

**Protection of Children**

The Coast Guard has analyzed this rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and does not create an environmental risk to health or risk to safety that may disproportionately affect children.

**Indian Tribal Governments**

This rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments because it does not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

**Environment**

The Coast Guard has considered the environmental impact of this rule and concluded that, under Figure 2-1, paragraph 34(g) of Commandant Instruction M16475.1D, this rule is categorically excluded from further environmental documentation. A "Categorical Exclusion Determination" is available in the docket for inspection or copying where indicated under **ADDRESSES**.

**Energy Effects**

The Coast Guard has analyzed this rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that it is not a "significant energy action" under that order because it is not a "significant regulatory action" under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. It has not been designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action. Therefore, it does not require a Statement of Energy Effects under Executive Order 13211.

**List of Subjects in 33 CFR Part 165**

Harbors, Marine safety, Navigation (water), Reporting and record keeping requirements, Security measures, Waterways.

**Regulation**

For the reasons discussed in the preamble, the Coast Guard amends 33 CFR part 165 as follows:

**PART 165—REGULATED NAVIGATION AREAS AND LIMITED ACCESS AREAS**

1. The authority citation for part 165 continues to read as follows:

**Authority:** 33 U.S.C. 1231; 50 U.S.C. 191, 33 CFR 1.05-1(g), 6.04-1, 6.04-6, 160.5; 49 CFR 1.46.

**[§ 165.103 Suspended]**

2. Suspend § 165.103 from June 21, 2002 through August 15, 2002.

3. In temporary § 165.T01-192 revise the section heading and add a new paragraph (c) to read as follows:

**§ 165.T01-192 Safety and Security Zones; LPG Transits, Portland, Maine Marine Inspection Zone and Captain of the Port Zone**

\* \* \* \* \*

(c) *Effective dates.* This section is effective from November 9, 2001 through August 15, 2002.

Dated: April 29, 2002.

**M.P. O'Malley,**

*Commander, Coast Guard, Captain of the Port, Portland, ME.*

[FR Doc. 02-11491 Filed 5-7-02; 8:45 am]

**BILLING CODE 4910-15-P**

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 124****Procedures for Decisionmaking***CFR Correction*

In Title 40 of the Code of Federal Regulations, parts 100 to 135, revised as of July 1, 2001, in § 124.15, on page 266, the third sentence of paragraph (a) is revised, and in § 124.56, on page 276, paragraph (b)(1)(vi) is revised, as follows:

**§ 124.15 Issuance and effective date of permit.**

(a) \* \* \* This notice shall include reference to the procedures for appealing a decision on a RCRA, UIC, PSD, or NPDES permit under § 124.19 of this part. \* \* \*

\* \* \* \* \*

**§ 124.56 Fact sheets (applicable to State programs, see § 123.25 (NPDES).)**

\* \* \* \* \*

(b) \* \* \*

(1) \* \* \*

(vi) Waivers from monitoring requirements granted under § 122.44(a) of this chapter.

[FR Doc. 02-55511 Filed 5-7-02; 8:45 am]

**BILLING CODE 1505-01-D**

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 261**

[SWH-FRL-7208-6]

**Hazardous Waste Management System; Identification and Listing of Hazardous Waste: Spent Catalysts From Dual-Purpose Petroleum Hydroprocessing Reactors**

**AGENCY:** Environmental Protection Agency.

**ACTION:** Notice of availability of response to comments on the scope of petroleum hazardous waste listings.

**SUMMARY:** The Environmental Protection Agency (EPA) today is announcing its decision to maintain its interpretation that under RCRA regulations, spent catalyst wastes removed from dual purpose hydroprocessing reactors at petroleum refining facilities are listed hazardous wastes. This interpretation was previously announced in Agency memoranda dated November 29, 1999 and June 1, 2000. In a **Federal Register** notice published July 5, 2001 (66 FR 35379), EPA announced that it was providing the public an opportunity to comment on the interpretation set forth in these memoranda and that the Agency would issue a second **Federal Register** notice that would announce EPA's decision and provide responses to those comments received. EPA's responses are provided in today's document and in a background document, "Response to Comments: July 5, 2001 FR Notice on Spent Catalysts from Dual-Purpose Petroleum Hydroprocessing Reactors." The regulations addressed in the memoranda and again in today's document were promulgated under the Resource Conservation and Recovery Act (RCRA) on August 6, 1998 (63 FR 42110).

**ADDRESSES:** Supporting materials to this notice are available for viewing in the RCRA Information Center (RIC), located at Crystal Gateway I, First Floor, 1235 Jefferson Davis Highway, Arlington, VA. The Docket Identification Number is F-2002-PR2F-FFFFF. The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, excluding federal holidays. To review file materials, we recommend that you make an appointment by calling (703) 603-9230. You may copy a maximum of 100 pages from any file maintained at the RCRA Docket at no charge. Additional copies cost \$0.15/per page. The docket index and some supporting materials are available electronically. See the beginning of the **SUPPLEMENTARY INFORMATION** section for information on accessing them.

**FOR FURTHER INFORMATION CONTACT:** For general information, contact the RCRA Hotline at (800) 424-9346 or TDD (800) 553-7672 (hearing impaired). In the Washington, DC, metropolitan area, call (703) 412-3323. For information on specific aspects of the information contained in the memoranda discussed below, contact Patricia Overmeyer or Max Diaz of the Office of Solid Waste (5304W), U.S. Environmental Protection Agency Ariel Rios, 1200 Pennsylvania Avenue, NW., Washington, DC 20460. [E-mail addresses and telephone numbers: *Overmeyer.Patricia@epa.gov*, (703) 605-0708; *Diaz.Max@epa.gov*, (703) 308-0439.]

**SUPPLEMENTARY INFORMATION:** The docket index and some supporting documents, including the Response to Comments document, that are in the docket for today's notice also are available in electronic format on the Internet at URL: <http://www.epa.gov/epaoswer/hazwaste/id/petroleum/catalyst.htm>

EPA will keep the official record for this action in paper form. The official record is the paper file maintained at the RCRA Docket, the address of which is in **ADDRESSES** at the beginning of this document.

## I. Background

### A. What is the Reason for Today's Publication?

Today's notice fulfills the terms of a settlement agreement between EPA and the American Petroleum Institute (API), in which the Agency agreed to solicit comment on its interpretation, described in two Agency memoranda, regarding the regulatory status of spent catalysts removed from dual purpose reactors at petroleum facilities and provide the public with responses to comments received. Today's notice provides an overview of the response to comments and announces the availability of a separate, more detailed, response to comments document. In addition, today's notice announces that the Agency is maintaining its interpretation provided in the memoranda dated November 29, 1999 and June 1, 2000 with regard to the hazardous waste listing determinations issued on August 6, 1998. The interpretation is that spent catalysts removed from dual purpose petroleum hydroprocessing reactors are included within the scope of the hazardous waste listings for spent hydrotreating catalysts (K171) or spent hydrorefining catalysts (K172).

### B. Overview of Past Agency Actions

On August 6, 1998, EPA listed as hazardous wastes spent hydrotreating catalysts (K171) and spent hydrorefining catalysts (K172) generated in petroleum refining operations (63 FR 42110). These regulations were promulgated under RCRA, 42 USC 6901, *et seq.* EPA took no action with regard to a third type of spent hydroprocessing catalyst generated by petroleum refineries, hydrocracking catalysts.

Subsequent to the promulgation of the hazardous waste listing determination, a number of industry and environmental groups filed lawsuits challenging the validity of the listings. These cases were consolidated in the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) in *American Petroleum Institute v. EPA*, Docket No. 94-1683.

Among the petitioners was Gulf Chemical and Metallurgical Corporation. Gulf asserted that the final rulemaking did not provide adequate definitions of the spent catalysts covered within the scope of the hazardous waste listing descriptions for K171 and K172. In particular, Gulf stated that the scope of the final listing descriptions did not adequately address the regulatory status of spent catalysts from petroleum hydroprocessing reactors that perform both hydrotreating and hydrocracking functions (*i.e.*, spent catalysts from dual purpose reactors). Gulf pointed out that such dual purpose reactors perform functions meeting both the definitions of "hydrotreating" and "hydrocracking" provided in the Department of Energy's (DOE's) Petroleum Supply Annual (PSA) and presented in the preamble to the August 6, 1998 final petroleum refining listing determination.

After reviewing the issues raised by Gulf in its petition, we concluded that the Agency had no dispute with the petitioner with regard to the regulatory status of spent catalysts removed from dual purpose reactors. In fact, we saw no grounds for Gulf's challenge to the August 1998 rulemaking given that our interpretation of the final listing descriptions for K171 and K172 is that spent catalysts from petroleum hydroprocessing units that perform hydrorefining and hydrotreatment functions are captured by the listing.

Gulf's challenge did, however, serve to highlight the potential for confusion regarding the regulatory status of spent catalysts removed from dual purpose reactors. Although a straight reading of the regulatory language promulgated in the final rule should result in a conclusion that spent catalysts from

units or reactors that perform hydrotreatment or hydrorefining functions are listed hazardous wastes, EPA's Office of Solid Waste decided to issue a memorandum clarifying the regulatory status of spent catalysts from dual purpose petroleum hydroprocessing operations. The memorandum was issued on November 29, 1999, and was distributed to industry trade associations and posted on EPA's "RCRA On-line" website (<http://www.epa.gov/rcraonline>). After the memorandum was issued, Gulf dismissed its lawsuit on the hazardous waste listings (K171 and K172).

The Agency's policy with regard to spent catalysts from dual purpose reactors, as originally expressed in the November 29, 1999 memorandum, is based on the fact that catalysts used in dual purpose reactors enhance the hydrotreatment or hydrorefining of petroleum feedstock. Dual purpose reactors are hydroprocessing reactors that perform hydrotreatment or hydrorefining functions while simultaneously hydrocracking petroleum feedstock. As explained in the memorandum, the fact that such reactors hydrocrack petroleum feedstocks does not exclude the spent catalysts from the hazardous waste listing. It was never the Agency's intent to exclude a spent catalyst from the listings for K171 and K172 on the basis that a spent catalyst is removed from a unit or reactor that hydrocracks petroleum feedstock, when the same unit or reactor also performs a hydrotreating or hydrorefining function.

In February 2000, API filed a lawsuit in the D.C. Circuit challenging the validity of the November 29, 1999 memorandum. *API v. EPA*, Docket No. 00-1069. API, however, agreed to hold this lawsuit in abeyance until the court decided the challenge to the original hazardous waste listing determinations.

While awaiting the opinion of the court in the first API lawsuit, and while the second suit was being held in abeyance, EPA received further inquiries on the regulatory coverage of spent catalysts from dual purpose hydroprocessing reactors. In response to these additional inquiries, EPA distributed a second memorandum on June 1, 2000 further clarifying the scope of the K171 and K172 hazardous waste listings with regard to spent catalysts removed from dual purpose reactors. EPA also responded to two letters from individual petroleum refineries that requested information on the regulatory status of spent catalysts from two specific types of hydroprocessing reactors. These letters are discussed in more detail below, and both letters and

EPA's responses to each are in the docket for this notice.

On June 27, 2000, the D.C. Circuit issued an opinion in the first lawsuit that upheld EPA's hazardous waste listing determinations. *API v. EPA*, 216 F.3d 50. Following the announcement of the court's decision with regard to its petition filed in response to the August 6, 1998 listing determinations, API reactivated its lawsuit on the November 29, 1999 memorandum.

In June 2001, API and EPA entered into an agreement settling the second lawsuit. Under the terms of the settlement agreement, EPA agreed to publish a **Federal Register** notice announcing the opportunity for the public to comment on the Agency's memoranda regarding the regulatory status of spent catalysts removed from dual purpose reactors. We published this notice in the **Federal Register** on July 5, 2001.

In the settlement agreement, EPA also agreed to publish a second notice, after evaluating the public comments received in response to the first notice. In the July 5, 2001 notice, we explained that the second **Federal Register** notice would serve as an announcement of EPA's decision either to maintain, and possibly clarify, the positions expressed in the memoranda or to change them. Today's notice serves as the second notice that EPA agreed to publish and completes the activities that EPA agreed to undertake in our settlement agreement with API.

### C. What Are Dual Purpose Reactors?

Petroleum refineries use hydroprocessing units to prepare residual stream feedstocks for cracking and coking units and to polish final products (e.g., diesel fuels). Hydroprocessing reduces the boiling range of petroleum feedstock and removes substantial amounts of impurities from the feed.<sup>1</sup> During hydroprocessing, molecules in petroleum feedstock are split or saturated in the presence of hydrogen. Hydroprocessing is a broad term encompassing the more specific processes of hydrotreating, hydrorefining, and hydrocracking. Hydroprocessing reactors that hydrotreat petroleum feedstock stabilize the feed and remove impurities catalytically and react the feed with hydrogen. Hydrotreating includes the removal of sulfur, nitrogen, metals, and other impurities from petroleum

feedstocks. Spent catalysts removed from hydrotreating reactors are listed hazardous wastes (K171). Hydrorefining also removes impurities, but uses more severe operating conditions than hydrotreating, and treats heavier molecular weight petroleum fractions (e.g., residual fuel oil and heavy gas oil). Spent catalysts removed from hydrorefining reactors also are listed hazardous wastes (K172).

Hydrocracking is a process in which the primary purpose is to reduce the boiling range of petroleum feedstocks.

Hydrocracking involves the breaking down of higher molecular weight hydrocarbons to lighter components with an infusion of hydrogen and in the presence of heat. In the August 6, 1998 final rule, EPA did not make a listing determination for spent catalysts from petroleum hydrocracking reactors and these spent catalysts are not currently listed as hazardous wastes.

Dual purpose hydroprocessing reactors are designed to process petroleum feedstocks by both hydrotreating (or hydrorefining) the feedstock (i.e., removing sulfur, nitrogen, metals, and/or other impurities) and hydrocracking the feedstock (i.e., reducing boiling points). The impurities are removed from the feedstock and become deposited on the spent catalyst. Given that the catalysts in dual purpose reactors are used to promote a hydrotreating or hydrorefining function, as well as a hydrocracking function, such catalysts when spent, are listed hazardous wastes under the plain language of the regulation. Although some commenters argue that dual purpose reactors fall within the definition of "hydrocracking" provided in DOE's Petroleum Supply Annual (see 63 FR 42110, at 42155), we point out that these units also clearly fall within the definition of "hydrotreating" included in the Petroleum Supply Annual. We include spent catalysts removed from dual purpose units within the scope of the hazardous waste listings based on the fact that these units perform hydrotreating or hydrorefining functions. We disagree with API's apparent view that the definitions are mutually exclusive and that a unit that can be described legitimately as a hydrocracking unit cannot also be described legitimately as a hydrotreating or hydrorefining unit. We also disagree with API's suggestion that the hydrotreating definition should be limited to the activities that do not also fall within the hydrocracking definition.

The Agency knows of three specific types of dual purpose hydroprocessing reactors currently in use at petroleum

refineries. The Agency is clarifying that spent catalysts removed from these three types of dual purpose units are listed hazardous wastes. All are expanded-or ebullating-bed processes. These are the H-Oil, the LC-Fining, and the T-Star reactors. These reactors are designed to process heavy feeds such as atmospheric tower bottoms or vacuum reduced crude and use a single moving-bed catalyst to perform hydrotreating (i.e., metals removal, desulfurization) and hydrocracking functions.<sup>2</sup> Ebullating bed hydroprocessing is a process that takes place in a reactor bed that is not fixed. In such a process, hydrocarbon feed streams enter the bottom of the reactor and flow upwards passing through the catalyst which is kept in suspension by the pressure of the fluid feed.

LC-Fining and H-Oil both use similar technologies but offer different mechanical designs. The purpose of an ebullating bed reactor is to convert the most problematic feeds, such as atmospheric residuum, vacuum residues, and heavy oils having a high content of asphaltenes, metals, sulfur, and sediments, to lighter, more valuable products while simultaneously removing contaminants. The function of the catalyst is to remove contaminants such as sulfur and nitrogen heteroatoms, which accelerate the deactivation of the catalyst, while cracking (converting) the feed to lighter products.

The H-Oil reactor is used to process residue and heavy oils to produce upgraded petroleum products such as liquefied petroleum gas (LPG), gasoline, middle distillates, gas oil, and desulfurized fuel oil. Stable operation is achieved through a high operating pressure. The reactor achieves a very high level of treatment, as well as a very high conversion rate. The H-Oil process can achieve conversion rates of 45 to 90 percent, desulfurization of 55 to 92 percent, and demetallization of 65 to 90 percent.<sup>3</sup>

The LC-Fining process serves the purposes of desulfurization, demetallization, Conradson Carbon Residue (CCR) reduction,<sup>4</sup> and hydrocracking of atmospheric and vacuum residuum. The LC-Fining process can be used to yield a full range

<sup>2</sup> Gary, James H., Handwerk, Glenn E., *Petroleum Refining Technology and Economics*, fourth edition, 2001, p. 165.

<sup>3</sup> See "Background Document Clarifying the Scope of Petroleum Hazardous Waste Listings: Supplemental Information Regarding Petroleum Hydroprocessing Units."

<sup>4</sup> Carbon residue is roughly related to the asphalt content of crude and to the quantity of lubricating oil fraction that can be recovered from it. It often is expressed in terms of weight percent carbon residue by the Conradson ASTM test procedure.

<sup>1</sup> Gary, James H. and Handwerk, Glenn E., "Petroleum Refining Technology and Economics," Third Edition, Marcel Dekker, Inc., New York, 1994, p. 174.

of high quality distillates, including residuals that may be used as fuel oil, and synthetic crude or feedstock for a residuum FCC, coker, visbreaker, or solvent deasphalter. The LC-Fining process can achieve conversion rates of 40 to 97 percent, desulfurization of 60 to 90 percent, and a demetallization rate of 50 to 98 percent. These conversion and treatment percentages are high, relative to other types of hydroprocessing units.

The T-Star Process also is an ebullated bed hydrotreating/hydrocracking process designed to process very difficult feedstocks (e.g., atmospheric residuum, vacuum residues, and heavy oils with high levels of sulfur and/or metals) and achieve both a high level of treatment and high conversion. T-Star units can maintain conversion rates in the range of 20 to 60 percent and hydrodesulfurization rates in the range of 93 to 99 percent.<sup>5</sup> Additional information on each of the dual-purpose technologies is provided in "Background Document Clarifying the Scope of Petroleum Hazardous Waste Listings: Supplemental Information Regarding Petroleum Hydroprocessing Units" which can be found in the docket for today's notice.

At this time, EPA is aware of only three specific types of dual purpose hydroprocessing units. In addition to the technologies identified in today's notice and in the accompanying background document, other dual purpose units may be under development or made commercially available in the future. Therefore, we point out that the scope of the spent catalyst listings, as it applies to dual purpose units, is not limited to the three units named here. In naming these three specific units we do not mean to imply that spent catalysts from other types of dual purpose units that are designed to both hydrocrack petroleum feedstock and hydrotreat or hydrorefine the feedstock are not included within the scope of the listings. Our intention is to clarify that the scope of the hazardous waste listings includes spent catalysts removed from petroleum hydroprocessing units that perform both a hydrotreating or hydrorefining function, as well as a hydrocracking function. The scope of the hazardous waste listing is based upon the function performed by the reactor and is not specific to the name or brand of the reactor.

## II. Summary of the Agency's Views Regarding Spent Catalysts From Dual Purpose Reactors

EPA is retaining its determination that spent catalysts removed from dual purpose reactors (i.e., those hydroprocessing reactors that perform both hydrotreating, or hydrorefining, and hydrocracking functions) are listed hazardous wastes. In the November 29, 1999 memorandum, the Agency clarified that these spent catalysts meet the listing descriptions for K171 or K172. Such materials include spent catalysts removed from expanded-or ebullated-bed reactors (e.g., H-Oil, T-Star, and LC-fining processes).

As explained in the preamble to the August 6, 1998, final rule, definitions for petroleum hydrotreating, hydrorefining, and hydrocracking operations are not universally established. We explained in the final rule preamble that classifying petroleum refining processes on the basis of conversion rates is problematic. Although the preamble introduced the concept of classifying hydroprocessing units on the basis of conversion rates, we decided not to rely upon specific conversion rates to define hydrotreating and hydrocracking. Our reasons for rejecting the use of specific conversion rates included the fact that the ability to vary the operating conditions for some reactors, or changes to the manner in which feedstock conversion is calculated or accounted for, may allow refineries to classify particular reactors as hydrocracking units despite the amount of hydrotreatment or hydrorefining conducted in the reactor. After considering all relevant information in the rulemaking record, as well as commenter suggestions, we decided that the simplest way to differentiate between hydrocracking and hydrotreating units was to rely on categorizations provided in the Department of Energy's (DOE) Petroleum Supply Annual (PSA).

We, however, did not foresee the confusion that arose after the final rule was promulgated over how to classify hydroprocessing units that meet more than one PSA definition. When we wrote the section of the final rule preamble discussing the definitions of hydrotreating, hydrorefining, and hydrocracking, we did not have dual purpose hydroprocessing units in mind. As a result, the discussion did not address the uncommon situation of petroleum hydroprocessing units or reactors that are designed to both hydrotreat or hydrorefine and hydrocrack feedstock and that legitimately meet both the PSA

definition of hydrotreating and the PSA definition of hydrocracking. Inquiries received after promulgation of the 1998 final listing determination made us recognize that dual purpose hydroprocessing units that achieve high conversion rates and that are designed to and in fact do perform a high level of treatment were not specifically addressed in the preamble discussion. Due to the high level of treatment obtained in the units, the units meet the definition of a hydrotreater and the spent catalysts generated by the units become contaminated with the same contaminants for which spent hydrotreating catalysts were listed as hazardous wastes.

Dual purpose units are not widely used in the petroleum refining industry. The discussion provided in the 1998 final rule preamble addressed the more common situation where hydrotreatment and hydrocracking are done in succession and in separate units or in separate reactors within a given unit (e.g., a two-staged hydrocracker, where a guard bed performs treatment prior to hydrocracking). Most hydrocracking units, with the exception of the dual purpose units addressed in today's notice, are not designed to convert or crack untreated petroleum feedstock. Most hydrocracking units contain catalysts that promote hydrocarbon conversion but will become poisoned by the sulfur, metal and other heteroatom content of untreated feedstock. This is not the case with dual purpose units where the unit and catalyst can handle untreated petroleum feedstock and perform both hydrotreating and hydrocracking in the same unit. The 1998 preamble discussion addresses the most prevalent case, and did not address the unusual or limited situation of a dual purpose unit.

Our intention in the November 29, 1999 and June 1, 2000 memoranda was to address this situation and clarify that spent catalysts removed from hydroprocessing units that meet the PSA definition of hydrotreating are listed hazardous wastes, even in cases where the unit also meets the PSA definition of hydrocracking. We also clarified that we do not consider spent catalysts from a petroleum hydroprocessing reactor to be a listed hazardous waste solely because some incidental and minimal amount of hydrotreatment (or hydrorefining) of feeds occurs in a hydrocracking unit.

In addition, the Agency, in the November 1999 memorandum, clarified that the listing should not be interpreted as providing that spent catalysts from any hydrocracking process-regardless of whether or not hydrotreatment (or

<sup>5</sup>Hydrocarbon Processing. "Refining Processes 2000." Process descriptions of hydroprocessing units. November 2000.

hydrorefining) also occurs—are, by definition, outside the scope of the K171 and K172 listings (i.e., if a spent catalyst otherwise meets the K171 or K172 listings because it comes from a unit that performs a hydrotreating or hydrorefining function, the fact that the spent catalyst is removed from a unit that also hydrocracks does not exclude the spent catalyst from the hazardous waste listing). In the August 1998 final rule, we did not define hydrocracking and then indicate that hydrotreating and hydrorefining are “not hydrocracking.” It was never our intent to allow the scope of the hazardous waste listing determination to be defined or superseded when a catalyst performs a hydrocracking function, and that same catalyst also, by design, facilitates a hydrotreating or hydrorefining function in the same unit or reactor. The final listing determinations were meant to include spent catalysts removed from reactors that perform hydrotreating and hydrorefining functions, even if the reactors also perform a hydrocracking function. This is consistent with EPA’s decision in the final rulemaking to rely on the PSA definitions in determining the function or functions performed by a reactor. The PSA definitions of hydroprocessing take into account the function or operation performed by a reactor when defining hydroprocessing operations. We, therefore, clarified in the November 1999 memorandum that it was based on these functions, hydrotreating and hydrorefining, that we determine the regulatory status of the spent catalysts from dual purpose reactors. The presence of hydrocracking within a reactor does not exclude a spent catalyst from the scope of the hazardous waste listing when the reactor also functions as a hydrotreating or a hydrorefining unit.

We further clarify that spent catalysts generated by refineries that classify dual purpose reactors as hydrocracking units when reporting to DOE will nonetheless be K171 or K172 listed wastes if the unit performs a hydrotreating or hydrorefining function. Today’s notice retains the clarification that the 1998 final rule should not be interpreted as allowing petroleum refineries to classify dual purpose reactors as hydrocracking reactors and in doing so claim that the spent catalysts removed from these reactors are spent hydrocracking catalysts (which are not listed hazardous wastes). Catalysts removed from reactors that perform a hydrotreating or hydrorefining function, regardless of whether hydrocracking is performed in the same unit, are listed hazardous wastes, when spent.

We acknowledge that the preamble is confusing in that it indicated that units that previously have been classified as hydrocrackers are not covered by the listing. Again, at the time EPA wrote the final rule preamble, it did not have dual purpose reactors in mind. The preamble did specifically address guard beds, in which a separate bed treats feed in advance of feeding the petroleum stream to a hydrocracker. But, EPA did not (in the 1998 preamble) address the situation where a single reactor performs both a hydrotreating (or hydrorefining) and a hydrocracking function. (Indeed, EPA’s treatment of guard beds supports the interpretation retained today, in that it reflects EPA’s clear intention to capture within the scope of the listings catalyst wastes from units that are intended to, and do, hydrotreat or hydrorefine petroleum feedstock). In any event, the indication that self-classification as a hydrocracker avoids listing coverage is inconsistent with EPA’s stated intent to rely on the PSA definitions, in that it would allow spent catalysts from units that are designed to, and in fact do, perform hydrotreating or hydrorefining functions to escape the listing, despite the fact that they are generating precisely the wastes EPA intended to capture in the listing. It was because of the potential inconsistency in the preamble that EPA saw the need to issue its interpretive memoranda in the first place. EPA believes that its interpretation presented in these memoranda and retained today is most consistent with the preamble and rulemaking overall—it captures wastes from units that are designed to hydrotreat or hydrorefine waste under the PSA definitions.

After EPA distributed the November 29, 1999 memorandum, it was brought to the Agency’s attention that the memorandum could be interpreted as indicating that spent catalysts from petroleum hydrocracking reactors are captured by the hazardous waste listings, even though such reactors may conduct only minimal and incidental hydrotreating or hydrorefining of previously treated feedstock. For example, some reactors that hydrocrack petroleum feedstock treated previously to remove sulfur, metals and other impurities, may also in practice perform incidental and minimal hydrotreating or hydrorefining due to the operating parameters employed and the nature of the pre-treated feed entering the reactor.

The Agency did not intend, when issuing the November 29, 1999 memorandum, to include within the scope of the hazardous waste listings spent catalysts from hydrocracking reactors, if such reactors are designed to

hydrocrack feedstock and perform only a minimal and incidental amount of hydrotreating or hydrorefining. Rather, EPA intended to address only the status of dual purpose units that are designed to perform hydrotreating or hydrorefining as well as hydrocracking functions. Therefore, we issued a memorandum dated June 1, 2000, clarifying that spent catalysts removed from reactors that hydrocrack petroleum feedstocks and perform only “minimal and incidental” hydrotreating or hydrorefining are not within the scope of the hazardous waste listing descriptions for K171 or K172. This is consistent with the regulatory language, and with the intention stated in the preamble and the November 1999 memorandum, to adopt a functional approach to defining catalysts removed from hydroprocessing units.

Today, the Agency reiterates that a spent catalyst removed from a unit that performs hydrotreating or hydrorefining functions is a “spent hydrotreating catalyst” or a “spent hydrorefining catalyst” within the meaning of the regulation, even if the unit also performs a hydrocracking function. However, a spent catalyst removed from a reactor that hydrocracks and performs only minimal and incidental hydrotreating or hydrorefining does not fall within the scope of the hazardous waste listings K171 and K172. Spent catalysts removed from such hydrocracking reactors are not captured by the listings simply because some hydrotreating or hydrorefining unavoidably occurs in the reactor. A copy of the Agency’s June 1, 2000 memorandum clarifying this conclusion is included in the docket.

Following distribution of the November 29, 1999 memorandum, EPA also received requests from members of the petroleum refining industry for clarification of the regulatory status of two specific types of spent catalysts. In response to these requests, we issued two letters to the requesting parties on June 1, 2000. In a letter to Motiva Enterprises LLC, we explained that we determined that the spent catalyst removed from the Motiva refinery’s H-Oil unit is a listed hazardous waste. Based on our determination that the H-Oil unit is a dual purpose hydroprocessing reactor designed to both hydrotreat and hydrocrack petroleum feedstock in a single reactor using a single, ebullating bed catalyst, we found that the spent catalyst from the H-Oil unit falls within the scope of the hazardous waste listings.

In a second letter, to Chevron Research and Technology Company, we addressed the regulatory status of spent

catalyst removed from Chevron's two-stage ISOCRACKING hydroprocessing unit. In this letter, we determined that spent catalyst removed from the first stage of the ISOCRACKING unit, which serves as a guard bed reactor and performs a predominant treatment function, is a listed hazardous waste (K171). The resulting K171 designation of spent catalyst from the first stage reactor of this unit follows from our determination that spent catalysts from guard bed reactors are within the scope of the listing descriptions for K171 and K172 as clarified in the preamble to the August 6, 1998 final rule. Also, the final listing descriptions for K171 and K172 clearly designate spent catalysts from guard bed reactors as included within the scope of the listings (see 40 CFR 261.32). In addition, we also stated in our letter to Chevron that spent catalysts removed from the second stage reactor of Chevron's ISOCRACKING unit are not spent hydrotreating or hydrorefining catalysts and are not captured by the listing descriptions for K171 and K172. The second stage reactor within the ISOCRACKING unit receives pretreated feed and performs a predominant hydrocracking function; we concluded that any hydrotreatment that occurs in the second stage of the reactor is minimal and incidental.

### III. Overview of Public Comments

In the July 5, 2001 **Federal Register** notice, we reiterated our explanation that spent catalysts removed from dual purpose reactors are listed hazardous wastes. We explained in that notice that it was our finding that this conclusion, as expressed in the two EPA memoranda, is consistent with the plain language of the listing description. However, we acknowledged that the memoranda were controversial within the regulated community and we believed that providing an opportunity for public comment was in the interest of good government because it provides interested parties with a chance to influence the Agency's thinking and could avoid potentially unnecessary litigation. We, therefore, solicited comment on the regulatory interpretation presented in the November 29, 1999 and the June 1, 2000 memoranda which explained the Agency's position that spent catalysts removed from petroleum hydroprocessing reactors that perform both a hydrotreatment (or hydrorefining) function and a hydrocracking function are captured by the hazardous waste listings K171 or K172.

We also solicited comments as to whether there are specific situations

where it is not clear whether, or relatively how much, hydrotreatment or hydrorefining is either occurring or intended in a particular unit or reactor. We noted especially that we were interested in comment on whether there is a better test for generally describing dual purpose units that are not H-Oil, LC-Fining, or T-Star reactors (the dual purpose reactors that, as noted above, EPA knows about) but perform hydrocracking and more than "minimal and incidental" hydrotreating or hydrorefining, or whether decisions regarding the regulatory status of these other reactors must be made on a case-by-case basis. We requested that any improvements suggested by commenters be consistent with our focus on determining when a catalyst is used in a reactor that performs a hydrotreatment or hydrorefining function, regardless of whether it also is performing a hydrocracking function.

We explained in the July 5, 2001 notice that we were not reopening comment on any substantive or procedural issues affecting the August 6, 1998 hazardous waste listing rule. Comments were requested solely on the issues addressed within the context of the two memoranda.

We received comments in response to the July 5, 2001 notice from one petroleum refinery, as well as from the American Petroleum Institute and the National Petrochemical and Refiners Association (NPRA). We also received comments from the Ferroalloys Association, a trade association representing the catalyst recycling industry.

We did not receive any comments on determining a clear test for describing dual purpose reactors that are not the three types EPA knows about, nor did any comments identify any other units that should be considered dual purpose reactors. However, we understand that we may in the future have to make case-by-case determinations of the status of spent catalysts from other dual purpose reactors under the general principles discussed in the record for the August 1998 rulemaking, as clarified by the record accompanying this **Federal Register** notice.

#### A. Comments Received From the Petroleum Refining Industry

Comments received from parties representing the petroleum refining industry argued that the memoranda developed by EPA clarifying the status of spent catalysts removed from dual purpose petroleum refining reactors contradict the preamble language included in the August 6, 1998 final rulemaking and substantially expand

the listing definitions. The commenters stated that the preamble to the final rule did not mention dual purpose reactors and stated that, with the exception of guard beds, if a refinery had been classifying hydroprocessing units as hydrocrackers for the purpose of the DOE form EIA-820, spent catalyst from such a unit would not be covered by K171 or K172. These commenters also argued that since EPA promulgated source-specific listings (or "K" listings), the listings were clearly based on specific processes or units from which the catalysts are removed and not based on the function performed by the catalysts. In addition, these commenters suggested that EPA define the scope of the hazardous waste listings on the percentage of feedstock conversion (*i.e.*, the amount of hydrocracking performed) in the unit from which a spent catalyst is removed.

We admit that confusion may have been created by the sentence in the preamble to the August 1998 final rule that states that "if a refinery has been classifying its hydroprocessor as a catalytic hydrocracker for the purposes of DOE's Form EIA-820, spent catalysts from this unit would not be covered by K171 or K172 (with the exception of guard beds \* \* \*)." As stated above, when we wrote the section of the final rule preamble discussing the definitions of hydrotreating, hydrorefining, and hydrocracking, we did not have dual purpose hydroprocessing units in mind. As a result, the discussion did not address the unusual situation of petroleum hydroprocessing units or reactors that legitimately meet both the PSA definition of hydrotreating and the PSA definition of hydrocracking.

Our intention in the November 29, 1999 and June 1, 2000 memoranda was to address this confusion and clarify that spent catalysts removed from hydroprocessing units that meet the PSA definition of hydrotreating are listed hazardous wastes, even in cases where the unit also meets the PSA definition of hydrocracking. We also clarified that we do not consider spent catalysts from a petroleum hydroprocessing reactor to be a listed hazardous waste solely because some incidental and minimal amount of hydrotreatment of feeds occurs in a hydrocracking unit. In addition, the Agency, in the November 1999 memorandum, clarified that the listing should not be interpreted as providing that spent catalysts from any hydrocracking process—regardless of whether or not hydrotreatment also occurs—are, by definition, outside the scope of the K171 and K172 listings.

Therefore, we disagree with the underlying premise of the commenter's argument that the PSA definitions of hydrotreatment and hydrocracking are mutually exclusive. The definitions clearly overlap. Individual hydroprocessing units may meet both definitions. The fact that any unit can legitimately be classified as a hydrocracker does not preclude the unit from meeting the definition of a hydrotreater or a hydrorefiner.

Based on guidance provided in the preamble to the final rule, including our use of definitions that categorize hydroprocessing units based on the function performed by the unit, and our rejection in the final rule of general refining process definitions (e.g., definitions provided by the Oil and Gas Journal, that base hydroprocessor definitions on the percent of conversion obtained within a unit), we believe the preamble to the August 1998 rule reflects our intent to base the scope of the final listings on the function performed by the units or reactors in which spent catalysts are generated. Therefore, when we clarified in our November 29, 1999 and June 1, 2001 memoranda that spent catalysts removed from dual purpose reactors are included within the scope of the hazardous waste listings based on the function performed by dual purpose reactors, we were consistent with the overall thrust of the discussion provided in the preamble to the final rule.

As we explained in the July 5, 2001 **Federal Register** notice, we acknowledge that the scope of the hazardous waste listings, as explained in the memoranda, is controversial. Therefore, although we believe that the policy explained in the memoranda is a correct reading of the final regulatory language, we decided to take the unusual step of soliciting public comment on the memoranda in which we explained our policy, due to concerns raised by the regulatory community. In today's notice, and after considering public comments received in response to the July 5, 2001 notice, we are providing public notification that we are retaining our policy with regard to the regulatory status of spent catalysts removed from dual purpose hydroprocessing units, as it is explained in our memoranda of November 29, 1999 and June 1, 2000.

We also disagree with the commenters' assertion that, because we promulgated the final listings as "K" listings, this limits the scope of the listings to specific units. Neither the listing descriptions codified in the regulatory language nor the preamble to the final rule limits the listings to

specific units. Both the final listing descriptions and the preamble language describe the scope of the listing based on the function performed by the units or reactors from which the spent catalysts have been removed. In addition, while the commenter is correct that some K-listings are unit specific (such as K051—API separator sludge from the petroleum refining industry), many K-listings are not unit specific, but process-specific from a particular industry. For example, there are 16 separate listings within the K-listings that specify "wastewater treatment sludge" from a particular industry (e.g., from the production of toxaphene (K041)). The wastewater treatment sludge listings are not necessarily from a particular type of unit. Instead, the listings can be derived from any wastewater treatment process involved in the production of a certain product. In fact, very few of the K-listings actually specify a specific unit. The major difference between the F- and K-listings is that the K-listings generally identify wastes generated by a particular industry and are often more specific with regard to where the waste is formed. Therefore, the Agency's interpretation that spent catalyst from dual-purpose reactors is included in the listing is consistent with the Agency's designation of other K-listings.

We also do not agree with arguments that we should redefine the scope of the hazardous waste listings for spent hydrotreating catalysts and spent hydrorefining catalysts based on the amount of hydrocracking performed in the units or reactors from which the catalysts are removed. We find it is more appropriate to base the scope of the listings on the basis of the hydrotreating and hydrorefining functions performed by the units. As we explained in the preamble to the August 6, 1998 final rule and in our responses to comments received on the proposed listing determinations (60 FR 57747), we continue to reject the notion of defining these wastes on the basis of the degree of hydrocracking that is performed in the units or reactors from which they are removed. As we stated in the preamble to the final rule, reliance on specific conversion rates allows that slight changes in operating and accounting practices may result in reclassification of units or reactors that otherwise would be considered hydrorefiners or hydrotreaters. In addition, the mere presence of hydrocracking does not preclude a unit or reactor from performing a significant hydrotreating or hydrorefining function. Hydrotreating and hydrorefining of

petroleum feedstock results in the demetalization and desulfurization of petroleum feedstock as well as the removal of other impurities and heteroatoms. The performance of these functions results in the contamination of the catalyst, such that it eventually becomes spent. We found that the degree of contamination of the catalyst has a direct correlation to the risk potential of the spent catalyst.

#### *B. Comments Received From the Catalyst Recycling Industry*

We also received comments from the Ferroalloys Association, a trade association representing companies that recycle spent hydroprocessing catalysts. The catalyst recycling industry generally supports the policy articulated in the November 29, 1999 and June 1, 2001 memoranda. As stated in its comments, the commenter agrees that spent catalysts that perform hydrotreating or hydrorefining functions should be regulated as hazardous wastes, even when the catalysts are removed from units that also perform conversion of heavy fractions to lighter fractions. The commenter points out, however, that in the July 5, 2001 **Federal Register** notice, we identified only three types of dual purpose hydroprocessing units. The commenter argues that other types of hydroprocessing units, including some fixed bed units also perform both hydrotreating and hydrocracking functions. As pointed out above, our interpretation of the final spent catalyst listings, as described in the final rule preamble, the two memoranda, and in this notice, is that the listings include spent catalysts from dual purpose hydroprocessing units. At present, we are aware of three types of specific dual purpose units (H-oil, L-C fining, and T-star units), that both hydrocrack petroleum feedstock and perform hydrotreatment or hydrorefining functions. We are aware that more such units could become available in the future and that others could now exist of which we are unaware. Although we do not anticipate that many other such units exist, other dual purpose units could exist, and the spent catalysts from such units would be captured by the listings.

The July 5, 2001 notice established that the Agency's policy, as described in the November 29, 1999 and June 1, 2000 memoranda, is that spent catalysts from hydroprocessing units that perform both a hydrotreating (or hydrorefining) function and a hydrocracking function are listed hazardous wastes. However, spent catalysts from reactors that perform a hydrocracking function and

only some incidental and minimal amount of hydrotreatment of feeds (e.g., the second stage of a two-staged ISOCRACKING unit) are not listed hazardous wastes. As explained above, the scope of the hazardous waste listings for K171 and K172 includes spent catalysts removed from a reactor that performs a hydrotreating or hydrorefining function, including a spent catalyst from any dual purpose reactor designed and operated to hydrotreat or hydrorefine petroleum feedstock, as well as hydrocrack the feed in the same reactor. The scope of the listing is not limited to the specific units named above or in the background document to this notice, or to units with specific brand names.

The catalyst recyclers also commented that, when EPA promulgated the final hazardous waste listings for spent catalysts, EPA designated the listings as "specific source" listings, or "K" listings. The recyclers suggested that the Agency amend the listings by combining both listings into one "F," or non-specific source listing. In its comments, the catalyst recycling industry also encouraged EPA to undertake a listing investigation to determine whether or not spent hydrocracking catalysts should be listed as hazardous waste. The commenter points out that data previously collected by the Agency may support such a hazardous waste listing.

The issue regarding the designation of a "specific source" listing versus "non-specific source" listing (i.e., a "F-listing" versus a "K-listing") is addressed above. The request regarding a listing determination for spent hydrocracking catalyst is beyond the scope of today's notice.

### *C. Comments Related to Encouraging Recycling*

Commenters representing petroleum refineries argued that EPA should promulgate a conditional exemption from the hazardous waste listings for spent hydrotreating catalysts and spent hydrorefining catalysts that are recycled. Commenters argued that a conditional exemption from the hazardous waste listing would encourage more recycling of spent catalysts.

The consideration of a conditional exemption from the hazardous waste listing for spent catalysts that are recycled is beyond the scope of today's notice. A commenter representing the petroleum refining industry argued that the final listing determination resulted in significant increases in the cost of recycling spent catalysts. The commenter stated, that "the predicted

result of EPA's refusal to tailor the listings was that the costs related to reclamation rose substantially (up to \$500–800/ton) after the listings took effect in early 1999, while landfilling of the listed catalysts—in compliance with Subtitle C of RCRA—became relatively more practical and economical (about \$200/ton) than reclamation." The commenter provided no additional documentation of its claim.

Information available to EPA does not support this conclusion. Available information indicates that management costs for catalyst recyclers increased only slightly as a result of the 1998 final rulemaking due to the need to manage wastes generated as a result of the reclamation process as hazardous wastes. Almost all of the catalyst reclaimers had Subtitle C storage permits prior to the 1998 final rule because many catalysts exhibit one or more of the hazardous waste characteristics and, therefore, had to be managed as hazardous wastes prior to the final listing determination. Although we do not dispute that there is a significant cost differential between the costs associated with reclamation and disposal of spent catalysts, the cost differential is not a result of the final listing determination. In addition, we do not expect a regulatory amendment changing the listing status of spent catalysts that are reclaimed or recycled to have any significant effect upon the future costs of waste management practices.

In its comments, the association representing the catalyst reclaimers did not address the issue of a conditional exemption from the hazardous waste listing for spent catalysts that are recycled. However, the association has petitioned the Agency to amend the land disposal restrictions treatment standards promulgated as part of the final listing determination to require similar treatment requirements for both spent hydrotreating catalysts and spent hydrorefining catalysts. The catalyst reclaimers argue that the difference in treatment standards for spent hydrorefining catalysts discourage recycling of these wastes and result in significant levels of hazardous constituents being land disposed.

We believe it is important to encourage recycling and reclamation of hazardous wastes, as well as the conservation of resources. It is a particularly important goal for the Agency to encourage the reclamation of hazardous wastes containing significant quantities of recoverable metals. As commenters to the July 5, 2001 notice pointed out, spent petroleum hydroprocessing catalyst can contain

recoverable quantities of vanadium and other metals. Therefore, we continue to encourage all parties to identify ways in which the recycling of spent catalysts may be encouraged.

Dated: April 30, 2002.

**Marianne Lamont Horinko,**  
*Assistant Administrator, Office of Solid Waste and Emergency Response.*

[FR Doc. 02–11451 Filed 5–7–02; 8:45 am]

**BILLING CODE 6560–50–P**

## **FEDERAL COMMUNICATIONS COMMISSION**

### **47 CFR Part 73**

**[DA 02–975, MM Docket No. 01–128, RM–10133]**

### **Digital Television Broadcast Service; Charleston, SC**

**AGENCY:** Federal Communications Commission.

**ACTION:** Final rule.

**SUMMARY:** The Commission, at the request of WCSC, Inc., licensee of WCSC-TV, NTSC channel 5, substitutes DTV channel 47 for DTV channel 52 at Charleston. See 66 FR 34400, June 28, 2001. DTV channel 47 can be allotted to Charleston, South Carolina, in compliance with the principle community coverage requirements of Section 73.625(a) at reference coordinates 32–55–28 N. and 79–41–58 W. with a power of 1000, HAAT of 597 meters and with a DTV service population of 851 thousand.

With is action, this proceeding is terminated.

**DATES:** Effective June 17, 2002.

**FOR FURTHER INFORMATION CONTACT:** Pam Blumenthal, Media Bureau, (202) 418–1600.

**SUPPLEMENTARY INFORMATION:** This is a synopsis of the Commission's Report and Order, MM Docket No. 01–128, adopted April 26, 2002, and released May 2, 2002. The full text of this document is available for public inspection and copying during regular business hours in the FCC Reference Information Center, Portals II, 445 12th Street, SW, Room CY–A257, Washington, DC. This document may also be purchased from the Commission's duplicating contractor, Qualex International, Portals II, 445 12th Street, SW, CY–B402, Washington, DC, 20554, telephone 202–863–2893, facsimile 202–863–2898, or via e-mail [qualexint@aol.com](mailto:qualexint@aol.com).