

US EPA ARCHIVE DOCUMENT

### Chapter III. Comments on the Revision to 40 CFR 261.3 to Exempt Wastes Listed Solely for Ignitability, Corrosivity and/or Reactivity

The ICR codes identify all comments that address the issue of revising the MDF rules to exempt wastes that are listed solely for ignitability, corrosivity or reactivity and no longer exhibit that characteristic. Comments on the ICR exemption were broken down further into the following specific issue codes:

ICR1	General comments on proposed expanded exemption
ICR2	Adding toxicity characteristic to expanded exemption
ICR3	Lack of regulatory language for the expanded exemption
ICR4	Applicability of LDRs to exempted wastes
ICR5	Technology-based LDR standards for wastes listed for a characteristic should be re-evaluated
ICR6	Adding P105 into exemption
ICR7	EPA must provide greater specificity on the regulatory definition of reactivity
ICR8	Inclusion of F003 solvents in exemption
ICR9	Dilution prohibition should apply to these exempted wastes
ICR10	Toxicity of wastes listed for ignitability, corrosivity, and/or reactivity
ICR11	EPA should encourage States to adopt changes
ICR12	EPA should increase funding to the States which adopt these changes
ICR13	Text of the mixture rule does not currently exclude waste listed for specific toxic chemicals (e.g., F035) from becoming exempt once those chemicals are below TC levels
ICR14	EPA should clarify whether discarded nitroglycerine patches are P081 hazardous waste

On the following pages, each ICR comment issue is summarized, and then followed by EPA's response. A list of all the specific comments (including the comment number assigned by the EPA docket, the page, and the paragraph) that are linked to each comment issue summary is also included. The full text of these comments appear in Appendix B.

### III. Comments on the Revision to 40 CFR 261.3 to Exempt Wastes Listed Solely for Ignitability, Corrosivity and/or Reactivity

**Issue Code:** ICR1: General Comments on Proposed Expanded Exemption

**Comments:** WHWP-00202, 6, 1; WHWP- 00175, 2, 3; WHWP-00201, 15, 2; WHWP-00201, 1, 2; WHWP-00034, 1, 4; WH2P-00035, 1, 3; WH2P-00018, 1, 4; WH2P-00048, 1, 2; WH2P-00048, 3, 1; WHWP-00186, 2, 1; WH2P-00017, 7, 1; WHWP-00040, 1, 2; WHWP-00182, 3, 3; WHWP-00166, 2, 4; WHWP-00206, 6, 3; WHWP-00089, 71, 2; WHWP-00108, 29, 1; WHWP-00220, 8, 3; WHWP-00239, 10, 1; WH2P-00039, 2, 2; WH2P-00035, 13, 5; WH2P-00044, 1, 2; WH2P-00044, 2, 1; WH2P-00035, 12, 4; WH2P-00005, 1, 3; WH2P-00005, 1, 2; WH2P-00001, 1, 2; WH2P-00012, 1, 4; WH2P-00016, 2, 2; WH2P-00019, 2, 3; WH2P-00020, 1, 2; WH2P-00020, 2, 1; WH2P-00021, 11, 2; WH2P-00046, 6, 3; WH2P-00045, 1, 2; WH2P-00042, 1, 3; WH2P-00041, 1, 4; WH2P-00039, 2, 1; WH2P-00039, 6, 1; WH2P-00038, 1, 2; WH2P-00036, 2, 4; WH2P-00035, 6, 2; WH2P-00033, 2, 1; WH2P-00033, 15, 2; WH2P-00031, 1, 3; WH2P-00028, 1, 3; WH2P-00034, 4, 1; WH2P-00048, 3, 3; WHWP-00035, A1, 5; WHWP-00106, 15, 1; WH2P-00021, 2, 3; WH2P-00007, 5, 1; WH2P-00010, 8, 3; WH2P-00014, 3, 3; WHWP-00072, 21, 1; WHWP-00177, 2, 4; WHWP-L0004, 14, 1; WHWP-00018, 1, 3; WH2P-00005, 15, 2; WHWP-00171, 4, 3; WH2P-00021, 4, 2; WH2P-00015, 2, 2; WH2P-00021, 6, 2; and WH2P-00050, 2, 5

#### Comment Summary:

The Agency received comments from 49 commenters in response to both the 1995 and the 1999 HWIR proposals concerning the proposed expanded exemption to the mixture and derived-from (MDF) rules. Of those comments, 17 were received from industry, 10 were from industry associations, six were from utility companies or utility company associations, six were from State Agencies, two were from waste management companies, two were from waste management associations, four were from Federal Government Agencies, one was from a consultant and one was from another type of commenter. A summary of the specific issues raised by commenters is provided below.

All but ETC agreed that wastes listed solely for the characteristics of ignitability, corrosivity, or reactivity (ICR) that no longer exhibit any characteristic should not be regulated as hazardous. Several commenters believed that the current “mixture rule” exemption for decharacterized waste should apply to all wastes. They felt it was an anomaly that a waste may qualify for an

exemption under the mixture rule, while essentially identical wastes may not be exempt because there is no “mixture.” Eli Lilly believed that EPA should promulgate the exemption as soon as possible, even if the issuance of the final HWIR was delayed. The Basic Acrylic Manufacturing Manufacturers, Inc. believed that the proposal would reduce unnecessary requirements and costs. Proler International believed that this change would promote waste minimization and more effective recycling. Lake City Army Ammunition noted that the proposal would reduce the over-regulation of low-risk wastes, which are currently captured by the MDF rules. Several commenters also noted that they believed there is no environmental or human health basis for continuing to regulate these de-characterized wastes and that EPA has ample legal discretion to exempt such wastes from Subtitle C regulation. Also, the proposed revision is scientifically sound, represents excellent public policy and is well within EPA’s legal discretion.

While commenters were pleased that the Agency was addressing the discrepancy between the mixture rules and the derived-from rules, several commenters noted that this was only a first-step in limiting the unnecessarily broad scope of the MDF rules. GE noted that with regard to commercial chemical products, the most common derived-from residuals (off-specification species, container residues and spill residues) also are specifically listed, so eliminating the derived-from rule for these listings has a very limited benefit. They further stated that as for the other wastes potentially impacted by the rule, there are very few companies that generate K044, K045, or K047. NEDA RCRA stated that the proposed revisions likely will have little effect beyond eliminating the derived-from rule for F003 listed wastes and they urged EPA to extend the changes to encompass other waste streams that pose similar low risks.

The Ohio Department of Health believed that the proposed exemption did not go far enough, and should go beyond the delisting of 29 wastes from the MDF rules. If a generator or treatment facility can verify that the residues left after meeting LDR treatment standards no longer meet the definition of a characteristic waste, and they also do not contain a listed waste, then the waste should not be considered a hazardous waste. The option should not be limited to 29 wastes but be based on a regulatory process.

ETC opposed the proposed exemption for derived-from residuals from treatment of the 29 listed hazardous wastes that were listed only because of ICR characteristics. Even though the exemption would apply only to derivatives that no longer exhibit a characteristic and that comply with the LDR treatment standards for any underlying hazardous constituents in the listed wastes, the commenter noted that EPA always has acknowledged that the ICR characteristics are only a gross screen for identifying hazardous wastes that clearly warrant Subtitle C control. These 29 listed wastes frequently contain other toxic constituents at levels that may pose risks even after LDR treatment and therefore, should be managed in a Subtitle C facility.

#### **Agency Response:**

The Agency appreciates the support for revisions to the mixture rule for wastes listed only for

ignitability, corrosivity, and reactivity. We recognize that this is but one part of a greater regulatory reform effort; other changes may be part of future rulemaking packages.

Some commenters presented specific waste situations for which the rule change will help. The Agency cannot comment here on the unique individual applications of today's rule.

The Agency disagrees with the commenter opposed to regulatory revisions for the ICR wastes. For reasons that will be stated below in response to comment issues ICR8 and ICR10, the Agency continues to believe that treatment of this particular set of wastes along with other existing Subtitle C controls (e.g., the Toxicity Characteristic) are enough to provide regulatory relief and mitigate risks otherwise posed by these wastes. The Agency reiterates that it sees no reason to treat derivatives of wastes listed solely for a characteristic (or those wastes as generated) differently from the way it treats mixtures of such wastes because all present similar low risks to human health and the environment. As previously noted by the Agency and most commenters, the Agency already exempts mixtures of these kinds of wastes.

**Issue Code:** ICR2: Adding the Toxicity Characteristic to the Expanded Exemption

**Comments:** WH2P-00041, 1, 4; WHWP-00035, A1, 5; WHWP-00185, 9, 2;  
WH2P-00031, 2, 3; WH2P-00007, 5, 1; WH2P-00008, 1, 3;  
WH2P-00010, 4, 2; WH2P-00010, 8, 3; WH2P-00022, 2, 5;  
WH2P-00022, 5, 1; WH2P-00001, 1, 3; WHWP-00106, 15, 1;  
WH2P-00014, 3, 3; and WH2P-00016, 2, 3

**Comment Summary:**

EPA received comments from 12 commenters in response to both the 1995 and the 1999 proposals concerning inclusion of wastes listed solely for the toxicity characteristic in the expanded exclusion. Of those comments, four were received from industry, two were from industry associations, four were from utility companies or utility company associations, one was from a Federal Government Agency, and one was from an industry consultant. A summary of the specific issues raised by commenters is provided below.

While supporting the proposed exclusion, these commenters urged EPA to modify the proposal so the exclusion would apply to wastes listed due to any of the four characteristics, including the toxicity characteristic. Commenters asserted that it was not logical to limit the exclusion for derived-from wastes to three of the four characteristics, regardless of the fact that no listed wastes are listed solely on the basis of the toxicity characteristic. One commenter stated that it appears as if EPA suspects that wastes containing TC constituents below the toxicity characteristic are not really safe. A few commenters noted that in the future, wastes that may be listed solely for the toxicity characteristic should be eligible for the exclusion. USWAG also noted that the proposed regulatory language does not provide for any additional hazardous waste characteristics that might be promulgated in the future. Commenters suggested that EPA replace references to ignitability, corrosivity, and reactivity in the proposed regulatory language for 40 CFR § 261.3(g) with references to any characteristic of hazardous waste identified in subpart C, reflecting the approach and language used in the current mixture rule.

Several commenters noted that EPA did not offer an explanation for omitting wastes listed solely because they exhibit the characteristic of toxicity from eligibility for the proposed exclusions that would be granted by 40 CFR 261.3(g). EPA did explain that, since no listings to date have been based on the toxicity characteristic, EPA was proposing to limit the new revision to the derived-from rule to wastes listed because they exhibit only the characteristics of ignitability, corrosivity, or reactivity. However, the commenters believed it is confusing to give no explanation for proposing the elimination of an existing exclusion from the mixture rule, even if no wastes now exist that are eligible for the exclusion. Therefore, the commenters recommended that the preamble for the final rule contain such an explanation.

**Agency Response:** EPA does not agree that wastes listed solely for the toxicity characteristic (TC) should be eligible for the exclusion. As we discussed in the 1995 HWIR proposal, wastes may still pose some risk concerns even when TC constituents are present below TC levels (60 FR 66369, December 21, 1995).

The hazards that the TC regulation addresses, carcinogenicity and chronic chemical toxicity via contaminated groundwater/drinking water, have fewer clear thresholds than the other

characteristics. Wastes that exhibit the characteristics of ignitability, corrosivity or reactivity typically pose acute hazards which can be addressed by application of appropriate treatment to decharacterize the waste. For example, ignitable liquid waste or waste chemical oxidizers can be treated by combustion, and the ash treatment residue poses no ignitability threat to landfills. Similarly, strong acid or basic wastes, if effectively neutralized, generate residues that pose no threat of skin damage. Waste explosives or highly reactive chemicals that are denatured or reacted-out under controlled conditions also generate residues that pose no explosion or reaction threat.

The TC chemicals have less clear thresholds below which they pose little or no hazard for several reasons. Toxic chemicals pose a risk that is typically dependent on a range of factors, and assessment of hazard from toxicity is much more complex, and involves many more variables, than assessment of hazard from the other three characteristics. A waste that does not exhibit the toxicity characteristic for a particular chemical may nonetheless pose a substantial hazard depending on such factors as the volume of the waste, the exposure route being assessed, and the amount of dilution and attenuation that is assumed prior to exposure. These factors, along with others, are taken into account in making hazardous waste listing determinations based on toxicity. See 40 CFR 261.11((a)(3)). In addition, as persistent chemicals move through the environment, they can accumulate, posing long-term chronic risks even at levels below those set for the toxicity characteristic. Thus, the toxicity characteristic is not designed to capture all of the wastes that might present a substantial hazard for the TC constituents. Rather, the TC is designed to capture wastes that may pose a substantial hazard, without the need to conduct a waste-specific risk assessment. In fact, when EPA promulgated the TC regulation, we stated that the regulation is intended to identify "...broad classes of wastes which are clearly hazardous...". We also noted that "wastes that do not exhibit the hazardous waste characteristics are not necessarily non-hazardous." (55 FR 11799, March 29, 1990). In identifying TC hazardous wastes as "clearly hazardous" the agency was identifying a universe of wastes that it believed may pose high enough risk so as to always require classification as hazardous. In noting that non-TC wastes are not necessarily non-hazardous, the agency both recognized the non-threshold (i.e., continuous) nature of TC constituent risks, and recognized that wastes falling just below the TC values may pose risks that are just below a "clearly hazardous" designation, and which may sometimes warrant classification as hazardous. EPA has in fact listed wastes based on toxicity where the waste did not fail the TCLP for the constituent of concern. (see, for example, the final petroleum waste listing, 63 FR 42154 (August 6, 1998)).

EPA's decision to not exclude wastes listed solely for the TC could potentially affect the regulation of certain inorganic wastes that EPA has recently proposed to list as hazardous. (65 FR 55684, September 14, 2000). The issue had been purely theoretical before that point because no waste had ever been listed for the TC. In the inorganics listing determination proposal, however, EPA proposed to list baghouse filters from antimony oxide production for the TC. Despite the fact these wastes fail the TC for lead and arsenic, they are not always being managed as Subtitle C hazardous waste, nor are these wastes always treated to the appropriate LDR standards. By listing them, we would clarify their regulatory status. In the preamble to the inorganics listing proposal, EPA noted that proposed revisions to the mixture and derived-from rules did not

include an exclusion for wastes listed for the TC (65 FR 55705). EPA did not receive any public comments in response to this discussion in the Inorganics Listing proposal.



**Issue Code:** ICR3: Lack of Regulatory Language for the Expanded Exemption

**Comments:** WHWP-00073, 20, 1; WHWP-00185, 9, 2; WHWP-00194, 2, 5;  
WHWP-00072, 21, 1; WHWP-00072, 77, 4; WHWP-00177, 2, 4;  
WHWP-00029, 2, 8; WHWP-00206, 6, 1; and WHWP-L0004, 14, 1

**Comment Summary:**

The Agency received comments from eight commenters in response to the 1995 HWIR proposal concerning the lack of regulatory language for the expanded exemption to the mixture and derived-from (MDF) rules. Of those comments, two were received from Federal Government Agencies, two were from industry associations, two were from industry, one was from a State Agency, and one was from an other type of commenter. A summary of the specific issues raised by commenters is provided below.

The commenters noted that in the preamble, EPA stated that it intended to revise the derived-from rule so that (consistent with the mixture rule) derivative wastes would be exempt if they no longer exhibited the characteristics of ignitability, corrosivity, or reactivity. However, the actual regulatory language for the changes to 40 CFR 261.3(c)(2)(i) was not provided. The commenters believed this exemption should be entirely consistent with the language in Part 261.3(a)(2)(iii), i.e., including the toxicity characteristic.

**Agency Response:**

The regulatory language was included in the 1999 proposal, and is modified per Agency review of comments. EPA does not agree that the exclusion should apply to wastes listed for the toxicity characteristic. See response to comment ICR2.

**Issue Code:** ICR4: Applicability of LDRs to Exempted Wastes

**Comments:** WHWP-00204, 7, 1; WHWP-L0004, 10, 3; WHWP-00169, 4, 3; WH2P-00019, 2, 3; WH2P-00045, 1, 2; WH2P-00041, 1, 4; WH2P-00038, 1, 2; WH2P-00036, 2, 4; WH2P-00033, 15, 2; WH2P-00031, 1, 3; WH2P-00048, 3, 3; WHWP-00106, 15, 1; WH2P-00001, 1, 3; WH2P-00014, 3, 3; WH2P-00005, 15, 2; WHWP-00194, 2, 6; WHWP-00035, A2, 1; WH2P-00007, 6, 1; WH2P-00038, 1, 3; WH2P-00009, 2, 5; and WH2P-00015, 2, 2

**Comment Summary:**

EPA received comments from 20 commenters in response to both the 1995 and the 1999 proposals concerning the applicability of LDRs to excluded wastes. Of those comments, eight were received from industries, four were from industry associations, two were from Federal Government Agencies, two were from State Agencies, one was from a consultant, one was from a waste management association, one was from a waste management company, and one was from an individual commenter. A summary of the specific issues raised by commenters is provided below.

Several commenters supported the EPA's proposed revision to the mixture and derived-from rules provided that the excluded waste meets land disposal restriction (LDR) requirements. One industry association noted that LDR standards assure that the waste is well treated. One State Agency believed that having similar wastestreams comply with the same requirements will achieve regulatory consistency as well as protection of human health and the environment.

Several commenters supported EPA's proposed revisions to the rules but did not support meeting LDR requirements. One industry commenter stated that applying LDRs to a waste which is excluded because it no longer meets the hazardous waste criteria is unnecessarily burdensome, costly and is a contradiction of the RCRA program requirements.

The American Auto Manufacturers Association and Caufield Enterprises said that the applicability of LDRs to both wastewater and nonwastewater forms of wastes should be both clear and identical. They felt that there is no justification for managing these wastes inconsistently.

Several of the comments dealt with whether excluded waste would need to be treated to meet LDR treatment standards for all underlying hazardous constituents (UHCs) under the existing rules. They felt that EPA should clarify that it did not intend to revise application of the current LDR rules without any discussion of why such a change would be necessary. Safety-Kleen emphasized that EPA has not provided a compelling case for requiring testing for UHCs or a clear methodology for implementing the requirements that are proposed. They stated that since these wastes are listed, generators have not been required to obtain information on underlying hazardous constituents. Obtaining this information would pose an undue burden for the generator, and they requested clarification on who would be responsible for verifying whether the waste in question meets the condition of the exclusion: the generator or the facility receiving the excluded waste.

API and CMA referenced the Land Disposal Program Flexibility Act of 1996 (LDPFA) and its relationship to the proposed exclusion. Under LDPFA, solid wastes identified as

hazardous based solely on a characteristic, are not prohibited wastes under the Land Disposal Restrictions program if they are managed in certain systems including a treatment system that subsequently discharges into waters of the United States pursuant to a CWA permit. The commenters further requested that EPA revise its proposed language modifying the mixture rule for wastes in proposed 40 CFR § 261.3(a)(2)(ii) so that the land disposal restrictions program does not apply to wastes that are not prohibited. They argued that this revision is crucial to maintain the status quo for managing wastes listed solely for a characteristic in land-based units. Imposing the LDR program on such wastes would put many surface impoundments out of compliance because they are managing decharacterized listed wastes in land-based units that do not meet RCRA's minimum technology requirements.

**Agency Response:**

In proposing to expand the current exclusion for waste listed solely for a characteristic, EPA did not intend to change the way land disposal restrictions (LDRs) apply to the excluded waste. EPA agrees with those comments that support the continued application of LDR requirements to mixture and derived-from wastes listed solely for a characteristic of ignitability, corrosivity, or reactivity after they have become excluded. We are not imposing any new LDR requirements in this rule.

We agree that the treatment standards for UHC's do not apply in all cases, and have not changed the applicability of these requirements. In general, wastes that are both listed as hazardous waste and exhibit a characteristic only need to meet the treatment standard for the listed waste code. (40 CFR 268.9(b)). An exception occurs when the treatment standard for the listed waste code does not include a standard for the constituent that causes the waste to exhibit the characteristic. In this case, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

EPA disagrees with the comment that LDRs for wastewaters and nonwastewaters should be identical. We continue to support the existing different treatment standards for wastewaters and nonwastewaters. Such differences are based on waste treatability and differences in the Best Demonstrated Available Technology applicable to the waste.

Today's rule also does not broaden the applicability of LDRs. The revised language to 40 CFR 261.3 (g)(3) states, "Wastes excluded under this section are still subject to part 268 of this chapter (as applicable), even if they no longer exhibit a characteristic at the point of land disposal." When the requirements of 40 CFR 268 would not otherwise apply to a waste (for example, during treatment of certain characteristic wastes in a land-based unit), today's rule does not change that fact. In the case of wastes listed solely for ignitability, corrosivity, and reactivity that do not exhibit a characteristic at the point of generation, these wastes are considered to never have been hazardous and are not subject to 40 CFR 268.

**Issue Code:** ICR5: Technology-based LDR Standards for Wastes Listed for a Characteristic Should be Re-evaluated

**Comments:** WH2P-00017, 7, 1; and WH2P-00024, 8, 1

**Comment Summary:**

The Agency received comments from two commenters in response to the 1999 HWIR proposal concerning technology-based LDR standards in the mixture and derived-from (MDF) rules. Of those comments, one was from a Federal Government Agency and one was from an industry.

DoD pointed out that the current mixture rule allows wastes listed solely for ignitability, corrosivity, and/or reactivity characteristics to exit Subtitle C of RCRA, provided the waste is decharacterized and the appropriate LDR standards are met. The additional requirement for these wastes to meet the 40 CFR 268 standards can be problematic because 19 of the 29 wastes listed for characteristics have technology-specific treatment standards rather than numeric standards. Consequently, the majority of the wastes listed for characteristics will not be eligible for the proposed exclusion because they always will require further treatment in RCRA Subtitle C facilities. In particular, the commenter raised the issue of P081 (nitroglycerine) wastes that do not exhibit any characteristic at the point of generation. Since the standard for P081 non-wastewaters is treatment via combustion, chemical reduction, or chemical oxidation, these wastes will be unable to exit Subtitle C of RCRA without further treatment. The commenter requested that EPA either (1) eliminates the LDR requirement for these wastes when they do not exhibit the characteristic at the point of generation, or (2) Replace the existing P081 non-wastewater treatment standards with Deactivation (DEACT).

TRW asked that EPA clarify BDAT for reactive wastes. The commenter felt that EPA has introduced a great deal of confusion into the LDR standards for reactive wastes by promulgating BDAT differently for different waste streams, all of which are classified as reactive. For all D003 and K044, K045, and K047 wastes the BDAT is DEACT; however, BDAT for reactive-only P and U listed wastes is a list of technologies. The commenter believed that DEACT would be the more appropriate standard for the P and U wastes in order to allow a wider variety of techniques to be used to remove the characteristic and to be consistent with other reactivity-based listings.

**Agency Response:**

In the Land Disposal Restrictions ANPRM (see 65 FR 37949, June 19, 2000), the Agency raises the issue of the adequacy of the treatment standard of deactivation (DEACT) for reactive hazardous wastes. Because only narrative definitions define when a waste is reactive or has been deactivated, the Agency is concerned that adequate treatment may not be taking place. Following the review of the comments on the ANPRM, a future proposal may replace existing DEACT requirements with technology requirements analogous to those currently applicable to P081. This approach is counter to the commenter's position. However, concerns raised regarding the potential confusion in the identification and deactivation of reactive waste have

lead the Agency to consider and solicit comment on processes that ensure the destruction of the agents that cause the reactive property. Any change to current regulation of reactive wastes will be the subject to a future rulemaking.

ICR wastes that do not exhibit any characteristic at the point of generation are considered non-hazardous under today's rule and do not have to meet LDR standards before disposal in a non-hazardous waste unit.

**Issue Code:** ICR6: Adding P105 into the Exemption

**Comments:** WH2P-00024, 2, 2; and WH2P-00024, 1, 3

**Comment Summary:**

The Agency received a comment from TRW in response to the 1999 HWIR proposal concerning the addition of P105 into the proposed expanded exemption to the mixture and derived-from (MDF) rules. A summary of the comment is provided below.

TRW believed that EPA should clarify the basis of the original listing of P105. The proposed rule allows ICR listed wastes to be exempted from RCRA Subtitle C regulation if they no longer exhibit the characteristic for which they were listed under one of three situations: as generated, after mixing, or after treatment. However, EPA has not included P105 as one of those listed wastes covered by the proposed exemption even though a careful reading of the Listing Background Documents indicates that P105 was listed exclusively on the basis of reactivity, not acute toxicity as stated in 40 CFR 261.33. The commenter requested that EPA clarify for the regulated community and for federal and state implementing agencies that sodium azide was listed for reactivity not acute toxicity and that P105 wastes are eligible for the benefits of proposed changes in the MDF rules.

The commenter offered the following information supporting their position. EPA's rulemakings, since the time sodium azide commercial chemical product wastes were listed as P105 in 1980, strongly indicate that the Agency views P105 as having been listed for reactivity. For example, the Background Document supporting the adoption of the land disposal restrictions for P105 indicates that the treatment standards applicable to P105 were designed to reduce the reactivity, rather than the toxicity, of sodium azide-related wastes. EPA referred to P105 as highly reactive or explosive and, for purposes of determining the applicable treatment standard, classified it as an incinerable reactive organic. EPA's failure to define sodium azide as a hazardous constituent for purposes of its 1995 proposed Hazardous Waste Identification Rule (HWIR) for process wastes further demonstrates that the Agency continues to justify the listing of sodium azide wastes on the basis of reactivity (see 60 FR 66344, December 21, 1995).

As part of the 1995 HWIR proposal, EPA proposed a risk-based standard for each of the toxic substances listed in Appendix VIII as the level below which wastes would no longer be regulated as hazardous waste. Significantly, no such level was proposed for P105. Had the Agency considered sodium azide to be hazardous due to its toxicity, it would have included sodium azide on its list of hazardous constituents for which a risk-based exit criterion would have been appropriate. If EPA believes the listing as an acutely toxic waste is appropriate, the commenter believes the Agency cannot rely on the listing in its current form. Rather, EPA should provide appropriate scientific support for the listing, take notice and comment on this information, and add sodium azide to Appendix VIII.

**Agency Response:**

The comment is outside the scope of today's rulemaking. Sodium azide itself has an acute toxicity, as pointed out in the 1980 Background Document to the Commercial Chemical Product listings under 40 CFR 261.33.

**Issue Code:** ICR7: EPA must Provide Greater Specificity on the Regulatory Definition of Reactivity

**Comments:** WH2P-00024, 6, 1; WH2P-00011, 4, 1; and WH2P-00003, 2, 1

**Comment Summary:**

The Agency received comments from three commenters in response to the 1999 HWIR proposal concerning the regulatory definition of reactivity in relation to the expanded exemption to the mixture and derived-from (MDF) rules. Of those comments, one was received from an industry, one was from a waste management company and one was a laboratory association. A summary of the specific issues raised by commenters is provided below.

TRW, ACIL and Envirocare requested that EPA address the problems with the definition of reactivity for sulfide and cyanide. TRW noted that most of the documents on the subject consistently state that existing test methods for reactivity are inadequate for waste matrices and the various waste management scenarios. Also, the various aspects of reactivity can overlap with each other and with other characteristics making specificity in the definition difficult to achieve. In addition, EPA has withdrawn the provision of the reactivity characteristic that addresses DOT definitions, and has withdrawn a guidance document and associated SW-846 test methods addressing cyanide and sulfide reactivity. [See Michael to Wapensky; Feb. 24, 1995; 9443.1995(01) and Bussard to Love; Apr. 21, 1998; FaxBack 14177].

TRW also requested to know how EPA would apply the currently subjective narrative criteria, since it would prove difficult or impossible for any generator to have sufficient certainty to take advantage of the provisions. This would impact a generator's compliance with LDR standards that dictate removal of the characteristic as BDAT. The commenter noted the following specific issues: 1. Only the fifth reactivity criterion (40 CFR 261.23(a)(5)), cyanide and sulfide reactivity, incorporates a pH range into the definition. What pH level does EPA intend a generator to utilize when determining water reactivity for other potential water reactive wastes? 2. The fourth and fifth criteria (40 CFR 261.23(a)(4) and (5)) mention gases, vapors and fumes in a quantity sufficient to present a danger to human health or the environment. What is this level? 3. What is the Agency's position on wastes that are not reactive at the point of generation or after mixing or treatment but have the potential, under future management scenarios, to become reactive, e.g., by drying out? EPA has stated on two different occasions that the reactivity characteristic is not intended to capture wastes that could become reactive sometime in the future. See Background Document. Characteristic of Reactivity; May 2, 1980; p. 23 and MRQ Jan. 1983, 9443.1983(02). 4. What is the Agency's position on whether wastewaters can be water reactive according to the three water reactivity criteria in the regulations? The Agency asserts in the LDR treatment standards table at 40 CFR 248.40 and in the Background Document to the LDR rulemaking that D003 water reactive streams consist only of non-wastewaters. 5. What is EPA's position regarding whether reliance on DOT tests for explosivity and water reactivity is appropriate for RCRA reactivity classification? If they are not appropriate, why not? 6. How should a generator



differentiate between certain reactive solids and flammable solids? Is it necessary to apply both classifications or is a single classification appropriate if there is only one distinct characteristic?

The commenters also requested that EPA address the problems with the test procedures for sulfide and cyanide reactivity. Envirocare noted that EPA had analytical methods for sulfide and cyanide reactivity, but the resulting standards were only interim guidance limits. The commenter believed that EPA should establish more defined standards for these hazardous waste characteristics in light of the proposed exemptions. ACIL requested EPA to disallow the use of analytical test procedures published in Chapter 7 of SW-846 for evaluating reactive cyanide or sulfide. The commenter stated that it generally was accepted that the test methods published in SW-846 used to evaluate sulfide and cyanide reactivity are invalid. However, laboratories are obliged to continue to perform the tests, because these tests are the only laboratory tests waste generators can use to evaluate reactivity. As noted in an April 28, 1998 memo prepared by David Bussard and Barnes Johnson of OSWER to EPA's National Enforcement Investigation Center on this topic: "After this careful consideration, it is our conclusion that there were critical errors made in developing the guidance, that your (NEIC's) concerns regarding the reliability of the guidance are well founded, and that the guidance should be withdrawn. This memo withdraws the July, 1985 guidance." The commenter believed that the Agency should provide better guidance on how to evaluate the characteristic of reactivity.

#### **Agency Response:**

The comments described above relate to: (1) a withdrawn guidance to determine cyanide/sulfide reactivity and (2) reactivity determinations for certain other wastes. With respect to wastes which are cyanide or sulfide reactive, EPA issued a memorandum on April 21, 1998 detailing arguments for the withdrawal of an interim guidance, used to determine such reactivity and issued in July, 1985. This memorandum was widely distributed outside EPA. Thus, the narrative standard of the RCRA regulations is the determinant for cyanide/sulfide wastes:

A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties: . . . (5) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

A consequence of the April 21, 1998 memorandum is that the analytical test procedures published in Chapter 7 of SW-846 for determining reactive cyanide or sulfide should no longer be used for the purposes of identifying the characteristic of reactivity.

EPA does not plan to further clarify the narrative standard on reactivity. In its initial promulgation of the reactivity characteristic (45 FR 33109 May 19, 1980), in the associated background document on reactivity (dated May 2, 1980), and in policy letters issued over the past

20 years, the Agency has discussed its reliance on the narrative standard and its belief that such a standard is sufficient for waste identification and deactivation. “[A] characteristic such as reactivity need not be accompanied by a testing protocol if the characteristic can be ‘reasonably detected by generators through their knowledge of the waste.’” (45 FR 33106 May 19, 1980). Hazardous waste generators should know if their wastes are likely to be reactive, since they are the ones routinely handling these wastes. In addition, such wastes are rarely generated from unreactive feedstocks, and, furthermore, from a worker protection perspective, generators generally manage such wastes to protect their personnel, their property, and their operations. .

Issues associated with the identification of characteristically reactive wastes are not within the scope of the revisions to the mixture and derived-from rules promulgated in this action and will not be addressed here. Specific aspects of such identification including acute worker exposure standards, other non-worker exposure scenarios and any potential specification of levels are also beyond the scope of today’s rulemaking. The deactivation of wastes listed for reactivity is related in that generators seeking exemption from the mixture and derived-from rules must deactivate such waste; however, the changes promulgated today do not alter the particulars of deactivation, the judgements required to assess such deactivation, and the continuing burden on a generator to make such judgements. Again, the Agency does not believe it necessary to further clarify the narrative standard on reactivity, and, therefore, these issues are also not addressed.

The Agency does clarify several questions related to the regulatory provisions associated with reactivity:

- For determining water reactivity for other potential reactive wastes, no pH level is stipulated in the 40 CFR 261.23(2), (3) and (4). Thus, wastes can be water reactive by these three stipulations, regardless of pH.
- Two reactivity criteria (40 CFR 261.23(4) and (5), i.e., water reactive and cyanide/sulfide reactive, respectively) mention gases, vapors and fumes in a quantity sufficient to present a danger to human health or the environment.
- Consistent with Appendix VI of 40 CFR 268, treatment standards are not considered applicable to wastewaters of D003 water reactives (i.e., reactive wastes defined under 40 CFR 261.23(a)(2), (3), and (4));
- EPA does not recognize DOT tests for explosivity and water reactivity to determine if a waste is reactive. EPA reiterates its reliance on the narrative standard and has not reviewed these tests to determine if they are, in general, applicable to hazardous waste identification for reactivity.
- There is no need to differentiate between reactive solids and flammable solids. If more than one classification is appropriate to designate a characteristic, then a material would

have multiple characteristics, from a RCRA perspective. The generator would have to address each characteristic in order to be eligible for today's promulgated exemption from the mixture and derived-from rules.

**Issue Code:** ICR8: Inclusion of F003 Solvents in the Exemption

**Comments:** WH2P-00005, 1, 3 ; WH2P-00028, 1, 3; WH2P-00008, 1, 3;  
 WH2P-00007, 6, 3; WH2P-00010, 4, 4; WH2P-00010, 10, 2;  
 WH2P-00017, 9, 1; WH2P-00022, 3, 2; WH2P-00022, 5, 6;  
 WH2P-00048, 3, 5; WH2P-00046, 6, 5; WH2P-00045, 2, 1;  
 WH2P-00042, 1, 4; WH2P-00033, 16, 2; WH2P-00030, 5, 3;  
 WH2P-00009, 2, 5; WH2P-00034, 4, 4; WHWP-00206, 6,5;  
 WH2P-00015, 2, 3; and WH2P-00036, 2, 5

**Comment Summary:**

EPA received comments from 17 commenters in response to the 1995 and 1999 proposals concerning the inclusion of F003 solvents in the expanded exclusion to the mixture and derived-from rules. Of those comments, five were from State Agencies, three were from utility companies or associations, four were from industries, two were from Federal Agencies, two were from waste management associations, and one was from an industry association. A summary of the specific issues raised by commenters is provided below.

About two-thirds of the commenters supported including F003 wastes in the proposed exclusion. However, GE noted that this proposed revision would have little effect beyond eliminating the derived-from rule for a small number of wastes. Many commenters noted that if the solvent contained, before use, one or more of the toxic solvents specifically listed in F001, F002, F004, or F005, at 10 percent or more by volume, it would be regulated as that waste code. Therefore a blanket exclusion for all categories of F003 is appropriate because toxics, when present, will be addressed under other applicable waste codes. Ohio EPA, DoD and DOE stated that any toxic solvents contained in an F003 spent solvent blend would not escape proper treatment because of the land disposal restrictions (LDR) program. They also noted that solvent mixtures/blends meeting the F003 listing description and containing a certain percentage of toxic solvents also will carry the waste code F001, F002, F004 and/or F005 and therefore, be subject to treatment requirements under the LDR program.

Four commenters did not support including F003 in the proposed exclusion. They argued that the listing description for F003 contains a reference to other solvent wastes (F001, F002, F004, or F005) that are listed for toxicity. Therefore, ignitability was not the only characteristic of concern. In addition, certain F003 solvents themselves may also be toxic, upon consideration of new data developed since 1985. Specifically, the commenter cited a National Toxicology Program, National Institutes of Environmental Health Sciences, Management Statistics Report dated January, 1999 on the carcinogenicity of ethylbenzene (an F003 waste).

In addition, one State noted that in the April 30, 1992 proposal to revise the Hazardous Waste Identification Rule, EPA was considering a separate rulemaking to modify the basis for listing F003 and other wastes listed solely for a characteristic because of concerns about toxicity and/or carcinogenicity. If the chemicals in these wastes are either toxic or carcinogenic according to EPA's own determinations, they should be identified as such in 40 CFR 261 subpart D.

Commenters also argued that F003 wastes "often" contain toxic constituents other than the solvents themselves. One commenter noted that EPA states in 50 FR 53317 (December 31,

1985) “In fact, solvents become spent when they have become contaminated with other materials, (i.e., heavy metals or toxic organic compounds) and must be disposed, reprocessed or reclaimed.” EPA further states “. . . since spent solvents reasonably are likely to contain other toxicants at levels of regulatory concern, and since we have not evaluated those wastes for these toxicants, we believe it inappropriate to remove these solvents from the hazardous waste list.” In addition, the waste management association commenter argued that as part of the economic impact analysis associated with the 1999 HWIR proposal, there have been 51 different hazardous constituents associated with the F003 waste code. The commenter believed that if EPA lacked toxicological data on any of these constituents, then F003 could not be eligible for the exclusion once the ignitability characteristic was removed and the waste exhibited no other hazardous waste characteristics.

**Agency Response:** EPA agrees with those comments that support F003 waste remaining eligible for this exclusion. Because F003 waste that contains 10% or more of the other F-listed solvents (F001, F002, F004, and F005) would also bear those waste codes, such wastes would not be eligible for the exclusion. The exclusions applies only to F003 wastes that do not contain 10% or more of these other solvents.

EPA is aware of the recent carcinogenicity study (referenced in the public comments) that was performed by the National Toxicology Program on ethylbenzene. Ethylbenzene is included in the Agency’s on-going Integrated Risk Information System (IRIS) project (63 FR 68285, December 10, 1998). A focus of the IRIS project is to update selected chemical assessments by incorporating new scientific information and methods. The IRIS project consists of a process that determines the Agency’s consensus position on the potential adverse health effects that may result from chronic or lifetime exposures to environmental contaminants. The carcinogenicity study on ethylbenzene, together with any other recent toxicological data, will be evaluated by the Agency as part of this process. Until that evaluation is completed, EPA does not believe it is appropriate to draw regulatory conclusions based on the referenced study.

With respect to the commenters’ more generalized concerns about the possibility of toxic constituents in F003 waste, as explained above, EPA does not believe this possibility justifies the continued regulation of a waste that was listed for the sole reason that it is ignitable, where the waste is no longer ignitable and exhibits no other hazardous waste characteristic. F003 waste is unique among the listed solvents: the other listed solvents were listed on the basis of toxicity. F005 solvents were listed for both ignitability and toxicity. In fact, EPA decided to move two listed solvents (methanol and methyl isobutyl ketone) that were originally proposed to be regulated under the F005 listing to the F003 listing because EPA determined that they did not pose a significant toxicity risk, although they are highly flammable (45 FR 74884, November 12, 1980).

Since then, EPA has analyzed the toxicity risks that might be posed by F003 solvents when de-characterized. The Agency has researched the most recent data concerning the F003 solvents in the IRIS data base. None of the solvents in the listing are classified as carcinogens, but eight of the nine possess reference concentrations (RfC) and oral reference doses (RfD) for non-cancer risk. EPA used these RfCs and RfDs to calculate conservative screening-level

health-based numbers (HBN) for those chemicals, and compared them to the relevant Universal Treatment Standards (UTS) these chemicals would need to meet under Land Disposal Restrictions. For seven of the eight chemicals (including ethylbenzene) the relevant UTS standards are much lower than the conservative health-based numbers calculated for water and soil ingestion pathways. The health-based number for the remaining chemical, n-butyl alcohol, is only slightly lower than the UTS standard (3.3 mg/L water ingestion HBN vs 5.6 mg/L wastewater UTS).<sup>1</sup> Given the fact that the health-based numbers are conservative screening numbers, EPA does not believe this difference is of concern. Therefore EPA remains confident that excluding ignitable F003 solvents, when they have been decharacterized, is protective of human health and the environment.

Commenters also claimed that F003 solvents, because they are general use solvents, can carry with them various constituents other than the solvents themselves, and that this was a reason for listing the F003 solvents in the first place (see 50 FR 53317, December 31, 1985). EPA acknowledges that in the 1985 solvents final rule, we noted that additional toxic contaminants would likely be present in the spent solvent. We also stated, however, that we did not evaluate F003 wastes for other toxic constituents that could be present at levels of regulatory concern. Therefore, toxicity was a not a basis for listing F003 waste.

When the F003 listing was finalized in 1985, because it was listed solely for ignitability, mixtures of F003 waste and solid waste were eligible for the exemption for mixtures of waste listed for a characteristic that no longer exhibit any characteristic of hazardous waste. Expanding the exclusion to non-mixtures that similarly do not exhibit any characteristic would still be protective of human health and the environment. We do not think it makes sense to continue the anomaly of retaining regulation for non-mixtures of F003 wastes based on toxicity concerns when we have no record basis to support regulation for toxicity. Today's exclusion is also consistent with the approach taken in EPA's decision not to list 14 spent solvent wastes, in which EPA declined to focus on any toxic constituents other than those in the solvents themselves, despite the likelihood of other toxic constituents in the spent solvent waste. (63 Fed. Reg. 64372 (Nov. 19, 1998)).<sup>2</sup>

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<sup>1</sup> For the water ingestion pathway, EPA assumed a 71.8 kg adult with a 2.3 L/day intake (90th percentile), 350 days/yr frequency. For the soil ingestion pathway, EPA assumed a 16.6 kg child with 400 mg/day intake (upper percentile), 350 days/yr frequency. For more information, please see U.S. EPA Analysis of Chemicals in Wastes Listed for Ignitability, Corrosivity, or Reactivity memorandum to the docket from David Cozzie, Office of Solid Waste, November 22, 2000.

<sup>2</sup>EPA's determination was upheld at *EDF v. EPA*, 210 F.3d 396 (D.C. Cir. 2000).

**Issue Code:** ICR9: Dilution Prohibition Should Apply to these Exempted Wastes

**Comments:** WH2P-00009, 2, 5

**Comment Summary:**

The Agency received a comment from the State of California in response to the 1999 HWIR proposal on the relationship between a dilution prohibition and the exempted wastes. This State commenter noted that currently certain D001, D002 and D003 wastes were prohibited from being decharacterized by means of dilution in order to meet treatment standards. The commenter wanted to ensure that it was EPA's intent that the proposed 29 listed wastestreams could not be decharacterized by means of dilution.

**Agency Response:**

The dilution prohibitions in 40 CFR 268.3 apply to the 29 wastes listed solely for a characteristic.

**Issue Code:** ICR10: Toxicity of wastes listed for ignitability, corrosivity, and/or reactivity

**Comments:** WH2P-00028, 1, 3; WH2P-00034, 4, 1; and WH2P-00034, 5, 1

**Comment Summary:**

EPA received two comments from Maine DEP and ETC in response to the 1999 proposal concerning the potential toxicity of waste under the proposed expanded exclusion to the mixture and derived-from rules. A summary of the specific issues raised by commenters is provided below.

The commenters believed that EPA must evaluate the properties carefully, especially the toxicity, of the 29 compounds proposed to be excluded. They assert that some of these wastes are acutely hazardous and merit a thorough review to ensure that the exclusion is appropriate. ETC noted that EPA had not performed an evaluation of the negative environmental impact associated with eliminating these codes. Ignitable, corrosive, and reactive wastes could contain substantial levels of toxic constituents that could be low enough not to exhibit a characteristic of ignitability, corrosivity or reactivity, yet high enough to cause environmental damage. One damage case or Superfund site can cause damages far in excess of the \$4.6 million estimated savings predicted by EPA. ETC further argued that EPA's Hazardous Waste Characteristics Scoping Study (Nov. 15, 1996) identified numerous gaps in the current RCRA identification of characteristic wastes. The commenter believed that gaps were so serious that EPA should not be proposing to eliminate any listing that was based on a characteristic until the deficiencies identified in the 1996 Scoping Study were addressed fully. Also, EPA must not eliminate any listing once the characteristic is removed, because the underlying hazardous constituent still represents a substantial threat even after LDR treatment.

**Agency Response:** EPA continues to believe that wastes that were listed only for the characteristics of ignitability, corrosivity, and reactivity should become excluded once they no longer exhibit any characteristic, including the toxicity characteristic. While it is true that these wastes could contain constituents that were not considered in the original listing determination, EPA does not believe this possibility, without information demonstrating some particularized basis for concern, warrants continued regulation of the waste under Subtitle C once it is decharacterized. This is because of the unique nature of listings based on the three characteristics in question. (See the discussion, in the response to comment issue ICR2 above, regarding the differences between wastes listed for the toxicity characteristic and wastes listed for the characteristics of ignitability, corrosivity and reactivity). These listings are unlike toxicity-based listings, which involve development of detailed risk assessments and consideration of a range of technical factors. See 40 CFR 261.11(a)(3). In contrast, the basis for listings based on one of these characteristics is simply that the waste exhibits the relevant characteristic (see 40 CFR 261.11(a)(1)).

Listings that are based on 40 CFR 261.11(a) criteria increase the clarity and certainty of the applicability of the Subtitle C system to these wastes. By listing the waste, EPA clarifies that it is hazardous without the need for a site-by-site demonstration that the waste in fact exhibits the characteristic, thereby simplifying implementation and enforcement regarding these wastes. EPA does not believe these listings should alter the basic principle that a characteristic waste should



not be regulated as hazardous if it no longer exhibits the characteristic. Consistent with this approach, EPA provided in 1981 an exemption from the mixture rule for wastes listed for one of these characteristics that no longer exhibits the characteristic (see 46 FR 56582, November 17, 1981). Today's rule provides a conforming change to the derived-from rule, which, because the 1981 rule only focused on mixtures, does not currently contain a comparable exemption. (see 60 FR 66349, December 21, 1995). The same rationale also supports the inclusion of as-generated waste in today's rule (although, since these wastes were listed solely on the basis of exhibiting a characteristic, EPA expects these wastes to exhibit the characteristic at the point of generation). Thus, EPA does not believe that the possibility that these wastes may contain additional hazardous constituents not considered in the original listing justifies continued regulation of the waste.

As stated earlier, EPA already excludes mixtures of these kinds of wastes, once the basis for listing these wastes has been removed. In addition, unlisted characteristic waste becomes non-hazardous when it ceases to be characteristic. Expanding the exclusion to non-mixtures that similarly do not exhibit the characteristic (particularly treatment residuals) would still be protective of human health and the environment. If there is any information that indicates that the original listing determination should have been based on toxicity risks, then the proper remedy is to amend the basis for listing the waste. The public can petition EPA to reconsider the basis for listing any such waste.

In regard to the toxicity of the listed chemicals themselves, EPA has examined the most recent toxicity data in IRIS concerning the chemicals in the 29 wastes listed solely for a characteristic, and does not believe these chemicals present a particular basis for concern. We found that fourteen of the chemicals have RfD's or RfC's available in IRIS. (This includes the eight F003 solvents discussed above - see response to comment issue ICR8). EPA used these RfCs and RfDs to calculate conservative screening-level health-based numbers (HBN) for those chemicals, and compared them to the relevant Universal Treatment Standards (UTS) these chemicals would need to meet under Land Disposal Restrictions, in those cases in which numerical standards were available. For most of those chemicals, the relevant UTS standards are much lower than the conservative health-based numbers calculated for water and soil ingestion pathways. As discussed in the response to comment issue ICR8 above, the level for one of the chemicals, n-butyl alcohol, is not significantly higher. Therefore EPA believes that excluding wastes that have been listed solely for a characteristic of ignitability, corrosivity, or reactivity, when they have been decharacterized (*i.e.*, exhibit none of the four hazardous waste characteristics), is protective of human health and the environment. However, in the future, if additional information becomes available, we may decide to reconsider the basis of listing for one or more of these wastes.

**Issue Code:** ICR11: EPA Should Encourage States to Adopt the Changes

**Comments:** WH2P-00005, 18, 1; and WH2P-00012, 2, 2

**Comment Summary:**

The Agency received comments from GE and NEDA RCRA in response to the 1999 HWIR proposal concerning the States adopting the expanded exemption in the mixture and derived-from (MDF) rules. Of those comments, one was from an industry and one was from an industry association. A summary of the specific issues raised by commenters is provided below.

The commenters urged EPA to finalize the proposal quickly. The commenters noted that the key to implementation of these changes was whether RCRA-authorized states adopted the revisions. Therefore, the commenters urged EPA to work closely with the States and encourage adoption of these amendments by RCRA-authorized states as soon as possible. GE also noted that it is important to provide enforcement discretion between the time a State adopts the new rule and is authorized for it under the RCRA program.

**Agency Response:**

Although States are not required to adopt the revisions to the mixture and derived-from rules, the EPA plans to encourage States to adopt this rule. Similar to what EPA has done with the HWIR-Media and Post-Closure Rules, EPA management and staff will discuss the specifics of this rule and the importance of adoption and authorization with EPA Regional and State counterparts. EPA Headquarters also tracks adoption and authorization progress on a quarterly basis for all RCRA rules and has even requested adoption and authorization status for the HWIR-Media and Post-Closure rules on a monthly basis when needed. States that have already received authorization for the current mixture and derived-from rules are not required to obtain authorization for these rules again. They may simply adopt and receive authorization for the new rule only. Enforcement is done on a case-by-case basis and each case will be addressed on its individual merits.

**Issue Code:** ICR12: EPA Should Increase Funding to the States which Adopt these Changes

**Comments:** WH2P-00025, 2, 1

**Comment Summary:**

The Agency received one comment from the State of Missouri in response to the 1999 HWIR proposal concerning increased funding to the States which adopt the expanded exemption to the mixture and derived-from (MDF) rules. The commenter noted that the proposed rule would place a significant new burden on inspection and enforcement personnel, particularly at the state and local government level. Implementing this proposed rule without providing additional funding for inspection and enforcement would result in fewer inspections and enforcement actions, a lesser overall enforcement presence, and a lower compliance rate less protective of human health and the environment. The State also anticipated that the budget for laboratory analysis required to test an exempt wastestream would increase exponentially with the proposed rule. Therefore, the commenter believed if this proposed rule was adopted, that EPA should increase funding to the states.

**Agency Response:**

The State and Tribal Assistance Grant (STAG) appropriation funds State RCRA programs, as well as other State environmental programs. Funds are distributed among the States based on many factors, including number of facilities and State population. EPA does not expect additional funds to be appropriated for State RCRA programs . As the rule revisions are less stringent, States are not required to adopt the revisions in their approved programs. A State has the option of not revising its program if it believes the associated costs will be too great.

**Issue Code:** ICR13: Text of the Mixture Rule Does Not Currently Exclude Wastes Listed for Specific Toxic Chemicals from Becoming Exempt once those Chemicals are below TC Levels

**Comments:** WHWP-00206, 6, 2

**Comment Summary:**

The Agency received one comment from the State of Kentucky in response to the 1999 HWIR proposal concerning the exemption of toxic chemicals below TC levels in the current mixture rule. The commenter noted that the text of the mixture rule does not exclude the use of the TCLP test (or the old EP toxicity test) for wastes that are listed for the specific toxic constituents. For example, if F035 no longer failed the TCLP/EP toxicity test, the commenter would have allowed an exemption under the mixture rule. The interpretation offered in the preamble does not reflect the text of the regulatory language (see 40 CFR 261.3(a)(2)(iii)) since the regulatory language states "... hazardous waste that is listed in [40 CFR Part 261] Subpart D of this part solely because it exhibits one or more of the characteristics of hazardous waste identified in [401 CFR Part 261] Subpart C... ". The commenter recommended that the language in the regulation itself be clarified so that the toxicity characteristic is not considered applicable to mixtures.

**Agency Response:**

The commenter misunderstands the regulations. F035 wastes are not listed only for a characteristic. Thus, the wastes remains hazardous even if all TC chemicals are removed.

**Issue Code:** ICR14: EPA Should Clarify Whether Discarded Nitroglycerine Patches are P081 Hazardous Waste

**Comments:** WHWP-00245, 1, 2; WH2P-00017, 6, 1; and WH2P-00048, 4, 1

**Comment Summary:**

The Agency received comments from NY DEC (1995 and 1999) and DoD in response to both the 1995 and the 1999 HWIR proposals concerning the classification of discarded nitroglycerine patches in the expanded exemption to the mixture and derived-from (MDF) rules. Of those comments, two were from State Agencies and one was from a Federal Government Agency. A summary of the specific issues raised by commenters is provided below.

The State of New York argued that in the case of nitroglycerine patches, wastes (not residues or mixtures) meeting the listing descriptions do not exhibit the indicated characteristic at the point of generation. They believed that under the current regulations, when nitroglycerin patches outlive their shelf life and become solid wastes, they are considered to be a listed hazardous waste (P081), even though the nitroglycerin content is too low to exhibit reactivity, the characteristic for which nitroglycerin is listed. The commenters also believed that these wastes should not be considered hazardous wastes and LDRs never should attach to these wastes. Also, to regard this material as an acute hazardous waste is completely inappropriate and adds nothing to the protection of human health and the environment.

DoD requested clarification regarding whether discarded products that contain chemicals listed solely for reactivity, but which are not concentrated sufficiently to exhibit any characteristic, are hazardous waste. The commenter believed the proposed rule contained an inconsistency in the discussion of nitroglycerin patches. In the proposed rule, EPA makes the statement "... nitroglycerine patches, which when used for medical purposes are not reactive even at the point they are manufactured, but are regulated as P081 when discarded." This interpretation is not consistent with guidance provided in the April 1995 Monthly Hotline Report. The Report states "Unused discarded nitroglycerine patches are not classified as P-listed hazardous waste... Although nitroglycerine may be the only chemically active component of a medical patch, a nitroglycerine patch is considered a manufactured article, similar to mercury containing thermometers, not a commercial chemical product. EPA did not intend for the phrase "commercial chemical product" to apply to manufactured articles like medical patches that contain a chemical listed in section 261.33." In addition to not applying to manufactured articles, P081 should not apply to waste that is not reactive at the point of generation. This is because the listing description for P081 includes an "(R)". This implies that it is limited to waste exhibiting this characteristic.

**Agency Response:**

The Agency will clarify manufactured articles containing these chemicals here: ordinarily, a nitroglycerine patch, if discarded unused, would be considered a P081 waste. However, under today's rules, discarded unused nitroglycerine patches would not be considered P081 since the

amount of nitroglycerine present (presumably) does not trigger the characteristic. The discarded patches, assuming they do not exhibit any hazardous waste characteristic at the point of generation, are not subject to Land Disposal Restrictions treatment standards and may be managed in a RCRA Subtitle D facility.