Division
701 33rd Avenue North
St. Cloud, MN 56303

Ms. Ann Cole
B/R Instrument Corp.
12861 Hamlet Avenue
Apple Valley, MN 55124

Mr. Michael Costello
IT Corporation
3570 North Lexington
Suite 200
St Paul, MN 55126

Mr. Gene Currie
Imperial Inc.
1102 West 6th Avenue
P.O. Box 98
Shenandoah, IA 51601

Mr. James Czaja
Circuit Chemistry Corp.
5129 Industrial Street
Maple Plain, MN 55359

Mr. Luke Davich
Federal-Hoffman, Inc.
900 Ehlen Drive
Anoka, MN 55303

Mr. William DeBelly
Southern Minnesota Sugar
Cooperative
P.O. Box 500
Renville, MN 56284

HW RULE AMENDMENTS

Ms. Katie DeBoer IO
Legislative Commission
on Waste Management
85 State Office Bldg.
St. Paul, MN 55155

Rollin Dennistoun
MN Agri-Growth Council
8030 Cedar Avenue
Suite 213
Bloomington, MN 55425

C. M. Douglass
St. Mary's Hospital
1216 - 2nd Street, SW
P.O. Box 911
Rochester, MN 55903-0911

Mr. C. A. Douthitt
Milwaukee Solvents
& Chemicals
P.O. Box 444
Butler, MN 53007

Mr. David Downs
Control Data Corp.
8100 34th Avenue South
P.O. Box 0
Minneapolis, MN 55440

Mr. Richard Dunn
Etchit Inc.
643-13th Avenue South
Hopkins, MN 55343

Mr. Todd Dykton
Envirite Corporation
16435 South Center Ave.
Harvey, IL 60426

Mr. Tom Eley
Great Lakes Env. Services
22077 Mound Road
Warren, Michigan 48091

Mr. Brian Ettesvold
MSSA/MTOA
1705 Marion Street
St. Paul, MN 55113

Mr. John T. Fakler
Circuit Chemistry Corp.
5129 Industrial Street
Maple Plain, MN 55359

Mr. Greg Falk
Jones Petroleum Company
2930 North 33rd Street
P.O. Box 30225
Lincoln, NE 68503

L. M. Ferdinandsen
Watkins Incorporated
150 Liberty Street
Winona, MN 55987

Ms. Rebecca Flood IO
Metropolitan Waste Control
Mears Park Centre
230 East Fifth Street
St. Paul, MN 55101

Mr. Kenneth Ford
Honeywell Inc.
Honeywell Plaza 3175
Minneapolis, MN 55408

Forester Welding
1726 South Broadway
New Ulm, Minnesota 56073

W. L. Fuerstenberg
Interstate Power Company
129 North St. Paul Avenue
P.O. Box 246
Fulda, MN 56131

Mr. Douglas Fullen
(MN29-3610)
Honeywell
Building 103, TCAAP
New Brighton, MN 55112

Mr. James Gencauski
Waste Management-Blaine
10050 Naples Street NE
Blaine, MN 55434

Mr. Ken Grant
3M
Building 21-2W-05
P.O. Box 33331
St. Paul, MN 55133

Terry Graumann
Otter Tail Power Company
215 South Cascade Street
Fergus Falls, MN 56537

Ms. Cathy Griffith
Rexnord Chemical
Resin Systems Division
6180 East 58th Avenue
Commerce City, CO 80022

Mr. Merlyn Gutz
Geo. A. Hormel & Company
501 Northeast 16th Avenue
P.O. Box 800
Austin, MN 55912

Ms. Vonny Hagen IO
MN DNR
500 Lafayette
St. Paul, MN

A. G. Hale
Minnesota Solvents and
Chemicals Corporation
2340 Rose Place
Roseville, MN 55113

Mr. Dale Halverson
Dana Corporation
600 Hoover Strett NE
Minneapolis, MN 55413

Ms. Anne Harri
Special Resource Mgmt, Inc.
1131 Westrac Drive
Suite 201
Fargo, MN 58103

G. W. Harries
Hanft, Fride, O'Brien,
Harries, Swelbar & Burns
1000 First Bank Place
Duluth, MN 55802

Mr. Brian J. Hauge
Round River Environ-
mental Services
Route 2, Box 179
Fertile, MN 56540

Ms. Debra Hefel
Interstate Power Company
1000 Main Street
P.O. Box 769
Dubuque, IA 52004-0769

Mr. Douglas Hildre
FMC
4800 East River Road
P.O. Box 59043
Minneapolis, MN 55459-0043

Mr. Jay Hill
Ashland Petroleum Company
P.O. Box 391
Ashland, KY 41114

Mr. John Hodgson
Solvent Systems
14581 Grand Avenue South
Burnsville, Minnesota 55337

Terry Hoffman
Bio Trol
386 North Wabasha
Suite 840
St. Paul, MN 55102

Mr. Earl Jackelen
Warden Oil Company Inc
187 Humboldt Avenue N
Minneapolis, MN 55405

Gene Jameson
Waste Research and
Reclamation Co. Inc.
Route 7
Eau Claire, WI 54701

Mr. Jay Johnson
7496 Saratoga Drive
P.O. Box 537
Chanhassen, MN 55317

Mr. Larry Johnson
Foth & Van Dyke
6474 City West Parkway
Eden Prairie, MN 55344

Terry Johnston
Prometheus Company
Route 1
P.O. Box 231
Wells, MN 56097

Mr. Michael Jost
Bay West Inc.
5 Empire Drive
St. Paul, MN 55103

Mr. Dennis Jurewicz
Stone Container Corp
2150 Parklake Drive
Suite 400
Atlanta, GA 30345

R. A. Kaiser
Pace Laboratories, Inc.
1710 Douglas Drive N
Minneapolis, MN 55422

Mr. R. J. Kale
Soo Line Railroad Co.
Soo Line Bldg., Room 300
P.O. Box 530
Minneapolis, MN 55440

Mr. John Keenan
Ecolab Incorporated
Ecolab Center
St. Paul, MN 55102

Mr. Paul Klinge
Honeywell Systems and
Research Center
3660 Technology Drive
Minneapolis, MN 55440

Mr. Alan Knutson
Safety and Security
Saint Marys Hospital
1216-2nd Street SW
Rochester, MN 55902

Ms. Jean Krueger
Unisys Corp. Semi-
conductor Operations
P.O. Box 64724 MS H2N26
St. Paul, MN 55164

Mr. Allen Kuebelbeck
Larson Boats
702 West Mississippi
River Drive
Little Falls, MN 56345

Ms. Carol Kuehn
Serco Laboratories
1931 West County Rd. C-2
St. Paul, MN 55113

Mr. Terry Lahti IO
Natural Resources
500 Lafayette Road
St. Paul, MN 55155-4016

Ms. Karen Lampert
Minnegasco, Inc.
700 West Linden Avenue
P.O. Box 1165
Minneapolis, MN 55440-1165

Ms. Inez Lange
Land O'Lakes Inc
P.O. Box 116
Minneapolis, MN 55440

Dr. Linda W. Little
Governor's Waste Mgmt. Board
325 North Salisbury Street
Raleigh, NC 27611

Mr. Jeffrey Leed
Exide Corporation
645 Penn Street
P.O. Box 14205
Reading, PA 19612-4205

Mr. Joseph Maccani
Jostens
5501 Norman Center Drive
Minneapolis, MN 55437

MAK Oil Company
10020 Olive Street NW
Coon Rapids, MN 55433

Ms. Margaret McCourtney
Environmental Information Ltd
7400 Metro Boulevard
Suite 400
Minneapolis, MN 55435

Mr. Charles McDuff
Ecolab Incorporated
Ecolab Center
St. Paul, MN 55118

Mr. Barry McGrath
Soo Line Railroad Co.
105 South Fifth Street
Suite 1000
Minneapolis, MN 55440

Mr. Kevin McNew
Sentinel Chemical
7714 Beech Street
Fridley, MN 55432

Mr. Farook Meah
Advance Circuits Inc.
560 16th Avenue S
Hopkins, MN 55343

B. K. Meierbachtol
Anchor Glass Container Corp.
4108 Valley Industrial Blvd
P.O. Box 69
Shakopee, MN 55379-0069

M. A. Mikovich
Union Carbide Corporation
10 South Riverside Plaza
22cd Floor
Chicago, IL 60606-3882

Mr. Dave Miller
Sheldahl, Inc.
Highway 3 North
P.O. Box 170
Northfield, MN 55057

Mr. Marvin Miller
Eaton Corporation
15151 Highway 5
Eden Prairie, MN 55344

Mr. Terry Miller
Waste Mgmt of Minn, Inc
14730 Sunfish Lake Blvd
P.O. Box 67
Anoka, MN 55303

Mr. William Miller, Jr.
Ashland Oil Inc.
5 West Broadway
P.O. Box 9
St. Paul Park, MN 55071

Mr. Everett Milton
GNB Incorporated
1110 Highway 110
P.O. Box 64100
St. Paul, MN 55164-0100

Mr. Edward M. Moersfelder
Leonard, Street and Deinard
100 South Fifth Street
Suite 1500
Minneapolis, MN 55402

Mr. David Moline
NCR Comten
2700 North Snelling Ave
Rosevelle, MN 55113

Mr. Joe Muller
Northern States Power
414 Nicollet Mall
Minneapolis, MN 55401

Mr. Ronald Nelson
Valley Track Service
235 2nd Avenue S
P.O. Box 123
Bayport, MN 55003

Mr. Larry Nowak
U.S. Air Force Reserve
934th TAG/DEEV
Minneapolis-St. Paul IAP,
Minnesota 55450

Mr. John Nyhlen
Nyhlen's Used Oil Service
16996 Patrica Street
Paynesville, MN 56362

Ms. Anne Ochs
Braun Environmental Lab.
6800 South County Road 18
P.O. Box 35108
Minneapolis, MN 55435-0108

Mr. Dennis O'Connell
Telex Communications Inc
9600 Aldrich Avenue S
Minneapolis, MN 55420

Ms. Ruth O'Connell
Worum Chemical Co.
2130 Energy Park Drive
St. Paul, MN 55108

Mr. Albert Orr
Environmental Trans.
Services, Inc.
P.O. Box 36118
Oklahoma City, OK 73136

Mr. Barry Owen
Badger Foundry Co
1058 East Mark Street
P.O. Box 1306
Winona, MN 55987

Mr. James Payne
Popham Haik et al
3300 Piper Jeffray Tower
Minneapolis, MN 55402

Mr. Paul Pederson
Safety-Kleen Corporation
777 Big Timber Road
Elgin, IL 60123

Ms. Jan Perlowski
Bureau of Engraving, Inc.
3311 Broadway Northeast
Minneapolis, MN 55413

Ms. Donna Peterson
MNTAP
University of MN
Box 197 Mayo
Minneapolis, MN 55455

Ms. Doris Polson
Tapemark Company
223 East Marie
West St. Paul, MN 55118

C. H. Porter
Ford Motor Company
15201 Century Drive
#608
Dearborn, MI 48120

Mr. Paul Pyzdrowski
Watt/Peterson, Inc.
15020-27th Avenue N
Plymouth, MN 55441

RMT Inc.
1406 E. Washington Ave
Suite 124
Madison, WI 53703
Attn: Library

Mr. Steven A. Reed
H. B. Fuller Company
3530 Lexington Avenue N
Shoreview, MN 55126

Mr. Robert J. Reid
DPRA Incorporated
245 East 6th Street
Suite 813
St. Paul, MN 55101

Mr. Steve Riner
MN Department of
Transportation
704 Transportation Bldg.
St. Paul, MN 55155

Mr. Neil Ruddy
City of Redwood Falls
P.O. Box 10
333 South Washington
Redwood Falls, MN 56283

Mr. Greg St. Hilaire
Electric Equipment Service
4751 Mustang Circle
St. Paul, MN 55112

Mr. Craig Sallstrom
MN Plant Food and
Chemicals Association
1821 University Avenue #253
St. Paul, MN 55104

Mr. Jerry Samson
Big Dipper Enterprises, Inc.
1016 11th Avenue S
P.O. Box 640
Wahpeton, ND 58074

S.M. Sanford
7000 Portland Avenue
Richfield, MN 55423

Mr. Peter M. Schmitt
Scott County Environmental
Health
Courthouse A102
Shakopee, MN 55379

Mr. Dan Schoepke
City of Richfield
6700 Portland Avenue S
Richfield, MN 55423

Ms. Sheila Schuman
Environmental Information
7400 Metro Boulevard
Suite 400
Minneapolis, MN 55435

Mr. Jim Schutjer
Minnesota Automobile
Dealers Association
277 University Avenue
St. Paul, MN 55103

Mr. Donald Seeberger
Hennepin County
Environment & Energy
822 3rd Street, Suite 300
Minneapolis, MN 55415

Mr. Thomas W. Segar
Koch Refining Company
P.O. Box 64596
St. Paul, MN 55164

Mr. James (Ted) Shields
Outdoors Committee
P.O. Box 88
Longville, MN 56655

Sierra Club
1313 5th Street SE
#323
Minneapolis, MN 55414

Mr. John Smith
Director of Envr. Affairs
S. B. Foot Tanning Co
Bench Street
Red Wing, MN 55066

Mr. Byron E. Starns
Leonard, Street and Deinard
100 South Fifth Street
Suite 1500
Minneapolis, MN 55402

Mr. Larry Tarara
B&F Companies
1830 3rd Avenue SE
P.O. Box 6536
Rochester, MN 55904

Ms. Barbara Thomas
Boise Cascade
P.O. Box 50
Boise, ID 83728

Mr. Ron Thompson
MN Department of Health
717 Delaware Street
P.O. Box 9441
Minneapolis, MN 55440

Mr. David Tollefson
Solv-Oil Service & Supply
P.O. Box 5477
Hopkins, MN 55343

Mr. William Trygstad, P.E.
Zenk, Read, Trygstad, & Assoc
Old Highway 65 North
P.O. Box 689
Albert Lea, MN 56007

Mr. Edward Van Hoven, Jr.
Van Hoven Company
505 Hardman Avenue
P.O. Box 56
South St. Paul, MN 55075

Ms. Janice Walls
ISRI
1627 K Street, NW
Suite 700
Washington, D.C. 20006

Mr. Walter Wagoner, Jr.
American Chemical
Service Inc.
P.O. Box 190
Griffith, IN 46319-0190

Mr. Lee Walz
DeZurik Corporation
250 Riverside Avenue
Sartell, MN 56377

Mr. Bryan Weinzierl
Safety Consultant
Healtheast
559 Capitol Boulevard
St. Paul, MN 55103

Mr. Greg Weisjahn
Unisys
P.O. Box 64525
Mail Station U1N14
St. Paul, MN 55164-0525

Mr. Lloyd West
Thermo King Corporation
314 West 90th Street
Minneapolis, MN 55420

Mr. Don Whitehurst
Buckbee-Mears, St. Paul
245 East Sixth Street
St. Paul, MN 55101

Mr. Lester Wilsey III
Indianhead Truck Line, Inc.
P.O. Box 64355
St. Paul, MN 55164

Mr. Lester Wilsey, Jr.
Indianhead Truck Line, Inc.
1947 West County Road C
P.O. Box 64355
St. Paul, MN 55164

Dames & Moore
1900 Silver Lake Road
Suite 302
New Brighton, MN 55112

Ms. JoAnne Musumeci IO
State Planning Agency
300 Centennial Bldg.

Mr. John Goslinga
Wespling Manufacturer
705 Highway 18 South
Princeton, Minnesota 55371

Mr. Ivan Jacobs
Mississippi Street Metals
800 Mississippi Street
St. Paul, MN 55101

Ms. Ruth Jensen
Northern Border Pipeline Co.
2223 Dodge Street
Omaha, NE 68102

Ms. Annette Bair
SW Regional Committee
2524 Broadway Avenue
P.O. Box 265
Slayton, MN 56172

Mr. Jim Alders
Northern States Power
2nd Floor, General Office
414 Nicollet Mall
Minneapolis, MN 55401

Mr. Don Anderson
Oil Services, Inc.
Route 2, Box 276
Zimmerman, MN 55398

Dr. Howard Anderson
1072 Plummer Lane
Rochester, MN 55902

Ms. Kim Austrian IO
House of Representatives
Room 580
State Office Building
St. Paul, MN

Ms. Cynthia Axness
Northern States Power
ERAD
414 Nicollet Mall
Minneapolis, MN 55912

Ms. Mary E. Ayde
1201 North Birch Lake Road
White Bear Lake, MN 55110

Mr. George Barker
Lubrication Systems Technology
58 Foxridge Drive
Linn Creek, MO 65052

Ms. Leasha Barnes
Minnegasgo
P.O. Box 1165
Minneapolis, MN 55440

Mr. Gene Beatty
Minnesota Power
30 West Superior Street
Duluth, MN 55802

Bernie Beerman
Beerman Services
6900 Dixie Avenue E
Inver Grove Heights, MN 55075

Mr. Dave Beil IO
MN Pollution Control Agency
Air Quality Division
520 Lafayette Road N
St. Paul, MN 55155

Mr. Conrad Berg
3636 Lakeside Drive
Eveleth, MN 55734

Mr. Clint Bluhm
C & D Oil
Route 2, Box 19
Waseca, MN 56093

Mr. Ernie Breton
Natural Resource Research
Institute
3151 Miller Trunk Highway
Duluth, MN 55811

Mr. John Chamberlain
Chamberlain Oil Company
P.O. Box 278
Clontarf, Minnesota 56226

Mr. Gene Christenson
University of Minnesota
319 15th Avenue SE
Minneapolis, MN 55455

Mr. Dan Croke
Minnesota Power
30 West Superior Street
Duluth, MN 55802

Mr. Allan Currie
Harvard Industries Inc
2701 North Dettman Road
Jackson, Michigan 49201

USED OIL AFFECTED PARTY

Mr. Don Dame
Northstar Steel
1678 Redrock Road
St. Paul, MN 55119

Mr. Tom Dellenbach
Washington Co Comm Health Serv
14900 North 61st Street
P.O. Box 6
Stillwater, MN 55082

Mr. Dennis Deming
MN Department of
Transportation
2055 North Lilac Drive
Golden Valley, MN 55427

Mr. Mark Deutschman
5401 Gamble Drive
Suite 300
Minneapolis, MN 55416

Mr. Alan Edel
Al's Oil Service
R.R. 5, Box 219
Northfield, MN 55057

Mr. Arnold Edel
Milo's Waste Oil
R.R. 5, Box 219
Northfield, MN 55057

Mr. Milo Edel
Milo's Waste Oil
RR 5, Box 219
Northfield, MN 55057

Mr. Brian Ettesvold
MN Service Station Assoc.
1705 Marion Street
Roseville, MN 55113

Mr. Lewis Fitterer
Lewis Reclaimed Oil
Box 100 RR 2
Owatonna, MN 55060

MNTAP
University of MN
Box 197 Mayo
Minneapolis, MN 55455

Mr. Al Frechette
Scott County Environmental Health Specialist
Scott County Courthouse
Shakopee, MN 55379

Mr. David Gellerstedt
Superwood Corporation
Box 16267
Duluth, MN 55816-0267

Mr. Carl Genz, President
Southern MN Asphalt Supply Incorporated
P.O. Box 217
Kasota, MN 56050

Mr. Dan Gunderson
MN Petroleum Council
350 St. Peter Street
Suite 1025
St. Paul, MN 55102

Mr. Don Hanson
HRA
302 SW 4th Street
Willmar, MN 56201

Mr. Mark Hawkinson
Hawkinson Contruction
Box 278
Grand Rapids, MN 55744

Mr. Steve Hicks
Hick's Oil Co.
P.O. Box 10
Pipestone, MN 56164

Mr. Charles Hoffman
Pickands, Mather and Company
200 West Superior Street
Duluth, MN 55802

Mr. Lee Holden
Ramsey County Division of Environ. Health #209
1910 West County Road B,
Roseville, MN 55113

Mr. Dave Holt
MN Asphalt and Pavement Association #136
155 South Wabasha Street
St. Paul, MN 55107

Mr. Randy Hukriede IO
MN Pollution Control Agency
HW/Hazardous Waste Section
520 Lafayette Road N
St. Paul, MN 55155

Mr. Robert Hutchison
Anoka County Health Department
County Courthouse - 4th Floor
325 East Main Street
Anoka, MN 55303

Mr. Steve Jackson
West End Iron and Metal Corp.
1932 West Michigan Street
Duluth, MN 55806

Mr. Loren Janson
Hennepin County Environment and Energy
822 South Third Street #300
Minneapolis, MN 55415

Mr. Mike Jaros
Natural Resources Research Institute
3151 Miller Trunk Highway
Duluth, MN 55811

Mr. Dave Johnson
Oil Services Incorporated
13808 293rd Avenue
Zimmerman, MN 55398

Mr. Kevin Johnson IO
MPCA-Office of Waste Mgmt.
1350 Energy Lane
St. Paul, MN 55108

Mr. George Kinney
Dakota County Community Health Sevices
33 East Wentworth, Suite 101
West St. Paul, MN 55118

Mr. Marion Kloster IO
DEED
American Center Building
St. Paul, MN

Mr. Mike Knispel
MAK Oil Company
1047 Raymond Avenue
St. Paul, MN 55108

Mr. Jim Kolar
Northern States Power
ERAD
414 Nicollet Mall
Minneapolis, MN 55912

Mr. Bob Krogman
Northwest Petroleum Assoc.
2345 Rice Street, Suite 173
St. Paul, MN 55113

Mr. Terry Lahti IO
MN Department of Natural Resources
500 Lafayette Road N
St. Paul, MN 55155

Mr. Ron Leger
Black and Gold Inc.
401 Third Avenue Southeast
Austin, MN 55912

Mr. Tom Lewis
Black and Gold Inc.
401 Third Avenue Southeast
Austin, MN 55912

Mr. Greg Lie
Hennepin County Department
of Environment and Energy
822 South Third Street, #300
Minneapolis, MN 55415

Mr. Harvey Loe
Loe's Oil Company
Route 2, Box 156
Mankato, MN 56001

Ms. Gail Lund IO
MN Pollution Control Agency
Program Development Unit
520 Lafayette Road
St. Paul, MN 55155

Ms. Nancy Misra IO
MN Pollution Control Agency
HW/Hazardous Waste Section
520 Lafayette Road
St. Paul, MN 55155

Mr. Mike Mahoney
Barton Enterprise
P.O. Box 210
Newport, MN 55055

Mr. Marty Martin
J & M Trucking
Route 1, Box 118
Brownton, MN 55312

Mr. Marty Martin
Zenith Oil
2725 Englewood
Minneapolis, MN 55416

Mr. Bob McNew
Sentinal Company
7714 Beech Street
North Fridley, MN 55432

Mr. John McGough IO
Metropolitan Council
Mears Park Centre
230 East 5th Street
St. Paul, MN 55108

Mr. Kermit McRae
Department of Trans.
3485 Hadley Avenue North
North St. Paul, MN 55109

MICA Environ Committee
Metropolitan Inter-Co Assoc.
33 Wentworth Ave., Suite 300
West St. Paul, MN 55118
Attn: Robert Orth

MN Chamber of Commerce
480 Cedar Street
300 Hanover Building
St. Paul, MN 55101
Attn: Winston Borden

Mr. Joe Muller
Northern States Power
414 Nicollet Mall
Minneapolis, MN 55401

Mr. John O'Brien IO
Department of Trade and
Econ Development
900 American Center Bldg.
St. Paul, MN 55101

Mr. Kevin O'Donnell IO
MPCA-Office of Waste Mgmt.
1350 Energy Lane
St. Paul, MN 55108

Ms. Anita Pederstuen
Honeywell, Building 103
MN29-3553
TCAAP
New Brighton, MN 55112

Mr. Jack Pirkc
MN Department of
Transportation
3485 Hadey Avenue N
Oakdale, MN 55119

Mr. Terri Port IO
MPCA-Office of Waste Mgmt.
1350 Energy Lane
St. Paul, MN 55108

Mr. Steve Puchtel
Steve's Oil Service
Isanti, MN 55040

Mr. Mike Rahja
Superwood Corporation
Box 16267
Duluth, MN 55816-0267

Mr. Darren Randt
Randt Oil Company
Route 1, Box 3
Litchfield, MN 55355

Mr. Lee Randt
Randt Oil Company
Route 1, Box 3
Litchfield, MN 55355

Mr. Byron Richards
Richards Asphalt Company
12101 Yosemite Avenue South
Savage, MN 55378

Mr. Nick Riley IO
DNR-Trails & Waterways
500 Lafayette Road
St. Paul, MN 55155

Mr. Emil Schlottke
S & S Glass
Box 6071
Minnehaha Station
Minneapolis, MN 55406

Mr. Peter Schmidt
Scott County Environmental
Health Specialist
Scott County Courthouse
Shakopee, MN 55379

Mr. George Schoeberl
Schoeberl Services Inc.
6306 Grimes Avenue North
Brooklyn Center, MN 55429

Ms. Carolina Schutt IO
MN Pollution Control Agency
Air Quality Division
520 Lafayette Road N
St. Paul, MN 55155

Mr. Tom Segar
Koch Refining
P.O. Box 64596
St. Paul, MN 55164

Mr. Michael Shotliff
Carver County Courthouse
600 East 4th Street
Chaska, MN 55318

Mr. Scott Sokola
Unisys Corporation
M.S. 4249
2276 Highcrest Road
Roseville, MN 55113

Mr. Jim Strudell IO
Water Quality
Reg. Compliance Section

Mr. Ron Swanson
Como Oil
2728 West Superior Street
Duluth, MN 55806

Mr. David Tollefson
Solv-Oil Service
4300 Decature Avenue N
New Hope, MN 55428

Mr. Ray Viall
MN Department of
Transportation
2055 North Lilac Drive
Golden Valley, MN 55427

Mr. Randy Wear
Industrial Products
P.O. Box B1
Glyndon, MN 56547

Mr. Phil Weston
Weston Oil Company
Route 8, Box 49
Mankato, MN 56001

Ms. Chris Wilson
Serco Laboratories
1931 West County C2
St. Paul, MN 55113

Mr. Ron Winter
34519 Loverslane
Melrose, MN 56352

Ms. Marsha Wood
4001 Lexington Ave. N
Arden Hills, MN 55112

Mr. Wayne Golly IO
Regional Director
Region I
Duluth

Mr. Larry Shaw IO
Regional Director
Region II
Brainerd

Mr. Willis Mattison IO
Regional Director
Region III
Detroit Lakes

Mr. Mark Jacobs IO
Regional Director
Region IV
Marshall

Mr. Larry Landherr IO
Regional Director
Region V
Rochester

A-1 Drain Oil
2206 Bossard
Roseville, MN 55113
Bill McClellan

C & D Oil Company
Box 445
Mapleton, MN 56065
Richard Reynolds

Crude Oil Inc.
1769 Iglehart Avenue
St. Paul, MN 55104
Dana Nelson

Determan Welding & Tank
Service
1241 72nd Avenue NE
Minneapolis, MN 55432
Bruce Madsen or Vern Peterson

Indianhead Truck Line, Inc.
P.O. Box 64355
St. Paul, MN 55164
Les Wilsey III

J & J Oil Company
Route 1
St. James, MN 56081
Jerry Sawatzky

Larry's Drain Oil Service
3714 North Milton
Shoreview, MN 55112
Larry Schaaf

McCarthy Waste Oil
Box 83
Waldorf, MN 56091

Nyhlen's Used Oil Service
16996 Patricia Street
Paynesville, MN 56362
John Nyhlen

Ralph's Car & Tractor Service
3313 County Road 74
St. Cloud, MN 56301

Swan Oil Company
Box 87
New Folden, MN 56738

Warden Oil Company
187 Humboldt Avenue
Minneapolis, MN 55405
A.L. Warden

Waste Oil Service
1625 17th Street South
Fargo, ND 58103
Frank Cordahl

Waste Oil Pick-Up Services
2725 S. Inglewood
St. Louis Park, MN 55416
Don

Mr. Mike Ritchie IO
MnDOT, Hazardous Materials
Section
100 Stockyards Road

Jay Hill
Ashland Petroleum Co.
P.O. Box 391
Ashland, KY 41114

Joe Weinhold
NSP
414 Nicollet Mall
2nd Floor
Minneapolis, MN 55401

Terry Graumann
Otter Tail Power Co.
215 S Cascade Street
Fergus Falls, MN 56537

Ms. Fran Ongaro IO
Trade Econ. Devel.
900 American Center Bldg.
150 East Kellogg Blvd.
St. Paul, MN

Mr. Michael Ralston
Kinetics Technology Inter.
1333 South Mayflower Ave
Monrovia, CA 91016-4099

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of Proposed Rule Amendments Governing Management of Used Oil Burned for Energy Recovery, Hazardous Waste Burned for Energy Recovery, A Land Application Prohibition for Used Oil and A Technical Correction to Existing Requirements for Recyclable Materials, Minn. Rules Chs. 7001 and 7045.

NOTICE OF INTENT TO ADOPT RULES WITHOUT A PUBLIC HEARING AND NOTICE OT INTENT TO ADOPT RULES WITH A PUBLIC HEARING IF 25 OR MORE PERSONS REQUEST A HEARING

(1) Notice is hereby given that the Minnesota Pollution Control Agency (MPCA) intends to adopt the above-entitled rule amendments without a public hearing following the procedures set forth in the Administrative Procedure Act for adopting rule amendments without a public hearing in Minn. Stat. §§ 14.22 to 14.28 (1988). The MPCA's authority to adopt the rule amendments is set forth in Minn. Stat. §§ 115.03, subd. 1(g), 116.07, subd. 4 (1988).

(2) All persons have until 4:30 p.m. on October 11, 1989, to submit comments in support of or in opposition to the proposed rule amendments or any part or subpart of the rules. Comment is encouraged. (3) Each comment should identify the portion of the proposed rule amendments addressed, the reason for the comment, and any change proposed.

(4) Any person may make a written request for a public hearing on the proposed rule amendments within the comment period. If 25 or more persons submit a written request for a public hearing within the comment period, a public hearing will be held unless a sufficient number withdraw their requests in writing. (5) Any (6) person requesting a public hearing should state his or her name and address, and is encouraged to identify the portion of the proposed rule amendments addressed, the reason for the request, and any change proposed. (7) If a public hearing is required, the MPCA will proceed pursuant to Minn. Stat. §§ 14.131 to 14.20 (1988).

(7) PLEASE NOTE THAT IF 25 OR MORE PERSONS SUBMIT WRITTEN REQUESTS FOR A PUBLIC HEARING WITHIN THE 30-DAY COMMENT PERIOD, A HEARING WILL BE HELD ON OCTOBER 19, 1989, UNLESS A SUFFICIENT NUMBER WITHDRAW THEIR REQUEST, IN ACCORDANCE WITH THE NOTICE OF PUBLIC HEARING ON THESE SAME RULE AMENDMENTS PUBLISHED IN THIS STATE REGISTER AND MAILED TO PERSONS REGISTERED WITH THE MPCA. To verify whether a hearing will be held, please call Gail V. Lund, MPCA, between October 11, 1989, and October 19, 1989, at 612/296-7351.

(5) Comments or written requests for a public hearing must be submitted to:

Gail V. Lund
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155
612/296-7351

(8) The proposed rule amendments may be modified if the modifications are supported by data and views submitted to the MPCA and do not result in a substantial change in the proposed rule amendments as noticed.

(11) The proposed rule amendments, if adopted, will establish administrative requirements for marketers and burners of used oil and hazardous waste burned for energy recovery. The amendments prohibit the burning of hazardous waste and contaminated used oil in nonindustrial burning devices, but allow these fuels to be burned in industrial furnaces, industrial boilers and utility boilers. The amendments prohibit used oil, waste oil or other material contaminated with hazardous waste from being placed in or on the land and prohibit uncontaminated used oil from being placed in or on the land. The amendments also provide exemptions for certain hazardous wastes that are derived from petroleum refinery wastes from the hazardous waste rules.

(11) One free copy of the rules is available upon request from Gail V. Lund at the address and telephone number stated above.

(12) A Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rule amendments has been prepared and is available from Gail V. Lund upon request.

(14) You are hereby advised, pursuant to Minn. Stat. § 14.115 (1988), "Small business considerations in rulemakings," that the proposed rule amendments will affect small businesses. The MPCA believes the economic impact on small business will be minimal because it believes the overall economic effect of the rules will be minimal. For additional information regarding possible effects, please see part V of the Statement of Need and Reasonableness.

(9) If no hearing is required, upon adoption of the rule amendments, the rule amendments and required supporting documents will be submitted to the Attorney General for review as to legality and form to the extent form relates to legality. Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the rules, must submit the written request to Gail V. Lund.

Dated: 8-28-89

for Barbara Lindsey Sims
Gerald L. Willet
Commissioner

annual fee surcharge for the tons of potential emissions above the initial 100 tons that classifies it as a major emitter. The surcharge shall be in the following amount, based on the potential emissions of the criteria pollutant emitted in the greatest amount:

Table Potential Emissions (tons per year)	Surcharge
250-499	$ 450
500-999	$ 675
1,000-4,999	$ 1,015
5,000-9,999	$ 1,520
10,000 or more	$ 2,280

Subp. 6. **General permits.** The agency shall not charge ~~processing or~~ annual fees for permits issued as a general permit under the permit rules in part 7001.0210 ~~(permit rules)~~.

REPEALER. *Minnesota Rules*, part 7002.0020, subparts 2, 4, 5, and 7, are repealed.

Pollution Control Agency

Proposed Permanent Rules Relating to Hazardous Waste; Burning of Hazardous Waste and Used Oil

Notice of Intent to Adopt Rules Without a Public Hearing and Notice of Intent to Adopt Rules with a Public Hearing if 25 or More Persons Request a Hearing

NOTICE IS HEREBY GIVEN that the Minnesota Pollution Control Agency (MPCA) intends to adopt the above-entitled rule amendments without a public hearing following the procedures set forth in the *Administrative* Procedure Act for adopting rule amendments without a public hearing in *Minnesota Statutes* §§ 14.22 to 14.28 (1988). The MPCA's authority to adopt the rule amendments is set forth in *Minnesota Statutes* §§ 115.03, subd. 1(g), 116.07, subd. 4 (1988).

All persons have until 4:30 p.m. on October 11, 1989, to submit comments in support of or in opposition to the proposed rule amendments or any part or subpart of the rules. Comment is encouraged. Each comment should identify the portion of the proposed rule amendments addressed, the reason for the comment, and any change proposed.

Any person may make a written request for a public hearing on the proposed rule amendments within the comment period. If 25 or more persons submit a written request for a public hearing within the comment period, a public hearing will be held unless a sufficient number withdraw their requests in writing. Any person requesting a public hearing should state his or her name and address, and is encouraged to identify the portion of the proposed rule amendments addressed, the reason for the request, and any change proposed. If a public hearing is required, the MPCA will proceed pursuant to *Minnesota Statutes* §§ 14.131 to 14.20 (1988).

PLEASE NOTE THAT IF 25 OR MORE PERSONS SUBMIT WRITTEN REQUESTS FOR A PUBLIC HEARING WITHIN THE 30-DAY COMMENT PERIOD, A HEARING WILL BE HELD ON OCTOBER 19, 1989, UNLESS A SUFFICIENT NUMBER WITHDRAW THEIR REQUEST, IN ACCORDANCE WITH THE NOTICE OF PUBLIC HEARING ON THESE SAME RULE AMENDMENTS PUBLISHED IN THIS *STATE REGISTER* AND MAILED TO PERSONS REGISTERED WITH THE MPCA. To verify whether a hearing will be held, please call Gail V. Lund, MPCA, between October 11, 1989, and October 19, 1989, at 612/296-7351.

Comments or written requests for a public hearing must be submitted to:

Gail V. Lund
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155
612/296-7351

The proposed rule amendments may be modified if the modifications are supported by data and views submitted to the MPCA and do not result in a substantial change in the proposed rule amendments as noticed.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **ADOPTED RULES SECTION** — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

The proposed rule amendments, if adopted, will establish administrative requirements for marketers and burners of used oil and hazardous waste burned for energy recovery. The amendments prohibit the burning of hazardous waste and contaminated used oil in nonindustrial burning devices, but allow these fuels to be burned in industrial furnaces, industrial boilers and utility boilers. The amendments prohibit used oil, waste oil or other material contaminated with hazardous waste from being placed in or on the land and prohibit uncontaminated used oil from being placed in or on the land. The amendments also provide exemptions for certain hazardous wastes that are derived from petroleum refinery wastes from the hazardous waste rules.

The proposed rule amendments are published below. One free copy of the rules is available upon request from Gail V. Lund at the address and telephone number stated above.

A Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rule amendments has been prepared and is available from Gail V. Lund upon request.

YOU ARE HEREBY ADVISED, pursuant to *Minnesota Statutes* § 14.115 (1988), "Small business considerations in rulemakings," that the proposed rule amendments will affect small businesses. The MPCA believes the economic impact on small business will be minimal because it believes the overall economic effect of the rules will be minimal. For additional information regarding possible effects, please see part V of the Statement of Need and Reasonableness.

If no hearing is required, upon adoption of the rule amendments, the rule amendments and required supporting documents will be submitted to the Attorney General for review as to legality and form to the extent form relates to legality. Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the rules, must submit the written request to Gail V. Lund.

Gerald L. Willet
Commissioner

Notice of Hearing and Notice of Intent to Cancel Hearing if Fewer than 25 Persons Request a Hearing in Response to Notice of Intent to Adopt Rule Amendments Without a Public Hearing

NOTICE IS HEREBY GIVEN that the Minnesota Pollution Control Agency (MPCA) will hold a public hearing in the above-entitled matter at the MPCA Board Room, 520 Lafayette Road North, St. Paul, Minnesota, commencing at 9:00 a.m. on October 19, 1989, and continuing in an evening session at the same location starting at 7:00 p.m. Additional days of hearing will be scheduled if necessary. All interested or affected persons will have an opportunity to paticipate by submitting either oral or written data, statements, or arguments. Statements or briefs may be submitted without appearing at the hearing.

PLEASE NOTE, HOWEVER, THAT THE HEARING WILL BE CANCELED IF FEWER THAN 25 PERSONS REQUEST A HEARING IN RESPONSE TO THE NOTICE OF INTENT TO ADOPT THESE SAME RULE AMENDMENTS WITHOUT A PUBLIC HEARING PUBLISHED IN THIS *STATE REGISTER* AND MAILED TO PERSONS REGISTERED WITH THE MPCA. To verify whether a hearing will be held, please call Gail Lund, Minnesota Pollution Control Agency, between October 11, 1989, and October 19, 1989, at 612/296-7351.

The matter will be heard before Administrative Law Judge Allen E. Giles, Office of Administrative Hearings, Flour Exchange Building, 310 Fourth Avenue South, Minneapolis, Minnesota 55415, 612/341-7604. The rule hearing procedure is governed by *Minnesota Statutes* §§ 14.131 to 14.20 (1988) and by the rules of the Office of Administrative Hearings, *Minnesota Rules* pts. 1400.0200 to 1400.1200. Questions concerning the rule hearing procedure should be directed to the Administrative Law Judge at the address and telephone number stated above.

The subject of the hearing will be the proposed rule amendments governing the Management of Used Oil Burned For Energy Recovery, Hazardous Waste Burned For Energy Recovery, A Land Application Prohibition for Used Oil, and Technical Corrections to Existing Requirements for Recyclable Materials, *Minnesota Rules*, chapters 7001 and 7045. The proposed rule amendments are authorized by *Minnesota Statutes* §§ 115.03, subd. 1(g), subd. 4 (1988). The proposed rule amendments are published below. One free copy of the proposed rule amendments is available on request by contacting:

Gail V. Lund
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155
612/296-7351

NOTICE IS HEREBY GIVEN that a Statement of Need and Reasonableness is now available for review at the MPCA offices and at the Office of Administrative Hearings. The Statement of Need and Reasonableness includes a summary of all of the evidence and argument which the MPCA anticipates presenting at the hearing justifying both the need for and reasonableness of the proposed rule amendments. Copies of the Statement of Need and Reasonableness may be reviewed at the MPCA offices or at the Office of Administrative Hearings and copies may be obtained from the Office of Administrative Hearings at the cost of reproduction.

Any person may present his or her views on the proposed rules in one or more of the following ways: by submitting written data to the Administrative Law Judge at any time before the close of the hearing; by submitting oral or written data at the hearing; and by submitting written data to the Administrative Law Judge during the comment period following the hearing. The comment period will not be less than five working days after the public hearing ends. The comment period may be extended for a longer period not to exceed 20 calendar days if ordered by the Administrative Law Judge at the hearing. The written material received during the comment period shall be available for review at the Office of Administrative Hearings. Within three business days after the expiration of the comment period, the MPCA and interested persons may respond in writing to any new information received during the comment period; however, no additional evidence may be submitted during this three-day period.

The MPCA requests that any person submitting written views or data to the Administrative Law Judge prior to the hearing or during the comment period also submit a copy of the written data to Gail V. Lund at the address stated above.

The proposed rule amendments may be modified if the data and views received during the hearing process warrant modification and the modification does not result in a substantial change in the proposed rule amendments. Therefore, if you are affected in any manner by the proposed rule amendments, you are urged to participate in the rule hearing process.

Any person may request notification of the date on which the Administrative Law Judge's report will be available, after which date the MPCA may not take final action on the rule amendments for a period of five working days. If you desire to be so notified, you may so indicate at the hearing. After the hearing, you may request notification by sending a written request to the Administrative Law Judge.

You may request notification of the date on which the rule amendments are adopted and filed with the Secretary of State. The notice must be mailed on the same day that the rules are filed. If you want to be so notified you may so indicate at the hearing or send a request in writing to the MPCA at any time prior to the filing of the rule amendments with the Secretary of State.

YOU ARE HEREBY ADVISED, pursuant to *Minnesota Statutes* § 14.115 (1988), "Small business considerations in rulemaking," that the proposed rule amendments will affect small business. The MPCA believes the economic impact on small business will be minimal because it believes the overall economic effect of the rules will be minimal. For additional information regarding possible effects, please see part V of the Statement of Need and Reasonableness.

PLEASE BE ADVISED that *Minnesota Statutes* ch. 10A (1988) requires each lobbyist to register with the State Ethical Practices Board within five days after he or she commences lobbying. A lobbyist is defined in *Minnesota Statutes* § 10A.01, subd. 11 (1988) as any individual:

(a) Engaged for pay or other consideration, or authorized by another individual or association to spend money, who spends more than five hours in any month or more than $250, not including his own travel expenses and membership dues, in any year, for the purpose of attempting to influence legislative or administrative action by communicating or urging others to communicate with public officials; or

(b) Who spends more than $250 not including his own travel expenses and membership dues, in any year for the purpose of attempting to influence legislative or administrative action by communicating or urging others to communicate with public officials.

The Statute contains certain exceptions. Questions should be directed to the Ethical Practices Board, 625 North Robert Street, St. Paul, Minnesota 55101-2520, telephone 612/296-5148.

Gerald L. Willet
Commissioner

Rules as Proposed

7001.0520 PERMIT REQUIREMENTS.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Permits by rule.** The owner or operator of the following facilities shall be deemed to have obtained a hazardous waste facility permit without making application for it unless the commissioner finds that the following conditions are not met:

A. to D. [Unchanged.]

E. Containers or tanks where generators mix characteristic hazardous waste as identified in part 7045.0131, subpart 2, with used oil if:

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(1) the generators who produce at least 1,000 kilograms per calendar month of hazardous waste meet the requirements of part 7045.0292, subpart 1; or

(2) the generators who produce less than 1,000 kilograms per calendar month of hazardous waste meet the requirements of part 7045.0219, subpart 4, item A.

Subp. 4. [Unchanged.]

7045.0020 DEFINITIONS.

Subpart 1. to 6. [Unchanged.]

Subp. 6a. **Boiler.** "Boiler" means an enclosed device using controlled flame combustion and having the characteristics specified in item A or B. If used oil or hazardous waste is to be used as a fuel in an industrial boiler or a utility boiler, these boilers must meet the additional criteria in items C and D.

A. and B. [Unchanged.]

C. An industrial boiler burning used oil or hazardous waste as a fuel must be located on the site of an establishment engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical processes.

D. A utility boiler burning used oil or hazardous waste as a fuel must be one that is used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

Subp. 6b. [Unchanged.]

Subp. 6c. **Burner.** "Burner" means an owner or operator of an industrial furnace, industrial boiler, or utility boiler meeting the definition of industrial furnace in subpart 43a or boiler in subpart 6a.

Subp. 7. to 9. [Unchanged.]

Subp. 9a. **Collector.** "Collector" means an initial transporter who receives used oil only from generators and does not market the used oil directly to a person who burns it for energy recovery.

Subp. 9b. **Combustible liquid.** "Combustible liquid" means a liquid that has a flash point below 200 degrees Fahrenheit and equal to or greater than 100 degrees Fahrenheit, as defined in Code of Federal Regulations, title 49, section 173.115.

Subp. 9c. **Commissioner.** "Commissioner" means the commissioner of the Minnesota Pollution Control Agency or ~~his~~ the commissioner's designee.

Subp. ~~9b.~~ 9d. **Component.** "Component" means either the tank or ancillary equipment of a tank system.

Subp. 10. to 21a. [Unchanged.]

Subp. 21b. **EPA identification number.** "EPA identification number" means the number assigned by the Environmental Protection Agency to each generator, transporter, and treatment storage and disposal facility.

Subp. 22. to 24a. [Unchanged.]

Subp. 24b. **Flammable liquid.** "Flammable liquid" means a liquid exhibiting a flash point below 100 degrees Fahrenheit, as defined in Code of Federal Regulations, title 49, section 173.115.

Subp. 25. to 34. [Unchanged.]

Subp. 34a. **Hazardous waste fuel.** "Hazardous waste fuel" means a hazardous waste that is burned for energy recovery and includes fuel that is produced from hazardous waste by processing, blending, or other treatment, except for those blended fuels described in part 7045.0102, subpart 3.

Subp. 35. to 40. [Unchanged.]

Subp. 40a. **Incidental burner.** "Incidental burner" means a person who burns some used oil fuel for purposes of processing other used oil or treating other used oil to produce used oil fuel for marketing. These persons are considered to be burning incidentally to processing.

Subp. 41. to 55. [Unchanged.]

Subp. 55a. **Marketer.** "Marketer" means a ~~person who, for the purpose of burning for energy recovery, processes, blends, or distributes waste oil, used oil, or hazardous waste. "Marketer" includes a generator who processes, distributes, or blends such fuel directly to a person who burns it.~~ generator who markets hazardous waste fuel or used oil fuel directly to a burner; a person who receives hazardous waste or used oil from generators and produces, processes, or blends hazardous waste fuel from these hazardous wastes, or blends used oil from these oils; a person who distributes but does not process or blend hazardous waste fuel or used oil; and a person who sends blended or processed used oils to brokers or other intermediaries.

Subp. 56. to 58. [Unchanged.]

Subp. 58a. **Mixed municipal solid waste.** "Mixed municipal solid waste" has the meaning given it in *Minnesota Statutes*, section 115A.03, subdivision 21.

Subp. 59. and 59a. [Unchanged.]

Subp. 59b. **Off-specification used oil.** "Off-specification used oil" means a used oil fuel that exceeds any of the specification levels for the following constituents or has a flash point less than 100 degrees Fahrenheit.

Constituent	Allowable level
Arsenic, total	5 parts per million maximum
Cadmium, total	2 parts per million maximum
Chromium, total	10 parts per million maximum
Lead, total	100 parts per million maximum
Total Halogens	4,000 parts per million maximum

Subp. 59c. **Onground tank.** "Onground tank" means a device meeting the definition of "tank" in subpart 90 and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.

Subp. 60. [Unchanged.]

Subp. 60a. **On-specification used oil.** "On-specification used oil" means used oil fuel that does not exceed the specification levels for the constituents in subpart 59b, and has a flash point equal to or greater than 100 degrees Fahrenheit.

Subp. 61. to 100a. [Unchanged.]

Subp. 100b. **Used oil fuel.** "Used oil fuel" means used oil that is burned for energy recovery, and includes fuel produced from used oil by processing, blending, or other treatment, except for those blended fuels described in part 7045.0102, subpart 3.

Subp. 101. to 109. [Unchanged.]

7045.0102 MIXTURES OF ~~HAZARDOUS AND NONHAZARDOUS~~ WASTES.

Subpart 1. **Scope.** Except as provided in ~~parts 7045.0125, subpart 10 and~~ part 7045.0665, subpart 5, mixtures of ~~hazardous and nonhazardous~~ wastes are ~~as follows:~~ listed in subparts 2 and 3.

Subp. 2. **Mixtures of hazardous and nonhazardous wastes.**

A. to G. [Unchanged.]

Subp. 3. **Mixtures of used oil and hazardous waste.** Items A and B apply to used oil that is intentionally mixed with hazardous waste.

A. Used oil mixed with a hazardous waste that exhibits any of the characteristics of part 7045.0131, subparts 2 to 7, is regulated as hazardous waste. If it is burned for energy recovery, it is regulated as a hazardous waste fuel under part 7045.0692 provided the mixture continues to exhibit any of those characteristics. If the mixture no longer exhibits any of those characteristics and is to be burned for energy recovery, it is regulated as a used oil fuel under part 7045.0695. If the mixture no longer exhibits any of those characteristics and is not burned for energy recovery, it is subject to the requirements of part 7045.0125.

B. Used oil mixed with hazardous waste listed in part 7045.0135 is a hazardous waste. If it is to be burned for energy recovery, it is regulated as a hazardous waste fuel under part 7045.0692.

7045.0120 EXEMPT WASTES.

The following wastes may be stored, labeled, transported, treated, processed, and disposed of without complying with the requirements of this chapter:

A. to L. [Unchanged.]

~~M. used oil which does not contain waste listed in part 7045.0135 and is to be recycled;~~

~~N.~~ a sample of waste, water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition when:

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(1) to (6) [Unchanged.]

~~O.~~ N. pulping liquors (for example, black liquor) that are reclaimed in a pulping liquor recovery furnace ~~and~~ then reused in the pulping process, unless they are accumulated speculatively as defined in part 7045.0020;

~~P.~~ O. spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in part 7045.0020; or

~~Q.~~ P. secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided that:

(1) to (4) [Unchanged.]

7045.0125 MANAGEMENT OF WASTE BY USE, REUSE, RECYCLING, AND RECLAMATION.

Subpart 1. **Scope.** This part regulates hazardous waste and used oil that is to be recycled except for use constituting disposal as provided in part 7045.0665, hazardous waste ~~utilized~~ used for precious metals recovery as provided in part 7045.0675; ~~or~~ spent lead-acid batteries being reclaimed as provided in part 7045.0685; hazardous waste fuel being burned for energy recovery as provided in part 7045.0692; or used oil fuel being burned for energy recovery as provided in part 7045.0695.

Subp. 3. [Unchanged.]

Subp. 3a. **Management requirements for used oil.**

A. Used oil that is recycled in some other manner than being burned for energy recovery is not subject to the requirements of parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380.

B. Used oil that is not recycled is regulated as a hazardous waste and is subject to the applicable requirements of parts 7045.0205 to 7045.0695 and 7045.1300 to 7045.1380.

C. Used oil that is to be burned for energy recovery is regulated under part 7045.0695. Used oil that is mixed with hazardous waste and is burned for energy recovery is regulated under part 7045.0692 and the applicable requirements of part 7045.0102.

Subp. 4. **Management of specific hazardous wastes.** Management of the following wastes when recycled, is not subject to regulation under parts 7045.0205 to ~~7045.0685~~ 7045.0695 and 7045.1300 to 7045.1380:

A. industrial ethyl alcohol that is reclaimed, except as provided in subpart 12;

B. used batteries or used battery cells returned to a battery manufacturer for regeneration; ~~and~~

C. scrap metal;

D. fuels produced from the refining of oil-bearing hazardous wastes along with normal process streams at a petroleum refining facility if the wastes result from normal petroleum refining, production, and transportation practices;

E. oil that is reclaimed from hazardous wastes that are generated from normal petroleum refining, production, and transportation practices, and that is to be refined along with normal process streams at a petroleum refining facility;

F. coke and coal tar from the iron and steel industry that contain EPA Hazardous Waste No. K087 listed under part 7045.0135, subpart 3, item L, subitem (2), (decanter tank tar sludge from coking operations) from the iron and steel production process;

G. hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from the hazardous wastes, where the hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil if the resulting fuel meets the used oil specification under part 7045.0695, subpart 1, item B, subitem (1), and no other hazardous wastes are used to produce the hazardous waste fuel;

H. hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining, production, and transportation practices, where the hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, if the fuel meets the used oil fuel specification under part 7045.0695, subpart 1, item B, subitem (1);

I. oil that is reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, and is burned as a fuel without reintroduction to a refining process, if the reclaimed oil meets the used oil fuel specification under part 7045.0695, subpart 1, item B, subitem (1); and

J. petroleum coke produced from petroleum refinery hazardous wastes containing oil at the same facility at which the wastes were generated, unless the resulting coke product exhibits one or more of the characteristics of hazardous waste in part 7045.0131.

Subp. 5. **Requirements for use of hazardous wastes as feedstock.**

A. Except as provided in items B to D, hazardous wastes that are shown to be recycled by being ~~utilized~~ used in a manner specified in subitems (1) to (3), are not subject to regulation under parts 7045.0205 to ~~7045.0685~~ 7045.0695 and 7045.1300 to 7045.1380. This subpart does not apply to wastes being accumulated speculatively as defined in part 7045.0020, or being managed

by use constituting disposal~~,~~ as regulated under part 7045.0665 or burning for energy recovery, ~~as regulated under part 7045.0665, or subpart 10~~ as regulated in part 7045.0692. Hazardous wastes are considered to be used as feedstock if they are:

(1) to (3) [Unchanged.]

B. to D. [Unchanged.]

Subp. 6. **Requirements for reclamation of specific hazardous wastes.**

A. [Unchanged.]

B. This subpart does not apply to hazardous wastes being accumulated speculatively as defined in part 7045.0020 or being managed by use constituting disposal, as regulated under part 7045.0665 or being burned for energy recovery ~~under subpart 10~~ as regulated by part 7045.0692.

Subp. 7. **Generator requirements.** Except as provided in subpart 3a, 4, 5, or 6, or ~~10~~ part 7045.0695, generators of hazardous waste destined for recycle~~,~~ are subject to the requirements of parts 7045.0205 to 7045.0304.

Subp. 8. **Transporter requirements.** Except as provided in subpart 3a, 4, 5, or 6, or ~~10~~ part 7045.0695, transporters of hazardous waste destined for recycle are subject to the requirements of parts 7045.0351 to 7045.0397.

Subp. 9. **Facility requirements.** Except as provided in subpart 3a, 4, 5, or 6, or ~~10~~ parts 7045.0692 and 7045.0695, owners or operators of facilities which recycle hazardous waste are subject to the following requirements:

A. and B. [Unchanged.]

Subp. 10. and 11. [See Repealer.]

Subp. 12. [Unchanged.]

7045.0214 EVALUATION OF WASTES.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Wastes generated by treatment, storage, or disposal.** Wastes generated by treatment, storage, or disposal of hazardous waste are as follows:

A. Except as provided in items B ~~and~~, C, and D, any waste generated from the treatment, storage, or disposal of hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate, but not including precipitation run-off, is a hazardous waste if it meets the criteria of subpart 2 or if it is derived from a waste that is listed in part 7045.0135.

B. [Unchanged.]

C. Materials that have been reclaimed from hazardous wastes and from wastes that have been reclaimed that are beneficially used are not hazardous wastes unless the reclaimed material is used in a manner constituting disposal under part 7045.0665 or burned for energy recovery under part ~~7045.0125, subpart 10~~ 7045.0692.

D. Wastes from burning any of the materials exempted from regulation by part 7045.0125, subpart 4, items D to J, are not hazardous wastes.

7045.0219 SPECIAL REQUIREMENTS FOR SMALL QUANTITY GENERATORS OF HAZARDOUS WASTE.

Subpart 1. **Applicability; quantities.** A generator is a small quantity generator subject to the requirements of subparts 2 to 6 if, in a calendar month, he or she generates less than:

A. to C. [Unchanged.]

Subp. 2. and 3. [Unchanged.]

Subp. 4. **Accumulation on-site.** A small quantity generator who does not have a permit or interim status may accumulate hazardous waste on-site under the following conditions: if the quantity of hazardous waste accumulated at any time exceeds the quantities ~~set forth~~ in item A or B, whichever applies, the small quantity generator must manage all of the accumulated waste in accordance with all the generator requirements ~~set forth~~ in parts 7045.0205 to 7045.0304, excluding this part, but does not lose the small quantity generator status.

A. The following provisions apply to waste not listed as acute hazardous waste:

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(1) A small quantity generator who in a calendar month generates at least 100 kilograms of waste not listed as acute hazardous waste in part 7045.0135, subpart 2, 3, or 4, item E, may accumulate that waste on-site for 180 days or less if the quantity of waste accumulated on-site never exceeds 3,000 kilograms and the small quantity generator meets all the requirements of subpart 5. For purposes of this subitem, the time period for accumulation begins when the generator begins accumulation in a container or tank. If the small quantity generators regulated under this subitem mix used oil with hazardous waste, they must meet the requirements under part 7045.0102, subpart 3.

(2) A small quantity generator who in a calendar month generates less than 100 kilograms of waste not listed as acute hazardous waste in part 7045.0135, subpart 2, 3, or 4, item E may accumulate that waste on-site indefinitely until 1,000 kilograms of waste are accumulated, at which point the small quantity generator may only store the waste on-site for a period of 180 days following the date the 1,000 kilogram limit is reached. A small quantity generator accumulating waste under this subitem must meet the requirements of subpart 5, except for subpart 5, item B, subitems (2) to (5). If the small quantity generators regulated under this subitem mix used oil with characteristic hazardous waste, they must meet the requirements under subpart 6. Small quantity generators regulated under this subitem who mix used oil with listed hazardous waste must meet the hazardous waste fuel requirements under part 7045.0692 if the waste is to be burned for energy recovery.

(3) [Unchanged.]

B. [Unchanged.]

Subp. 5. **Management requirements.**

A. Small quantity generators shall comply with the following requirements of this chapter:

(1) to (5) [Unchanged.]

(6) parts 7045.0566 and 7045.0568; ~~and~~

(7) parts 7045.0626 and 7045.0629; and

(8) as applicable, parts 7045.0692 and 7045.0695.

B. and C. [Unchanged.]

Subp. 6. **Mixtures.** A small quantity generator's hazardous waste may be mixed as specified in items A to C and be subject to the reduced requirements of this rule.

A. Hazardous waste may be mixed with nonhazardous waste pursuant to part 7045.0102 and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity generation and accumulation limitations identified in this rule unless the resultant mixture is hazardous pursuant to part 7045.0102.

B. A waste that is hazardous solely for the characteristic of ignitability may be mixed with used oil that is generated on-site and regulated as used oil fuel under part 7045.0695 if the waste mixed is hazardous solely for the characteristic of ignitability under part 7045.0131, subpart 2, and the following conditions are met:

(1) the ignitable waste is generated by a small quantity generator who in a calendar month generates a total of less than 100 kilograms of hazardous waste;

(2) the ignitable waste has a flash point of 100 degrees Fahrenheit or greater, is not a metal bearing paint waste, or is not gasoline; and

(3) the concentration of ignitable waste in the used oil does not exceed ten percent by volume.

C. Mixtures that do not meet the criteria in item B are subject to part 7045.0102, subpart 3.

7045.0665 USE CONSTITUTING DISPOSAL.

Subpart 1. [Unchanged.]

Subp. 1a. **Land application prohibition.**

A. The following materials may not be placed in mixed municipal solid waste or applied as a dust suppressant or used for road treatment:

(1) waste oil;

(2) used oil;

(3) hazardous waste; and

(4) a mixture of hazardous waste and other material, waste oil, or used oil.

B. A person may not otherwise place used oil in or on the land, unless approved by the commissioner. The application of used oil in or on the land shall only be approved in the case of an accidental oil spill.

Subp. 2. to 4. [Unchanged.]

7045.0692 HAZARDOUS WASTE BURNED FOR ENERGY RECOVERY.

Subpart 1. **Scope.** This part applies to hazardous wastes that are burned for energy recovery in a boiler or industrial furnace that is not regulated by the thermal treatment standards in part 7045.0542 or 7045.0640, except:

A. Gaseous emissions recovered from hazardous waste management activities when the gas is burned for energy recovery.

B. Used oil that exhibits a characteristic of hazardous waste as identified in part 7045.[illegible]31, provided that it has not been intentionally mixed with a characteristic hazardous waste, and is regulated as a used oil fuel in part 7045.0695.

C. Hazardous wastes that are exempt from regulation under part 7045.0125, subparts 3a and 4, items D to J.

D. Mixtures of used oil and waste that is hazardous solely for the characteristic of ignitability in part 7045.0131, subpart 2, provided the waste is generated by a person who in a calendar month generates less than 100 kilograms of hazardous waste. This mixture is regulated as provided in part 7045.0219, subpart 6. If the waste is generated by a person who in a calendar month generates at least 100 kilograms of hazardous waste, part 7045.0102, subpart 3, item A, applies.

E. Used oil being burned for energy recovery as regulated in part 7045.0695.

Subp. 2. **Prohibitions.**

A. A person may market hazardous waste fuel only:

(1) to persons who have notified the Environmental Protection Agency of their hazardous waste fuel activities and have an EPA identification number; and

(2) if the fuel is to be burned, to persons who burn the fuel in boilers or industrial furnaces identified in item B.

B. Hazardous waste fuel may be burned for energy recovery only in industrial furnaces as defined in part 7045.0020, or boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet one of the following criteria:

(1) industrial boilers located on the site of an establishment engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes; or

(2) utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale.

C. Hazardous waste or a fuel that contains a hazardous waste may not be burned in a cement kiln unless the kiln fully complies with the thermal treatment standards of part 7045.0542.

Subp. 3. **Standards applicable to generators of hazardous waste fuel.** Generators of hazardous waste that is used as a fuel or used to produce a fuel are subject to parts 7045.0205 to 7045.0304. Generators who market hazardous waste fuel to a burner are also subject to subpart 5. Generators who are burners are also subject to subpart 6.

Subp. 4. **Standards applicable to transporters of hazardous waste fuel.** Transporters of hazardous waste fuel and hazardous waste that is used to produce a fuel are subject to parts 7045.0351 to 7045.0397.

Subp. 5. **Standards applicable to marketers of hazardous waste fuel.** Marketers are subject to the requirements in items A to F.

A. A marketer of hazardous waste that is used as a fuel or used to produce a fuel must notify the Environmental Protection Agency to identify hazardous waste fuel activities. Even if a marketer has previously notified the Environmental Protection Agency of hazardous waste management activities other than hazardous waste fuel activities, a marketer must renotify specifically to identify hazardous waste fuel activities.

B. A marketer must comply with the prohibitions in subpart 2, item A.

C. If a marketer is a generator, or becomes a generator by initiating a shipment of hazardous waste fuel, the marketer must comply with parts 7045.0205 to 7045.0304. If the marketer operates a facility, the marketer must comply with parts 7045.0450 to 7045.0534. If the marketer is operating a facility under interim status, the marketer must comply with parts 7045.0552 to 7045.0632. If the marketer stores hazardous waste, the marketer must comply with the agency's permitting procedures in chapter 7001 for storage of hazardous waste.

D. Before a marketer initiates the first shipment of hazardous waste fuel to a burner or another marketer, a one-time written and signed notice from the burner or marketer must be obtained certifying that:

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

(1) the burner or marketer has notified the Environmental Protection Agency and identified the waste-as-fuel activities; and

(2) if the recipient is a burner, the burner will burn the hazardous waste fuel only in an industrial furnace or boiler identified in subpart 2, item B.

E. Before a marketer accepts the first shipment of hazardous waste fuel from another marketer, the receiving marketer must provide the other marketer with a one-time written and signed notice certifying that the receiving marketer has notified the Environmental Protection Agency and identified the receiving marketer's hazardous waste fuel activities.

F. In addition to the applicable record keeping requirements of parts 7045.0205 to 7045.0304, 7045.0450 to 7045.0534, and 7045.0552 to 7045.0632, a marketer must keep a copy of each certification notice received or sent for three years from the date the marketer last engaged in a hazardous waste fuel marketing transaction with the person who sent or received the certification notice.

Subp. 6. **Standards applicable to burners of hazardous waste fuel.** Owners and operators of industrial furnaces and boilers identified in subpart 2, item B, that burn hazardous fuel are subject to the requirements in items A to F.

A. A burner must notify the Environmental Protection Agency of hazardous waste fuel activities and obtain an EPA identification number. Even if a burner has previously notified the Environmental Protection Agency of the burner's hazardous waste management activities and obtained an EPA identification number, the burner must renotify the Environmental Protection Agency to identify the burner's hazardous waste fuel activities.

B. Before a burner accepts the first shipment of hazardous waste fuel from a marketer, the burner must provide the marketer with a one-time written and signed notice certifying that:

(1) the burner has notified the Environmental Protection Agency and identified the burner's waste-as-fuel activities; and

(2) the burner will burn the fuel only in a boiler or furnace identified in subpart 2, item B.

C. In addition to the applicable record keeping requirements of parts 7045.0478 to 7045.0482 and 7045.0584 to 7045.0588, a burner must keep a copy of each certification notice that the burner sends to a marketer for three years from the date the burner last receives hazardous waste fuel from that marketer.

D. Generators who accumulate hazardous waste fuel before burning on-site within the accumulation time period allowed in part 7045.0292 must comply with that part. Small quantity generators who accumulate hazardous waste fuel before burning on-site within the accumulation time period allowed in part 7045.0219 must comply with that part. Burning by the generator of a hazardous waste that is a sludge or is or contains a waste listed in part 7045.0135 for reasons other than ignitability or is or contains a waste that is toxic under part 7045.0131, subpart 6, is subject to the additional requirements of item E, subitem (2).

E. Generators who accumulate waste for longer than the time periods in item D, and burners who receive waste from off-site and store it, must comply with the following requirements:

(1) the agency's permitting procedures in chapter 7001 for hazardous waste storage facilities, parts 7045.0205 to 7045.0536, 7045.0544, 7045.0552 to 7045.0632, 7045.1000 to 7045.1030, and 7045.1300 to 7045.1380; and

(2) if the hazardous waste to be burned is a sludge or is or contains a waste listed in part 7045.0135 for reasons other than ignitability, or is or contains a waste that is toxic under part 7045.0131, subpart 6, then parts 7045.0542, excluding subparts 4, item C, and 7, item A, subitem (2); and 7045.0640 apply.

F. A burner must abide by Minnesota and federal air quality regulations, including obtaining a permit if necessary. Compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes.

7045.0695 USED OIL BURNED FOR ENERGY RECOVERY.

Subpart 1. **Scope.** The requirements of this part apply to used oil that is burned for energy recovery in a boiler or industrial furnace that is not regulated under part 7045.0542 or 7045.0640. Used oil burned for energy recovery is subject to regulation under this part rather than as hazardous waste fuel under part 7045.0692, even if it exhibits a characteristic of hazardous waste identified in part 7045.0131, provided that it has not been intentionally mixed with a characteristic hazardous waste. Used oil intentionally mixed with a characteristic hazardous waste as identified in part 7045.0131 is regulated as specified in part 7045.0102, subpart 3.

A. The requirements of this part do not apply to subitems (1) and (2), which are regulated as specified.

(1) Used oil that has been intentionally mixed with a hazardous waste listed in part 7045.0135 is regulated under part 7045.0692 if it is to be burned for energy recovery.

(2) Used oil containing more than 1,000 parts per million of total halogens is presumed to have been mixed with a halogenated hazardous waste listed in part 7045.0135 and is a hazardous waste. It is subject to the requirements of part 7045.0692 if it is to be burned for energy recovery. This presumption may be rebutted by a demonstration that the used oil does not contain hazardous waste.

B. Used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment, is subject to regulation as off-specification used oil fuel if it exceeds any of the allowable levels of the constituents and properties in subitem (1). On-specification used oil fuel as defined in part 7045.0020, subpart 60a, is subject only to the analysis and record keeping requirements under subpart 3, item B, subitems (1) and (8).

(1) Used oil exceeding any of the following allowable levels, for the constituent or property listed, is subject to full regulation under this part when burned for energy recovery:

Constituent/property	Allowable level
Arsenic, total	5 parts per million maximum
Cadmium, total	2 parts per million maximum
Chromium, total	10 parts per million maximum
Lead, total	100 parts per million maximum
Flash Point	100 degrees Fahrenheit minimum
Total Halogens	4,000 parts per million maximum

(2) The specifications in subitem (1) do not apply to used oil fuel mixed with a listed hazardous waste identified in part 7045.0135. Such wastes are regulated under part 7045.0692.

(3) If the presumption of mixing is not successfully rebutted, used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided in item A, subitem (2). This used oil is subject to part 7045.0692 rather than this part when burned for energy recovery. If the presumption of mixing is successfully rebutted and the oil is on-specification used oil, it is subject only to the reduced requirements identified in subpart 3, item B, subitems (1) and (8).

Subp. 2. **Standards applicable to generators of used oil to be burned for energy recovery.** Except as provided in items A and B, generators of used oil are not subject to this subpart.

A. Generators who market used oil directly to a burner are subject to subpart 3.

B. Generators who burn used oil are subject to subpart 4.

Subp. 3. **Standards applicable to marketers of used oil to be burned for energy recovery.**

A. The following persons are not marketers:

(1) Used oil generators, and collectors who transport used oil received only from generators, unless the generator or collector markets the used oil directly to a person who burns it for energy recovery. Generators and collectors who market to incidental burners are not marketers subject to this subpart.

(2) Persons who market only on-specification used oil fuel and who are not the first person to claim the used oil meets the specifications of subpart 1, item B.

B. Marketers are subject to the following requirements:

(1) Used oil fuel is subject to regulation as off-specification used oil fuel under this part unless the marketer obtains analyses or other information documenting that the used oil is on-specification used oil fuel.

(2) A person may market off-specification used oil for energy recovery only:

(a) to burners or other marketers who have notified the Environmental Protection Agency of their used oil management activities stating the location and general description of those activities, and who have an EPA identification number; and

(b) to burners who burn the used oil in an industrial furnace or boiler identified in subpart 4, item A, subitems (1) and (2).

(3) Even if a marketer has previously notified the Environmental Protection Agency of the marketer's hazardous waste management activities and obtained an EPA identification number, the marketer must renotify the Environmental Protection Agency to identify the marketer's used oil management activities.

(4) When a marketer initiates a shipment of off-specification used oil fuel, the marketer must prepare and send the receiving facility an invoice containing the following information:

(a) a unique invoice number;

(b) the marketer's own EPA identification number and the EPA identification number of the receiving facility;

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(c) the names and addresses of the shipping and receiving facilities;

(d) the quantity of off-specification used oil fuel to be delivered;

(e) the dates of shipment or delivery; and

(f) the following statement: "This used oil is subject to EPA regulation under Code of Federal Regulations, title 40, section 266."

(5) Used oil that meets the definition of combustible liquid or flammable liquid is subject to the United States Department of Transportation hazardous materials regulations in Code of Federal Regulations, title 49, sections 100 to 177.

(6) Before a marketer initiates the first shipment of off-specification used oil fuel to a burner or other marketer, the marketer must obtain a one-time written and signed notice from the burner or marketer certifying that:

(a) the burner or marketer has notified the Environmental Protection Agency stating the location and general description of the marketer's used oil management activities; and

(b) if the recipient is a burner, the burner will burn the off-specification used oil fuel only in an industrial furnace or boiler identified in subpart 4, item A, subitems (1) and (2).

(7) Before a marketer accepts the first shipment of off-specification used oil fuel from another marketer subject to the requirements of this part, the first marketer must provide the other marketer with a one-time written and signed notice certifying that the first marketer has notified the Environmental Protection Agency of the first marketer's used oil management activities.

(8) A marketer who first claims under item B, subitem (1), that used oil fuel meets the specifications must keep copies of analysis, or other information used to make the determination, for three years from the date of analysis. That marketer must also record in an operating log and keep for three years the information in units (a) to (d) on each shipment of on-specification used oil fuel. On-specification used oil fuel is not subject to further regulation, unless it is subsequently mixed with hazardous waste or unless it is mixed with used oil so that it no longer meets the specifications:

(a) the name and address of the facility receiving the shipment;

(b) the quantity of used oil fuel delivered;

(c) the date of shipment and delivery; and

(d) a cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets the specifications required under this subitem.

(9) A marketer who receives or initiates an invoice under the requirements of this subpart must keep a copy of each invoice for three years from the date the invoice is received or prepared. In addition, a marketer must keep a copy of each certification notice that the marketer received or sent for three years from the date that the marketer last engaged in an off-specification used oil fuel marketing transaction with the person who sent or received the certification notice.

Subp. 4. **Standards applicable to burners of used oil burned for energy recovery.** Owners and operators of devices that burn used oil fuel are subject to the requirements in items A to G.

A. Off-specification used oil fuel may be burned for energy recovery only in industrial furnaces defined in part 7045.0020, or in boilers as defined in part 7045.0020, or as provided in part 7045.0075, subpart 4, that meet the following criteria:

(1) industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

(2) utility boilers used to produce electric power, steam, or heated or cooled air or other gases or fluids for sale; or

(3) used oil-fired space heaters provided that:

(a) the heater burns only used oil that the owner or operator generates or used oil received from do-it-yourself oil changers who generate used oil as household waste;

(b) the heater is designed to have a maximum capacity of not more than 0.5 million Btu per hour; and

(c) the combustion gases from the heater are vented to the out-of-doors.

B. Burners of off-specification used oil fuel and burners of on-specification used oil fuel who are the first to claim that the oil meets the specifications provided in subpart 1, item B, must notify the Environmental Protection Agency stating the location and general description of used oil management activities. Burners who meet the following criteria are not required to notify the Environmental Protection Agency:

(1) burners of on-specification used oil fuel who receive the oil from a marketer who has previously notified the Environmental Protection Agency;

(2) owners and operators of used oil-fired space heaters that burn used oil fuel under item A, subitem (3); and

(3) burners who burn on-specification used oil that they generate.

C. Before a burner accepts the first shipment of off-specification used oil fuel from a marketer, the burner must provide the marketer with a one-time written and signed notice certifying that:

(1) the burner has notified the Environmental Protection Agency stating the location and general description of the burner's used oil management activities; and

(2) the burner will burn the used oil only in an industrial furnace or boiler identified in item A, subitems (1) and (2).

D. A person who burns used oil fuel that has been generated on-site is subject to regulation under this subpart unless that person obtains analysis or other information documenting that the oil is on-specification used oil.

E. Burners who process, blend, or otherwise manage off-specification used oil to meet the specifications provided under subpart 1, item B, must obtain analyses or other information documenting that the oil is on-specification used oil.

F. A burner must retain a copy of the invoice given from a marketer for three years from the date the invoice is received. Burners must also keep for three years copies of all analyses of used oil fuel as may be required by items D and E. In addition, the burner must keep a copy of each certification notice that the burner sends to a marketer for three years from the date the burner last received off-specification used oil fuel from that marketer.

G. Burners must abide by Minnesota and federal air quality regulations, including obtaining a permit if necessary. Compliance with this part does not release a burner from any obligation to comply with local air quality ordinances or codes.

REPEALER. *Minnesota Rules*, parts 7045.0100; and 7045.0125, subparts 10 and 11, are repealed.

Pollution Control Agency

Hazardous Waste Division

Proposed Permanent Rules Relating to Underground Storage Tank Training and Certification

Notice of Intent to Adopt Rules Without a Public Hearing

NOTICE IS HEREBY GIVEN that the Minnesota Pollution Control Agency (MPCA) intends to adopt the above-entitled rule without a public hearing following the procedures set forth in the Administrative Procedure Act for adopting rules without a public hearing in *Minnesota Statutes* §§ 14.22 to 14.28 (1988). The MPCA's authority to adopt the rule is set forth in *Minnesota Statutes* § 116.491 (1988).

All persons have until 4:30 p.m. on October 11, 1989, to submit comments in support of or in opposition to the proposed rules or any part or subpart of the rules. Comment is encouraged. Each comment should identify the portion of the proposed rules addressed, the reason for the comment, and any change proposed.

Any person may make a written request for a public hearing on the rules within the comment period. If 25 or more persons submit a written request for a public hearing within the comment period, a public hearing will be held unless a sufficient number withdraw their requests in writing. Any person requesting a public hearing should state his or her name and address, and is encouraged to identify the portion of the proposed rules addressed, the reason for the request, and any change proposed. If a public hearing is required, the MPCA will proceed pursuant to *Minnesota Statutes* §§ 14.131 to 14.20 (1988). Comments or written requests for a public hearing must be submitted to:

Beth G. Lockwood
Tanks and Spills Section
Hazardous Waste Division
Minnesota Pollution Control Agency

520 Lafayette Road North
St. Paul, Minnesota 55155
(612) 297-3081

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CERTIFICATE OF AGENCY'S AUTHORIZING RESOLUTION

I, Gerald L. Willet, do hereby certify that I am the Commissioner of the Minnesota Pollution Control Agency, an agency duly authorized under the laws of the state of Minnesota, and that the following is a true, complete, and correct copy of the resolutions adopted at a meeting of the Minnesota Pollution Control Agency duly and properly called and held on the 22nd day of August 1989, that a quorum was present at said meeting, that a majority of those present voted for the resolutions and that said resolutions will be set forth in the minutes of said meeting and have not been rescinded or modified:

RESOLUTION

BE IT RESOLVED, that the Commissioner of the Minnesota Pollution Control Agency is hereby granted the authority to sign and to give notice of the Minnesota Pollution Control Agency's intent to adopt, without a public hearing, the attached amendments to the Minnesota Pollution Control Agency's hazardous waste rules governing the management, storage and treatment of hazardous waste, Minn. Rules pts. 7001.0520, 7045.0020, 7045.0102, 7045.0120, 7045.0125, 7045.0214, 7045.0219, 7045.0665, 7045.0692, and 7045.0695, to all persons who have registered their names with the Minnesota Pollution Control Agency for that purpose and publish the notice and the rule amendments in the State Register, and to perform any acts incidental thereto, including making any form changes in the rule amendments that the Revisor of Statutes requires the Minnesota Pollution Control Agency to make in order to obtain the Revisor's certification as required by Minn. Stat. § 14.07, subd. 2 (1988).

BE IT FURTHER RESOLVED, that in the event a public hearing becomes necessary, the Commissioner is hereby granted the authority and directed to call a hearing for the purpose of promulgating said rule amendments as well as to perform any and all acts incidental thereto, including but not limited to signing an Order for the Notice of Hearing, as well as acting as the Minnesota Pollution Control Agency's representative at all hearings.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 22 day of August, 1989.

Gerald L. Willet

Gerald L. Willet
Commissioner

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of the Proposed Rule Amendments Governing the Management of Hazardous Waste, Minn. Rules Ch. 7045

AFFIDAVIT REGARDING COMMENTS RECEIVED PURSUANT TO NOTICE OF INTENT OF SOLICIT OUTSIDE OPINION

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

Gail V. Lund, being duly sworn on oath deposes and says:

1. That she is the person named in the Notice of Intent to Solicit Outside Opinion (13 SR 309, August 8, 1988) as the person to receive comments on the Minnesota Pollution Control Agency's intent to adopt rule amendments governing the management of hazardous waste.

2. That the comment period set forth in the notice terminated at 4:30 p.m. on September 6, 1988.

3. That during the public comment period, there were no comments received by the Minnesota Pollution Control Agency regarding the above-entitled matter.

Gail V. Lund

Subscribed and sworn to before me
this 20 day of January

Ardith M. Vos
Notary Public

ARDITH M. VOS
NOTARY PUBLIC — MINNESOTA
ANOKA COUNTY
My commission expires 1-12-94

ATTACHMENT 2

DIVISION OF STATE FIRE MARSHAL
~~MARKET HOUSE~~ 285 Bigelow Building
~~289 EAST 5TH STREET~~ 450 No Syndicate St
ST. PAUL, MINNESOTA ~~55101~~ 55104
TELEPHONE: (612) ~~296-7641~~ 643-3088

STATE OF MINNESOTA
DEPARTMENT OF PUBLIC SAFETY

October 9, 1989

Gail V. Lund
Minnesota Pollution Control Agency
520 Lafayette Road North
St Paul, Minnesota 55155

RE: Proposed Permanent Rules Relating to Hazardous Waste; Burning of Hazardous Waste and Used Oil

Dear Ms Lund

This is a follow-up to your recent phone conversations with Deputy State Fire Marshal Ray Geffre As Mr. Geffre has no doubt indicated to you, we have reviewed the abovementioned proposed rule and support its adoption We do, however, have some suggestions relating to the definition section of the proposed rule (Part 7045.0020). We recommend the following.

- Part 7045.0020, Subpart 9b - Definition of "Combustible Liquid"

  Add a reference to Section 9.105 of the Minnesota Uniform Fire Code (MUFC).

- Part 7045.0020, Subpart 24b - Definition of "Flammable Liquid"

  Add a reference to Section 9.108 of the Minnesota Uniform Fire Code.

We do not view these as substantial changes to your rule as proposed, but rather changes of an editorial nature intended to promote consistency between state regulations. The definitions of flammable and combustible liquid in the fire code sections cited above are similar to those found in CFR, Title 49, Section 173.115.

The MUFC is a commonly used document throughout the state. By referencing it, in addition to CFR, Title 49, two goals would be achieved:

1. It would identify to users of the proposed rule that the definitions in question are consistent between PCA Rule and the MUFC.

2. The rule would be referencing a document that is readily available, understood and used by building and fire officials throughout the state who are going to be encountering waste oil burner installations in their jurisdictions. These people are much more likely to have a copy of the MUFC available than the Code of Federal Regulations.

Your cooperation in making these editorial additions to your proposed rule would be appreciated. Should you have any questions or care to discuss this matter further, please contact Deputy Geffre at 612-643-3088 or Deputy State Fire Marshal Robert Imholte at 612-685-8559.

Sincerely,

Thomas R. Brace
State Fire Marshal

AN EQUAL OPPORTUNITY EMPLOYER

DEPARTMENT : POLLUTION CONTROL AGENCY

STATE OF MINNESOTA

Office Memorandum

DATE : October 6, 1989

TO : Sharon C. Meyer, Supervisor
Program Development Unit
Hazardous Waste Division

FROM : Gail V. Lund GVL
Program Development Unit
Hazardous Waste Division

PHONE : 296-7351

SUBJECT : COMMENT RECEIVED ON PROPOSED USED OIL RULES REGARDING THE LAND APPLICATION PROHIBITION

Dave Richfield, Supervisor, Tanks and Spills Section, Hazardous Waste Division, reviewed the proposed used oil rules during the comment period. He had a comment on part 7045.0665, Use Constituting Disposal.

The proposed rules add a new subpart, 1a, to part 7045.0665. Subp. 1a discusses a land application for used oil. It prohibits used oil and waste oil from being applied in or on the land, unless approved by the commissioner. The application of used oil will only be approved in the case of an accidental oil spill.

Mr. Richfield was confused when he read that specific portion of the proposed rule. He commented that the Minnesota Pollution Control Agency (MPCA) has approved the land application of waste oil in spill situations in the past and believes that this practice has merit and will continue to have merit. The proposed rule published in the State Register on October 11, 1989, does not include wording applicable to waste oil application on the land in the case of an oil spill.

I agree with Mr. Richfield's comment regarding waste oil application. The omission of the words, "waste oil" was in error and should have been included in the proposed rule amendment publication in the State Register. The MPCA staff do not believe this constitutes a substantial change to the proposed rules. Used oil and waste oil have similar physical characteristics but are different by definition. Used oil means any oil which has been refined from crude oil, used, and as a result of such use has become contaminated by physical or chemical impurities. Waste oil means virgin oil that is discarded before use. The application of waste oil on the land is a common cleanup method in the case of accidental spills. In fact, waste oil most likely does not contain the same contaminants as most used oil; therefore, its application in or on the land will not cause any greater threat to human health and the environment than used oil which is also approved for application as a result of a spill.

Minn. Rules pt. 7045.0665, subp. 1a, item B is modified to read:

> B. A person may not otherwise place used oil in or on the land, unless approved by the commissioner. The application of used or waste oil in or on the land shall only be approved in the case of an accidental spill.

GVL:km

DEPARTMENT : POLLUTION CONTROL AGENCY

STATE OF MINNESOTA

Office Memorandum

DATE : October 6, 1989

TO : Sharon C. Meyer, Supervisor
Program Development Unit
Hazardous Waste Division

FROM : Gail V. Lund
Program Development Unit
Hazardous Waste Division

PHONE : 296-7351

SUBJECT : MINNESOTA POLLUTION CONTROL AGENCY (MPCA) STAFF COMMENT ON PROPOSED STATE USED OIL RULES

MPCA staff have commented on the proposed used oil rules regarding the regulation of used oil burned for energy recovery. There is a need to modify part 7045.0695, subpart 1 to more specifically incorporate the federal prohibition for burning used oil only in industrial boilers and industrial furnaces which meet certain criteria.

MPCA staff believe that the rules are unclear regarding the regulation of used oil burned as a fuel in devices which do not meet the criteria for industrial boilers and furnaces. The proposed rules do not clearly state which devices are prohibited from burning used oil as a fuel. The proposed rules merely indicate which burning devices are allowed to burn used oil as a fuel.

U.S. Environmental Protection Agency's (EPA) regulations clearly prohibit burning used oil in any device which is not an industrial boiler or furnace.

The proposed rules are equivalent to the federal regulations but do not have a specific prohibition section in part 7045.0695, similar to EPA's. The proposed rules state the prohibition in part 7045.0695, subpart 4, item A instead.

In order to clarify the prohibition to staff and the regulated community, it is necessary to add a sentence to the scope of the proposed used oil rules at part 7045.0695. Staff do not feel that a clarifying addition to the scope of part 7045.0695 is a substantial change since the prohibition is already stated in subpart 4 of part 7045.0695. The modification will merely add a similar statement to subpart 1, scope, which will clarify the regulation of used oil burned for energy recovery.

Minn. Rules pt. 7045.0695, subp. 1 will be modified to read:

Subp. 1. Scope. The requirements of this part apply to used oil that is burned for energy recovery in a boiler or industrial furnace that is not regulated under part 7045.0542 or 7045.0640. Burning used oil as a fuel is prohibited except as provided in this part. Used oil burned for energy recovery is ....

GVL:km

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of Proposed Rule
Amendments Governing the Management of
Used Oil Burned for Energy Recovery,
Hazardous Waste Burned for Energy Recovery,
A Land Application Prohibition
for Used Oil, and A Technical
Correction to Existing Requirements
for Recyclable Materials,
Minn. Rules Chs. 7001 and 7045.

CERTIFICATE

I hereby certify that the list of persons, associations, and other interested groups who have requested, pursuant to Minn. stat. § 14.14 (1988) that their names be placed on file with the Minnesota Pollution Control Agency for the purpose of receiving notice of the proposed adoption of rules by the Minnesota Pollution Control Agency is accurate and complete as of 10:00 a.m. this 8th day of September, 1989.

Gail U. Lund

Subscribed and sworn before me
this 8 day of Sept 19 89

Ardith M. Vos

ARDITH M. VOS
NOTARY PUBLIC — MINNESOTA
ANOKA COUNTY
My commission expires 1-12-94