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Part IV

Environmental Protection Agency

40 CFR Parts 63, 261, and 270
Hazardous Waste Combustors; Revised Standards; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 63, 261, and 270

[EPA F-98-RCSF-FFFFF; FRL-6110-3]

RIN 2050-AE01

Hazardous Waste Combustors; Revised Standards; Final Rule—Part 1: RCRA Comparable Fuel Exclusion; Permit Modifications for Hazardous Waste Combustion Units; Notification of Intent To Comply; Waste Minimization and Pollution Prevention Criteria for Compliance Extensions

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: On April 19, 1996, EPA proposed revisions for air emission standards for certain hazardous waste combustion units. Today's rule finalizes some elements of that proposal. These elements include a conditional exclusion from RCRA for fuels which are produced from a hazardous waste, but which are comparable to some currently used fossil fuels; a new RCRA permit modification provision which is intended to make it easier for facilities to make changes to their existing RCRA permits when adding air pollution control equipment or making other changes in equipment or operation needed to comply with the upcoming air emission standards; notification requirements for sources which intend to comply with the final rule; and allowances for extensions to the compliance period to promote the installation of cost effective pollution prevention technologies to replace or supplement emission control technologies for meeting the emission standards.

EFFECTIVE DATE: This rule is effective on June 19, 1998.

ADDRESSES: The public docket for this rulemaking is available for public inspection at EPA's RCRA Docket, located at Crystal Gateway, First Floor, 1235 Jefferson Davis Highway, Arlington, Virginia. The regulatory docket for this final rule contains a number of background materials. To obtain a list of these items, contact the RCRA Docket at 703-603-9230 and request the list of references in EPA Docket #F-98-RCSF-FFFFF.

FOR FURTHER INFORMATION CONTACT: The RCRA Hotline between 9:00 a.m.-6:00 p.m. EST, at 800-424-9346 (toll-free); 703-412-9810 (from Government phones or if in the Washington, D.C. local calling area); or 800-553-7672 (for the hearing impaired). For more detailed information on specific aspects of the rulemaking, contact Mary Jo Krolewski on the comparable fuel exclusion at (703) 308-7754, Tricia Buzzell on permit modifications at (703) 308-8632, James Lounsbury on waste minimization and pollution prevention at (703) 308-8463, David Hockey on the notification of intent to comply at (703) 308-8846, or by writing, to U.S. Environmental Protection Agency, Office of Solid Waste, Permits and State Programs Division, 401 M St., S.W. (Mailcode 5303W), Washington, D.C. 20460.

SUPPLEMENTARY INFORMATION: This rule is available on the Internet. Please follow these instructions to access the rule electronically:

From the World Wide Web (WWW), type either
http://www.epa.gov/epaoswer/hazwaste/combust/fastrack.

EPA's "Pollution Prevention Facility Planning Guide" (May, 1992; NTIS #PB92-213206) describes the series of analytical steps that are often used by companies to identify waste minimization measures. Additional EPA references include: "Waste Minimization Opportunity Assessment Manual (EPA 625/7-88/003, July 1988), Interim Final "Guidance to Hazardous Waste Generators on the Elements of a Waste Minimization Program In Place," (May 1993), "An Introduction to Environmental Accounting As a Business Management Tool" (EPA 742-R-95-001, June 1995), the "P2/Finance User's Manual: Pollution Prevention Financial Analysis and Cost Evaluation System for Lotus 1-2-3 (EPA 742-B-94-003, January 1994), and Enviro$ense, an electronic library of information on pollution prevention, technical assistance, and environmental compliance. Many of these and other documents can be accessed by contacting the RCRA Hotline toll-free at 1-800-424-9346. Enviro$ense can be accessed by contacting a system operator at (703) 908-2007, or on the Internet at http://wastenot.inel.gov/enviro-sense. Information on State waste minimization programs can be obtained through Enviro$ense, directly from the State pollution prevention program offices, or from the National Pollution Prevention Roundtable at E-mail address 75152.1416@compuserve.com, by phone at 202-466-7272 in Washington, D.C.

The official record for this action is kept in a paper format. Accordingly, EPA has transferred all electronic comments received into paper form and placed them into the official record, with all the comments received in writing. The official record is maintained at the address in the **ADDRESSES** section at the beginning of this document.

EPA's responses to comments have been incorporated in a "Response to Comments" document, which has been placed into the official record for this rulemaking. The major comments and responses are discussed in the Response to Comment sections of this preamble.

The contents of today's preamble are listed in the following outline:

I. Authority

II. Scope of Final Rule

III. Comparable Fuels Exclusion

A. EPA's Approach to Establishing Benchmark Constituent Levels
  1. The Benchmark Approach
  2. Selection of the Benchmark Fuels
B. Options for the Benchmark Approach
  1. Selection of Percentile Level
  2. Composite v. Individual Specifications
C. Parameters for the Comparable Fuel Specification
  1. Physical Specifications
  2. General Constituent Specifications
  3. Individual Hazardous Constituent Specifications
D. Parameters for the Synthesis Gas Fuel Exclusion
  1. Physical Specifications
  2. General Constituent Specifications
  3. Individual Hazardous Constituent Specifications
E. Meeting the Comparable Fuel Specifications
  1. Potential Applicability of Today's Rule to Specific Waste Codes
  2. General
  3. Blending
  4. Treatment
F. Meeting the Syngas Fuel Specifications
G. Sampling and Analysis
  1. Use of Process Knowledge
  2. Waste Analysis Plan
  3. Methods to Analyze Comparable Fuels
  4. Syngas Waste Analysis Plan and Analysis Methods
  5. Non-detects
H. Notification, Certification, and Documentation
  1. Who Must Make the Exclusion Notification
  2. Notification Requirements
I. Exclusion Status
J. Recordkeeping
  1. General
  2. Off-site Shipment
K. Transportation and Storage
L. Comparable Fuels Exclusion and Waste Minimization
  1. Introduction
  2. Major Concerns of Commenters

IV. RCRA Permit Modifications for Hazardous Waste Combustion Units

A. Introduction
B. Overview
  1. Background on RCRA Permit Modification Procedures
  2. Shortcomings of the Current Procedures

3. How Today's Rule Impacts the Procedures
C. Discussion of RCRA Permit Modification Procedures for Facilities Coming Into Compliance With MACT Requirements
1. Summary of Proposed Options
2. Summary of Public Comments
3. Response to Comments and Discussion of Final Provisions
D. Summary of Public Comments
E. Response to Comments
F. RCRA Changes in Interim Status Procedures
V. Notification of Intent to Comply and Progress Report
A. Background
B. Summary of Final Provisions
C. Discussion of Public Comments and Final NIC Provisions
1. General
2. Purpose of the NIC
3. Timing
4. NIC Meeting
5. Relation Between NIC and Other Notification Requirements
D. Discussion of Public Comments and Progress Report
1. Overview
2. Summary of Progress Report Requirements
E. Certification
F. Extension of the Compliance Date
G. Sources Which Become Affected After the Effective Date of This Subpart
VI. Waste Minimization and Pollution Prevention
A. Overview
B. Background
C. Summary of Proposed Pollution Prevention/Waste Minimization Incentives and Comments Received
D. Waste Minimization Incentives Contained in Today's Rule
VII. State Authority
A. RCRA State Authorization
B. Program Delegation under the Clean Air Act
VIII. Administrative Requirements/ Compliance With Executive Order
A. Regulatory Impact Analysis Under Executive Order 12866
B. Regulatory Flexibility Act
C. Paperwork Reduction Act
D. Unfunded Mandates
IX. Submission to Congress and the General Accounting Office
X. Environmental Justice
A. Applicability of Executive Order 12898
B. Potential Effects
XI. Children's Health
XII. National Technology Transfer and Advancement Act

I. Authority

These regulations are being finalized under the authority of sections 1004, 1006, 2002, 3001, 3004, 3005, and 7004 of the Solid Waste Disposal Act of 1965, as amended, including amendments by the Resource Conservation and Recovery Act.

II. Scope of the Final Rule

On April 19, 1996, EPA proposed rules to control emissions of HAPs from hazardous waste-burning incinerators, cement kilns, and light weight aggregate kilns. (61 FR 17358) After promulgation of the proposal, the Agency issued the following notices of data availability (NODA): NODA 1 (Peer review and Comparable fuels)—August 23, 1996: 61 FR 43501; NODA 2 (Revised emissions database)—January 7, 1997: 62 FR 960; Continuous Emissions Monitoring Systems (CEMS) NODA—March 21, 1997: 62 FR 13775; NODA 3 (MACT standards and implementation)—May 2, 1997: 62 FR 24212; and NODA 4 (Comparable fuels data)—September 9, 1997: 62 FR 47402.

Today's final rule addresses four elements of the April 19, 1996 (61 FR 17358) proposal to revise the standards for hazardous waste combustors. The remaining issues of the proposal will be addressed in final rules in the near future.

III. Comparable Fuels Exclusion

Under this final rule, EPA is excluding from the regulatory definition of solid waste hazardous waste-derived fuels that meet specification levels comparable to fossil fuels for concentrations of hazardous constituents and for physical properties that affect burning.[1] The exclusion would apply to the comparable fuel from the point it is generated and would be claimed by the person generating the comparable fuel (which person can include a hazardous waste treater). With respect to the fuels, generators of the comparable fuel would have to comply with sampling and analysis, notification and certification, and recordkeeping requirements in order for their fuels to be excluded. The exclusion potentially applies to gaseous and liquid hazardous waste-derived fuels. However, this exclusion does not apply to solids or to used oil, which is subject to special standards under 40 CFR Part 279.

Today's rule is consistent with EPA's goal to develop a comparable fuel specification which is of use to the regulated community but assures that an excluded waste-derived fuel is similar in composition to commercially available fuel and therefore poses no greater risk than burning fossil fuel. Accordingly, EPA is using a "benchmark approach" to identify a specification that would ensure that constituent concentrations and physical properties of excluded waste-derived fuel are comparable to those of fossil fuels.

The rationale for the Agency's approach is that if a hazardous waste-derived fuel is comparable to a fossil fuel in terms of hazardous and other key constituents and has a heating value indicative of a fuel, EPA has discretion to classify such material as a fuel product, not as a waste. Given that a comparable fuel would have legitimate energy value and the same hazardous constituents in comparable concentrations to those in fossil fuel (and satisfies other parameters related to comparability as well), classifying such material as a fuel product and not as a waste promotes RCRA's resource recovery goals without creating any risk greater than those posed by the commonly used commercial fuels. Under these circumstances, EPA can permissibly classify a comparable fuel as a non-waste. See 46 FR 44971 (August 8, 1981) (exemption from Subtitle C regulation for spent pickle liquor used as a wastewater treatment agent in part because of its similarity in composition to the commercial acids that would be used in its place); 50 FR 49180, 49181, 49183 (November 29, 1985) (explanation of a similar type of benchmark approach in establishing used oil fuel specification); 53 FR at 31164 (August 18, 1988) (exemption for certain hazardous waste-derived fertilizers due to similarity to the commercial fertilizers that would be used in their place).

Put another way, EPA can reasonably determine that a material which is a legitimate fuel and which contains hazardous constituents at levels comparable to fossil fuels is not being "discarded" within the meaning of RCRA section 1004 (27). "Discarded" itself is an ambiguous term, see *American Petroleum Inst.* v. *EPA*, 906 F. 2d 729, 741 (D.C. Cir. 1990). EPA's interpretation that hazardous waste-derived fuels which are comparable to fossil fuels need not be considered to be "discarded" serves the statutory objective of encouraging resource recovery. RCRA section 1003 (a) (10). In addition, burning of such fuels does not present the element of discarding hazardous constituents through combustion that underlies the typical classification of hazardous waste-derived fuels as a solid waste. 50 Fed. Reg. at 629–630 (Jan. 4, 1985). This is because, as noted, hazardous constituent concentration levels are comparable to those in fossil fuels.

[1] We note that DOW Chemical Company (Dow) in a petition to the Administrator, dated August 10, 1995, specifically requested that the Agency develop a generic exclusion for "materials that are burned for energy recovery in on-site boilers which do not exceed the levels of fossil fuel constituents* * *." (Petition, at p.3). This final rule also responds to that petition.

The case law further makes clear that EPA may classify secondary materials as "discarded" based, at least in part, upon whether such materials may be considered part of the waste management problem. *American Mining Congress* v. *EPA*, 907 F. 2d 1179, 1186 (D.C. Cir. 1990). Today's rule contains conditions to assure that burning of comparable fuels will not become part of the waste management problem. The chief condition is limitation on burning to industrial furnaces (as defined in 260. 10), industrial and utility boilers, and hazardous waste incinerators. Another condition prevents specification limits for hazardous constituents being achieved by means of dilution, so that the total volume of hazardous constituents emitted from burning comparable fuels would remain comparable to those from burning fossil fuels. The rule also contains notification and record keeping conditions which assure that the fuels meet the specification and will be burned in the requisite type of unit, and that this can be verified objectively by third persons.

EPA notes that today's final rule is consistent with the main approach discussed in the Dow petition (see footnote 1 above), which also points out a number of benefits that would result from promulgating this type of exclusion: (1) Support for the statutory goal of promoting beneficial energy recovery and resource conservation; (2) reduction of unnecessary regulatory burden and allowing all parties to focus resources on higher permitting and regulatory priorities; and (3) demonstration of a common-sense approach to regulation. Dow's petition contained data on the chemical and physical aspects of the fuel for which the petition was submitted. Based on these data and additional data submitted during the comment period, it appears that the waste petitioned for exclusion by Dow meets the individual physical and chemical comparable fuel specifications set forth in this rule. Today's rule does not exclude Dow's wastestreams or other wastestreams for which commenters submitted data that may meet the specifications of the final rule. It remains the responsibility of the generator to comply with the specifications of the comparable fuel exclusion stipulated by the State RCRA implementing authority.

A. EPA's Approach to Establishing Benchmark Constituent Levels

1. The Benchmark Approach

EPA considered using risk to human health and the environment as the way to determine the scope and levels of a "clean fuels" specification. However, the Agency encountered several technical and implementation problems using a purely risk-based approach to develop a national rule. Specifically, EPA has insufficient data relating to the types of waste burned and the risks they pose to develop a fully protective and complete "clean fuels" exemption. EPA also does not have sufficient data to determine the relationship between the amount of "clean fuel" burned and emissions, especially of dioxins and other non-dioxin PICs. EPA also does not know how emissions (likely uncontrolled) at the multitude of actual facilities that would burn an excluded fuel would compare to emissions from the example facilities that EPA would use to derive a "clean fuel" specification. (Emissions and/or risks at a given facility could be higher than those of the example facilities given site-specific considerations.) Without considering all reasonable, possible emission scenarios, which is not feasible for the Agency at this time, the Agency is not prepared today to address these potential risks[2].

The Chemical Manufacturers Association (CMA) submitted a proposal to exempt certain "clean" liquid wastes from RCRA regulation. (61 FR at 17469) Unlike EPA's benchmark-based comparable fuel approach, the CMA approach would establish "clean fuel" specifications for mercury, LVM, and SVM metals based on the technology-based MACT emissions standards proposed for hazardous waste combustors on April 19, 1996. As just discussed above, EPA is concerned about using risk to establish a "clean fuel" specification. EPA does not have data available documenting that emissions from burning a "clean fuel" would not pose a significant risk for the potential combustion and management scenarios in which the clean fuel exclusion from RCRA might be used. Therefore, EPA will not be adopting CMA's proposal in today's rule, but may address aspects of the CMA concept in future actions if appropriate and feasible.

The Agency instead developed a comparable fuel specification, based on the level of hazardous and other constituents normally found in fossil fuels. EPA refers to this as the benchmark approach. For this approach, EPA set a comparable fuel specification such that concentrations of hazardous constituents in the comparable fuel could be no greater than the concentration of hazardous constituents normally occurring in commercial fossil fuels. Thus, EPA expects that the comparable fuel would pose no greater risk when burned than a fossil fuel and would at the same time be physically comparable to a fossil fuel, leading to the conclusion that EPA may classify these materials as products, not wastes. See proposal for more details (61 FR 17460, April 19, 1996).

Some commenters argued that by using a benchmark approach, EPA had failed to assess potential risks to human health and the environment resulting from the exclusion. Commenters argued that EPA cannot determine that there are no adverse risks by the comparison to fossil fuels. EPA disagrees with commenters conclusions concerning the need to determine absolute risk. In this final rule, EPA is setting a comparable fuel specification with concentrations of hazardous constituents no greater than the concentrations of hazardous constituents occurring in fossil fuels. Thus, EPA reasonably expects—based on the methodology used to establish the specification—that the comparable fuel will pose no greater risk when burned than a fossil fuel and concomitant energy recovery benefits will be realized from reusing the waste to displace fossil fuels. The Agency concludes it has discretion in exercising jurisdiction over hazardous waste-derived fuels that are essentially the same as fossil fuel, since there would likely not be environmental benefits from regulating those hazardous waste-derived fuels (i.e., burners would likely just choose to burn fossil fuels). Indeed, as explained below, many commercial fuels could be less "clean" than the comparable fuels, so that substitution of some commercial fuels could be a net deterrent. See 50 FR at 49186 (November 29, 1985) where EPA discussed similar considerations when developing a specification for used oil fuel. See also discussion above as to why such fuels need not be considered to be "discarded". EPA has therefore decided not to regulate comparable hazardous waste-derived fuels meeting the benchmark specifications as hazardous waste under RCRA.

Furthermore, the Agency notes that the comparable fuel exclusion promulgated today is the first phase in addressing the "clean fuels" issue. Although EPA has identified problems with commenters' alternatives, there is

[2] It is possible to determine on an individual basis that particular waste-derived fuel should be excluded from RCRA on risk-based grounds. See 63 FR at 18533 (April 15, 1998) where EPA finalized such an exclusion for a waste fuel which could be generated by the pulp and paper industry. However, EPA cautions that making such a demonstration is difficult (because of potential uncertainties regarding combustion conditions and exposure patterns) and resource-intensive for the Agency to evaluate, and would still involve rulemaking.

room for further expansion of the comparable or clean fuel concept. EPA will continue to work with the regulated community to identify areas to expand the approach taken in today's final rulemaking.

2. Selection of the Benchmark Fuels

Since commercially available fossil fuels are diverse, EPA considered a range of fuels upon which to base its benchmark fuel selection. Available fuels ranged from gases, such as natural gas and propane, to liquids (such as gasoline and fuel oils) to solids (such as coal, coke, and peat). The Agency proposed a benchmark based on liquid fossil fuels (gasoline, No.2 fuel oil, and No.6 fuel oil). (61 FR at 17462)

Commenters argued that EPA should consider solid fossil fuels in developing the benchmark specifications. Commenters believe that materials such as coal are fuels that are widely used throughout the U.S. and failing to consider these materials ignores legitimate fuels used by certain industries. EPA disagrees with commenters' requests to include solid fossil fuels in its benchmark specification. From an environmental standpoint, the comparable fuel specification, which would exclude a hazardous waste-derived fuel from RCRA subtitle C regulation, should not be based on fossil fuels that have high levels of toxic constituents that will not be destroyed or detoxified by burning (e.g., metals and halogens). Data show that solid fossil fuels have comparatively higher metal[3] and possibly halogen levels than liquid fossil fuels[4]. Metals and halogens are not destroyed in the combustion process unlike organic constituents which are commonly destroyed or detoxified through combustion. Comparison with this type of fuel could easily result in a least common denominator approach whereby a hazardous waste-derived fuel would be "comparable" if it was no more dangerous to burn than the most contaminated fossil fuels. Such "comparability" is not congruent with the overall objective of RCRA to protect human health and the environment and is inconsistent with the specific directive to regulate combustion of hazardous waste-derived fuels where necessary to protect human health and the environment. (RCRA section 3004(q)). Thus, while EPA has chosen to use a benchmark rather than a risk-based approach, the Agency has chosen benchmark fuels that, in general, have lower contaminant levels for constituents that are not destroyed. Therefore, in today's rule, EPA is not using solid fossil fuels as part of the comparative benchmark.

EPA also will not be using a gas fuels as benchmarks. Basing the comparable fuel specification on a gas fuel would be overly conservative and have no utility to the regulated industry. (The reader should note that EPA is promulgating an exclusion for a particular type of hazardous waste-derived fuel, namely a type of synthesis gas ("syngas") meeting particular specifications (see Section D below). This hazardous waste derived gas can be used as a fuel and an exclusion provides beneficial resource recovery.) Liquid fuels, on the other hand, are widely used by industry, readily combusted, and do not present the inconsistencies of solid or gaseous fuels. Simply put, the Agency, in assessing comparability, is not required to base a specification on either the most or least contaminated fossil fuels, but may reasonably choose a median, in this case, representative fuel oils. In this final rule, EPA is selecting only liquid fuels for its benchmark fuel specification.

With regard to liquid fuels, commenters argued that EPA should consider as benchmark fuels non-petroleum liquid based fuels such as turpentine and tall oil. One commenter recommended that EPA identify turpentine as a benchmark fuel because it has a very high Btu value and is used as a fuel (and a manufacturing feedstock) both within and outside the forest products industry. Another commenter pointed out that tall oil is not only used in commerce as a traditional fuel, but that EPA has previously noted that tall oil is a legitimate non-waste fuel under the BIF rule low risk waiver exemption (LRWE) and DRE trial burn exemptions (56 FR 7193, February 21, 1991).

While EPA is interested in establishing a broad-based benchmark of liquid fuels, EPA disagrees that turpentine should be included in the benchmark specification. Turpentine is not a widely used commercial fuel. There are no ASTM standards for turpentine fuel which specify the minimum properties which must be met for the product to be considered as a commercial fuel. By contrast, there are ASTM specifications for each of the petroleum fossil fuels EPA is using as a benchmark.

EPA does agree with the commenter that tall oil is used in commerce as a traditional fuel and could be used as a benchmark fuel. At the time of the proposal, EPA had no data on tall oil. The commenter did submit one set of data that EPA was unable to use because it did not meet EPA data quality standards. Therefore, at this time, EPA will not include tall oil in its benchmark fuels.

Finally, some commenters did not support the use of gasoline for setting comparable fuel specifications, because it is not typically utilized in industrial boilers and furnaces. Gasoline is typically limited used in internal combustion engines, and the commenter did not anticipate that industry or individuals will utilize hazardous waste-derived fuels in automobiles, trucks and buses. EPA disagrees that gasoline should be excluded as one of the benchmark fuels. The Agency notes that gasoline is a widely used, commercially available, liquid fuel and EPA does not believe that our selection is necessarily limited to fuel burned in boilers or industrial furnaces. EPA has chosen its benchmark fuels so that the resulting comparable fuel when substituted would have hazardous constituents lower than the fuel it replaces. However, because the comparable fuel will not be substituted for use in gasoline applications (the exclusion is restricted to air regulated stationary combustion units, see Section H below), the rationale for the inclusion of gasoline differs. The Agency believes that gasoline provides a reasonable upper boundary for volatile organics, which are fuel-worthy constituents. The Agency notes that unlike some solid fuels, gasoline has low concentrations of metals. When compared to lighter fuel oils (e.g., No. 2 fuel oil), the gasoline specification has higher specifications for only the detected volatile organics, which are readily burnable compounds.

B. Options for the Benchmark Approach

At proposal, EPA presented several options for deciding what fossil fuel(s) data to use as the benchmark. The options range from developing a suite of comparable fuel specifications based on individual benchmark fuels (i.e., gasoline, No. 2, No. 4, No. 6) to basing the specification on composite values derived from the analysis of all benchmark fuels. (61 FR at 17643).

EPA took comment on individual benchmark fuel specifications based on gasoline, No. 2, and No. 6 fuel oil, using the 90th percentile values for the basis of the individual specifications. Under this approach, individual fuel specification(s) could be implemented

[3] A smaller fraction of metals in coal partitions to emissions than for liquid fuels. Given that most potentially comparable fuels are liquids, allowing metals at the concentrations present in coal could result in substantially higher metals emissions.

[4] For further discussion see USEPA, "Final Technical Support Document for HWC MACT Standards, Development of Comparable Fuels Specifications", May 1998.

in one of two ways. First, a facility could use any of the individual benchmark specifications, without regard to what fuel it currently burns. The second approach is to link the comparable fuel specification to the type of fuel burned at the facility and being displaced by the comparable fuel. Under a composite fuel benchmark approach, EPA took comment on using: (1) The 90th percentile aggregate values for the benchmark fuels; and (2) the 50th percentile aggregate values for the benchmark fuels. (61 FR at 17643).

1. Selection of Percentile Level

To calculate benchmark specifications, EPA obtained 27 fossil fuel samples, comprised of eight gasoline, eleven No. 2, one No. 4, and seven No. 6 fuel oil samples. Due to the small sample sizes of each fuel type, EPA initially used a nonparametric rank order statistical approach to analyze the fuel data. Rank order involved ordering the data for each constituent from lowest to highest concentration, assigning each data point a percentile value from lowest to highest percentile, respectively. Results were then calculated from the data percentiles. Because there were different numbers of samples for each fuel type, EPA was concerned that the fuel with the largest number of samples would dominate the composite database. To address this issue, EPA's statistical analysis "normalized" the number of samples, i.e., treated each fuel type in the composite equally without regard to the number of samples taken.[5] See *Kennecott* v. *EPA*, 780 F.2d 445, 457 (4th Cir. 1985) (upholding this statistical methodology). The fuel samples were weighted equally because this weighting reflects the fact that benchmark fuels can be used interchangeably in stationary combustion units. In addition, as noted in the next section, equal weighting prevented over-estimation of either metals and semi-volatiles in No. 6 fuel oil or volatiles in the higher end fractions.

One commenter argued that EPA's proposed constituent-by-constituent comparison approach is flawed because it ignores the compounding effect of joint probability. The commenter has examined the rank order statistics technique EPA used and has concluded that the percentile values for the individual constituents must be set higher for all of them to meet the overall percentile value simultaneously. For example, a candidate comparable fuel taken from the same reservoir as a benchmark fuel would, because of random variability in constituent concentrations, have a 23 percent chance of "failing" a comparison to a benchmark (at the 90th percentile) that has 14 constituents above the detection limits. Thus the commenter argued that the proposed constituent-by-constituent comparison would have little utility to the regulated community.

While EPA believes there is some interdependence among individual constituents and that the principle of joint probability cannot be strictly applied, EPA is inclined to agree with the commenter. At the time of proposal, EPA believed that a 50th percentile analysis represented a midpoint of potential benchmark fuels that were studied. EPA also believed that a 90th percentile analysis represented a reasonable upper bound of what is found in all fuels capturing variability both with each fuel category and in the case of the composite approach, between categories. However, when the individual fuel samples were compared to the benchmark specifications, EPA found that at the 50th percentile composite *none* of the virgin fuel samples met the specification and at the 90th percentile composite only 40 percent met the specification. This appears to confirm the commenter's concern over joint probability, and reflects on the degree to which the comparable fuels exclusion would actually be useable. It was EPA's goal to base the comparable fuel specifications on the 99th percentile, a level near which 90 percent of EPA's individual fuel samples would meet the specification. However, the size of the data base precluded the calculating of a 99th percentile constituent specification. Therefore, in this case, the Agency used the largest measured value to approximate an upper percentile. In the future, EPA may choose alternative methods of evaluating any new data that may be submitted suggesting that these specifications need to be modified. After re-calculating the specification taking joint probability into account, the composite at the largest value more closely represents what EPA intended to propose with the 90th percentile, a reasonable upper bound that is also useable in practice. The 90th percentile closely represents what EPA intended with the proposed 50th percentile, i.e., a midpoint.

Some commenters did support the 50th percentile because they argued it was more protective. The majority of commenters supported the 90th percentile and some commenters argued for the use of a higher percentile, i.e., 95th or 99th. Because none of EPA's own fuel samples meet this specification, the 50th percentile is overly conservative. If EPA selected the 50th percentile, comparable fuels would have to be "cleaner" than *all* commercial liquid fuels (or at least all of those in the Agency's current database), which would greatly restrict the utility of the provision. Also, with such a strict approach, additional quantities of virgin oils with higher contaminant levels would be burned, leading to greater emissions than if a higher percentile was chosen. Therefore, EPA agrees with commenters that a higher percentile better reflects the liquid fossil fuels burned nationally and is a better benchmark.

After considering the issue of joint probability, EPA has decided to promulgate a composite specification based on the largest measured value to approximate what 90 percent of individual benchmark fuels are likely to meet. This approach has the virtue of being representative of a range of fuels that are burned nationally in combustion devices.

Based on the proposal, EPA had the option of choosing between an individual fuel specification approach and a composite approach. The majority of commenters supported using the composite specification plus the suite of individual fuel specifications that could be used irrespective of the fuel displaced.

The composite approach has advantages over the individual fuel specification approach. One issue associated with the single fuel specification approach is that gasoline has relatively higher levels of volatile organic compounds while No. 6 fuel oil has higher levels of semi-volatile organic compounds and metals. If a potential comparable fuel were to have a volatile organic constituent concentration below the gasoline specification but higher than the others and a particular metal concentration lower than the No. 6 fuel oil specification but higher than gasoline, it would not be a comparable fuel since it meets no single specification entirely. Therefore, EPA is concerned that establishing specifications under this

[5] For the gasoline sample analysis, the resulting detection limits for volatile organic compounds were an order of magnitude higher than the other fuel specifications. EPA believes analysis of comparable fuels will more likely result in detection limits much lower than gasoline and similar to those associated with analysis of fuel oils. To address this issue, EPA has performed an analysis of a fuel oil-only composite (one which does not include gasoline in the composite) to use as a surrogate for the volatile organic gasoline non-detect values. Therefore, the volatile organic gasoline non-detect values used in the development of the composite and individual gasoline specification were based on this fuel oil-only composite.

option would significantly limit the utility of the exclusion without any obvious advantage in terms of the technical basis of the specifications themselves.

Compositing all the fuels has the advantage that it may better reflect the range of fuel choices and potential for fuel-switching available nationally to burners. A facility would be allowed to use the composite fuel specification regardless of which fuel(s) it burns. In addition, the composite well represents the constituent makeup of liquid fossil fuels currently burned nationally. Because allowing individual specifications would unnecessarily complicate the Agency's implementation oversight, EPA has decided not to allow the individual specifications as an alternative. Furthermore, EPA notes that because it has chosen to promulgate constituent standards for comparable fuels based on the largest measured value, the composite approach will provide industry with greater flexibility in using the exclusion. A composite specification provides a simpler regulatory framework, which would facilitate implementation of the exclusion. Therefore, in this final rule, EPA is promulgating a composite specification for comparable fuels.

C. Parameters for the Comparable Fuel Specification

Using the benchmark approach discussed above, EPA is promulgating a set of technical specifications. The specifications address the following[6]:

(1) Physical specifications:

—Heating value (BTU/lb);

—Kinematic viscosity (centistokes, cs, as-fired),

(2) General constituent specifications for:

—Total Halogens (ppmw, expressed as Cl)

—Nitrogen, total (ppmw), and

(3) Individual hazardous constituent specifications, for:

—Individual Metals (ppmw),

—Individual Appendix VIII Toxic Organics (ppmw)

The constituent specifications and heating value would apply to both gases and liquids. The kinematic viscosity would not apply to gases. (See Section D, below, which discusses synthesis gases specifically.)

1. Physical Specifications

a. *Heating Value.* The Agency is concerned with the acceptability of the potential fuel and wants to ensure that comparable fuels have a legitimate use as a fuel. As discussed below, the comparable fuels exclusion only applies to waste fuels that are ultimately burned. In addition, the Agency has relied on a heating value of 5,000 Btu/lbm (11,500 J/g) as a reasonable heating value specification for determining if a waste is being burned for energy recovery; that is, wastes with this Btu value or higher are considered to be burned for energy recovery. (See §266.103(c)(2)(ii). 50 FR at 49173n.24 (November 29, 1985)).[7] This type of minimum Btu value specification is appropriate here as well as for the overall fuel (note that this is a different issue than finding the appropriate Btu value by which to correctly determine if the individual constituent specifications are being met, discussed below). EPA is thus setting a 5,000 Btu/lbm limit today as a minimum heating value for a comparable fuel to ensure that comparable fuels are in fact legitimate fuels. See §261.38(a)(1)(i).

b. *Kinematic viscosity.* Viscosity is an important specification to help ensure that a comparable fuel is as readily burnable as the benchmark fuel. Viscosity is important to the proper atomization and feed to the burning device and is an important design specification of the burner assembly. EPA proposed two options for setting a viscosity specification: (1) Using a value derived from the analyses EPA conducted; or (2) using the ASTM viscosity specification for fuel oil. (61 FR at 17465). Under the ASTM option for the composite fuel viscosity specification, EPA took comment on using the second highest ASTM viscosity specification. This would have the effect of not considering the extremes, viscosity of No. 6 fuel oil (50.0 cs at 100°C) and using as the specification the viscosity of No. 4 fuel oil (24.0 cs at 40°C).

Given the choice of EPA-derived viscosity values and ASTM values, the majority of commenters supported the use of the ASTM physical specification for viscosity. In addition, several commenters argued that the viscosity specification should apply at the point (temperature) that the fuel is fired rather than the point of generation. Commenters pointed out that it is common practice to reduce the as-fired viscosity to promote good atomization and combustion through blending with less viscous fuels or by warming the fuel to above-ambient temperature before firing. For example, while No. 6 fuel oil has an elevated viscosity at ambient conditions, it is typically stored and fired at temperatures which promote atomization and combustion.

EPA is persuaded by commenters that basing our viscosity specification on No. 4 fuel oil would possibly limit comparable fuels similar to No. 6 fuel oil (one of the benchmark fuels) from qualifying for the exclusion. EPA agrees that the viscosity specification should be based on ASTM standard for No. 6 fuel oil (50 cs at 100°C). The ASTM standard represents the typical temperature and viscosity at which No.6 fuel oil is fired. Thus, it is appropriate for a comparable fuel, when fired, to have the same viscosity as No. 6 fuel when fired. This will allow for a specification that is achievable for all liquid fossil fuels.

Therefore, in this final rule, EPA is promulgating a kinematic viscosity specification of 50 cs, as-fired . The specification for viscosity will only pertain to non-gaseous fuels, because gases are inherently less viscous than liquids. See §261.38(a)(1)(ii).

c. *Flashpoint (proposed, but not promulgated).* EPA proposed two options for setting a minimum flashpoint specification: (1) Using a value derived from the analyses EPA conducted; or (2) using the requirements for flashpoint specified by ASTM. Under the ASTM option for the composite fuel flashpoint specification, EPA took comment on using the second lowest flash point as the specifications. (61 FR at 17465). This would have the effect of not considering the extremes, flash point of gasoline (−42°C) and using as the specification the flash point of No. 2 fuel oil (38°C).

Several commenters opposed setting specifications for flash point. Commenters argued that DOT and OSHA have developed and promulgated regulations that control the hazards such materials can pose. Commenters also argued that the specification would preclude burning materials that are normally fuels such as methanol. EPA agrees with commenters that DOT (49 CFR Parts 171 through 180) and OSHA (29 CFR Part 1910) regulations adequately address the transportation and handing of low flashpoint material and setting a flashpoint specification under RCRA would be unnecessarily redundant with no ostensible gain in protectiveness. In addition, by limiting the exclusion to units subject to Federal/State/local air emission requirements, comparable fuels will be burned in units subject to OSHA requirements. (See Section H, below,

[6] Note that ppmw is an alternate way of expressing the units mg/kg.

[7] The 5,000 Btu/lb measure is not, however, an unvarying measure of legitimate versus insufficient energy recovery. See, e.g., 48 FR at 1158 (March 16, 1983).

which discusses this requirement.) Therefore, EPA is not establishing a flashpoint specification for the final rule.

2. General Constituent Specifications

In determining general constituent specifications and in determining individual hazardous constituent specifications (see following discussion), the Agency is concerned with the overall environmental loading. Comparable fuels could have lower heating value than the fossil fuels they would displace. In these situations, more comparable fuel would be burned to achieve the same heat input, with the result that more hazardous constituents would be fired and emitted (e.g., halogenated organic compounds and metals) than if fossil fuel were to be burned. This would lead to greater environmental loading of potentially toxic substances, which is not in keeping with the intent of the comparable fuels exclusion nor with RCRA's overall protectiveness goals.

To address environmental loading, the approach used in this final rule is to establish a minimum heating value specification comparable to the BTU content of the benchmark fossil fuel(s). The Agency is establishing the specification(s) for comparable fuels at a heating value of 10,000 BTU/lb, which is near to what liquid commercial fuels contain.[8] EPA chose 10,000 BTU/lb because it is typical of current hazardous waste burned for energy recovery.[9] However, candidate comparable fuels when generated initially can have heating values very different than 10,000 BTU/lb. Therefore, under this final rule, when determining whether a waste meets the comparable fuel constituent specifications, a generator must first correct the constituent levels in the candidate waste to a 10,000 BTU/lb heating value basis prior to comparing them to the comparable fuel specification tables. In this way, a facility that burns a comparable fuel would not be feeding more total mass of hazardous constituents than if it burned fossil fuels.[10]

a. Specification Levels for Halogenated Compounds. I. Summary. For the final rule, EPA is using its composite benchmark approach to establish a total halogen specification and allowing compliance with a total organic halogen limit in lieu of complying with limits on individual Appendix VIII halogenated compounds. Therefore, a comparable fuels generator would have the option of complying: (a) with a total organic halogen specification of 25 ppm plus the total PCB specification or (b) with the all of the individual Appendix VIII specifications for halogen compounds. In addition, in both cases, the generator would also have to comply with the total halogen limit (which includes both organic and inorganic halogens) of 540 ppm and with a total PCB specification (non-detect at a minimum required detection limit of 1.4 ppm). See § 261.38(a)(2), Table 1.

Compliance with a total organic halogen specification in lieu of limits on individual halogenated compounds will ensure that measurable levels of halogenated compounds will be no greater than in benchmark fuels. In addition, the total organic halogen specification will result in less sampling and analysis costs. Finally, the total halogen limit (both organic and inorganic) will create a presumption that halogenated products of incomplete combustion (PICs) generated from burning a comparable fuel will not be emitted at higher levels than from burning a benchmark fossil fuel.

ii. Total Halogen Rationale. Although total halogens are not listed in Appendix VIII, Part 261, EPA proposed a total halogen specification to establish a presumption that halogenated products of incomplete combustion (PICs) generated from burning a comparable fuel would not be emitted at higher levels than from burning a benchmark fossil fuel. See proposal (61 FR at 17461) and subsequent notices of data availability (61 FR 43502, August 23, 1996 and 61 FR 47402, September 9, 1997). PICs resulting from the burning of halogenated organic compounds can pose a particular hazard to human health and the environment.[11] Using the benchmark approach, EPA proposed a composite fuel total halogen limit of 25 ppm.

At the time of the proposal, EPA intended to establish a total halogen limit that included both organic and inorganic halogens. However, the total halogen data used by EPA in the proposed rule for its No. 4 and No. 6 fuel oils were based on analytical methods measuring only total organic halogens, not both organic and inorganic halogens. Commenters raised concerns about including total halogen data that did not include inorganic halogens because it did not represent typical halogen content found in benchmark fuels. EPA was persuaded by commenters' arguments and noticed additional total halogen data gathered from its own database (i.e., Certifications of Compliance (CoC) required by the Boilers and Industrial Furnace Rule) and data submitted by one commenter. In addition, EPA will continue to use its original gasoline and No. 2 fuel oil halogen data, which included both organic and inorganic halogens. Using the additional data, the total halogen specification would be 540 ppm for the composite benchmark data. For further discussion, see NODA 61 FR at 47402.

In response to EPA's NODA, commenters argued that some of the data should not be used to establish the total halogen specification due to the use of inappropriate analytic methods. In particular, commenters believe that CoC data from two facilities (Huntsman Polypropylene Corporation and American Cyanamid) should not be included because the analytical method used measured organic halogens only. In addition, commenters believe that CoC data from another facility (Dow Chemical) should not be included because the detection limit of the method used to analyze for total halogens (ASTM Standard D 808) is not sensitive below 1000 ppm, and unless some other, more sensitive analytical method were followed afterward, the method could not have been effective at the levels reported. EPA is persuaded by these commenters' arguments and has excluded the data from these three facilities from its halogen data set. Using this revised data set, the total halogen specification would be 540 ppm for the composite benchmark data. For the final rule, EPA is promulgating a total halogen specification of 540 ppm.

In response to the initial proposal, some commenters argued that EPA should consider solid fuels like wood and coal in the development of a total halogen specification. As discussed above, EPA has decided not to include solid fuels in its benchmark specification. Thus, EPA is not inclined to consider using solid fuels to set one of the specifications. Also, EPA is concerned about the formation of halogenated PICs from comparable fuels containing halogens. At this time, EPA has no data to support a conclusion that the higher halogen levels in solid fuels would not cause an increase in

[8] Constituent levels presented in today's final rule have been corrected from the fuel's heating value (approximately 20,000 BTU/lb) to 10,000 BTU/lb.

[9] Consult USEPA, "Final Technical Support Document for HWC MACT Standards, Development of Comparable Fuels Specifications", May 1998.

[10] Note that the heating value correction would apply only to allowable constituent levels in fuels, not to detection limits. Detection limits would not be corrected for heating value.

[11] For further discussion see USEPA, "Final Technical Support Document for HWC MACT Standards, Development of Comparable Fuels Specifications", May 1998.

halogenated PIC formation compared to benchmark fuels.

The Agency also received comment on an emissions-based equivalency determination to qualify for the total halogen specification. One commenter argued that the Agency should consider the commenter's candidate comparable fuel as a comparable fuel even though it cannot meet the comparable fuel specification for total halogens. The Agency considered the situation but, as indicated in the September 9, 1997 NODA (62 FR at 47403), continues to maintain that an emissions-based equivalency determination to the halogen specification on a national regulatory basis would be inappropriate and infeasible at this time.

In response to EPA's NODA, the commenter argued that an equivalency determination would not be administratively complex and that it could involve a demonstration by the person applying for the equivalency determination that the chemistry of the fuel is such that it is incapable of forming halogenated PICs. EPA is not persuaded by the commenter's arguments. For hydrocarbon-based fuels, combustion conditions (such as oxygen level, mixing, temperature, etc.) will have an impact on non-chlorinated and/or chlorinated PIC emissions. Additionally, chlorine in both inorganic and organic forms in the waste fuel can contribute to chlorinated PIC emissions. Dioxin/furans and other chlorinated PICs have been detected from sources burning both inorganic (e.g., salts) and/or organic chloride (e.g., plastics) containing wastes.[12] Furthermore, if the Agency were to develop an equivalency determination for total halogens, the implementation details needed in a national regulation to ensure proper combustion of halogenated wastes would be numerous, including, for example, provisions on burner operating parameters, performance testing, and monitoring. These details would almost certainly result in a complicated conditional exclusion from the definition of solid waste that is viewed as both potentially unworkable and very difficult to implement on a national basis.

Therefore, EPA is not inclined at this time to consider developing any national equivalency determination to the total halogen specification. At some future point, perhaps as the Agency's understanding of cause-and-effect relationships regarding emissions from a wider variety of sources grows, EPA may be able to address aspects of the commenter's recommendations if appropriate and feasible.

iii. Total Organic Halogen Rationale. As an additional part of its proposal, EPA invited comment on whether a total halogen specification could act as a surrogate for limits on individual halogenated compounds found in Appendix VIII. In this case, EPA's proposed limit of 25 ppm for total organic halogens would act as the surrogate for the individual halogenated organics. Commenters supported the surrogate approach and indicated that it would reduce the testing and recordkeeping costs on the regulated community. EPA agrees that this approach will simplify the comparable fuels specification and possibly mean fewer and less costly sampling and analyses of comparable fuel streams for generators.

However, some commenters raised concerns that a total halogen analysis will not be an effective screen for some of the more hazardous halogenated Appendix VIII constituents which could constitute a potential risk at low detection levels (e.g., tetrachlorodibenzo-p-dioxins). EPA calculated the equivalent constituent concentrations using the minimum detection limit values for these hazardous halogenated organics and determined that the 25 ppm total organic halogen limit will be an effective screen for all of the chlorinated dibenzofurans and chlorinated dibenzodioxins (i.e., the tetra- through octa-congeners). The minimum detection limits calculated for these congeners ranged from 30 to 150 ppm and the 25 ppm organic halogen specification will limit these congeners' concentrations to below those minimum detection limits. Additional factors in this decision to use the 25 ppm halogen limit as a screen for dioxins include the following:

(1) In particular, waste codes F020, F021, F022, F023, F026 and F028 have been designated as "inherently waste-like" under 40 CFR 261.2(d) and therefore are not eligible for the comparable fuel exclusion;

(2) Wastes listed because they contain dioxins would also be expected to contain significant levels of other halogenated organics. (The reader should note that the compounds in question are typically formed from the breakdown and reaction of other halogenated organics.) The higher concentrations of these other halogenated organics would drive the total organic halogen content of the waste up and, thus, the contribution of any chlorinated dibenzofurans and dioxins would have to be significantly less than the 25 ppm limit; and

(3) Waste codes expected to contain significant levels of other halogenated organics can be readily discerned from their list descriptions in 40 CFR 261 Subpart D (e.g., F001 and F002 solvent wastes are defined as halogenated solvents; F024 includes waste from production of halogenated organics.) In addition, Appendix III to Part 268 lists the halogenated organics typically found in hazardous wastes and that are subject to land disposal restrictions under 40 CFR 268.32. By comparing these, a person implementing today's rule could easily determine the most likely waste codes that could contain halogenated organics in excess of the 25 ppm limit, and thus easily identify wastes not eligible for the comparable fuels exclusion. See also Section E below for point of generation and blending/treatment discussions.

Commenters are also concerned that the use of a total organic halogen surrogate will possibly mask illegal PCB disposal. Since low analytical detection limits for PCBs (i.e., 1.4 ppm) in the benchmark fuel matrices have been well-demonstrated, the 25 ppm total organic halogen limit would not be a sufficient screen. Since PCBs are relatively common halogenated contaminants in fuel-like wastes and the probability of finding them is non-trivial, EPA is keeping the limits on PCBs to ensure levels no greater than from benchmark fuels. EPA also points out that there are several relatively inexpensive analytical screening methods that have been developed specifically for the determination of total PCBs.

With regard to analysis methodology, commenters have indicated that the test method (ASTM Method 4929) used by EPA to analyze for organic halogens may not be appropriate to analyze their candidate comparable fuel. EPA recognizes that the methods used in its own analysis of the benchmark fuels may not be appropriate for some candidate comparable fuels. Thus, in the final rule EPA is allowing the use of alternate methods or modifications to current methods that meet the performance based criteria in section § 261.38(c)(7). It is the responsibility of the generator to ensure that the sampling and analysis is unbiased, precise, and representative of the waste. For further details, see Section G. Sampling and Analysis, below.

b. Specification Levels for Nitrogenated Compounds. Although total nitrogen is not listed on Appendix VIII, Part 261, EPA proposed a total

[12] For further discussion see USEPA, "Final Technical Support Document for HWC MACT Standards, Development of Comparable Fuels Specifications", May 1998.

nitrogen specification to ensure that nitrogenated products of incomplete combustion (PICs) from burning a comparable fuel would not be emitted at higher levels than from burning a benchmark fossil fuel. See proposal (61 FR at 17462) and a subsequent notice of data availability (61 FR 43502, August 23, 1996). PICs resulting from burning nitrogenated organic compounds can also pose a particular hazard to human health and the environment.[13]

Commenters generally did not address the issue of formation of nitrogenated PICs. Instead, most commenters disagreed with the need to establish a specification for nitrogen under RCRA's comparable fuel specification when this pollutant (as NOx) is controlled under the Clean Air Act (CAA). Commenters argued that EPA has the authority under the CAA to control certain criteria pollutants, such as nitrogen oxides and, in fact, has promulgated primary and secondary National Ambient Air Quality Standards (NAAQS) for oxides of nitrogen. EPA believes that a total nitrogen specification is necessary. The counter-arguments advanced do not address EPA's rationale for establishing a total nitrogen limit. The CAA NAAQS do not themselves ensure control of individual combustion units in a manner that prevents formation of nitrogenated PICs, nor do they ensure that a hazardous waste-derived fuel would contain no greater amounts of nitrogenated compounds than fossil fuels. EPA is therefore establishing a total nitrogen specification to ensure that concentrations of nitrogenated PICs in comparable fuels will be no greater than in benchmark fuels.

As an additional part of its proposal, similar to total halogens, EPA invited comment on whether a total nitrogen specification could act as a surrogate for limits on individual nitrogenated compounds found in Appendix VIII. EPA believes that a surrogate approach would simplify the comparable fuels specification and possibly mean fewer and less costly sampling and analyses of comparable fuel streams for generators. However, analysis of EPA's composite data results in a total nitrogen specification of 4,900 ppm. The detection limits for EPA's analysis of individual nitrogenated compounds in its benchmark fuels ranged from 1 to 2200 ppm. Since detection limits for nitrogenated compounds in the benchmark fuels have been demonstrated well below 4,900 ppm, a total nitrogen specification would not be a sufficient screen for individual Appendix VIII nitrogenated compounds.

Therefore, for nitrogen compounds, EPA is promulgating a total nitrogen specification of 4,900 ppm with individual Appendix VIII nitrogen specifications. See §261.38(a)(2), Table 1. This approach ensures that levels of individual nitrogenated compounds and the total nitrogen concentration are no greater than the benchmark fuels and creates a presumption that concentrations of nitrogenated PICs from burning a comparable fuel are no greater than burning a benchmark fuel.

3. Individual Hazardous Constituent Specifications

To limit the Part 261, Appendix VIII constituents in comparable fuels to those found in benchmark fossil fuels, the Agency calculated concentration limits using the Agency's analysis of individual benchmark fuel samples. Where EPA did not detect a particular Appendix VIII constituent in the benchmark fuel, the Agency set the constituent specification using one of two approaches. For constituents that the Agency did not detect and did not have reason to believe would be present in a benchmark fuel (e.g., halogenated organics), the comparable fuel specification is "non-detect" with an associated, specified minimum required detection limit for each compound. The detection limit is a statistically-derived level based on the quantification limit determined for each sample. While these constituents should not be present, the Agency will allow non-detects lower than the detection limits that EPA was able to obtain. However, EPA will not allow measured or quantified results below the specified minimum required detection limit where "non-detect" is the comparable fuel specification. For metals, hydrocarbons, and oxygenates, the Agency followed a different approach, which is described below.

a. Individual CAA and Appendix VIII Metals. EPA proposed concentration levels or minimum required detection limits for all CAA metals and RCRA Appendix VIII metals (61 FR at 17460). Commenters argued that the Agency should modify its approach with respect to non-detect levels and allow the hazardous constituent to be present in the comparable fuel up to the detection limit. In particular, commenters argued that metals are expected to be present in petroleum products, resulting from the formation process or the production process, and, therefore, it is reasonable to assume that non-detect metals in EPA's benchmark analysis would be present up to the detection limit. EPA agrees that metals could be present in fossil fuels but below EPA's detection limits. Therefore, the final rule allows metals to be present at any concentration less than or equal to the detection limits in EPA's analysis.

In addition, as proposed, EPA is setting limits for two metals that are not found on Part 261, Appendix VIII: cobalt and manganese. EPA included these metals in the analysis because they are listed in the Clean Air Act as hazardous air pollutants (HAPs). See CAA, section 112(b) and proposal (61 FR at 17460). By including these metal HAPs and the RCRA metals listed on Appendix VIII, Part 261, the Agency will ensure that the specification limits all toxic metals of concern in hazardous wastes to levels present in the benchmark fossil fuels. Therefore, EPA is promulgating constituent levels for the all CAA metals and RCRA Appendix VIII metals at the largest value composite of EPA fossil fuel data. See §261.38(a)(2), Table 1.

b. Individual Appendix VIII Toxic Organics. EPA is promulgating constituent levels or minimum required detection limits for all Part 261, Appendix VIII, toxic organic constituents, unless otherwise noted. See §261.38(a)(2), Table 1. Some Appendix VIII compounds were not analyzed because a routine analytical method is not available. Because EPA did not analyze for some compounds in Appendix VIII, EPA will not be promulgating standards for these remaining Appendix VIII constituents. These compounds are not listed in today's specifications, and a comparable fuel generator will not have to comply with specifications for these compounds. EPA believes it highly unlikely that a hazardous waste-derived fuel would contain only these undetectable Appendix VIII constituents.

i. Specification Levels for Undetected Pure Hydrocarbons. EPA proposed allowing pure hydrocarbons on Appendix VIII to be present at any concentration less than or equal to the detection limits in EPA's analysis. Since fossil fuels are comprised almost entirely of pure hydrocarbons[14] in varying concentrations, it is possible that many pure hydrocarbons in Appendix VIII, Part 261, could be present in fossil fuel but below detection limits. These materials, which include compounds such as fluoranthene, might not even be considered solid wastes when burned in

[13] For further discussion see USEPA, "Final Technical Support Document for HWC MACT Standards, Development of Comparable Fuels Specifications", May 1998.

[14] Excluding sulfur, carbon and hydrogen comprise 99.6 to 100% of liquid fossil fuels.

their pure carbon form since they are themselves products. See § 261.2(c)(2)(ii), and see proposal (61 FR at 17461).

Some commenters argued that no comparable fuels specifications should be established for pure hydrocarbon compounds because pure hydrocarbons will burn cleanly. EPA disagrees for the purpose of today's rule because establishing no limits for Appendix VIII hydrocarbons would depart from the basic comparable benchmark approach and even relatively clean-burning compounds may produce some toxic emissions. EPA's analysis confirms that these compounds are not present in the benchmark fuels above the minimum detection limits. However, it is reasonable to assume that the "non-detect" pure hydrocarbons could in fact be present in fossil fuels up to the detection limit since fossil fuels are comprised entirely of pure hydrocarbons. Therefore, the final rule allows hydrocarbons in Appendix VIII to be present at any concentration less than or equal to the detection limits in EPA's analysis. See § 261.38(a)(2), Table 1.

Some commenters argued that toluene, a typical fuel component, should be allowed without limitation in comparable fuels. As discussed above for all hydrocarbons, EPA disagrees with not establishing any limits on toluene, or establishing a different specification not based on fuel data, because this would depart from the comparable benchmark approach. EPA has established the toluene specification at the fuel data-based concentration found in its benchmark fuel analysis. However, because toluene can be a fuel component, setting a different data-based specification for toluene may be warranted at some point in the future, and therefore EPA will continue to remain open to considering further action.

ii. Specification Levels for Undetected Oxygenates. In addition to the pure hydrocarbon compounds, EPA invited comment on whether oxygenates should be allowed up to the detection limits in EPA's analysis and on what would be an appropriate minimum oxygen-to-carbon ratio to identify an oxygenate. (61 FR at 17461). Oxygenates are organic compounds comprised solely of hydrogen, carbon, and oxygen and can serve as fuels or fuel additives. Examples of oxygenates (not in Appendix VIII and thus not RCRA regulated) include alcohols such as ethanol, and ethers such as methyl tert-butyl ether (MTBE). Appendix VIII oxygenates are not routinely found in fossil fuels and only a few oxygenates were detected in EPA's sampling and analysis program.

Several commenters supported allowing oxygenates at any concentration less than or equal to the detection limit but also argued that EPA should go a step further and set no specification limits for oxygenated compounds. Commenters argued that oxygenates (like isobutyl alcohol) burn well and promote good combustion of other constituents in a fuel. Again, for the purpose of today's rule, EPA disagrees with not establishing any limits on oxygenates because this would depart from the basic comparable benchmark approach. EPA's analysis confirms that these compounds are not present in the benchmark fuel above the minimum detection limits and establishing a specification without fuel data containing oxygenates would depart from the comparable fuel approach. Furthermore, oxygenates are listed on Appendix VIII for their toxicity and in particular, one group of organic oxygenates, organic peroxides, can be extremely hazardous to manage. However, since most oxygenates burn well and are not likely to produce significant PICs, EPA will allow these compounds at any concentration less than or equal to the detection limits found in EPA's analysis.

EPA notes that the Clean Air Act provides for the use of some oxygenates (like isobutyl alcohol) as additives in unleaded gasoline and it may be appropriate to consider their use in a comparable fuel. However, at the time of this final rulemaking, EPA had no fuel data in which these oxygenates were used as gasoline additives and thus was not able to set a specification different than in today's final rule. As discussed above, any approach without using fuel data would depart from the comparable fuel approach. However, setting data-based specifications for certain oxygenates may be warranted at some point in the future, and therefore EPA will continue to remain open to considering further action.

With regard to a minimum oxygen-to-carbon ratio to define an oxygenate, one commenter recommended defining oxygenates simply as aliphatic compounds comprised of carbon, hydrogen, and oxygen. If EPA was intent on defining an oxygen-to-carbon ratio, other commenters recommended a ratio of 0.266, which is the ratio for MTBE. Defining an oxygenate with a minimum oxygen-to-carbon ratio or limiting the definition to only aliphatics is more conservative than necessary. Instead, EPA is defining an oxygenate as any compound comprised solely of hydrogen, carbon, and oxygen.

In summary, the final rule allows oxygenates, defined as any compound comprised solely of hydrogen, carbon, and oxygen, at any concentration less than or equal to the detection limits in EPA's analysis. See § 261.38(a)(2), Table 1.

D. Parameters for the Synthesis Gas Fuel Exclusion

In today's final rule, EPA is also excluding from the regulatory definition of solid waste (and, therefore regulation as hazardous waste) a particular type of hazardous waste-derived fuel, namely a type of synthesis gas ("syngas") fuel meeting particular specifications. The exclusion applies to syngas that results from the thermal reaction of hazardous wastes by a process designed to generate both hydrogen gas (H_2) and carbon monoxide (CO) as usable fuel. See proposal (61 FR at 17465).

Some commenters stated that synthesis gas fuels are beyond EPA's regulatory authority because they are uncontained gases. EPA has broad statutory authority to regulate fuels produced from hazardous wastes. RCRA section 3004 (q) (1); see also *Horsehead Resource Development Co.* v. *Browner*, 16 F. 3d 1246, 1262 (D.C. Cir. 1994) (broadly construing this authority). The fact that syngas (by definition) is a gas, rather than a solid or liquid, does not appear to raise jurisdictional issues. It is still produced from the hazardous wastes that are being processed thermally. See § 261. 2 (c) (2) (A) and (B) (defining such materials as solid wastes). EPA believes its authority to be clear under these provisions.

EPA also received a number of comments from persons operating synthetic gasification processes within the petroleum industry. These comments also argued that the Agency was without legal authority to regulate the fuel output of these processes even if the processes use hazardous waste as a feed material. The Agency has in fact adjudicated the status under existing regulations of such a unit, indicating that while both the process and the fuel output are within RCRA subtitle C jurisdiction, the process is a type of exempt recycling unit under 40 CFR 261.6(c)(1) and the fuel is also exempt under § 261.6(a)(3). Letter of Michael Shapiro (Director of Office of Solid Waste) to William Spratlin (Director RCRA Division EPA Region VII) (May 25, 1995).

Upon reflection, it appears that these petroleum gasification operations may be similar to other within-petroleum industry recycling activities that EPA has proposed to exclude from Subtitle C jurisdiction in the petroleum listing rule

proposed on November 20, 1995. 60 *FR* 57747. It therefore appears more appropriate to consider this overall jurisdictional issue in the context of that rulemaking. However, EPA is not at this time limiting the synthetic gas fuel exclusion insofar as it potentially applies to the output of gasification operations conducted as part of normal petroleum refining (SIC Code 2911). Thus, these syngas fuels can also be eligible for the exclusion in today's rule.

To ensure that any excluded hazardous waste-derived syngas contains low levels of hazardous compounds relative to levels in fossil fuels, the Agency is setting a series of syngas specifications addressing:

(1) physical specifications:

—Minimum Btu value (Btu/scf);

(2) general constituent specifications for:

—Total halogen (ppmv)

—Total nitrogen (ppmv)

—Hydrogen Sulfide (ppmv)

(3) individual hazardous constituent specifications, for:

—Individual Appendix VIII constituents (ppmv)

1. Physical Specifications

a. Minimum Btu value. Like the comparable fuel specification, EPA proposed that syngas fuel have a minimum Btu value of 5,000 Btu/lb. Commenters had several concerns with this specification. First, commenters noted that the heating value of a gas is almost universally measured in units of Btu per unit volume ("scf"). Second, commenters argued that due to the efficiencies of combustion, a gas can be used as a fuel even though its heating value, when expressed in terms of Btu per pound, is less than 5000. Commenters argued that using fuels with significantly higher Btu per scf could actually degrade efficiency of gas turbine electric generation systems and increase air emissions. For example, syngas with a heating value of 5000 Btu per pound would have to be diluted to reduce its heating value to enable a combustion turbine to meet NO_X emission limits. Furthermore, commenters argued that in many potential applications, syngas produced from hazardous waste would be used as a substitute for syngas produced from fossil fuels or syngas produced from non-hazardous secondary materials. Syngas produced from coal, coke, and certain types of secondary materials, with heating values less than 5000 Btu per pound (when expressed in these terms), are currently used as fuels.

EPA agrees with commenters' concerns with regard to the heating value of syngas. To set an appropriate heating value, EPA investigated the heating values of syngas currently manufactured for use as a fuel.[15] For fuel usage related purposes, syngas is classified as either medium- or low-Btu gases (medium-Btu generally being produced with pure oxygen, low-Btu generally with air). Medium-Btu syngas generated from the gasification of fuels (including coal, fuel oil, biomass, municipal solid wastes, plastics, etc.) with pure oxygen typically has heating values from 200 to 400 Btu/scf. Medium-Btu syngas can typically be used as a fuel for power production in a gas turbine. Low-Btu syngas generated from the gasification of fuels with air has heating values from about 100 to 200 Btu/scf. In most cases, low-Btu syngas does not achieve temperature and expansion ratios needed for thermodynamically efficient power generation. Low-Btu syngas is usually mixed with higher energy sources and is not generally desired for most applications. However, EPA notes that there are certain specifically designed gas turbines (with very large "silo" combustion chambers) that can handle very low-Btu (100 Btu/scf) syngases for power generation. Thus, a heating value of 100 Btu/scf is reasonable for syngas because it represents fuels used as legitimate energy sources. Therefore, EPA is establishing a minimum Btu value of 100 Btu/scf for synthesis gas. See §261.38(b)(1).

2. General Constituent Specifications

a. Total Halogen Specification. As proposed, EPA is promulgating a total halogen specification for synthesis gas fuels of less than 1 ppmv. Like comparable fuels, EPA is establishing a total halogen specification to limit the formation of halogenated PICs from the burning of the hazardous waste-derived syngas fuel. EPA has looked at syngas manufactured from non-hazardous waste sources, such as coal, and concludes that 1 ppmv is a reasonable specification for total halogen for a synthesis gas fuel. See §261.38(b)(2).

b. Total Nitrogen Specification. EPA proposed a total nitrogen specification of less than 1 ppmv of total nitrogen, other than diatomic nitrogen (N_2). Like comparable fuels, EPA was concerned about the formation of nitrogenated PICs from the nitrogen contained in the hazardous waste-derived syngas fuel. Commenters argued that regardless of whether nitrogen is present in the syngas, when syngas is burned, NO, NO_2 and NO_X will always form, as nitrogen present in the air combines with oxygen in the syngas, the air or both. In addition, commenters argued that the Agency or authorized states already regulate the emissions of these air pollutants through the issuance of air permits. Furthermore, commenters argued that nitrogen in the syngas would not lead to the formation of PICs.

EPA disagrees with the commenters that a total nitrogen specification is unnecessary and believes that the comments did not address EPA's rationale for a total nitrogen limit. EPA is establishing a total nitrogen specification to limit the formation of nitrogenated PICs. Diatomic nitrogen is not included in a total nitrogen specification because only organic-bound nitrogen compounds are expected to form PICs. However, a total nitrogen specification based on syngas used as a fuel is a more appropriate specification. EPA has looked at syngas currently manufactured for use as a fuel to establish a total nitrogen specification. Nitrogen compounds in syngas (other than N_2) are mostly in the form of HCN or NH_3. Syngas manufactured from coal can have HCN and NH_3 levels of 100 to 300 ppmv.[16] A total nitrogen specification of 300 ppmv would ensure that concentrations of nitrogenated PICs in waste-derived syngas will be no greater than syngas manufactured from coal. Therefore, in today's final rule, EPA is promulgating a total nitrogen specification of 300 ppmv, other than diatomic nitrogen (N_2) for synthesis gas fuel. See §261.38(b)(3).

c. Hydrogen Sulfide Specification. EPA proposed a hydrogen sulfide (H_2S) specification of 10 ppmv for syngas fuels. Commenters argued that the H_2S specification is not necessary because the Clean Air Act has specifications that restrict the amount of sulfur that can be emitted by sources that would likely burn syngas fuel (i.e., boilers, combustion turbines). In addition, commenters argued that the potential of facilities that burn syngas as a fuel to emit sulfur compounds is low in comparison to facilities burning fossil fuels. For example, facilities that produce power by burning syngas produced from the gasification of coal emit approximately one-fifth of the level of sulfur compounds emitted by similar facilities burning coal.

EPA disagrees with the commenters that no hydrogen sulfide specification

[15] For further discussion see USEPA, "Final Technical Support Document for HWC MACT Standards, Development of Comparable Fuels Specifications", May 1998.

[16] For further discussion see USEPA, "Final Technical Support Document for HWC MACT Rule, Development of Comparable Fuels Specifications", May 1998.

should be promulgated. EPA is establishing the syngas exclusion by limiting Part 261 Appendix VIII constituents, one of which is hydrogen sulfide. However, a more appropriate specification would be based on current applications where syngas is used as a fuel, rather than the proposed specification of 10 ppmv. To set an appropriate hydrogen sulfide specification, EPA investigated the hydrogen sulfide levels in syngases currently manufactured from non-hazardous waste sources for use as a fuel.

The sulfur content of the material used to produce the syngas is converted to almost entirely H_2S in the gasification process, with smaller amounts of carbonyl sulfide (COS). Syngas produced from low sulfur content material does not contain appreciable H_2S. The H_2S content of high sulfur coal-based syngas can be over 1000 ppmv. However, in these cases, H_2S is removed during the gasification process. The amount of H_2S removal is dependent on how the syngas will be used. In the case of syngas used for chemical feedstock, the H_2S removal can be to a level under 1 ppmv. For the case of syngas used for fuel, H_2S removal can range to levels between 50 and 200 ppmv (above 200 ppmv leads to corrosion of down stream gas handling equipment, such as turbine blades.[17] Thus, 200 ppmv represents the level of H_2S in gas currently used in applications where syngas is used as a fuel. Therefore, in this final rule, EPA is promulgating a H_2S specification of 200 ppmv for synthesis gas fuels. See § 261.38(b)(4). EPA further notes that H_2S removal is considered as part of the gasification process and a syngas generator is required to meet the H_2S specification after this removal process.

3. Individual Hazardous Constituent Specifications

As proposed, EPA is promulgating specifications of less than 1 ppmv for each hazardous constituent listed in Appendix VIII of part 261 (that could reasonably be expected to be in the gas). Having received no comments to the contrary, this a reasonable specification for Appendix VIII constituents in a synthesis gas fuel. See § 261.38(b)(5). Since EPA is promulgating a total halogen specification for syngas and since this specification ensures that the excluded syngas has less than 1 ppmv of individual halogenated compounds, a syngas generator would not be expected to analyze for the individual halogenated compounds in Appendix VIII. However, a syngas generator would be expected to analyze for the individual nitrogenated compounds in Appendix VIII since a total nitrogen specification of 300 ppmv would not ensure that individual nitrogenated compounds would be limited to 1 ppmv. In addition, a syngas generator would be expected to analyze for the Appendix VIII constituents identified in the comparable fuels specification. See § 261.38(a)(2) Table 1.

E. Meeting the Comparable Fuel Specifications

1. Potential Applicability of Today's Rule to Specific Waste Codes

The probability of today's rule being applicable to any specific hazardous waste is highly dependent upon the waste codes assigned to that waste as well as the industry generating the waste. In developing the Land Disposal Restrictions (40 CFR part 268) and in developing the listings of hazardous wastes (40 CFR part 261), the majority of the listed hazardous wastes were analyzed for concentrations of specific hazardous constituents. EPA has already determined that the majority of listed hazardous wastes (i.e., those having codes beginning with "F", "K", "U" or "P") are known to contain at least one of the hazardous constituents that are restricted by today's rule to "non-detect" levels. Appendix VII to Part 261 provides a partial list of hazardous constituents that are known to be present in each Listed Waste code, and the Treatment Standards for Hazardous Wastes (40 CFR 268.40) indicate constituents (and concentrations) that are specifically regulated for land disposal for each waste code. The majority of these constituents and waste codes are restricted to "non-detect" levels in today's rule and so a potential comparable fuel containing these constituents either could not be used, or would have to be treated so that the hazardous constituents are removed or destroyed to non-detect levels. See treatment discussion below, Section E.4. It is possible, however, that an organic solvent or oil could carry one of these codes, based on the derived-from rule only, and could comply with the limits in today's rule. As such, EPA did not restrict the application of today's rule to any waste code, except in the case of wastes listed for the presence of dioxins or furans. See 261.38(c)(12). However, EPA does not expect that corrosive or reactive wastes would be candidate comparable fuels because of the detrimental impacts on the burning unit that would occur.

At the same time, there are specific listed waste codes that EPA expects to contain only those constituents for which today's rule sets maximum allowable concentrations. As such, some wastes with these codes would be likely candidates for compliance with the corresponding constituent limits. These applicable wastes are primarily expected to be: ignitable solvent wastes (F003 and F005), wastes from petroleum production (F037, F038, and K048–51), and wastes from coking operations (K060, K087, K141–145, K147 and K148). Table 1 also lists a set of U waste codes and their corresponding constituents that may be applicable depending upon their concentrations.

It is expected that today's rule will primarily be applied to wastes that are classified as hazardous only because they exhibit the hazardous characteristic of ignitability (D001) and/or corrosivity (D002). In comparing the regulatory levels for characteristic metal wastes (D004–D011) and the corresponding allowable limits for these metals in today's rule, there is an extremely small window of applicability for some wastes identified as D006 (cadmium) or D009 (mercury) and likewise a relatively small window of applicability for some D008 wastes (lead). All other characteristic metal wastes fail the limit restrictions for metals. D003 wastes that are classified as hazardous due to their cyanide (CN) content are expected, for the most part, to fail to meet the specification for total nitrogen. Except for D018 wastes (benzene), wastes that are characteristic for organics (D012–D043) are also expected to be unable to comply with either the limits or the "non-detect" requirements.

All wastes consisting primarily of alcohols (e.g., ethanol or isopropanol), petroleum distillates, oils, or other ignitable organic liquids) are the most likely candidates for applying today's rule. This is quite logical in that these chemicals tend to have good fuel value when compared to the fuels examined for today's rule. The most probable listed wastes that are expected to be able to comply with today's rule are F003 and F005 solvents (except those F005 wastes containing carbon disulfide, pyridine, or nitrobenzene). There are an additional number of "U" wastes identified in Table 2 that are also good candidates for compliance with today's rule. These chemicals are either hydrocarbons or oxygenated hydrocarbons for which today's rule does not establish any limits.

Because of the potential for cross-contamination, wastes from facilities

[17] For further discussion see USEPA, "Final Technical Support Document for HWC MACT Rule, Development of Comparable Fuels Specifications", May 1998.

(e.g., pesticide manufacturers and halogenated solvent manufacturers) known to manufacture concentrated forms of the chemicals restricted by today's rule, are the most likely to require closer scrutiny and testing. However, wastes generated by these facilities that are not expected to be cross-contaminated would include non-contact solvents, hydraulic or lubricating oils, and solvent-based wastes from the production of unregulated constituents.

TABLE 1.—LISTED "U" WASTES WITH CORRESPONDING CONSTITUENT LIMITS

Constituent for which the code was listed	Waste code
Acetophenone	U004
Benz[a]anthacene	U018
Benzene	U019
Benzo(a)pyrene	U022
Bis(2-ethylhexyl) phthalate	U028
Chrysene	U050
Creosote	U051
Cresol cresylic acid (total cresols)	U052
Dibenz[a,h]anthracene	U063
Di-n-butyl phthalate	U069
Diethyl phthalate	U088
7,12-Dimethylbenz[a]anthracene	U094
Di-n-octyl phthalate	U107
Fluoranthene	U120
Indeno(1,2,3-cd) pyrene	U137
3-Methylcholanthrene	U157
Naphthalene	U165
Toluene	U220
Acrolein	P003
Allyl alcohol	P005
Endothall	P088
Propargyl alcohol	P102
Ethyl methacrylate	U118
Isobutyl alcohol	U140
Isosafrole	U141
Methyl ethyl ketone [2-Butanone] [MEK].	U159
Methyl methacrylate	U162
1,4-Naphthoquinone	U166
Phenol	U188
Safrole	U203
2-Ethoxyethanol [Ethylene glycol monoethyl ether].	U359

TABLE 2.—LISTED "U" WASTES WITH NO CORRESPONDING CONSTITUENT LIMITS

Constituent for which the waste was listed	Waste code
Acetaldehyde [Ethanal]	U001
Acetone [2-Propanone]	U002
2-Acetylaminofluorene [2-AAF]	U005
Acrylic acid	U008
Benz[c]acridine	U016
n-Butyl alcohol [n-Butanol]	U031
Carbon oxyfluoride	U033
Crotonaldehyde	U053
Cumene [Isopropyl benzene]	U055
Cyclohexane	U056
Cyclohexanone	U057

TABLE 2.—LISTED "U" WASTES WITH NO CORRESPONDING CONSTITUENT LIMITS—Continued

Constituent for which the waste was listed	Waste code
Dibenzo[a,i]pyrene	U064
1,2:3,4-Diepoxybutane [2,2'-Bioxirane]	U085
∝,∝-Dimethyl benzyl hydroperoxide	U096
2,4-Dimethylphenol	U101
Dimethyl phthalate	U102
1,4-Dioxane [1,4-Diethyleneoxide]	U108
Ethyl acetate	U112
Ethyl acrylate	U113
Ethylene oxide	U115
Ethyl ether	U117
Formaldehyde	U122
Formic Acid	U123
Furan	U124
Furfural	U125
Glycidylaldehyde	U126
Maleic anhydride	U147
Methanol	U154
Methyl ethyl ketone peroxide	U160
Methyl isobutyl ketone [4-Methyl-2-pentanone].	U161
Paraldehyde	U182
1,3-Pentadiene	U186
Phthalic anhydride	U190
Quinone [p-Benzoquinone]	U197
Resorcinol	U201
Tetrahydrofuran	U213
Xylenes, mixed isomers [Xyenes, total].	U239

2. General

The proposal provided several methods by which a hazardous waste could qualify as a comparable fuel. The final rule retains these methods and adds clarifying conditions to ensure that the methods do not violate existing policy with regard to blending and treatment. The person claiming that a hazardous waste meets the exclusion criteria of this rule will be referred to as the "comparable fuel generator," in the case of excluded liquid fuel, or "syngas fuel generator," in the case of excluded syngas fuel. In today's final rule, a hazardous waste can meet the comparable fuel hazardous constituent, heating value and viscosity specifications of §261.38(a) in several ways. However, in each case, the generator claiming the exclusion is responsible for demonstrating eligibility. In addition, just meeting the hazardous constituent, heating value and viscosity specifications would not qualify a hazardous waste for the exclusion. The implementation requirements of §261.38(c) (e.g., notification, certification, sampling and analysis, recordkeeping) must also be satisfied for a hazardous waste to be excluded as a comparable fuel.

A waste can meet the §261.38(a)(2) hazardous constituent specification if the hazardous waste "as generated," i.e. without any processing, blending or other alteration: (a) Meets the hazardous constituent specification; or (b) does not meet the hazardous constituent specification, but undergoes treatment, pursuant to §261.38(c)(4), so that the hazardous constituents of concern are destroyed or removed to concentrations that meet the exclusion specification.

A waste can meet the §261.38(1)(i) heating value specification if the hazardous waste as generated without processing: (a) Meets the heating value specification; or (b) does not meet the hazardous constituent specification, but undergoes treatment, pursuant to §261.38(c)(4), that destroys or removes material to increase the heating value to meet the exclusion specification.

A waste can meet the §261.38(a)(1)(ii) viscosity specification if the hazardous waste as generated without processing: (a) Meets the viscosity specification; (b) does not meet the viscosity specification, but through blending, pursuant to §261.38(c)(3) with fossil fuel, another excluded comparable fuel, or other non-waste changes the viscosity to meet the exclusion specification; or (c) does not meet the viscosity specification, but undergoes treatment, pursuant to §261.38(c)(4) that destroys or removes material to decrease the viscosity to meet the exclusion specification.

3. Blending

Commenters supported allowing the blending of a hazardous waste that meets the constituent and heating value specifications for the purpose of decreasing viscosity. However, commenters were concerned that blending could dilute toxic constituents and said that blending should only be allowed if toxic constituents in the hazardous waste would not be diluted. In today's final rule, the Agency allows an as-generated hazardous waste, which meets the hazardous constituent and heating value specifications, but does not meet the viscosity specification, to be blended to meet the viscosity specification (see §261.38(a)). The generator must document that the hazardous waste, as generated without processing, meets the hazardous constituent and heating value specifications prior to any blending. It is also the responsibility of the generator to document that the blending does not violate the dilution prohibition of §261.38(c)(6). This provision states that the hazardous constituent and heating

value specifications cannot be met through dilution; i.e. they can only be met through treatment which destroys or removes hazardous constituents, or by the waste as-generated. See generally 61 FR at 15586–87 (April 8, 1996) (extending dilution prohibition in § 268.3 to include combustion of inorganic wastes). Allowing blending to meet the hazardous constituent or heating value specification simply increases the amounts of hazardous constituents emitted when the fuels are burned, and would increase these amounts above those emitted if fossil fuels were burned instead. This is at inconsistent with the whole premise of comparable fuels, and also is inconsistent with the section 3004(m) hazardous waste treatment provisions (which, although not directly applicable, articulate important overall statutory objectives) which require hazardous constituents to be removed or destroyed by treatment, not diluted. *Chemical Waste Management* v. *EPA*, 976 F. 2d 2, 16 (D.C. Cir. 1992). As noted earlier, such burning can be viewed as part of the waste management problem, and EPA may validly condition the exclusion to prevent that result.

Blending of a hazardous waste pursuant to § 261.38(c)(3) to meets the viscosity specification obviously may be performed only in regulated units: at a permitted RCRA treatment, storage facility; a regulated interim status treatment, storage facility; or at a 90-day generator unit meeting the requirements of § 262.34.

4. Treatment

Commenters also supported the proposal to allow a hazardous waste to be treated to meet the comparable fuel specifications. Many of the same commenters also expressed concerns that any treatment allowed should reduce emissions of hazardous constituents, i.e. treatment must destroy or remove the constituents or materials of concern. The Agency agrees, and § 261.38(c)(4) specifically states that only treatment which destroys or removes hazardous constituents or materials is permissible. Moreover, as noted above, the waste remains subject to subtitle C control during treatment and thus treatment can only occur in regulated units. (Treatment by blending to meet the viscosity specification likewise can only occur in regulated units, for the same reason.)

It is the responsibility of the generator claiming the exclusion to demonstrate eligibility. See generally § 261.2(f). It should be noted that just meeting the hazardous constituent, heating value and viscosity specifications would not qualify a hazardous waste for the exclusion; the implementation requirements of § 261.38(c) (e.g., notices, certification, sampling and analysis, recordkeeping, etc.) also must be satisfied for a hazardous waste to be excluded as a comparable fuel. The person that treats the hazardous waste to generate a comparable fuel must also demonstrate that the treatment of the hazardous waste destroys or removes the hazardous constituents or materials of concern from the waste. The treater must: (1) Document that the unit that will treat the hazardous waste has been demonstrated to effectively remove or destroy the hazardous constituents (at the levels present in the waste) or materials of concern from the type of waste being treated; or (2) treat the waste in a unit that removes or destroys the constituents of concern, then reanalyze the waste, in accordance with the requirements of § 261.38(c)(8), to document that the constituent specifications have been satisfied.

If a hazardous waste is treated to produce a comparable fuel, only the waste-derived fuel would be excluded from RCRA subtitle C regulation upon a determination that it met the specification. The hazardous waste would be regulated under Subtitle C from the point of generation until the generation of a comparable fuel that meets the exclusion specifications and implementation requirements. This means that the generation, transport, storage, and treatment of the hazardous waste, until exclusion as a comparable fuel, remains subject to applicable Subtitle C regulations.

In addition, residuals from the treatment of a hazardous waste remain solid waste and, if hazardous, are subject to applicable Subtitle C regulations. Thus, if comparable fuel is produced from treatment of listed hazardous waste, the wastes from that process are automatically hazardous by virtue of the derived from rule. (See the derived-from rule in § 261.2(d).)

F. Meeting the Syngas Specifications

Commenters felt the proposal was not very specific in describing ways in which a syngas fuel could be generated from hazardous waste. The final rule makes clear that a hazardous waste can meet the syngas fuel constituent and heating value specifications through the treatment of the hazardous waste. As with comparable fuels, it is the responsibility of the generator claiming the exclusion to demonstrate eligibility. The treatment of a hazardous waste to generate a syngas fuel can occur in either: (1) A unit subject to applicable Subtitle C treatment, storage and disposal requirements (i.e., Parts § 264, § 265 or § 262.34); or (2) a recycling unit exempt under § 261.6(c).

The generator of the syngas fuel must demonstrate that the treatment of the hazardous waste destroys or removes the hazardous constituent of concern from the waste. A generator of syngas fuel from the treatment of hazardous waste must: (1) Document that the unit that will process the hazardous waste has been demonstrated to effectively remove or destroy the hazardous constituents of concern from the type of waste being treated; and (2) process the hazardous waste in a unit that removes or destroys the constituents of concern, then analyze the waste in accordance with the requirements of § 261.38(c)(8) to document that the exclusion specifications have been satisfied. If a hazardous waste is processed to produce a syngas fuel that meets the exclusion specifications, only the syngas fuel would be excluded from RCRA subtitle C regulation.

In addition, residuals from the treatment of a hazardous waste to generate an excluded syngas fuel remain solid waste and are subject to applicable Subtitle C regulations if they are also hazardous wastes. Residuals from the treatment of a listed hazardous waste to generate a syngas fuel remain hazardous wastes due to the derived-from rule: the residuals are derived from treatment of listed hazardous wastes.

G. Sampling and Analysis

Commenters expressed concern that the Agency proposed: (1) To initially require sampling and analysis for all Appendix VIII constituents; (2) to require the use of SW–846 methods to conduct sampling and analysis of Appendix VIII constituents; and (3) to also require the use of the same methods for syngas as for comparable fuels. In response to commenters concerns, the Agency is finalizing the following approaches to sampling and analysis of comparable fuel and syngas fuel.

1. Use of Process Knowledge

A majority of commenters believed that EPA should allow the use of process knowledge under limited circumstances in determining which constituents to test for in the initial scan as well as any follow up testing. The Agency agrees with commenters. Generators of hazardous wastes should have adequate knowledge of their waste to allow the use of process knowledge in determining which constituents may and may not be present in their waste.

The use of process knowledge may only be used by the original generator of

the hazardous waste. If the generator of the hazardous waste and generator of the comparable/syngas fuel are different, then the generator of the comparable/syngas fuel may not use process knowledge to determine that constituents are not present in the waste. The generator of the comparable/syngas fuel, if not the original generator of the hazardous waste, must test for all of the constituents and properties in § 261.38(a)(2) Table 1 of the regulations. This is because the Agency believes that only the original generator may have intimate knowledge of the constituents in the waste to make such a determination. See § 268.7, where EPA uses the same approach for analyzing compliance with LDR treatment standards; *see also Hazardous Waste Treatment Council* v. *EPA*, 886 F. 2d 355, 368–71 (D.C. Cir. 1989) (upholding this approach).

Therefore, the final rule allows the use of process knowledge under certain circumstances. Today's rule requires testing for all constituents except those the initial generator of the hazardous waste determines should not be present in the waste. The following cannot be determined to "not be present" in the waste: (1) A hazardous constituent that causes the waste to exhibit the toxicity characteristic for the waste or hazardous constituents that were the basis for the listing of the waste; (2) a hazardous constituent detected in previous analysis of the waste; (3) a hazardous constituent introduced into the process that generates the waste; or (4) a hazardous constituent that is a byproduct or side reaction to the process that generates the waste.

It is the responsibility of the original generator/comparable fuel generator to document their claim that specific hazardous constituents meet the exclusion specifications based on process knowledge. Regardless of which method a generator uses, testing or process knowledge, the generator is responsible for ensuring that the waste meets all constituent specifications at all times. If at any time the comparable fuel fails to meet any of the specifications, that fuel is in violation of Subtitle C requirements.

2. Waste Analysis Plan

As in the proposal, the final rule requires comparable fuel generators to develop a waste analysis plan prior to sampling and analysis of their hazardous waste to determine if the waste meets the exclusion specifications. This is consistent with the usual requirement throughout the Subtitle C rules that persons generating and treating hazardous waste must prepare a waste analysis plan. See, e.g. § 264.13 (general waste analysis plans) and § 268.7(a)(4) (requiring even generators using 90-day units for treatment to prepare waste analysis plans with respect to hazardous waste prohibited from land disposal). To ensure that the chemical/physical measurements of the waste are sufficient, accurate and precise, the Agency is requiring comparable fuel generators to develop a waste analysis plan, and suggest doing so in accordance with Agency guidance. Chapter Nine of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW–846) addresses the development and implementation of a scientifically credible sampling plan. Chapter One of SW–846 describes the basic elements to be included in a Quality Assurance Project Plan (QAPP), as well as information describing basic quality assurance (QA) and quality control (QC) procedures. Chapter Two of SW–846 aids the analyst in choosing the appropriate methods for samples, based upon sample matrix and the analytes to be determined.

Comparable fuel generators may want to follow the SW–846 guidance in developing their waste analysis plans. As specified in the recordkeeping section of the rule (§ 261.38(c)(10)) the generator also must have documentation of the: (1) Sampling, analysis, and statistical analysis protocols that were employed; (2) sensitivity and bias of the measurement process; (3) precision of the analytical results for each batch of waste tested; and (4) results of the statistical analysis.

3. Methods To Analyze Comparable Fuels

In the proposal, EPA required the use of SW–846 methods for the sampling and analysis of wastes to determine if the waste meets the comparable fuel exclusion constituent specifications. Based on commenter response and the Agency's overall increased use of alternative methods to those specified in SW–846, the final rule allows the use of alternate methods that meet the performance based criteria in section § 261.38(c)(8).

The approach allows comparable/syngas fuel generators to use any reliable analytical method to demonstrate that no constituent of concern is present at concentrations above the specification levels. It is the responsibility of the generator to ensure that the sampling and analysis is unbiased, precise, and representative of the waste. For the waste to be eligible for exclusion, a generator must demonstrate that: (1) Each constituent of concern is not present above the specified specification level at the 95% upper confidence limit around the mean; and (2) the analysis could have detected the presence of the constituent at or below the specified specification level at the 95% upper confidence limit around the mean. (See Guidance for Data Quality Assessment—Practical Methods for Data Analysis, EPA QA/G–9, January 1998, EPA/600/R–96/084).

The Agency will consider that the exclusion level was achieved in the waste matrix if an analysis in which the constituent is spiked at the exclusion level indicates that the analyte is present at that level within analytical method performance limits (e.g., bias and precision). In order to determine the performance limits for a method, EPA recommends following the quality control (QC) guidance provided in Chapters One and Two of SW–846, and the additional QC guidance provided in the individual methods.

The Office of Solid Waste's (OSW) standing policy on the Appropriate Selection and Performance of Analytical Methods for Waste Matrices Considered to be "Difficult-to-Analyze" was stated in a January 31, 1996 memorandum from Barnes Johnson, Director of the Economics, Methods, and Risk Assessment Division, to James Berlow, Director of the Hazardous Waste Minimization and Management Division. The following excerpts are appropriate to this rulemaking.

Inadequate recovery of target analytes from the RCRA-regulated waste matrices of concern demonstrates that the analytical conditions selected are inappropriate for the intended application. Proper selection of an appropriate analytical method and analytical conditions (as allowed by the scope of that method) are demonstrated by adequate recovery of spiked analytes (or surrogate analytes) and reproducible results. Quality control data obtained must also reflect consistency with the data quality objectives and intent of the analysis.

(a) For extractable organics in standard RCRA matrices, e.g., groundwater, aqueous leachates, soils, OSW considers a sample preparation method appropriate for use if it generates an analyte recovery of 70% or greater (Method 8270C, Sec. 1.1). For extractable organics in "difficult matrices", e.g., sludges, ash, stabilized wastes, OSW considers a sample preparation method appropriate for use if it generates an analyte recovery of 50% or greater.

(b) For volatile organics, using relative recoveries, i.e., standard curves established by purge-and-trap, or other

techniques for the preparation of standards, OSW considers a sample preparation method appropriate if it generates a relative analyte recovery of 80% or greater (Methods 8260B, 8015B).

(c) For inorganic analytes in almost all matrices, an absolute recovery and precision of 80–120% can generally be achieved with the proper choice of acid digestion procedure and determinative method for the analyte of interest."

4. Syngas Waste Analysis Plan and Analysis Methods

a. General. EPA is concerned that tested and generally accepted methods may not exist for the sampling and analysis of gases from pressurized systems that will ensure an accurate, unbiased, and precise representation of the hazardous constituents present in the gas.

Hazardous constituents present in a gas at high pressure and high temperature may be difficult to analyze accurately due to possible physical and chemical changes in the constituents when a sample is drawn into a low pressure and temperature environment for analysis. For example, some constituents, while present as a gas under high pressure and temperature, may solubilize into liquids that have condensed or adhere to the sampling components as the pressure and temperature drops in the sampling device. If this were to occur, the analysis of the sampled gas would not accurately represent the concentrations of the constituents in the original gas.

The Agency also shares the general concern stated in comments that enforcement of the exclusion specifications could be compromised because of the difficulty in applying or potential absence of accepted sampling and analysis methods for these gases. Therefore, the final rule requires syngas generators to submit for approval, prior to sampling and analysis, a waste analysis plan to the appropriate regulatory authority (see § 261.38(c)(7)(iii)). At a minimum, the plan must specify: (1) The parameters for which each hazardous waste will be analyzed and the rationale for the selection of those parameters; (2) the test methods which will be used to test for these parameters; (3) the sampling method which will be used to obtain a representative sample of the waste to be analyzed; and (4) the frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date; and (5) if process knowledge is used in the waste determination, any information prepared by the facility owner or operator in making such determination.

b. Analysis. A syngas fuel generator also may use the performance-based approach (§ 261.38(c)(8)) to demonstrate that the performance of the methods selected is appropriate to meet the exclusion specifications (as described in 3 above). Guidance on demonstration of appropriate method performance can be found in Chapter One of SW–846 and the Quality Control sections of the individual methods.

5. Non-Detects

EPA proposed that for a waste to meet a non-detect standard, the analysis must achieve a detection limit equal to or less than the EPA specified number and also not detect the constituent of concern in the waste (61 FR 17358). However, some commenters believe that the Agency should develop numerical levels for each parameter in the benchmark where results are "non-detect." They are concerned that a potential comparable fuel that has any measurable levels of Appendix VIII constituents below the Agency's detection limits would not qualify as a comparable fuel.

The final rule maintains the proposed approach for non-detect constituent specifications, except in the case of metals, hydrocarbons and oxygenates (see Section C. above). The Agency believes that allowing concentrations of constituents not found in the benchmark fuels to be present in the comparable fuel is counter to the comparable approach and could allow higher emissions of toxic compounds from burning excluded waste than from benchmark fuels. Additionally, commenters noted that the detection limit, referenced as the "maximum" detection limit, should more accurately be referred to as the "minimum" detection limit that must be achieved. The Agency agrees and the final rule requires that analysis for a constituent with a specification of non-detect must: (1) Meet a detection limit at or less than the minimum required detection limit listed for the constituent; and (2) not detect the constituent of concern in the waste (see § 261.38(a) and (b)).

Commenters also indicated that it may be difficult to achieve the detection limits specified for the non-detect specifications. The Agency continues to believe that the detection limits can be met. This is due in part to the fact that the detection limits are primarily based on the limits found for the No. 6 fuel oil analysis. EPA believes that the matrix for No. 6 fuel oil is a more difficult matrix to analyze than what the Agency believes will be the matrix for the majority of comparable fuels—a light solvent matrix. In addition, to assist generators who may have difficult matrices to analyze, the final rule provides the latitude to use any method that will ensure an unbiased and precise analysis of the waste.

H. Notification, Certification, and Documentation

1. Who Must Make the Exclusion Notification

The person claiming that a hazardous waste meets the exclusion criteria of this rule is known as the "comparable fuel generator" in the case of excluded liquid fuel or "syngas fuel generator" in the case of excluded syngas fuel. The comparable/syngas fuel generator need not be the person who originally generates the hazardous waste. The comparable/syngas fuel generator can be the first person who documents and certifies that a specific hazardous waste meets the exclusion criteria.

2. Notification Requirements

Most commenters agreed with the proposal that a one-time notification was appropriate; however, some commenters said that the exclusion should not be self-implementing and should require some type of review and approval by the implementing authority. The Agency continues to believe that a one-time notification in combination with the other requirements of this section, gives sufficient notice to the regulating officials (i.e., State RCRA and CAA officials). Since this is a self-implementing exclusion, in order to ensure delivery, the notification must be sent certified mail and until the notification of exclusion is received the waste is still a hazardous waste and must be managed as such. Only after the receipt of such notification that the hazardous waste-derived fuel meets the requirements of this rule is the waste excluded and free to be managed in accordance with the requirements for a comparable or syngas fuel. If a comparable/syngas fuel generator loses its exclusion, the generator must renotify for the exclusion, after coming into compliance with the requirements of this section. If necessary the generator must also comply with any applicable Subtitle C requirements for the waste.

a. EPA Regional or State Notification. Prior to managing any waste as an excluded comparable/syngas fuel under this section, the generator must send to, in States not authorized to implement this Section, the EPA Regional RCRA and CAA Directors, and, in authorized States, to the State RCRA and CAA Directors. The notification of the exclusion claim should be sent via

certified mail, or other mail service that provides written confirmation of delivery. Notification of the RCRA and CAA Directors will provide notification of the exclusion and appropriate documentation to both the RCRA and CAA implementing officials. The Agency's intent is for copies of the exclusion information to reach both the RCRA and CAA implementing officials because of the nature of this exclusion—a RCRA excluded waste being burned in CAA regulated units. If the comparable/syngas is to be burned in a State other than the generating State, then the comparable/syngas fuel generator must also provide notification to that State's or Region's RCRA and CAA Directors.

The notification shall contain the following items: (1) The name, address, and RCRA ID number of the person/facility claiming the exclusion; (2) the applicable EPA Hazardous Waste Codes for the hazardous waste; (3) the name and address of the units, meeting the requirements of § 261.38(c)(2), that will burn the comparable/syngas fuel; and (4) the following statement signed and submitted by the person claiming the exclusion or his authorized representative:

"Under penalty of criminal and civil prosecution for making or submitting false statements, representations, or omissions, I certify that the requirements of 40 CFR 261.38 have been met for all waste identified in this notification. Copies of the records and information required at 40 CFR 261.38(c)(10) are available at the comparable/syngas fuel generator's facility. Based on my inquiry of the individuals immediately responsible for obtaining the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

b. Public Notification. As a self-implementing exclusion effective upon receipt of the notification by the implementing authority, there is no decision prior to exclusion being made by the implementing authority regarding the waste. The opportunity exists at all times for the public to bring to the implementing authority's attention any circumstance that might aid that authority in its monitoring and enforcement efforts. The public, furthermore, would have the ability to bring a citizen suit for a claimant's failure to comply with any requirement of the exclusion. Based on comments received on the proposal, the Agency believes that requiring the comparable/syngas fuel burner to provide a simple public notification of an exclusion claim would aid the public in its efforts. In most cases, the Agency believes the burner will also be the generator of the fuel.

Therefore, under the final rule, the comparable/syngas fuel burner must submit for publication in a major newspaper of general circulation local to the site where the comparable/syngas fuel will be burned, a notice entitled "Notification of Burning of Comparable/Syngas Fuel Excluded Under the Resource Conservation and Recovery Act" containing the following information: (1) Name, address, and RCRA ID number of the claimant's facility; (2) name and address of the unit(s) that will burn the comparable/syngas fuel; (3) a brief, general description of the manufacturing, treatment, or other process generating the comparable/syngas fuel; (4) an estimate of the average and maximum monthly and annual quantity of the waste claimed to be excluded; (5) name and mailing address of the State or Regional Directors to whom the claim is being submitted. This notification must be published in the newspaper prior to the burning of the comparable/syngas fuel. Notification is only necessary once for each waste stream excluded.

c. Burner Certification. As proposed, the final rule requires comparable/syngas fuel to be burned only in units subject to Federal/State/local air emission requirements. The Agency believes that limiting the burning of comparable/syngas fuels to industrial furnaces or industrial boilers, or hazardous waste incinerators, along with a certification from the burner, would ensure that the fuel was burned in a unit subject to Federal/State/local air emission regulations. Industrial furnaces or industrial boilers, or hazardous waste incinerators are believed to be a universe of units that are capable of handling comparable/syngas fuels and that would be subject to Federal/State/local air emission requirements. In response to comments, the Agency believes that these excluded hazardous wastes are best handled and burned in the types of units specified in § 261.38(c)(2). To ensure that comparable/syngas fuels burned off-site are burned in a unit specified in § 261.38(c)(2) (see discussion below), the Agency is requiring the generator to obtain from the burner a one-time written, signed certification that: (1) The comparable/syngas fuel will be burned only in an industrial furnace or boiler, or hazardous waste incinerator subject to Federal, State, or local air emission requirements; (2) identifies the name and address of the units that will burn the comparable/syngas fuel; and (3) the state in which the burner is located is authorized to exclude wastes as comparable fuels (i.e., under the provisions of § 261.38). This requirement coupled with the requirement to notify the State or Regional Directors will enable regulatory officials to take any measure that may be appropriate to ensure that excluded fuel is burned in conformance with applicable regulations and so does not become part of the waste management problem.

If the generator or burner intends to change the unit where the comparable/syngas fuel is burned (i.e., burn a comparable/syngas fuel in a unit that has not previously been included in a certification), then prior to burning, the generator must again follow the requirements for: (1) Obtaining a burner certification; (2) notifying the public; and (3) submitting a revised notification to the State or Regional Directors. Once the revised notification has been received by the State or Regional Directors and the notification has been published in the newspaper, the generator/burner may burn the fuel as an excluded waste.

I. Exclusion Status

Some commenters requested clarification of the regulatory status of the comparable/syngas fuel if the conditions of the exclusion were not met. After the exclusion for a waste has become effective, the conditions of the exclusion must continue to be met in order to maintain the exclusion.

Separate and distinct from any requirement or condition established in this final rule, all generators—including comparable/syngas fuel generators under this exclusion—have a continuing obligation to identify whether they are generating a hazardous waste and to notify the appropriate government official if they are generating a hazardous waste. Section 3010; 40 CFR 262.11. If a comparable fuel claimed as excluded under today's rule fails to meet the exclusion requirements of sections § 261.38(a)–(c), that comparable/syngas fuel and subsequently generated comparable/syngas fuel would be required to be managed as a hazardous waste—including compliance with all notification requirements—until testing demonstrated that the waste was below the exclusion specifications.

A comparable/syngas fuel that is not ultimately burned remains a hazardous waste and is subject to all applicable Subtitle C regulations (unless another exclusion from RCRA applies). As stated

in the proposal, the only allowable treatment or disposal method for a comparable/syngas fuel is burning. Any disposal method other than burning is a RCRA violation, unless the comparable/syngas fuel is properly managed as a hazardous waste meeting applicable Subtitle C regulations. The implications of not burning are that any prior management of the waste was subject to Subtitle C requirements.

Excluded comparable/syngas fuel generators, transporters and burners are subject to the speculative accumulation requirements under § 261.2(c)(4). Thus, there must be turnover of a given percentage of comparable fuel stock each calendar year, and the persons holding such fuels must be able to demonstrate that such turnover is occurring. See § 261.2(f). Since ultimate users are notified that they are receiving comparable fuels, they may feasibly comply with this requirement by documenting how much such fuel is received when it is burned.

If a generator knows or should have known that a waste fails to meet the constituent specifications, the exclusion ends as of the point of determination and the material must be managed as a hazardous waste.

J. Recordkeeping

1. General

Some commenters believed that the recordkeeping requirements in the proposal were excessive, while others felt they were too lenient. The Agency, however, believes that because of the self-implementing nature of this exclusion, maintenance of the proper information on-site is essential to the proper implementation of the exclusion.

The final rule requires the comparable/syngas fuel generator to maintain the following files (see § 261.38(c)(10)) at the facility generating the fuel: (1) All information required to be submitted to the State RCRA and CAA Directors as part of the notification of the claim: (i) the name, address, and RCRA ID number of the person claiming the exclusion; (ii) the applicable EPA Hazardous Waste Codes for the hazardous waste; (2) a brief description of the process that originally generated the hazardous waste and process that generated the excluded fuel; (3) an estimate of the average and maximum monthly and annual quantities of each waste claimed to be excluded; (4) documentation for any claim that a constituent is not present in the hazardous waste as required under § 261.38(8); (5) the results of all analyses and all quantitation limits achieved for the fuel; (6) documentation as required for the treatment or blending of a waste to meet the exclusion specifications; (7) a certification from the burner if the waste is to be shipped off-site; and (8) the certification signed by the person claiming the exclusion or his authorized representative.

The generator must also maintain documentation of the waste analysis plan and the results of the sampling and analysis that includes the following: (1) the dates and times waste samples were obtained, and the dates the samples were analyzed; (2) the names and qualifications of the person(s) who obtained the samples; (3) a description of the temporal and spatial locations of the samples; (4) the name and address of the laboratory facility at which analyses of the samples were performed; (5) a description of the analytical methods used, including any clean-up and sample preparation methods; (6) all quantitation limits achieved and all other quality control results for the analysis (including method blanks, duplicate analyses, matrix spikes, etc.), laboratory quality assurance data, and description of any deviations from analytical methods written in the plan or from any other activity written in the plan which occurred; (7) all laboratory analytical results demonstrating that the exclusion specifications have been met for the waste; and (8) all laboratory documentation that support the analytical results, unless a contract between the claimant and the laboratory provides for the documentation to be maintained by the laboratory for the period specified in § 261.38(c)(11) and also provides for the availability of the documentation to the generator upon request. These records and those required for off-site shipments must be maintained for the period of three years. A generator must maintain a current waste analysis plan during that three year period.

2. Off-Site Shipments

The final rule requires that for each shipment of comparable/syngas fuel a generator sends off-site for burning in an industrial furnace or boiler, or hazardous waste incinerator, a record of the shipment must be kept by the generator on-site. Because these fuels are not required to be accompanied by a manifest, it is the Agency's belief, supported by commenters, that to ensure that comparable/syngas fuels are transported to and burned in only those units approved for such burning some type of tracking mechanism is warranted. Therefore, the final rule requires for off-site shipments the following information be maintained by the generator on-site: (1) The name and address of the facility receiving the comparable/syngas fuel for burning; (2) the quantity of comparable/syngas fuel delivered; (3) the date of shipment or delivery; (4) a cross-reference to the record of comparable/syngas fuel analysis or other information used to make the determination that the comparable/syngas fuel meets the specifications; and (5) the one-time certification by the burner.

K. Transportation and Storage

Commenters concurred with the Agency's belief that the Department of Transportation (DOT) and the Occupational Safety and Health Agency (OSHA) requirements for the transportation and handling of comparable/syngas fuels will be adequate to ensure the safe management of these excluded fuels. The final rule does not require comparable/syngas fuel handlers to comply with the RCRA storage and transportation requirements. It should be noted that excluded comparable/syngas fuel transporters are required to comply with all applicable requirements under the U.S. Department of Transportation regulations in 49 CFR parts 171 through 180.

Anyone who stores an excluded comparable/syngas fuel (e.g., generator, transporter, burner) is required to comply with all applicable requirements under the Occupational Safety and Health Agency regulations in 29 CFR part 1910. The occupational safety and health standards for flammable and combustible liquids can be found in Subpart H—Hazardous Materials section 1910.106 and standards for compressed gases in section 1910.101.

L. Comparable Fuels Exclusion and Waste Minimization

1. Introduction

In its April 1996 NPRM (61 FR 17464), EPA solicited comment on the effects of the comparable fuels provision on facilities' efforts to promote pollution prevention and waste minimization measures (i.e., source reduction and environmentally sound recycling). In particular, EPA wanted to determine the extent to which companies might: (1) Shift from hazardous waste recycling practices to burning wastes as fuel in broader markets; (2) continue to recycle these wastes for product recovery; (3) undertake source reduction for those wastes currently failing the comparable fuel specifications; or (4) continue to burn the excluded waste fuel in either an hazardous waste incinerator, light weight aggregate kiln, or cement kiln.

EPA received many comments on this issue, most of which indicated there

would probably be a shift from recycling toward combustion, but the Agency received very little quantitative information that would allow the Agency to assess the extent and impact of potential shifts. Consequently, EPA used data from the RCRA Biennial Reporting System, which is a census of waste stream information from all large quantity hazardous waste generators, and the National Hazardous Waste Constituent Survey (NHWCS), which contains data on the composition and properties of waste streams for certain industries, to develop two approaches for assessing the impacts of the comparable fuels provision on pollution prevention and recycling. This approach is described in the next section.

The results of EPA's analysis conclude that about three-fourths of hazardous wastes now meeting the comparable fuels specifications are already being combusted; the remainder (about one-fourth) is recycled. The 70,000 tons of hazardous wastes, that qualify for the comparable fuels exclusion and are currently recycled annually, could shift to the comparable fuels market, if all generators responded the same way, a possibility which seems unlikely. This figure represents less than a one percent annual increase in the amount of hazardous waste combusted, but it represents a decrease of about 20% in the amount of hazardous wastes recycled annually.

If the comparable fuels provision were implemented alone, a 20% decrease in recycling might appear to have a negative effect on pollution prevention and waste minimization. However, as one commenter pointed out, some generators will install pollution prevention and waste minimization measures (i.e., to prevent high levels of constituents from becoming part of the waste) in order to qualify for the comparable fuels exclusion. This would have the effect of increasing pollution prevention. Furthermore, EPA fully expects that the increased cost of upcoming MACT standards will cause the regulated community to seek cost effective pollution prevention and waste minimization solutions to offset the higher costs (a response seen, for example, in the RCRA land disposal restrictions program). EPA is examining this effect in the regulatory impact analysis for the upcoming MACT standards. On balance, the impact of the comparable fuels provision on pollution prevention and waste minimization in the context of MACT standards appears to be negligible.

2. Major Concerns of Commenters

EPA received comments generally expressing either concerns or support for the exclusion. There was some concern that the comparable fuels exclusion would lead to combustion of spent solvents and other high-energy wastes low in halogens and metals that would otherwise be recovered as product. Conversely, others supported the exclusion pointing to incentives it may create to source reduce and conserve resources by replacing fossil fuels with comparable fuels. In addition, concerns were raised over the role of energy recovery in the waste management hierarchy, and the impact of fuel blending on comparable fuels.

Impact on Source Reduction and Recycling: Several commenters stated that EPA failed to investigate whether the comparable fuels exclusion would encourage combustion of wastes now being recycled. Some of these commenters took positions on how the comparable fuels exclusion would impact the recycling-combustion balance. One group claimed that the comparable fuels exclusion would encourage combustion at the expense of recycling. A smaller group of commenters stated that the comparable fuels exclusion would offer an incentive for generators to use more source reduction to lower the levels of toxic constituents to the specification levels. The commenters provided little quantitative information describing these changes.

As noted above, EPA used data from the RCRA Biennial Reporting System (BRS), which is a census of waste stream information from all large quantity hazardous waste generators, and the National Hazardous Waste Constituent Survey (NHWCS), which contains data on the composition and properties of waste streams for certain industries, to develop two approaches for assessing the impacts of the comparable fuels provision on pollution prevention and recycling. Results from both analyses indicate that about three-fourths of wastes likely to meet the comparable fuel specifications are already combusted rather than recycled, and that the remaining wastes could shift from the current recycling market to the comparable fuels depending on the economics and individual company preferences. The methodologies used are summarized below. A full discussion of these analyses is provided in the docket.

Analysis #1: EPA searched the 1993 BRS data to identify waste streams that would be most likely contain wastes that could meet comparable fuel specifications for energy value and low levels of contaminants. EPA focused its search on D001/ignitable wastes because this waste typically contains spent nonhalogenated solvents. EPA also used the BRS data to determine how these wastes were managed after generation, and found that about three-fourths of D001 wastes are combusted, while the remaining one-fourth goes to recycling for solvent recovery.

Analysis #2: Using waste stream specific laboratory analysis data from the NHWCS, EPA identified those waste streams in the survey that meet the comparable fuels specifications for about half of the recycled wastes reported in the BRS. Using this data, EPA was able to estimate the total amount of recycled wastes that could be comparable fuels, and how much waste currently sent to combustion meets the comparable fuels specifications. Analysis of these estimates indicates that about 75% of waste streams meeting the comparable fuels criteria is combusted while the remainder is recycled.

The "Economic Analysis Report for the Combustion MACT Fast-Track Rulemaking" (contained in the docket) predicts savings to generators who can begin to combust hazardous wastes as comparable fuels rather than as hazardous wastes. EPA believes this offers generators incentives to achieve the comparable fuels specifications through source reduction. However, since the costs of source reduction initiatives vary widely from facility to facility, EPA could not reliably estimate net cost savings that facilities could achieve by turning hazardous wastes into comparable fuels through upstream source reduction. Therefore we did not attempt such an estimation.

In addition, many solvent recycling facilities could begin to combust streams meeting the comparable fuels specifications instead of continuing to recycle them. EPA's comparison of recycling costs and revenues with costs for combusting these streams as comparable fuels indicate that in many cases facilities may find the combustion option more economical. Since solvent recycling costs and revenues vary considerably from facility to facility and also fluctuate in time according to the market values of virgin solvent (fuel costs also fluctuate), EPA could not and did not estimate the extent of this shift. Individual facilities may continue to recycle wastes rather than combust them as comparable fuels.

Recycling and the Waste Management Hierarchy: Some commenters stated that letting wastes similar to fuels be burned is evidence of an Agency preference for

combustion over recycling. EPA disagrees: The comparable fuels exclusion is based on the fact that some hazardous waste fuels very closely resemble fossil fuels and do not warrant the full slate of RCRA Subtitle C controls. This does not suggest that the Agency has altered its commitment to the hierarchy. The underpinning of the comparable fuels exclusion is simply a determination on the degree of regulatory oversight needed for fuel-like waste materials, which does not translate to any change of view on the waste management hierarchy.

Burning for Energy Recovery: Some commenters claim that burning for energy recovery is waste minimization. While EPA is clearly providing greater flexibility to burn wastes that closely resemble virgin fuels, EPA distinguishes this from waste minimization. Waste minimization includes source reduction and environmentally sound recycling, but does not include 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 non-hazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume." (40 CFR 260.10)(emphasis added).

Blenders and Third Parties: Some commenters expressed concern that EPA would allow blending of hazardous wastes to meet the concentration specifications for a comparable fuel, thereby raising the issue of dilution to avoid RCRA regulation. Similarly, commenters objected to allowing third parties, such as fuel blenders, to handle and blend wastes between generation and combustion. Commenters pointed out that blending and third-party involvement would constitute impermissible dilution. It would also undermine any incentive to minimize the volume or toxicity of these wastes. The Agency agrees that blending hazardous wastes to bring them within the comparable fuels concentration specifications would constitute dilution which is not only impermissible but also would likely inhibit waste minimization. Today's rule explicitly prohibits any blending or other "treatment" which does not remove or destroy hazardous constituents. Blending of two wastes already meeting the comparable fuels specifications is, however, allowed only to achieve the viscosity specification. The rationale for this limited use of blending is discussed in that section of today's preamble.

Opportunities for Source Reduction: One commenter commented that the Standards for the Management of Used Oil (40 CFR Part 279) offered generators an incentive for keeping used oil streams clean by requiring oil exceeding certain concentration specifications for metals and chlorine to be managed as hazardous waste, and predicts that the comparable fuels exclusion will result in similar incentives for source reductions to achieve the comparable fuel exclusion criteria, particularly for generators of D001 (ignitable) wastes. EPA agrees with this view, but did not receive industry-specific information from commenters with which to complete an analysis of this issue.

IV. RCRA Permit Modifications for Hazardous Waste Combustion Units

A. Introduction

The Clean Air Act (CAA) sets a maximum time frame of three years for facility owners or operators to comply with Maximum Achievable Control Technology (MACT) emission standards once final standards are published in the **Federal Register**. EPA expects that many facility owners or operators will need to make changes to their process(es) in order to come into compliance with the new standards. For facilities operating under a RCRA permit, these changes may have to be incorporated into the permit before they may be put in place at the facility. To facilitate meeting the three year deadline, EPA is revising the RCRA permit modification procedures to explicitly address changes to a facility's design or operations that are necessary to comply with the new MACT emission standards. The revised modification process offers streamlined procedures that will help facility owners and operators meet two compliance concerns—compliance with their RCRA permits and compliance with the new MACT standards.

EPA anticipates that a substantial number of requests to modify facility design or operations will be submitted in a relatively short period of time following promulgation of the final MACT standards. Although the states could always use their current modification process, the revised procedures offer a potentially more viable way for states to handle the anticipated volume of requests in a more timely manner.

In most cases, state permitting agencies have been authorized by EPA to issue and modify RCRA permits. Authorized states that wish to implement the revised procedures may have to modify their state procedures, consistent with today's rule, before they may use the streamlined procedures to respond to MACT-related modification requests from facility owners or operators. Once the final MACT standards are promulgated, facility owners and operators have three years to begin operating under the lower emissions levels. The Agency believes that these three years are better used for processing modification requests, and subsequently implementing the necessary changes, than for modifying state regulations and going through the authorization process. By promulgating the revised procedures on an expedited schedule (i.e., before the final MACT standards), EPA hopes to provide ample time for states to develop comparable standards and obtain EPA authorization before they need to process MACT-related modification requests from facility owners or operators. It should be noted that states which currently have temporary authorization procedures equivalent to the federal 40 CFR 270.42(e) procedures may also use these, in many cases, to approve facility changes needed to come into compliance with MACT standards. However, these procedures would allow operation under the modified conditions only up to 180 days (with a possible extension of up to 180 additional days), followed by a full class 2 or 3 permit modification. Therefore, EPA encourages states to adopt procedures comparable to those in today's rule.

Combining the streamlined modification procedures with the expedited schedule for promulgating them sets up a procedural framework to promote compliance with the MACT standards. But even this combination does not guarantee that other factors will not ultimately interfere with a facility's efforts to comply. As part of a common sense approach to implementing, and enforcing, its programs, EPA would like to make sure that the consequences of non-compliance are commensurate with the causes. With regard to the three-year deadline for operating under the lower emissions levels required by MACT, EPA is further examining potential consequences of non-compliance, particularly if the causes are beyond the facility's control (e.g., a permitting agency's administrative procedures or workload cause delays, necessary equipment is back ordered, or testing contractors are unavailable). For example, the Agency is looking into the possibility of using standard

enforcement procedures under the Clean Air Act (CAA), rather than requiring more stringent consequences through regulations (e.g., requiring a facility to stop burning hazardous waste until it receives a permit or revoking a permit). The potential consequences of non-compliance are discussed in more detail in the Revised Technical Standards for Hazardous Waste Combustion Facilities; Proposed Rule, Notice of Data Availability (62 FR 24212, May 2, 1997).

EPA is not going to pursue any of the three companion implementation options discussed in the proposed rule (see 61 FR 17456, April 19, 1996). Those options were intended to address possible permit implementation conflicts which may have occurred if a State did not become authorized to carry out the provisions of the proposed MACT rule in time to handle necessary modifications. By promulgating the revised modification procedures prior to the remainder of the proposed rule, EPA anticipates that States will have adequate time to receive authorization to process the requisite modifications. Thus, the need to put in place a separate implementation mechanism no longer exists. Today's rule does not address any of the longer-term implementation options discussed in the proposed rule (e.g., placing the MACT standards in a Clean Air Act permit, in a RCRA permit, or in both permits). Implementation will be discussed in the final rule promulgating revised standards for hazardous waste combustors.

B. Overview

1. Background on RCRA Permit Modification Procedures

Section 3004 of RCRA requires owners and operators of facilities that treat, store, or dispose of hazardous waste to comply with standards that are "necessary to protect human health and the environment." EPA, or EPA-authorized States, implement these standards by issuing RCRA permits to these types of facilities. Once a permit has been issued to a facility, the facility must operate in compliance with the conditions in the permit; any subsequent changes to the facility's design or operations are incorporated into the permit in accordance with the Agency's, or authorized State's, permit modification procedures.

EPA's regulations concerning permit modifications requested by facility owners or operators are set forth in 40 CFR 270.42. The regulations break the types of potential modifications into three classes (see § 270.42 Appendix I). Class 1 modifications cover administrative or routine changes, including replacing equipment with functionally equivalent equipment. They are relatively straightforward and in most cases do not require Agency approval before being made. Class 2 modifications cover somewhat more complex changes, for example, to address common variations in the types and quantities of wastes managed, where the changes can be implemented without substantially altering the design specifications or management practices prescribed by the permit. Class 3 modifications involve substantial changes to facility operating conditions or waste management practices and are subject to principally the same review and public participation procedures as permit applications. Each class of modification request requires varying degrees of facility preparation, Agency review time, and public involvement. The various degrees have a significant impact on the amount of time needed to put the change into effect. For example, Class 1 modifications typically can be implemented in a very short time, where Class 2 and 3 modifications may take several years.

Prior to promulgating the Class 1, 2, 3 procedures, modifications were divided into two categories, major and minor. States authorized to implement the RCRA program were not required to adopt the Class 1, 2, 3 procedures, since they were considered less stringent than the predecessor major/minor system. As a result, both systems are in use today. EPA would like to point out that, in converting to the new system, many of the modifications that had been designated as minor were placed into Class 1, or Class 1 with prior Agency approval. EPA presumes that modifications listed in Appendix I as Class 1, or Class 1 requiring prior Agency approval, are most likely processed as minor modifications in states that continue to use that system.

2. Shortcomings of the Current Procedures

EPA did not consider, in developing the modification classes and procedures, that changes to RCRA permit conditions might be necessary in order to comply with other environmental statutes. Similarly, the Agency did not anticipate changes to comply with upgrades to existing regulations (although the process was developed to include changes for new regulations). EPA developed the Class 1 through 3 modification scheme within the context of the RCRA program to provide both incentives to facility owners and operators to pursue facility changes that lead to improved management of hazardous wastes, and greater flexibility for timely processing of change requests, e.g., by tailoring the level of review to the type of change (see Permit Modifications for Hazardous Waste Management Facilities; Final Rule, 53 FR 37912, September 28, 1988). EPA is now concerned, however, that the RCRA permit modification procedures, as a practical matter, will not allow enough time to meet statutory deadlines for implementing new standards under the Clean Air Act.

3. How Today's Rule Impacts the Procedures

EPA proposed several options for amending RCRA permit modification procedures to accommodate the Clean Air Act requirement that facilities comply with MACT standards within three years of publishing a final rule in the **Federal Register** (61 FR 17454, April 19, 1996). In all five of the proposed options, the Agency tried to balance the need to develop a process that would enable facilities to comply with more stringent emissions standards within the allotted time with the need to provide adequate opportunities for public participation in the process. The level of regulatory oversight that would take place under each option was also discussed. The Agency requested comments on the proposed options, as well as on any combinations thereof, or any other feasible approaches.

EPA has decided to finalize, with some adjustments, its originally proposed recommended approach, i.e., to establish a new section in the permit modification table for changes to existing permit conditions necessary to come into compliance with MACT standards. This approach best meets the Agency's objective of implementing a process that enables facilities to meet the three year statutory deadline. This approach also allows for public notification of the modification request.

Today's final rule establishes a new section in Appendix I of 40 CFR 270.42 for technology changes that are necessary for a facility to achieve compliance with the MACT standards. The new section is designated as Class 1 modifications, with prior Agency approval. As such, the Agency will have an opportunity to review the proposed physical and operational changes to the facility before they are implemented, in order to ensure that these changes do not have other undesirable consequences. Agency experience suggests that steps intended to reduce emissions may not, in all cases, lead to overall enhanced environmental protection. For example, decreasing combustion temperature as a way to

decrease air pollution control device (ACPD) inlet temperature, in order to reduce dioxin emissions could increase organic emissions by allowing poor combustion.

The new section in 40 CFR 270.42 Appendix I, specifically, section L(9) "Technology Changes Needed to Meet MACT Standards Under 40 CFR Part 63 Subpart EEE—National Emissions Standards for Hazardous Air Pollutants From Hazardous Waste Combustors," is limited to technology changes to existing permits to allow a facility to come into compliance with the new Part 63 standards. General retrofitting changes outside the framework of meeting MACT-related technology, or subsequent changes for maintaining compliance with Part 63 standards, are outside the scope of this category. The permitting agency director will determine whether the types of modifications requested qualify as "technology changes needed to meet standards under 40 CFR part 63 Subpart EEE." The Agency anticipates that the distinction between technology changes necessary to allow a facility to operate under the lower emissions levels and general retrofitting changes will be clear. EPA expects that the same types of changes to comply with the MACT standards will be needed at most facilities, thus the requests submitted under section L(9) should be fairly uniform.

EPA, in response to public comments, is also incorporating a time default into the modification procedures for changes requested under section L(9) only. Section 270.42(a) is being amended to add a paragraph specifying that the permitting agency Director has 90 days, with a possible one-time 30 day extension, to make a decision about modifications requested under section L(9). If the Director does not make a decision, then the permittee may consider the request approved. EPA is also requiring owners or operators to comply with the requirements for the Notification of Intent to Comply (NIC) (see 40 CFR 63.1211) in order to benefit from the streamlined modification process.

C. Discussion of RCRA Permit Modifications Procedures for Facilities Coming Into Compliance With MACT requirements

1. Summary of Proposed Options

EPA is in the process of developing final MACT standards imposing more stringent (lower) emissions levels for hazardous waste combustion activities; facilities will have to operate in compliance with these standards within three years of their promulgation, with a possible one year extension (for a total of four years). The Agency expects that a large number of facilities will need to modify their design or operations to meet the more stringent emissions standards required under MACT. For example, incinerators that currently operate above the MACT emissions standard for particulate matter (PM) might have to add electrostatic precipitators (ESP) or baghouses to reduce emissions; similarly, incinerators that need to reduce dioxin emissions to meet the MACT standards may need to implement additional controls on temperature or employ carbon injection; or light weight aggregate kilns (LWAKs) with high acid gas emissions may need to add a control technology, such as wet scrubbers.

For these facilities to remain in compliance with their RCRA permits, they will need to modify their permits to allow any design or operational changes needed to achieve compliance with the MACT standards. The Agency proposed five options for handling these "MACT related" RCRA permit modifications. The options, which varied with regard to the level of procedural requirements and administrative review required, were: (1) Provide facilities with "self-implementing" authority to proceed with necessary changes without Agency review; (2) categorize the changes needed to comply with MACT standards as Class 1 modifications that do not require prior Agency approval; (3) categorize the changes as Class 1 modifications that do require prior Agency approval (this option was discussed in the proposal as the recommended option); (4) categorize the changes as Class 1 modifications requiring prior Agency approval, but give the Director authority to elevate change requests to Class 2; and, (5) retain the current scheme for modifying the RCRA permits. Under the current scheme, the MACT-related changes would likely be categorized as Class 2 or 3 modifications.

2. Summary of Public Comments

In general, there were three recurring themes in the comments received by the Agency in this area. First, commenters expressed concern about being able to meet the three year time frame. They cited, as reasons, (1) that three years are insufficient to allow state agencies to obtain authorization for the rule and to subsequently process the anticipated volume of modification requests, and (2) that the modification procedures themselves are too long. Secondly, commenters emphasized the need to allow sufficient public participation, but with the caveat that the modification process not be unduly delayed by public participation activities (this being yet another factor in potentially being unable to meet the three year deadline). Finally, commenters were concerned that the consequences of non-compliance are too severe (e.g., having to stop burning), given that delays in achieving compliance could be the result of permitting agencies being unable to process modification requests in a timely manner (and not a consequence of the facility's activities).

The Agency received a wide variety of comments on the options themselves. Each of the proposed options received support, with most commenters favoring the first three options for their more streamlined procedures. A few commenters suggested that incorporating a time limit into the modification review process would aid in coming into compliance with the MACT standards. Many commenters expressed the importance of developing a streamlined permit modification process that would allow facilities to make the necessary technology upgrades in a timely fashion, while retaining enough regulatory oversight to ensure that the changes have a proper degree of "buy-in" by the permitting agency. Some commenters expressed concern that options 4 and 5 would delay implementation of MACT-related changes beyond the three year deadline mandated by Congress. A few commenters preferred options 4 and 5 since they incorporate a greater degree of public participation into the review process. Additionally, some commenters thought that options 4 and 5 might be more readily accepted by and implemented in authorized States that chose to remain with the original permit modification structure composed of minor and major changes. [Note: States were not required to adopt the Class 1, 2, 3 structure since it was determined to be less stringent than the major/minor structure.]

Finally, some commenters requested that the Agency consider as a possible alternative that a Class 3 modification could be reclassified as Class 2 for the purposes of MACT compliance.

3. Response to Comments and Discussion of Final Provisions

EPA agrees with commenters that streamlined modification procedures for MACT-related changes are essential. The three year time frame for complying with the MACT standards has been set by Congress; it is the Agency's responsibility to ensure that facilities are able to comply with those

requirements without violating other areas of their environmental responsibilities, like their RCRA permit. As discussed earlier, EPA anticipates that many facilities will need to make some changes to meet the lower emissions levels imposed by MACT, and that these changes will have to be incorporated into their RCRA permits. EPA does not want the RCRA permit modification procedures to hinder a facility's ability to comply with MACT.

As discussed in the Section B.1. Background on RCRA Permit Modifications Procedures, Class 1 modifications may be done quickly, whereas Class 2 or 3 modifications may take several years to process. The combination of the time normally required to completely process Class 2 or 3 modification requests, and the anticipated volume of requests from facilities striving to meet MACT emission levels, would make meeting the three year deadline unrealistic. Permitting agencies would not have the resources to meet the workload demand. This leads EPA to concur with commenters on the need to embrace a more streamlined approach than would be provided by options 4 or 5. Similarly, EPA chose not to pursue the option suggested by some commenters to reclassify changes from Class 3 to Class 2. A streamlined approach is consistent with general efforts within the Agency (e.g., through the Permits Improvement Team) to improve the permitting process by focusing on performance standards rather than on a detailed review of the technology requirements.

The Agency acknowledges the validity of the concerns expressed by some commenters that the options offering the more streamlined procedures offer fewer opportunities for public participation. It is important to strike an appropriate balance between streamlined modification procedures that promote coming into compliance sooner with more stringent standards and public participation. The Agency has repeatedly emphasized its commitment to a common-sense approach to permitting—one that minimizes regulatory burden and provides flexibility to tailor activities to specific situations. In carrying this commitment to today's rule, EPA wants to ensure three things; (1) that the permit modification process is not an obstacle for complying with the MACT standards; (2) that facilities are not forced to operate outside of their permitted conditions in order to comply with MACT standards; and (3) that public participation is not streamlined out of the process.

EPA believes that Option 3, with some modifications, provides the best framework for meeting these objectives and responding to public comments. This option was supported by many commenters, particularly because the streamlined procedures will facilitate meeting the three year deadline for complying with the more stringent emission levels. There has been a precedent set in the past for streamlining the modifications process. To ensure that facilities implemented timely changes necessary to meet land disposal restriction (LDR) levels for newly listed or newly identified hazardous waste, the Agency designated the modifications needed to meet the LDR levels for newly identified wastes as Class 1 modifications (see 54 FR 9596, March 7, 1989).

The prior agency approval under Option 3 provides the regulatory oversight requested by commenters, since the permitting agency will have the opportunity to review the proposed physical and operational changes to the facility before they are implemented. EPA concurs with commenters who encouraged retaining some amount of regulatory oversight in the modifications. As discussed previously, sometimes changes to one part of a facility's design or operations that have a positive effect, like reducing one type of emissions, may cause detrimental effects to other parts of the facility's operations. It is important for permitting agencies to have the opportunity to review proposed changes to make sure they do not lead to other undesirable impacts.

Some commenters expressed concern, however, that a facility's ability to begin implementing the change(s) might be delayed by requiring regulatory oversight (i.e., if the Agency failed to respond to the request in a timely manner). EPA recognizes the validity of this concern, given the anticipated volume of requests from facilities striving to meet the new emissions standards; therefore, the Agency is incorporating a time default for reviewing the requests into the final modification process. The time default for review, codified in a new paragraph 270.42(a)(4), specifies that if a determination to approve or deny the Class 1 permit modification request submitted under item L(9) is not made within 90 days (with the possibility of a one-time extension for up to 30 days) from the time the request was received by the permitting agency, the request is to be considered approved, and the facility can proceed with the modification(s). In some situations, the Director of the permitting agency may deny a request, for example, if the request contained insufficient information upon which to base a decision. The permittee could revise its request to address the shortfalls and resubmit it to the permitting agency. Such a resubmittal would initiate a new 90 day review period.

EPA anticipates that the incorporation of the time default, coupled with the fact that the revised modification procedures are being promulgated on an expedited schedule, will alleviate commenters' concerns about non-compliance. Although the consequences of non-compliance are outside the scope of this rule, this approach (streamlined modification procedures coupled with expedited promulgation) establishes a procedural framework through which there is a greater chance that permitting agencies will not cause undue delays in facilities' compliance with the MACT standards. Under the new streamlined process, permitting agencies should be able to process the modification requests with sufficient time remaining for facility owners or operators to make the changes within the three year time frame.

Some commenters expressed concern that option 3 does not provide the same levels of public participation that would be available through options 4 and 5. Those options would require facilities to request Class 2 or 3 permit modifications for MACT-related changes. The procedures for Class 2 and 3 modifications include public meetings, notices, and comment periods. Class 1 modifications, even those requiring prior Agency approval, only require that the facility owner or operator send a notice of the change to the facility mailing list within 90 days of approval being given.

EPA is committed to enhancing public participation in all of its processes, and has established additional requirements in today's rule to provide opportunities, beyond the public notice requirements associated with Class 1 (with prior approval) modifications, to involve the public in permitting changes required to comply with MACT standards. These opportunities are being incorporated into requirements for a Notification of Intent to Comply (NIC), discussed in more detail in Section V. One goal of the NIC development process is to promote interaction between the facility and its host community, for example, by requiring the facility to host an informal meeting with the community before submitting the final NIC to the permitting agency. Since the NIC must describe anticipated activities for coming into compliance with the MACT

standards, the technology changes that trigger the RCRA permit modification would be a natural component of the NIC and the public meeting. EPA expects that the meeting will be similar in style and intent to the pre-application meetings required under 40 CFR 124.31.

The final rule requires facility owners or operators to complete the NIC in order to benefit from the streamlined modification procedures. This requirement means that owners or operators will need to submit a final NIC either before, or at the same time as, they submit the modification request. If they do not comply with the NIC requirements, they will need to follow the otherwise applicable modification scheme, i.e., the permitting agency Director will likely reclassify their request to Class 2 or 3. EPA is not requiring documentation in the modification request that the permittee completed the NIC. Since both items are submitted to the permitting agency, EPA assumes the permitting agency will be aware of whether the permittee has indeed complied with the NIC requirements.

EPA expects that information about anticipated changes to facility design or operations to comply with the more stringent standards will be included in the NIC, and thus will be available for public review and discussion during the NIC public meeting. Through this meeting, communities have an early vehicle for learning, among other things, about potential changes to facility design and operations necessary to meet the lower emission levels. Of course, in accordance with the current requirements concerning Class 1 modifications, the permittee must also inform the public about the modifications within 90 days of their approval by the permitting agency (see 40 CFR 270.42(a)(1)(ii)).

EPA would like to point out that although similar information about facility design or operation changes may be included in both the NIC and the modification request, the Agency does not believe it is redundant to have both documents. The two have different purposes, and the formats and levels of detail may differ accordingly. The modification request would most likely differ from the NIC, since the request has to tie directly to the permit itself. For example, the NIC may talk in general terms about adding baghouses to reduce emissions, but the modification request would have to specifically cite the section(s) of the permit being modified to include information on the baghouses.

Today's requirements would not, of course, preclude additional public participation activities beyond the regulations, where appropriate on a facility-specific basis. At certain RCRA facilities, in fact, permitting agencies and facilities have implemented a variety of public involvement activities, such as additional fact sheets or information availability sessions, that have helped affected communities to understand and participate in permit decision-making. EPA has published a practical how-to guidance manual designed to help all stakeholders in the permitting process (permit writers, industry, and communities) determine what types of public participation activities might be helpful. The RCRA Public Participation Manual (EPA530-R-96-007, September 1996) also offers tips on how to conduct a wide variety of activities. Supplemental public participation activities on a site-specific level, geared for a particular facility's operations and tailored to meet the host community needs, could be used to augment community understanding of the changes taking place to comply with MACT standards. In closing, EPA would like to reiterate that facilities are making changes to meet more stringent standards. Requiring facilities to comply with lower emissions levels in a relatively short time frame does offer significant benefits to public health and the environment that the Agency believes communities will generally welcome.

In response to the comments that options 4 and 5 might be more compatible with permit modification procedures in authorized states, EPA is aware that States have to evaluate new regulations in terms of their specific structures. Promulgating the revised modification procedures in today's rule, however, will provide ample time for states to obtain authorization before they actually begin processing modification requests following promulgation of the final MACT standards. EPA encourages states to expedite their requests for authorization to implement the provisions in today's rule. EPA expects that States using the Class 1, 2, 3 modification system would incorporate the provisions by reference, and that States using the major/minor system would incorporate the provisions as minor modifications. As discussed in Section B.1. Background on RCRA Permit Modification Procedures, many changes that were formerly classified as minor were converted to Class 1, or Class 1 requiring prior Agency approval. Thus, EPA believes it is consistent for states using the major/minor system to incorporate this category of changes into the minor classification.

If the states cannot adopt an approach that ensures expeditious implementation of the MACT standards, however, then the Agency expects that changes necessary to comply with MACT standards may well be accomplished under a compliance order, with a specified schedule to come into compliance.

F. RCRA Changes in Interim Status Procedures

RCRA facilities operating under interim status are allowed to implement certain facility changes in accordance with requirements and procedures set forth in 40 CFR 270.72(a). (Note: EPA anticipates that the types of changes a facility may need to make to comply with the MACT standards would be allowable under this section). Section 270.72(b) imposes a limit, however, by stating that the changes cannot amount to "reconstruction" (defined in the regulation as "when the capital investment in the changes to the facility exceeds 50 percent of the capital cost of a comparable entirely new hazardous waste management facility"). As discussed in the preamble to the proposed rule, the Agency does not anticipate that the costs to perform facility changes necessary to come into compliance with the MACT standards would exceed the 50 percent reconstruction limit. However, since the limit is cumulative for all changes at the interim status facility, there could conceivably be situations where the cost for MACT-related changes might push a facility over the limit.

To ensure that the reconstruction clause does not present an obstacle for interim status facilities trying to implement changes to meet the new emissions levels, the Agency proposed adding a new paragraph to §270.72(b) exempting changes necessary to comply with the MACT standards from the reconstruction limit. The Agency did not receive any adverse comments, and so is finalizing this provision in today's rule.

It is important to note that facilities operating under interim status will, like permitted facilities, be required to comply with the NIC requirements. Thus, the public will have the opportunity to review planned changes as part of the NIC and to participate in the public meeting. EPA anticipates that owners or operators of interim status facilities will hold the meeting and complete the NIC before proceeding with any changes to facility design or operations necessary to comply with the MACT standards.

V. Notification of Intent To Comply and Progress Report

A. Background

In the proposed rule (61 FR 17358), the Agency requested comments on strategies to identify and encourage or require affected sources to comply with the final emission standards at the earliest possible date. The Agency also asked for views on how best to determine when a source can realistically conclude whether it will comply with the final standards. A number of commenters suggested that the Agency require a submission from affected sources that would identify whether the facility intends to comply with the final standards, and outline the procedures the facility would employ to achieve compliance. This primary purpose of this submission (referred to by the commenters as a "Notification of Intent to Comply") would be to identify the sources that will choose as a compliance strategy to stop burning hazardous waste, so that those sources could be required to terminate waste burning activities as soon as possible following the effective date of the final Hazardous Waste Combustor (HWC) rule.

Other commenters suggested that EPA require submission of a plan that outlines the procedures a facility will follow to comply with the final standards. However, the purpose of this submission would be to begin an early process of communication between the public and the facility through the public disclosure of the facility's compliance strategy to meet the final HWC standards.

The Agency reviewed these comments and found the suggestions for an early notification persuasive. In the Notice of Data Availability (NODA) published in the **Federal Register** on May 2, 1997 (Revised Technical Standards for Hazardous Waste Combustion Facilities; Proposed Rule, 62 FR 24241), EPA described its strategy to promote early compliance planning through a Public and Regulatory Notice of Intent to Comply (PRNIC). The discussion laid out a process by which an affected source would be required to develop a draft document including anticipated plans for coming into compliance with the new emissions standards, hold an informal meeting with the public to discuss the draft planning document, and to subsequently provide a final planning document to the permitting agency. The information to be covered in the document and during the meeting would include such topics as a description of waste minimization and pollution control technique(s) being considered and their effectiveness, a description of emission monitoring techniques being considered, and an outline of key dates for activities the source would need to accomplish in order to operate within the MACT standards.

The intended purpose of the PRNIC, as described in the NODA, was twofold. First, the PRNIC was intended to provide for public involvement in a source's compliance planning process. EPA envisioned that this involvement would also serve to offset public participation opportunities that may be "lost" if a source is able to take advantage of the new streamlined RCRA modification procedures for HWCs, since modifications required under RCRA would naturally be part of the source's overall plan for achieving compliance with the standards. Secondly, the PRNIC would provide an expeditious notice to the permitting Agency as to whether sources would be able to come into compliance with the new standards. Having information about plans for compliance might prove helpful to permitting agencies in planning the most efficient use of their resources during the three year compliance period.

B. Summary of Final Provisions

EPA is moving forward with an early compliance planning requirement. However, the final rule contains certain changes from the PRNIC discussed in the NODA; the Agency has revised the requirements based on public comments received following the NODA's publication and based as well on the original proposal. EPA is finalizing new requirements in §63.1211 for facility owners and operators to develop and submit a Notification of Intent to Comply (NIC), and in §63.1212 to develop and submit a Progress Report. Section 63.9(h) "notification of compliance status" requires facilities to submit such notification when a source becomes subject to a relevant CAA standard. As such, today's requirement is an enhancement of this requirement to give notification of intent to comply prior to the three year compliance date of the emissions standards. The source can use the NIC to notify either the source's intent to come into compliance with the new standards, or the source's intent not to come into compliance with the new standards. The NIC must be submitted to the permitting agency within a year of the final standards being promulgated, and the Progress Report within two years.

As proposed, the primary purpose of the NIC is to serve as a planning and outreach tool for achieving compliance with the MACT standards. The contents of the NIC, set forth in §63.1211(a)(1), are similar to those presented in the NODA discussion on the PRNIC with modifications based on comments received on the NODA. Also as discussed in the NODA, sources will have to make a draft of the document available to the public as part of the process of developing the NIC. They will also have to provide notice of and conduct an informal meeting with the public to discuss anticipated plans for achieving compliance with the standards. The purpose of the Progress Report is to help permitting agencies determine if sources are making reasonable headway in their efforts to come into compliance. In deciding on this approach to compliance planning—the NIC followed by the Progress Report—EPA determined (1) that one year is sufficient time for a source to establish its general "plan of attack" for achieving compliance, and (2) that during the second year a source should be well on its way to making necessary modifications, if it plans to meet the MACT limits, or to making alternate arrangements for handling the hazardous waste, if it does not intend to meet the MACT limits.

The final rule does not contain provisions for updates to the final NIC following a significant change in the facility's implementation strategy, as considered in the NODA. Since the Agency decided to implement a requirement for a Progress Report at the end of the second year, there is no purpose served by having a revised NIC. EPA anticipates that any significant changes to a facility's compliance plan would necessarily be reflected in the Progress Report.

C. Discussion of Public Comments and Final NIC Provisions

1. General.

The majority of commenters supported the concept of early compliance planning, particularly with regard to the public involvement component. Those advocating early involvement indicated that the PRNIC concept appears reasonable, not overly burdensome, and represents a positive step to ensure public involvement in the MACT process. Many lauded the Agency's effort to bring the spirit of the recently promulgated RCRA enhanced public participation requirements (see 69 FR 63417 (Dec. 11, 1995)) to the MACT arena and the strong RCRA goal of public participation for decisions involving permitted hazardous waste management facilities (RCRA section 7004(b)). Commenters opposing the

additional public involvement required as part of the PRNIC development process stated that the activities (e.g., the public meeting) would create more controversy and impose additional burdens on both sources and permitting agencies at a time when they will be faced with a substantial workload. Some commenters expressed concern that the additional activities would provide no real benefit, since neither the permitting agencies nor the public have authority to disapprove of a source's chosen control options, as long as the source operates within the MACT limits. One commenter noted that the concept of a PRNIC was unprecedented for CAA sources; they said a PRNIC was not required under the CAA and it was beyond EPA's authority to impose such a requirement.

The Agency agrees with commenters who recognize the value of early public involvement. EPA has repeatedly emphasized its commitment to enhancing public participation in all of its programs (see National Waste Minimization and Combustion Strategy and Enhanced Public Participation Rule). Experience has shown that hazardous waste combustors spark a tremendous amount of legitimate public interest; many communities have expressed a desire to be involved at all stages of combustor operations and permitting activities. Given this background, EPA fully expects the promulgation of the final MACT standards to receive significant and appropriate public scrutiny. As one commenter points out, HWCs are already subject to RCRA regulations, and many of them operate under risk-based permits that were subject to extensive public review. EPA anticipates that the fact that HWCs will now be regulated under CAA is likely to remain of vital interest. People will know that new emissions limits are being imposed, and will want to know how the source plans on meeting them. The NIC provides this information, and the NIC meeting opens the door for the public to communicate directly with the owners or operators.

EPA does not share the concern expressed by commenters that the public involvement activities impose a substantial burden with no commensurate benefit. The effort associated with drafting a NIC and holding the NIC meeting is not overly burdensome. Facilities will most likely need to compile the information for their own uses, in order to effectively decide which compliance option(s) they will pursue. Making the information available to the public and discussing it during an informal meeting could provide benefits in many areas, even if the permitting agency and the public do not have the authority to approve or disapprove of the compliance method(s) ultimately selected. For example, it could save time and money at the end of the permitting process. Talking to people early on about what can and cannot be accomplished in a given situation, asking their input on decisions that need to be made, and explaining the rationale behind decisions that have already been made, can lead to fewer challenges on draft permit conditions. EPA also believes the public could provide useful information to owners or operators that might contribute to a quality plan for achieving compliance with the MACT standards. The level of knowledge on environmental matters exhibited by the public (at public meetings, in correspondence, for example) appears to be increasing. As the public's knowledge base grows, so might the quality of input they can provide into technical decisions.

EPA disagrees also that there is no precedent for the concepts inherent in the NIC, and that EPA does not have authority to impose such a requirement. Since EPA has chosen to provide the maximum amount of time for compliance allowed under the CAA (3 years), requiring sources to identify their compliance plans is particularly appropriate. As stated before, EPA is committed to enhancing public involvement in environmental matters. Providing the compliance plans to the public is one of many ways the Agency is implementing this policy. Precedent for early public involvement has been set both in the Agency's Hazardous Waste Minimization and Combustion Strategy and in the enhanced RCRA public participation requirements promulgated in December, 1995 (see 69 FR 63417, December 11, 1995).

2. Purpose of the NIC

As discussed in the background part of this section, the original purpose of the PRNIC was to promote public involvement and to assist in compliance planning. Commenters supported these goals, which continue to be the compelling motives for adopting the NIC requirement. The primary purpose of the NIC is thus to serve as a planning tool for achieving compliance with the MACT standards. In other words, the NIC is designed to ensure that facility owners or operators get an early start on evaluating their options for meeting the new standards, and to serve as a vehicle for public involvement. EPA's intent is to facilitate dialogue regarding a facility's compliance strategy. The NIC also serves the purpose of having sources identify to the regulators and the public their intent to comply or not to comply with the applicable emission control requirements of this Subpart. The NIC and public meeting will foster mutual understanding of the compliance options, including consideration of both technical (e.g., equipment changes to upgrade air pollution control devices) and operational (e.g, process changes to minimize waste generation) alternatives. Ideally, it will also result in the selection of a method that will meet the goals of both the facility and the community.

The NIC will not serve as a basis for requiring facilities to cease burning hazardous waste if they intend to comply with the emission standards of this Subpart. If, however, a facility indicates in its NIC that it does not intend to meet the emission standards of this Subpart, then the source must stop burning hazardous waste within two years of the standards being promulgated. This requirement is discussed in more detail in Section D. Discussion of Public Comments and Progress Report. EPA would like to clarify that its intent has never been to shut a source down completely. The source might be required to cease burning hazardous waste; however, it would not be precluded from burning non-hazardous waste or other alternative fuels. However, those sources who indicate in the NIC their intent not to comply with the applicable emission control requirements of this Subpart will be required to stop burning hazardous waste within two years of the effective date of the emission control requirements.

Although the NIC will not be used to cause sources to stop burning, there are enforceable requirements associated with it. Sources must provide a draft NIC for public review, advertise and conduct an informal meeting, and submit a final NIC to the permitting agency. If these activities do not take place within the time frames specified in the regulations, sources will be in violation of the requirements, and subject to appropriate enforcement action. The key milestone dates contained in the schedule submitted with the NIC are not enforceable, however; the requirement to submit a schedule containing key dates is the enforceable requirement.

Finally, one commenter suggested that the NIC be used to identify RCRA permit conditions that would "disappear" when MACT limits are set. EPA is not using the NIC for this purpose. EPA will address permitting

schemes, and the process for transitioning from a RCRA permit to a Title V permit, in the final rule promulgating MACT standards for HWCs. The NIC is not the appropriate vehicle for accomplishing this task.

3. Timing

In the PRNIC discussion in the May 2, 1997 NODA, EPA said that the final PRNIC would be due to the permitting agency within 270 days following the effective date of the final MACT standards. A draft of the document would have to be available within 210 days, and at least 30 days before the informal public meeting was to be held.

Although several of commenters considered the time frame too long, many others said it would be difficult to prepare a quality compliance planning document so quickly. They also expressed concern about meeting with the public at such an early stage. The commenters' position was that any draft plan put together within 7 months after the standards are finalized would be tentative only. They were reluctant to go to the public with a tentative plan that was likely to change significantly before it was final.

EPA agrees with commenters that the time frames are tight. In order to be operating within the new limits by the end of the compliance period, it is imperative to start the planning process immediately. In recognition of commenters' concerns about preparing the draft plan, EPA is extending the time frames in the final rule. In accordance with the provisions in § 63.1211, the final NIC will be due to the permitting agency within one year of promulgation of the final standards. The NIC meeting must be held no later than 10 months following promulgation, and the draft NIC made available at least 30 days before the meeting is held. So, facilities basically have 2 extra months to prepare a draft document, and 3 extra months to submit a final NIC to the permitting agency. The revised time frames should provide sufficient time not only to prepare the initial draft, but also to revise it, as appropriate, to reflect discussions from the public meeting and final engineering decisions about the source's operation.

The Agency understands the concerns expressed by commenters about sharing draft material with the public. However, EPA does not expect, nor should facilities or the public expect, the draft NIC to describe all of the technical aspects of the compliance options in extensive detail. Similarly, discussion of the options at the public meeting should not focus on minute details. The purpose of sharing the draft and discussing the options at the public meeting is to capture major ideas in a planning document, to facilitate dialogue regarding a facility's compliance strategy, and to discuss possible courses of action. The information in the draft NIC should be sufficient to stimulate this level of discussion. The more in-depth technical discussion can be incorporated into the final document. Since all sources are required to have the final NIC submitted to the permitting agency one year after the final standards are promulgated, anyone may request a copy of it from the permitting agency at that time.

4. NIC Meeting

EPA is requiring facilities to provide notice of and host an informal meeting with the community to discuss anticipated plans for complying with the MACT emissions standards (see § 63.1211(b)). The meeting must take place within 10 months of the final standards being promulgated. At least 30 days before the meeting takes place, the facility must provide public notice of the meeting, and must make the draft NIC available for public review.

Commenters were generally supportive of EPA's intent to require a public meeting to discuss compliance planning. Some commenters had specific concerns, ranging from the timing issues addressed above, to the methods for providing notice, and the potential for being required to conduct several redundant meetings to meet various purposes.

EPA had listed three mechanisms in the NODA for providing notice of the public meeting: a display ad in a newspaper, a sign at the facility, and a broadcast announcement. These were the same mechanisms used to provide notice of the RCRA pre-application meeting, and EPA believes they are appropriate for the NIC meeting as well. At least one commenter thought the mechanisms were too broad, and that a notice via newspaper and a sign at the facility would be enough. Another commenter suggested that a notice be sent to the facility mailing list as well. EPA decided not to limit the notice methods for the NIC meeting, but did add the facility mailing list to the methods in § 63.1211(b)(3). Each of these notices must include the date, time and location of the meeting, a brief description of the purpose, a brief description of the facility, a statement asking people who need special access to notify the facility in advance, the name of a contact for the NIC, and a statement describing how the draft NIC can be obtained.

Commenters who were concerned about redundant public meetings described a few possible scenarios. For example, in states that do not adopt the streamlined RCRA modification procedures a facility might be required to conduct a public meeting as part of a Class 2 or 3 RCRA modification, as well as the NIC meeting. Federal facilities might have public meeting requirements under the National Environmental Policy Act (NEPA). Other facilities might be facing RCRA pre-application meetings, either for initial permits or those up for renewal. Or, some facilities might have routine meetings scheduled with communities as part of Responsible Care or Good Neighbor agreements.

It is not EPA's intent in imposing the NIC meeting requirement to create duplicative requirements for public meetings. To do so would burden both the facility and the public. Everyone's time is valuable, and most people would probably prefer not to go to several meetings if one will do. EPA recognizes this, and would like to clarify that nothing in today's rule precludes a facility from combining meetings as long as the purposes of each are served. EPA sees combining events, particularly public involvement activities, as a first step in moving towards a multi-media approach to environmental management. Thus, if a facility has to complete a class 2 or 3 RCRA modification because it is located in a state that has not adopted the RCRA streamlined modification process, EPA would expect, and fully encourage, the facility to set up one meeting that would serve both the RCRA requirements and the CAA NIC requirements. The same is true for combining the NIC meeting with a RCRA pre-application meeting, if the facility has to host one for either an initial RCRA permit or because its permit is up for renewal, or with other types of public meetings the facility may have scheduled.

A few commenters expressed concerns about responding to public comments on the draft NIC, either during or following the public meeting. They cited time as the driving reason for this concern; they suggested their time would be better spent finalizing their plans for complying than formally responding to comments. One commenter noted that it was unclear in the NODA whether the draft NIC would be available prior to the meeting. In response, EPA would like to clarify that facilities are not required to formally respond to any comments, oral or written. However, it is important to keep in mind that the public may request a copy of the final NIC, and will

be reviewing the facility's final plans for coming into compliance. Facilities must also submit a summary of the meeting to the permitting agency as part of the final NIC, so the permitting agency will be apprised of the discussions that took place. EPA believes that this provides incentive for the facility to address any significant issues raised by the public in the NIC meeting.

EPA expects that the exchange between the facility and the community that takes place during the meeting will be much like it is for RCRA pre-application meetings. That is, the Agency intends for the meeting to provide an open, flexible and informal occasion for the facility and the public to discuss various aspects of the facility's compliance strategy. The Agency anticipates that the facility and the public will share ideas, and build a framework for a solid working relationship. The final NIC should reflect, to the extent appropriate, ideas or suggestions raised by the public.

The final provisions in §63.1211 clarify that the draft NIC must be made available to the public at least 30 days before the meeting is to take place. This will provide sufficient time for people to review the facility's intended strategy. EPA did not prescribe in the regulations the manner in which the draft NIC must be provided. There is not a "one-size-fits-all" approach to getting information out to the public. It is more logical to allow the facility to make that decision in the context of their particular situations. For example, if a facility has an information repository established, the draft NIC may be made available there. Or they could make it available upon request, since the name, phone number, and address of the NIC contact must be in the meeting notice.

5. Relation Between NIC and Other Notification Requirements

The requirements for the NIC are being promulgated in a new subpart applicable to HWCs in the Part 63 CAA regulations. Several commenters did not believe it necessary to add these new requirements, arguing that existing provisions under both the CAA and RCRA would fulfill the purpose of the NIC. They cited the initial notification requirements in §63.9(b), the notifications of compliance status in §63.9(h), Title V permit application requirements in §70.5(c), and RCRA public involvement requirements in §270.42 (permit modification procedures).

EPA has reviewed the requirements in each of these sections, and is not persuaded that the information or the timing of the submittals are sufficient to meet the objectives of the NIC. In terms of the information, the NIC actually seems to fall between the initial notification and the notification of compliance status. The information included in the NIC supplements the initial notification requirements in 40 CFR Part 63.9(b). The initial notification requirements in §63.9(b) address basic information such as name and address of the owner and the source, and a brief description of the source. The focus is on the source as it exists, not as it may need to be modified to meet new standards. The information in the NIC provides this next step—it focuses on what types of changes might have to take place in order to achieve the emission limits set by MACT. The types of changes may be physical, such as adding or replacing air pollution control devices, or they may be operational, for example, achieving lower emissions by minimizing the waste generated elsewhere that is subsequently used as fuel for the combustor.

The information required in the NIC will enable the public to engage in a meaningful dialogue about the facility's compliance strategy, including a discussion of the various options under consideration. For example, when a facility identifies and describes the type of control technique(s) being considered, it would be ideal for the facility to have examined all of the waste minimization and/or pollution control options available, including emission control through process modification, feed restriction, and pollution control equipment, (e.g., Hg control by production process changes, recovery, segregation, feedrate restriction, carbon injection, carbon bed, wet scrubbing, etc.). The compliance notification requirements in §63.9(h), on the other hand, have a different objective. They focus not on options for coming into compliance, but rather on how compliance will be demonstrated and monitored.

EPA chose not to tie the NIC requirements to the Title V permitting process. In terms of timing, the Title V process may not always be appropriate. It is important to keep in mind that MACT standards set forth in Part 63 are self-implementing; activities associated with them often take place outside of the permitting process. When MACT standards are promulgated, sources must begin adhering to the regulations, regardless of where they stand in the Title V permit process. For example, sources that already have Title V permits do not have to reopen them until renewal, if they are within 3 years of the expiration date. This time frame obviously is too long to meet the goals of the NIC. In addition, Title V permits contain all applicable requirements for all sources at a facility. To use the Title V process just for hazardous waste combustors is not practical.

The Agency has also determined that the information requirements for Title V applications do not meet the spirit of the NIC. Like the §63.9(h) compliance notification requirements, the Title V information does not address options for achieving compliance, particularly with regard to waste minimization and pollution prevention techniques being considered. Of course, the NIC is not intended to be the primary vehicle for waste minimization or pollution prevention planning. EPA expects that these are ongoing areas of exploration for facilities. EPA does expect, however, that to the extent these may be used to achieve compliance with the MACT standards, facilities will investigate them as viable options and will discuss them as such with the public.

Some commenters suggested that facilities having to follow Class 2 or 3 RCRA permit modification procedures (e.g., because they are located in states that do not adopt the RCRA streamlined modification procedures) not be required to submit a NIC, since public meetings are a required step in those procedures. Another suggested that RCRA interim status facilities not be subject to NIC requirements, because they are not "losing" any public involvement in a modification process (since they have no permit to modify). EPA disagrees with these suggestions. The NIC is broader in scope than just facility modifications that may have to be incorporated into a RCRA permit or that may be accomplished by following the procedures in 40 CFR 270.72(a) for allowable changes under interim status. The NIC is intended to lay out for discussion the source's overall plan for achieving compliance; this goal is relevant regardless of whether the facility is operating under a permit or under interim status. Facility changes under RCRA would just be one piece of the overall document, and one segment of the public discussion. As stated in the previous section, however, there is nothing in today's rule that precludes a facility having to follow Class 2 or 3 permit modification procedures from combining the public meeting required as part of the modification process with the public meeting required as part of the NIC process. EPA would expect, and fully encourage, a facility in this situation to set up one meeting that would serve both purposes.

D. Discussion of Public Comments and Progress Report

1. Overview

The Clean Air Act requires the Administrator to establish a compliance date or dates for each category or subcategory of existing sources, which shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the effective date of such standard, except as provided via a one year extension. CAA section 112(i)(3). EPA believes that compliance as expeditiously as practicable will have numerous benefits for human health and the environment. In particular, for those sources that do not intend to ultimately come into compliance with the emission standards of this Subpart, expeditious compliance would be achieved by ceasing to burn hazardous waste. The Agency anticipates that numerous sources will choose not to come into compliance with the requirements of this rule, and will cease burning hazardous waste prior to issuance of the rule or at some later date, but prior to the compliance date. This section is intended to expeditiously limit the burning of hazardous waste by those sources who do not intend to come into compliance with the requirements of the emission standards of this Subpart, but continue to burn hazardous waste after the effective date of the emission standards of this Subpart. These sources are, quite simply, able to meet the standards earlier than the three years allowed for sources which will continue to burn hazardous waste. Thus, for this class of facilities, EPA is creating a means of compliance "as expeditiously as practicable" (CAA section 112(i)(3)).

In the April 1996 proposal, the Agency invited comment on how sources could be identified and strategies that could be used to encourage or require these types of sources to comply at the earliest possible date. Several commenters suggested methods to require sources to identify their intent to comply or not comply with the emission standards soon after the promulgation of the final rule for these standards. They also suggested that those sources that did not intend to come into compliance would be required to stop burning hazardous waste.

2. Summary of Progress Report Requirements

The Agency has adopted in the final rule a variation of the concept commenters suggested along the lines of the April 1996 concept EPA proposed. The final rule requires those sources subject to the rule to signify in their NIC an intent to comply or not to comply with the requirements of the emission standards of this Subpart. Sources who make the decision not to comply with the rule must stop burning hazardous waste on or before two years after the effective date of the emission standards of this Subpart. The Agency believes that two years is an adequate length of time for these sources to arrange for alternate management of their hazardous waste through process changes to minimize the waste, use of alternate on-site management, or the use of off-site management. Those sources who intend to come into compliance with the emission standards will have the full three years to come into compliance as intended by the statute.

The sources who do not intend to comply with this rule must include in their NIC a schedule that includes key dates for the steps to be taken to stop burning hazardous waste. Key dates include the date for submittal of RCRA closure documents. The types of closure documents that would need to be submitted will most likely vary depending on the source's status. For example, if a source is in interim status, it may need to submit a closure plan. If the source is permitted, it will probably need to update its closure plan (that is part of the permit); thus, the "document" may be a permit modification request.

a. Submittal. Commenters suggested that sources submit progress reports to track source's actions toward compliance. The Agency also believes that a progress report would be a useful tool to evaluate a source's progress toward compliance. In the final rule, EPA requires those sources to submit to the regulatory authority a progress report on or before two years after the effective date of the emission standards of this Subpart. Any sources burning waste on and/or after two years following the effective date of the emission standards of this Subpart will be required to submit a progress report.

b. Demonstration. The Agency believes that any source which intends to come into compliance with the emission standards of this Subpart, except for those sources in compliance on the effective date of the emission standards of this Subpart, will be required to make modifications to the source to come into compliance. To gauge the progress of these modifications, the final rule requires sources to submit with their progress report information demonstrating that the source has: (1) Completed engineering design for any physical modifications to the source needed to comply with the emissions standards of this Subpart; (2) Submitted applicable construction applications to the applicable regulatory authority; and (3) Entered into a binding contractual commitment to purchase, fabricate, and install any equipment, devices, and ancillary structures needed to comply with the emission requirements of this Subpart. Those sources which fail to make this demonstration in their progress report or who fail to submit a progress report shall stop burning hazardous waste on or before the date two years after the effective date of this Subpart.

Because the types of modifications that sources will have to make are anticipated to require the commitment of substantial resources, sources are required to demonstrate that they have entered into a binding contractual commitment to purchase the resources necessary to make those modifications. Some examples of binding contractual commitments follow; however, EPA may judge other demonstrations adequate on a case-by-case basis. In some cases, EPA will allow evidence of an in-house construction plan to satisfy the demonstration. If on-site labor by facility personnel will be used, a statement of commitment must be provided by upper management, and such other evidence of a commitment as is available, such as company memoranda or annual budgets committing funds, purchase orders, or copies of contracts with any suppliers of equipment or materials. EPA expects that, in most cases, sources will use off-site resources in their modifications. To demonstrate commitment in these cases, sources must provide copies of binding contracts with companies to perform tasks or supply equipment that will facilitate bringing the source into compliance.

There may be a limited number of sources who intend to come into compliance, but will not need to undertake any of the activities identified in the demonstration criteria above to do so. These sources are required to submit instead documentation: (1) Demonstrating that the source, at the time of the progress report, is in compliance with the emissions requirements; or (2) specifying the steps that will be taken to bring the source into compliance, without undertaking any of the activities identified in the demonstration criteria. The Agency anticipates that few if any sources will not need to enter into binding contracts in order to come into compliance with the emission standards of this Subpart.

Those sources who indicated in the NIC their intent not to comply with the

emission control requirements of this Subpart must still submit a progress report. These sources, however, must only indicate that they have stopped burning hazardous waste and have submitted the required RCRA closure documents.

c. Schedule. To determine that facilities are undertaking the steps necessary to come into compliance by the compliance date, the progress report shall contain a schedule. This schedule must take into account the key dates listed in 63.1211(a)(1)(ii) for projects that will bring the source into compliance with the emission standards. The schedule must cover the time frame from the submittal of the progress report through the compliance date of the emission standards. EPA is requiring that the following key dates, as applicable to each source, be contained in their schedule: (1) Bid and award dates for construction contracts and equipment supply contractors; (2) milestones such as ground breaking, completion of drawings and specifications, equipment deliveries, intermediate construction completions, and testing; (3) the dates on which applications were submitted for or obtained operating and construction permits or licenses; (4) the dates by which approvals of any permits or licenses applied for are anticipated; and (5) the projected date by which the source will be in compliance with emission standards. The Agency anticipates that many sources will be able to update the schedule included with their NIC in submitting a schedule for the progress report.

d. Sources That Do Not Intend To Comply. The Agency anticipates that some facilities, which intended to comply at the time of their NIC submittal, may make the determination not to comply based on engineering studies or evaluations by the time of their progress report submittal. Those sources that signify in their progress report, submitted on or any time before two years after the effective date of the emission standards of this Subpart, their intention not to comply with the requirements of this Subpart must stop burning hazardous waste on or before the date two years after the effective date of the emissions standards of this Subpart. Sources who, at the time of their NIC submittal, have any belief or concern that they may decide not to comply with the emission standards should consider planning alternate waste management alternatives well in advance of the two year stop burning deadline.

e. Facilities with Multiple Sources. Commenters stated that some facilities may have multiple units at the same site subject to the MACT requirements. These facilities may decide to bring a portion of the sources into compliance and cease burning hazardous waste in the other portion of their sources. If a facility did decide to upgrade one or more units, it may be necessary to utilize the remaining unit, in which it intended to stop burning hazardous waste prior to the compliance date, to handle the capacity of the unit being upgraded until the installation of controls was complete. The commenters believed that it was unjustified to close a source at the two year deadline in the case where a source: (1) Was designated for closure at or before the three year compliance date; and (2) was handling the waste from another on-site source being upgraded to comply with the MACT standards or in order to install source reduction modifications eliminating the need for further combustion of wastes.

The Agency agrees that the intent of the requirement for sources that did not intend to comply to stop burning hazardous waste should not apply to these types of sources. Therefore, the requirement to stop burning hazardous waste at the two year deadline does not apply to a source if: (1) The source was designated in the NIC as a source that would stop burning hazardous waste on or before the compliance date; and (2) the source was shown in the NIC to be necessary to handle the capacity of another on-site source while that source was unable to handle the waste and undergoing modifications to come into compliance with the emission standards of this Subpart or in order to install source reduction modifications eliminating the need for further combustion of wastes.

E. Certification

To ensure that information submitted by a source is true and accurate, all NIC and progress reports submitted shall contain the following certification signed and dated by an authorized representative of the source: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the 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."

An authorized representative should be a responsible corporate officer (for a corporation), a general partner (for a partnership), the proprietor (of a sole proprietorship), or a principal executive officer or ranking elected official (for a municipality, State, Federal, or other public agency).

F. Extension of the Compliance Date

The CAA provides sources that intend to come into compliance, but because of the need to install controls will not meet the compliance date, the ability to request an extension of the compliance date for one year. The Agency believes facilities that choose to install process changes (which are essentially pollution prevention or waste minimization measures) and/or other controls that are appropriate for meeting MACT standards are eligible to request a one year extension of the compliance date to install these controls (CAA Section 112(i)(3)(B)). Facilities that request an extension to install pollution prevention and/or waste minimization measures may use part 63.1216 below, which describes the pollution prevention related information to be submitted. Facilities that request an extension for installing only end-of-pipe emission controls may use part 63.6(i)(4) requirements. In either case, the extension request shall be filed at least one year prior to the compliance date of this Subpart.

G. Sources Which Become Affected Sources After the Effective Date of This Subpart

The Agency is concerned that there may be sources who become subject to the emission standards of this Subpart after the effective date of the emission standards of this Subpart. The following is intended to clarify the requirements and time frames that must be met by such sources. A source which begins to burn hazardous waste after the effective date of the emission standards of this Subpart, therefore becoming an affected source, but prior to 9 months after the effective date of the emission standards of this Subpart, shall comply with all the requirements of this section and associated time frames for public meetings and document submittals.

A source which intends to begin burning hazardous waste after 9 months after the effective date of the emission standards of this Subpart, therefore becoming an affected source, shall meet all the requirements concerning the NIC and progress report prior to burning hazardous waste. Such sources shall make a draft NIC available, notice their public meeting, hold their public meeting, and submit a final NIC prior to burning hazardous waste. Such sources also shall submit their progress report at

the time of the submittal of their final NIC.

VI. Waste Minimization and Pollution Prevention

A. Overview

Pollution prevention is widely recognized as the most preferable form of environmental management. Indeed, the Clean Air Act, the Pollution Prevention Act, and the Resource Conservation and Recovery Act explicitly make pollution prevention the preferred tool in our nation's environmental management toolbox. The States have been strong leaders as well in moving pollution prevention to the forefront. Over the past decade, 30 states have passed legislation that promotes pollution prevention.[18] Those States have embarked on a variety of programs that move pollution prevention more into the mainstream of their environmental management strategies—ranging from pollution prevention based permits and inspections, to mandatory pollution prevention planning programs, to voluntary partnerships and technical assistance. Nearly every State operates some form of pollution prevention technical assistance program to help companies reduce as much waste as possible at the source.

EPA has embarked on several experimental programs, including, for example, Project XL and the Common Sense Initiative, to identify barriers in Federal regulations that impede cleaner, cheaper, smarter environmental solutions, and to demonstrate ways of redrafting regulations to provide greater flexibility in solving environmental problems.

In 1994, EPA began an extensive outreach effort to begin identifying pollution prevention barriers and incentives affecting hazardous waste combustion. Over the course of the past four years, EPA has worked extensively with the States, industry, environmental groups, and citizens, in many dozens of discussions and correspondences to explore a broad range of approaches to pollution prevention in the combustion arena. Today's rulemaking puts in place several incentive based pollution prevention and waste minimization incentives that derive from that long term effort, and that will provide the regulated community with additional flexibility to use pollution prevention technologies where it makes sense to do so. Some barriers were identified that are not easily solvable within the limits of the Clean Air Act, such as time limits on compliance that sometimes force companies to install end-of-pipe emission controls, instead of pollution prevention process changes, because they are faster and less risky to install. Nevertheless, today's rule suggests an approach that can address even this problem.

Today's rule contains incentives that provides the regulated community:

—several months of planning time before the MACT compliance period begins to explore cost effective pollution prevention alternatives that might reduce the cost of hazardous waste combustion,

—the opportunity to extend the compliance period by one year where the additional time is needed to install pollution prevention controls that reduce the amount of hazardous waste entering combustion units, and

—the opportunity to engender public support on pollution prevention alternatives that reduce the amount of waste that will be combusted.

The six pollution prevention alternatives EPA published for comment, the comments received and a description of the incentives contained in today's rule are discussed further below.

B. Background

The goals of the Clean Air Act clearly express Congress' intent to use pollution prevention as a fundamental tool for protecting our nation's air resources:

"A primary goal of this chapter is to encourage or otherwise promote reasonable Federal, State, and local government actions, consistent with the provisions of this chapter, for pollution prevention." (Clean Air Act, Section 101 (c))."

"Air pollution prevention (that is, the reduction or elimination , through any measures, of the amount of pollutants produced or created at the source) * * * is the primary responsibility of States and local governments." (Clean Air Act, Section 101 (a)(3))."

Congress' intent in the CAA is consistent, if not identical, to the policies set in the Pollution Prevention Act of 1990 (PPA) and the Hazardous and Solid Waste Amendments to RCRA of 1984, RCRA Section 1003(b) and Section 6602 (a).

More specifically, we note the definition of pollution prevention as used in the CAA is best captured in the operational definition used in Section 112 (d)(2). This section requires EPA to consider pollution prevention techniques in addition to "end of pipe" emission controls and other methods in the setting of MACT standards. Pollution prevention is used here to include: "measures, processes, methods, systems, or techniques including, but not limited to, measures which * * * (A) reduce the volume of, or eliminate emissions of, such pollutants through process changes, substitutions of materials or other modifications, * * * or (D) are design, equipment, work practice, or operational standards (including requirements for operator training or certification) * * *"

To avoid some of the historical confusion that has occurred over the definitions of pollution prevention and waste minimization, it is useful to compare the CAA definition to those in the PPA and in the Hazardous and Solid Waste Amendments to RCRA of 1984.

The PPA (at Section 6603(5)(A)) defines pollution prevention as source reduction activities, which includes any practice that reduces the amount of hazardous substance, pollutant or contaminant entering a waste stream, or otherwise prior to recycling, treatment or disposal. It includes such activities as: equipment or technology modifications, reformulation or redesign of products, substitution of raw materials, improvements in work practices, maintenance, training, and inventory control. The meaning contained in the PPA is essentially the same meaning referred to in Section 112(d)(2) of the CAA. Both focus on reducing waste generation at the source by making changes in the way things are manufactured.

The PPA excludes from pollution prevention any practice which "alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity which itself is not integral to and necessary for the production of a product or the providing of a service." (Section 6603(5)(B). In essence, this definition excludes waste management, recycling (except for closed loop recycling that is integrated into production processes), burning for energy recovery, waste treatment, and disposal.

Since many of the facilities affected by today's rulemaking are simultaneously regulated by RCRA, it is important to also explain the use of the term waste minimization, under RCRA.

Waste minimization includes pollution prevention (or source reduction) and environmentally sound recycling, i.e., recycling that does not constitute disposal (see 40 CFR 261.1(c)). It does not include treatment—i.e, any "method, technique, or process, including neutralization,

[18] *Pollution Prevention 1997, A National Progress Report* (June, 1997). U.S. Environmental Protection Agency, EPA 742-R-97-00, Washington, D.C.

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 non-hazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume." (40 CFR 260.10). RCRA also contains requirements for hazardous waste generators and permitted waste management facilities to make routine certifications that they have a "waste minimization program in place," and large generators must also report waste minimization activities biennially.

The environmental literature and public statements of many companies provide strong evidence of the potential benefits to industry and the environment that result from using pollution prevention over waste generation and management. For example, pollution prevention techniques can help companies reduce the amount of raw materials purchased and the amount of waste generated. These reductions can reduce the amount spent on waste management and can also reduce worker exposure to hazardous substances. Pollution prevention can help companies improve product yield and find ways to recover materials that might otherwise be destroyed or landfilled.

The literature also points to barriers that may impede a company's ability to pursue pollution prevention. Barriers may include, for example: little or no access to technical information on pollution prevention technologies, concern over the impact of process changes on product quality, a lack of access to capital, requirements in existing environmental regulations that conflict with pollution prevention objectives.

Today's regulation focuses on reducing several potential regulatory barriers that could interfere with pollution prevention solutions. The incentive based approach contained in today's rule is explained further below.

C. Summary of Proposed Pollution Prevention/Waste Minimization Incentives and Comments Received

EPA requested comment on six alternatives for promoting pollution prevention and waste minimization at hazardous waste incinerators, cement kilns and LWAKs. Three were proposed in the Agency's April 1996 NPRM and three were proposed in the Agency's Notice of Data Availability (NODA) published in the **Federal Register** on May 2, 1997 (Revised Technical Standards for Hazardous Waste Combustion Facilities; Proposed Rule, 62 FR 24241). All six incentive based alternatives were designed to promote the identification and installation of pollution prevention and waste minimization techniques that reduce or eliminate the amount and/or toxicity of hazardous wastes entering combustion feedstreams, either as an alternative to end-of-pipe combustion measures, or in combination with combustion measures, to meet MACT standards.

Two of the six alternatives proposed focused on using waste minimization facility planning as a tool that would cause regulated facilities to identify pollution prevention/waste minimization measures that could be used to reduce the amount and/or the toxicity of hazardous wastes entering combustion feedstreams. Two additional alternatives focused on extending compliance deadlines to allow additional time for companies to fully explore pollution prevention/waste minimization measures and combustion measures that may be necessary to meet MACT standards. A fifth alternative requested comment on an approach that would harness the power of public involvement during the initial stage of corporate compliance planning. The sixth alternative proposed promulgating pollution prevention and waste minimization incentives several months before the MACT standards are promulgated—which would provide companies several months of advance planning time before the MACT compliance period begins. The alternatives were not designed to be exclusive. Today's rule promulgates a combination of three of these options, encourages States to adopt two others, and recommends an alternative voluntary approach for the sixth. The options, comments received and EPA's response to major comments are discussed below. EPA's response to each comment is contained in the docket.

EPA received over 40 comments on the options contained in the April 1996 NPRM and the NODA. Most of the commenters addressed one or more of the following topics:

—Time-based incentives, including the opportunity to enter into enforcement agreements beyond four years,
—The effectiveness of pollution prevention planning and planning criteria,
—Perceived effectiveness of pollution prevention in the context of this rulemaking,
—Setting MACT standards based on pollution prevention/waste minimization,
—Public review of pollution prevention and waste minimization,
—The role of pollution prevention and waste minimization in waste management,
—The definition of pollution prevention and waste minimization, and
—Applicability of pollution prevention incentives to commercial facilities.

EPA asked for comments on the appropriateness of two options requiring pollution prevention/waste minimization facility planning. One option would require facilities to complete a waste minimization facility plan that identifies alternatives for reducing the amount of hazardous waste managed by combustion. While this approach would not require facilities to select any particular pollution prevention technology, it presumes that going through the process of exploring alternatives would cause a company to consider more pollution prevention options than they would have otherwise and select any that are cost-effective.

In the second waste minimization planning option, EPA proposed to allow States and EPA Regions (in cases where States are do not have an approved CAA Title V program) to require pollution prevention planning on a case-by-case basis. Determining which facilities should be required to complete a pollution prevention/waste minimization facility plan could take into account several factors, including, for example, whether an existing state program had already accomplished this objective, the extent to which this requirement may be too burdensome for some states, and the extent to which facility specific conditions indicate emissions could be controlled by feed stream management and waste minimization at the source.

A variety of commenters addressed this issue. Four states and one state association commented pollution prevention/waste minimization should be the highest priority waste management approach, though they had diverse and sometimes conflicting opinions about the specific options proposed. One State commented that mandatory planning should be required for all facilities that generate and combust waste on-site, and that planning should be required on a case-by-case basis for commercial off-site combustion facilities. One State and the State association stated that the mandatory planning requirement should be expanded to include all facilities that generate waste managed by combustion. A fourth State said that no waste minimization incentives should be included in this rule because the

regulated community has had many years to reduce waste generation through pollution prevention/ waste minimization, and should have already considered waste minimization as an approach to compliance. One state did not comment specifically on the pollution prevention planning options but was in favor of encouraging pollution prevention incentives in this rule.

This diversity of opinion among States leads EPA to believe that the pollution prevention/waste minimization incentives contained in this rule must allow broad flexibility for State programs. EPA is also aware, from discussions outside the context of this rulemaking, that some states are specifically opposed to mandatory pollution prevention requirements, and a few states have not yet established pollution prevention programs.

Several dozen comments were received from industry. Most of the comments from companies who generate and combust waste on-site were in favor of pollution prevention/ waste minimization as the most desirable form of waste management. However, most were opposed or silent regarding required pollution prevention planning. Only one argued that mandatory pollution prevention planning is not appropriate, and that the case by case option provides greater flexibility and is therefore more appropriate.

Commercial combustion facilities generally oppose pollution prevention planning requirements because they have virtually no control over what types or how much waste their customers generate for combustion. However, one company argued strongly for the Agency to require mandatory pollution prevention planning by all regulated units to identify pollution prevention alternatives that eliminate or reduce the amount and toxicity of combusted wastes. The commenter further argued that pollution prevention should be used to leverage the closing of combustion units where wastes could more effectively be eliminated or reduced. Another commercial company believes EPA should implement "good actor" incentives for companies that educate their customers regarding available waste minimization resources. Such incentives could include reduced inspection frequencies, reduced performance testing, and a recognition program. This approach was not suggested by any other commenters. EPA believes this approach might be appropriate for further exploration at a later time. One Federal agency commented in favor of a case-by-case approach.

EPA considered several factors regarding this approach. First, the CAA clearly envisions States as the primary implementers of the Title V program, and the pollution prevention programs operated by the States are clearly diverse. While 15 States have enacted mandatory pollution prevention planning programs, the remaining States continue to emphasize voluntary pollution prevention programs and technical assistance to encourage pollution prevention.

Available data shows that mandatory pollution prevention planning can be an effective State tool. It is not clear how effective this approach would be for a broad array of states. In a review of seven states that have chosen to implement mandatory pollution prevention planning programs, the National Pollution Roundtable concludes that mandatory pollution prevention planning produces beneficial results for the regulated community and the environment, and encourages other states to consider this direction.[19] However, New Jersey (one of the seven States reviewed) notes in a separate report that its companies began making significant reductions through pollution prevention well before the State passed legislation requiring mandatory pollution prevention planning. In this case, the State is not able to pinpoint why this occurred.[20]

Of the 21 commercial hazardous waste incinerators and the 141 on-site hazardous waste incinerators (i.e., incinerators co-located with a company manufacturing facilities), 58 percent are located in states which have legislated pollution prevention programs already in place. Nearly all of the remaining facilities are located in States that provide pollution prevention technical assistance. In addition, all of these facilities are co-regulated by RCRA and have been required since 1984 to certify on an annual basis, that they have a waste minimization program in place. Therefore, it is not clear what additional pollution prevention benefits would result from a mandatory requirement. Based on its analysis, EPA believes that a federal requirement for pollution prevention planning is not appropriate.

EPA also considered the impact Federal pollution prevention planning requirements would have on the Agency's paperwork reduction commitments. EPA is committed to decreasing its information collection request budget. In light of the baseline requirements and voluntary programs States have already established in this area, EPA concludes this requirement would increase federal paperwork without necessarily creating a commensurate improvement in environmental quality.

EPA has also expanded the availability of voluntary pollution prevention incentives available—which in turn reduce the need for mandatory federal pollution prevention requirements. For example, EPA has recently released the "Waste Minimization Prioritization Tool."[21] This tool is an easy-to-use computer program that allows industrial, government and public users to quickly identify their highest hazard wastes as targets for pollution prevention efforts. The tool allows the user to enter information on particular waste streams and develop a screening-level assessment of chemicals based on their persistence, bioaccumulation potential, and human and ecological toxicity. The system ranks about 900 chemicals that have "complete" data on chemical persistence, bioaccumulation potential, and human and ecological toxicity, and it includes partial data for 3,800 others. This tool has received much review and is targeted for widespread distribution in the regulated community.

EPA continues to provide $5–$8 million dollars per year in grant funds to States that develop innovative pollution prevention approaches, and EPA is promoting pollution prevention innovation in States through the National Environmental Performance Partnership System (NEPPS). NEPPS agreements give the States flexibility to combine individual program grants to maximize achieve environmental goals, including using funds for pollution prevention that have historically been used for end-of-pipe pollution controls. Texas, New Jersey, and Ohio (which oversee a total of 45 hazardous waste incinerators) are among the states that signed NEPPS agreements in 1996. Thirty states were scheduled to negotiate NEPPS agreements in 1997.

In addition, a variety of government-industry partnerships are producing pollution prevention results. For example, 163 industry members of Texas' Clean Industries 2000 program

[19] "Facility Pollution Prevention Planning Requirements: An Overview of State Program Evaluations," National Pollution Prevention Round table (August 8, 1997), Washington, D.C. 20036.

[20] Aucott, M., Wachspress, D., & Herb J., (May, 1996). "Industrial Pollution Prevention in New Jersey." New Jersey Department of Environmental Protection, Trenton, N.J.

[21] "Waste Minimization Prioritization Tool, Version 1.0: User's Guide and System Documentation," (EPA 530–R–97–019, June, 1997). U.S. Environmental Protection Agency, Washington, D.C.

are committed to reducing emissions of Toxic Release Inventory (TRI) chemicals by 50 percent by the year 2000. A twenty-nine percent reduction was reached by the year 1994.

Balancing all of the above factors, EPA believes mandatory and case-by-case pollution prevention planning approaches are not necessary to achieve the pollution prevention goals of the CAA. A combination of strong incentives and broad flexibility for States and the regulated community, including some of the options discussed below and contained in today's rule, will accomplish the pollution prevention goals of the CAA.

Two options were proposed that would allow the MACT compliance period to be extended for facilities that demonstrate the need for extra time to install pollution prevention measures. One of these options would allow facilities to apply for a one-year compliance extension to the MACT compliance period under Section 112(i)(3)(B) where additional time is needed to install pollution prevention or waste minimization measures that reduce or eliminate hazardous wastes entering the combustion feedstreams of regulated facilities. Of course, such applications must still be evaluated on a case-by-case basis CAA 112(b)(3). However, the following discussion provides an indication of how EPA might evaluate such applications based on pollution prevention.

Facilities that apply for this one-year extension would be required to provide a description of the pollution prevention/waste minimization measures that would significantly reduce or eliminate the volume and/or toxicity of hazardous wastes entering combustion feedstreams, a reduction goal (i.e., how much waste will no longer enter combustion feedstreams of the regulated unit(s)), a discussion of additional combustion or other treatment technology that will be installed to meet MACT standards, and a schedule of milestones necessary to achieve compliance. The pollution prevention/waste minimization measures installed could be used either alone to meet MACT standards (e.g., in cases where elimination of certain combusted waste streams will either achieve MACT standards for the regulated unit(s), or will eliminate the need for the regulated unit(s)), or in combination with combustion or other treatment technologies that enable the facility to comply with MACT standards. We emphasize that identifying expected reductions in combustion feedstreams is required, but identifying reductions in emissions as a result of installing pollution prevention measures is not required. EPA recognizes this would not be practical. The compliance date for facilities that are granted a one year extension by the permitting agency would be four years after the promulgation of MACT standards, rather than three years after the date of promulgation.

EPA recognized in its proposal that States operate very diverse pollution prevention programs. However, to ensure some degree of consistency in granting one year extensions, EPA proposed four flexible factors to be considered in approving or denying requests for one-year compliance extensions for hazardous waste burning incinerators, LWAKs, and cement kilns. These factors included: (1) The extent to which the process changes (including waste minimization measures) proposed as a basis for the extension reduce or eliminate hazardous wastes entering combustion feed streams and are technologically and economically feasible, (2) whether the magnitude of the reductions in hazardous wastes entering combustion feed streams through process changes are significant enough to warrant granting an extension, (3) a clear demonstration that reductions of hazardous wastes entering combustion feed streams are not shifted as increases in pollutants emitted through other regulated media, and (4) a demonstration that the design and installation of process changes, which include waste minimization measures, and other measures that are necessary for compliance cannot otherwise be installed within the three year compliance period.

EPA received no adverse comments on the four factors for ensuring consistency. Companies that operate on-site units (many of which are large chemical plants which operate complex production processes and which generate diverse and complex waste streams) commented that they prefer to use pollution prevention and waste minimization measures wherever they are cost effective. However, in the instant rulemaking, the dual tasks of designing, testing and installing pollution prevention process changes and combustion or other treatment equipment is not practical in a three year compliance period plus a one-year extension. Some commented that meeting the compliance date may often force companies to install combustion controls at great expense and forego exploration of pollution prevention options.

The four states and one State association that commented on the compliance extension options had diverse opinions. Two states commented that pollution prevention/waste minimization should be encouraged in this rulemaking. However, they believe three years plus a one-year extension may not be enough time for companies to identify and install waste minimization measures. A third State said that pollution prevention/waste minimization incentives should not be included in this rule because companies have had more than ample time to pursue pollution prevention/waste minimization as an approach to compliance. A fourth State and State association commented that facilities have had ample time to identify and install pollution prevention solutions—however, one year compliance extensions should be considered in cases where it will promote further pollution prevention.

Two commercial hazardous waste treatment organizations commented that a one-year extension for pollution prevention/waste minimization purposes is not appropriate since the companies generating the waste have had several years to consider pollution prevention and waste minimization measures as a waste management alternative.

EPA believes that compliance extensions provide a strong incentive for pollution prevention, and provide States additional flexibility. EPA agrees that, in some cases, three years plus a one-year extension may not be sufficient time to identify and install waste minimization measures that achieve compliance. However, the one year extension is the maximum allowable under the CAA. EPA disagrees with the commenters opposing the extension because pollution prevention and waste minimization should be viewed as an on-going process that adopts new pollution prevention technologies as they become available. In some cases, the economics of complying with new MACT standards may make pollution prevention more cost-effective than it would have otherwise been.

In today's rule, EPA has chosen to implement the one-year compliance extension approach. In evaluating extension requests, EPA urges permitting agencies to give first preference to facilities that request the extra time to install pollution prevention measures (either alone or in addition to combustion controls) over facilities that request an extension only for installing combustion controls. EPA has also simplified the factors that must be considered by permitting agencies in making determinations for one year extensions by making them identical to

the factors facilities must include in requests for extensions.

In its 1997 NODA, EPA encouraged facilities that wish to apply for a one-year extension to coordinate the development the application for extension with the information contained in Notice of Intent to Comply (NIC), which is also described in today's rulemaking. Based on the comments received from industry and States noting the need for extra time to consider and then install pollution prevention measures, EPA would expect to see a reasonable degree of consistency between pollution prevention alternatives discussed in the NIC and pollution prevention technologies identified in a subsequent request for a one year extension to install pollution prevention technologies. Requests for a one-year compliance extension from facilities who did not address pollution prevention in the NIC should be viewed with caution to guard against last minute attempts to delay compliance.

The second compliance extension option, proposed in the 1997 NODA, would allow certain facilities to enter into a written consent agreement or consent order in cases where pollution prevention/waste minimization technologies would significantly reduce wastes entering combustion feed streams, but would take more than four years (i.e., three years plus a one-year extension). EPA could use this alternative using the principles articulated in the Agency's "Policy on Encouraging Self-Policing and Voluntary Correction" (also known as the "Audit Policy" 60 FR 66706, December 22, 1995).

Very few commenters addressed this option. Some industry commenters expressed limited interest in this approach, since entering into a consent agreement would provide no shield against citizen suits.

EPA agrees that longer than four years may be needed in some cases. However, based on the comments received and after further evaluation, the Agency has decided not to pursue this proposal as part of this rulemaking. Instead, EPA believes its Project XL program provides a better opportunity for EPA to work with companies who are interested in undertaking projects which hold the promise of superior environmental results in exchange for regulatory flexibility. The XL program is also designed to include public involvement early in the process, which would hopefully reduce the likelihood of citizen suits. Project XL proposals should be developed and submitted well in advance of the deadline for meeting this MACT standard, possibly before the promulgation of MACT standards. See the May 22, 1995 **Federal Register** Notice [FRL–5197–9] for further information on developing and submitting a proposal.

EPA proposed a fifth pollution prevention/waste minimization incentive in the 1997 NODA which focused on harnessing the power of public involvement to encourage companies to consider pollution prevention alternatives. The NODA proposed to require facilities to make public, within ten months after promulgation of the MACT standards, a draft Notice of Intent to Comply (NIC) that contains a description of technologies that will be used to achieve compliance with MACT standards, including pollution prevention and waste minimization technologies. Regulated facilities would also be required to hold a public meeting on its compliance plan and to submit a final NIC to the permitting agency no later than one year after the promulgation of standards. In this setting, the public would be able to review a company's draft compliance plan and make known its concerns and views regarding the use of pollution prevention, combustion or other treatment methods.

Several commenters responded to the pollution prevention/waste minimization components of the NIC proposal. One industry trade organization commented that the NIC requirements are unnecessary since its members already participate in a responsible care program that includes pollution prevention and community involvement. Another commenter argued strongly that the public involvement opportunity provided by the NIC process is inadequate, and that the point at which the public interacts with the facility is too late to influence decisions to encourage the installation of pollution prevention technology that may reduce or eliminate the need for combustion.

It is crucial to provide the public with information and a public meeting on the pollution prevention/waste minimization and combustion measures that are planned at individual facilities. The NIC process occurs early enough in the compliance process to provide meaningful public involvement, and the NIC process provides a strong lever for citizens to voice their opinions. The pollution prevention aspects of the NIC requirements are further discussed in the NIC portion of today's preamble.

The sixth pollution prevention/waste minimization option proposed involved promulgating a "fast track" rule in advance of MACT standards to provide the regulated community time to explore, plan and possibly begin implementation of pollution prevention and waste minimization measures several months before the promulgation of MACT standards.

One commenter strongly urged this option because it provides facilities with additional planning time to identify pollution prevention options before the MACT compliance period begins. Although no other commenters specifically addressed this option, EPA believes it provides States additional flexibility, and comports with the variety of comments that expressed general support for pollution prevention as a top priority environmental management strategy.

D. Waste Minimization Incentives Contained in Today's Rule

Today's rulemaking provides three incentives to encourage the use of pollution prevention measures to reduce or amount and/or toxicity of hazardous wastes entering combustion feedstreams. Wastes that cannot be reduced at the source should be recycled in an environmentally sound manner, i.e., in a manner that does not constitute disposal. Wastes that cannot be reduced at the source or recycled should be either burned for energy recovery, treated, or disposed in accordance with environmental standards. Today's incentive based approach encourages and rewards facilities that significantly reduce the amount of combusted hazardous waste using pollution prevention measures as a method for achieving MACT standards, and it provides the flexibility needed by the States to build on or expand existing pollution prevention programs.

Today's rule (at Section 63.1216) allows owners/operators of hazardous waste burning incinerators, cement kilns and lightweight aggregate kilns to request a one-year extension to the MACT compliance period in cases where additional time is needed to install pollution prevention and waste minimization measures that reduce the amount of hazardous waste entering combustion feedstreams. The Administrator or State with an approved Title V program is authorized to grant one-year extensions for this purpose under Section 112(i)(3)(B) of the CAA. Pollution prevention and waste minimization measures that can be considered in this determination include: process changes (including closed loop recycling), raw material substitutions, design changes, equipment changes, work practice changes, changes in operational standards or other similar measures that

EPA or State permitting agencies may determine is pollution prevention or waste minimization. Waste minimization activities that may be considered for an extension include pollution prevention activities and recycling measures, as defined in 40 CFR 261.1(c) and conducted in accordance with RCRA regulations.

The term recycling, as defined in defined in 40 CFR 260.10 does not include burning for energy recovery or treatment activities. Therefore, burning for energy recovery will not be considered for an extension. Companies who burn for energy recovery are presumed, in accordance with their RCRA waste minimization program in place certification (discussed above), to have determined that wastes burned for energy recovery could not be economically source reduced or recycled prior to burning. EPA believes this approach is completely consistent with past Agency policy and provides the regulated community with greater flexibility in managing its non-product outputs.

Requests for a one-year extension must reasonably document that the waste minimization measures, and whatever additional compliance measures are necessary to achieve compliance, could not otherwise be installed in time to meet the three-year compliance period. Stronger consideration should be given to requests that contain, for example: (1) A schedule to redesign a production process that eliminates the use of solvents and the generation of spent solvents (which are currently combusted in an on-site hazardous waste incinerator), (2) a commitment to reduce by 25% the amount of hazardous wastes entering the incinerator feedstream (as a result of the waste minimization process change), (3) a description and schedule for designing and installing combustion controls to treat remaining wastes, and (4) evidence that the extension reflects the reality that the design specs and schedule for the remaining combustion controls can not be completed or installed without first having information on waste minimization related feedstream changes. In contrast, requests that propose to simply send wastes off-site for recycling, for example, without first exploring on-site process changes or operating practices, should receive little or no consideration for an extension because there is nothing in this action that would require extensive time.

Decisions to grant one-year extensions will be made by EPA or state programs that have delegated the authority to implement and enforce the emission standard for that source. In light of the wide range of approaches States employ regarding waste minimization planning, it is appropriate to encourage some degree of consistency in how these decisions are made, without superseding State approaches. Therefore, EPA is requiring that permitting agencies must consider all of the information required in Section 63.1216 in approving or denying requests for one-year compliance extensions for hazardous waste burning incinerators, LWAKs, and cement kilns. EPA will also work with States to develop separate guidance, with examples, of how to review requests for an extension, based on pollution prevention/waste minimization efforts.

The second pollution prevention/waste minimization incentive promulgated in today's rule is the requirement for regulated facilities to include in their Notice of Intent to Comply (NIC) a description of pollution prevention and waste minimization activities proposed to reduce the amount and/or toxicity of hazardous waste entering the facility's combustion feedstream(s). This approach will harness the power of public involvement, through the NIC review and public meeting process, to encourage facilities to consider pollution prevention measures in their MACT compliance plan. The requirements for the NIC process are described in today's preamble.

It is important to note here that companies should consider coordinating the development of a NIC process with any subsequent requests for a one year extension. For example, it would seem logical that pollution prevention measures identified in the NIC (prepared in the first year of the compliance period), would also appear in a subsequent request for a one year extension (prepared in the second year of the compliance period). In contrast, requests for a one year extension from companies that did not consider pollution prevention in their NIC might be looked at with more caution.

As a third pollution prevention incentive, EPA is promulgating today's rule several months in advance of promulgating MACT standards to provide companies with several valuable months of advance planning time to identify waste minimization measures can be used to meet, or assist in meeting MACT standards. The timing of today's rule, therefore, serves as a valuable pollution prevention incentive.

Taken together, the tailored incentives contained in today's rule provide strong encouragement for regulated companies to pursue cost effective pollution prevention and waste minimization measures in their individual approaches to meeting MACT standards.

As a final note, a substantial amount of free technical information, assistance and guidance on pollution prevention and waste minimization is available from the Federal government and States, and from a variety of private sources. EPA's "Pollution Prevention Facility Planning Guide" (May, 1992; NTIS # PB92–213206) describes the series of analytical steps that are often used by companies to identify waste minimization measures. Additional EPA references include: "Waste Minimization Opportunity Assessment Manual (EPA 625/7–88/003, July 1988), Interim Final "Guidance to Hazardous Waste Generators on the Elements of a Waste Minimization Program In Place,"(May 1993), "An Introduction to Environmental Accounting As a Business Management Tool" (EPA 742–R–95–001, June 1995), the "P2/Finance User's Manual: Pollution Prevention Financial Analysis and Cost Evaluation System for Lotus 1–2–3 (EPA 742–B–94–003, January 1994), and Enviro$ense, an electronic library of information on pollution prevention, technical assistance, and environmental compliance. Many of these and other documents can be accessed by contacting the RCRA Hotline toll-free at 1–800–424–9346. Enviro$ense can be accessed by contacting a system operator at (703) 908–2007, or on the Internet at http://wastenot.inel.gov/enviro-sense. Information on State waste minimization programs can be obtained through Enviro$ense, directly from the State pollution prevention program offices, or from the National Pollution Prevention Roundtable at E-mail address 75152.1416@compuserve.com, by phone at 202–466–7272 in Washington, D.C.

VII. State Authority

A. RCRA State Authorization

Under RCRA section 3006, EPA may authorize a State to administer and enforce the RCRA hazardous waste program. See 40 CFR part 271. After receiving authorization, the State administers the program in lieu of the Federal government, although EPA retains enforcement authority under RCRA sections 3008, 3013, and 7003. Because the new Federal requirements in today's final rule are promulgated under non-HSWA authority, they are not Federally enforceable in an authorized State until the State has adopted equivalent (or more stringent) standards under its authorized laws and regulations, and those changes have

been approved by EPA. See RCRA section 3006, 42 U.S.C. 6926. Thus, upon their effective date, these requirements will be applicable only in those States that do not have authorization.

It should be noted that authorized States are only required to modify their programs when EPA promulgates Federal standards that are more stringent or broader in scope than existing Federal standards. RCRA section 3009 allows States to impose standards that are more stringent than those in the Federal program (see also 40 CFR 271.1(i)(1)). Thus, for those Federal changes that are less stringent, or reduce the scope of the Federal program, States are not required to modify their programs. The revisions to the Federal RCRA Subtitle C program that are promulgated today are considered to be less stringent than the existing Federal regulations. However, EPA believes that their adoption by States will greatly enhance the implementation of the upcoming MACT standards, and ease the permitting burden on the States. Thus, EPA strongly urges States to adopt all aspects of today's final rule as quickly as their legislative and regulatory processes will allow.

B. Program Delegation Under the Clean Air Act

Today's final rule adds notification procedures for hazardous waste combustors under Title III. Specifically, today's rule requires sources to provide to the permitting agency a Notification of Intent to Comply (NIC) within a year following promulgation of new emissions standards in 40 CFR part 63 Subpart EEE, and a Progress Report within two years. As part of the process of developing a NIC, the source is also required to conduct additional public involvement activities, in particular an informal meeting with the community. Section 112(l) of the Clean Air Act allows EPA to approve State rules or programs for the implementation and enforcement of emission standards and other requirements for air pollutants subject to section 112. Under this authority, EPA has developed delegation procedures and requirements located at 40 CFR Part 63, Subpart E, for NESHAPS under Title III of the CAA (See 57 FR 32250, July 21, 1992).

Submission of rules or programs by States under 40 CFR Part 63 is voluntary. Once a State receives approval from EPA for a standard under section 112(l) of the CAA, the State is delegated the authority to implement and enforce the approved State rules or programs in lieu of the otherwise applicable federal rules (the approved State standard would be federally enforceable). States may also apply for a partial Title III program, such that the State is not required to adopt all rules promulgated in 40 CFR Part 63. EPA will administer any rules federally promulgated under section 112 of the CAA that have not been delegated to the State.

VIII. Administrative Requirements/ Compliance With Executive Order

A. Regulatory Impact Analysis Under Executive Order 12866

Under Executive Order No. 12866, (58 FR 51735 (October 4, 1993)) the Agency must determine whether the regulatory action is "significant" and therefore subject to formal review by the Office of Management and Budget (OMB) and to the requirements of the Executive Order, which include assessing the costs and benefits anticipated as a result of the proposed regulatory action. The Order defines "significant regulatory action" as one that is likely to result in a rule that may: (1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

EPA has determined that today's final rule is not "significant" under points one through three above. The Agency is sensitive, however, to interpretations that may define today's action as "significant" under point number four above, due to the nature of the policy issues raised and recognizes today's action as significant. The Agency has examined economic impacts potentially associated with the three key elements of today's action: the comparable fuel exclusion, waste minimization incentives, and streamlined RCRA permitting modifications. The comparable fuels exclusion in today's final rule will result in national annual cost savings to generators ranging from approximately $11 to $36 million, net of the cost of gaining the exclusion. Blending and combustion facilities, however, are estimated to experience reduced receipts for managing hazardous wastes, coupled with the costs of replacing these materials with more expensive substitutes. The combined impact is estimated to cost these firms an additional $3 to $13 million per year. Today's action also allows sources to apply for up to a one year extension of the three-year compliance period for implementation of waste minimization procedures. Overall, this extension is likely to provide a greater incentive for facilities with on-site combustion units to implement waste minimization options rather than to continue burning hazardous wastes and implement appropriate control technologies. The degree to which this incentive will change the waste burning behavior of combustion facilities is undetermined. EPA is also implementing streamlined procedures for modifying RCRA permits at hazardous waste combustion units. Only those states that regulate combustion units and choose to adopt the streamlined modification system would have to undergo rulemaking and authorization for the streamlined permitting process. The Agency estimates that approximately half of the states with MACT-regulated combustion units will not alter their current permitting system. Based on the average cost to a state for rulemaking and authorization, the Agency estimates aggregate national costs for those states that would modify their systems at a one-time cost of no more than $685,000. In addition to rulemaking and authorization costs, the aggregate national cost for permit review may be as high as $3.8 million. For more information on the cost impacts of today's final rule, see the Economic Analysis Report for the Combustion MACT Fast-Track Rulemaking, March 1998, which is part of the docket for this rule.

B. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) of 1980 requires Federal agencies to consider "small entities" throughout the regulatory process. Section 603 of the RFA requires an initial screening analysis to be performed to determine whether small entities will be adversely affected by the regulation. If affected small entities are identified, regulatory alternatives must be considered to mitigate the potential impacts. Small entities as described in the Act are only those "businesses, organizations and governmental jurisdictions subject to regulation."

EPA has determined that today's rule will primarily affect large scale facilities. Furthermore, since today's final notice generally provides savings

over current requirements, EPA believes that any small entities engaged in activity covered by the rule will not be adversely affected. Therefore, EPA provides the following certification under the Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act. Pursuant to the provision at 5 U.S.C., I hereby certify that this rule will not have a significant economic impact on a substantial number of small entities. A more detailed discussion of small entity impacts is presented in the Economic Analysis Report.

C. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in this rule under the provisions of the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2050–0073.

The incremental annual public reporting and record keeping burden for this collection of information is estimated to be 55,196 hours at a cost of about $5,164,000. For those generators applying for the comparable/syngas fuel exclusion, the average annual respondent reporting burden is estimated to be 0.5 hours per facility and the average annual record keeping burden is estimated to be 47.3 hours per facility. For burners of comparable/syngas fuels, there is no reporting burden and the annual record keeping burden is 8.0 hours per facility. For HWCs complying with the notification of intent to comply regulations, the average annual reporting burden is 300.5 hours per facility and the average annual record keeping burden is 9.0 hours per facility.

This estimate includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purpose of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to respond to collection of information; search existing data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

During its review of the proposed rule ICR, OMB offered comments concerning the burdens associated with the proposed testing requirements and records retention for the comparable fuel/syngas exclusion. In the final rule, EPA is allowing generators to use process knowledge and requiring testing for only those constituents the generator determines should be in the waste. The frequency of the testing will be specified by the generator in the waste analysis plan. With regards to records retention, the final rule will require the retention of records of all comparable and syngas fuel-related information for three years. EPA also received several public comments on the final rule ICR which was noticed on January 28, 1998 at 63 FR 4249. EPA has responded to those comments in the supporting statement for the ICR.

EPA estimates that the addition of the comparable fuels exclusion will cause the BIF universe to decrease by 25 facilities. Although the burden reduction is not reflected in the ICR, EPA expects reporting and recordkeeping requirements for BIFs to decrease by 70,743 hours (18 percent) and $7,493,221 (15 percent) annually. EPA will revise the ICR to reflect this burden reduction when it finalizes the emissions standards for hazardous waste combustors.

EPA is also amending the table of currently approved ICR control numbers issued by OMB for various regulations. This amendment updates the table to display accurately this final rule. This display of the OMB control numbers and their subsequent codification in the Code of Federal Regulations (CFR) at 40 CFR Part 9 satisfies the requirements of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*) and OMB's implementing regulations at 5 CFR Part 1320.

An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are displayed in 40 CFR Part 9.

Send comments regarding the burden estimates or any other aspect of this collection of information, including suggestions for reducing this burden to Chief, OPPE Regulatory Information Division; U.S. Environmental Protection Agency (2136); 401 M Street, S.W.; Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA." Include the ICR number in any correspondence.

D. Unfunded Mandates

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

EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and Tribal governments, in the aggregate, or the private sector in any one year. EPA has estimated that the total potential cost to State, local, and Tribal governments would not exceed approximately $4.5 million over ten years. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA.

IX. Submission to Congress and the General Accounting Office

Under 5 U.S.C. 801(a)(1)(A) as added by the Small Business Regulatory Enforcement Fairness Act of 1996, EPA submitted a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives and the Comptroller General of the General Accounting Office prior to publication of the rule in today's **Federal Register**. This rule is not a "major rule" as defined by 5 U.S.C. 804(2), therefore, the effective date of the rule is not affected.

X. Environmental Justice

A. Applicability of Executive Order 12898

EPA is committed to address environmental justice concerns and is assuming a leadership role in environmental justice initiatives to enhance environmental quality for all residents of the United States. The Agency's goals are to ensure that no segment of the population, regardless of race, color, national origin, or income bears disproportionately high and adverse human health and environmental effects as a result of EPA's policies, programs, and activities, and all people live in clean and sustainable communities.

B. Potential Effects

Today's final rule is not expected to cause any disproportionate impacts to minority or low income communities versus affluent or non-minority communities.

XI. Children's Health

Executive Order 13045: The Executive Order 13045 applies to any rule that EPA determines (1) "economically significant" as defined under Executive Order 12866, and (2) the environmental health or safety risk addressed by the rule has a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children; and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency

This final rule is not subject to E.O. 13045, entitled "Protection of Children from Environmental Health Risks and safety Risks (62 FR 19885, April 23, 1997), because: (a) "This is not an economically significant regulatory action as defined by E.O. 12866."

XII. National Technology Transfer and Advancement Act

Under section 12(d) of the National Technology Transfer and Advancement Act, the Agency is directed to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices, etc.) that are developed or adopted by voluntary consensus standard bodies. Where available and potentially applicable voluntary consensus standards are not used by EPA, the Act requires the Agency to provide Congress, through the Office of Management and Budget, an explanation of the reasons for not using such standards.

EPA is not finalizing any new test methods or other technical standards as part of today's final rule. Thus, the Agency has no need to consider the use of voluntary consensus standards in developing this final rule.

List of Subjects

40 CFR Part 63

Administrative practice and procedure, Air pollution control, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

40 CFR Part 261

Hazardous waste, Recycling, Reporting and record keeping requirements.

40 CFR Part 270

Administrative practice and procedure, Confidential business information, Emergency responses, Hazardous materials transportation, Hazardous waste, Permit application requirements, Permit modifications, Reporting and recordkeeping requirements.

Dated: June 5, 1998.

Carol M. Browner,

Administrator.

For the reasons set forth in the preamble, 40 CFR Parts 63, 261, and 270 are amended as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

2. Part 63 is amended by adding Subpart EEE, to read as follows:

Subpart EEE—National Emission Standards for Hazardous Air Pollutants From Hazardous Waste Combustors

Sec.

63.1200–63.1210 [Reserved]
63.1211 Notification requirements.
63.1212 Progress reports.
63.1213 Certification.
63.1214 Extension of the compliance date.
63.1215 Sources that become affected sources after the effective date of this subpart.
63.1216 Extension of compliance date to install pollution prevention or waste minimization controls.

§ 63.1211 Notification requirements.

(a) *Notification of Intent To Comply (NIC).* (1) All hazardous waste combustors subject to this subpart shall prepare a Notification of Intent to Comply that includes the following information:

(i) General information:

(A) The name and address of the owner/operator and the source;

(B) Whether the source is a major or an area source;

(C) Waste minimization and emission control technique(s) being considered;

(D) Emission monitoring technique(s) being considered;

(E) Waste minimization and emission control technique(s) effectiveness;

(F) A description of the evaluation criteria used or to be used to select waste minimization and/or emission control technique(s); and

(G) A statement that the source intends to comply with this subpart by controlling emissions from the combustion of hazardous waste pursuant to the standards of this subpart.

(ii) Information on key activities and estimated dates for these activities that will bring the source into compliance with emission control requirements of this subpart. The submission of key activities and dates is not intended to be static and may be revised by the source during the period the NIC is in effect. Revisions shall be submitted to the regulatory authority and be made available to the public. The following are the key activities and dates that shall be included:

(A) The dates for beginning and completion of engineering studies to evaluate emission control systems or process changes for emissions;

(B) The date by which contracts for emission control systems or process changes for emission control will be awarded, or the date by which orders will be issued for the purchase of component parts to accomplish emission control or process changes;

(C) The date by which construction applications will be submitted;

(D) The date by which on-site construction, installation of emission control equipment, or process change is to be initiated;

(E) The date by which on-site construction, installation of emission control equipment, or process change is to be completed; and

(F) The date by which final compliance is to be achieved. The individual dates and milestones listed in paragraphs (a)(1)(ii)(A) through (F) of this section as part of the NIC are not requirements and therefore are not enforceable deadlines; the Agency is

requiring paragraphs (a)(1)(ii)(A) through (F) of this section as part of the NIC only to inform the public of the source's intentions towards coming into compliance.

(iii) A summary of the public meeting required under paragraph (b) of this section.

(iv) For any source that does not intend to comply, but will not stop burning hazardous waste as required under paragraph (c) of this section, a certification that the designated source will:

(A) Stop burning hazardous waste on or before the compliance date of the emission standards of this Subpart; and

(B) Be necessary to combust the hazardous waste from another on-site source, during the year prior to the compliance date of the emission standards of this Subpart, because that other source is:

(*1*) Installing equipment to come into compliance with the emission standards of this Subpart; or

(*2*) Installing source reduction modifications to eliminate the need for further combustion of wastes.

(2) A draft of the NIC must be made available for public review no later than 30 days prior to the public meeting required under paragraph (b)(1) of this section.

(3) The final NIC must be submitted to the permitting agency no later than one year following the effective date of the emission standards of this subpart.

(b) *NIC Public Meeting and Notice.* (1) Prior to the submission of the NIC to the permitting agency, and no later than 10 months after the effective date of the emission standards of this subpart, the source shall hold at least one informal meeting with the public to discuss anticipated activities described in the draft NIC for achieving compliance with the MACT standards promulgated in this subpart. The source must post a sign-in sheet or otherwise provide a voluntary opportunity for attendees to provide their names and addresses.

(2) The source shall submit a summary of the meeting, along with the list of attendees and their addresses developed under paragraph (b)(1) of this section, and copies of any written comments or materials submitted at the meeting, to the permitting agency as part of the final NIC, in accordance with paragraph (a)(1)(iii) of this section.

(3) The source must provide public notice of the NIC meeting at least 30 days prior to the meeting. The source shall provide public notice in all of the following forms:

(i) *Newspaper advertisement.* The source shall publish a notice in a newspaper of general circulation in the county or equivalent jurisdiction of the source. In addition, the source shall publish the notice in newspapers of general circulation in adjacent counties or equivalent jurisdiction where such publication would be necessary to inform the affected public. The notice must be published as a display advertisement.

(ii) *Visible and accessible sign.* The source shall post a notice on a clearly marked sign at or near the source. If the source places the sign on the source's property, then the sign must be large enough to be readable from the nearest spot where the public would pass by the source.

(iii) *Broadcast media announcement.* The source shall broadcast a notice at least once on at least one local radio station or television station.

(iv) *Notice to the facility mailing list.* The source shall provide a copy of the notice to the facility mailing list in accordance with § 124.10(c)(1)(ix) of this chapter.

(4) The notices required under paragraph (b)(3) of this section must include:

(i) The date, time, and location of the meeting;

(ii) A brief description of the purpose of the meeting;

(iii) A brief description of the source and proposed operations, including the address or a map (e.g., a sketched or copied street map) of the source location;

(iv) A statement encouraging people to contact the source at least 72 hours before the meeting if they need special access to participate in the meeting;

(v) A statement describing how the draft NIC can be obtained; and

(vi) The name, address, and telephone number of a contact person for the NIC.

(c) *Sources that do not intend to comply.* Those sources subject to the requirements of this subpart, except those sources meeting the requirements of paragraph (a)(1)(iv) of this section:

(1) Who signify in their NIC an intent not to comply with the requirements of this Subpart, must stop burning hazardous waste on or before two years after the effective date of the emmission standards of this subpart;

(2) Who do not intend to comply with this subpart must include in their NIC a schedule that includes key dates for the steps to be taken to stop burning hazardous waste. Key dates include the date for submittal of RCRA closure documents.

§ 63.1212 Progress reports.

(a) *General.* Not later than two years after the effective date of the emission standards of this subpart, all sources subject to this Subpart except those hazardous waste combustion sources that comply with paragraph (b)(2) of this section shall:

(1) Complete engineering design for any physical modifications to the source needed to comply with the emissions standards of this subpart;

(2) Submit applicable construction applications to the applicable regulatory authority; and

(3) Enter into a binding contractual commitment to purchase, fabricate, and install any equipment, devices, and ancillary structures needed to comply with the emission requirements of this subpart.

(b) *Demonstration* (1) Hazardous waste combustion sources shall submit to the regulatory authority a progress report on or before two years after the effective date of the emission standards of this subpart which contains information demonstrating that the source has met the requirements of paragraph (a) of this section. This information will be used by the regulatory authority to determine if the source has made adequate progress towards compliance with the applicable emission standards.

(2) Sources that intend to come into compliance with the emissions standards of this subpart, but can do so without undertaking any of the activities described in paragraph (a) of this section, shall submit documentation either:

(i) Demonstrating that the source, at the time of the progress report, is in compliance with the emissions requirements; or

(ii) Specifying the steps that will be taken to bring the source into compliance, without undertaking any of the activities listed in paragraphs (a)(1) through (3) of this section.

(3) Sources that fail to comply with paragraph (a) above or paragraph (b)(2) of this section shall stop burning hazardous waste on or before the date two years after the effective date of the emission standards of this subpart.

(c) *Schedule.* (1) The progress report shall contain a detailed schedule that lists key dates for all projects that will bring the source into compliance with the requirements of this subpart (i.e., key dates for the activities required under paragraphs (b)(1)(i) through (iii) of this section). Dates shall cover the time frame from the progress report through the compliance date of the emission standards of this subpart.

(2) The schedule shall contain the following dates:

(i) Bid and award dates for construction contracts and equipment supply contractors;

(ii) Milestones such as ground breaking, completion of drawings and specifications, equipment deliveries, intermediate construction completions, and testing;

(iii) The dates on which applications were submitted for or obtained operating and construction permits or licenses;

(iv) The dates by which approvals of any permits or licenses are anticipated; and

(v) The projected date by which the source will be in compliance with the requirements of this subpart.

(d) *Notice of intent to comply.* The progress report shall contain a statement that the source intends or does not intend to come into compliance with the applicable emission control requirements of this subpart.

(e) *Sources that do not intend to comply.* (1) Sources that: indicated in their NIC their intent not to comply with this subpart and stop burning hazardous waste prior to the submittal of a progress report; or meet the requirements of paragraph (a)(1)(iv) of this section are not required to include the requirements of paragraphs (b) and (c) of this section to their progress report, but shall include in their progress report: the date on which the source stopped burning hazardous waste; and the date(s) on which RCRA closure documents were submitted.

(2) Those sources that signify in the progress report, submitted not later than two years after the effective date of the emission standards of this subpart, their intention not to comply with the requirements of this subpart must stop burning hazardous waste on or before the date two years after the effective date of the emission standards of this subpart.

§ 63.1213 Certification.

(a) The Notice of Intent to Comply (NIC) and Progress Report submitted shall contain the following certification signed and dated by an authorized representative of the source:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the 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.

(b) An authorized representative should be a responsible corporate officer (for a corporation), a general partner (for a partnership), the proprietor (of a sole proprietorship), or a principal executive officer or ranking elected official (for a municipality, State, Federal, or other public agency).

§ 63.1214 Extension of the compliance date.

(a) A source that intends to come into compliance with the requirements of this subpart, but due to the installation of controls will not meet the compliance date, may request an extension of the compliance date for one year.

(b) Sources subject to this subpart shall follow the requirements of § 63.6(i)(4) or § 63.1216 to request an extension of the compliance date.

§ 63.1215 Sources that become affected sources after the effective date of the emission standards of this subpart.

(a) A source that begins to burn hazardous waste after the effective date of the emission standards of this subpart, therefore becoming an affected source, but prior to 9 months after the effective date of the emission standards of this subpart shall comply with all the requirements of §§ 63.1211 through 63.1213 and associated time frames for public meetings and document submittals.

(b) A source that intends to begin burning hazardous waste more than 9 months after the effective date of the emission standards of this subpart, therefore becoming an affected source, shall meet all the requirements of §§ 63.1211 through 63.1213 prior to burning hazardous waste.

(1) Such sources shall make a draft NIC available, notice their public meeting, hold their public meeting, and submit a final NIC prior to burning hazardous waste.

(2) Such sources also shall submit their progress report at the time of the submittal of their final NIC.

§ 63.1216 Extension of the compliance date to install pollution prevention or waste minimization controls.

(a) *Applicability.* The owner or operator of any source subject to the requirements of this subpart may request from the Administrator or State with an approved Title V program an extension of one year to comply with the emission standards in this subpart, if the owner or operator can reasonably document that the installation of pollution prevention or waste minimization measures will significantly reduce the amount and/or toxicity of hazardous wastes entering the feedstream(s) of the combustion device(s) subject to this subpart, and that the facility could not otherwise install the necessary control measures and comply within three years after the effective date of the emission standards of this subpart.

(b) *Requirements for requesting an extension.* Requests for a one-year extension must be in writing, must be received not later than 12 months before the affected source's compliance date, and must contain the following information:

(1) A description of pollution prevention or waste minimization controls that, when installed, will significantly reduce the amount and/or toxicity of hazardous wastes entering the feedstream(s) of the combustion device(s) subject to this subpart. Pollution prevention or waste minimization measures may include: equipment or technology modifications, reformulation or redesign of products, substitution of raw materials, improvements in work practices, maintenance, training, inventory control, or recycling practices conducted as defined in 40 CFR 261.1(c);

(2) A description of other pollution controls to be installed that are necessary to comply with the emission standards;

(3) A reduction goal or estimate of the annual reductions in quantity and/or toxicity of hazardous waste(s) entering combustion feedstream(s) that will occur by installing the proposed pollution prevention or waste minimization measures;

(4) A comparison of reductions in the amounts and/or toxicity of hazardous wastes combusted after installation of pollution prevention or waste minimization measures to the amounts and/or toxicity of hazardous wastes combusted prior to the installation of these measures; and, if the difference is less than a fifteen percent reduction, a comparison to pollution prevention and waste minimization reductions recorded during the previous five years;

(5) Reasonable documentation that installation of the pollution prevention or waste minimization changes will not result in a net increase (except for documented increases in production) of hazardous constituents released to the environment through other emissions, wastes or effluents;

(6) Reasonable documentation that the design and installation of waste minimization and other measures that are necessary for compliance cannot otherwise be installed within the three year compliance period, and

(7) The information required in 40 CFR 63.6(i)(6)(i)(B) through (D).

(8) Documentation prepared under an existing State required pollution prevention program that contains the information may be enclosed with a

request for extension in lieu of paragraphs (b)(1) through (7) of this section.

(c) *Approval of request for extension of compliance.* Based on the information provided in any request made under paragraph (a) of this section, the Administrator or State with an approved Title V program may grant an extension of compliance with the emission standards identified in paragraph (a) of this section. The extension will be in writing in accordance with §§ 63.6(i)(10)(i) through 63.6(i)(10)(v)(A). EPA and States must consider the information required in paragraph (a) of this section in approving or denying requests for one-year compliance extensions.

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

1. The authority citation for part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, and 6938.

2. Section 261.4 is amended by adding paragraph (a)(16) to read as follows:

§ 261.4 Exclusions.

(a) * * *

(16) Comparable fuels or comparable syngas fuels (i.e., comparable/syngas fuels) that meet the requirements of § 261.38.

* * * * *

3. Section 261.38 is added to read as follows:

§ 261.38 Comparable/Syngas Fuel Exclusion.

Wastes that meet the following comparable/syngas fuel requirements are not solid wastes:

(a) *Comparable fuel specifications.*—(1) *Physical specifications.*—(i) *Heating value.* The heating value must exceed 5,000 BTU/lbs. (11,500 J/g).

(ii) *Viscosity.* The viscosity must not exceed: 50 cs, as-fired.

(2) *Constituent specifications.* For compounds listed in table 1 to this section the specification levels and, where non-detect is the specification, minimum required detection limits are: (see Table 1).

(b) *Synthesis gas fuel specification.*—Synthesis gas fuel (i.e., syngas fuel) that is generated from hazardous waste must:

(1) Have a minimum Btu value of 100 Btu/Scf;

(2) Contain less than 1 ppmv of total halogen;

(3) Contain less than 300 ppmv of total nitrogen other than diatomic nitrogen (N_2);

(4) Contain less than 200 ppmv of hydrogen sulfide; and

(5) Contain less than 1 ppmv of each hazardous constituent in the target list of Appendix VIII constituents of this part.

TABLE 1 TO § 261.38: DETECTION AND DETECTION LIMIT VALUES FOR COMPARABLE FUEL SPECIFICATION

Chemical name	CAS No.	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Total Nitrogen as N	na	4900	
Total Halogens as Cl	na	540	
Total Organic Halogens as Cl	na	25 or individual halogenated organics listed below.	
Polychlorinated biphenyls, total [Arocolors, total][a]	1336–36–3	Non-detect	1.
Cyanide, total	57–12–5	Non-detect	1.
Metals:			
Antimony, total	7440–36–0	7.9	
Arsenic, total	7440–38–2	0.23	
Barium, total	7440–39–3	23	
Beryllium, total	7440–41–7	1.2	
Cadmium, total	7440–43–9	1.2	
Chromium, total	7440–47–3	2.3	
Cobalt	7440–48–4	4.6	
Lead, total	7439–92–1	31	
Manganese	7439–96–5	1.2	
Mercury, total	7439–97–6	0.24	
Nickel, total	7440–02–0	58	
Selenium, total	7782–49–2	0.15	
Silver, total	7440–22–4	2.3	
Thallium, total	7440–28–0	23	
Hydrocarbons:			
Benzo[a]anthracene	56–55–3	1100	
Benzene	71–43–2	4100	
Benzo[b]fluoranthene	205–99–2	960	
Benzo[k]fluoranthene	207–08–9	1900	
Benzo[a]pyrene	50–32–8	960	
Chrysene	218–01–9	1400	
Dibenzo[a,h]anthracene	53–70–3	960	
7,12-Dimethylbenz[a]anthracene	57–97–6	1900	
Fluoranthene	206–44–0	1900	
Indeno(1,2,3-cd)pyrene	193–39–5	960	
3-Methylcholanthrene	56–49–5	1900	
Naphthalene	91–20–3	3200	
Toluene	108–88–3	36000	
Oxygetes:			

TABLE 1 TO § 261.38: DETECTION AND DETECTION LIMIT VALUES FOR COMPARABLE FUEL SPECIFICATION—Continued

Chemical name	CAS No.	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Acetophenone	98–86–2	1900	
Acrolein	107–02–8	37	
Allyl alcohol	107–18–6	30	
Bis(2-ethylhexyl)phthalate [Di-2-ethylhexyl phthalate]	117–81–7	1900	
Butyl benzyl phthalate	85–68–7	1900	
o-Cresol [2-Methyl phenol]	95–48–7	220	
m-Cresol [3-Methyl phenol]	108–39–4	220	
p-Cresol [4-Methyl phenol]	106–44–5	220	
Di-n-butyl phthalate	84–74–2	1900	
Diethyl phthalate	84–66–2	1900	
2,4-Dimethylphenol	105–67–9	1900	
Dimethyl phthalate	131–11–3	1900	
Di-n-octyl phthalate	117–84–0	960	
Endothall	145–73–3	100	
Ethyl methacrylate	97–63–2	37	
2-Ethoxyethanol [Ethylene glycol monoethyl ether]	110–80–5	100	
Isobutyl alcohol	78–83–1	37	
Isosafrole	120–58–1	1900	
Methyl ethyl ketone [2-Butanone]	78–93–3	37.	
Methyl methacrylate	80–62–6	37.	
1,4-Naphthoquinone	130–15–4	1900.	
Phenol	108–95–2	1900.	
Propargyl alcohol [2-Propyn-l-ol]	107–19–7	30.	
Safrole	94–59–7	1900.	
Sulfoted Organics:			
Carbon disulfide	75–15–0	Non-detect	37
Disulfoton	298–04–4	Non-detect	1900
Ethyl methanesulfonate	62–50–0	Non-detect	1900
Methyl methanesulfonate	66–27–3	Non-detect	1900
Phorate	298–02–2	Non-detect	1900
1,3-Propane sultone	1120–71–4	Non-detect	100
Tetraethyldithiopyrophosphate [Sulfotepp]	3689–24–5	Non-detect	1900
Thiophenol [Benzenethiol]	108–98–5	Non-detect	30
O,O,O-Triethyl phosphorothioate	126–68–1	Non-detect	1900
Nitrogenated Organics:			
Acetonitrile [Methyl cyanide]	75–05–8	Non-detect	37
2-Acetylaminofluorene [2-AAF]	53–96–3	Non-detect	1900
Acrylonitrile	107–13–1	Non-detect	37
4-Aminobiphenyl	92–67–1	Non-detect	1900
4-Aminopyridine	504–24–5	Non-detect	100
Aniline	62–53–3	Non-detect	1900
Benzidine	92–87–5	Non-detect	1900
Dibenz[a,j]acridine	224–42–0	Non-detect	1900
O,O-Diethyl O-pyrazinyl phophoro-thioate [Thionazin]	297–97–2	Non-detect	1900
Dimethoate	60–51–5	Non-detect	1900
p-(Dimethylamino)azobenzene [4-Dimethylaminoazobenzene]	60–11–7	Non-detect	1900
3,3'-Dimethylbenzidine	119–93–7	Non-detect	1900
α,α-Dimethylphenethylamine	122–09–8	Non-detect	1900
3,3'-Dimethoxybenzidine	119–90–4	Non-detect	100
1,3-Dinitrobenzene [m-Dinitrobenzene]	99–65–0	Non-detect	1900
4,6-Dinitro-o-cresol	534–52–1	Non-detect	1900
2,4-Dinitrophenol	51–28–5	Non-detect	1900
2,4-Dinitrotoluene	121–14–2	Non-detect	1900
2,6-Dinitrotoluene	606–20–2	Non-detect	1900
Dinoseb [2-sec-Butyl-4,6-dinitrophenol]	88–85–7	Non-detect	1900
Diphenylamine	122–39–4	Non-detect	1900
Ethyl carbamate [Urethane]	51–79–6	Non-detect	100
Ethylenethiourea (2-Imidazolidinethione)	96–45–7	Non-detect	110
Famphur	52–85–7	Non-detect	1900
Methacrylonitrile	126–98–7	Non-detect	37
Methapyrilene	91–80–5	Non-detect	1900
Methomyl	16752–77–5	Non-detect	57
2-Methyllactonitrile [Acetone cyanohydrin]	75–86–5	Non-detect	100
Methyl parathion	298–00–0	Non-detect	1900
MNNG (N-Metyl-N-nitroso-N'-nitroguanidine)	70–25–7	Non-detect	110
1-Naphthylamine, [α-Naphthylamine]	134–32–7	Non-detect	1900
2-Naphthylamine, [β-Naphthylamine]	91–59–8	Non-detect	1900
Nicotine	54–11–5	Non-detect	100

TABLE 1 TO § 261.38: DETECTION AND DETECTION LIMIT VALUES FOR COMPARABLE FUEL SPECIFICATION—Continued

Chemical name	CAS No.	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
4-Nitroaniline, [p-Nitroaniline]	100–01–6	Non-detect	1900
Nitrobenzene	98–95–3	Non-detect	1900
p-Nitrophenol, [p-Nitrophenol]	100–02–7	Non-detect	1900
5-Nitro-o-toluidine	99–55–8	Non-detect	1900
N-Nitrosodi-n-butylamine	924–16–3	Non-detect	1900
N-Nitrosodiethylamine	55–18–5	Non-detect	1900
N-Nitrosodiphenylamine, [Diphenylnitrosamine]	86–30–6	Non-detect	1900
N-Nitroso-N-methylethylamine	10595–95–6	Non-detect	1900
N-Nitrosomorpholine	59–89–2	Non-detect	1900
N-Nitrosopiperidine	100–75–4	Non-detect	1900
N-Nitrosopyrrolidine	930–55–2	Non-detect	1900
2-Nitropropane	79–46–9	Non-detect	30
Parathion	56–38–2	Non-detect	1900
Phenacetin	62–44–2	Non-detect	1900
1,4-Phenylene diamine, [p-Phenylenediamine]	106–50–3	Non-detect	1900
N-Phenylthiourea	103–85–5	Non-detect	57
2-Picoline [alpha-Picoline]	109–06–8	Non-detect	1900
Propythioracil [6-Propyl-2-thiouracil]	51–52–5	Non-detect	100
Pyridine	110–86–1	Non-detect	1900
Strychnine	57–24–9	Non-detect	100
Thioacetamide	62–55–5	Non-detect	57
Thiofanox	39196–18–4	Non-detect	100
Thiourea	62–56–6	Non-detect	57
Toluene-2,4-diamine [2,4-Diaminotoluene]	95–80–7	Non-detect	57
Toluene-2,6-diamine [2,6-Diaminotoluene]	823–40–5	Non-detect	57
o-Toluidine	95–53–4	Non-detect	2200
p-Toluidine	106–49–0	Non-detect	100
1,3,5-Trinitrobenzne, [sym-Trinitobenzene]	99–35–4	Non-detect	2000
Halogenated Organics [b]:			
Allyl chloride	107–05–1	Non-detect	37
Aramite	104–57–8	Non-detect	1900
Benzal chloride [Dichloromethyl benzene]	98–87–3	Non-detect	100
Benzyl chloride	100–44–77	Non-detect	100
Bis(2-chloroethyl)ether [Dichloroethyl ether]	111–44–4	Non-detect	1900
Bromoform [Tribromomethane]	75–25–2	Non-detect	37
Bromomethane [Methyl bromide]	74–83–9	Non-detect	37
4-Bromophenyl phenyl ether [p-Bromo diphenyl ether]	101–55–3	Non-detect	1900
Carbon tetrachloride	56–23–5	Non-detect	37
Chlordane	57–74–9	Non-detect	14
p-Chloroaniline	106–47–8	Non-detect	1900
Chlorobenzene	108–90–7	Non-detect	37
Chlorobenzilate	510–15–6	Non-detect	1900
p-Chloro-m-cresol	59–50–7	Non-detect	1900
2-Chloroethyl vinyl ether	110–75–8	Non-detect	37
Chloroform	67–66–3	Non-detect	37
Chloromethane [Methyl chloride]	74–87–3	Non-detect	37
2-Chlorophthalene [beta-Chlorophthalene]	91–58–7	Non-detect	1900
2-Chlorophenol [o-Chlorophenol]	95–57–8	Non-detect	1900
Chloroprene [2-Chloro-1,3-butadiene]	1126–99–8	Non-detect	37
2,4-D [2,4-Dichlorophenoxyacetic acid]	94–75–7	Non-detect	7.
Diallate	2303–16–4	Non-detect	1900
1,2-Dibromo-3-chloropropane	96–12–8	Non-detect	37
1,2-Dichlorobenzene [o-Dichlorobenzene]	95–50–1	Non-detect	1900
1,3-Dichlorobenzene [m-Dichlorobenzene]	541–73–1	Non-detect	1900
1,4-Dichlorobenzene [p-Dichlorobenzene]	106–46–7	Non-detect	1900
3,3′-Dichlorobenzidine	91–94–1	Non-detect	1900
Dichlorodifluoromethane [CFC–12]	75–71–8	Non-detect	37
1,2-Dichloroethane [Ethylene dichloride]	107–06–2	Non-detect	37
1,1-Dichloroethylene [Vinylidene chloride]	75–35–4	Non-detect	37
Dichloromethoxy ethane [Bis(2-chloroethoxy)methane	111–91–1	Non-detect	1900
2,4-Dichlorophenol	120–83–2	Non-detect	1900
2,6-Dichlorophenol	87–65–0	Non-detect	1900
1,2-Dichloropropane [Propylene dichloride]	78–87–5	Non-detect	37
cis-1,3-Dichloropropylene	10061–01–5	Non-detect	37
trans-1,3-Dichloropropylene	10061–02–6	Non-detect	37
1,3-Dichloro-2-propanol	96–23–1	Non-detect	30
Endosulfan I	959–98–8	Non-detect	1.
Endosulfan II	33213–65–9	Non-detect	1.

TABLE 1 TO § 261.38: DETECTION AND DETECTION LIMIT VALUES FOR COMPARABLE FUEL SPECIFICATION—Continued

Chemical name	CAS No.	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Endrin	72–20–8	Non-detect ..	1.
Endrin aldehyde	7421–93–4	Non-detect ..	1.
Endrin Ketone	53494–70–5	Non-detect ..	1.
Epichlorohydrin [1-Chloro-2,3-epoxy propane]	106–89–8	Non-detect ..	30
Ethylidene dichloride [1,1-Dichloroethane]	75–34–3	Non-detect ..	37
2-Fluoroacetamide	640–19–7	Non-detect ..	100
Heptachlor	76–44–8	Non-detect ..	1.
Heptachlor epoxide	1024–57–3	Non-detect ..	2.
Hexachlorobenzene	118–74–1	Non-detect ..	1900
Hexachloro-1,3-butadiene [Hexachlorobutadiene]	87–68–3	Non-detect ..	1900
Hexachlorocyclopentadiene	77–47–4	Non-detect ..	1900
Hexachloroethane	67–72–1	Non-detect ..	1900
Hexachlorophene	70–30–4	Non-detect ..	1000
Hexachloropropene [Hexachloropropylene]	1888–71–7	Non-detect ..	1900
Isodrin	465–73–6	Non-detect ..	1900
Kepone [Chlordecone]	143–50–0	Non-detect ..	3600
Lindane [gamma-Hexachlorocyclohexane] [gamma-BHC]	58–89–9	non-detect ...	1.4
Methylene chloride [Dichloromethane]	75–09–2	non-detect ...	37
4,4'-methylene-bis(2-chloroaniline)	101–14–4	non-detect ...	100
Methyl iodide [Iodomethane]	74–88–4	non-detect ...	37
Pentachlorobenzene	608–93–5	non-detect ...	1900
Pentachloroethane	76–01–7	non-detect ...	37
Pentachloronitrobenzene [PCNB] [Quintobenzene] [Quintozene]	82–68–8	non-detect ...	1900
Pentachlorophenol	87–86–5	non-detect ...	1900
Pronamide	23950–58–5	non-detect ...	1900
Silvex [2,4,5-Trichlorophenoxypropionic acid]	93–72–1	non-detect ...	7.0
2,3,7,8-Tetrachlorodibenzo-p-dioxin [2,3,7,8-TCDD]	1746–01–6	non-detect ...	30
1,2,4,5-Tetrachlorobenzene	95–94–3	non-detect ...	1900
1,1,2,2-Tetrachloroethane	79–34–5	non-detect ...	37
Tetrachloroethylene [Perchloroethylene]	127–18–4	non-detect ...	37
2,3,4,6-Tetrachlorophenol	58–90–2	non-detect ...	1900
1,2,4-Trichlorobenzene	120–82–1	non-detect ...	1900
1,1,1-Trichloroethane [Methyl chloroform]	71–55–6	non-detect ...	37
1,1,2-Trichloroethane [Vinyl trichloride]	79–00–5	non-detect ...	37
Trichloroethylene	79–01–6	non-detect ...	37
Trichlorofluoromethane [Trichlormonofluoromethane]	75–69–4	non-detect ...	37
2,4,5-Trichlorophenol	95–95–4	non-detect ...	1900
2,4,6-Trichlorophenol	88–06–2	non-detect ...	1900
1,2,3-Trichloropropane	96–18–4	non-detect ...	37
Vinyl Chloride	75–01–4	non-detect ...	37

[a] Absence of PCBs can also be demonstrated by using appropriate screening methods, e.g., immunoassay kit for PCB in oils (Method 4020) o colorimetric analysis for PCBs in oil (Method 9079).

[b] Some minimum required detection limits are above the total halogen limit of 540 ppm. The detection limits reflect what was achieved durin EPA testing and analysis and also analytical complexity associated with measuring all halogen compounds on Appendix VIII at low levels. EPA recognizes that in practice the presence of these compounds will be functionally limited by the molecular weight and the total halogen limit of 540 ppm.

(c) *Implementation.*—Waste that meets the comparable or syngas fuel specifications provided by paragraphs (a) or (b) of this section (these constituent levels must be achieved by the comparable fuel when generated, or as a result of treatment or blending, as provided in paragraphs (c)(3) or (4) of this section) is excluded from the definition of solid waste provided that the following requirements are met:

(1) *Notices*—For purposes of this section, the person claiming and qualifying for the exclusion is called the comparable/syngas fuel generator and the person burning the comparable/syngas fuel is called the comparable/syngas burner. The person who generates the comparable fuel or syngas fuel must claim and certify to the exclusion.

(i) State RCRA and CAA Directors in Authorized States or Regional RCRA and CAA Directors in Unauthorized States.—

(A) The generator must submit a one-time notice to the Regional or State RCRA and CAA Directors, in whose jurisdiction the exclusion is being claimed and where the comparable/syngas fuel will be burned, certifying compliance with the conditions of the exclusion and providing documentation as required by paragraph (c)(1)(i)(C) of this section;

(B) If the generator is a company that generates comparable/syngas fuel at more than one facility, the generator shall specify at which sites the comparable/syngas fuel will be generated;

(C) A comparable/syngas fuel generator's notification to the Directors must contain the following items:

(*1*) The name, address, and RCRA ID number of the person/facility claiming the exclusion;

(*2*) The applicable EPA Hazardous Waste Codes for the hazardous waste;

(*3*) Name and address of the units, meeting the requirements of paragraph (c)(2) of this section, that will burn the comparable/syngas fuel; and

(4) The following statement is signed and submitted by the person claiming the exclusion or his authorized representative:

Under penalty of criminal and civil prosecution for making or submitting false statements, representations, or omissions, I certify that the requirements of 40 CFR 261.38 have been met for all waste identified in this notification. Copies of the records and information required at 40 CFR 261.28(c)(10) are available at the comparable/syngas fuel generator's facility. Based on my inquiry of the individuals immediately responsible for obtaining the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(ii) Public notice.—Prior to burning an excluded comparable/syngas fuel, the burner must publish in a major newspaper of general circulation local to the site where the fuel will be burned, a notice entitled "Notification of Burning a Comparable/Syngas Fuel Excluded Under the Resource Conservation and Recovery Act" containing the following information:

(A) Name, address, and RCRA ID number of the generating facility;

(B) Name and address of the unit(s) that will burn the comparable/syngas fuel;

(C) A brief, general description of the manufacturing, treatment, or other process generating the comparable/syngas fuel;

(D) An estimate of the average and maximum monthly and annual quantity of the waste claimed to be excluded; and

(E) Name and mailing address of the Regional or State Directors to whom the claim was submitted.

(2) *Burning.*—The comparable/syngas fuel exclusion for fuels meeting the requirements of paragraphs (a) or (b) and (c)(1) of this section applies only if the fuel is burned in the following units that also shall be subject to Federal/State/local air emission requirements, including all applicable CAA MACT requirements:

(i) Industrial furnaces as defined in § 260.10 of this chapter;

(ii) Boilers, as defined in § 260.10 of this chapter, that are further defined as follows:

(A) 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

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

(iii) Hazardous waste incinerators subject to regulation under subpart O of parts 264 or 265 of this chapter or applicable CAA MACT standards.

(3) *Blending to meet the viscosity specification.*—A hazardous waste blended to meet the viscosity specification shall:

(i) As generated and prior to any blending, manipulation, or processing meet the constituent and heating value specifications of paragraphs (a)(1)(i) and (a)(2) of this section;

(ii) Be blended at a facility that is subject to the applicable requirements of parts 264 and 265, or § 262.34 of this chapter; and

(iii) Not violate the dilution prohibition of paragraph (c)(6) of this chapter.

(4) *Treatment to meet the comparable fuel exclusion specifications.*—(i) A hazardous waste may be treated to meet the exclusion specifications of paragraphs (a)(1) and (2) of this section provided the treatment:

(A) Destroys or removes the constituent listed in the specification or raises the heating value by removing or destroying hazardous constituents or materials;

(B) Is performed at a facility that is subject to the applicable requirements of parts 264 and 265, or § 262.34 of this Chapter; and

(C) Does not violate the dilution prohibition of paragraph (c)(6) of this seciton.

(ii) Residuals resulting from the treatment of a hazardous waste listed in subpart D of this part to generate a comparable fuel remain a hazardous waste.

(5) *Generation of a syngas fuel.*—(i) A syngas fuel can be generated from the processing of hazardous wastes to meet the exclusion specifications of paragraph (b) of this section provided the processing:

(A) Destroys or removes the constituent listed in the specification or raises the heating value by removing or destroying constituents or materials;

(B) Is performed at a facility that is subject to the applicable requirements of parts 264 and 265, or § 262.34 of this chapter or is an exempt recycling unit pursuant to § 261.6(c) of this chapter; and

(C) Does not violate the dilution prohibition of paragraph (c)(6) of this chapter.

(ii) Residuals resulting from the treatment of a hazardous waste listed in subpart D of this part to generate a syngas fuel remain a hazardous waste.

(6) *Dilution prohibition for comparable and syngas fuels.*—No generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a hazardous waste to meet the exclusion specifications of paragraph (a)(1)(i), (a)(2) or (b) of this section.

(7) *Waste analysis plans.* The generator of a comparable/syngas fuel shall develop and follow a written waste analysis plan which describes the procedures for sampling and analysis of the hazardous waste to be excluded. The waste analysis plan shall be developed in accordance with the applicable sections of the "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW–846). The plan shall be followed and retained at the facility excluding the waste.

(i) At a minimum, the plan must specify:

(A) The parameters for which each hazardous waste will be analyzed and the rationale for the selection of those parameters;

(B) The test methods which will be used to test for these parameters;

(C) The sampling method which will be used to obtain a representative sample of the waste to be analyzed;

(D) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date; and

(E) If process knowledge is used in the waste determination, any information prepared by the generator in making such determination.

(ii) The waste analysis plan shall also contain records of the following:

(A) The dates and times waste samples were obtained, and the dates the samples were analyzed;

(B) The names and qualifications of the person(s) who obtained the samples;

(C) A description of the temporal and spatial locations of the samples;

(D) The name and address of the laboratory facility at which analyses of the samples were performed;

(E) A description of the analytical methods used, including any clean-up and sample preparation methods;

(F) All quantitation limits achieved and all other quality control results for the analysis (including method blanks, duplicate analyses, matrix spikes, etc.), laboratory quality assurance data, and description of any deviations from analytical methods written in the plan or from any other activity written in the plan which occurred;

(G) All laboratory results demonstrating that the exclusion specifications have been met for the waste; and

(H) All laboratory documentation that support the analytical results, unless a contract between the claimant and the laboratory provides for the

documentation to be maintained by the laboratory for the period specified in paragraph (c)(11) of this section and also provides for the availability of the documentation to the claimant upon request.

(iii) Syngas fuel generators shall submit for approval, prior to performing sampling, analysis, or any management of a syngas fuel as an excluded waste, a waste analysis plan containing the elements of paragraph (c)(7)(i) of this section to the appropriate regulatory authority. The approval of waste analysis plans must be stated in writing and received by the facility prior to sampling and analysis to demonstrate the exclusion of a syngas. The approval of the waste analysis plan may contain such provisions and conditions as the regulatory authority deems appropriate.

(8) *Comparable fuel sampling and analysis.* (i) General. For each waste for which an exclusion is claimed, the generator of the hazardous waste must test for all the constituents on appendix VIII to this part, except those that the generator determines, based on testing or knowledge, should not be present in the waste. The generator is required to document the basis of each determination that a constituent should not be present. The generator may not determine that any of the following categories of constituents should not be present:

(A) A constituent that triggered the toxicity characteristic for the waste constituents that were the basis of the listing of the waste stream, or constituents for which there is a treatment standard for the waste code in 40 CFR 268.40;

(B) A constituent detected in previous analysis of the waste;

(C) Constituents introduced into the process that generates the waste; or

(D) Constituents that are byproducts or side reactions to the process that generates the waste.

Note to paragraph (c)(8): Any claim under this section must be valid and accurate for all hazardous constituents; a determination not to test for a hazardous constituent will not shield a generator from liability should that constituent later be found in the waste above the exclusion specifications.

(ii) For each waste for which the exclusion is claimed where the generator of the comparable/syngas fuel is not the original generator of the hazardous waste, the generator of the comparable/syngas fuel may not use process knowledge pursuant to paragraph (c)(8)(i) of this section and must test to determine that all of the constituent specifications of paragraphs (a)(2) and (b) of this section have been met.

(iii) The comparable/syngas fuel generator may use any reliable analytical method to demonstrate that no constituent of concern is present at concentrations above the specification levels. It is the responsibility of the generator to ensure that the sampling and analysis are unbiased, precise, and representative of the waste. For the waste to be eligible for exclusion, a generator must demonstrate that:

(A) Each constituent of concern is not present in the waste above the specification level at the 95% upper confidence limit around the mean; and

(B) The analysis could have detected the presence of the constituent at or below the specification level at the 95% upper confidence limit around the mean.

(iv) Nothing in this paragraph preempts, overrides or otherwise negates the provision in §262.11 of this chapter, which requires any person who generates a solid waste to determine if that waste is a hazardous waste.

(v) In an enforcement action, the burden of proof to establish conformance with the exclusion specification shall be on the generator claiming the exclusion.

(vi) The generator must conduct sampling and analysis in accordance with their waste analysis plan developed under paragraph (c)(7) of this section.

(vii) Syngas fuel and comparable fuel that has not been blended in order to meet the kinematic viscosity specifications shall be analyzed as generated.

(viii) If a comparable fuel is blended in order to meet the kinematic viscosity specifications, the generator shall:

(A) Analyze the fuel as generated to ensure that it meets the constituent and heating value specifications; and

(B) After blending, analyze the fuel again to ensure that the blended fuel continues to meet all comparable/syngas fuel specifications.

(ix) Excluded comparable/syngas fuel must be re-tested, at a minimum, annually and must be retested after a process change that could change the chemical or physical properties of the waste.

(9) *Speculative accumulation.* Any persons handling a comparable/syngas fuel are subject to the speculative accumulation test under §261.2(c)(4) of this chapter.

(10) *Records.* The generator must maintain records of the following information on-site:

(i) All information required to be submitted to the implementing authority as part of the notification of the claim:

(A) The owner/operator name, address, and RCRA facility ID number of the person claiming the exclusion;

(B) The applicable EPA Hazardous Waste Codes for each hazardous waste excluded as a fuel; and

(C) The certification signed by the person claiming the exclusion or his authorized representative.

(ii) A brief description of the process that generated the hazardous waste and process that generated the excluded fuel, if not the same;

(iii) An estimate of the average and maximum monthly and annual quantities of each waste claimed to be excluded;

(iv) Documentation for any claim that a constituent is not present in the hazardous waste as required under paragraph (c)(8)(i) of this section;

(v) The results of all analyses and all detection limits achieved as required under paragraph (c)(8) of this section;

(vi) If the excluded waste was generated through treatment or blending, documentation as required under paragraph (c)(3) or (4) of this section;

(vii) If the waste is to be shipped off-site, a certification from the burner as required under paragraph (c)(12) of this section;

(viii) A waste analysis plan and the results of the sampling and analysis that includes the following:

(A) The dates and times waste samples were obtained, and the dates the samples were analyzed;

(B) The names and qualifications of the person(s) who obtained the samples;

(C) A description of the temporal and spatial locations of the samples;

(D) The name and address of the laboratory facility at which analyses of the samples were performed;

(E) A description of the analytical methods used, including any clean-up and sample preparation methods;

(F) All quantitation limits achieved and all other quality control results for the analysis (including method blanks, duplicate analyses, matrix spikes, etc.), laboratory quality assurance data, and description of any deviations from analytical methods written in the plan or from any other activity written in the plan which occurred;

(G) All laboratory analytical results demonstrating that the exclusion specifications have been met for the waste; and

(H) All laboratory documentation that support the analytical results, unless a contract between the claimant and the laboratory provides for the documentation to be maintained by the laboratory for the period specified in paragraph (c)(11) of this section and also

provides for the availability of the documentation to the claimant upon request; and

(ix) If the generator ships comparable/syngas fuel off-site for burning, the generator must retain for each shipment the following information on-site:

(A) The name and address of the facility receiving the comparable/syngas fuel for burning;

(B) The quantity of comparable/syngas fuel shipped and delivered;

(C) The date of shipment or delivery;

(D) A cross-reference to the record of comparable/syngas fuel analysis or other information used to make the determination that the comparable/syngas fuel meets the specifications as required under paragraph (c)(8) of this section; and

(E) A one-time certification by the burner as required under paragraph (c)(12) of this section.

(11) *Records retention.* Records must be maintained for the period of three years. A generator must maintain a current waste analysis plan during that three year period.

(12) *Burner certification.* Prior to submitting a notification to the State and Regional Directors, a comparable/syngas fuel generator who intends to ship their fuel off-site for burning must obtain a one-time written, signed statement from the burner:

(i) Certifying that the comparable/syngas fuel will only be burned in an industrial furnace or boiler, utility boiler, or hazardous waste incinerator, as required under paragraph (c)(2) of this section;

(ii) Identifying the name and address of the units that will burn the comparable/syngas fuel; and

(iii) Certifying that the state in which the burner is located is authorized to exclude wastes as comparable/syngas fuel under the provisions of this section.

(13) *Ineligible waste codes.* Wastes that are listed because of presence of dioxins or furans, as set out in Appendix VII of this part, are not eligible for this exclusion, and any fuel produced from or otherwise containing these wastes remains a hazardous waste subject to full RCRA hazardous waste management requirements.

PART 270—EPA ADMINISTERED PERMIT PROGRAMS: THE HAZARDOUS WASTE PERMIT PROGRAM

1. The authority citation for part 270 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912, 6924, 6925, 6927, 6939, and 6974.

Subpart D—Changes to Permits

2. Section 270.42 is amended by adding a new paragraph (j) to read as follows:

§ 270.42 Permit modification at the request of the permittee.

* * * * *

(j) *Combustion facility changes to meet part 63 MACT standards.* The following procedures apply to hazardous waste combustion facility permit modifications requested under Appendix I of this section, section L(9).

(1) Facility owners or operators must comply with the Notification of Intent to Comply (NIC) requirements of 40 CFR 63.1211 before a permit modification can be requested under this section.

(2) If the Director does not approve or deny the request within 90 days of receiving it, the request shall be deemed approved. The Director may, at his or her discretion, extend this 90 day deadline one time for up to 30 days by notifying the facility owner or operator.

3. In § 270.42 Appendix I is amended by adding entry L(9) to read as follows:

Appendix I to § 270.42—Classification of Permit Modification

Modification	Class
L. Incinerators, Boilers and Industrial Furnaces	[1] 1
* * * * * * *	
9. Technology Changes Needed to meet Standards under 40 CFR part 63 (Subpart EEE—National Emission Standards for Hazardous Air Pollutants From Hazardous Waste Combustors), provided the procedures of §270.42(i) are followed	
* * * * * * *	

[1] Class 1 modifications requiring Agency prior approval.

* * * * *

Subpart G—Interim Status

4. Section 270.72 is amended by adding paragraph (b)(8) to read as follows:

§ 270.72 Changes during interim status.

* * * * *

(b) * * *

(8) Changes necessary to comply with standards under 40 CFR part 63, Subpart EEE—National Emission Standards for Hazardous Air Pollutants From Hazardous Waste Combustors.

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