Vanadium Producers and Reclaimers Association (VPRA)

EXCERPTS FROM VPRA COMMENTS ON DSW RULE
Docket ID No.EPA-HQ-RCRA 2002 0031

VPRA supports EPA's commitment to encourage recycling and reuse

EPA says that the purpose of its proposal is "to encourage safe, environmentally sound recycling and resource conservation…" (72 FR 14172)

VPRA members are interested in the safe, environmentally sound recycling of spent hydroprocessing catalyst, currently RCRA listed hazardous wastes K171/K172. VPRA has repeatedly urged EPA to adopt measures that would safely induce refiners to choose recycling as the preferred method of spent catalyst management, demonstrating that metals recovery saves valuable and strategic resources and avoids not only land disposal of the hazardous spent catalyst itself, but also millions of tons of waste generated in the mining and refining of vanadium ores. *See, for example,* Petition for Rulemaking and Supplement, RCRA Docket 2003-0023, Documents 0005 and 0006; Comments of the Ferroalloys Association on the Proposed Gasifier Rule (September 10, 2002), Docket RCRA-2002-0002; Comments of VPRA on the proposed Teris Delisting (November 6, 2003), Region VI Docket F-03-ARDEL-TERIS; Comments of VPRA on Proposed Motiva Delisting (April 30, 2003), Louisiana DEQ Log No. HW079P; VPRA Comments to Proposed Revisions to the Definition of Solid Waste (February 24, 2004). RCRA Docket 2002-0031, Document 0144; VPRA Letter to Matthew Hale (March 9, 2006) [supporting conditional listing for recycled spent catalyst]. VPRA has shown that its proposed rule changes and clarifications are completely consistent with EPA's statutory mandate and policy goals expressed above. For the reasons set forth below, VPRA believes that EPA should adopt a conditional exclusion for spent catalyst, and that it would be a mistake to completely unwind 20+ years of successful RCRA regulation of spent catalyst management. Including spent catalyst recycling under the Proposed Rule would not significantly increase responsible recycling and would be an incentive to short-cuts, collusion and marginal or incomplete reclamation. This in turn could cost far more in environmental remediation than it would save in catalyst management costs.

History of Spent Catalyst Regulation

Because the Proposal by its terms would "deregulate" reclamation of materials from "hazardous secondary materials", including spent catalyst, relaxing a regulatory system that has worked effectively for over 20 years, it would be useful to briefly review the history of that regulation from the perspective of catalyst reclaimers.

EPA has carefully studied the properties of spent hydroprocessing catalyst and is well aware of its hazardous nature. It contains metallic sulfides, which in the presence of air often self-heat to the point where contained oil combusts. Spent catalyst can also contain toxic levels of benzene and arsenic, as well as polycyclic aromatic hydrocarbons and percentage levels of molybdenum, vanadium, nickel and cobalt.

Before 1985, spent catalyst was treated by the refiners as a waste to be rid of and by the recyclers as a raw material for the extraction of metals. Few states regulated catalyst at all if it was shipped to a recycler. It was normally stored outside on the ground or on a concrete pad. Fires occurred during transportation and storage of spent catalyst. While storage locations usually had sumps to capture most runoff of rainwater and oil, there was nothing to prevent or detect leakage through the pad to groundwater. Landfilling of spent catalyst was common where economics favored it. EPA records show that mismanagement of spent catalyst led to a number of emergency responses, cleanup actions and Superfund sites. *See, e.g.* VPRA Response to NODA, RCRA Docket EPA HQ 2003-0023 Document 0018.

In 1985, EPA made hazardous waste rules applicable to recycled material, which meant that refiners had to test spent catalyst for characteristics of hazardous waste. About 20% of spent catalyst tested hazardous for benzene or arsenic. Refiners had to store and ship this spent catalyst under RCRA rules, and recyclers had to build RCRA-compliant storage facilities and obtain Part B permits, which incorporated waste testing, handling and storage provisions of RCRA, as well as training, corrective action, emergency response and financial responsibility for hazardous waste management.

Ten years later, EPA conducted in-depth studies of spent catalyst properties and management methods. The Agency carefully evaluated the risks presented by spent catalyst handling, shipment, storage and disposal, and proposed that the ignitable/reactive and toxic properties of the material are such that **all** hydrotreating and hydrorefining spent catalyst had to be regarded as listed hazardous waste. 60 FR 57748 (November 20, 1995). *See* RCRA Docket EPA HQ RCRA-1995-0058. EPA finalized this determination in 1998. 63 FR 42109 (August 6, 1998). *See* RCRA Docket EPA HQ RCRA-1998-0064. Significantly, in response to comments by both refiners and catalyst recyclers, EPA considered the idea of a "conditional listing" under which spent catalyst sent to reclaimers would be not considered a solid waste if certain conditions were met. The Agency categorically rejected the idea because of its findings that spent catalyst properties were too inherently dangerous:

> "EPA believes that the catalyst wastes present several risks beyond those necessarily associated with landfill disposal, including pyrophoric properties and significant levels of benzene and arsenic (all of which may pose risks via pathways other than groundwater exposure, including risks from improper storage or other handling, and risks from uncontrolled air emissions from thermal treatment)....Given the hazardous nature of this waste, EPA believes it is entirely appropriate for it to be transported and stored as hazardous waste before recycling." (63 FR 42158)

EPA's decision to list spent hydroprocessing catalyst, including its rejection of conditional listing, was challenged by the petroleum refining industry and upheld by the DC Circuit Court of Appeals. *API v. U.S.EPA*, 342 U.S. App. D.C. 159 (2002).

The listing caused a drastic change in the management of spent catalyst. First, controls over landfilling were tightened considerably, because refiners had to send the material to hazardous waste landfills and meet LDR. Second, refiners had to store and ship all spent catalyst as hazardous waste, limiting on-site storage time to 90 days and shipping the material in safe

containers and vehicles under tracking manifests. Third, recyclers had to amend their permits to cover all catalyst received. They could no longer store "non-hazardous" catalyst outside, and invested many millions of dollars in RCRA-design storage buildings with a heavy concrete base, double-lined with leak detection. Recylers had to manage all wastes as "derived-from" listed wastes. Fourth, refiners could export spent catalyst only as a hazardous waste, meaning any proposed shipment would be notified to EPA and the receiving country as such, and the shipment would trigger any applicable treaties such as Basel and the OECD Decision. Finally, the RCRA listing automatically triggers collateral remedial requirements, such as those in CERCLA.

EPA found (and the DC Circuit Court affirmed) that these regulatory changes were consistent with EPA's findings on the risks presented by spent catalyst. Most importantly, they worked. Since the listing, catalyst management requirements have become systematic, predictable and for the most part directly responsible for a significant reduction in accidents or incidents involving spent catalyst.

The Proposal would be a major relaxation in the rules applicable to spent catalyst management. The specific RCRA requirements for reporting, recordkeeping, regular inspections, employee training, detailed storage design criteria, corrective action for releases of spills, etc. would go away. In its place would be a general set of conditions on recycling. If the conditions are met, the generation, shipping, storage and reclamation of spent catalyst would not be considered waste management at all, and the EPA and state authorities would have no supervisory role other than presumably ensuring the "conditions" for the exclusion are met. EPA explicitly states that one of its goals is to encourage competition in the recycling market by making market entry easier; this proposal will do that. A company interested in reclaiming spent catalyst will merely have to contend that it will "legitimately" recycle spent catalyst consistent with the proposed rule, and begin soliciting business-no permit or other authorization (other than a one-time notification and compliance with other environmental rules such as air permits) will be needed. Rather than requiring complete reclamation of metals, it appears a simple thermal desorption process that removes some of the oil from catalyst but none of its toxic or ignitable/reactive properties might qualify as "legitimate" recycling and therefore get the exclusion.

VPRA's comments on this Proposal can be summarized by the adage "If it ain't broke, don't fix it". Reclaimers often object to some of the administrative burdens of Part B permit obligations and the sometimes silly interpretations of the "derived-from" rule. On the other hand, who knows how many marginal operators have been deterred from claiming they can reclaim something from spent catalyst by RCRA permit requirements. Who knows how many spills, fires, and superfund sites have been avoided by the strict state scrutiny that the RCRA rules mandate. Experience has shown that when metal markets and oil prices are down, refiners will not hesitate to send spent catalyst to landfills or marginal facilities just to save a few dollars.[1]

VPRA has its own proposal: adopt a conditional listing, more stringent than the one considered by EPA in 1998, tailored to spent catalyst. VPRA's conditional listing proposal is different from EPA's general proposal in that (1) it defines reclamation narrowly, ensuring that only complete recovery of specific metals achieves the intended goal of reusing the metal values in the spent

[1] EPA's own study confirmed the protection afforded by a RCRA permit. Of the 208 incidents of damage relating to recycling, EPA found only 9 at RCRA permitted facilities. 72 FR 14182.

catalyst, and (2) it would establish specific storage, transportation, record keeping and other conditions so that there is no doubt what the requirements are and that these requirements are enforceable by the EPA. Under VPRA's proposal the unnecessary burdens of regulation-the Part B permit and the derived from rule-would be eliminated, but the new operator would be subject to clear, enforceable catalyst management requirements sufficient to ensure that refiners and recyclers continue to safely manage the material. *See* VPRA letter to Matt Hale (March 9, 2006), Exhibit A.

Why should EPA adopt a specific exclusion for spent catalyst?

EPA proposed to scrap future material-specific exclusions tailored to the particular hazardous properties of specific residuals in favor of a broad exclusion from "solid waste" for all legitimately recycled material. In the following sections, VPRA submits specific comments from the point of view of catalyst reclaimers on various aspects of the Proposal. At the outset, however, VPRA urges EPA to continue with its rulemaking to adopt a conditional listing tailored to the hazardous properties of spent catalyst. Why?

- In the listing proceeding, EPA specifically evaluated the risk of spent catalyst management, and found that strict regulation is needed to prevent safety and environmental problems. Numerous examples (including RCRA permitted facilities) show that mismanagement can cause fires, release of toxic metals, and other damage. Spent catalyst is a specialized material: very few companies are experienced with its properties and risks. Twenty years of RCRA regulation of spent catalyst have worked to build up a qualified cadre of companies and personnel who are experienced with the spent catalyst and the applicable rules. This has resulted in a record of safe, predictable management. EPA should not unravel this protective environment, at least without careful study of the specific increase in risk. VPRA's proposal retains the essential requirements for safe transportation and storage, and at the same time lightens the unnecessary regulatory burden to save excess costs.

- EPA's economic study shows that volatile prices (as with global metal markets) are an incentive to mismanage recyclable materials. Attached as Exhibit B is a chart of vanadium, molybdenum and nickel prices over 25+ years. Recyclers' revenue from sale of metals reclaimed from spent catalyst tracks these charts. These are world market prices, over which recyclers have absolutely no control. Most contracts with refiners are based on a "formula price", such that in high metal markets the refiner gets a share of the sale price of the reclaimed metals and in low metals markets, they pay a treatment fee. Experience shows that in low metal markets refiners treat spent catalyst as a waste, and discard it, often to landfills, which can be cheaper than the recyclers' treatment fee. A general, self-enforced rule such as that proposed is only an invitation to collusion and cutting corners in such economic situations.

  Indeed, during these low metals price periods (such as 1996-2002) spent catalyst would arguably be a "solid waste" under EPA's proposal, and experience shows that treatment fees competitive with landfills are barely sufficient to allow catalyst reclaimers to

survive. This only emphasizes the need for careful and specific regulation to protect the environment in such difficult economic times.

Example: A major reclaimer of spent hydroprocessing catalyst closed down in 2005 after many years of low metals prices and process difficulties. Thousands of tons of spent catalyst were stored in containers and a RCRA permitted storage building. Thanks to recently rising metals prices, the stored catalyst was transferred to another reclaimer. The leak detection system in the building showed leakage of oil into the ground, which then could be addressed by the regulatory agency and the facility as part of RCRA closure. If this facility were left to "reasonable efforts" inspections and a vague, self-enforced standard for storage, it is questionable whether an orderly and timely closure, material removal and remediation would have occurred.

- VPRA and EPA are far down the road, with over ten years of discussions on how to properly manage spent catalyst and encourage it's recycling. It makes little sense to discard all this work and try to make the general rule properly cover the unique properties of spent catalyst. EPA has reportedly developed a proposed rule revision that would incorporate a specific exclusion for reclaiming spent catalyst under certain conditions. This approach is easily justified and presumably EPA can follow through and finish the job with little cost or difficulty.

  Furthermore, VPRA believes that most refinery waste streams are now covered by specific exclusions; one of the few remaining is spent catalyst.[2] It would seem to be no more difficult for a refiner to comply with a specific exclusion than to try and fit spent catalyst into the proposed general exclusion.

- A specific rule for spent catalyst is consistent with the most recent case from the DC Circuit on the subject of conditional exclusions for recycling-*Safe Food and Fertilizer v. EPA*-which approved EPA's approach tailoring an exclusion to the specific risks presented by an individual waste stream.

Comments on restrictions and conditions for conditional exclusion for hazardous secondary materials transferred off site for reclamation

VPRA agrees with EPA that restrictions and conditions should apply to both the generator and the reclaimer for any conditional exclusion to apply to hazardous material transferred for reclamation. However, the EPA conditions are very generic. In most cases, the conditions provide no specific details on the requirements or the requirements are not sufficiently stringent to ensure proper management and control of many secondary hazardous materials. Contrast VPRA's proposal for conditional exclusion for spent catalyst recycling with EPA's proposed general exclusion. Under VPRA's proposal, spent catalyst would not be a hazardous waste only if conditions such as the following are met:

[2] VPRA objects to EPA's interpretation of the oil bearing residuals exclusion to include spent catalyst recycled at the refinery. *See* VPRA Comments on the Revised Definition of Solid Waste (February 24, 2004).

- It is fully reclaimed by extracting molybdenum and vanadium to make products for sale and by oxidizing a substantial portion of the sulfides in the catalyst
- Storage complies with RCRA requirements for buildings, containers, contingency planning, financial responsibility, etc.
- Generator and reclaimer comply with detailed record keeping
- Reclamation must be within the USA
- There is ninety day limit on interim storage, which must be in containers or a building conforming to RCRA design

Because these conditions are specific and clear, a customer or enforcing agency can easily determine whether the generator or reclaimer is in compliance.

If EPA adopts the Proposal, the only specific requirements are that the generator and reclaimer must not speculatively accumulate the spent catalyst, that they maintain limited records, and the reclaimer must maintain RCRA financial assurance. Storage, as discussed below, is left for the reclaimer to determine, and could well turn out to be outside storage on a thin concrete pad or indeed on the ground, which is how analogous molybdenum and vanadium ores are stored. What if the recycler discussed in the above example were subject to these general standards? It would have had no leak detection to discover the building leak; indeed it may not have had a building at all. With rudimentary runoff collection it could have argued for years that its stored catalyst was both "analogous" to vanadium/molybdenum ore storage and that it was "contained". While there may have been notification and remediation obligations under CERCLA or state law, this is a poor substitute for the preventative nature of specific storage requirements.

In addition, EPA's proposal could legitimize limited processing as "reclamation". For instance, some companies put spent catalyst through a thermal desorber to remove the oil. As discussed below, if the oil is collected this could be construed as exempt recycling, but the remaining material will have virtually all the ignitable/reactive and toxic properties as the original that left the refiner, and nearly all of the valuable materials would remain in the spent catalyst. *See* VPRA Comments on Proposed Motiva Delisting, *above*.

Because these proposals would seem to include sending spent catalyst to an off-site reclaimer, VPRA comments on specific conditions and requirements are provided below.

<u>The generator must not "speculatively accumulate" the material</u>

VPRA has always supported EPA in its basic requirement that hazardous waste sent for reclamation should not be allowed to be speculatively accumulated. Inappropriate speculative accumulation has been the source of environmental impacts and a true reclamation supply chain from generator through the reclamation process would move the material in an expeditious manner (such as using just in time inventory, if it is truly a valuable commodity with economic value). EPA has applied the "normal" definition that inventory cannot be built over time, i.e. the amount of material that is recycled or transferred to a different site for recycling must equal at

least 75% by weight or volume of the amount of material at the beginning of the period (based on a calendar year).

Spent catalyst and its hazardous properties are a good example of why applying a general condition without taking into account waste specific properties can lead to environmental problems. Spent catalyst has unique properties that result in the spent catalyst being self-heating and reactive. Problems have occurred when this material is stored for longer than a few weeks (such as a generator site), unless special storage under controlled conditions is used. The metal sulfides present in the catalyst can react and form acid, which can attack containers and/or other containment materials. Also, the spent catalysts can self-heat resulting in fires or smoldering piles of hazardous material. Due to these unique properties and others, spent catalyst was listed as a specific hazardous waste (K171/K172). Part of the conditional exclusion discussion for spent catalyst included consideration of a shorter storage period at the generator (90 days) and then proper RCRA like storage and control at the reclaimer.

Undoubtedly, some secondary hazardous waste materials can be accumulated up to one year without concern and the general ban on speculative accumulation is adequate to control these materials. However, there are most likely other hazardous waste materials that like spent catalyst should only be accumulated at a generator site for short periods of time and the reclaimer should be required to follow special storage and handling control once the material is received. Thus, while VPRA supports the requirement that generators and reclaimers must not speculatively accumulate hazardous materials, VPRA believes that a very general all inclusive rulemaking is dangerous and EPA should require spent catalyst and other hazardous wastes with dangerous proprieties to have a specific exclusion with a specific set of conditions established to manage the hazards associated with these specific wastes.

The reclaimer must manage the material in a way that is "at least as protective as that employed for analogous raw materials"

EPA is proposing a general "performance based" standard for handling and storage that basically says the hazardous material should be stored in a protective manner similar to the analogous raw material, and if there is no analogous raw material, the material must be "contained". It could be construed from this approach that spent catalyst, since it may not be analogous to say, vanadium ore, would require containment. However, there are no details on the specific containment needed and the further description in Section IX of the proposal under the generator controlled reclamation option is no more specific.

VPRA's proposed conditional exclusion for spent catalyst is based on the RCRA specifications for containers, containment building, and waste piles, etc. These are well proven approaches that work for spent catalyst and other hazardous materials. The RCRA rules and requirements for proper storage and containment provide a reasonable and well-proven set of construction and operational requirements for managing hazardous materials. These requirements are based on sound engineering principles and are not overly restrictive for protecting the environment. It might be expected that truly responsible generators and reclamation companies will evaluate the characteristics of the specific hazardous materials and, using "sound engineering practices", will

construct storage facilities with containment that is protective of the environment. However, the EPA assessment of environmental problems associated with the recycling of hazardous secondary materials shows that improper storage and containment is a significant source of the recorded environmental impacts. As currently written, the "performance based approach" with no guidance on the actual requirements, provides no assurance that good engineering practice will be used. Using this approach, EPA and the public will only know that the performance-based approach was inadequate after the environmental impact has already occurred.

VPRA strongly recommends that EPA adopt the basic RCRA storage requirements as the guidelines for proper storage and containment of hazardous secondary materials qualifying for this conditional exclusion. The secondary hazardous materials that would qualify for this exclusion, by definition have already been determined to be hazardous and, if not excluded, they are considered hazardous waste. Therefore, these hazardous materials require some type of special management or they would not be subject to the hazardous waste rules. Providing guidance and requirements based on the RCRA rules, without requiring the associated permitting, etc. is appropriate. This approach will also provide the generator auditors with basic guidelines for evaluating the storage and handling systems used by the reclaimers when the generator audits the reclamation facility to meet the reasonable effort condition.

Spent catalyst provides a good example of how following the basic RCRA containment guidance works in the real world. As described earlier, prior to spent catalyst being a listed waste, generators and reclamation facilities typically stored the spent catalyst in the open on concrete pads or on the ground with containment only for storm water runoff. Fires occurred during transportation and storage, and pollutants entered the underlying groundwater. At that time the spent catalyst was handled similar to an inert "raw material" rather than a hazardous material. Subsequently, containment buildings were constructed with leak detection systems, following the RCRA approach. As discussed above, one spent catalyst reclamation facility did have a leak in the containment building and the leak detection system identified the problem.

EPA has used the RCRA rules and guidance for developing the financial assurance requirements for this proposal. VPRA supports this approach (see comment below) and strongly urges EPA to adopt the same approach for storage and handling of hazardous secondary materials under this conditional exclusion proposal. Referencing the appropriate parts of the RCRA requirements in the conditions related to storage and handling will help strengthen the management of these hazardous materials and provide a proactive approach to protecting the environment, rather than a reactive "performance based" approach. VPRA is very familiar with spent catalyst and reiterates the importance of the proper handling and storage of spent catalyst and other hazardous secondary materials.

One of the reasons that EPA says they do not need an "elaborate set" of conditions for storage is because generators are required to make "reasonable efforts" to evaluate the reclamation facility. EPA expects the generator to make the assessment. This of course assumes that the generators know what proper storage should be and actually make the assessment. Auditors are typically not experts in the construction of storage facilities. Providing the basic RCRA containment requirements as a condition for storage of hazardous materials qualifying for the conditional exclusion, coupled with a basic requirement for auditor expertise will help to ensure that

generators can truly make a reasonable effort to ensure these materials are properly managed during storage and handling activities.

Export Requirements – Generator Controlled and Off Site Transfer Options

EPA has taken two different positions on the issue of export depending on if the hazardous secondary materials are "maintained under the control of the generator" or if "the material is transferred off site for reclamation". As stated at 72 FR page 14207:

The proposed exclusion for hazardous secondary materials recycled under the control of the generating facility is limited to recycling performed in the United States or its territories. However, the transfer-based recycling exclusion and non-waste determinations included in today's supplemental proposal do not place any geographic restrictions on movements of such hazardous secondary materials, provided they meet the description of the exclusion. It is therefore possible that in some cases excluded hazardous secondary materials could be generated in the United States or its territories and subsequently exported for reclamation to a facility in a foreign country.

Under the generator control provisions EPA has taken the position that the exclusion does not apply outside the country because *we do not have sufficient information about recycling activities outside the United States to decide whether discard is likely or unlikely.* (72 FR Page 14187) EPA then asks for comment on whether EPA should promulgate a conditional exclusion for exported material otherwise meeting the criteria for the generator control exclusion.

VPRA supports EPA's current position that hazardous secondary materials should not be exported under this conditional exclusion, as EPA does not and cannot have sufficient information on what happens outside the country. Generators that want to export these hazardous materials should follow the hazardous waste rules for export in all cases. The receiving country can determine upon receipt how they want to regulate these materials and whether special conditions should apply. EPA uses this same approach for entry of hazardous wastes/materials into this country. If hazardous secondary materials are shipped to the US, it is the US rules (including conditional exclusions, etc.) that apply upon entry, not whether or not the exporting country has special rules. Allowing generators to export hazardous material under the conditional exclusion would result in receiving countries having only minimal information about the materials and they would "look like" any other product. These hazardous materials would be shipped without special labeling or manifests. There would no information at the receiving country docks indicating the material was considered a hazardous waste unless it is properly reclaimed. EPA has no control over these materials (wastes) once they leave the US and there should be no conditional exclusion used to circumvent the in-place export rules for hazardous wastes. If EPA were to allow export under the "generator control" option, very limited information and tracking information would be available. The proposal, as currently written for the generator control option, has minimal conditions based on the premise that the generator will handle the material responsibly at their facility. While this argument may have some merit for US facilities operating under US laws and liability (CERCLA), it certainly is not necessarily the case in other countries. Maintaining the current approach of requiring these hazardous materials

to be identified as hazardous waste, if exported, at least maintains the protection provided by the current hazardous waste export rules.

VPRA included an export ban in the conditional exclusion proposed for spent catalyst. EPA should NOT extend the conditional exclusion under the proposal to generator controlled hazardous material for the exact reasons noted by EPA and described above. Further under the generator control provisions, under the third part of the definition, tolling contractors also qualify and therefore, conceivably hazardous material could be moved out of the country to a generator overseas facility where the material was actually handled by a third party – where EPA and even the original generator would have little information or control. Also, if EPA were to extend the definition under part one to include facilities under separate ownership at the generator location, then material could be exported and processed by a third party who owned the land and the responsibility. As stated in the discussion on the topic earlier, allowing separate ownership to qualify under this part of the definition eliminates the requirement that the generator use reasonable efforts to ensure proper management of the material and confirm the reclamation is legitimate recycling.

In the Proposal, EPA is allowing for the export of hazardous secondary material using the conditional exclusion for the option where the hazardous material is transferred off site. The export allowance is based on the condition that the receiving country is notified through EPA and accepts the shipment of the hazardous material for reclamation. EPA is allowing export under the exclusion on the premise that by notifying the receiving country and receiving their authorization, it assures the material will be proper managed, reclaimed, and not discarded.

While requiring notification is better than just applying the conditional exclusion, VPRA strongly disagrees with the EPA approach. There is certainly no guarantee or method of enforcement to ensure the hazardous material are in fact properly managed and recycled at overseas locations. This is particularly true given the limited information that is required in the current proposed notification and recordkeeping approach. It certainly is not clear how the generators would meet the reasonable effort provisions. Once the material is exported outside the hazardous or solid waste definition, there will be no labeling or tracking of the material as it leaves the country. The receiving country may acknowledge they will receive the material, but after that, they will be no paperwork in place to notify the receiving country inspectors that this material has special conditions attached to it and that it is a <u>hazardous</u> secondary material.

EPA should not allow the use of the proposed conditional exclusion for any material transferred off site, as this circumvents all of the in place rules (Basel Convention, etc.) to control and limit the shipment of hazardous or potential hazardous waste to other countries. Generators wishing to send hazardous secondary materials to other countries should be required to track the material as hazardous waste and make the required notification and shipping arrangements. If the receiving country wants to have their own exclusion or apply certain conditions then they can obviously do so. As with the US, if these materials arrive at the US border as hazardous waste, the specific conditions and exclusion can then be applied as part of the entry process when it reaches the border.

If the EPA is going to retain the export provision for hazardous secondary material transferred off site, then at the very least they need to strengthen the conditions for record keeping, characterization, shipping procedures and documentation, etc. All of the earlier comments proposed to strengthen the generator and reclaimer requirements and make them more specific should apply. It is particularly important that the generator facility maintain records of their audits and documentation used to meet the reasonable effort provision, as EPA and the states will not have any access to the overseas reclamation facility or its records, procedures, etc. If EPA is serious that they believe the hazardous secondary materials can be excluded from the definition of solid waste because the generator will bear responsibility to ensure the material is properly managed and reclaimed (i.e. not discarded), then clearly allowing export of the hazardous material (including currently list hazardous waste, such as spent catalyst) must include specific details and records showing the generator and reclaimer has met the conditions required under the rules.

Reclaimer versus Generator Exclusion issue

At 72 FR pages 14196-14197, EPA states: *Finally, the Agency anticipates that, when and if today's proposed exclusion for transferred materials is promulgated and becomes effective, there are likely to be some generators of recyclable hazardous wastes that will choose not to use the exclusion, and thus will continue to manage their wastes under the current hazardous waste regulatory system. These generators may nevertheless wish to ship their hazardous waste to a reclamation facility that is operating under this exclusion. In such situations, it is possible that questions could arise as to the regulatory status of the hazardous waste materials that are sent to such reclamation facilities. Today's proposed exclusion includes a provision (§ 261.4(a) (24) (VI)) that is intended to clarify that the reclamation facilities may still claim the exclusion in these types of situations. The Agency requests comment on this provision.*

The referenced regulatory language reads:
(vi) A reclamation facility at which hazardous secondary materials are managed in accordance with the provisions of this exclusion may also accept and manage fully regulated hazardous wastes from generators who do not use this exclusion. Such materials are not solid wastes, and the RCRA regulatory status of the reclamation facility will not be affected, provided that the reclamation facility complies with the requirements specified in § 261.4(a)(24)(i), (ii), (iii) and (v).

EPA should not allow a reclamation facility to apply the conditional exclusion when a generator is handling and shipping the material as a hazardous waste. If this provision is allowed, it completely undermines the basic premise of the proposal that generators will be responsible and ensure reclaimers properly manage and recycle the hazardous materials. This provision will allow generators to ignore the requirement of making a "reasonable effort" (261.4(a) (24) (iv)) to ensure the reclaimer intends to legitimately recycle the materials and that the reclaimer will manage the material in a manner that is protective of health and the environment. This provision provides a large loophole that lets generators off the hook for auditing the reclaimer and making

other reasonable efforts to ensure the excluded material is legitimately recycled and managed properly. It would appear to allow the reclaimer to make whatever decisions they wish regarding the exclusion. This approach seems contradictory to the approach EPA has taken for off site transfer, namely attempting to make the generator responsible, in addition to the reclaimer, for ensuring that the material is truly recycled and managed properly.

It is also not clear how a generator could manifest a hazardous waste and ship it to a facility that is not a RCRA permitted facility. Somewhere between the time the generator puts the material on the road and the time it is received, it would magically have to be declared non hazardous and the manifest closed. This approach appears to be completely contradictory to the RCRA "cradle to grave" approach and would circumvent the RCRA rules and agency intent.

Which rule applies? (Waste specific conditional listing and conditions or the DSW general rule)

EPA states that their intent in the proposed rule is to keep existing exclusions, i.e. waste specific exclusions and conditions, as the controlling conditions.

However, on page 14205, EPA states: *We request comment on the option of allowing a regulated entity to choose which exclusion the person is subject to in those cases where more than one exclusion could apply and, if so, whether that entity should be required to document the choice made.*

VPRA supports the current EPA position that specific exclusions should apply to those wastes. The specific exclusions have been developed with careful consideration of the hazardous proprieties of the materials and conditions set to ensure proper management of these hazardous properties. VPRA has proposed a set of conditions specific to spent catalysts. VPRA believes that spent catalysts are hazardous secondary materials that have unique properties that require their own set of conditions to ensure safe and effective management. Allowing a generator and reclaimer to use the general, non waste specific provisions and conditions of the proposed DSW rule ignores the unique properties of spent catalyst that have long been recognized by the Agency and led to the specific listing of spent catalyst as listed waste K171/172.

If EPA were to change its current position and allow reclaimers to choose which exclusion to use, then selecting the use of the DSW exclusion could circumvent any special conditions that are included in the proposed spent catalyst exclusion and in other exclusions that have been implemented. EPA should maintain the current clear requirement that existing conditional exclusion requirements should be the applicable conditions and supercede any "generic set of conditions" under this proposal.

EPA should also include in the proposed rule a provision that allows EPA to establish other waste specific exclusions with special conditions in the future. The current proposal does not mention what options or approach EPA may take, if waste specific conditional exclusions are needed and promulgated in the future. It would appear that EPA assumes that there will be no

need to establish conditional exclusions for specific wastes in the future. Mismanagement of some hazardous secondary materials would certainly appear to be likely in the future; if this very generic, general broad brush conditional exclusion is adopted and applied to all hazardous secondary materials. EPA should consider what action it may need to take in the future to ensure proper management of certain hazardous secondary materials, if needed in the future. EPA should add a provision stating that existing conditional exclusions and any future conditional exclusions would take precedent over this general proposal.

Legitimate Recycling (72 FR Page 14198 – 14210 and 261.2(g))

Originally, EPA proposed that four criteria must be met for a facility to determine that the recycling process is legitimate and not a sham recycling process. In the new proposal only two of the criteria (# 2 and #3) are required, while the other two must be "considered" but are not required. EPA also proposes to eliminate the specific wording in #2 requiring consideration of economics.

The four criteria are:

1) The secondary material is managed as a valuable commodity. Where there is an analogous raw material, the secondary material should be managed in a manner consistent with the management of the raw material. Where there is no analogous raw material, the secondary material should be managed to minimize the potential for releases to the environment.
2) The hazardous secondary material being recycled provides a useful contribution to the recycling process or to the product of the recycling process and *evaluating this criterion should include consideration of the economics of the recycling transaction.* The recycling process itself may involve reclamation or direct reuse without reclamation. *(Italics statement removed in the revision.)*
3) The product of the recycling process yields a valuable product or intermediate.
4) The product of the recycling process (i) Does not contain significant amounts of hazardous constituents that are not found in the analogous product; and (ii) Does not contain significantly elevated levels of any hazardous constituent that are found in the analogous products; and (iii) Does not exhibit a hazardous characteristic that analogous products do not exhibit.

VPRA carefully wrote the definition of recycling for spent catalyst in its proposed conditional exclusion. It is very important that clear and comprehensive criteria be established to demonstrate the legitimacy of the recycling process. History has shown that "sham" recyclers will operate in any market where there is money to be made by skirting the rules. The end result is often significant environmental damage and a significant cost to the public.

For spent catalyst VPRA specifically wrote the condition describing the reclamation process to require that the valuable metals present in the spent catalysts must be recovered as part of the reclamation process. This condition was needed to ensure that the true reclamation was being performed and not just a simple oil recovery with the valuable metals being discarded to landfills. For spent catalyst reclamation and the recycling of other hazardous secondary materials it is very

important that the recycling process be an established legitimate process that manages and the hazardous materials (raw materials) and the resultant product as valuable commodities.

VPRA believe that by removing item #1 from the requirements, the management of the secondary material as a valuable commodity and in a manner consistent to minimize releases, EPA has potentially weakened the overall management requirements of the hazardous materials including potentially weakening the shipping and storage requirements for recycled material under the guise of adding flexibility when considering this factor. EPA should add this requirement back to the recycling legitimacy determination.

EPA states under the legitimacy discussion (72 FR pages 14199-14200): *If a facility making a legitimacy determination decides that one of these two factors is in fact not applicable to the recycling process, we recommend that the facility document why the recycling process is legitimate even though it may not meet one or more of the factors to be considered.*

While it is "nice" that EPA recommends this information be documented, there is no requirement that any documentation be available for review by anyone – regulators, industry, or the public. It would seem that if EPA wants a recycler who cannot meet all the criteria to document why the criteria is not met, then this information should be recorded somewhere. The analysis and documentation should be part of the notification to the state and EPA. Further, this documentation would then be available for review by the generator auditors under the reasonable efforts requirement. It is certainly not clear how a generator could determine that a recycler meets the legitimacy criteria if there is no documentation of the analysis performed. Further, if the analysis were not "legitimate" then there would be a basis to challenge the process.

EPA should not just recommend that the legitimacy analysis be documented, but should require that the analysis be documented and be submitted as part of the notification process. This ensures that the generator, the regulators and the public can review this critical condition of the exclusion and the analysis performed.

Conclusion

EPA concluded in 1998 that spent hydroprocessing catalyst is a unique material with uniquely dangerous properties. As such, EPA required that spent catalyst management, including shipment and storage for reclamation, be subject to full RCRA regulation. The Agency has not done any analysis to show that this is no longer valid. Therefore, from a safety and environmental protection point of view, there is no basis to abolish the entire network of RCRA controls applicable to spent catalyst management that has worked well for over 20 years.

EPA says it is within its powers to regulate recycling of hazardous secondary materials sent to another company, and that it will do so when necessary for protection of the environment. Clearly, this position is supported by the *Safe Foods* case. Therefore the above-cited *API* case still stands for authority to consider spent catalyst sent for reclamation as hazardous and to be regulated accordingly.

Without knowing what refiners and reclaimers will or should do in response to a broad deregulation of spent catalyst reclamation, it would be irresponsible and arbitrary for EPA to remove RCRA restrictions proven to promote safe management.

On the other hand, there are certain features of the current scheme of regulation that could be removed to reduce costs without significant increase in risk.

EPA should instead take the middle ground between the status quo and the general deregulation of reclamation. It should continue down the path of a specific conditional exclusion that will remove certain unneeded regulatory burdens, such as a RCRA permit, yet keep in place enough detailed, enforceable rules to ensure that generators, reclaimers and state agencies know exactly what steps are needed for safe spent catalyst management. And EPA should include in the general rule a provision that any subsequently promulgated specific exclusion will prevail over a general exclusion, whenever adopted.