system. If you send an e-mail comment directly to the Docket without going through *http://www.regulations.gov*, your e-mail address is automatically captured and included as part of the comment that is placed in the official public docket, and made available in EPA's electronic public docket.

Dated: December 18, 2008.

Richard B. Ossias,

Associate General Counsel.

[FR Doc. E8–30677 Filed 12–23–08; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–8756–5]

Control of Emissions From New and In-use Highway Vehicles and Engines: Approval of New Scheduled Maintenance for Exhaust Recirculation Valves in Certain Applications

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: This notice announces that EPA has granted an engine manufacturer a new and limited variation in the emission-related scheduled maintenance interval for the exhaust gas recirculation (EGR) valve for some heavy duty engine families for model years 2007–2009. Diesel EGR valve cleaning is considered critical emission-related maintenance.

FOR FURTHER INFORMATION CONTACT: Laura Baker, Compliance and Innovative Strategies Division, U.S. Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor, Michigan 48105. Telephone: (734) 214–4592. E-mail Address: *baker.laura@epa.gov.*

SUPPLEMENTARY INFORMATION: The Agency adopted new emission standards for complete heavy-duty vehicles fueled by gasoline, methanol gas, and liquefied petroleum gas fuels in 2001. (66 FR 5002: January 18, 2001; 40 CFR 86.1816–08). The new standards have stimulated new emission control technologies, including new NO_X absorption technology for heavy-duty vehicles which are still subject to the emission-related scheduled maintenance intervals.

However, under § 86.1834–01(b)(7)(ii) a manufacturer may request EPA approval for any new scheduled maintenance the manufacturer wishes to recommend. ''New scheduled maintenance'' is maintenance which did not exist prior to the 1980 model year. A manufacturer's request must include (1) Detailed evidence, supportive data, and other substantiation as well as (2) a subject maintenance category (i.e., emission-related or non-emission-related, critical or non-critical) recommendation and (3) the suggested emission maintenance interval.

EPA received information from Cummins Power Generation Incorporated (Cummins), a heavy duty engine manufacturer, indicating that it was technologically necessary to perform cleaning and maintenance to the EGR valve more frequently than 100,000 miles, as is prescribed in 40 CFR 86.1834–01(b)(3)(vi)(H), to meet the emission standards. In part, this minimum service interval is included in the regulations to ensure that the control of emissions is not compromised by a manufacturer's overly frequent scheduling of emission-related maintenance.

The Agency received information from Cummins indicating that its NO_X aftertreatment system, which utilizes cooled EGR and a NO_X adsorber catalyst, a technology that did not exist prior to 1980, and thus ''new.'' The information received from Cummins indicates that the EGR valve requires cleaning to maintain the performance of NO_X adsorption technology for emission compliance. Sulfur regeneration requires a net rich air/fuel mixture which can produce significant amounts of unburned hydrocarbon and carbon in the exhaust gas. These unburned hydrocarbons (soot) can adhere to engine components including the EGR valve which ultimately affects engine and emission performance. Therefore the EGR valve requires cleaning maintenance to remove the soot build-up prior to the 100,000 mile maintenance interval prescribed in 40 CFR 86.1834–01(b)(3)(vi)(H).

An EGR valve is defined as a critical emission-related component under 40 CFR 86.1834(b)(6)(i)(D) and thus the scheduled maintenance must have a reasonable likelihood of being performed while in use, according to § 86.1834(b)(6)(ii). To this effect, Cummins has equipped all vehicles covered by this approval with a messaging system alerting drivers to ''Perform Service'' as well as providing vehicles with on-board diagnostic (OBD) systems to detect when required maintenance has not been performed and illuminate an independent check engine light.

Therefore, EPA has approved the 67,500 mile service emission maintenance interval as suggested by Cummins. However, the Agency has limited this approval to the 2007–2009 model years due to the expectation that EGR valve related technologies compatible to NO_X adsorption technology will be developed by the 2010 model year.

Dated: December 16, 2008.

Robert J. Meyers,

Principal Deputy Assistant Administrator, Office of Air and Radiation.

[FR Doc. E8–30681 Filed 12–23–08; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–RCRA–2008–0645; FRL–8756–7]

RIN 2050–ZA04

Notice of Data Availability on Spent Oil Shale From Above Ground Retorting Operations

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of Data Availability.

SUMMARY: The Agency recognizes that there may have been some uncertainty regarding the Bevill status of spent oil shale from above ground retorting operations. This notice reiterates that spent oil shale from the above ground retorting of oil shale is not a Bevill waste excluded from regulation under Subtitle C of the Resource Conservation and Recovery Act (RCRA). However, the fact that such material is not excluded from regulation as Bevill waste does not mean that it is regulated under Subtitle C of RCRA. In fact, the notice summarizes, for comment, available analytical data on the characteristics of spent shale from oil shale above ground retorting operations (especially leachate characteristics), which indicate that this material is unlikely to exhibit a hazardous characteristic under Subtitle C of RCRA. This Notice does not reopen any prior EPA rulemakings which address the Bevill status of wastes from the extraction, beneficiation, or processing of ores and minerals.

DATES: Submit comments on or before January 23, 2009.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–RCRA–2008–0645 by one of the following methods:

- *http://www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *E-mail:* Comments may be sent by electronic mail (e-mail) to rcra-docket@epa.gov Attention Docket ID No. EPA–HQ–RCRA–2008–0645.
- *Fax:* Comments may be faxed to 202–566–9744. Attention Docket ID No. EPA–HQ–RCRA–2008–0645.

• *Mail:* Send two copies of your comments to Notice of Data Availability on Spent Oil Shale from Above Ground Retorting Operations, Environmental Protection Agency, Mailcode: 5305T, 1200 Pennsylvania Ave., NW., Washington, DC 20460. Attention Docket ID No. EPA–HQ–RCRA–2008–0645.

• *Hand Delivery:* Deliver two copies of your comments to the Notice of Data Availability on Spent Oil Shale from Above Ground Retorting Operations Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC 20460. Attention Docket ID No. EPA–HQ–RCRA–2008–0645. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–HQ–RCRA–2008–0645. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *http://www.regulations.gov*, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *http://www.regulations.gov* or e-mail. The *http://www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through *http://www.regulations.gov*, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket, visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm*. For additional instructions on submitting comments, go to the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: All documents in the docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy at the Notice of Data Availability on Spent Oil Shale from Above Ground Retorting Operations Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., 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 Docket telephone number is (202) 566–0270. The Public Reading Room 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.

FOR FURTHER INFORMATION CONTACT: Stephen Hoffman, Office of Solid Waste (5306P), U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460–0002, telephone (703) 308–8413, e-mail: *hoffman.stephen@epa.gov*.

SUPPLEMENTARY INFORMATION:

I. What Should I Consider as I Prepare My Comments for EPA?

1. *Tips for Preparing Your Comments.* When submitting comments, remember to:

• Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).

• Follow directions—The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

• Explain why you agree or disagree. Suggest alternatives and substitute language for your requested changes.

• Describe any assumptions and provide any technical information and/or data that you used. Provide as much detail as possible.

• If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

• Provide specific examples to illustrate your concerns, and suggest alternatives.

• Explain your views as clearly and in as much detail as possible.

• Make sure to submit your comments by the comment period deadline identified.

2. *Docket Copying Costs.* The first 100-copied pages are free. Thereafter, the charge for making copies of Docket materials is 15 cents per page.

II. How Should I Submit CBI to the Agency?

Do not submit information that you consider to be CBI electronically through *http://www.regulations.gov* or by e-mail. Send or deliver information identified as CBI only to the following address: RCRA CBI Document Control Officer, Office of Solid Waste (5305W), U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, Attention Docket ID No. EPA–HQ–RCRA–2008–0645. You may claim information that you submit to EPA as CBI by marking any part or all of that information as CBI (if you submit CBI on disk or CD–ROM, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is CBI). Information so marked will not be disclosed, except in accordance with procedures set forth in 40 CFR Part 2.

In addition to one complete version of the comment that includes any information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket and EPA's electronic public docket. If you submit the copy that does not contain CBI on disk or CD–ROM, mark the outside of the disk or CD–ROM clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket and EPA's electronic public docket without prior notice. If you have any questions about CBI or the procedures for claiming CBI, please contact: LaShan Haynes, Office of Solid Waste (5305P), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460–0002, telephone (703) 605–0516, e-mail address: *haynes.lashan@epa.gov*.

III. Oil Shale Retorting Wastes

A. Background

The Energy Policy Act of 2005 directed the Bureau of Land Management (BLM) to manage oil shale and tar sands development on public lands on three tracks:

• Research development and demonstration (RD&D) leasing;

• A programmatic Environmental Impact Statement (PEIS); and

• Regulations for commercial leasing.

In 2006, BLM issued Environmental Assessments for oil shale Research and

Development projects located in Colorado and Utah. In 2007, BLM issued its oil shale and tar sands PEIS. Given the fact that BLM has already issued RD&D leases in Colorado and Utah and the PEIS, we believe it is appropriate to discuss and provide a clear statement as to the regulatory status of spent oil shale from above ground retorting operations since it is likely that commercial development will occur in the near future.

1. What Is Oil Shale?

BLM defines oil shale [1] as fine-grained sedimentary rock containing: (1) Organic matter which was derived chiefly from aquatic organisms or waxy spores or pollen grains, which is only slightly soluble in ordinary petroleum solvents, and of which a large proportion is distillable into synthetic petroleum, and (2) Inorganic matter, which may contain other minerals. This term is applicable to any argillaceous, carbonate, or siliceous sedimentary rock which, through destructive distillation, will yield synthetic petroleum.

2. What Is Kerogen?

BLM defines kerogen as the hydrocarbon in oil shale. Kerogen is a pyrobitumen, and oil is formed from kerogen by heating. It consists chiefly of low forms of plant life; chemically it is a complex mixture of large organic molecules, containing hydrogen, carbon, oxygen, nitrogen, and sulfur. Kerogen is the chief source of oil in oil shale.

3. Where Is Oil Shale Located in the United States?

Nearly 62% of the world's potentially recoverable oil shale resources are concentrated in the United States. The largest of the deposits is found in the Green River formation in northwestern Colorado, northeastern Utah and southwestern Wyoming. The richest and most easily recoverable deposits are located in the Piceance Creek Basin in western Colorado and the Uinta Basin in eastern Utah.[2] There are less productive oil shale deposits in the eastern United States.

4. What Is Above Ground Retorting?

Organic kerogen within the oil shale rock can be heated to form synthetic gas and petroleum known as shale oil. The transformation of kerogen to oils occurs in a process called retorting which requires heating of the rock. There are various above ground retort designs that have differing operating temperatures ranging from lower temperatures of approximately 600–700 degrees Fahrenheit (F) to higher temperature designs usually operating at 900 to 1200 degrees F. Most aboveground retorts are closed metal vessels where the oil shale is placed and internally or externally heated. When sufficient heat is applied to oil shale, gases and oil are released from the oil shale. The heating of oil shale to produce shale oil is classified by EPA as retorting. See 54 FR 36619.

After retorting, shale oil is removed. The spent oil shale, a waste of this process, is generally disposed of in aboveground disposal units or is placed back into mined-out voids.

A recent study of oil shale production by the Congressional Research Service entitled, *Oil Shale: History, Incentives, and Policy* (April 13, 2006 RL33359), states, ''Oil derived from shale has been referred to as a synthetic crude oil and thus closely associated with synthetic fuel production.''

5. What Is an Oil Shale Cleaning and Upgrade Facility?

Shale oil flowing out of aboveground retorting units must be cleaned of contaminants or be ''upgraded'' to make a range of products. Shale oil ''cleaning'' often involves the removal of sulfur. Shale oil upgrading generally includes additional processing equivalent to crude oil hydrocracking (required to convert oil shale distillates to gasoline). Upgrading also removes arsenic and nitrogen using hydrotreating.

A one million ton per day (tpd) upgrade facility can generate over 3,000 metric tons per year (tpy) of spent catalysts, treatment chemicals, sludges and byproduct wastes. Upgrade wastes may include 5,400 tpy of spent hydrotreater guard bed catalyst containing 20 percent arsenic and 7,200 tpy [3] of API separator bottoms.

Wastes from oil shale upgrade operations are not exempt from the hazardous waste requirements under the Bevill exemption (40 CFR 261.4(b)(7)), and unlike spent oil shale generated by above ground retorting operations discussed below, may, in some cases, exhibit a hazardous characteristic. EPA is not addressing or seeking comment on those wastes, which are of much smaller volume relative to the spent oil shale.

B. Bevill Status of Spent Oil Shale

One purpose of this notice is to make a clear statement on the Bevill status of spent oil shale wastes from aboveground retorting of oil shale. A history of the Bevill rulemakings can be found at 54 FR 15317, April 17, 1989. The Agency is not seeking comment on this discussion since this position has been in effect since the promulgation of the Mining Waste Exclusion final rules (see 54 FR 36592, September 1, 1989, 55 FR 2322, January 23, 1990, and 56 FR 27300, June 13, 1991). Nor is EPA seeking to reopen, or otherwise reconsider, the regulatory status of oil shale retort wastes. Consequently, the Agency will not respond to any comments that raise questions or concerns about this background discussion. In summary, EPA has determined that spent oil shale waste from aboveground retorting of oil shale is not Bevill-exempt. However, as discussed in subsection C below, EPA believes it is very unlikely that such waste would exhibit a hazardous characteristic and thus, would not be subject to regulation under Subtitle C of RCRA.

Specifically, on October 21, 1980, Congress enacted Pub. L. 96–482, which included various amendments to RCRA Section 8002, such as subsection (p), which required the Administrator to study the adverse effects on human health and the environment, if any, of waste from the disposal and utilization of ''solid waste from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore,'' and submit a Report to Congress on its findings by October 21, 1983. 42 U.S.C. 6982(p). Also, as part of these amendments, Congress enacted RCRA section 3001(b)(3), which established a temporary exemption for such wastes, pending the completion of EPA's Report to Congress and a Regulatory Determination on whether the wastes warranted regulation as hazardous wastes under RCRA Subtitle C. 42 U.S.C. 6921(b)(3)(A)(ii) and (C).

The Agency issued its Report to Congress, *Wastes from the Extraction and Beneficiation of Metallic Ores, Phosphate Rock, Asbestos, Overburden from Uranium Mining, and Oil Shale* (EPA/530–SW–85–033), in December 1985. The report's findings on wastes from the mining and processing of oil shale are summarized in Appendix A of this report and were entitled, ''Summary of Major Wastes from the Mining and Processing of Oil Shale.'' This appendix did not identify spent oil shale as potentially hazardous under the RCRA

[1] U.S. Bureau of Land Management, Draft Oil Shale and Tar Sands Resource Management Plan Amendments to Address Land Use Allocations in Colorado, Utah, and Wyoming and Programmatic Environmental Impact Statement, December 2007.

[2] USGS Geology and Resources of some World Oil Shale Deposits 2005, Rand Corporation Oil Shale Deposits in the U.S. for USDOE NETL 2005.

[3] USEPA 1985 Report to Congress, Wastes from the Extraction and Beneficiation of Metallic Ores, Phosphate Rock, Asbestos, Overburden from Uranium Mining, and Oil Shale, EPA/530–SW–85–033.

hazardous waste regulations. It also stated that spent oil shale did not have an ignitability characteristic.

Based on the 1985 Report to Congress, the Agency issued the, *Regulatory Determination for Wastes from the Extraction and Beneficiation of Ores and Minerals* (51 FR 24497), on July 3, 1986. This determination concluded that wastes from the extraction and beneficiation of ores and minerals should not be regulated under RCRA Subtitle C at that time. In making this Regulatory Determination, the Agency did not specifically mention wastes from the retorting of oil shale.

On April 17, 1989, EPA proposed a rule (54 FR 15316), which for the first time addressed the Court decision in *Environmental Defense Fund* v. *EPA* (852 F.2d 1316 (D.C. Cir. 1988), cert. denied, 109 S. Ct. 1120 (1989)), mandating that the Agency clarify the line between extraction/beneficiation and mineral processing. In the preamble to the proposed rule (at 54 FR 15342), after review of nominated waste streams, the Agency presented its preliminary conclusions as to (1) Whether the wastes fell within the categories of extraction/beneficiation or mineral processing; (2) whether those wastes derived from mineral processing activities might qualify as Bevill-exempt; and (3) the rationale for the determination. Table 1 at 54 FR 15343 indicated the Agency's preliminary conclusion that oil shale retorting wastes were not mineral processing wastes, but were beneficiation wastes.

On September 1, 1989, EPA finalized the first Bevill rule (54 FR 36592) making significant changes to the April 1989 proposal. Among other things, EPA promulgated a definition of beneficiation waste that listed certain specific processes as beneficiation processes, and made it clear that processes that did not fit these categories were not beneficiation processes. The 24 enumerated beneficiation processes [4] did not include shale oil retorting. That is, spent oil shale from retorting operations does not meet the definition of any of these 24 categories, and therefore, is not a Bevill-exempt beneficiation waste.[5] Because spent oil shale does not meet these definitions, it is therefore not a Bevill-exempt beneficiation waste.

Because spent oil shale from above ground oil shale retorting operations are not Bevill exempt, they are not exempt from regulation under Subtitle C of RCRA. As stated in 40 CFR 262.11, ''A person who generates a solid waste, as defined in 40 CFR 261.2, must determine if that waste is a hazardous waste * * *.'' The generator must determine if the waste is listed as a hazardous waste in Subpart D of 40 CFR 261, and/or whether the waste exhibits any hazardous waste characteristic identified in Subpart C of 40 CFR 261, either by testing the waste, or by applying knowledge of the waste.[6] The information presented in Section C below will be useful to generators in making such a determination.

C. Is Spent Oil Shale a Hazardous Waste?

Spent oil shale from above ground oil shale retorting operations is not listed as a hazardous waste. Further the Agency does not believe that such material is likely to exhibit a hazardous characteristic. In this section, EPA is presenting data that have been identified and can be used by generators, along with any other data that they are aware of, as part of their hazardous waste determination. Specifically, EPA is seeking comment on these data. Based on the data EPA has evaluated and described in this notice, EPA believes spent oil shale generated by above ground retorting operations is very unlikely to exhibit a hazardous waste characteristic. Accordingly, EPA believes that it is very unlikely that such material is a hazardous waste under Subtitle C of RCRA.

1. Toxicity Characteristics—Metals

The purpose of this section is to summarize the research that was conducted since the mid-1980's that evaluates the chemical characteristics of spent oil shale from aboveground retorting operations. EPA has placed into the docket reports which assess the total chemical concentrations and leaching characteristics of spent oil shale.[7]

Most of the early research included leachate analyses using the Extraction Procedure (EP) Toxicity Test first noted in the **Federal Register** in 1978 (see SW 846 Method 1310). That test was superseded by the Toxicity Characteristic Leachate Procedure (TCLP) in June 1991 (see SW 846 Method 1311). The Agency conducted a review of these test methods to determine if the Agency could continue to use test results that relied upon EP toxicity data when assessing whether spent oil shale could be characteristically hazardous. Specifically, the Agency reviewed the 1991 EPA and U.S. Army Engineer Waterways Experiment Station report entitled, *A Comparative Evaluation of Two Extraction Procedures: The TCLP and The EP,* by R. Mark Bricka, Teresa T. Holmes, and M. John Cullinane, Jr. The researchers found that when the TCLP extraction fluid 2 was used for the extraction of metal contaminants, the EP and TCLP produced similar results. It is likely that TCLP extraction fluid 2 would be used in the analysis of spent oil shale because of its moderate to high alkalinity. Therefore, the Agency believes that research which analyzed spent oil shale using the EP test is useful in evaluating whether spent oil shale is likely to be hazardous under the current characteristic regulations. These EP test results supplement the available TCLP information.

Before presenting the specific data, we would note that the leaching characteristics of spent oil shale are dependent on the origin of the shale, the retorting process, and the conditions under which the spent oil shale is managed. There are two types of processed shale—carbonaceous and burned. Carbonaceous processed oil shales are produced by indirect retorting which does not burn the residual oil on the shale, while burned processed shale is produced by direct heating and in-situ retorting. The Agency's evaluation of past research indicates that most spent oil shale, regardless of the retort technology (with internal operating temperatures in the retort ranging from 900 degrees F to greater than 1200 degrees F) generates leachate which is significantly below TCLP limits.

[4] The 24 categories of beneficiation activities are: Crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water and/or carbon dioxide; roasting, autoclaving, and/or chlorination in preparation for leaching (except where the roasting (and/or autoclaving and/or chlorination)/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and in situ leaching.

[5] In March 1989, the Office of Solid Waste issued a memorandum to EPA Region VIII regarding the Bevill status of spent oil shale at the Parachute Creek oil shale project. The memo stated, among other things, that the retort process at Parachute Creek is a beneficiation process, and as such, wastes from it are subject to the Bevill exclusion. While the Agency has not withdrawn or revised the memorandum, the September 1, 1989 final rule superseded it since spent oil shale from above ground retorting operations does not meet any of the processes or activities that the rule defines as beneficiation.

[6] For more information regarding requirements for hazardous waste generators, see 40 CFR 262 and *Hazardous Waste Generator Requirements* at *http://www.epa.gov/epaoswer/osw/gen_trans/tool.pdf.*

[7] EPA is also interested in the public identifying other related studies/reports which evaluate the leachate and other characteristics of spent oil shale.

Results From Previous Research and Studies

In 1983, USGS issued Open File Report 83–378, entitled, *Chemical and Mineral Composition Data on Oil Shale and Retorted Oil Shale Wastes from Rulison, Colorado.* This study assessed the chemical composition of spent oil shale generated at the U.S. BOM's oil shale retort test facility. The spent oil shale analyzed in this study was stored in open piles, outside, for approximately 50 years. Samples were analyzed for total metal concentrations (at ppm). No EP or TCLP analyses of the samples were undertaken; however, total analyses can be used to show that it is physically impossible for a material to fail the toxicity characteristic—because even in the very unlikely event that 100% of the hazardous substance leached, it would still not exceed the toxicity characteristic (or TC) levels. In fact, EPA has identified totals analysis as an acceptable method of testing for the TC, if it is conservatively assumed that 100% of the total constituent concentration will leach from the waste.[8] The study results below show that it is highly unlikely that spent oil shale is characteristically hazardous.

Element	Totals (mg/kg)	RCRA limit (mg/L)	Calculated maximum possible leachate (mg/L)
Arsenic	60	5.0	3
Barium	740	100	37
Cadmium	3	1.0	0.15
Chromium	27	5.0	1.35
Lead	30	5.0	1.5
Mercury	not analyzed	0.2	
Selenium	not analyzed	1.0	
Silver	not analyzed	5.0	

A May 1986 study entitled, *Assessment of Solid Waste Characteristics and Control Technology for Oil Shale Retorting,* by Ashok Agarwal, Monsanto for USEPA, EPA 60017–86–019 evaluated the leaching characteristics from simulated retorted oil shale wetted with simulated process water using the EP toxicity test. This study used simulated retorted shale from the Union B process, which is a good indicator of wastes from higher temperature above ground retorts. This study shows that spent oil shale would not be classified as characteristically hazardous and supports the findings of the USGS 1983 study. The study noted on Table 1.2–4:

Element	RCRA limit (mg/L)	EP test results* (mg/L)
Arsenic	5.0	0.07
Barium	100	<2.7
Cadmium	1.0	not analyzed
Chromium	5.0	<0.05
Lead	5.0	<0.0005
Mercury	0.2	<0.0005
Selenium	1.0	<0.0005
Silver	5.0	<0.02

*While Agarwal (1986) did not report the sampling methodology, QA/QC, or pH in the final EP extract, these results are much lower than the hazardous characteristic and it is very unlikely to expect that results would be materially different had the spent shale undergone TCLP analyses.

Another EP leachate study, *Leaching and Hydraulic Properties of Retorted Oil Shale Including Effects from Codisposal of Wastewater, Colorado State University for EPA/ORD, 1986* examined spent oil shale from different retort processes using oil shale from Colorado, Pennsylvania, and Kentucky (data from this study is replicated in ''Assessment of Solid Waste Characteristics and Control Technology for Oil Shale Retorting,'' Monsanto Company for EPA/ORD, 1986). EP toxicity results from spent shale generated from deposits in Colorado, Pennsylvania, and Kentucky are provided in the Table below.

This study notes that spent oil shale from these sources do not generate leachate levels that exceeds the RCRA EP toxicity characteristic levels. The study shows, however, that retorted oil shale leachate has the potential to leach non-hazardous constituents, such as sulfates, nitrates and total dissolved solids (TDS).

		EP test results (mg/L)					
	Units	Rio Blanco Colorado	Hammerville Pennsylvania	Rocky Flats Colorado	Anvil Points Colorado	Kentucky	RCRA TC limit
Retort Process		Lurgi		Tosco	Paraho	Hytort	
Grain Size	mm	0.1–5.0			0.420–3.327		
Density	kg/m^3	2700–2760		2600	2589–2633	1700	
Aluminum	mg/L	<0.02	<0.02	<0.02	3.6	0.44	
Arsenic	mg/L	0.019	0.047	<0.01	0.010	0.010	5.0
Barium	mg/L	0.130	0.180	0.780	0.915	0.210	100.0
Beryllium	mg/L	<0.0005	0.0026	0.0045	<0.0005	<0.0005	
Boron	mg/L	0.520	1.470	0.640	0.333	0.340	
Cadmium	mg/L	0.004	0.002	0.003	<0.001	0.013	1.0
Calcium	mg/L	964	1479	1872	724	319	

[8] See memo from Michael Shapiro to Charlie Norwood on May 25, 2000, which can be found at *http://yosemite.epa.gov/osw/rcra.nsf/0c994248c239947e85256d090071175f/66b5c5da87d218b285256a4100635b78!OpenDocument.* It is important to note that totals concentrations can be used to show that a waste is non-hazardous, but they can not be used to show that a waste is hazardous. EPA does not presume a waste is TC hazardous if 1/20th of the total constituent concentrations in the waste exceed TC regulatory levels, because it would be an unusual situation for 100% of the material to leach from a solid.

EP test results (mg/L)							
	Units	Rio Blanco Colorado	Hammerville Pennsylvania	Rocky Flats Colorado	Anvil Points Colorado	Kentucky	RCRA TC limit
Chromium	mg/L	<0.005	<0.005	0.007	<0.10	<0.005	5.0
Chlorides	mg/L	7.1	18.9	22.2	28.8	8.95	
Copper	mg/L	0.032	0.009	0.014	0.019	0.023	1.3
Iron	mg/L	<0.005	<0.005	<0.005	0.020	0.078	
Lead	mg/L	<0.01	<0.01	<0.01	<0.010	0.01	5.0
Magnesium	mg/L	290	430	81	484	85	
Manganese	mg/L	0.110	0.090	1.260	0.016	8.98	
Mercury	mg/L	<0.001	<0.001	0.075	<0.001	<0.001	0.2
Molybdenum	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
Nickel	mg/L	0.012	<0.005	0.055	<0.05	0.971	
Nitrate	mg/L	1.53	0.53	2.0	1.75	2.3	
Phosphorous	mg/L	0.4	0.7	0.6	0.49	0.4	
Potassium	mg/L	3.2	11.0	3.9	6.5	22	
Selenium	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	1.0
Silver	mg/L	0.002	<0.002	0.002	<0.002	0.003	5.0
Sodium	mg/L	43	55	131	37	11	
Sulfate	mg/L	684	880	229	220	97	
Zinc	mg/L	0.138	0.010	0.078	<0.001	0.477	
TDS	mg/L	5690	8520	8180	6220	1740	
pH		8.06	8.67	7.72	9.27	4.94	

DOE conducted a study that presented TCLP analysis of raw and retorted shale as part of the preliminary clean up of the Western Research Institute North Site Facility, which had been commissioned to conduct energy studies in 1968. Test oil shale retorting was conducted at this site using a wide variety of pilot retort technologies. Results of this analysis were published in a study entitled, *Volume 1 Phase 1 of the North Site Cleanup Topical Report by Susan Sorini and Norm Merriam March 1994 (DOE/MC/30126–3843).* Two laboratories were used to test composite samples of spent oil shale from three different sources onsite, and the paired results are shown in the table below. This study notes that retorted oil shale did not exceed TCLP limits, by orders of magnitude, for any of the TCLP metals (see table below).

	RCRA limit	TCLP Results (mg/L)					
		Spent oil shale-1 WRI	Spent oil shale-1 SVL	Spent oil shale-2 WRI	Spent oil shale-2 SVL	Spent oil shale pile WRI	Spent oil shale pile SVL
Arsenic	5.0	<0.10	<0.04	<0.10	<0.04	<0.10	<0.04
Barium	100	0.14	0.17	0.20	0.22	0.10	0.09
Cadmium	1.0	<0.01	<0.002	<0.01	<0.002	<0.01	<0.002
Chromium	5.0	<0.008	<0.003	<0.008	<0.003	<0.008	0.005
Lead	5.0	<0.10	<0.04	<0.10	<0.04	<0.10	<0.04
Mercury	0.2	<0.002	<0.0002	<0.002	<0.0002	<0.002	<0.0002
Selenium	1.0	<0.10	<0.04	<0.10	<0.04	<0.10	<0.04
Silver	5.0	<0.02	<0.002	<0.02	<0.002	<0.02	<0.002

WRI—Western Research Institute.
SVL—SVL Analytical is the inorganic CLP laboratory that was used in phase I to verify WRI's analytical results.

Another study involving TCLP analyses of spent oil shale is found in the 1995 article in *Fuel* (vol. 74, no. 9) by Michael Mensinger and Jeffery Budiman entitled, *Physical and Thermal Properties and Leaching Characteristics of a Hydroretorted Beneficiated Eastern Oil Shale in Different Processing Stages.* This study evaluated the TCLP characteristics of retorted eastern oil shale and concluded that none of the spent oil shale exhibited the TC. Analytical results of hydroretorted, hydroretorted and combusted, and hydroretroted and agglomerated Alabama oil shale are as follows:

Element	Mensinger and Budiman (1995) TCLP test results (mg/L)			
	RCRA limit	Hydroretorted	Hydroretorted & combusted	Hydroretorted & agglomerate
Arsenic	5.0	0.081	0.078	0.0069
Barium	100	0.082	0.034	0.085
Cadmium	1.0	<0.02	<0.02	0.12
Chromium	5.0	<0.05	<0.05	<0.05
Lead	5.0	<0.2	<0.2	<0.2
Mercury	0.2	<0.005	<0.001	<0.001
Selenium	1.0	0.096	0.026	<0.013

Element	Mensinger and Budiman (1995) TCLP test results (mg/L)			
	RCRA limit	Hydroretorted	Hydroretorted & combusted	Hydroretorted & agglomerate
Silver	5.0	<0.05	<0.05	<0.05

This study noted that silver, lead and mercury did not leach above the detection limit, selenium was <10 percent of the TCLP limit, while all other metals leached at levels that were <2 percent of the TCLP limit.

BLM also conducted a series of studies in 2005 to determine how to effectively clean up spent oil shale piles at the Anvil Points facility. A report titled, *Final Draft Engineering/Cost Analysis for Waste Shale and Impoundments at U.S. Navy Oil Reserve 1 & 3 March 2005,* presented the results of TCLP analyses of the spent oil shale piles. The spent oil shale analyzed in this study was generated between 1947 and 1982. This study noted that eight inorganic constituents (arsenic, barium, beryllium, chromium, copper, magnesium, sodium, and vanadium) were detected at concentrations exceeding three times background (Dynamac 1998). The spent oil shale had no detectable volatile organic compounds (VOCs), phthalates were detected at concentrations less than the practical quantification limit, and high molecular weight hydrocarbons were detected at concentrations in the 1.3 to 2.6 milligrams per kilogram (mg/kg) range. In addition to testing the spent oil shale samples using the TCLP, they were also tested for the other hazardous characteristics—that is corrosivity, ignitability, and reactivity; however, the report did not provide these results. Page 3–12 of this report concluded that none of the 28 retorted oil shale samples exceeded TCLP limits for metals. Results of these analyses are noted below:

Element	RCRA limit (mg/L)	Minimum leachate results (mg/L)	Maximum leachate results (mg/L)
Arsenic	5.0	not detected	2.70E–05 J
Barium	100	2.37E–06 B	3.91E–03
Cadmium	1.0	not detected	2.32E–05
Chromium	5.0	not detected	1.28E–04
Lead	5.0	2.19E–06 JB	1.30E–04 JB
Mercury	0.2	not detected	not detected
Selenium	1.0	not detected	4.60E–05 J
Silver	5.0	not detected	4.72E–06 J

J—Estimated value below practical quantification limit but above method detection limit.
B—Analyte detected in method blank.

Because the detection limit was not noted in the report, total concentration data are shown in the table below, along with the calculated theoretical maximum leachate concentrations, to provide further information regarding the potential for spent oil shale to exhibit the TC. All calculated leachate values are below the RCRA hazardous characteristic limits.

Element	Totals (mg/kg)	Calculated leachate (mg/L)	RCRA limit (mg/L)
Arsenic	74.0	3.70	5.0
Barium	568	28.4	100
Cadmium	0.375J	0.019	1.0
Chromium	33.5	1.68	5.0
Lead	42.2	2.11	5.0
Mercury	0.0562	0.003	0.2
Selenium	4.88	0.244	1.0
Silver	0.494J	0.025	5.0

2. Ignitability

A 1984 report on a study on the auto-oxidation potential of raw and retorted oil shale (Research Triangle Institute for EPA, July 1984) noted that retorted (i.e., spent) oil shale is unlikely to present a spontaneous combustion hazard. The oil shale investigated in this study includes retorted oil shale from the Paraho, TOSCO II, Hytort, and Lurgi processes and a mixture of retorted oil shale, raw shale ''fines,'' and sulfur from the Union B process. Appendix A of the 1985 Report to Congress noted at A–6 that raw shale fines and/or spent shales, if not properly disposed, may auto-oxidize resulting in autoignition. However, the 1985 RTC also noted that retorted oil shale appears to be less reactive than raw shale fines. The Ashok Agarwal, Monsanto for USEPA EPA, May 1986 study, *Assessment of Solid Waste Characteristics and Control Technology for Oil Shale Retorting,* supports EPA's 1985 conclusion that spontaneous combustion of retorted oil shale is only a concern assuming improper disposal with other wastes. Based on the reports noted above, the Agency believes that spent oil shale does not present an environmental concern due to ignitability.

3. Corrosivity

The majority of research on the environmental effects of spent oil shale has focused on the potential leaching of metals into ground and surface waters. There is, however, limited information assessing whether spent oil shale could be corrosive. Review of the BLM studies

noted above, which assessed spent oil shale disposed of at Anvil Points for over thirty years, and discussed in the report, *Final Draft Engineering/Cost Analysis for Waste Shale and Impoundments at U.S. Navy Oil Reserve 1 & 3 March 2005,* indicates that spent oil shale samples did not exhibit the corrosivity characteristic when tested for the hazardous characteristic of corrosivity. Also, because oil shale undergoing above ground retorting is subject to high heat where destructive distillation occurs and results in most organics and hydrogen being removed, it is not likely from a chemical standpoint that spent oil shale could be corrosive.

4. Reactivity

Based on the review of the literature noted above, the Agency has not found any information that identifies spent oil shale as potentially reactive. Review of the BLM Anvil Points studies do not indicate that spent oil shale disposed of in piles over long periods of time ever became reactive. Based on our review of the data noted above, it is not likely from a chemical standpoint that spent oil shale could be reactive.

D. Conclusion

The regulatory status of spent oil shale, from above ground retorting operations was determined as part of the 1989 final Bevill rulemaking. Spent oil shale from above ground oil shale operations is not Bevill-exempt. The Agency believes this NODA's clear statement will have little practical effect, because it believes—based on the data described in this notice—that spent oil shale from above ground retorting operations are very unlikely to be hazardous under RCRA Subtitle C. EPA seeks additional data relevant to this conclusion and seeks comment on the data presented that supports our conclusion.

Dated: December 17, 2008.

Susan Parker Bodine,

Assistant Administrator, Office of Solid Waste and Emergency Response.

[FR Doc. E8–30698 Filed 12–23–08; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPP–2007–0037 FRL–8392–6]

Chitin/Chitosan, Farnesol/Nerolidol and Nosema locustae Final Registration Review Decision; Notice of Availability

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: This notice announces the availability of EPA's final registration review decisions for the pesticides Chitin/Chitosan (case 6063), Farnesol/Nerolidol (case 6061) and Nosema locustae (case 4104). Registration review is EPA's periodic review of pesticide registrations to ensure that each pesticide continues to satisfy the statutory standard for registration, that is, that the pesticide can perform its intended function without unreasonable adverse effects on human health or the environment. Through this program, EPA is ensuring that each pesticide's registration is based on current scientific and other knowledge, including its effects on human health and the environment.

ADDRESSES: All documents in the docket are listed in the docket index available in regulations.gov. To access the electronic docket, go to *http://www.regulations.gov*, select ''Advanced Search,'' then ''Docket Search.'' Insert the docket ID number where indicated and select the ''Submit'' button. Follow the instructions on the regulations.gov website to view the docket index or access available documents. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other 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 in the electronic docket at *http://www.regulations.gov*, or, if only available in hard copy, at the OPP Regulatory Public Docket in Rm. S–4400, One Potomac Yard (South Bldg.), 2777 S. Crystal Dr., Arlington, VA. The hours of operation of this Docket Facility are from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The Docket Facility telephone number is (703) 305–5805.

FOR FURTHER INFORMATION CONTACT: For information about the biopesticides included in this document, contact the specific Regulatory contact, as identified in the Table in Unit II.A. for the pesticide of interest. The mailing address and additional contact information is Biopesticides and Pollution Prevention Division, (7511P); Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460–0001; telephone number: (703) 308–8712; fax number: (703) 308–7026.

For general questions on the registration review program, contact, Kevin Costello, Special Review and Reregistration Division (7508P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460–0001; telephone number: (703) 305–5026; fax number: (703) 308–8090; e-mail address: *costello.kevin@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this Action Apply to Me?

This action is directed to the public in general, and may be of interest to a wide range of stakeholders including environmental, human health, farm worker, and agricultural advocates; the chemical industry; pesticide users; and members of the public interested in the sale, distribution, or use of pesticides. Since others also may be interested, the Agency has not attempted to describe all the specific entities that may be affected by this action. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

II. Background

A. What Action is the Agency Taking?

This notice announces the final registration decisions for Chitin/Chitosan, Farnesol/Nerolidol and Nosema locustae cases as shown in the following Table.

TABLE – REGISTRATION REVIEW DOCKETS – FINAL DECISIONS

Registration Review Case Name and Number	Pesticide Docket ID Number	Regulatory Contact name, Phone Number, E-mail Address
Chitin/Chitosan; Case 6063	EPA–HQ–OPP–2007–0566	Chris Pfeifer (703) 308–0031 *pfeifer.chris@epa.gov*