12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113, section 12(d) (15 U.S.C. 272 note).

VII. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of this final rule in the **Federal Register**. This final rule is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: December 20, 2007.

Lois Rossi,

Director, Registration Division, Office of Pesticide Programs.

■ Therefore, 40 CFR chapter I is amended as follows:

PART 180—[AMENDED]

■ 1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 321(q), 346a and 371.

■ 2. In § 180.555, the table to paragraph (a) is amended by revising the entries for ''Citrus, dried pulp'' ''Citrus, oil'' and ''Fruit, citrus, group 10,'' and by alphabetically adding new commodities to read as follows:

§ 180.555 Trifloxystrobin.

(a) * * *

Commodity	Parts per million
* * *	* *
Asparagus	0.07
* * *	* *
Canistel	0.7
* * *	* *
Citrus, dried pulp	1.0
Citrus, oil	38
* * *	* *
Fruit, citrus, group 10	0.6
* * *	* *
Mango	0.7
* * *	* *
Papaya	0.7
* * *	* *
Radish, tops	10
* * *	* *
Sapodilla	0.7
Sapote, black	0.7
Sapote, mamey	0.7
* * *	* *
Star apple	0.7
Strawberry	1.1
* * *	* *
Vegetable, root, except sugar beet, subgroup 1B	0.1
* * *	* *

* * * * *

[FR Doc. E7–25396 Filed 12–31–07; 8:45 am]

BILLING CODE 6560–50–S

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260 and 261

[EPA–HQ–RCRA–2002–0002: FRL–8511–5]

RIN 2050–AE78

Regulation of Oil-Bearing Hazardous Secondary Materials From the Petroleum Refining Industry Processed in a Gasification System To Produce Synthesis Gas

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is revising its hazardous waste management regulations under the Resource Conservation and Recovery Act (RCRA) to further promote the environmentally sound recycling of oil-bearing hazardous secondary materials generated by the petroleum refining industry. Specifically, EPA is amending an existing exclusion from the definition of solid waste for oil-bearing hazardous secondary materials when they are processed in a gasification system at a petroleum refinery for the production of synthesis gas. We are finalizing this exclusion so that the gasification of these materials will have the same regulatory status (they are all excluded from the definition of solid waste under RCRA) as oil-bearing hazardous secondary materials that are reinserted into the petroleum refining process. This action serves what we believe is a national interest by capturing as much energy from a barrel of oil as possible to maximize production efficiencies at petroleum refineries in an energy constrained world.

DATES: This final rule is effective on February 1, 2008.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–HQ–RCRA–2002–0002. All documents in the docket are listed on the *http://www.regulations.gov* web site. Although listed in the index, some information is not publicly available, because, for example, it may be Confidential Business Information (CBI) or other information, the disclosure of which is restricted by statute. Certain material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *http://www.regulations.gov* or in hard copy at the RCRA Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Avenue, NW., Washington, DC. This Docket Facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the RCRA docket is (202) 566–0270.

FOR FURTHER INFORMATION CONTACT: Elaine Eby, Waste Minimization Branch, Hazardous Waste Minimization and Management Division, Office of Solid Waste (5302P), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; *telephone number:* (703) 308–8449, *fax number:* (703) 308–8433, *e-mail address: eby.elaine@epa.gov*.

SUPPLEMENTARY INFORMATION:

A. Does This Action Apply to Me?

This rule may apply to entities regulated under RCRA, in the petroleum refining industry, identified as Standard Industrial Classification (SIC) 2911. To determine whether your facility, company, or business is affected by this action, you should carefully examine 40 CFR Parts 260 through 271. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding ''**FOR FURTHER INFORMATION CONTACT**'' section.

B. Table of Contents

I. Statutory Authority

The U.S. Environmental Protection Agency (EPA or the Agency) regulates the generation and management of hazardous waste under 40 CFR Parts 260 through 273 using the authority of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 6901 *et seq.*

II. Summary of This Action

EPA is amending an existing exclusion from the definition of solid waste that applies to oil-bearing hazardous secondary materials generated at a petroleum refinery when these materials are recycled by inserting them back into the petroleum refining process. This exclusion is found at 40 CFR 261.4(a)(12)(i) and applies to oil-bearing hazardous secondary materials that are hazardous because they are listed in 40 CFR Part 261, Subpart D (*e.g.*, K048–K052, K169–K170, and F037–F038), or because they exhibit a hazardous characteristic under Part 261, Subpart C.

With today's final rule, the exclusion will be revised to add ''gasification'' to the list of already recognized petroleum refinery processes (*e.g.*, distillation, catalytic cracking, fractionation, and thermal cracking units) into which oil-bearing hazardous secondary materials can be legitimately recycled. The Agency is also promulgating a definition for the term ''gasification,'' at 40 CFR 260.10, which applies only to this specific exclusion. The exclusion is conditioned on there being no land placement and no speculative accumulation of the oil-bearing hazardous secondary material prior to re-insertion into the petroleum refining process. The exclusion allows these materials to be inserted into the same petroleum refinery where they are generated, or sent directly to another petroleum refinery, and still be excluded under this provision.

Provided the conditions of the exclusion are met, oil-bearing hazardous secondary materials will be excluded from the definition of solid waste at the point of generation. Similarly, the fuels and by-products manufactured from these excluded materials will also be excluded.[1] Residuals from the gasification process, like residuals generated from other recognized petroleum refining processes (*e.g.*, fines from coking operations) will be classified as newly generated waste and would only be considered hazardous if they exhibit one or more of the hazardous waste characteristics. However, as discussed in the preamble for the **Federal Register** notice promulgating this exclusion at 63 FR 42128 (August 6, 1998), the exclusion extends only to materials actually reinserted into the petroleum refinery process, and any residuals generated from the processing of oil-bearing hazardous secondary materials prior to insertion into the petroleum refining process are designated as F037 waste.

Subsequent to the promulgation of the exclusion in August 1998 (63 FR 42110), we proposed regulatory language that would create a new, separate exclusion to address the gasification of oil-bearing hazardous secondary materials. (See 67 FR 13684, March 25, 2002.) However, in the course of finalizing this rule, we have concluded that a new exclusion is unnecessary. Instead, we are following the original proposal suggested in the July 15, 1998 Notice of Data Availability (NODA) (See 63 FR 38139) to add to 40 CFR 261.4(a)(12)(i) gasification, as one of the recognized petroleum refining processes to which oil-bearing hazardous secondary materials can be inserted and not be considered a solid waste under the Subtitle C hazardous waste regulations. The definition of gasification, however, is generally based on the March 2002 proposal, and comments and information developed as a result of both the NODA and that proposal.

Today's final rule is based on information presented in the July 1998 NODA, the final rule for oil-bearing hazardous secondary materials for petroleum refining operations published in August 1998, and the March 25, 2002 proposed rule. The rulemaking record for this rule incorporates the rulemaking records for all of these notices.

III. Background

The exclusion at 40 CFR 261.4(a)(12)(i) provides operators of petroleum refineries with the ability to recycle materials generated by the refining of crude oil to manufacture additional fuels. In that rule, we specifically address certain reinsertion scenarios that involved common practices within the industry (*e.g.*, coking and quench coking operations). Prior to finalizing these provisions, however, we issued a Notice of Data Availability (NODA) specifically requesting comment on extending the exclusion to gasification—a process that also provides operators of petroleum refineries the ability to extract additional hydrocarbons from these materials by converting them into a synthesis gas. (See 63 FR 38139, July 15, 1998.)

We stated in the NODA that gasification of oil-bearing hazardous secondary materials from the petroleum refining industry may be an activity warranting an exclusion from the definition of solid waste, because gasification also provides a means of recovering hydrocarbons from these materials and could be viewed as an additional process in crude oil refining. We also noted that a gasification system might compete with other petroleum refining operations (*i.e.*, coking) for these same materials, which suggested to us that gasification is an alternative fuel production process—just one that was not being used extensively in the petroleum refining industry.

The Agency did not add gasification in the 1998 rule, choosing to explicitly include only those petroleum refining processes discussed in the original proposal. In 2002 however, the Agency proposed a different, more ambitious exclusion for hazardous waste processed in a gasification system for the production of synthesis gas. In that

[1] The existing exclusion found at 40 CFR 261.4(a)(12)(i) also requires that the oil-bearing hazardous secondary material inserted into the petroleum refinery process does not result in the coke product exhibiting one or more of the hazardous waste characteristics.

proposal, we solicited comment on two conditional exclusions. The first was for oil-bearing hazardous secondary materials recycled in a gasification system operating at a petroleum refinery or at a different facility operating outside the petroleum refining industry. This proposal was different from what was proposed in the 1998 NODA, where gasification operations were specifically identified as part of the petroleum refining operation. A second, much broader exclusion, addressed all hazardous secondary material when processed in a gasification system for the production of synthesis gas. This broader exclusion is not being addressed as part of this rulemaking and is still under consideration by the Agency.[2]

Because the proposed exclusion was addressing recycling scenarios for oil-bearing hazardous secondary materials outside petroleum refining operations, we proposed an expanded set of conditions. The conditions proposed included the conditions already included in 40 CFR 261.4(a)(12)(i) (*e.g.*, no speculative accumulation and no land placement of the material prior to reuse), as well as conditions, that we believed, would ensure the legitimacy of the process as a production operation, rather than a waste treatment process.

The first condition specified was a definition of the types of gasification systems capable of processing these oil-bearing hazardous secondary materials into synthesis gas. At the time, we were aware of a number of devices operating in the United States (U.S.) that could claim to be a type of gasification system, but did not gasify materials in the same manner, or to the same extent, as the gasification systems we considered for the proposal. We were concerned that these devices may be more similar to waste treatment processes than to production operations.

Additionally, we proposed that the synthesis gas product from the gasification system meet the fuel specification promulgated for hazardous waste derived synthesis gas in the ''Synthesis Gas Rule.'' [3] The synthesis gas specification (or syngas spec) establishes specific physical parameters and concentration levels for contaminants and serves as a regulatory benchmark for classifying synthesis gas produced from hazardous waste as a fuel that can be readily marketed, rather than as a hazardous waste fuel (see 40 CFR 261.38(b)).[4]

Finally, we proposed that any co-product or residue generated by the gasification system be subject to the Universal Treatment Standards (UTS) (found at 40 CFR 268.48) for six RCRA metals (*i.e.*, antimony, arsenic, chromium, lead, nickel, and vanadium), if such co-product or residue was placed on the land. This condition was proposed to ensure legitimacy by applying the same land disposal provisions to any co-product and residual that would have existed had the oil-bearing hazardous secondary materials not been excluded from the definition of solid waste. We reasoned that this would eliminate any incentive to claim to be performing ''gasification'' for the real purpose of avoiding treatment of metals in residues that ultimately are placed on the land.

In response to the proposal, a number of commenters generally supported the idea of promoting the reuse of oil-bearing hazardous secondary materials from petroleum refineries to produce additional fuels, although they also expressed concern with one or more of the proposed conditions. A number of other commenters, however, disagreed with our approach. Specifically, these commenters believed that full RCRA Subtitle C regulation for both the oil-bearing hazardous secondary materials and the gasification process was mandated by RCRA. These commenters stated that RCRA Subtitle C oversight is necessary because gasification is merely a poor combustion process, promoting the generation and release of toxic products of incomplete combustion (PIC), including dioxin-containing compounds. Conversely, other commenters questioned, as they had for the coking and quench coking operations in the original exclusion, whether we had any regulatory authority at all in this situation. (See discussion at 63 FR 42121–42129, August 6, 1998.) These commenters suggested that the gasification of oil-bearing hazardous secondary materials generated elsewhere in the refining process is merely the final step in extracting fuels from the crude oil feed to the refinery and is, therefore, part of an ongoing production process. We also received comments on the specific conditions we proposed as part of the exclusion.

With regard to the specific technical issues for which we solicited comment, we received little response. That is, commenters did not provide data on the composition of gasification system residues or the composition of synthesis gas. In addition, limited data were received regarding the economics of operating a gasification system at a petroleum refinery or elsewhere.[5] While we solicited this information for both the proposed petroleum refinery exclusion and the broader exclusion applicable to all hazardous waste (see 67 FR at 13695, March 25, 2002), the lack of information submitted weighed heavily on our decision to limit today's rulemaking specifically to the petroleum refinery industry.

Major comments on today's rule are discussed elsewhere in this preamble.

IV. Development of This Final Rule

Through study of existing technical reports and papers published by the Department of Energy (DOE) and others, the Agency was aware that gasification could be a part of the petroleum refining process. We solicited data to confirm this in our proposal; however, commenters did not provide a significant amount of new information, thus requiring EPA to once again check existing information and data to confirm our understanding of the gasification process and its use in petroleum refinery operations. In addition, we sought to confirm, through site visits, how gasification was integrated into the production process at some petroleum refineries.

[2] However, it is likely that if we chose to move forward with the broader exclusion, the Agency would issue a supplemental proposal before it makes any final decision.

[3] For purposes of this preamble discussion, we are using the term, ''Synthesis Gas Rule'' to refer to the regulation found at 40 CFR 261.38(b). This regulation was developed as part of the RCRA Comparable Fuels Exclusion that provides a conditional exclusion from RCRA Subtitle C for fuels which are produced from a hazardous waste, but which are comparable to some currently used fossil fuels. The entire preamble and rule can be found in 63 FR 33782, June 19, 1998. Hazardous Waste Combustors; Revised Standard; Final Rule—Part I: RCRA Comparable Fuel Exclusion; Permit Modification for Hazardous Waste Combustion Units; Notification of Intent to Comply; Waste Minimization and Pollution Prevention Criteria for Compliance Extensions.

[4] We also solicited comment on a number of approaches to revise the synthesis gas specifications found at 40 CFR 261.38(b). (See 67 FR at 13694, March 25, 2002.) In particular we were interested in revised standards for the highly volatile metals and some organic constituents.

[5] One commenter described the composition of their residue streams for their specific gasification system; however, no constituent concentration data was provided. In this case, the commenter described inorganic residues that vitrify into a leach resistant glass, solid particulates of baghouse dust and a dissolved salt scrubber solution.

A few comments were received on the economics of the gasification process. Several commenters disagreed with our assessment of the economics of running a gasification system. One commenter disagreed with our statements that the cost of building and operating a gasification system is sufficient to guarantee high quality products. Other commenters stated that the changes we were proposing would not lower the regulatory barriers to using gasification as part of the production process.

A. How Many Gasification Systems Are Currently Operating at Petroleum Refineries?

Petroleum refineries use gasification for the conversion of low-value fuels and/or secondary material, such as petroleum coke, visbreaker tar and deasphalter pitch into synthesis gas. Synthesis gas can then be converted to usable products, such as hydrogen, ammonia and other chemicals, and/or used as a fuel to produce steam and electricity. Oil-bearing hazardous secondary materials generated at the petroleum refinery can also be co-gasified with these other materials to manufacture synthesis gas. In petroleum refining operations, electric power generation is a preferred use for the synthesis gas. For this purpose, the integrated gasification combined cycle (IGCC) technology can be integrated into the petroleum refinery process. Except for the gasifier and the feedstock preparation units, many of the components in an IGCC system already exist at a petroleum refinery. Downstream of a gasifier, petroleum refineries, as part of their ongoing production processes, typically have the other components of an IGCC plant, including gas clean-up systems, Claus plants, heat recovery systems, and steam and gas turbines. Power generation for use within a petroleum refinery is not a new activity and based on our research, is widely practiced. Seldom, however, is enough power produced to allow it to be sold for external consumption. With the utilization of an IGCC plant, a refinery's internal power needs can be readily addressed with surplus power sold as a commodity to outside consumers.

Presently, EPA has identified four gasification systems operating at petroleum refineries in the U.S.[6]; one of these is an IGCC unit. [7,8,9] The second uses the synthesis gas to produce chemicals. The Agency is also aware of two petroleum refineries that operate units combining fluid coking with coke gasification, a process known as flexicoking.™[10]

While petroleum refinery-based gasification units are currently in limited use in the U.S., interest in developing these systems is on the rise.[11,12,13] Many factors may be contributing to this interest, but we believe it is most likely related to the increasing cost of natural gas, an increasing interest in maximizing efficiencies in the petroleum refining process, manufacturing cleaner fuels, and reducing the generation of waste. Although limited in number, petroleum refinery-based gasification systems have demonstrated positive economic returns, while providing more flexible operations to address increases in raw material costs.[14] These facilities have shown that gasification systems can process lower value fuels or material commodities (*e.g.*, petroleum coke and other petroleum secondary materials) into higher value fuels or chemical commodities. These systems have also demonstrated how well gasification fits into petroleum refinery operations and the advantages of doing so.

B. What Conclusions Have We Drawn About Gasification Systems Operating at Petroleum Refineries?

This Unit IV.B. explains the overall rationale for the Agency's decision that oil-bearing hazardous secondary materials inserted into a gasifier are excluded from the definition of solid waste. Analyses supporting this decision are found elsewhere in this preamble and in the rulemaking record, including the Response to Comment document for this rulemaking. In each configuration reviewed, where petroleum refineries used petroleum coke alone or in combination with other petroleum feedstock (including oil-bearing hazardous secondary materials), we found that the systems are operated as part of the petroleum refining process and produce synthesis gas as a legitimate product to further enhance the petroleum refining operation. We believe that a gasification system, when operated at a petroleum refinery, will function as a component of the overall petroleum refinery process to produce synthesis gas as its main product.[15] In turn, synthesis gas can be used to manufacture usable products, such as hydrogen, ammonia and other chemicals, and/or used as a fuel to produce steam and electricity. Oil-bearing hazardous secondary materials generated by petroleum refineries, as well as other low-value fuels, are appropriate feed materials to

[6] Data pertaining to operational gasification systems processing secondary materials from petroleum refineries was developed from a review of the Gasification Technology Council's database. Based on information obtained from this database, there are 16 gasification systems operating at petroleum refineries outside the U.S. See email correspondence from Mr. James Childress, Executive Director, Gasification Technology Council to Ms. Elaine Eby, USEPA. Re: Operational Gasification Systems Processing Petroleum Refining Residues at Petroleum Refineries. July 2007.

[7] *Experience With Low Value Feed Gasification at the El Dorado, Kansas Refinery* by Gary DelGrego. Texaco Power and Gasification. Presented at the 1999 Gasification Technology Conference. Recently, the Agency learned that the IGCC unit operating at the El Dorado, Kansas refinery was shut down in 2006.

[8] IGCCs combine the gasification reactor with a combined cycle power turbine designed to use the synthesis gas. In IGCC systems, the synthesis gas is injected into the combustion turbine and ignited. The resulting high energy exhaust from the combustion of synthesis gas in the turbine is used to turn a generator. Steam and additional electric power is recovered in a follow-up heat recovery steam generator from the turbine's high temperature exhaust.

[9] One of the largest markets for IGCC systems is the petroleum refining industry using petroleum residual feedstock, such as vacuum residual oil, deasphalter bottoms and petroleum coke. Petroleum refineries typically feature multi-train designs for high reliability and the co-production of power, steam and hydrogen for the refinery, with extra power being sold to third parties. *Major Environmental Aspects of Gasification-based Power Generation Technologies—Final Report.* U.S. Department of Energy. Office of Fossil Energy. National Energy Technology Laboratory. December 2002.

[10] Sapre, Ajit, Kamienski, Paul, Phillips, Glenn, Wright, Marie, *Resid Upgrading Technology Options and Role of Flexicoking Technology.* ERTC Coking and Gasification Conference, Paris France. April 18, 2007.

[11] Gray, D. and Tomlinson. *Potential of Gasification in the U.S. Refining Industry.* United States Department of Energy, National Energy Technology Laboratory. June 2000.

[12] Murano, John J. *Refinery Technology Profiles. Gasification and Supporting Technologies.* U.S. Department of Energy. National Energy Technology Laboratory. Energy Information Administration. June 2003.

[13] Clayton, Stewart J., Steigel, Gary J., and Wimer, John G., Gasification Technologies Product Team, U.S. Department of Energy. *U.S. DOE's Perspective on Long-Term Market Trends and R&D Needs in Gasification.* Presented at the 5th European Gasification Conference. Gasification—The Clean Choice. Noordwijk, The Netherlands. April 8–10, 2002.

[14] The addition of a gasification plant at an El Dorado, Kansas petroleum refinery resulted in significant economic benefits. Previously, the refinery was spending $12 to $14 million per year on power purchases from the local utility. With the implementation of the gasification system, the refinery reported paying only a few million dollars a year for stand-by services. In addition, the refinery saved about $1 million annually in both waste shipment and disposal costs and nitrogen costs. Steam production costs were reduced by more than half. Other benefits resulted from oxygen enrichment of the sulfur plant that enabled the refinery to process a wider range of high sulfur crudes. Furimsky, E. *Gasification in Petroleum Refinery of 21st Century.* Oil and Gas Science and Technology—Rev. IFP, Vol.54 (1999), No. 5, pp. 597–618.

[15] ''Gasification-based systems operated at a petroleum refinery are typically highly integrated processes. The complex consists of a number of distinct processing steps/plants. These are: feed preparation, gasifier, air separation unit (ASU), syngas clean-up, sulfur recovery unit (SRU), and downstream process options, such as cogeneration, hydrogen production, Fischer-Tropsch synthesis or methanol synthesis. Any given installation may or may not contain all of these processes depending on the feedstock used, products desired, and the availability of spare capacity in pre-existing plants at the petroleum refinery. For example, if the petroleum refinery has spare sulfur plant capacity or can revamp its existing sulfur plant to gain capacity, the sulfur plant would be considered outside the battery limits of the gasification complex.'' Marano, John J., *Refinery Technology Profiles: Gasification and Supporting Technologies.* U.S. Department of Energy. National Energy Technology Laboratory. Energy Information Administration. June 2003.)

gasification systems because these materials contain hydrocarbons that can be further processed into fuels or chemicals. The use of a gasifier to recover these hydrocarbons is ideal because the system not only operates to recover the hydrocarbon value for the production of a legitimate product, but can also process the non-fuel components to yield inorganic co-products (*e.g.*, liquid or solid sulfur, ammonia). In manufacturing settings, gasification systems have historically been used to produce commodities and have not been operated to get rid of unwanted material.[16] At petroleum refineries, a gasification system complements the activities already being performed at the petroleum refinery, *i.e.*, the manufacture of fuels from crude oil.

While some commenters have argued that gasification of oil-bearing hazardous secondary materials is more a waste management process involving incineration than a petroleum refining process, we refer to the conclusions drawn in a DOE report contrasting incineration and gasification. DOE concluded, and we agree, that gasification and incineration are distinct processes that can be distinguished by a number of factors. As discussed in the report, the factors distinguishing the two processes are: (1) Incinerators are designed to maximize the conversion of feedstock to carbon dioxide and water; gasifiers are designed to maximize the conversion of feedstock to carbon monoxide and hydrogen; (2) incinerators utilize large quantities of excess air; gasifiers utilize small quantities of oxygen; (3) incinerators operate in a highly oxidizing environment; gasifiers operate in a reducing environment; (4) incinerators discharge their flue gas to the environment as a waste; gasifiers utilize their synthesis gas for ongoing chemical, fuel production or power production as a product gas.[17]

The Agency has concluded that gasification operations fall within the scope of normal operations at petroleum refineries—even when applied to material that has historically been managed as waste. The Agency believes that recognizing gasification as a petroleum refining process, capable of recycling oil-bearing hazardous secondary materials, achieves the resource recovery goals of RCRA without jeopardizing human health and the environment. Gasification is a desirable component of fuel manufacturing operations at a petroleum refinery because it ensures more efficient processing of crude oil and provides the petroleum refinery with the added flexibility to maximize its fuel production outputs. Therefore, we disagree with the view that the activity serves essentially as a waste management process.

In today's final rule, we find that oil-bearing hazardous secondary materials generated as part of the petroleum refinery process and inserted into a gasification system located at a petroleum refinery, will serve as legitimate feedstock materials and that the gasification process, is a type of petroleum refining process warranting these materials an exclusion from the definition of solid waste. We have concluded that the operation of gasification systems at petroleum refineries is consistent with other processes that occur at petroleum refineries (*e.g.*, fractionation, coking, quench coking) because: (1) The activity takes place at a petroleum refinery; (2) the system uses feedstock only from refinery operations; (3) the system generates a synthesis gas that, is converted to multiple products, such as steam, electricity, hydrogen, as well as other chemicals; (4) the products generated are consistent with the many types of products normally generated at petroleum refineries; and (5) the system processes the raw material by manipulating the same variables, *e.g.*, hydrocarbons, as other refining processes that are universally accepted to be part of a petroleum refinery.[18]

V. This Final Rule

Gasification systems, like other petroleum refining operations, are capable of recovering fuel value or chemicals from the recycling of oil-bearing hazardous secondary materials. As such, we believe it is appropriate to treat these materials in a manner consistent with the other processes used at petroleum refineries that recover fuel value or chemicals from crude oil—the basic raw material used in petroleum refining. Today, we are amending the exclusion found at 40 CFR 261.4(a)(12)(i), by adding gasification to the list of recognized petroleum refining processes. We are finalizing this change to: (1) Prevent unnecessary confusion regarding the status of oil-bearing hazardous secondary materials from the petroleum industry recycled in a gasification system; (2) promote the use of a technologically advanced method of extracting hydrocarbons from these materials; and (3) remove regulatory restrictions that may limit the petroleum refining industry's ability to maximize the production of fuels and other commodities from crude oil, while minimizing the production of waste from the fuel production process.

The Agency has decided to limit the scope of this exclusion to oil-bearing hazardous secondary materials that are gasified as part of the petroleum refining process for the production of synthesis gas. As such, we are retaining only the conditions applied to oil-bearing hazardous secondary materials in the existing exclusion at 40 CFR 261.4(a)(12)(i). We are, however, adding one additional condition, a definition for gasification, which is based on information presented in the 1998 NODA, as well as the March 2002 proposal and comments and information received in response to these notices.

We have decided not to finalize the other conditions proposed in 2002. In large part, we have decided to eliminate these conditions because we are not extending this exclusion to oil-bearing hazardous secondary materials recycled at gasification systems operating outside the petroleum refining industry. The condition requiring the synthesis gas meet the specification we developed in the regulations at 40 CFR 261.38(b) has been removed because we now believe, based on the compelling arguments made by commenters and a review of our rationale for including it as a condition, that it was unnecessary and an inappropriate application of RCRA to a petroleum fuel product. Our decision is strongly influenced by the operational purpose of petroleum refineries—the production of fuels. Petroleum refineries create fuels for commercial markets, and we are convinced that these gasification systems operate within the reasonable scope of these operations. We have also removed the condition requiring that materials generated by the gasification system (*i.e.*, co-products and residuals) not be placed on the land if they exceed the nonwastewater Universal Treatment Standards (UTS) for antimony, arsenic, chromium, lead, nickel, and vanadium (found at 40 CFR 268.48). After further review, the Agency has determined that this condition is inconsistent with the current exclusion we are amending, and conflicts with how RCRA manages residues from excluded materials (*i.e.*,

[16] See review of Coal Conversion Technologies in *Perry's Chemical Engineer's Handbook,* Seventh Edition. Pages 27–13 through 27–25. McGraw-Hill. 1997.

[17] *A Comparison of Gasification and Incineration of Hazardous Waste—Final Report.* United States Department of Energy, National Energy Technology Laboratory (NETL). 3610 Collins Ferry Road. Morgantown, West Virginia 26505. DCN 99.803931.02. March 30, 2000.

[18] *Energy and Environmental Profile of the U.S. Petroleum Refining Industry.* United States Department of Energy. December 1998.

wastes are excluded at the point of generation, provided the conditions of the exclusion are met). Further, these constituents are not expected to leach at levels above the UTS in the residuals from gasification at petroleum refineries. These changes are discussed below.

A. Does the Conditional Exclusion Include a Definition for a Gasification System Used at a Petroleum Refinery?

Yes. In today's final rule, we are promulgating a regulatory definition for gasification systems that are used at petroleum refineries. For this rule, gasification is defined as a process, conducted in any enclosed device or system, designed and operated to process petroleum feedstock, including oil-bearing hazardous secondary materials, through a series of highly controlled steps utilizing thermal decomposition, limited oxidation, and gas cleaning to yield a synthesis gas composed primarily of hydrogen and carbon monoxide gas.

This final definition differs from the definition proposed in 2002 in a number of ways. We have: (1) Deleted the reference to incinerators or industrial furnaces; (2) removed the requirement for the gasifier to slag its inorganic feed at temperatures above 2000 degrees Fahrenheit; and (3) removed the requirement that the unit be equipped with monitoring devices that ensure the quality of the synthesis gas. This revised definition reflects current information on gasification systems at petroleum refineries and addresses the significant concerns commenters raised regarding the proposed definition. More importantly, however, the definition reflects the primary purpose for using gasification at petroleum refineries, the production of synthesis gas. As such, we believe that we have retained the most important requirements of a gasification system operating at a petroleum refinery: (1) That it is considered a process; and (2) it utilizes petroleum feedstock to yield a synthesis gas.

In the 2002 proposal (see 67 FR at 13690), we defined a gasification system as an enclosed thermal device and associated gas cleaning system (or systems) that does not meet the definition of an incinerator or industrial furnace (found at 40 CFR 260.10), and that: (1) Limits oxygen concentrations in the enclosed thermal device to prevent the full oxidization of thermally disassociated gaseous compounds; (2) utilizes a gas cleanup system or systems designed to remove contaminants from the partially oxidized gas that do not contribute to its fuel value; (3) slags inorganic feed materials at temperatures above 2000 degrees Fahrenheit; (4) produces a synthesis gas; and (5) is equipped with monitoring devices that ensure the quality of the synthesis gas produced by the gasification system.

We received numerous comments criticizing various aspects of our proposed definition. Some commenters argued the definition, as written, prohibited the potential use of a large number of gasification system designs that are in use around the world. More specifically, commenters stated that the definition eliminated one of the gasification designs currently processing petroleum residues in the U.S. because it did not operate at the specified temperature or slag the residual.[19] Generally, however, commenters urged the Agency to revise the definition to include all petroleum refinery-based units currently processing petroleum refining residues, or provide some type of site-specific variance to allow such units the opportunity to demonstrate that they can safely process refinery residues in their gasification system. While the development of a variance procedure would be a possible mechanism to evaluate those gasifiers not meeting the definition, the Agency believes that the definition of gasification being promulgated today addresses the concerns raised by the commenters and provides sufficient flexibility to allow for any number of gasification designs or configurations to be used within a petroleum refinery. As such, we have not included a variance provision as part of today's rule.

As previously mentioned, EPA has conducted a number of site visits to gasifiers located both on-site of a petroleum refinery and off-site and has continued to research the use of gasification at petroleum refineries. As a result of these efforts, we have concluded that gasification design and operation can vary substantially within the petroleum refining industry. We have also concluded and agree with commenters that a variety of different gasifier designs are capable of legitimately processing petroleum feedstock to produce a synthesis gas.[20] This has given us reason to reassess the need for specifically defining certain operating characteristics of a gasification system. Our revised definition of ''gasification'' allows additional flexibility in the design and configuration of gasification systems to process petroleum feedstock, including oil-bearing hazardous secondary materials, provided the gasification system produces a synthesis gas.

Several commenters questioned whether our definition should differentiate gasification from incinerators and industrial furnaces regulated under Subtitle C of RCRA. One commenter was particularly concerned that the proposed definition would require an affirmative determination by regulators that the gasification system did not meet the definition of incinerator or industrial furnace defined at 40 CFR 260.10. Additionally, the commenter questioned whether gasification systems also designed to recover hydrogen chloride (HCl) (which gasification systems can be configured to recover), could also be defined as a type of industrial furnace, (*i.e.*, halogen acid furnace) and thus not be able to use the exclusion.

After weighing the value added to the definition by including the references to industrial furnaces and incinerators (defined at 40 CFR 260.10), we are persuaded that including the reference to hazardous waste burning incinerators and industrial furnaces in the definition is unnecessary and could lead to confusion between the public, the regulated community, and regulators on how to regulate these units. Accordingly, we have removed the references to incinerators and industrial furnaces from the final definition. We expect, however, that even with this change to the definition, that certain gasification systems could be confused with, or identified as, a type of industrial furnace. In these situations, where the design and operational characteristics appear to be shared between the two types of systems, we believe it is appropriate for regulators to review the predominant products and process design of the system in question. For example, if the system recovers only small amounts of synthesis gas fuel, but significant amounts of hydrogen chloride, and the design of the system does not differ substantially from industrial furnaces designed to recover hydrogen chloride (*i.e.*, a substantial fraction of emissions are released to the atmosphere), such a system would more appropriately be classified as a type of industrial furnace, rather than a gasification system.

The Agency received few comments on four of the operational requirements

[19] The Agency would also note that this gasification system operates outside a petroleum refinery and as such, would not be eligible for today's final rule.

[20] The reader is referred to the following DOE reports assessing the various types of gasification systems that can be used at petroleum refineries. Marano, John J., *Refinery Technology Profiles: Gasification and Supporting Technologies.* U.S. Department of Energy. National Energy Technology Laboratory. Energy Information Administration. June 2003.) and Gray, D. and Tomlinson. *Potential of Gasification in the U.S. Refining Industry.* United States Department of Energy, National Energy Technology Laboratory. June 2000.

proposed as part of the definition of gasification system: (1) Limits on oxygen concentrations in the enclosed thermal device to prevent the full oxidization of thermally disassociated gaseous compounds (2) production of a synthesis gas; (3) requirements for a gas cleanup system or systems designed to remove contaminants from the partially oxidized gas that do not contribute to its fuel value; and (4) requirements for monitoring devices that ensure the quality of the synthesis gas produced by the gasification system. In general, commenters did not have specific technical issues with the provisions, but thought that the provisions were unclear and would benefit from additional clarification. For example, commenters stated that the requirement relating to monitoring devices would benefit from EPA identifying the type of monitoring equipment required. In the case of the requirement for monitoring devices, consideration of this condition is no longer germane based on our determination that petroleum gasification is a part of the petroleum refining operation. In today's rule, we have retained, with slight modifications, three of the operational requirements. Changes have been made to the definition to eliminate redundancy and provide a more clear and concise regulatory definition. The revised definition retains the key operational requirements of a gasification system operating at petroleum refinery—thermal decomposition, limited oxidation, gas cleanup, and production of a synthesis gas. This ensures that the exclusion applies only to gasification systems designed and operated in a manner that promotes the conversion of hydrocarbons found in the oil-bearing hazardous secondary materials into a synthesis gas fuel.

The operational requirement that received the most comment was for a gasification system to ''slag inorganic feed materials at temperatures above 2000 degrees Fahrenheit.'' Commenters were divided on the need for such a requirement. Some believed that the slagging criteria generally would result in a non-leachable residue, a ''preferred residual matrix.'' Others stated that the temperature requirement was arbitrary and not technically supportable. Additional commenters questioned the usefulness of the term slagging and the Agency's rationale for deciding to prohibit non-slagging gasifiers from the exclusion. These commenters pointed to the fact that the residues would be under RCRA Subtitle C jurisdiction if they exhibited a hazardous waste characteristic based on the content and leachability of the toxic metals.

We had proposed this requirement to address two issues: (1) To ensure that gasification systems processing excluded materials operate at a temperature sufficient to slag inorganic components found in the materials, so metals would not leach from the residue; and (2) to reduce the occurrence of unreacted carbon-containing compounds in the residue formed by the gasification system. After review of all the comments, and a re-examination of our site visit reports and available technical reports, we have determined that this requirement is not needed and would inappropriately restrict those gasification systems and configurations that could be effectively used at petroleum refineries for the production of synthesis gas fuels. We have found that classifying a gasifier as slagging or non-slagging has no relationship to a gasification system's overall ability to effectively process hydrocarbons for the production of synthesis gas fuel. Similarly, if a gasifier generates a residual that exhibits one or more of the hazardous waste characteristics, it will be subject to the RCRA Subtitle C hazardous waste regulations. We believe that this should provide adequate incentive for petroleum refineries to consider the potential benefit of slagging gasifiers verses non-slagging units.[21] Any further requirement by EPA would only interfere with the refineries' ability to most effectively achieve the same environmental endpoint.

In the proposed rule, we further stated that gasifiers generally do not have direct emissions to the atmosphere. Several commenters disagreed with this conclusion and suggested that potential releases of toxic and hazardous air pollutants (HAP) can occur during other steps in the gasification process. These steps include, feedstock preparation, gas cleanup, product recovery, and slag quenching, as well as during start-up, shutdown or operational emergencies of the gasification system. These commenters further stated that the current Clean Air Act (CAA) regulations may fail to properly address potential risk to human health and the environment posed by these releases. As a result, these commenters urged EPA to make a regulatory determination that gasifiers should be identified as an industrial furnace and subject to all RCRA/CAA hazardous waste combustion regulations.

In the proposal, (See 67 FR at 13688), we recognized that gasification systems are designed with release vents or flares that operate during emergencies or malfunctioning operations. Flares and release vents are necessary to prevent damage or catastrophic failure of the gasification system in the event of a major malfunction. These types of relief systems are common at facilities that manufacture products using thermal processes. Furthermore, the operation of flares and release vents is regulated by each facility's Title V CAA permit. Our decision to exclude, from the definition of solid waste, oil-bearing hazardous secondary materials generated at a petroleum refinery and inserted back into the petroleum refining process has been guided by a determination that gasification is a legitimate petroleum refining process that results in the manufacture of a synthesis gas product. (See discussion in Section IV of this preamble.) This decision allows the beneficial use of petroleum refining oil-bearing hazardous secondary materials for the manufacturing of a synthesis gas fuel that can be used for the production of steam, and/or power. Therefore, we do not agree with the commenter's suggestion that gasification systems operating at petroleum refineries processing these materials are waste management units (e.g., incinerators) and that any potential air emissions should be subject to all RCRA/CAA hazardous waste combustion regulations. Emissions at a petroleum refinery operating a gasification system will be evaluated. However, these emissions will be evaluated for compliance with regulations for petroleum refining operations under the authority of the CAA.[22]

B. Does the Conditional Exclusion Include a Synthesis Gas Specification?

No. In today's final rule, there is no condition requiring the synthesis gas to meet certain physical and/or constituent specifications. In the 2002 proposal, the Agency included a condition that required the synthesis gas to meet the specification for hazardous waste derived synthesis gas found at 40 CFR 261.38(b). We proposed to apply the synthesis gas specification because we believed it would ensure that the synthesis gas produced was a legitimate fuel product, and was an appropriate

[21] Although EPA did not rely on this information in its decision-making, data analyzed by the Agency suggests that it is highly unlikely that leachable metal concentrations in residuals from gasification of secondary material from petroleum refining operations will be significant. See the memorandum to the record from Ms. Elaine Eby, USEPA. *Re:* Characterization of Petroleum Refining Waste and Possible Gasification Scenarios. August 2007.

[22] See 72 FR 14734 (March 29, 2007), Risk and Technology Review, Phase II, Group 2.

condition considering we were proposing to allow oil-bearing hazardous secondary materials to be gasified at facilities outside a petroleum refinery. In addition, because the Agency was taking comment on whether to expand the exclusion to address all hazardous secondary materials generated in other industries, we considered such a provision to be important. In the development of the final rule, however, we have concluded, based on analysis of the comments and further review of petroleum refinery-based gasification systems that such a condition is unnecessary and an inappropriate use of RCRA to regulate a fuel product manufactured at petroleum refineries.

The majority of the comments received did not specifically address the need for a synthesis gas specification, but rather addressed the overall inadequacy of the synthesis gas specification finalized in the ''Synthesis Gas Rule.'' Commenters suggested that the specification was too lenient and not drawn from appropriate data.[23] Several commenters also reminded the Agency of possible pending litigation.[24]

Irrespective of the concerns with the details of a synthesis gas specification, only a few commenters supported establishing a synthesis gas specification. These commenters generally agreed with the Agency's proposed premise of applying the synthesis gas specification to ensure legitimacy of the gasification process and the quality of the synthesis gas. However, other commenters suggested that applying the synthesis gas specification was without basis and inappropriate. Commenters reasoned that the purpose of 40 CFR 261.38 was to provide an exclusion from the definition of solid waste for synthesis gas generated by the gasification of hazardous waste. Under the 2002 proposal, they believed EPA was establishing that oil-bearing hazardous secondary materials generated at a petroleum refinery and re-inserted into a gasifier were excluded from the definition of solid waste because gasification was part of the production process. Given that, commenters questioned the Agency's rationale for including a hazardous waste specification to a manufactured fuel product, i.e., a product generated from a fossil fuel. Commenters reasoned that operators of gasification systems did not need a specification for synthesis gas any more than they needed a RCRA specification for gasoline, propane, petroleum coke, or any other legitimate product from a petroleum refining operation. Additionally, some commenters suggested that any questions regarding the quality of the synthesis gas were answered by the use of the synthesis gas as a fuel in power, steam, or hydrogen production on-site (subject to CAA regulations) and should serve to ensure that the synthesis gas was, in fact, a legitimate fuel.

The Agency agrees with the commenters. In this rule, we have determined that gasification is a part of the petroleum refining process and that oil-bearing hazardous secondary materials generated at a petroleum refinery and reinserted back into a gasification system located at a petroleum refinery are excluded from the definition of solid waste, provided the conditions of the exclusion are met. Hence, the Agency concludes that gasification is a legitimate fuel process that does not require a synthesis gas specification as a condition to ensure its legitimacy. Gasification systems when operated at a petroleum refinery take petroleum feedstocks and convert them into a synthesis gas comprised primarily of hydrogen, carbon monoxide, carbon dioxide and methane. Petroleum feedstocks to these systems can include petroleum coke, visbreaker tars, deasphalter pitch, as well as oil-bearing hazardous secondary materials. Available information suggests that the synthesis gas composition remains consistent regardless of the petroleum input feed. Furthermore, when used as a fuel for power generation, information available to the Agency shows that turbine specifications and other equipment specifications drive the fuel specification requirements of the synthesis gas fuel. As such, the Agency has also concluded that applying the synthesis gas specifications at 40 CFR 261.38 as presented in the 2002 proposal does not provide an additional assurance that legitimate fuel operations are occurring at gasifiers located at petroleum refineries. Therefore, in today's final rule, we are not including a condition that requires the synthesis gas generated by the gasification system to meet the specification of 40 CFR 261.38(b). The Agency has determined that the application of a hazardous waste derived synthesis gas specification is an inappropriate use of the synthesis gas specification for gasification operations at a petroleum refining.

However, we note that today's exclusion from the definition of solid waste does not exempt the device from regulation under the applicable CAA standard for the gasification device, co-product recovery units, or any related infrastructure designed to use the synthesis gas fuel to produce electricity.

C. Does the Conditional Exclusion Prohibit Oil-Bearing Hazardous Secondary Materials From Being Placed on the Land Prior to Insertion in the Gasification System?

Yes, the conditional exclusion we are amending (40 CFR 261.4(a)(12)(i)) prohibits oil-bearing hazardous secondary materials from being placed on the land prior to insertion into the petroleum refining process. This prohibition will not change with the addition of gasification as a listed petroleum refining process.

In the proposed rule, we explained our view that this condition (i.e., no placement on the land prior to re-insertion into the petroleum refining process) further defines gasification of excluded oil-bearing hazardous secondary materials as a legitimate refining operation for processing these materials because it requires that the excluded materials be handled as a valuable feed to the gasification system. We stated that we knew of no gasification system (or for that matter, any petroleum refinery) which stored these materials on the land, and that to do so would indicate that such oil-bearing hazardous secondary materials are being handled more like waste, and not as a feedstock (since because of the physical characteristics of these oil-bearing materials, the potential for them not to be released could no longer be assured, and there could be large-scale losses of the secondary material due to land placement). Thus, we reasoned that oil-bearing hazardous secondary materials from the petroleum refinery process should preclude storing the material in anything other than a tank, container, or some other device that would contain the material because as

[23] In the proposed rule, we requested comment on a number of approaches to revise the synthesis gas specification found at 40 CFR 261.38(b). In particular, we were interested in soliciting comment on the specifications for highly volatile metals and certain organics.

[24] Commenters took issue with the inadequacy of the synthesis gas specification found at 40 CFR 261.38(b). Commenters believed that the allowable concentration limits for highly volatile metals and certain organics were excessively high, the BTU value was too low, and the specification was not based on actual synthesis gas from a gasification unit. Commenters noted the Agency was challenged on the synthesis gas specification in the Comparable Fuels Rule by the Sierra Club, Natural Resources Defense Council, and the Environmental Technology Council in *Chemical Manufacturers Association* v. *EPA*, No. 98–1375 (DC Cir. Filed August 17, 1998). The case is currently being held in abeyance by the DC Circuit Court. Because the Agency has decided not to require the synthesis gas fuel meet the specifications found at 40 CFR 261.38(b), specific comments on the appropriate specification requirements are not being addressed in this rulemaking.

far as we knew, the oil-bearing hazardous secondary materials were generally comprised of tar-like, oily substances not amenable to land storage or placement.

Most of the commenters agreed with our position that some type of restriction was appropriate to prevent the oil-bearing hazardous secondary materials from being placed or stored on the land. However, some commenters did not completely agree with our characterization of these materials (i.e., tar-like oily substances) and suggested that the prohibition take into account the physical characteristics of the oil-bearing hazardous secondary materials before a total prohibition on land placement was implemented. For example, some commenters believed that the prohibition should only apply to those hazardous secondary materials that are tar-like oily substances, while other commenters suggested that we modify the wording of the prohibition to allow for land placement of hazardous secondary materials if it would not endanger the environment. One commenter stated that the hazardous secondary materials they received from a petroleum refinery could be described as chunky, angular, blocky or coarse particulates and could be safely managed on the land. However, these commenters did not provide EPA with any characterization data that would support their claims.

Given that these hazardous secondary materials would be hazardous waste if discarded instead of being gasified, and given that land placement of these types of oil-bearing hazardous secondary materials is not typical before they are reinserted back into the petroleum refinery, we see no reason to relieve them from the existing prohibition against land placement for all oil-bearing hazardous secondary materials prior to re-insertion into the petroleum refining process (i.e., gasified). This approach maintains full regulatory consistency with the exclusion found at 40 CFR 261.4(a)(12)(i) which is being amended today to include gasification as an identified petroleum refining process.

D. Does the Conditional Exclusion Prohibit Oil-Bearing Hazardous Secondary Materials From Being Speculatively Accumulated Prior to Insertion in the Gasification System?

Yes. In today's rule, the conditional exclusion we are amending (40 CFR 261.4(a)(12)(i)) includes the requirement that the oil-bearing hazardous secondary materials not be speculatively accumulated prior to insertion into the petroleum refining process. This provision will not change with the addition of gasification as a listed petroleum refining process.

In the proposed rule, we stated that the speculative accumulation provision ensures that legitimate quantities of oil-bearing hazardous secondary materials are being recycled and re-inserted into the petroleum refining process rather than being stored to avoid regulation. We reasoned that this condition was necessary to assure that recycling actually occurs, and that such materials are not discarded by being stored for extended periods of time. Furthermore, we stated that this condition is consistent with the no speculative accumulation condition we adopted for excluded oil-bearing hazardous secondary materials returned to the petroleum refinery process (40 CFR 261.4(a)(12)(i)).

As such, we are promulgating, as proposed, the speculative accumulation provision for oil-bearing hazardous secondary materials prior to their insertion into the petroleum refinery process. This requirement should ensure that such materials are not ''over accumulated,'' an indication of discard, but are being legitimately recycled, which maintains regulatory consistency with the existing exclusion we are amending at 40 CFR 261.4(a)(12)(i).

E. Does the Conditional Exclusion Regulate Certain Metals in Residuals Generated from the Gasification Process?

No. In today's final rule, we are removing the proposed condition that materials (both co-products and residues) generated by the gasification system not exceed the nonwastewater Universal Treatment Standards (UTS) (40 CFR 268.48) for antimony, arsenic, chromium, lead, nickel, and vanadium when placed on the land.[25] Under today's rule, and consistent with both the proposal and the existing exclusion found at 40 CR 261.4(a)(12)(i), we are classifying residues generated after the gasification process as newly generated. The determination as to whether the gasification residues (i.e., waste) or any other residue generated after reinsertion into the petroleum refining process are hazardous will be based on whether the residues exhibit a hazardous waste characteristic(s) when generated (i.e., after the oil-bearing hazardous secondary material is gasified). Should a residue exhibit a characteristic, such as leaching toxic metals at levels above the prescribed standards, it will be required to be managed in compliance with all applicable RCRA hazardous waste regulations, including the Land Disposal Restrictions (see 40 CFR 268.48).[26] As for co-products, they are fully excluded as products and are outside RCRA jurisdiction unless discarded and/or disposed.

In our proposed rule, we requested comment on a condition to the exclusion establishing leachate limits for six toxic metals in the gasification co-products and residuals prior to any placement on the land. We considered this condition to ensure that co-products and residues generated by the gasification process and that were to be placed on the land did not contain toxic metals with a potential for leaching greater than allowed by the requirements of the Land Disposal Restrictions (LDR) program. (See 67 FR at 13691, March 25, 2002.) In developing this possible condition, we were influenced by the condition established for hazardous waste-derived products that are used in a manner constituting disposal (see 40 CFR 266.20). These materials are required to meet the appropriate LDR treatment standards prior to use as products applied to the land (e.g., fertilizers). We reasoned that requiring this same condition for co-products and residuals would ensure legitimate fuel manufacturing by applying the same land disposal provisions to the co-products and residuals that would have existed had the material (i.e., the listed waste) not been excluded from the definition of solid waste. Further, it was reasoned that this proposed condition would be needed to assure that the gasification system is operated for the purpose claimed—conversion of organic matter in the hazardous secondary materials into fuels (or intermediates), while removing metals from raw synthesis gas and trapping those metals in an inert matrix. The levels in the proposed condition would provide a means of quantifying this premise.

We received comments that both supported and opposed this condition. Commenters opposed to the condition stated that there was no need to impose the UTS requirements, beyond what the regulations (*e.g.,* 40 CFR 261.4(a)(12)(i)) already required for residues generated from the petroleum refining process (*i.e.,* the characteristic test), and that EPA had provided no rationale for imposing the additional UTS

[25] Universal Treatment Standards (UTS) are concentration-based treatment levels that must be met before a RCRA hazardous waste can be land disposed. These treatment standards can be found in 40 CFR 268.40.

[26] If the Agency receives evidence to suggest that these gasification residues routinely have the potential to adversely affect human health and the environment, the Agency could list them as hazardous under RCRA.

requirements. As proposed, the condition would apply to any residual regardless of its characteristic determination. Other commenters, however, believed that EPA had not gone far enough, and that the residuals generated during the gasification process should be certified to meet all the nonwastewater UTS (both organic and inorganic constituents). Without such limits on hazardous organics, the commenters argued that substantial releases to the environment might occur because these residuals would be allowed in landfills not subject to subtitle C regulations.

The Agency rejects the suggestion of the commenters that gasification residuals should be tested for all UTS constituents. As a result of studies and analyses conducted by EPA in support of the listing determinations for petroleum refinery wastes, as well as development of the LDR treatment standards for these wastes, the characterization of these materials is well documented, and does not represent all the UTS constituents. The suggestion that it is necessary to require these residuals meet all the nonwastewater UTS for all organic and inorganic constituents is therefore without technical justification.

In response to the commenters arguing against imposing the UTS requirements for the six metals, the Agency set about establishing further justification for this condition. This began with a more detailed analysis of the characterization data for petroleum refining waste collected as part of the LDR program. We reviewed available data presented in various Treatment Technology Background Documents to get a better understanding of the total concentration levels of these six metals in the listed waste. As a result of this effort, we were able to collect concentration data for nine listed petroleum refining wastes. Next, based on information collected as part of the proposed rule, as well as information presented in two recent DOE studies, we developed gasification scenarios using a combination of petroleum coke and oil-bearing hazardous secondary materials as feedstock to gasifiers with different feed rates.[27] As a result of this analysis, we concluded, based on two scenarios we believe are most representative of possible gasification activities at petroleum refineries, that gasification residues would achieve the UTS levels for all metals, except for vanadium in one scenario and chromium in the other. With regard to chromium, the concentration level was below the characteristic level, but above the UTS level. As for vanadium, it was determined that petroleum coke (a product) contributed most of the vanadium to the gasifier, and that vanadium concentrations in the gasification residuals would not be affected when feeding petroleum coke alone or in combination with oil-bearing hazardous secondary materials.

Although this analysis showed chromium levels above the UTS in one scenario, the Agency is convinced that chromium concentrations in oil-bearing hazardous secondary materials have decreased from the levels found in our characterization studies, which were conducted in 1988, 1992, and 1998 and therefore will be lower than what we used in our analysis (*i.e.*, the gasification residuals will have concentration levels below the UTS). This is based on information in the preamble for the August 1998 listing rule promulgating the exclusion at 261.4(a)(12)(i) that indicates that chromium levels in these hazardous secondary materials will decrease due to a prohibition on chromium-based water treatment chemicals in industrial cooling towers, as a result of Clean Air Act requirements (see 40 CFR part 63, subpart Q.)[28] Furthermore, EPA believes that not only for chromium, but lead concentrations (which are below the UTS levels in the analysis we conducted) in the secondary materials will decline with time. This is due to the overall reduction in the use of these metals throughout the refinery (*e.g.,* leaded gasoline is no longer produced). In conclusion, as a result of the additional analysis conducted in response to commenters concerns regarding the imposition of the UTS requirements, as well as our decision to amend 40 CFR 261.4(a)(12)(i) because we have determined that gasifiers are a part of the petroleum refinery process, the Agency has eliminated the condition requiring material generated by the gasification system to meet the UTS standards for antimony, arsenic, chromium, lead, nickel, and vanadium prior to their placement on the land. As such, oil-bearing hazardous secondary materials inserted to the gasification system, like other petroleum refining processes, are excluded from the definition of solid waste, at the point of generation, provided the conditions of the exclusion are met. Residuals generated after the gasification process are, therefore, considered a new point of generation. If a gasifier residual is determined to be characteristically hazardous, it must be managed as a hazardous waste (if discarded), including being treated to the UTS. These standards would require treatment for the characteristic, as well as any underlying hazardous constituents reasonably expected to be present. Underlying hazardous constituents include both organic and inorganic constituents. This is consistent with the current petroleum refinery exclusion found at 40 CFR 261.4(a)(12)(i), and addresses our greatest concern—assuring that gasification residues do not create potential risks when disposed.

As a final note, the Agency distinguishes between residuals generated from the gasifier and those residuals generated from the processing of oil-bearing hazardous secondary materials before they are reinserted into the petroleum process. EPA discussed in the final rule for the petroleum refinery exclusion (63 FR 42110, August 6, 1998), that some oil-bearing hazardous secondary materials cannot be directly inserted into a particular petroleum refining process, and therefore may require some type of processing or preparation beforehand (*e.g.*, centrifugation, desorption, settling, etc.). See 63 FR at 42113–42114, 42128. These activities are generally viewed as part of normal petroleum refining operations.

During the 1998 rulemaking, however, we were particularly concerned with the management of any residuals generated from the processing or recycling of oil-bearing hazardous secondary materials prior to or before insertion back to the petroleum refining process, and thus developed an approach to ensure that if such residuals are discarded, that they continue to be managed appropriately. In the 1998 final rule, we clarified that the exclusion for oil-bearing hazardous secondary materials returned to the petroleum refining process only extends to the materials actually inserted into the petroleum refinery process, and any residuals generated from recycling or processing oil-bearing hazardous secondary materials prior to insertion into the refining process that: (1) Would have otherwise met a listing description when originally generated; and (2) are disposed of or intended for disposal, are designated as F037 waste and must be managed in accordance with all the applicable Subtitle C RCRA hazardous waste requirements. The language was

[27] See the memorandum to the record from Ms. Elaine Eby, USEPA. Re: Characterization of Petroleum Refining Waste and Possible Gasification Scenarios. August 2007.

[28] On September 8, 1994 (59 FR 46339), EPA issued a final MACT rule that eliminated the use of chromium-based water treatment chemicals and subsequently chromium compound emissions from industrial process cooling towers.

intended to clarify that residuals that are not ultimately inserted are not excluded, and that these discarded residuals are classified as F037 waste.

The Agency did not include in the F037 listing residuals generated after reinsertion into the petroleum refining process, *e.g.*, coke fines from coking operations. These types of residues generated after insertion into the petroleum refining process, are considered newly generated waste subject to the characteristic test, and not F037 waste. This is the exact reasoning we are applying to today's rule, *i.e.*, if residuals are generated as a result of the processing of oil-bearing hazardous secondary materials prior to gasification, and if these residuals are intended for discard and the original oil-bearing hazardous secondary materials was a listed waste, these residuals are classified as F037 waste. Similarly, if the original waste exhibited one or more hazardous waste characteristics, and the processing, prior to gasification, resulted in a residual destined for disposal, that residue would be characterized as a newly generated waste, subject to the characteristic test.

F. Does the Conditional Exclusion Require Additional Recordkeeping and Reporting Requirements?

No. Under today's rule, no additional recordkeeping or reporting requirements will be required. Under the exclusion at 40 CFR 261.4(a)(12)(i), oil-bearing hazardous secondary materials are not solid wastes, for purposes of Subtitle C regulation, and therefore are not (by definition) hazardous wastes from the point of generation. Therefore, requirements that normally apply to the management of hazardous wastes, such as notification or the use of a hazardous waste manifest, do not apply to these materials, provided the conditions of the exclusion are satisfied.[29]

In the approach used for the proposed rule, oil-bearing hazardous secondary materials could be processed in a gasification system either on-site or off-site of a petroleum refinery (*i.e.*, materials could be sent to gasifiers at facilities that are not located within petroleum refineries (SIC 2911)). We noted that allowing these materials to go to facilities outside the petroleum refining industry was somewhat different and more expansive than what was permitted for the other processes previously included in 40 CFR 261.4(a)(12)(i). Because of this expansion, we asked for comment on whether additional records and/or reporting requirements might be necessary. We proposed this alternative strategy (*i.e.*, gasification facilities could be located either on-site or off-site of a petroleum refinery) because we believed that excluding oil-bearing hazardous secondary materials processed in gasification systems operating physically outside of a petroleum refinery could still be an extension of the petroleum refining process. It is not unusual for the refining of oil into fuels to occur at multiple locations.

Many commenters generally were supportive of allowing off-site facilities as part of the exclusion. However, there were some commenters that strongly believed that gasification should only occur at a petroleum refinery. Commenters supporting off-site gasification agreed with the Agency's assessment that any gasification process operated off-site would be technically indistinguishable from the types of gasifiers operated at a petroleum refinery. One commenter believed that generators would be better served by transporting the oil-bearing hazardous secondary materials to a centralized processing facility for conversion to synthesis gas, and if the exclusion is not extended to ''off-site'' gasification, the exclusion would be meaningless and have limited, if any, practical use.

The Agency recognizes and agrees, in part, with the potential flexibility afforded to petroleum refineries that have an option of using off-site gasification facilities (*i.e.*, gasification systems not located at a petroleum refinery). However, we have decided not to promulgate this aspect of the rule. The Agency has concluded that a gasification operation located off-site of a petroleum refinery is inconsistent with our basic premise for promulgating this exclusion—gasification is a part of the petroleum refining process. As such, EPA is electing to simplify its approach today by allowing this exemption only for facilities that clearly meet the definition of petroleum refineries.[30] It should be noted, however, that under the provisions of the exclusion, oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another petroleum refinery, and still be excluded under this provision.[31]

VI. What Will the Effect of the Final Rule Be on Recycling and Energy Recovery?

Predicting the impacts of any rule is a difficult task. In most cases, the marketplace determines the adoption of new technologies and/or practices. In the case of gasification, it is doubly difficult as both the waste management market and the fuels market will impact adoption of the technology more than any regulatory provision. Today's conditional exclusion provides operators of petroleum refineries an option to consider. This does not mean that every petroleum refinery will adopt this technology as part of their operations, but it may mean that some will adopt the technology to provide for power or steam production less expensively, or for the generation of hydrogen used elsewhere in the petroleum refining process, or sold as a fuel or feedstock. What the rule does do is provide operational flexibility to allow petroleum refiners to adopt a technology that generates valuable products as a result of processing oil-bearing hazardous secondary materials that can and have historically been managed as solid and hazardous waste. With this rulemaking, petroleum refiners can decide whether to invest in the development of gasification with the knowledge that it will also allow them to increase their production efficiency and reduce their costs through the conversion of these materials.

VII. How Will These Regulatory Changes Be Administered and Enforced in the States?

Under section 3006 of RCRA, EPA may authorize qualified states to administer their own hazardous waste

[29] It should be noted, however, that under 40 CFR 261.2(f) documentation is necessary to demonstrate that the conditions of an exclusion have been met. 40 CFR 261.2(f) does not contain specific record keeping requirements, but it does require the respondent to bear the burden of showing, through appropriate documentation, that the excluded material is being processed in a manner that meets the conditions in the claimed exclusion.

[30] It should be noted that petroleum refineries that ship oil-bearing hazardous secondary materials to an off-site gasification system not located at a petroleum refinery (SIC 2911) would not meet the conditions of this exclusion and would be subject to the appropriate Subtitle C regulations. See, for example, the Synthesis Gas Rule at 40 CFR 261.38(b). Furthermore, a gasification facility that accepts oil-bearing hazardous secondary materials from a petroleum refinery can not claim to be part of the petroleum refining process and utilize this exclusion, even if the synthesis gas is sent back to the petroleum refinery for use. However, we do recognize that there will be situations where petroleum gasification facilities are built in close proximity (*e.g.*, adjoining land) and are part of the petroleum refining facility. In general, such facilities would be within the scope of the exemption being promulgated today.

[31] See the February 8, 2002 letter from Mr. Robert Springer, Director of the Office of Solid Waste to Mr. Rob Short, Managing Director Tetra Process Services, L.C. In this letter, Mr. Short posed twelve detailed questions concerning the regulatory status of oil-bearing hazardous secondary materials under the RCRA. Specifically, clarification was requested on numerous aspects of the exclusion at 40 CFR 261.4(a)(12)(i).

programs in lieu of the federal program within the state. Following authorization, EPA retains enforcement authority under sections 3008, 3013, and 7003 of RCRA, although authorized states have primary enforcement responsibility. The standards and requirements for state authorization are found at 40 CFR Part 271.

Prior to enactment of the Hazardous and Solid Waste Amendments of 1984 (HSWA), a state with final RCRA authorization administered its hazardous waste program entirely in lieu of EPA administering the federal program in that state. The federal requirements no longer applied in the authorized state, and EPA could not issue permits for any facilities in that state, since only the state was authorized to issue RCRA permits. When new, more stringent federal requirements were promulgated, the state was obligated to enact equivalent authorities within specified time frames. However, the new federal requirements did not take effect in an authorized state until the state adopted the federal requirements as state law.

In contrast, under RCRA section 3006(g) (42 U.S.C. 6926(g)), which was amended by HSWA, new requirements and prohibitions imposed under HSWA authority take effect in authorized states at the same time that they take effect in unauthorized states. EPA is directed by the statute to implement these requirements and prohibitions in authorized states, including the issuance of permits, until the state is granted authorization to do so. While states must still adopt HSWA related provisions as state law to retain final authorization, EPA implements the HSWA provisions in authorized states until the states do so.

Authorized states are required to modify their programs only when EPA enacts federal requirements that are more stringent or broader in scope than existing federal requirements. RCRA section 3009 allows the states to impose standards more stringent than those in the federal program (see also 40 CFR 271.1). Therefore, authorized states may, but are not required to, adopt federal regulations, both HSWA and non-HSWA, considered less stringent than previous federal regulations.

Today's exclusion is finalized pursuant to non-HSWA authority and is considered to be less stringent than the current federal requirements. Therefore, states will not be required to adopt and seek authorization for the finalized changes. EPA will implement the changes to the exemptions only in those states which are not authorized for the RCRA program. Nevertheless, EPA believes that this rulemaking has considerable merit, and we thus strongly encourage states to amend their programs and become federally-authorized to implement this rule.

VIII. What Are the Costs and Benefits of the Final Rule?

The costs and benefits of any regulatory action are traditionally measured by the net change in social welfare that it generates. The Agency's economic assessment conducted in support of today's final rule evaluates costs, cost savings (benefits), waste quantities affected, and other impacts, such as environmental justice, children's health, unfunded mandates, regulatory takings, and small entity impacts. To conduct this analysis, we prepared a baseline characterization for waste management and gasification at petroleum refineries, developed and implemented a methodology for examining impacts, and followed appropriate guidelines and procedures for examining equity considerations, children's health, and other impacts. Because EPA's data are limited, the estimated findings from these analyses should be viewed as national, not site-specific impacts.

Proper baseline specification is vital in the assessment of incremental costs, benefits, and other economic impacts associated with a rule that would expand the exclusion for oil-bearing hazardous secondary materials that are utilized to generate fuels and other chemicals. The baseline essentially describes the world absent any expanded exclusion. The incremental impacts of today's final rule are evaluated by predicting post-rule responses with respect to baseline conditions and actions. The baseline, as applied in this analysis, is assumed to be the point at which the final rule is published. A full discussion of baseline specifications is presented in the economic assessment document completed for this rule.[32]

As outlined above, the final rule creates an exclusion for oil-bearing hazardous secondary materials generated at a petroleum refinery if this material is used at a petroleum refinery as an input for the production of synthesis gas. Because not all petroleum refineries will elect to include a gasification system as part of their petroleum refinery, the impacts of the final rule will depend significantly on the number of petroleum refineries that decide to adopt the technology and use the exclusion and the baseline waste management practices of these petroleum refineries. To account for these factors in this analysis, a bottom-up analytic approach was developed for estimating impacts based on the decisions of individual petroleum refineries to exclude or not exclude their oil-bearing hazardous secondary materials under the final rule. The analysis of each affected petroleum refinery begins by estimating the likely costs and benefits associated with its potential use of the exclusion. A key assumption of the analysis is that a petroleum refinery will divert its oil-bearing hazardous secondary materials to gasification if the following two conditions apply: (1) The benefits realized by the petroleum refinery if it uses the exclusion exceed the related costs, and (2) the benefits realized by the gasification system receiving the petroleum refinery's oil-bearing hazardous secondary materials exceed the costs associated with accepting this material.

After determining whether a petroleum refinery is likely to divert its oil-bearing hazardous secondary materials to gasification, we estimate the total impacts associated with its decision to use or not use the exclusion. If the petroleum refinery is unlikely to use the exclusion, we assume zero impacts. If the analysis suggests that the petroleum refinery will use the exclusion, we estimate impacts as the sum of three items: (1) The savings that the petroleum refinery will experience by diverting its oil-bearing hazardous secondary materials to gasification, (2) savings for the petroleum refinery that receives this material and uses it as a feedstock in its gasification system, and (3) indirect third-party costs. Indirect third-party costs include increased virgin fuel and material costs for facilities that receive and manage the petroleum refinery's oil-bearing hazardous secondary materials in the baseline (*i.e.,* prior to the promulgation of the final rule) and either burn it for energy recovery or recycle it to recover metals or other valuable materials.

To complete our analysis and estimate the total impacts of the final rule, we summed the impacts associated with oil-bearing hazardous secondary materials diverted to gasification under the exclusion. In addition, we assessed the impacts of the rule under two scenarios to account for uncertainty in the operational status of gasification systems that are planned, but have not yet gone online: a low-capacity scenario reflecting existing gasification capacity

[32] *Assessment of the Potential Costs, Benefits, and Other Impacts of the Exclusion for Gasification of Petroleum Oil-Bearing Secondary Materials—Final Rule,* August 2007.

and a high-capacity scenario reflecting existing and planned capacity.

This rule is projected to result in a benefit to society in the form of net cost savings to the private sector, on a nationwide basis, thereby allowing for the more efficient use of limited resources elsewhere in the market. For more detail regarding the data sources, key assumptions, and any limitations associated with the analyses of the economic impacts, the reader is referred to the economic assessment document completed for this rule, which can be found in the docket to this rulemaking.

As described in the methodology overview in EPA's economic assessment document, we estimated the impacts of the final rule under two gasification capacity scenarios: (1) A low-capacity scenario that reflects the capacity of the three petroleum refinery gasification systems that are known to be operating; and (2) a high-capacity scenario that reflects the capacity of these three systems plus two additional units that were planned as of 2003, but have not yet gone online. Results for both of these scenarios are presented as a range of the potential net social benefits of the rule, in order to help account for the uncertainty regarding the future operational status of planned units not yet in operation.[33]

The central conclusion of our analysis states that approximately 324,300 tons of oil-bearing hazardous secondary materials generated by 152 refineries would qualify for the exclusion each year. Of this quantity, petroleum refineries currently send approximately 205,500 tons offsite for disposal or recycling; the remaining 118,800 tons are processed onsite. Of the 324,300 tons of oil-bearing hazardous secondary materials qualifying for the exclusion, between 123,300 and 177,000 tons are likely to be excluded by petroleum refineries each year. This represents approximately 38 percent to 55 percent of the material eligible for the exclusion.

We estimate that the rule will yield between $46.4 million and $48.7 million in net social benefits per year. Avoided waste management costs make up the most significant share of the benefits of the rule, followed by feedstock savings for gasification systems. Commercial waste management facilities that manage oil-bearing hazardous secondary materials in the baseline may experience annual revenue losses of $10.8 million to $15.1 million under the final rule. Based on the limited data available on the revenues of these facilities, this loss represents a small fraction of their revenues. The impact of the final rule depends significantly on the cost of incineration. The impacts reflect the average cost of incinerating bulk sludge, as reported by the Environmental Technology Council (ETC). If we use the low end of ETC's cost range, the net social benefits of the rule decline to $5.2 million to $25.5 million per year.[34]

IX. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a ''significant regulatory action.'' It has been determined that this rule is a ''significant regulatory action'' because it raises novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order. Accordingly, EPA submitted this rule to the Office of Management and Budget (OMB) for review under Executive Order 12866 and any changes made in response to OMB recommendations have been documented in the docket for this action.

In addition, EPA prepared an analysis of the potential costs and benefits associated with this action. As indicated above, the annual cost savings of the rule are estimated to be $46.4 million to $48.7 million. This analysis is contained in the document ''Assessment of the Potential Costs, Benefits, and Other Impacts of the Exclusion for Gasification of Petroleum Oil-Bearing Secondary Materials—Final Rule.'' A copy of the analysis is available in the docket for this regulation.

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* EPA is amending an existing exclusion from the definition of solid waste that applies to hazardous secondary materials generated at a petroleum refinery when these materials are inserted back into the petroleum refining process (see current exclusion found at 40 CFR 261.4(a)(12)(i)). With today's final rule, the conditional exclusion will be revised to add ''gasification'' to the list of identified petroleum refinery processes into which hazardous secondary materials can be legitimately recycled. Materials excluded under 40 CFR 261.4(a)(12)(i) are not solid wastes for purposes of Subtitle C regulation, and therefore are not (by definition) hazardous wastes from the point of generation. Therefore, requirements that normally apply to the management of hazardous wastes, such as notification or the use of a hazardous waste manifest, do not apply to these materials, provided the conditions of the exclusion are satisfied.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes 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 be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. 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 in 40 CFR are listed in 40 CFR Part 9.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 *et seq,* generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act, or any other statute. This analysis must be completed unless the agency is able to certify that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entities are defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently

[33] The IGCC unit located at the El Dorado, Kansas Refinery was used as part of this analysis. However, as of 2006, this unit is no longer in operation.

[34] ETC, Incinerator and Landfill Cost Data, *http://www.etc.org/costsurvey8.cfm,* accessed September 8, 2006.

owned and operated and is not dominant in its field.

After considering the economic impacts of today's rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. In determining whether a rule has a significant economic impact on a substantial number of small entities, the impact of concern is any significant adverse economic impact on small entities, since the primary purpose of the regulatory flexibility analyses is to identify and address regulatory alternatives ''which minimize any significant economic impact of the rule on small entities.'' 5 U.S.C. 603 and 604. Thus, an agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, or otherwise has a positive economic effect on all of the small entities subject to the rule.

The final rule is projected to result in benefits/cost savings for those petroleum refineries that use the exclusion. In addition, those petroleum refineries that choose not to take advantage of the subject exclusion would experience no direct impact from this final rule. Consequently, the rule is not expected to adversely affect small entities that generate oil-bearing hazardous secondary materials eligible for the exclusion. Nevertheless, we developed facility-specific impact estimates for petroleum refineries that may be classified as small entities to show how they would likely benefit from the final rule. The SBA considers a petroleum refinery to be a small business if it has ''no more than 1,500 employees or more than 125,000 barrels per calendar day total Operable Atmospheric Crude Oil Distillation capacity.'' Based on the available data, it is not feasible to measure the distillation capacities of each refinery affected by the rule; therefore, we relied on facility employment data to determine which petroleum refineries are small entities. Our analysis of employment data suggests that 37 of the 152 refineries affected by the rule are small entities.

The benefits (cost savings) of the final rule on each small business are expected to range from $0 to $2.0 million per year. It is further estimated that the aggregate small entity impacts total $2.1 million to $2.5 million per year in cost savings, which represents 4.3 to 5.4 percent of the annual impact of the final rule. Similarly, the quantity of material eligible for the exclusion that is generated by small businesses, 16,895 tons, accounts for 5.2 percent of the total oil-bearing hazardous secondary materials tonnage eligible for the exclusion. We have therefore concluded that today's final rule will relieve regulatory burden for affected small entities.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of 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. Before promulgating an EPA rule for which a written statement is needed, 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, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Based on these criteria set forth by the UMRA, the final rule does not contain a significant unfunded mandate. As reported in the analytic results presented above, the rule is not likely to result in annualized costs of $100 million or more, either for the private sector or for state, local, and tribal governments.

Today's rule contains no federal mandates (under the regulatory provisions of Title II of the UMRA) for state, local, or tribal governments or the private sector, as the rule imposes no enforceable duty on any State, local or tribal governments or the private sector. Furthermore, EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. Thus today's rule is not subject to the requirements of sections 202 and 205 of UMRA.

E. Executive Order 13132: Federalism

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

This final rule does not have Federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, because it will not impose any requirements on states or any other level of government. Thus, the requirements of Section 6 of the Executive Order do not apply to this rule.

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

Executive Order 13175, entitled ''Consultation and Coordination With Indian Tribal Governments'' (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' This final rule does not have tribal implications, as specified in Executive Order 13175. No Tribal governments are known to own or operate petroleum refineries that generate oil-bearing hazardous secondary materials subject to the final rule. Thus, Executive Order 13175 does not apply to this rule.

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

Executive Order 13045, ''Protection of Children From Environmental Health

Risks and Safety Risks'' (62 FR 19885, April 23, 1997), applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have 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.

EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Order has the potential to influence the regulation. This final rule is not subject to Executive Order 13045 because it does not establish an environmental standard intended to mitigate health or safety risks.

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

This rule is not a ''significant energy action'' as defined in Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355 (May 22, 2001)), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. On the contrary, this rule is expected to result in energy savings, as described below.

EPA estimates that of the 324,300 tons of oil-bearing hazardous secondary material qualifying for the exclusion, approximately 36,735 tons are currently managed through energy recovery in the baseline. Based on the results of our analysis, we estimate that between 3,700 to 18,700 tons of the 36,735 tons currently being reported as being recovered (e.g., managed) for energy recovery will be diverted to gasification at petroleum refineries as a result of the final rule. This represents an energy loss of 19,800 to 101,300 MMBtu for facilities that manage this material for energy recovery in the baseline. This is the equivalent of 3,400 to 17,500 barrels of crude oil per year.[35] The petroleum refineries that gasify this oil-bearing hazardous secondary material under the final rule, however, would use the resulting synthesis gas as a fuel for the production of power or other petroleum products, which would (at least partially) offset the 19,800 to 101,300 MMBtu energy loss mentioned above. Moreover, gasification of the 119,600 to 158,300 tons of excluded material not burned for energy recovery in the baseline would yield additional energy savings. Assuming that all of the energy content of this material is retained in the resulting synthesis gas, the gasification of this material represents energy savings of 648,300 to 858,000 MMBtu per year. Therefore, accounting for the estimated energy loss of 19,800 to 101,300 MMBtu associated with oil-bearing hazardous secondary materials burned for energy recovery in the baseline, this rule could yield a net energy savings ranging from 628,500 to 756,700 MMBtu per year.

I. National Technology Transfer and Advancement Act of 1995

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

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

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

Executive Order 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment.

Under the final rule, EPA estimates that 123,000 to 177,000 tons of oil-bearing hazardous secondary materials will be diverted to gasification processes from their baseline disposition at hazardous waste treatment, storage, and disposal facilities (TSDFs). As such, the final rule will concentrate the processing of excluded material at the limited number of petroleum refineries that could potentially use this material as a feedstock under the final rule. However, EPA does not believe that gasification of this material represents a greater risk to the public than baseline management practices. Rather than managing the excluded material as hazardous waste and transporting it to more widely dispersed TSDFs, as is currently the case (e.g., under the baseline), the final rule would help limit distribution of these materials such that they are instead managed at their source of generation (e.g., petroleum refineries).

EPA also assessed the demographic characteristics of populations living within a one-mile radius of petroleum refineries with gasification systems using geo-coded data from the U.S. Census Bureau. This analysis shows that the areas surrounding gasification systems affected by the rule have disproportionately high minority and low-income populations when compared to the national average. However, based on a number of published studies, areas in close proximity to TSDFs and combustion facilities also have disproportionately high minority and low-income populations that are similar to or greater than those of petroleum refineries with gasification systems. For instance, among the individuals living within one mile of the existing and planned gasification systems included in our analysis, 15.8 percent are low-income individuals, compared to 15.7 percent and 22.3 percent near TSDFs and hazardous waste combustion facilities, respectively. Similarly, 28.1 percent of the individuals living near existing and planned gasification systems are minorities, compared to 27.2 percent living near TSDFs and 38.3 percent living near hazardous waste combustion facilities. These findings show that the percentages of low-income and minority populations near TSDFs are similar to or greater than those of populations living near petroleum refineries with gasification systems.

The implication of our analyses is that low-income and minority populations

[35] According to the U.S. Energy Information Administration (EIA) Annual Energy Outlook 2006, Table A2, one barrel of crude oil produced has a heat content of 5.8 million Btu.

will not bear a disproportionate share of any human health or environmental effects associated with shifting the processing of excluded oil-bearing hazardous secondary materials to gasification systems. Furthermore, as less oil-bearing hazardous secondary materials will be received by TSDFs and hazardous waste combustion facilities, low-income and minority populations living near these facilities would likely experience a potential reduction in risk under the final rule.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2). This rule will be effective February 1, 2008.

List of Subjects

40 CFR Part 260

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous waste, Reporting and recordkeeping requirements.

40 CFR Part 261

Excluded hazardous waste, Hazardous waste, Recycling, Reporting and recordkeeping requirements.

Dated: December 20, 2007.

Stephen L. Johnson,

Administrator.

■ For the reasons set out in the preamble, 40 CFR chapter I is amended as follows:

PART 260—HAZARDOUS WASTE MANAGEMENT SYSTEM; GENERAL

■ 1. The authority citation for part 260 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921–6927, 6930, 6934, 6935, 6937, 6938, 6939, and 6974.

Subpart B—Definitions

■ 2. Section 260.10 is amended by adding in alphabetical order the definition of ''Gasification'' to read as follows:

§ 260.10 Definitions.

* * * * *

Gasification. For the purpose of complying with 40 CFR 261.4(a)(12)(i), gasification is a process, conducted in an enclosed device or system, designed and operated to process petroleum feedstock, including oil-bearing hazardous secondary materials through a series of highly controlled steps utilizing thermal decomposition, limited oxidation, and gas cleaning to yield a synthesis gas composed primarily of hydrogen and carbon monoxide gas.

* * * * *

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

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

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

■ 4. Section 261.4 is amended by revising paragraph (a)(12)(i) to read as follows:

§ 261.4 Exclusions.

(a) * * *

(12)(i) Oil-bearing hazardous secondary materials (*i.e.*, sludges, byproducts, or spent materials) that are generated at a petroleum refinery (SIC code 2911) and are inserted into the petroleum refining process (SIC code 2911—including, but not limited to, distillation, catalytic cracking, fractionation, gasification (as defined in 40 CFR 260.10) or thermal cracking units (i.e., cokers)) unless the material is placed on the land, or speculatively accumulated before being so recycled. Materials inserted into thermal cracking units are excluded under this paragraph, provided that the coke product also does not exhibit a characteristic of hazardous waste. Oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another petroleum refinery and still be excluded under this provision. Except as provided in paragraph (a)(12)(ii) of this section, oil-bearing hazardous secondary materials generated elsewhere in the petroleum industry (i.e., from sources other than petroleum refineries) are not excluded under this section. Residuals generated from processing or recycling materials excluded under this paragraph (a)(12)(i), where such materials as generated would have otherwise met a listing under subpart D of this part, are designated as F037 listed wastes when disposed of or intended for disposal.

* * * * *

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