
As required by the Washington State Administrative Procedures Act, Chapter 34.05 RCW:

# A Concise Explanatory Statement And Responsiveness Summary

For the adoptions of Chapter 173-303 WAC, *Dangerous Waste Regulations*
Proposed July 2004, Adopted November 2004, AO #03-10

## Part C
## Comments and Responses

Washington State Department of Ecology
Hazardous Waste and Toxics Reduction Program
Publication Number 04-04-028c
See also 04-04-028a, b, and d

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# Background

The Department of Ecology is authorized by the State Hazardous Waste Management Act (Chapter 70.105 RCW) to adopt rules regulating the management of hazardous waste. The purpose of the Hazardous Waste Management Act is to provide a comprehensive statewide framework for the regulation, control, and management of hazardous waste. Ecology's actions under this authority prevent land, air, and water pollution and conserve the natural, economic, and energy resources of the State.

**Scheduled Adoption and Effective Dates**

The amendments to the *Dangerous Waste Regulations* are scheduled for adoption on November 30, 2004. The amendments will be effective on January 1, 2005.

The Hazardous Waste Management Act also gives Ecology the authority to carry out the federal hazardous waste program in Washington. Further authority to carry out the Federal Resource Conservation and Recovery Act (RCRA) amendments is contained in the Model Toxics Control Act at RCW 70.105D(3)(d). Ecology is authorized under Federal regulations (40 CFR Part 271) by the U.S. Environmental Protection Agency (EPA) to administer and enforce the Federal RCRA program in Washington.

The *Dangerous Waste Regulations*, Chapter 173-303 WAC, implement the Hazardous Waste Management Act. These regulations establish requirements for generators, transporters, and facilities that manage dangerous waste in Washington. Ecology amends the *Dangerous Waste Regulations* every two to four years to update the regulations to improve waste management in Washington for all stakeholders affected by the regulation including the public, businesses, state governmental agencies, and officials at Ecology and EPA.

As a state authorized to implement the federal hazardous waste program, Ecology must periodically incorporate newer federal rules into the state's regulations. The majority of the rules being adopted as part of this rulemaking are federal rules that EPA promulgated through 2003. EPA has already been implementing most of these rules in Washington with the exception of the less stringent requirements, which do not go into effect until the state adopts them. Therefore, most of the federal rules are not new requirements to the regulated community since they have already been required to comply with them. Adoption of federal rules enables Ecology, rather than EPA, to implement these rules in Washington. The transition of responsibility for implementation from the federal program to the state program simplifies regulation of hazardous waste in Washington since the result is that the regulated community has one rather than two regulatory agencies to deal with. The rule amendments adopted during the current rulemaking incorporate newer federal requirements, improve some state requirements, and implement the Hazardous Waste Facilities Initiative, which extends closure planning and financial responsibility rules to recycling and used oil facilities. These amendments improve hazardous waste management while continuing to provide protection to human health and the environment.

Federal requirements being adopted include updates to export requirements, coordination between air emission permitting and hazardous waste permitting, universal waste rule for mercury-

containing equipment (although this has not yet been finalized by EPA), revisions to mixture and derived-from rules, and amendments to the corrective action management unit rule. State-specific changes include technical and editorial corrections, clarifications, and changes to improve the waste management system including: updated reporting form name changes, addition of NAIC codes to replace SIC codes, modifying permit-by-rule requirements, clarification of waste analysis plan requirements, and a change to fertilizer registration requirements so that the same testing information does not have to be submitted year after year if it does not change.

The most significant state-initiated rule change is a result of the Hazardous Waste Facility Initiative. This change extended hazardous waste closure and financial responsibility requirements to recyclers and used oil processors/re-refiners. In 2002, Ecology published a report to the Legislature that outlined problems and inadequacies with the current system for regulating, permitting, maintaining public information, and funding Ecology's oversight responsibilities for TSDs, recyclers and used oil processors (see http://www.ecy.wa.gov/biblio/0204028.html). Representatives from the waste management industry, large and small businesses, public interest and environmental organizations, and government (local, state and federal) were consulted during the process of identifying these problems and proposing solutions.

## Summary of public involvement actions

Prior to official rulemaking, considerable work was done on the Hazardous Waste Facilities Initiative, including meeting with focus groups, to determine if rulemaking was an appropriate avenue and to ascertain the ideal regulatory approach. Much of the early work on this initiative and on other aspects of the rulemaking took place through meetings and phone conversations with stakeholders. A *Shoptalk* article (distribution approximately 25,000) was published several months prior to the pre-proposal notice to encourage stakeholders to subscribe to the electronic interested persons' list to receive periodic updates on the rulemaking.

At the beginning of the official rulemaking process, a letter was sent to Washington tribes inviting their participation in the rulemaking. Ecology filed a pre-proposal statement of inquiry (CR101) in the Washington State Register (WSR) on February 4, 2004 to announce upcoming rulemaking and invite preliminary public comments. As part of this early notification of upcoming rulemaking, comments were sought on options for the Hazardous Waste Facilities Initiative.

The next step was an informal draft of rule language. The draft rule language was made available for early review and comment. Electronic notification of availability of the early draft was sent to approximately 3000 people. The public comments that Ecology received on the early draft were incorporated into the proposed version of the rules which were filed with the Code Reviser's Office on July 6, 2004. Notification was made, again using both the Dangerous Waste Regulation list serve and Ecology's Rules list serve to interested parties. In addition, a *Shoptalk* article (distribution approximately 25,000) was published highlighting the proposed changes. The proposed rule and other related information were made available on Ecology's Rules web page as well as by paper copy.

Following formal proposal in the State Register, a simultaneous videoconference public hearing was held on the proposed amendments in Seattle, Tacoma, Yakima, and Spokane on August 10, 2004. A total of 15 people attended and public testimony was given by one person. The public comment period was scheduled to close on September 10, 2004 and was extended until September 24, 2004. The responsiveness summary portion of this document contains all of the comments that were submitted on the proposed amendments and Ecology's responses.

This Concise Explanatory Statement and Responsiveness Summary has been divided into sections to make downloading quicker and includes the following chapters:

Introduction and Background, 04-04-028a

Differences Between Proposed and Final Rule, 04-04-028b

**Comments and Responses, 04-04-028c**

Appendices, 04-04-028d

# Comments and Responses

This section includes all summarized comments that were submitted on the proposed rule amendments and Ecology's responses.

## General

**Comment 1:** A commenter requested an extension to the public comment period.

***Response:*** *The end of the comment period was extended from September 10, 2004 to September 24, 2004, making the comment period nine weeks long from the date of publication in the State Register, and eleven weeks from electronic notification to interested persons.*

**Comment 2:** The commenter expressed appreciation for consideration of their comments on the earlier draft of the amendments.

***Response:*** *Comment noted.*

**Comment 3:** At the public hearing, the commenter requested a copy of the Responsiveness Summary and wanted clarification that the Responsiveness Summary doesn't mean the preamble.

***Response:*** *A copy of the Responsiveness Summary will be sent to the commenter. It contains responses to all comments received on the proposed amendments to the* Dangerous Waste Regulations *and shows the rule language changes that were made to the final rule.*

**Comment 4:** After reading the Small Business Economic Impact Statement (SBEIS) it has become blatantly clear that the proposed rule has an extremely negative impact on small businesses. First; the financial responsibility requirement WAC 173-303-120 will impose $3,657 in costs per employee on small businesses opposed to $89 per employee for larger businesses. Secondly, the expanded requirement for marking packages of dangerous waste WAC 173-303-190 (5)(b) will cost small business owners $5.89 per employee and large business owners $3.92 per employee. Again, a greatly disproportionate cost for small business owners. Finally, proposed WAC 173-303-515 (13) testing of used oil is expected to cost small business owners $0.48 per employee and large businesses $0.31 per employee

If the intended goal of these rules is to eliminate small businesses from this area of business, these proposed rules work towards that means. I encourage the department to seriously reconsider adopting these rules unless significant modifications are made to lessen the negative impact. One possible solution to explore for the financial responsibility rule is utilizing the PLIA program as another option for small firms to meet this requirement.

***Response:*** *The analysis for the Small Business Economic Impact Statement (SBEIS) shows that not all dangerous waste related industries will be impacted by the proposed rule revision. For those that are impacted, some rules have proportional impacts between large and small business, and some will result in cost saving. Areas of the proposal where costs were reduced (cost savings) for existing requirements or lowered for proposed changes include the following:*

- *The universal waste rule for mercury-containing equipment, which reduces costs for generators with mercury wastes. The mercury rule amendments reduce substantive requirements.*
- *The Mercury rule amendment will indirectly reduce record keeping and reporting.*
- *Substantive requirements for post-closure plans (-610(8)) and financial responsibility (-620(6)) were not applied to recyclers and used oil processors.*
- *Closure funding can be phased in over a five year period following Ecology approval of closure plans. This was extended from 3 years in the proposed rule to 5 years in the final rule.*
- *Companies will have up to 72 rather than 24 hours to temporarily hold wastes prior to recycling so that they will not be considered "stored" and subject to hazardous waste permitting.*
- *Ecology will consider the economic impact of hazardous waste fines on small businesses as a mitigating factor in its compliance assurance policy (HWTR Policy 3-1, revised January 2004). The basic process of establishing penalties involves: 1) Determining that a penalty is the appropriate response; 2) Classifying the violations that become the basis of a penalty as major, moderate or minor; 3) Establishing the penalty amount for each violation; 4) Applying mitigating factors (these include degree of threat to human health or the environment, history of compliance, and small business incentives).*
- *The Permit by Rule amendments will create cost savings for some companies and new earnings for others.*
- *Ecology will provide guidelines, model closure plans, and on-site assistance on closure plans, closure cost estimating, and coordination on pollution liability coverage and financial assurance for closure.*

*With respect to the requirement to mark packages, the survey conducted by Ecology showed a cost to small businesses of $5.89 per employee. However, this type of marking is already being done by most generators since it was related to the 2000 rulemaking that changed requirements for transportation and marking of wastes. Outreach done on the previous rule included information on this, as well as the other marking requirements. The marking amendment that was included in this proposal was inadvertently omitted from the proposed regulation in 2000, but since it was understood by much of the regulated community and being complied with, the cost estimate from the survey of how much it will cost to comply will not necessarily translate into an actual new cost for many small businesses. Ecology field staff have noted that marking has been occurring since the 2000 rule revision when the transportation changes were made.*

**WAC 173-303-010**

**Comment 5:** The commenter supports inclusion of the note clarifying use of the terms public health and human health.

***Response:*** *Comment noted.*

**Comment 6:** Ecology should clarify in the introduction provisions or definitions section that "public health" and "human health" are used synonymously in the *Dangerous Waste Regulations.*

***Response:*** *Section -010 of the* Dangerous Waste Regulations *is considered the introductory provision to Chapter 173-303 WAC. In section -010(1) a note was proposed that those two terms are to be used interchangeably since there have been questions in the past as to whether or not public health applied to all humans or only if they were part of the public. The term "interchangeably" was selected over "synonymously" to make it clear that, for the purpose of the* Dangerous Waste Regulations *those two terms mean the same thing.*

## WAC 173-303-040 Definitions

### *Knowledge* (Also see response to comments under WAC 173-303-300)

**Comment 7**: Delete the word "reliably" from the new definition for "Knowledge." Reliably is a somewhat ambiguous term that can be a point of confusion to generators, TSDF's and regulators alike.

**Comment 8**: The note following the definition indicates that the definition is to be used for compliance with both the generator and TSD facility regulations. Ecology noted in the preamble that the purpose of the definition is to "clarify requirements for confirming and documenting information from a generator on a waste profile for a waste stream." However, Ecology is seeking a change that will broadly impact generators.

**Comment 9**: The proposed definition of knowledge is vague and ambiguous because the word 'sufficient' has different meanings under different circumstances. The concept of sufficient knowledge is not a concept that can be generalized and placed into the regulation. The determination of sufficient information for a waste can mean multiple meanings for a given waste. The proposed definition should be withdrawn in order to retain the level of flexibility currently allowed, and to avoid additional confusion about the term 'sufficient'.

**Comment 10**: The proposed definition of knowledge does not provide a meaningful example. Any guidance Ecology provides to illustrate a point should show a definitive answer towards the standard. Ecology's choice of the words "may be sufficient" does the regulated community and Ecology inspectors no good. The example cited by Ecology is an example of knowledge that exceeds any minimum requirements to ensure proper management of the waste.

**Comment 11**:The proposed definition of knowledge is defining a term contrary to application of the English language. Without the proposed definition of knowledge, the word knowledge would be interpreted to be the broadest universe of information about a waste. EPA then uses and defines the terms 'process knowledge' and 'acceptable knowledge.' Both of these terms would constitute a subset of the universe of knowledge. By the way Ecology is proposing to define knowledge, just the opposite will occur. The universe of 'knowledge' would now be a subset of 'process knowledge', and may be closer to EPA's definition of 'acceptable knowledge.' Ecology needs to avoid defining the term knowledge.

***Response (to comments 7 through 11)**: The proposed rule language has been changed for the final rule to eliminate confusing or vague language and to provide greater clarity of Ecology's intent. The definition will appear in the final rule as follows to improve meaning and clarity:*

*"Knowledge" means ~~there is~~ sufficient information about ~~both the waste constituents and the process generating a waste~~ a waste to reliably substitute for direct testing of the waste. To be sufficient and reliable, the "knowledge" used must provide information necessary to manage the waste in accordance with the requirements of this Chapter. ~~Such information must include the chemical, physical, and/or biological characteristics of the waste. (For example, if all chemical constituents used in an industrial process generating a waste are known and the formation of the waste by-products from that industrial process are understood, that information may be sufficient without direct laboratory analysis to describe the waste for safe management under this chapter.)~~*

*~~Note: Knowledge as defined here is for the purpose of complying with WAC 173-303-070 (3)(c) and 173-303-300(2).~~*

*Note: "Knowledge" may be used by itself or in combination with testing to designate a waste pursuant to WAC 173-303-070(3)(c), or to obtain a detailed chemical, physical, and/or biological analysis of a waste as required in WAC 173-303-300(2).*

## WAC 173-303-070

**Comment 12:**The commenter supports adoption of the federal mixture and derived from rule as a rule that makes practical sense and prevents over-regulation or over-management of wastes that are not hazardous, and saves money for small businesses. Another commenter stated their support for state adoption of a more stringent version of this rule that discourages dilution of waste, and support for not adopting other related less stringent provisions.

***Response:** Comments noted.*

**Comment 13:** Ecology should add mixtures of a solid waste and hazardous waste to the exclusion (WAC 173-303-070(2)(c)) because not all circumstances of dilution are impermissible under EPA's program and Ecology has adopted EPA's dilution prohibition at 40 CFR 268.3 found in the LDR program.

***Response:** Ecology agrees that not all dilution is impermissible under EPA's program and that Ecology allows dilution, as does EPA, under LDRs. However, EPA's "mixture rules" are considered less stringent than the existing state dangerous waste regulations and were evaluated with consideration for*

*waste designation and not LDR standards. The proposed mixture rules are a way to delist a listed dangerous waste. Ecology has always prohibited mixing solid waste with a dangerous waste to dilute any characteristics and criteria a dangerous waste may exhibit as part of designation and on-site management. Listed wastes are identified by EPA based on a number of factors, one being whether or not the waste exhibits certain criteria. If a solid waste is a legitimate treatment agent for a listed waste to remove its dangerous waste properties, then the person treating the waste has the opportunity to show that the solid waste is an effective substitute through section -017. Ecology has not added the solid waste allowance as suggested by the commenter.*

**Comment 14:** Ecology should delete the tie in between the exclusion and the state criteria in section -100. The proposed exclusion should not be dependent on whether the waste still displays any of the criteria.

***Response:*** *Ecology will retain the tie in to state criteria as described above. By retaining the state criteria consideration, the generator will be less likely to incorrectly designate and mismanage their waste. In other words, when the generator compares their listed waste against the dangerous waste characteristics it would be a common mistake to stop the designation process and manage their waste as solid waste when in fact it could designate as a state toxic or persistent dangerous waste. By retaining the tie in to state criteria, the generator is not being subjected to any additional designation requirements than they were subject to prior to this change. Listed wastes are listed by EPA for a number of reasons, one being whether or not they exhibit certain criteria. Since the mixture rule is a type of delisting, it is appropriate to evaluate listed dangerous waste for criteria properties. Finally, in the formal delisting process, the generator is required to test for dangerous waste criteria.*

**Comment 15:** Ecology should modify the text of the mixtures proposal relating to "any characteristic" to the characteristic for which the waste is listed. The condition being placed on the exclusion related to "any characteristic" is inconsistent with the federal mixture rule exclusion and will unnecessary limit the application of the exclusion.

***Response:*** *The text in WAC 173-303-070(2)(c)(i) and (ii) is identical in this respect to the federal rule at 40 CFR 261.3 (g)(1) and (g)(2)(ii) and (g)(3).*

**Comment 16:** It appears that the word "hazardous" should be replaced with "dangerous" in a few places to be consistent with terminology.

***Response:*** *The replacements will be made in the final rule.*

**Comment 17:** The sentence appearing on Ecology's web page with the proposed rule states: "Federal waste codes should be assigned to any federally regulated hazardous wastes that are not excluded at the state level." Ecology's first part of the statement is true, but the second part about 'excluded at the state level' has nothing to do with a federally regulated hazardous waste.

In EPA's program, if a hazardous waste meets the requirements for the ignitable, corrosive, reactive mixture rule exclusion, then the hazardous waste is no longer recognized as a hazardous waste in EPA's program (but still subject to applicable land disposal restriction

requirements). Even in Washington state, an EPA delegated state program, WAC 173-303 provisions do not change the way EPA looks at a hazardous waste. So if WAC 173-303 does not exclude the same universe that EPA excludes, a listed waste code is still required as part of a proper waste designation. This waste is a state-only dangerous waste by definition (See -040). Since Ecology has not identified/promulgated a state-only waste code for the difference in the universe of wastes excluded, a waste designator must use the federal waste code to denote a state-only dangerous waste.

The additional criteria restrictions placed on the exclusion by Ecology will still create a state-only waste and will not accomplish making the regulations consistent with the federal program. A state-only waste will still result because the federal exclusion will still allow the listed waste code to be dropped from a proper waste designation and the state rules will still retain the listed waste code, causing a state-only dangerous waste.

***Response:*** *Ecology was intending to state that a waste that originally became designated due to a federal characteristic that is not subsequently excluded under state regulation retains the designation originally assigned to it, and retains the original waste code. Ecology did not mean to imply that its rule caused EPA to look at their program differently. Ecology agrees that the commenter is correct where they surmise in the last paragraph that waste not excluded under WAC 173-303-070(2)(c), since the state did not adopt the federal exclusion for mixing a solid and hazardous waste, will result in a state-only dangerous waste that will require a federal waste code.*

## WAC 173-303-071

**Comment 18:** Ecology needs to change the TSCA citation in section -071(3)(k)(iii) to be consistent with the language in section -071(3)(k)(ii). This proposed change has nothing to do with Ecology's intent of the exclusion. Ecology can not extend their regulatory authority beyond what is provided to them by statute [RCW 70.105.105].

***Response:*** *Ecology's intent with the PCB exclusion is not to exclude this persistent dangerous waste from the dangerous waste stream so it can be disposed as a solid waste, but rather to keep in place some safeguards. The change suggested by the commenter was not part of the proposed rule amendments. Any change will have to be looked at as part of a future rulemaking as Ecology has not had the resources to thoroughly review the implications of the 1998 mega rule amendments to TSCA. The current TSCA citation referenced in -071(3)(k)(iii) would prevent persistent PCB dangerous waste from being excluded from the dangerous waste regulations and disposed of in a solid waste landfill under the TSCA PCB "mega rule." Ecology has determined that it would not be appropriate to exempt a PCB dangerous waste from dangerous waste regulation so it can be land disposed in a solid waste landfill.*

**Comment 19:**The commenter supports adoption of the zinc fertilizer exemptions and noted that they will ease compliance and result in cost savings for small business owners.

***Response:*** *Comment noted.*

**Comment 20:** Two commenters opposed adoption of the federal rule language that would exempt hazardous secondary materials from the definition of solid waste when those materials are used to make zinc fertilizers. This opposition is based on the perspective that the proposed language is less stringent (and therefore less protective of human health and the environment) than existing state requirements. In addition, the commenters noted that because the proposed federal rule language is less stringent than existing state requirements Ecology is not required to adopt it to maintain authorization of the federal hazardous waste management program.

***Response:*** *Ecology withdrew the exclusion for zinc secondary hazardous material at WAC 173-303-071(3)(oo) and it does not appear in the final rule. The proposed exemption language was less stringent than the existing state rule and it is true that Ecology is not required to adopt this exclusion. Ecology is unaware of any manufacturers of zinc fertilizer in the state that will be adversely affected by Washington choosing to not adopt language that would exempt hazardous secondary materials from the definition of solid waste when those materials are used to make zinc fertilizers. The lack of any comments from fertilizer manufacturers or generators with zinc secondary hazardous waste in favor of the proposal was also a factor in the decision to withdraw the proposed exemption. This exclusion may be considered for adoption during a future rulemaking.*

**Comment 21:** Two commenters opposed the adoption of the federal rule language that would exempt zinc fertilizers from the definition of solid waste when they are made from hazardous wastes or hazardous secondary materials. However, both commenters were in favor of retaining the proposed contaminant limits for metals and dioxins that would apply to zinc fertilizers made from hazardous wastes or hazardous secondary materials. The exemption of these zinc fertilizers would be less stringent than existing state requirements, but the addition of contaminant limits for such zinc fertilizers is more stringent than existing state requirements.

***Response:*** *Ecology retained the exclusion at WAC 173-303-071(3)(pp) with respect to fertilizers made from zinc hazardous wastes, but deleted the portion of the language that pertained to zinc hazardous secondary materials in the proposed (oo) that was not adopted. Zinc fertilizers will be subject to the more stringent contaminant limits that are part of the exclusion.*

## WAC 173-303-081

**Comment 22:**The proposed change in WAC 173-303-081(3) references an exclusion in -070(2)(d). No such section exists or is proposed. The citation "or (d)" should be deleted.

***Response:*** *The recommended change will be made in the final rule.*

**Comment 23:**The language in the second sentence of WAC 173-303-081(3) is different than the federal mixture rule language at 40 CFR 261.3(a)(2)(iii) and (iv). The state rule should be revised to ensure that it is consistent with and equivalent to the federal rule.

**Response:** EPA's mixture and derived from rule were incorporated as part of this rulemaking. This change for consistency with respect to mixtures will be made in the final rule. The rule language change does not impact the meaning of the paragraph.

## WAC 173-303-082

**Comment 24:**The proposed change in WAC 173-303-082(3) references an exclusion in -070(2)(d). No such section exists or is proposed. The citation "or (d)" should be deleted.

***Response:*** *The recommended change will be made in the final rule.*

**Comment 25:**The language in the second sentence of WAC 173-303-082(3) is different than the federal mixture rule language at 40 CFR 261.3(a)(2)(iii) and (iv). The state rule should be revised to ensure that it is consistent with and equivalent to the federal rule.

***Response:*** *EPA's mixture and derived from rule were incorporated as part of this rulemaking. This change for consistency with respect to mixtures will be made in the final rule. The rule language change does not impact the meaning of the paragraph.*

## WAC 173-303-090

**Comment 26:**The commenter supports the deletion of the reference to 49 CFR 173.128 for the ignitability waste designation because it makes the waste designation consistent with the federal program and eliminates state-only dangerous waste designation for organic peroxides. A corresponding change needs to made in *Chemical Testing Methods for Designation Dangerous Waste*, publication #97-407. (20, 21)

***Response:*** *Comment noted. Corresponding changes were to be included in the revised* Chemical Testing Methods*; however, all proposed changes to* Chemical Testing Methods *were withdrawn. See the related response below for comments on* Chemical Testing Methods.

**Comment 27:**Ecology needs to propose a change pertaining to the designation of Division 1.5 reactive waste. Under –090(7)(a)(viii), Ecology needs to remove the reference to Division 1.5 as reactive waste in order to be consistent with the federal rules. Because the *Chemical Testing Methods for Designating Dangerous Waste* (publication #97-407) document is being amended due to halogenated organic compounds, Ecology needs to put the effort into confirming the accuracy of this comment and make the appropriate change. The change should also be made to update the document *Chemical Testing Methods for Designating Dangerous Waste* (publication #97-407) to delete reference to Division 1.5 since this document is open for change as part of this rulemaking. The commenter understands that Ecology has inadvertently created a new class of state-only dangerous waste by adding Division 1.5 to the reactive provisions.

***Response:*** *Division 1.5 was not proposed for removal as a reactive waste since Ecology believes that these wastes should be regulated as Dangerous Wastes and is considering adding Classes 1.4 and 1.6 to WAC 173-303-090(7)(a)(viii). Although EPA has not revised 40 CFR 262.23(a)(8) to change its reference from Class A and Class B explosives to Class 1.1 through to 1.6, Ecology staff has recommended that all hazard classes of explosives should be referenced in WAC 173-303-90(7)(a)(viii) and designated as a D003. It is our understanding the Department of Defense currently designates all Class 1.1 through 1.6 explosives as D003.*

The commenter is correct that Division 1.5 waste is currently considered state-only wastes since the federal regulations do not cite it. Class 1.5 wastes should be assigned the waste code D003, the same as other reactive wastes.

## WAC 173-303-100

**Comment 28:** WAC 173-303-100(5)(b)(ii) uses a formula in which the hazards are additive for fish bioassay, rat inhalation, and rabbit dermal toxicities. Ecology should provide clear evidence that using the additive method is sound and reasonable. A preferable approach is to rate the components of a mixture and add only each toxicity criteria, rather than adding the highest hazards from across the different toxicity groups.

In addition, please change the calculated formula to eliminate the conservative factor that can increase the toxicity quotient up to 10 times and replace it with one that calculates the total effective toxicity. The change would remove common household products used in industrial settings such as hand lotions.

WAC 173-303-100(5)(b) provides a method for book designation. Based on inhalation toxicity data, wastes could be designated as DW or EHW. The waste could be in a physical state which would not result in an inhalation hazard. Ecology should exempt waste from being DW or EHW if designation is based solely on toxicity data via a specific route of exposure (inhalation data) and the physical state does not exhibit the hazard or exposure pathway.

***Response:*** *The additive method for estimating acute toxicity is the most common approach to assessing chemical interactions. Furthermore, additivity is the preferred default assumption, since it is neutral, relative to more complex interactions (e.g., synergy or antagonism). Although combining toxicity data from four test endpoints (i.e., fish LC50, oral rat LD50, inhalation rat LC50, dermal rabbit LD50) is hypothetical, it represents a conservative model, consistent with the book designation intent. If more realism is desired, the generator always has the option to perform a bioassay, in lieu of book designating waste.*

*It is acknowledged that because toxic categories span an order of magnitude, chemicals may exhibit up to a 10-fold difference in acute toxicity within the same category. For example, a chemical at the upper end of Toxic Category D (e.g., oral rat LD50=5000 mg/kg) will be treated identically, relative to a chemical at the lower end of the same category (oral rat LD50=500 mg/kg), despite the difference in toxicity. Nonetheless, the simplicity gained with the use of toxic categories is an overriding objective, consistent with the book designation intent.*

*It would be non-conservative to exclude certain exposure pathways, based on the physical state of the waste. For example, the physical state of the waste may change (e.g., due to heating or pulverizing), so that a pathway (e.g., inhalation) becomes possible under a new set of conditions. In addition, it would be technically difficult to establish effective criteria to exclude pathways, based on physical state of the waste. Again, the book designation method is designed to be both simple and conservative.*

**Comment 29:** Ecology has proposed to add a clarification phrase "…(for the same criteria)…" on book designations for the state-only waste designation step of 'toxicity criteria'. Unfortunately, this clarification creates confusion for the waste designator because the word "criteria" means something different than the word 'category' in the book designation process. In the preceding sentence to the one being modified, the phrase 'toxicity criteria (fish, oral, inhalation, or dermal)' is used, thereby defining this term as the four column elements in the Toxic Category Table. The new phrase is being added to the word 'category' which is defined as either an "X, A, B, C, or D" from the rows of the Toxic Category Table. The parenthetical, as proposed, does not seem to provide the clarity Ecology was attempting to achieve.

From the explanation for this proposal, it appears Ecology wants a two step toxic category evaluation process. In order to arrive at the overall toxic category for a constituent, it appears Ecology wants first a toxic category assigned to each of the four toxic criteria (fish, oral, inhalation, or dermal) and then second, the resulting toxic categories compared for which one is most severe for the overall toxic category for the constituent. The toxicity data from more than one toxicity source is compared (apples to apples) within each of the four toxicity criteria (fish, oral, inhalation, or dermal) in the first step. If so, Ecology should consider modifying the rule language (suggested language was provided).

***Response:*** *Ecology agrees that "toxicity criteria" is ambiguously used. The proper usage is as a descriptor for the entire subsection on state toxicity, i.e., WAC 173-303-100(5). "Test endpoints" is a more appropriate term than "toxicity criteria" to refer to fish LC50, oral rat LD50, inhalation rat LC50, and dermal rabbit LD50. Therefore, within section WAC 173-303-100(5)(b)(i), "toxicity criteria" will be replaced with "test endpoints." Regarding "toxic category," this term is clear and is shown as "X, A, B, C, D" in the Toxic Category Table.*

*Furthermore, the parenthetical revision, "(for the same criteria)," will be replaced with "(for the same test endpoint)." This insertion constrains data comparisons which are used to specify the toxic category. That is, "(for the same test endpoint)" refers to LC50 or LD50 data from one of four acute bioassays, including fish, oral rat, inhalation rat, or dermal rabbit tests. This revision clearly underscores that data sources specifying the toxic category are to be compared only within the same test endpoint.*

**Comment 30:** A comment also needs to be made regarding the interpretation of required toxicity sources based on the second sentence of -100(5)(b)(i) which states: *The toxic category for each constituent may be determined from available data, or by obtaining data from the NIOSH RTECS and checking this data against the toxic category table, below.* Taken literally, this provision allows the waste designator to select their data source without restriction or caveat. The only limitation appears to be a duty to ensure that any 'available data' used must not be less stringent than NIOSH RTECS. If a generator chooses the last part of this sentence for a book designation, the waste designator only needs to consult NIOSH RTECS to be in compliance based on the permissive use of the word 'may' and the construct of the sentence. Only if the waste designator chooses the "available data" option does the additional toxicity sources come into play. If Ecology's position is that toxicity data sources other than NIOSH RTECS must always be consulted for a book designation, then Ecology's position is not supported by existing regulation or the changes being proposed in this amendment.

Prior to the 1995 amendments, the regulations listed two toxicity sources, the NIOSH RTECS and EPA's spill table. The required toxicity data sources were clear and unambiguous. Since the major overhaul in 1995, the toxicity data source requirements have been vague. Two pieces of information have since been offered by Ecology. The first is in the *Responsiveness Summary Amendments to the Dangerous Waste Regulations, Chapter 173-303 WAC*, Publication #95-423, October 1993, in response to comment 132 where 'available data' meant: "…include but are not limited to: Material Safety Data Sheets (MSDS), laboratory analysis of the generator's waste or a similar waste, and published data. Ecology will provide examples in guidance documents rather than defining them in the regulation to avoid precluding the use of the data source." Since generators usually do not test their waste, and if they test, bioassay results take precedence over a book designation, there appears to be no need to cite the laboratory data as a toxicity source. The second piece of information is contained in the *Chemical Testing Methods for Designating Dangerous Waste* (publication #97-407), Footnote 27 where Ecology also identifies the Hazardous Substances Data Base as a toxicity source. Therefore, the commenter is proposing that Ecology eliminate the ambiguous nature of the required toxicity sources to complete a book designation and propose to amend the second sentence of -100(5)(b)(i) as part of the next rule amendment.

***Response:*** *Ecology does not wish to limit data sources (for example, to only RTECS, Hazardous Substances Data Bank, and Material Safety Data Sheets). By specifying "available data," a wide range of data sources can potentially be employed. In order to enhance the clarity of the second sentence of subsection WAC 173-303-100(5)(b)(i), "or by obtaining data from" will be replaced by "including" to more clearly indicate that RTECS are part of the "available data." In addition, a specified constraint is that data indicating the severest toxicity must be used to determine the toxic category, except that RTECS takes precedence when data conflict within the same test endpoint (that is, for data from one of four acute bioassays, including fish, oral rat, inhalation rat, or dermal rabbit tests).*

## WAC 173-303-104

**Comment 31:**The commenter expressed appreciation for locating the waste codes unique to Washington together in this section.

***Response:*** *Comment noted.*

## WAC 173-303-200

**Comment 32:**The commenter expressed appreciation for the "expeditious adoption" of the Performance Track Rule (WAC 173-303-200(5)).

***Response:*** *Comment noted.*

**Comment 33**: The commenter supports the adoption of the National Environmental Performance Track rule, and states that utilizing the rule at their facility will increase environmental benefits and cost savings.

***Response**: Ecology appreciates the support for the Performance Track Program, and agrees the Program will lead to enhanced environmental performance at member facilities.*

## *Satellite Accumulation Areas*

The proposed amendment to satellite accumulation area requirements has been withdrawn and will not appear in the final rule. An explanation follows comments 34 through 78. Since the proposed amendment was withdrawn, the comments were not individually responded to.

**Comment 34:** The addition of significant new requirements to satellite accumulation is unwarranted. Ecology's contention that this change is merely a clarification, and inferences that Ecology has always expected satellite accumulation to comply with inspection and contingency planning requirements, are not consistent with current Ecology or EPA policy.

**Comment 35:** We have seen Ecology propose to add these requirements to certain satellite areas (in the past), but always in the context of the authority granted in -200(2)(c); that is, Ecology determines that the characteristics of certain satellite accumulation situations pose a threat to human health and the environment, thus requiring more stringent requirements of 90-day accumulation to be implemented. Ecology has always had the authority to impose these more stringent requirements when merited in isolated/unique cases, without requiring them of all generators statewide.

**Comment 36:** The addition of contingency planning requirement for locations that do not currently require it is of questionable value. Many of these requirements were designed for dedicated hazardous waste management areas and are not good matches to small locations having one or a few satellite accumulation areas. Note that the required submittal of these plans to emergency response agencies will give these agencies significantly more paperwork to cope with.

**Comment 37:** Although Ecology states that the amendment is to clarify that contingency planning and general facility inspections apply to satellite accumulation, the reference to 200(1)(e) also mandates personnel training. This step adds yet more complexity for generators, as the scope of personnel to be trained is unclear and potentially very broad. Access to 90-day areas is usually more restricted than access to satellite areas due to multiple operators and shifts at facilities, along with the requirement that a satellite area must be located "at or near" the point of generation. The definition of "facility personnel" given in -300 is likely to apply to many more staff, including staff whose role does not include hazardous waste management activities, when the rule is applies to satellite accumulations areas by reference to -200(1)(e).

**Comment 38:** The sections of -320 referenced in 200(1)(e) generally require an inspection plan and schedule and prompt response to problems identified. However, an inspection frequency is not specified. The proposal could result in different generators specifying widely variable inspection frequencies, depending on their individual needs evaluation. In turn this situation

would result in inconsistency and potential enforcement concerns based on an individual inspector evaluating the given facility's inspection frequency.

**Comment 39:** At the public hearing on August 10, 2004, Ecology's comments indicated that the proposed rule on satellite accumulation areas is consistent with previous EPA direction regarding satellite areas. However, EPA has consistently held that personnel training, weekly inspections and contingency plan requirements are unnecessary and inapplicable to satellite accumulation areas. Ecology has not explained in the proposal how it has determined that more stringent regulation of satellite accumulation is necessary to protect human health or the environment, or why it believes satellite accumulation poses a threat sufficient to justify the addition of these additional requirements.

**Comment 40:** Since satellite accumulation must take place at or near any point of generation and the commenter currently operates approximately 800 satellite accumulation areas, the added expense of training, inspection, and contingency planning for these areas is substantial. The cost of performing weekly inspections alone would be approximately $500,000 per year. We cannot see an environmental benefit commensurate to the cost of this proposal.

**Comment 41:** These proposals were added since the pre-proposal and should be more carefully analyzed for impact on the regulated community before Ecology considers final adoption of this proposed change.

**Comment 42:** We do not object to the addition of the reference to -200(1)(f) for compliance with Land Disposal Restrictions.

**Comment 43:** The Washington Department of Corrections opposes Ecology's proposed changes in WAC 173-303-200(2)(a)(ii).

**Comment 44:** Ecology indicated that the change in WAC 173-303-200(2)(a)(ii) is simply a clarification. In fact, it is a significant expansion of authority and clearly not a case of increased stringency. EPA exempts satellite accumulation areas from most of the requirements that apply to 90-day storage areas and permitted TSD facilities.

**Comment 45:** The commenter submitted a table from McCoy's RCRA Unraveled, 2004 Edition to show the federal differences between requirements for satellite accumulation areas and 90-day areas in the RCRA regulations. The commenter submitted a note from the discussion from McCoy's RCRA Unraveled as to what the federal hazardous waste program considers a satellite accumulation area to be.

**Comment 46:** The inclusion of the proposed additional requirements for satellite accumulation areas represents a significant increase in the level of effort on the part of the generator for a negligible gain in environmental protection.

**Comment 47:** If satellite accumulation areas must be included in contingency plans, how would a facility deal with a "one-shot" satellite accumulation area?

**Comment 48:** A satellite accumulation area is typically a container of 55 gallons or less. The quantity of material is small and the corresponding risk to the environment and human health from a satellite accumulation area is also small. Imposing the proposed requirements does not make sense. Ecology already has the ability to impose such requirements at facilities where satellite accumulation area operating history indicates a need for tighter management. Imposing these requirements on all satellite accumulation areas will be burdensome to the generator, and will not result in improved environmental protection.

**Comment 49:** This proposed change is not trivial for many large quantity generators. Ecology asserts that it has interpreted this subsection and implemented it as if inspections and contingency plans were required for satellite accumulation areas. The commenter asserts that Ecology has not attempted consistent application or enforcement of this provision.

**Comment 50:** This change will have an impact on Ecology inspectors. Ecology's workload will increase substantially as a direct result of this proposed rule change.

**Comment 51:** We should be looking for ways to achieve environmental protection more cost effectively. This rule change would lay a heavier compliance and enforcement burden on both generators and regulators.

**Comment 52:** The change proposed for satellite accumulation areas is unnecessary and could add to confusion regarding generator requirements instead of making them clearer. Sections –320 and -350 are requirements applicable to a facility. The requirements they define are not limited in scope to accumulation container areas. In all likelihood an LQG will accumulate waste on site in both 90 day dated containers and in satellite containers; it is unlikely that an LQG will only have satellite containers on site. As such they will be subject to –320 and -350 throughout the facility.

**Comment 53:** This change adds to the confusion regarding what is required in a contingency plan. It implies that waste accumulation containers or the "footprint" they occupy are somehow specified in a contingency plan. They are not.

**Comment 54:** WSU does not agree that the proposed amendment to WAC 173-303-200(2)(a)(ii) is a clarification. It is a proposal for several substantial changes to the waste generator satellite accumulation area standards.

**Comment 55:** The proposed changes to satellite accumulation would require generators of small quantities of waste at satellite areas to comply with WAC 173-303-320 though -360.

**Comment 56:** The proposed changes to satellite accumulation areas would be significant, complex, and cumbersome at WSU where there are more than 1,500 satellite accumulation areas. The change would take an excessive amount of valuable resources away from other environmental health and safety programs. Satellite accumulation areas require a certain level of attention, but in no way merit the dedication for personnel and resources called for in this proposed amendment.

**Comment 57:** WAC 173-303-320 is unclear as to the frequency and elements required for inspections.

**Comment 58:** The commenter submitted a number of cost estimates for complying with the proposed amendment (inspections, training, including hazardous waste handling duties in job descriptions of existing employees).

**Comment 59:** Is the required level of training the same as that required for 90-day areas?

**Comment 60:** The quantity of wastes allowed within a satellite accumulation area is unlikely to cause significant harm to the environment, by design. EPA has held consistently that personnel training, weekly inspections and contingency plan requirement are unnecessary and inapplicable to satellite accumulation areas. Ecology has not explained in the proposal how it has determined that more stringent regulation of satellite accumulation is necessary to protect human health or the environment or why it believes satellite accumulation poses a threat sufficient to justify the addition of these requirements.

**Comment 61:** WSU faculty and staff are highly educated and trained in safe chemical handling methods. Imposition of new, redundant training and documentation requirements will not benefit the environment nor will it encourage compliance.

**Comment 62:** It is redundant, wasteful, and unmanageable for Ecology to require individual contingency plans for each satellite accumulation area if a facility already has and maintains a facility wide contingency plan, emergency response plan and spill prevention control and countermeasures plan.

**Comment 63:** WSU is concerned that the proposed rule could be construed as requiring inappropriate supplies and equipment to be provided at each satellite accumulation area. Not only will this create an unmanageable financial burden, but these items do not have unlimited shelf lives. It is unclear if lists of such equipment will be required only in the general plan or if they must be present at each satellite accumulation area (-350(3)(e)).

**Comment 64:** The proposed change is described as a clarification of existing rule interpretation. Since the change would impose new requirements on satellite accumulation, this strikes us as a mischaracterization of Ecology's stated intent. Any reasonable

interpretation must conclude that those requirements (personnel training, contingency planning, and general inspection) do not presently apply to satellite accumulation. Ecology guidance Publication # 94-120 itemized the satellite accumulation provisions and made no mention of the requirements that are now proposed for insertion. Ecology has not provided a good explanation why the additional requirements should now be imposed. The existing regulation is sufficient.

**Comment 65:** Ecology should review relevant EPA guidance as to how it implements federal satellite accumulation area provisions.

**Comment 66:** If the satellite accumulation provision been included in the earlier draft, Ecology would have received ample input to help determine if an amendment is warranted.

**Comment 67:** Ecology's proposed change to satellite accumulation was not in the pre-proposal draft nor was it identified on the Focus Sheet for the proposed amendments. The change is being advertised as a clarification, but in reality, it constitutes a significant impact to the regulated community.

**Comment 68:** The addition of the land disposal restriction (LDR) requirement is supported by USDOE.

**Comment 69:** The proposed rule is inconsistent with past Ecology rulemaking activities**.** The SAA rules were placed into the regulations during the 1993 amendments. Prior to this rule, subsection (2) did not exist in section -200. Ecology response to comments document *Responsiveness Summary Amendments to the Dangerous Waste Regulations Chapter 173-303-WAC*, publication 93-92, October 1993 contains the insight to show separation between -200(1) and -200(2). Ecology's 1993 amendments adding this provision did not propose or mention the requirements currently being clarified. On page 46, response to comment 166 it states: "The satellite areas are the only accumulation areas that do you require a date until 55 gallons of a waste is generator/accumulation." Since the accumulation date requirements are located in -200(1), this statement shows intent to keep -200(2) and -200(1) separate. On page 48, comment 175 suggested a terminology change in order to clarify that secure SAAs are not considered designated accumulation areas which must meet the requirements of -200(1). On page 111, rationale for change, Ecology acknowledges this separation by stating: "In the definition of satellite accumulation area, commenters stated that it would be helpful to insert 'less than 90-day' in the in the first sentence after 'designated' and before 'accumulation area' to clarify that secure satellite accumulation areas are not considered designated accumulation areas, which must meet the requirements of WAC 173-303-200(1)." Ecology made a change in the final rule to accommodate the commenters concern.

There were also no statements in the 1993 rule or the *Responsiveness Summary Amendments to the Dangerous Waste Regulations Chapter 173-303-WAC*, publication 93-92, indicating Ecology was being more stringent than EPA's requirements. The regulated community was led to

believe Ecology was establishing requirements for SAAs consistent with EPA's program as a result of the 1993 rulemaking.

The addition of these significant new requirements to satellite accumulation is unwarranted. Ecology's contention that this change is merely a "clarification" and inferences that Ecology has always expected satellite accumulation to comply with inspection and contingency planning requirements are not consistent with current Ecology or EPA policy.

**Comment 70:** The proposed rule is inconsistent with Ecology's SAA Technical Information Memorandum (TIM) (Publication 94-120, Satellite Accumulation)**.** After the 1993 rulemaking, Ecology has maintained comprehensive, user-friendly guidance for SAA management in the TIM, with the most recent revision of the TIM occurring January 2003. The TIM has never mentioned or referenced the requirements Ecology is proposing to add into -200(2)(a)(ii). The SAA requirements are clearly identified on pages 1-2 of the TIM. The omissions of the -300 through -360 standards in this list demonstrate that it is not past or current Ecology policy to expect generators to comply with the requirements proposed to be added, unless the case-by-case provision in -200(2)(c) are applied.

Ecology claims in the proposed rule explanation "This is not consistent with the way this regulation has been interpreted or implemented in the past by Ecology." If this statement is true, why has the TIM not been updated to reflect this? The regulated community has not been informed of this policy statement. In order for Ecology to claim that their interpretation exists, the regulated community must be notified through the appropriate channels.

**Comment 71:** The proposed rule is inconsistent with EPA guidance. EPA has published guidance in this area demonstrating that Ecology's proposal is not consistent with federal requirements. At the public hearing held on August 10, 2004, Ecology made statements indicating that the proposed action is consistent with previous EPA direction regarding SAAs. However, the opposite is actually true. EPA determined when adopting the satellite accumulation rule in 1984, and has held consistently since, that personnel training, weekly inspections and contingency plan requirements are unnecessary and inapplicable to SAAs (see 49 FR 49568 at 49570 on December 20, 1984). Since that time, EPA has addressed these requirements on more than one occasion (see RCRA Online, Faxback 11373, 11317, 14418, and 14703). EPA has determined that accumulation of up to 55 gallons of non-acutely hazardous waste in a satellite area is "reasonable and safe and does not pose a threat to human health or the environment" (49 FR 49569). Ecology has not explained in the proposal the basis for their position, nor how Ecology has determined more stringent regulation of satellite accumulation is necessary to protect human health or the environment, or why it believes satellite accumulation poses a threat sufficient to justify the addition of these additional requirements. Ecology needs to delete the addition of these requirements to SAAs.

**Comment 72:** The proposed rule is inconsistent with nationally recognized expert interpretations. There is a firm who is recognized nationally for their understanding or EPA's

RCRA regulations. USDOE pays to bring this training to the Hanford Facility once every few years. USDOE is also aware of many Ecology employees attending the training classes offered by this firm. One of their reference materials, "McCoy's RCRA Unraveled, 2003 Edition," compares SAA requirements to 90-day requirements in Table 6-2, *Federal Requirements for Satellite Accumulation Units to 90-day containers*. Of interest are the inspection, training, and contingency plan requirement entries for SAAs. The table shows that these aspects clearly do not apply to SAAs. Ecology needs to delete the addition of these requirements to SAAs. (20, 21)

**Comment 73:** The proposed rule is inconsistent with the case-by-case requirements of -200(2)(c). Any interpretation that -200(1) requirements automatically apply to SAAs is beyond logic because there would be no reason to have -200(2)(c). The -200(2)(c) provision would not be needed in the regulations if the -200(1) requirements apply to SAAs. SAA requirements are determined through the requirements in -200(2), and do not extend into -200(1) unless specifically referenced by -200(2). -200(2)(c) is invoked by Ecology on a case-by-case basis on compliance inspections when Ecology determines that the management practices of certain satellite accumulation situations pose a threat to human health and the environment, thus requiring more stringent requirements of 90-day accumulation areas to be applied. Ecology has always had the authority to impose these more stringent requirements when merited in isolated/unique cases, without requiring them of all generators statewide.

**Comment 74:** The proposed rule is inconsistent with the information posted on Ecology web page and in the preamble. This inconsistency only serves to confuse the regulated community on the scope of the proposed changes to -200(2)(c). The sentence appearing on Ecology's web page and on page 155 of the preamble states: "WAC 173-303-200(2)(a) is being amended to clarify that contingency planning and general facility inspections are required for satellite accumulation." The proposed rule change adding "(e)" actually also brings into play the training requirements (-330) and preparedness and prevention requirements (-340), in addition to the contingency planning and general facility inspections. A reading of -200(1)(e) references the requirements of -330 through -360 and most of -320. Ecology has only identified half of the changes actually being proposed in their explanatory text. For this reason alone, Ecology should delete the proposed addition of "(e)" to -200(2)(c) because Ecology failed to accurately reflect the rule to be presented.

**Comment 75:** The proposed rule is a significant cost impact to Hanford Facility activities. At the Hanford Facility under two of the three field offices (the Richland Operations Office and the Office of Science) plus a laboratory under USDOEs Office of River Protection field office, there are approximately 1,100 satellite accumulation areas. The added expense of the proposed requirements would be substantial. The added cost of performing weekly inspections would be approximately $800,000 per year (8-man-years), based on 15 minutes per week to inspect each area and document these inspections in accordance with -320(2)(d) (included as part of the reference from -200(1)(e) proposed for addition). Since the -320 requirement also requires inspection be performed daily when in use and subject to spills, this cost estimate is multiplied by the number of times per week an SAA needs to be inspected.

Applying the training requirements will require the amendment of many training plans or the issuance of new training plans and will require inspection training to those who are not subject to these training requirements now. Contingency planning requirements would also be a large additional cost based on the need to create and maintain the documentation as well as address the equipment that must be procured to meet the -340 preparedness and prevention requirements. We cannot foresee an environmental benefit commensurate to the cost of this proposal.

The addition of preparedness and prevention, contingency planning, and emergency procedure requirements for locations that do not currently require it is of questionable value as well. These requirements were designed for dedicated hazardous waste management areas (TSD facilities) in 1980 and were then subsequently applied to 90-day accumulation areas. These regulations are not a good match to small locations having one or a few satellite accumulation areas. Note that the required submittal of contingency plans to emergency response agencies [-350(4)(b)] will give these agencies significantly more paperwork to cope with.

Although Ecology states in the preamble (page 155) that the amendment is to "clarify" that contingency planning and general facility inspections apply to satellite accumulation, the reference to -200(1)(e) also mandates personnel training. This step adds yet more complexity for generators, as the scope of personnel to be trained is unclear and potentially very broad. Access to 90-day accumulation areas is usually more restricted than access to SAAs due to multiple operators and shifts at facilities, along with the requirement that an SAA must be located "at or near" the point of generation. The definition of "facility personnel" given in -330 is likely to apply to many more staff, including staff whose role does not include hazardous waste management activities, when the rule is applied to satellite accumulation areas by reference to -200(1)(e).

Another issue regarding inspections is raised by the reference to -200(1)(e) and the fact that the inspection requirement is vague. The sections of -320 referenced in -200(1)(e) generally require an inspection schedule and appropriate responses to problems identified. However, an inspection frequency is not specified other than the daily inspection requirement for areas subject to spills when in use. The weekly inspection frequency is addressed for 90-day accumulation areas in -200(1)(b)(i) by referencing -630(6) for containers. The proposal could result in different generators specifying widely variable inspection frequencies, depending on their individual needs evaluation. In turn this situation would result in inconsistency and potential enforcement concerns based on an individual inspector evaluating the given SAA inspection frequency.

Due to these significant impacts, an unclear proposal about training requirements and vague expectations on inspection frequencies, this proposal needs to be withdrawn.

**Comment 76:** This proposal meets the threshold for triggering a review under the Regulatory Fairness Act (RCW 19.85) to be part of the small business economic impact analysis. Review of the document posted on Ecology's web page and the text on WSR 04-14 appearing on pages 156-159 reveals no discussion on this subject. Because these changes "impose more than a

minor cost on twenty percent of the businesses in all industries, or ten percent of the businesses in any one industry" (Reference: WSR opening statements on the Regulatory Fairness Act of RWC 19.85), Ecology is required to include the SAA changes as part of the Small Business Economic Impact Statement. The WRS opening remarks also indicate when a Small Business Economic Impact Statement is not required. The SAA proposal does not meet at any the five criteria identified.

Because Ecology did not include the SAA proposed change in the Small Business Economic Impact Statement, the proposal to add contingency, inspection, and the unadvertised training requirements, and preparedness and prevention requirements to SAAs needs to be withdrawn.

**Comment 77:** In addition to the proposed addition of "(e)", Ecology has also proposed to add "(f)" to -200(2)(a)(i). This proposal is supported by USDOE. The new reference provides a clear tie in between SAAs and treatment-by-generator requirements under EPA's land disposal restriction program. The addition of "(f)" is consistent with an email message from Tom Cusack dated May 25, 2000.

**Comment 78:** The University of Washington requests that Ecology postpone any action relating to satellite accumulation areas until after the completion of the USEPA Colleges and Universities Sector project. One of the work groups, The Regulatory Innovation Work Group is working to address the most significant regulatory barriers to sector-wide environmental performance. They are currently working on developing a strategy to address RCRA/Lab waste issues specific to the Sector.

***Response:*** *Ecology is withdrawing the proposed change to WAC 173-303- 200(2)(a)(ii) since the proposed change caused more confusion than clarification. Ecology will instead clarify its interpretation here, and will propose appropriate and clear changes in a future amendment.*

*Ecology's interpretation is that satellite accumulation areas are subject to generator requirements of WAC 173-303-200(1)(e) & (f) for LQGs and WAC 173-303-201 for MQGs.*

*Ecology is authorized to implement federal hazardous waste regulations that are at least as stringent as, or more stringent than EPA's RCRA regulations. There are many instances where the State's* Dangerous Waste Regulations *and implementation are different than EPA's. Ecology staff research EPA interpretations, guidance and Federal Register Notices to gain an understanding of why a particular regulation was promulgated and how EPA is interpreting it. In doing so, some regulations are interpreted differently at the state level. This is the case with applying additional standards to areas where dangerous waste is managed and generated throughout a generator's site, which may include areas where waste is generated and then added to a satellite accumulation container. Ecology is not unique in its interpretation of the need for additional safety and environmental standards at satellite areas. Other states such as Colorado also apply these types of regulations to satellite areas. Additionally, most of the violations that are found during routine inspections of facilities are found at satellite areas. In part, there are many more satellite areas at facilities than 90-day accumulation areas, therefore more instances to find violations.*

*In reviewing the history of satellite accumulation standards, EPA added this unique opportunity to store waste without a permit on site to allow businesses the opportunity to accumulate 'slowly generated wastes' for a long period of time. The extra time allowance enables the generator to fill the drum, making it more economical to dispose of since TSDs would charge for a full drum even if it was only ¼ full at the end of 90 days. With this extra time in mind, a satellite drum could potentially be sitting in one location for a very long time without any safety measures to ensure it is in good shape. Many businesses use satellite accumulation areas as a way to reduce regulation during generation, to increase storage time, and to accumulate an economically viable shipment of waste. This results in many drums that are filling frequently and a lot of waste that is moving in and around satellite areas.*

*Ecology has historically interpreted, and currently interprets, the generator regulations of WAC 173-303-200(1) and -201 (for LQGs and MQGs respectively) to apply to the entire site. Ecology does not agree with some commenters that WAC 173-303-200(2) is a stand-alone section that encompasses all the requirements for a satellite area. Considerable changes to improve Ecology's interpretation of what constitutes a satellite area were made in 1993. Ecology defined and considered a satellite accumulation area as the footprint of the drum(s) with the same waste stream (not to exceed 55 gallons). EPA does not define what a satellite area is in their regulations nor do they even use the term satellite accumulation in their regulations. In 1993, Ecology also listed container regulations that apply to a satellite area since the 'area' is defined as the footprint of the drum(s). WAC 173-303-630(2), (4), (5)(a) and (b), (8)(a), and (9)(a) and (b) are the container management standards listed for a satellite drum. Ecology also listed WAC 173-303-200(1)(d) to ensure that the words dangerous or hazardous waste were included on a satellite drum since –630(3) only covers the risk labeling requirements. The consistent listing of the labeling requirements was to help generators have one labeling standard for both satellite and 90 day accumulation drums. Other applicable sections for satellite accumulation drums were not specifically listed in section 200(2), such as compliance with designation (-170), counting (-070), and site-wide requirements for contingency planning, personnel training and general inspections in 200(1) and 201 for LQGs and MQGs respectively. The changes made in 1993 concentrated on clarifying what constitutes a satellite 'area' and the individual container management requirements that were needed. WAC 173-303-200(2)(c) was added to allow an inspector to require security signage, secondary containment or other container management standards listed in 200(1)(b) if the area was being managed improperly. WAC 173-303-200(1)(e) was not specifically called out during this time as Ecology had thought it was clear that this was a site-wide requirement that would be implemented in all areas at the facility where dangerous waste was managed and generated.*

*Ecology believes that providing safety equipment for employees in areas where dangerous waste is generated or managed is common sense. If a satellite area were accumulating a flammable solvent, then it would make sense to provide a fire extinguisher and a spill kit nearby in the event of a fire or release of dangerous waste from the drum. It also makes sense to provide employees working in the area with evacuation routes and simple basic on-the-job training on how to safely manage the waste from the generation point into the drum. The contingency, training, and general inspection regulations are performance-based regulations that allow for maximum flexibility at facilities. Each facility is required to identify what type of training, inspections or emergency equipment is necessary for their particular business, situation, or area. Ecology does not set out specific requirements in these regulations but instead allows a business to set those standards and then verify that they are in place and working properly.*

*Since the 1993 amendment, Ecology has never been questioned nor challenged on this interpretation until very recently. Thus, the recent clarification was proposed to clarify Ecology's historical and current stance on application of these rules in satellite areas. Ecology agrees that the clarification was not explained as well as it could have been which led many businesses to feel as though extra plans and inspections were required specifically in these areas instead of in a site-wide plan that is already required.*

**WAC 173-303-300**

## *Waste Analysis Plan*

**Comment 79**:The commenter supports the intent of the proposed change to WAC 173-303-300(2)(a) and (b) and the proposed definition for "knowledge."

***Response:*** *Comment noted.*

**Comment 80**: Changing the word 'may' to 'must' in WAC 173-303-300(2) is inappropriate**.** This is a significant change because now what was once a permissive word now has been changed to a mandatory word. There is no explanation by Ecology for such a drastic change. The next problematic change is adding the word 'either' thereby creating an interpretation problem with sentence structure when the words 'or' and 'and' also exist following the word 'either.' The next change, adding the phrase 'analytical data from' now precludes other knowledge from similar processes being used by limiting the universe of usable information to testing data. Other information can no longer be used. The final change is deleting the phrase 'if necessary' and substituting the phrase 'or a combination of these.' This change has now taken a discretionary term aimed at testing requirements and replacing it with a term that denotes more information needs to be retained. These changes to -300(2) are unrealistic; they are not supported by this proposed rule, nor the explanatory text that accompanies the proposed rule, and need to be deleted. For the reasons cited in this comment, and the other comments submitted on this proposed change to -300(2), Ecology needs to retract most of the proposed changes.

***Response:*** *See response to comments 80 through 83, and response to comments 94 through 98 below.*

**Comment 81**: The use of the word 'analysis' in the regulations has a complex meaning and does not mean waste testing. The use of the word 'analysis' in the regulations means both 'sampling and laboratory analysis' as well as 'applying acceptable knowledge.' Use of the word analysis is more akin to a verb like a 'technical or engineering analysis' which is an action evaluating the available knowledge. In EPA's 1994 Waste Analysis Guidance in Section 1.5 How can you meet the waste analysis requirements for your facility? it states: "Wherever feasible, the preferred method to meet the waste analysis requirements is to conduct sampling and laboratory analysis because it is more accurate and defensible than other options. … However, generators and TSDFs also can meet waste analysis requirements by applying acceptable knowledge." Even in the margin to the side of this text the question is asked "What are your waste analysis options under RCRA?", and the answer is sampling and analysis plus

acceptable knowledge. It is clear from this information that the word 'analysis' in the TSD regulations is a complex term. This is further supported by the two sentences in -300(1). The first sentence uses the phrase 'confirm his knowledge' and the second sentence used the phrase 'of this analysis' referring back to the confirmation process. Further in Section 1.5 of EPA's 1994 Waste Analysis Guidance, the term acceptable knowledge is then defined to include process knowledge, waste analysis data, and facility records of analysis performed before the effective date of RCRA. The last portion has little or no meaning any more in the RCRA regulations, so it is the first two components of the definition that are used as guidance today. The term waste analysis data is defined as "… obtained from facilities which send wastes off site for treatment, storage, or disposal (e.g., generators)." Even the term 'waste analysis data' does not specifically denote a waste testing requirement. For the reasons cited in this comment, and the other comments submitted on this proposed change to -300(2), Ecology needs to retract most of the proposed changes.

**Comment 82**: It is a good idea to reference -380(1)(c) for recordkeeping requirements, but the extra explanatory text needs to be deleted on what the records need to consist of. Ecology is proposing to add the following text as the new -300(2)(b): "As required in WAC 173-303-380 (1)(c), records must be retained containing specific information that show compliance with this subsection for adequate information on the waste whether the owner or operator conducts direct testing on the waste or relies on knowledge from the generator." FH agrees that referencing the recordkeeping requirements helps ensures the reader is informed of the -380(1)(c) requirements. We do not agree that the language after the word subsection should be retained. The extra language now introduces yet another new term 'adequate information' to the regulations. This new text needs to be avoided so that yet another term is thrown into the already complex waste analysis mix of terms. For the reasons cited in this comment, and the other comments submitted on this proposed change to -300(2), Ecology needs to retract most of the proposed changes.

**Comment 83**: The commenter requests that Ecology maintain a performance based stance on "knowledge." Waste is generated during a specific process/function. The process owner is aware of the chemical content that goes into the process and then what comes out of the unit as waste generated. This same process owner is the most accurate source of information for specifying the components and their concentration in a given waste unit. This approach is very reliable and can be formally documented through engineering and process flow diagrams. The process owner can determine the chemical content of a unit of waste based on what was introduced into the system. The process owner understands the process and the chemistry of the reaction and is the determiner whether the chemicals used in the process might result in a regulated hazardous waste. The process owner is able to report this information to a waste disposal/destruction facility operator through the waste profiling mechanism. Referencing written procedures, activity logs, and instrument-monitoring data recorders/logs are non-analytical ways to make a validation.

***Response to comments 80 though 83:*** *The proposed rule has been changed to eliminate confusing or vague language and to provide greater clarity of Ecology's intent and to respond to the preceding*

*comments. The proposed rule language was changed and will appear in the final rule as follows to improve meaning and clarity:*

*WAC 173-303-300 General waste analysis.*
*(2) The owner or operator must obtain a detailed chemical, physical, and/or biological analysis of a dangerous waste, or nondangerous wastes if applicable under WAC 173-303-610 (4)(d), before ~~he~~ they store~~s~~, treat~~s~~, or dispose~~s~~ of it. This analysis must contain the information necessary to manage the waste in accordance with the requirements of this chapter. The analysis must include or consist of ~~either~~ existing published or documented data on the dangerous waste, or on ~~analytical data from~~ waste generated from similar processes, or data obtained by testing, or a combination of these.*

*(a) When an owner or operator ~~dangerous waste management facility uses information or~~ relies on knowledge from the generator ~~to complete a waste profile for a waste~~ for waste designation or for this detailed analysis (commonly known as a waste profile) instead of ~~direct analysis~~ analytical testing of a sample, that information must be documented and must meet the definition of "knowledge" as defined in WAC 173-303-040. To confirm the sufficiency and reliability of the ~~information or~~ "knowledge" used for the waste profile, the facility must do one or more of the following~~, as applicable~~:*

*(i) Be familiar with the generator's processes by conducting site visits, and reviewing sampling data and other information provided by the generator to ensure they are adequate for safe management of the waste;*

*(ii) Ensure waste analysis contained in documented studies on the generator's waste is based on representative and appropriate sampling and test methods;*

*(iii) Compare the generator's waste generating process to documented studies of similar waste generating processes to ensure the waste profile is accurate and current;*

*(iv) Obtain other information as predetermined by the Department on a case-by-case basis to be equivalent.*

*(b) As required in WAC 173-303-380 (1)(c), records must be retained containing specific information that show compliance with this subsection for ~~adequate~~ sufficient and reliable information on the waste whether the owner or operator ~~conducts direct testing on the waste~~ relies on analytical testing of the waste or knowledge from the generator, or a combination of these.*

**Comment 84**:The proposed definition of "knowledge" is unnecessarily prescriptive and is inconsistent with the existing requirements in -070(3)(c)(ii) and -300(2). The three standards are not identical or consistent, and overlaying the proposed definition exacerbates the inconsistency.

**Comment 85**:The proposal appears to be inconsistent with the book designation procedures of WAC 173-303-100(5)(b).

**Comment 86**: The proposed definition of knowledge is inconsistent with knowledge requirements for designating the toxicity criteria. We note that this proposal appears to be inconsistent with the book designation procedures of -100(5)(b) and the language contained

in -100(5)(a). This widely used designation process does not provide the level of 'knowledge,' as defined, necessary to substitute for direct testing of the waste. The weight percent used in completing the equivalence concentration calculation is often obtained from upper bound numbers from a Material Safety Data Sheet (MSDS), which are conservatively selected by the company when they prepare the MSDS.

**Comment 87**: This proposal appears to be inconsistent with the book designation procedures of WAC 173-303-100(5)(b). This widely used procedure does not appear to provide the level of 'knowledge,' as proposed to be defined, necessary to substitute for direct testing of the waste. The confirmation procedures of proposed -300(2)(a)(i)-(iii) also do not match up to information derived by generators according to the book designation process. For the reasons cited in this comment, and the other comments submitted on this proposed change to -300(2), Ecology needs to retract most of the proposed changes.

***Response to comments 84 though 87**: Ecology disagrees that the rule amendment is inconsistent with book designation procedures, or that the use of Material Safety Data Sheets (MSDS) are precluded from use by the new regulations.*

*WAC 173-303-100(5)(i) specifically allows "available data" or information from the NIOSH RTECS data base to be used for book designation of toxicity. Since NIOSH RTECS data are studies of toxicity, and since the reference is specifically called out as acceptable in the regulations, the information can be used to meet the knowledge definition in the new rule. Ecology has consistently held that the use of MSDS for book designation can be misleading since such information represents a product before use rather than after. Some hazardous components of the product may not be divulged because of proprietary information. There are no standard requirements for MSDS and therefore the reliability of the information can be called into question. However, MSDS can be a helpful component in a body of information that helps inform book designation.*

**Comment 88**:The proposal appears to be inconsistent with the book designation procedures of WAC 173-303-100(5)(b), This widely used procedure does not appear to provide the level of knowledge, as defined, necessary to substitute for direct testing of the waste.

**Comment 89**:Ecology's proposal to add further requirements to waste analysis planning is unnecessary and not always consistent with Federal guidance, as claimed. Ecology proposed to delete use of published data on waste from similar processes without explanation. However existing federal regulations 265.13(a)(2) allow for published data on waste from similar processes to be utilized as acceptable knowledge. Use of published data or studies on such similar processes is also defined as acceptable knowledge at p. 1-11 of the DPA guidance document.

**Comment 90**:Ecology's proposal to require facilities to confirm all waste profiles using specified methods is also beyond existing requirements and inconsistent with the Waste analysis Guidance. 1) The placement of the requirement in -300(2) results in its application to waste shipments not expected to be subject to the Waste Analysis Guidance. 2) The preamble

state that the verification processes cited are consistent with existing requirements in commercial dangerous waste management facilities. If true, there is no need for the proposal. 3) The preamble states that it is directed at waste profiles for waste streams, implying waste acceptance at commercial TSD facilities. However most of the impact is on generators and onsite TSD facilities.

**Comment 91:** This proposal by Ecology will add new requirements, contrary to the statement found in the explanatory text (preamble) on Ecology's web page: "The rule amendment elaborates on that requirement but doesn't impose new requirements." In Ecology's explanation of proposed changes in the Small Business Economic Impact Statement, section 2.1 text indicates that the impact of this rule change is 'negligible.' FH comments on the definition of 'knowledge' and the proposed waste analysis changes in -300(2) will show Ecology's conclusion on this matter is faulty. Ecology needs to withdraw the proposed definition of knowledge and rely on the Chemical Testing Methods for Designating Dangerous Waste (publication #97-407) for any additional explanations of knowledge regarding sufficiency for generators. Perhaps Ecology should consider using the term 'acceptable knowledge,' a term the EPA uses in its guidance. Ecology needs to avoid defining the term 'knowledge' based on how EPA uses the term 'process knowledge' and 'acceptable knowledge' in their guidance. If review of the information in the Chemical Testing Methods for Designating Dangerous Waste (publication #97-407) does not match Ecology's expectation, then Ecology should re-propose a new package to the regulated community with changes being made in that document.

**Comment 92**: Conditions are not part of Ecology permits as Ecology has claimed. Ecology stated in the text on their webpage that "proposed changes are consistent with … current final permits at commercial dangerous waste management facilities on the subject of waste analysis and the use of generator knowledge." Current final permits and draft permits that have been posted on Ecology's website do not indicate that the proposed rule language is being utilized in those permits, particularly the requirements proposed at -300(2)(a)(i) through (iii). We question the value of including these requirements in the regulations when they are not part of current final permits, as indicated in the discussion on Ecology's webpage. Are these conditions in draft permits? Is Ecology having a difficult time issuing permits because these conditions are not in the regulations? What are the permits Ecology has placed these conditions into? The conditions are also not part of FH's Hanford Facility RCRA Permit which has been in place since 1994 and is up for renewal. Because waste designation knowledge and TSD waste analysis policy/guidance have a long history and the cost of testing mixed waste is enormous, these principles are very important to waste management at the Hanford Facility.

**Comment 93**: Ecology's proposal to add further requirements to waste analysis planning is unnecessary and not always consistent with Federal guidance, as claimed. Existing Federal regulations [40 CFR 264.13(a)(2)] allow for published data on waste from similar processes to be utilized as acceptable knowledge. Use of published data or studies on such similar processes is also defined as acceptable knowledge at pg. 1-11 of EPA's 1994 Waste Analysis Guidance. Ecology proposes to delete use of published data on waste from similar processes

without explanation. For the reasons cited in this comment, and the other comments submitted on this proposed change to -300(2), Ecology needs to retract most of the proposed changes.

***Response to comments 88 through 93**: The requirements reflected in the amended rules are well established from existing permit language, waste analysis plans, fact sheets, and guidance. The requirements are not new, inconsistent with, or more stringent than existing permits, guidance, and rules.*

*Existing permit language is consistent with this rule amendment. Current dangerous waste permits have required either testing as a means of gathering information needed to manage a waste safely, or information provided by the generator with the understanding that knowledge is documented in the operating record of the facility. These requirements can be found in the text of the permits issued by Ecology, and within the waste analysis plans that are attachments incorporated by reference at the beginning of each permit. (For examples see "Permit For the Storage of Dangerous Waste" issued to Sol-Pro, Inc., and issued to Philip BEI.) Further guidance to facilities on the appropriate implementation of waste analysis plans and use of generator knowledge was provided in the Fact Sheets issued with the referenced permits at the time of public notice. The Central Waste Complex waste analysis plan for the Hanford Facility also states that the knowledge of a generator's waste must be sufficient to manage it safely.*

*Existing guidance is consistent with the intent and result of this new rule. The requirements, now reflected in the regulation amendment, were based on EPA's "Waste Analysis At Facilities That Generate, Treat, Store, and Dispose of Hazardous Wastes, A Guidance Manual," (OSWER 9938.4-03, April 1994) and is consistent with discussion of knowledge found in Ecology's "Chemical Testing Methods for Designating Dangerous Waste," Publication #97-407, February 1998. Ecology is responding to interested parties who prefer the agency to place guidance into rule when it is possible and practical. In this case, Ecology has determined it is necessary to be clear to both generators and TSDFs by incorporating into rule established expectations when knowledge is relied upon for waste characterization and safe management.*

*Existing rules are consistent with this new rule. Generators have long been allowed to use knowledge of their own processes to comply with requirements to designate their waste. This allowance is currently reflected in existing rules (See WAC 173-303-070(3)(c)(ii)). Generators have always been required to keep records containing the data or other information used to make a waste designation determination. The requirement to base waste characterization on established, well-documented knowledge is therefore not a new requirement.*

*Ecology has determined that the rule amendments are consistent with established regulations, guidance, and expectations of compliance for generators and TSDFs. By providing a definition of knowledge the agency is clarifying existing expectations.*

**Comment 94**: It is reasonable for generators to describe the basis of their "knowledge" and provide that basis to the TSDF. It is not reasonable to require the TSDF to conduct the research or to ensure the sample data is representative and the appropriate test methods were used. Short of observing all samples being taken, the TSDFs will have to rely upon a certified

statement from the sampler that the samples were representative, or upon a certified statement from the laboratory, or a certified statement from author of the study. The generator is required to use representative sampling and approved methods of analysis. A certification by the generator that all information is true and accurate should be sufficient. Generators provide that statement when they sign the TSDFs waste stream description.

**Comment 95**: Rather than clarify waste designation, the real intent of the rule change is to assure that TSDs acquire sufficient documented information to support waste management decisions. Ecology has not provided any evidence that the current language is inadequate and that wastes are being mismanaged because of it. Clarity is not enhanced by the proposal. The proposed definition of knowledge has to do with the sufficiency of information about the waste, yet the proposed insertion to WAC 173-303-300(2)(a) addresses the use of "information or knowledge" to characterize the waste. Since Ecology has not identified a problem with the existing language, we request that the proposed changes be deleted.

**Comment 96:** In lieu of the approach proposed, we suggest that any perceived statewide deficiency in generator designation of waste be addressed during case-by-case compliance inspections and any perceived deficiency in TSD waste analysis plans be addressed in the context of those individual waste analysis plans and permits. Ecology should not be trying to align the regulations with guidance. If there are problems Ecology wishes to address, Ecology should hold workshops or other outreach programs to inform the regulated community. For the reasons cited in this comment, and the other comments submitted on this proposed change to -300(2), Ecology needs to retract most of the proposed changes.

**Comment 97:** There are a wide variety of industrial, commercial, and governmental waste management considerations, including the mixed waste considerations for FH's waste within Washington State. If Ecology needs to address specific issues at specific TSD facilities, Ecology needs to use their omnibus authority under -800(8) to address these issues in individual permits. Without an explanation of the issues Ecology is facing at whatever TSD facilities issues are occurring at, it is very difficult for the regulated community to respond. Ecology posted no information about the problems and concerns or the issues they are facing, either on Ecology's web page or part of the preamble in WSR 04-14.

**Comment 98:** Amending the WAC will not necessarily bring the state's permitted TSD facilities into alignment with the proposed amendment, as their permit requirements act as a shield against WAC changes until those changes are adopted into their permits [see -810(8)(a)].

***Response to comments 94 through 98**: There have been compliance problems at generator sites and TSDFs that point to a need for clarity for both facility operators and generators that use "knowledge" as the basis for waste management decisions. These problems support the need for regulatory consistency and clarity.*

*Over the years Ecology has consistently applied the concepts behind the new rules as regulation interpretation of WAC 173-303-070(3)(c)(ii) when reviewing designations by generators. This is reflected in decisions made by the agency on a case-by-case basis at generator sites. Experience in the field from compliance and technical assistance visits indicate generators rely, sometimes entirely, on TSDF personnel to provide them with designation determinations. At the same time, compliance inspectors consistently find TSDFs relying on generator certifications as adequate knowledge of dangerous waste without obtaining supporting documentation either in the form of analytical data, comparable studies, or proof of process knowledge. The resulting designations and profiles lack the substance Ecology feels is essential for safe waste management.*

*By clarifying in rule what is expected of generators and TSDFs as partners in the cradle-to-grave hazardous waste management system, Ecology clarifies the responsibility of each for providing essential components of information as the basis for good decisions. Because substantiated knowledge is an essential component for safe waste management, a position already reflected in existing rules and guidance, it is appropriate to further clarify such expectations in rule.*

*The regulated community has also expressed a desire for Ecology to place detailed guidance into rule whenever possible so that the agency's expectations are clear. It is not in the best interests of the regulated community to allow the rules to imply that substantiated knowledge is optional when relied upon in place of testing. In translating guidance into rule Ecology sought to remain consistent with the intent of existing rule (WAC 173-303-070(3)(c)(ii)) and the existing guidance while making the language both effective and clear as a regulation.*

**Comment 99**: The preamble to the proposed rule changes emphasizes the need to establish knowledge so that a waste is properly designated and managed safely. The preamble states that the requirements are already in the current regulations. The proposed regulations do not change those requirements, but restricts the owner/operator to fewer methods that result in additional testing and assume that the generator does not know the waste stream. These methods should remain guidance and not be codified. Keeping the method as guidance would allow for other methods for designation and meet the safety requirements.

***Response:*** *See response to comments 94 though 98, above, and response to comments 99 through 105, below.*

**Comment 100**: Ecology has not demonstrated why the existing screening methods are inadequate or what additional benefits will accrue as a result of these mandatory procedures. The proposed options in WAC 173-303-300(2) create mandatory requirements in place of the less burdensome and more flexible alternatives in the current regulations. The new requirement will require each TSDF to revise its waste analysis plan and profiles to document knowledge to meet the new requirement before waste may be received. Because most options are unrealistic and burdensome given the number of generators and waste streams managed at a TSDF, it is likely that they will be forced to perform chemical and physical analysis in the event a generator will not provide such information. The unfavorable alternative is to refuse to accept a generator's waste. The economic impact to TSDFs from compliance with the propose requirements will be significant and should be carefully considered.

***Response:*** *See response to comments 94 though 98, above, and response to comments 99 through 105 and response to comments 111 and 112, below.*

**Comment 101**: The proposed definition of knowledge removes necessary flexibility to address the variety of waste management scenarios that must be addressed by the regulations. There are three main scenarios resulting in greatly varied waste management considerations for whether direct testing of the waste is appropriate. (1) commercial TSD facilities receiving waste from off-site, (2) off-site TSD facilities owned by the same company, and (3) on-site management within a TSD facility. A commercial TSD facility waste profile process documents information about the waste in order for the waste to change hands between different companies. Off-site facilities owned by the same company have different standards based on the fact the waste is not changing hands between different entities. On-site management within a TSD facility is not subject to the off-site verification procedures in -300(4)(b), -300(5)(g) and -300(6). These three standards are clearly not identical and Ecology should not try to harmonize them. The greatly varied waste management considerations for commercial TSD facilities receiving waste from off-site, off-site TSD facilities owned by the same company, and especially on-site management within a TSD facility should be reasons enough for Ecology to withdraw this definition. Overlaying this proposed definition on the existing rules is taking away the ability to tailor waste management considerations across the spectrum of waste management considerations.

***Response:*** *See response to comments 99 through 105 and response to comments 111 and 112, below.*

**Comment 102**: The proposed definition of knowledge is unnecessarily prescriptive and inflexible and requires encyclopedic knowledge of the waste. A great deal of information can be garnered from direct testing of a waste, including information not relevant to the actual designation under -070(3) or proper management under -300(2) of a waste (e.g. viscosity, color). Direct testing of a waste seldom reveals information about the process sufficient to designate waste, especially listed waste. Hence the proposed definition's requirement that knowledge about the process must be sufficient to substitute for direct testing is unnecessarily stringent and would pose significant implementation problems and expense for generators. In practice, most waste designations utilize at least some process knowledge that can not be equated with any direct testing.

**Comment 103**: The three options proposed by Ecology in -300(2)(a)(i) through (iii) are too limiting. Ecology's proposal to require facilities to confirm all waste profiles using specified methods [-300(2)(a)(i) through (iii)] is beyond existing requirements and inconsistent with EPA, Waste Analysis At Facilities That Generate, Treat, Store, and Dispose of Hazardous Wastes: A Guidance Manual, April 1994. Faxback 50010 (hereinafter referred to as EPA's 1994 Waste Analysis Guidance), with which the proposal claims to be consistent. Although Ecology requested comments on additional ways to provide options in the regulations, Ecology's approach to define the ways in the regulations is the wrong way to go about regulating sufficient knowledge for a generator and how an off-site TSD facility confirms knowledge to ensure proper management. Ecology should not be trying to list all the options in the regulations. The current regulations contain the appropriate flexibility and are generally consistent with EPA's regulations and should not be changed.

**Comment 104**: Based on evaluating Ecology's proposal it appears that TSD facilities can no longer adapt their waste profile evaluation processes. FH is concerned about Ecology's approach to revising the requirements for waste analysis and waste designation. We readily acknowledge the need for confirming waste information at a TSD facility and obtaining sufficient information as part of a waste designation process for waste accepted into a TSD facility. However, we are concerned that the ability of individual TSD facilities to adapt waste profile evaluation processes to their particular needs is being eliminated through the proposed rule amendments. The amendments are prescriptive as to the approach and requirements. We also note that the placement of the proposed rule amendments in -300(2) would make them applicable to onsite TSD activities as well as offsite facilities. For the reasons cited in this comment, and the other comments submitted on this proposed change to -300(2), Ecology needs to retract most of the proposed changes.

**Comment 105**: The proposed changes by Ecology for -300(2) and its subsections are not consistent with general requirements in the existing regulations by applying off-site commercial requirements to onsite transfers and offsite shipments between sites owned by the same company. The placement of the requirements in -300(2) results in its application to waste shipments not expected to be subject to EPA's 1994 Waste Analysis Guidance, i.e. shipments to TSD facilities from other sites owned by the same company as well as onsite transfers. Page 1-15 of EPA's 1994 Waste Analysis Guidance states "…if you own/operate an off-site (facility) and rely on information provided by a generator …" This makes it clear that verification of one's own processes and procedures for waste data generation is redundant and not appropriate for this rulemaking. These practices are very important to the onsite management of mixed waste at the Hanford Facility. The application of comprehensive waste testing requirements for onsite transfers is costly and inconsistent with EPA's 1994 Waste Analysis Guidance. The existing regulations are written so that all of the available flexibility is preserved so that permit writers can tailor the needs of the waste analysis plan. The text on Ecology's web page states: "In addition to being consistent with general requirements in the current regulations, the proposed changes are consistent with federal guidance on waste analysis and current final permits at commercial dangerous waste management facilities on the subject of waste analysis and the use of generator knowledge." If this is true, then there is little or no need for the rulemaking as presented because any deficiencies at existing facilities could be addressed through permit modifications rather than rulemaking. Finally, the preamble states that it is directed at waste profiles for waste streams, implying waste acceptance at commercial TSD facilities. However, most of the impact is on generators and onsite TSD facilities, both through the operation of the proposed definition in -040 and due to the claimed existence of similar requirements in commercial TSD permits. For the reasons cited in this comment, and the other comments submitted on this proposed change to -300(2), Ecology needs to retract most of the proposed changes.

***Response to comments 99 through 105**: The amended rule provides flexibility on how to comply without testing by providing options on how to meet an adequate standard of knowledge for safe management at TSDFs through their waste analysis plans.*

*Existing waste analysis plans, based on the dangerous waste regulations, have evolved over time to allow flexibility in testing dangerous waste for acceptance by allowing the use of a variety of screening methods instead of more costly SW-846 methods in order to gain greater protections and better information. This*

*flexibility better informs the waste management process from acceptance, storage, treatment or recycling, to final disposal.*

*In the new rule three options are also provided for TSDFs to meet and document adequate knowledge for safe waste management when the choice is made not to test a dangerous waste. These three options, discussed in existing guidance, are the commonly used means for generators and TSDFs to use knowledge to properly designate and meet the additional information needs of profiling for a receiving facility. The proposed rule was amended to add a fourth option for meeting the safe-management standard by allowing the proposal of other information for agency approval on a case-by-case basis. However, this is not intended to provide a loophole that would allow TSDFs to rely solely on a generator certification of knowledge without supporting documentation.*

*It is Ecology's position that the majority of "captive" TSDFs, (facilities owned by the same company sending to a company-owned, off-site TSDF, or a large generator with on-site TSDF units) should be able to easily meet the adequate knowledge standard because they are in control of product inventory and the processes used within their company. Ecology also maintains that existing WAPs within TSDFs are consistent with the new rule and permit modifications will not be necessary.*

**Comment 106**: We are concerned that mixed waste generators may be required to perform additional analysis work on mixed waste if the proposed requirements are adopted. Testing of mixed waste generally results in radiation exposure to generators. The proposed definition does not fully accommodate the types of knowledge described in the Joint Nuclear Regulatory Commission/EPA Guidance.

***Response:*** *See response to comments 99 through 105, above, and 106 through 110, below.*

**Comment 107**: Restricting the methods that the TSDFs can accept for "knowledge" will result in more testing by both the generators and TSDFs. Either the generators will have to perform additional testing when TSDFs question a designation based on "knowledge" or the TSDFs will when the additional cost for testing is less then the time needed to determine the basis for the generator decision. These additional costs and delays will be passed on to the generator. Washington TSDFs will be at a competitive disadvantage because of the additional requirements. Generators would choose an out of state disposal facilities that would not required to perform additional testing and who were compliant with Federal requirements for "generator knowledge. This effect would not only be fiscally detrimental to generators and Washington TSDFs but also be more detrimental to the environment on two counts. The first is that increasing the distance a waste would have to travel would increase the risk of potential discharges to the environment due to accidents. The second is that increasing the transporting distance increases emission from the transportation vehicle.

***Response:*** *See response to comments 99 through 105, above, and response to comments 111 and 112, below.*

**Comment 108**: The currently available mixed waste testing guidance flexibility appears to be eliminated by this proposal. Another important point for the FH is the additional guidance available on mixed waste (Joint NRC/EPA Guidance on Testing Requirements for Mixed

Radioactive and Hazardous Waste, 11/20/1997, 62 FR 62079). The NRC/EPA 1997 mixed waste guidance is used at the Hanford Facility to address testing issues associated with mixed waste. Maintaining the flexibility in the regulations provided for mixed waste will be a very important element to preserve based on the agreements reached during permitting Notice of Deficiency workshops at the Hanford Facility for TSD units covering the whole range of treatment, storage, and/or disposal of mixed waste. Waste Analysis Plans have been painstakingly crafted over the last decade between FH and Ecology. All available flexibility is used during the Notice of Deficiency workshops to arrive at an operating permit for a TSD unit. There are still a fair amount of TSD units in the process of obtaining operating permits. The impacts of this rule amendment could be enormous if the waste analysis plans must be renegotiated all over again.

We are also concerned that our TSD units managing mixed waste may be required to perform additional testing work on mixed waste if the requirements proposed are adopted. Testing of mixed waste generally results in radiation exposure to TSD workers. The NRC/EPA 1997 mixed waste guidance, Section V, indicates that TSD facilities managing mixed waste should utilize the available flexibility in their waste analysis plan to avoid unnecessary waste testing. The proposed rule reduces this flexibility by introducing strictures on the types of knowledge that can be used for designation. The placement of the proposed requirements in -300(2) requires that they be complied with in the waste analysis plan by the wording of -300(5). For the reasons cited in this comment, and the other comments submitted on this proposed change to -300(2), Ecology needs to retract most of the proposed changes.

***Response:*** *See response to comments 99 through 105, above, and 106 through 110, below.*

**Comment 109**: We are also concerned that mixed waste facilities may be required to perform additional analysis work on mixed waste if the requirements are adopted. Testing of mixed waste generally results in radiation exposure to TSD workers.

**Comment 110**: The proposed definition of knowledge eliminates mixed waste testing flexibility provided in guidance issued by the EPA/NRC. We are also concerned that mixed waste generators may be required to perform additional testing on mixed waste if the proposed requirements are adopted. Testing of mixed waste generally results in radiation exposure to personnel. Joint NRC/EPA mixed waste testing guidance (Joint NRC/EPA Guidance on Testing Requirements for Mixed Radioactive and Hazardous Waste, 11/20/1997, 62 FR 62079.), Sections II and III, encourages generators and TSD facilities that manage mixed waste to utilize waste knowledge to characterize their wastes to eliminate unnecessary or redundant waste testing. The NRC/EPA 1997 mixed waste guidance then describes several types of knowledge that can be utilized. The proposed rule does not fully accommodate the types of knowledge described in the NRC/EPA guidance. Mixed waste testing is very expensive and can only be performed by certain laboratories. It is not uncommon to spend $5,000 per sample for simple low level radioactive waste testing. High level waste testing, on the other end of the spectrum can reach in the hundreds of thousands of dollars.

When the standard in WAC 173-303 is more stringent than EPA's requirements, potential inconsistencies between the state's requirements and the Atomic Energy Act (AEA) might be raised. If Ecology finalizes the proposal, FH will have to look very carefully at these provisions to determine if WAC 173-303, under the Hazardous Waste Management Act, is raising additional inconsistency issues with respect to section 1006 of RCRA.

At the Hanford Facility, the FH and Ecology's Nuclear Waste Program have used waste analysis plans and the permitting process in the Hanford Facility RCRA Permit to balance the appropriate considerations for mixed waste testing.

FH encourages Ecology to maintain the same level of regard as NRC/EPA has. Since Ecology's proposed definition seems to run counter to the NRC/EPA 1997 mixed waste guidance, Ecology should not finalize this definition. See also the mixed waste comments under -300(2).

***Response to comments 106 though 110**: Supporting the use of knowledge with better documentation will result in less testing when such testing would pose a hazard to waste management workers.*

*Substantiated knowledge that better informs decision makers will result in less testing rather than more. By ensuring that profiles developed for dangerous waste and mixed waste are better documented and supported with dependable information, the agency is ensuring that waste management decisions will be better informed. Informed decisions early in the waste management process will reduce risk posed by dangerous or mixed waste further down the waste management chain. This is important when risks to workers outweigh other issues; however the agency must also consider risks to human health and the environment further along the waste management process posed by dealing with treatment or disposal at secondary or tertiary TSDFs or waste management units. In finalizing this rule Ecology is taking into consideration safe management for the entire waste management system, not just the generation, initial profiling and storage at the beginning of a dangerous waste's life cycle.*

**Comment 111**: The commenter requests that Ecology maintain a performance based stance on "knowledge." Waste is generated during a specific process/function. The process owner is aware of the chemical content that goes into the process and then what comes out of the unit as waste generated. This same process owner is the most accurate source of information for specifying the components and their concentration in a given waste unit. This approach is very reliable and can be formally documented through engineering and process flow diagrams. The process owner can determine the chemical content of a unit of waste based on what was introduced into the system. The process owner understands the process and the chemistry of the reaction and is the determiner whether the chemicals used in the process might result in a regulated hazardous waste. The process owner is able to report this information to a waste disposal/destruction facility operator through the waste profiling mechanism. Referencing written procedures, activity logs, and instrument-monitoring data recorders/logs are non-analytical ways to make a validation.

**Comment 112**: A great deal of information can be garnered from direct testing of a waste, including information not relevant to the actual designation or safe management of a waste.

However, the wording of the proposed definition of knowledge appears to make encyclopedic knowledge of the waste necessary in order to substitute for laboratory analysis- "sufficient information …to reliably substitute." Direct testing of a waste seldom reveals information about the process sufficient to designate waste, especially listed waste. In practice, most waste designation utilizes at least some process knowledge.

***Response to comments 111 and 112**: The new rules do not require "encyclopedic" knowledge of every waste stream; they are performance based and rely on a "safe management" standard.*

*When choosing not to test, the new rules require enough knowledge to ensure proper waste designation and safe management, requirements reflected in existing rules and guidance. For a few waste streams this may require extensive and detailed knowledge of products, product constituents, processes, and the accounting for the presence of hazardous components picked up by waste generation. For many waste streams, documentation of the basis for knowledge will consist of MSDS, RTECs data, and process descriptions.*

**Comment 113**: The commenter requests omission of the second sentence of the proposed definition of knowledge. The specificity of the language and TSD requirements are not necessary to protect life, health, and the environment, will be extremely costly to waste generators like WSU, and will negatively impact existing environmental programs such as pollution prevention/waste minimization efforts, emergency preparedness and emergency response programs and community outreach. As a research institution, WSU has more than 1,200 labs generating thousands of waste containers every year of a very small size. A lab may have multiple processes in operation at any given time, and processes may vary within a short period of time. Analysis of each of these small waste containers/streams would be extremely expensive, would require accumulation of wastes in labs while awaiting analysis, and would add little or nothing to waste composition knowledge. Researchers know, and can and have provided the necessary information to EH&S for safe collection and storage and shipment of their wastes. Detailed experimentation procedure data for all the research conducted at the institution would be both unnecessary and extremely burdensome.

**Comment 114**: The revisions and additions to WAC 173-303-300(2) create a broad expansion of federal mandates. The changes impose mandatory responsibility on TSDFs to ensure that each description of dangerous waste received into these TSDFs is accurate and that waste designations are complete and appropriate in accordance with federal and state dangerous waste regulations. A significant burden is removed from a generator under the proposed regulations in that generators may shift the burden of ensuring that all such information is valid to the TSDF. The proposed changes to a TSDF's duties will present an additional competitive disadvantage for in-state TSDFs. Generators may simply force them to assume more of the waste identification burden or simply ship their waste to out-of-state TSDFs to avoid paying the compliance costs that will be incurred by TSDFs and likely passed on to the generators.

***Response to comments 113 and 114**: The new rules do not require increased testing or additional resources not already anticipated by existing rules, permits, and guidance.*

*If generators or TSDFs have not been supporting designation or waste profiles as described by the new rules, they have not been complying with existing rule WAC 173-303-070(3)(c)(ii), permits, and established guidance on such rules and permits. In such cases, additional costs will be incurred for generators either to test their waste or document the knowledge that supports designation determinations. TSDFs will also incur costs to gather supporting information for profiles based solely on generator certifications. This may require either additional testing, site visits, or documentation based on applicable studies or similar processes. Ecology does not consider this an economic impact associated with these new rules, but rather a cost associated with compliance with existing requirements.*

*Commenters state that Washington TSDFs will be placed at a competitive disadvantage. However the new rule is consistent with existing Federal rules and guidance and is not more stringent than RCRA requirements in this respect. Therefore the problem of inconsistent compliance at out-of-state facilities is a matter for EPA and the specific authorized states. Ecology's compliance program seeks to meet the expectations of EPA Region 10 with regard to the federal RCRA regulations as written and interpreted by them.*

**Comment 115**: The proposed definition of "knowledge" would impact all generators' waste designation processes and is significantly more prescriptive than the current Ecology regulatory framework. The level of knowledge being proposed necessary to substitute for laboratory testing of waste will likely have the result of many more questions being raised about waste designation, and a resultant shift to laboratory testing by generators to characterize their waste. Ecology notes in their reason statement that laboratory testing is costly and unnecessary in some cases. The issues of knowledge were heavily commented on during the last revision of the Chemical Testing Methods for Designating Dangerous Waste (publication #97-407). Many sections of this publication and the definition of 'process knowledge' in the glossary of this document received much attention. Since Ecology did not propose any related changes to Publication #97-407, the regulated community is at a loss as to how the proposed changes apply to all the discussions contained in the response to comments section for publication #97-407 that is contained in Appendix D to Responsiveness Summary Amendments to the *Dangerous Waste Regulations*, Chapter 173-303 WAC, Publication 97-439, dated January 1988.

***Response**: Inconsistencies between the new rule and "Chemical Test Methods for Dangerous Waste," if they exist, will be addressed by revising the publication (Chemical Testing Methods) during its next revision. Ecology received comments that the discussion of process knowledge in this publication was inconsistent with the new rule. A comparison was made and the agency does not agree that the two are inconsistent in intent. Clarifications in language and terminology in the publication will be made to ensure there is no room for confusion between rule and guidance.*

**Comment 116**: The Waste Analysis Guidance requirement that Ecology seeks to adopt is dated and thus of dubious value.

**Comment 117**: EPA's 1994 Waste Analysis Guidance requirements that Ecology seeks to adopt are outdated and thus of no value. Ecology's proposed steps in -300(2)(a) appear similar to the

information contained in EPA's 1994 Waste Analysis Guidance under Special Concerns When Using Acceptable Knowledge on page 1-15 which states: "There are several special concerns that you should be aware of it you rely on acceptable knowledge to manage your wastes. First, if you own/operate an off-site TSDF and rely, on information supplied by the generator, you should, if possible, become thoroughly familiar with the generator's processes to verify the integrity of the data. This can be accomplished by (1) conducting facility visits of generators and/or (2) obtaining split samples for confirmatory analysis. Second, if you use process descriptions and existing published or documented data as acceptable knowledge, you should scrutinize carefully whether:

- There are any differences between the process in the documented data and you process
- The published or documented data that were used are current

These issues are of concern, for example, because EPA recently revised the criteria that qualify a waste as a hazardous waste due to being were characteristically toxic. Not only were the number of constituents deemed hazardous increased, but also the prescribed test method was modified [i.e., the TCLP replaced the Extraction Procedure Toxicity Test (EP TOX Test)]."

The TCLP rule, a sweeping change to the dangerous waste characteristics, was published March 29, 1990 (55 FR 11862) and required a new test method (the Toxicity Characteristic Leaching Procedure) as well as identifying 25 new characteristically toxic wastes. The guidance was intended to upgrade information due to sweeping changes in the regulations and avoid the use of outdated or inapplicable knowledge from the EP TOX procedure. One year prior to the publication of the 1994 Waste Analysis Guidance, underlying hazardous constituents were first instituted in May 1993 (58 FR 29860) and expanded to other waste codes in 1996. It has now been eight years since major changes like this have happened in EPA's program. Hence it is much less likely at this point that generators are inappropriately relying on outdated information to try and designate their waste, or that TSD facilities are overlooking significant constituents that would adversely affect their ability to manage the waste safely, properly and compliantly. Ecology should not include this type of guidance into regulations at this point in the regulatory history of RCRA and the Hazardous Waste Management Act. For the reasons cited in this comment, and the other comments submitted on this proposed change to -300(2), Ecology needs to retract most of the proposed changes.

**Comment 118**: It is a good idea to reference -380(1)(c) for recordkeeping requirements, but the extra explanatory text needs to be deleted on what the records need to consist of. Ecology is proposing to add the following text as the new -300(2)(b): "As required in WAC 173-303-380 (1)(c), records must be retained containing specific information that show compliance with this subsection for adequate information on the waste whether the owner or operator conducts direct testing on the waste or relies on knowledge from the generator." FH agrees that referencing the recordkeeping requirements helps ensures the reader is informed of the -380(1)(c) requirements. We do not agree that the language after the word subsection should be retained. The extra language now introduces yet another new term 'adequate information' to the regulations. This new text needs to be avoided so that yet another term is thrown into the already complex waste analysis mix of terms. For the reasons cited in this comment, and the other comments submitted on this proposed change to -300(2), Ecology needs to retract most of the proposed changes.

***Response to comments 116 through 118****: The EPA guidance referenced and used by Ecology is current and applicable. The EPA guidance issued in 1994 is, to the agency's knowledge, the most recent guidance document on waste analysis plans. It is Ecology's position that it is still a valuable and current document. Ecology acknowledges that an updated guidance written for Washington's TSDFs would be useful, and has such a proposal under consideration.*

## WAC 173-303-370

**Comment 119:** Ecology proposed text in -370(4) that duplicates existing text in -280(1). Also, the renumbering of regulatory sections affects the referencing of other sections. For example, -350(3)(b) references -370(5) and with the new additions of -370(4) and (5), the renumbering has created a problem with -350(3)(b). Ecology needs to update all applicable WAC 173-303 references when subsection numbering changes.

***Response:*** *The proposed text in -370(4) will be deleted since it duplicates existing text in -280(1). Proposed -370(5) will be moved to the end of the section so as not to cause a conflict with the existing cross citation that cannot be changed as part of the current process since no changes were proposed to WAC 173-303-350.*

## WAC 173-303-390

**Comment 120:** The proposed changes to WAC 173-303-390(2)(g) and (h) relating to annual dangerous waste reporting appear to have good intentions but unintended consequences. The proposal appears to aim at improved RCRA permitting. The commenter supports permitting improvement efforts such as this, but on the other hand, is concerned that Ecology incorporated the federal text without evaluating the way TSD facilities gather information and prepare the annual dangerous waste report.

Specifically, -390(2)(g) requires information on the description of efforts taken during the year to reduce the volume and toxicity of the waste to be reported. This is a direct conflict with current practices because annual dangerous waste reporting under TurboWaste, Ecology's software, uses mass [kilograms] and waste codes. In addition, review of the TurboWaste reporting fields do not yield a field for which the required description could be entered. Without changes to the proposed text of the rule, it appears Ecology has begun the effort to completely overhaul the way TSD facilities have to collect information for the annual dangerous waste report and that Ecology will be initiating a significant overhaul to TurboWaste. If so, as one option, Ecology needs to include a delayed implementation of this requirement until Ecology's software is updated and training is provided to the regulated community what specific information is required and how that information should be collected and reported.

Per Annual Dangerous Waste Report instructions, dangerous waste "descriptions" are provided as brief "Waste Stream" narratives including applicable federal and state dangerous waste codes; dangerous waste "quantities" are reported as mass units in kilograms. There are no other "volume and toxicity" parameters required by the reporting instructions.

In -390(2)(h), a description is required of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years, to the extent such information is available for the years prior to 1984. This requirement appears to carry no logic as there is no data still available prior to 1984, and Ecology's existing software does not allow this kind of description to be added. It appears the first year this provision will be in place will constitute the baseline year for subsequent years and that in the second year, the first comparison can be made, since the volume and toxicity of a waste is currently not been reported in TurboWaste. In addition, review of the TurboWaste reporting fields do not yield a field for which the required description could be entered.

The Hanford Facility collects waste minimization and pollution prevention (P2) data to meet the requirements of Department of Energy (DOE) Order 450.1 and associated Executive Orders. The reporting elements are defined by DOE Headquarters in Washington DC and are presently being revised for P2 goals beyond 2005. Presently, waste generation information is binned into routine and non-routine (this would include both RCRA and CERCLA waste) and by waste type (not by waste codes). The information is reported in cubic meters except that sanitary waste, TSCA waste, RCRA waste, and State-only dangerous waste in reporting in metric tons. The way this information is collected and reported would not be compatible with Ecology's proposal to report volume and toxicity of dangerous waste generated.

The Hanford Facility's mission is related to closure of the site with no baseline "production" level of operations. Waste generation quantities can vary greatly from year to year, depending on the Decontamination & Decommissioning project schedules. The value added of year to year comparisons of waste generation "volume and toxicity" for a site undergoing closure is questionable, and may be meaningless.

For the Hanford Facility, the proposed rule with requirements for dangerous waste "volume and toxicity" reporting could necessitate a greatly expanded waste sampling and analytical program to determine toxicity, with accompanying site-wide infrastructure improvements and additional data management capabilities. Such an expansion may be cost prohibitive with respect to funding priorities. Even if Ecology changes the terms "volume and toxicity" to "quantity and description," a significant data gathering program will be required to come up with the descriptions required by both of the new requirements. Again, based on an above comment, the value added of this additional reporting requirement is questionable. Ecology needs to provide a method to balance the impacts of the rule with the time it will take to implement new requirements.

***Response:*** *The proposed amendment does not require facilities to take on a new reporting responsibility. Adoption of this rule by Ecology means that implementation responsibility for this rule has shifted from EPA to the state. Facilities have been required to submit this information to EPA since the rule was first promulgated. Ecology will implement it to the same extent and in the same manner that EPA has implemented the rule. No new information gathering or types of data generated are expected to be required. The state will be satisfied with the same type of submittal that has met the regulatory requirements as administered by EPA.*

*If a facility is currently required to prepare pollution prevention plans and updates under state law or an executive order, they do not need to submit additional information as required by the new sub-sections. If a facility is not currently required to comply with pollution prevention planning requirements, they can submit a brief narrative description as a supplement to the Annual Report. It is an unfortunate consequence of the state adopting a federal rule this many years after it was first promulgated by EPA that the provision may appear obsolete, such as the mention of 1984 baseline data. However, these are not new requirements. They are HSWA requirements that EPA has been responsible for implementing for the past approximately 20 years. The state considered how adoption of this rule at this time would appear to the regulated community, and on balance, it was determined that gaining permitting authority outweighed the possible confusion of taking on an older provision that may not have been implemented in the past as strictly as the wording would indicate.*

*Ecology is not proposing to adopt the waste minimization requirements for generators at this time and they will not be subject to -390(2)(g) and (h). They remain subject to the federal version of the rule. The proposed rule did "exempt" them from the -390 reporting requirements although the wording in -220 is being deleted from the final rule so as not to jeopardize authorization of the portion that applies to TSDs. Although not explicitly exempted, generator waste minimization requirements were not proposed and those requirements remain as they are under current federal rule. They will be considered for future adoption by the state.*

*TurboWaste will not be modified to accommodate these changes, and TSDs do not need to change the way they collect information for the annual dangerous waste report. Although Ecology is adopting the language that exists in the federal rule, it is expected that facilities have already been complying with the requirements throughout the past 20 years, so this is not a new requirement. Ecology is not expecting facilities to compare data prior to 1984 or in the years since then up to this point. That reporting would have already been submitted to EPA. The year 1984 is the first year that this requirement went into effect, and the commenter is correct that reporting from this point forward (2006) will be based on the year Ecology assumes responsibility for this requirement from EPA.*

*Rather that not merely conflicting with existing pollution prevention planning requirements, Ecology's intention is that a facility complying with state P3 requirements is already meeting the intent of the waste minimization requirements and will not be asked to provide additional information. Ecology and EPA originally approached the waste minimization/pollution prevention requirements in two different ways. Ecology understands that facilities that are performing clean-ups will have years where waste generation totals are higher than previous years. Facilities should not consider instituting expensive and greatly expanded waste sampling and analytical programs to determine the toxicity of their waste. Waste minimization compliance that has met EPA requirements in the past will be considered sufficient for complying with the newly adopted state requirement.*

**WAC 173-303-395(1)(d)**

**Comment 121**: The Hanford Facility is subject to Department of Energy Orders which specify that the Uniform Fire Code (UFC) be used. If Ecology now uses the International Fire Code in the *Dangerous Waste regulations*, it will impose two different standards at the Hanford site.

Ecology needs to determine whether or not the two codes are equivalent, and if not provide an option to comply with either standard at the discretion of the local fire marshal.

***Response**: In 2003, the Washington state legislature passed an amendment that replaced the Uniform Fire Code (UFC) with the International Fire Code (IFC). All cities and counties around the state are in the process of adopting this code, which has been collectively approved by the Washington State Association of Fire Marshals. Switching to the IFC makes Washington state consistent and in-step with the majority of the United States. Without an extensive review by a fire code expert, it is not possible to provide an analysis of all the differences between the IFC and the UFC, but it does appear that the two codes are not equivalent as they pertain to the dangerous waste rule citations. At facilities where federal facility orders require that the UFC be used, (such as at the Department of Energy Hanford site), Ecology's Hazardous Waste Program inspectors will work with the facility to meet dangerous waste rule requirements.*

## WAC 173-303-400

**Comment 122:** The proposed amendment at WAC 173-303-400(3)(c)(ix) does not cite the correct sections of 40 CFR 265. By saying the section is "modified to read" when the intent is to add additional language to the existing regulation, Ecology appears to be repealing the existing requires in that section.

***Response:** The change will be made in the final rule. Since the proposed language modifies existing sentences in the federal regulations, rather than adds additional sentences to the regulations, Ecology will clarify which sentences in sections 265.112(d)(1) and 265.115 are modified by the proposed amendments.*

**Comment 123:** The proposed amendment at WAC 173-303-400(3)(c)(ix) does not properly cite 40 CFR 265 sections intended to be included. The proposed amendment also appears to have the unintended effect of repealing the existing requirements cited by saying the section "is modified to read" when the intent is to add additional language to the existing regulation. Ecology appears to be repealing the existing requirements in that section. Ecology's interim status regulations do not require changing, and the partial closure provisions proposed by Ecology are inconsistent with EPA regulations at 40 CFR 265.112(d)(1).

***Response:** Since the proposed language modifies existing sentences in the federal regulations, rather than adds additional sentences to the regulations, Ecology will clarify which sentences in sections 265.112(d)(1) and 265.115 are modified by the proposed amendments.*

*Notification of partial closure is currently required for closure of surface impoundments, waste piles, land treatment, and landfill units. The proposed amendments extend the notification requirement to treatment and storage tanks, container storage, and incinerator units. It is consistent to expect notification of closure for these units whether it is for partial closure or final closure or for an interim status facility. Closure notification is required so that Ecology can ensure the facility has an approved closure plan and that the closure proceeds in accordance with approved regulations. For facility owners or operators without approved closure plans, the closure notification triggers Ecology's review and approval of the closure plan in accordance with the regulations.*

## WAC 173-303-505

**Comment 124:** One commenter was in opposition to the proposed language that, under certain circumstances, Ecology would allow a fertilizer registrant to forgo submittal of the test information required in subsection (b)(v)(A) Initial Criteria of WAC 173-303-505. The Initial Criteria information requirements are: toxicity characteristic leaching procedure (TCLP) metals and halogenated organic compounds (HOC) test data.

***Response:*** *Ecology will retain the proposed amendment. As written, the language in the proposal provides Ecology with some flexibility regarding the testing requirements for waste-derived and micronutrient fertilizers. That language states, in part, "…the information requirements in (b)(v)(A) of this subsection may not be required if…"(emphasis added). Ecology has noted over the five years these requirements have been in place that some fertilizer products (most notably micronutrient fertilizers) are consistent products with unchanging source materials and very low levels of leachable metals and halogenated organic compounds. The expense of these tests can be a financial burden and automatic retesting of such stable products provides no environmental gain. From a regulatory and a business perspective, it makes sense that Ecology should have the ability to determine on a case-by-case basis that consistent products do not automatically need to undergo these tests with every registration renewal. However, waste-derived fertilizer products are considered by Ecology to be less consistent in their make-up due to the nature of the source materials. As a result, the flexibility of the proposed language change will also allow Ecology to continue to require the TCLP metals and HOC testing on any products of concern as determined to be appropriate on a case-by-case basis.*

## WAC 173-303-515

**Comment 125**: The commenter supports the proposed amendment.

***Response****: Support noted.*

**Comment 126**: Ecology is requiring a test for listed wastes when listed wastes can only be designated based on process knowledge. The mere presence of a listed constituent does not mean that a material is designated as a listed dangerous waste. Test results indicating the presence of acetone in used oil would not determine if the acetone was an F listed solvent since testing cannot determine if the solvent was 10% or more before use and whether the use was used for its solvent properties. Testing also could not determine if the acetone was unused and therefore a potential U listed dangerous waste. Testing can only determine whether a characteristic and/or criteria of dangerous waste is exhibited or whether environmental media or debris no longer contains a listed constituent. In the March 8, 1990, Federal Register on page 8758, EPA explained that it is often necessary to know the origin of the waste to determine whether it is a listed waste and that, if such documentation is lacking, the agency (EPA) may assume it is not a listed waste. Ecology specifically omitted listed waste discussions from the Chemical Testing Methods for Designating Dangerous Waste (Publication #97-407) because of this fact.

Testing would not be required for determining the presence of listed hazardous waste since testing cannot make a listing determination; only generator knowledge can determine the applicability of listings. By avoiding finalizing the listed waste language as proposed, unnecessary and expensive testing will be eliminated since testing cannot determine the applicability of listings. Deleting the testing requirement for listings would also maintain consistency with waste designation policies and the Federal program.

In the preamble discussions Ecology makes a statement: "Testing for specific chlorinated compounds is part of the allowed procedure under EPA guidance to rebut the presumption that listed waste was added to a used oil, and is therefore established policy for implementing the used oil rules." Ecology should not tie in the listed waste and chlorinated compound terminologies. Chlorinated compounds are not necessarily listed wastes. Instead, Ecology should use the term "total halogens" in place of "a listed hazardous waste" in order to be consistent with Table 1 in -515.

***Response**: The commenter is not correct about the existing regulation and Federal Register preamble on the application and use of the "rebuttable presumption." Existing federal regulation and 1992 preamble for the adoption of 40 CFR 279 apply the "rebuttable presumption" as a mechanism to identify used oil that has been mixed with listed hazardous waste (see FR Vol. 57, No. 176, p. 41579, Sept. 10, 1992). The presumption itself assumes a used oil is a listed waste when screening reveals it to exceed 1000 ppm total halogens. The method of rebutting the presumption is to either produce knowledge that indicates the oil was either formulated with listed constituent components, or that the halogens were gained by the oil through normal use, or to test the oil to show that it does not contain more than 100 ppm of any one listed constituent. Ecology adopted the "rebuttable presumption" portion of the federal regulation as is, and is not proposing to change it. The proposed rule gives Ecology the option to require testing on a case-by-case basis when adulteration of a used oil is suspected. Instead of declaring the used oil a solid waste subject to designation, Ecology will be able to consider a waste in question as used oil until testing proves otherwise.*

## WAC 173-303-573

**Comment 127:** The commenter supports adoption of mercury-containing equipment as a Universal Waste.

***Response:*** *Comment noted.*

**Comment 128**: Adding mercury-containing equipment as a universal waste will be a positive step toward giving people a convenient and cost-effective way to recycle mercury-containing material such as thermometers, manometers and mercury switches. The commenter asks that elemental mercury itself (other than what may be contained in mercury equipment) be considered a universal waste, in order to simplify recycling.

***Response**: When adding universal wastes, Ecology has worked to closely adhere to EPA's criteria for selecting universal waste. One of these criteria is that the waste is common to a wide variety of industries and other types of institutions. As a waste, elemental mercury is not commonly generated by*

*many facilities, as is the case with lamps, batteries and thermostats. Universal wastes normally pose little risk of causing major contamination and clean-ups, such as might happen with a spilled container of mercury that held a relatively large amount of mercury. Liquid elemental mercury may be stored in breakable or inadequate containers, often by homeowners or schools, with corresponding risks of spillage during transport and handling activities. The universal waste rules are not usually applicable to these types of small quantity generators. Also, the universal waste rules are not designed to provide in-depth criteria for appropriate management of highly toxic liquid wastes. Often homeowners and some small businesses can use their local household hazardous waste facility for disposing of elemental mercury.*

**Comment 129:** In the proposed rules you are making mercury containing equipment a universal waste. A generator may treat this waste as universal waste as an option or they may manage the waste as hazardous waste. Since many of the devices that will fall under this revision are themselves containers (i.e. Thermometers, sphygmomanometers, etc) as defined by interpretation by EPA, when these devices are empty they will be excluded as empty containers under WAC 173-303-160(2). Under the proposed rules would they still be regulated when empty? If I had a drum of thermometers and manage them as universal waste I must send the entire device out for recycle. If I manage them as waste and drain the mercury I may reduce my cost by thousands by discarding the empty containers. I believe there will be some confusion over the management of empty containers on this proposed rule. If these units are not considered containers by DOE as EPA has defined them then the intact units may be sent to landfill as a debris and managed under the alternative LDR standards for debris in conflict with the EPA. I do not believe DOE can define them as anything other than containers therefore.

***Response:*** *Ecology encourages generators to manage their mercury-containing equipment under the universal waste rule. However, generators can choose to manage mercury-containing equipment as dangerous waste subject to additional waste management requirements. Adoption of the universal waste rule will not change or affect the management or ultimate disposition of mercury-containing devices when the generator chooses to manage them as dangerous waste. Ecology believes that most generators will take advantage of the simplified universal waste rules for managing mercury-containing equipment. Universal waste can be stored on-site for up to a year, and shipped without a manifest to either a recycler or to a treatment, storage or disposal facility.*

*Under the universal waste rule, mercury-containing equipment cannot be opened by universal waste handlers (UWH) so that the mercury can be drained out and collected. Universal waste handlers are allowed to remove glass ampules and collect them as intact units. Ecology strongly discourages generators or non-RCRA permitted facilities from opening mercury-containing equipment in order to remove and bulk the mercury (which is not allowed when managed as universal waste). The risks associated with handling mercury in this fashion are too great, both from a worker protection standpoint and from the likelihood of a spill. Also, with some devices (such as thermometers) it may be difficult to fully empty out the mercury. If these "empty" devices are placed in a municipal landfill and they still contain residual mercury, the generator could be liable for possible mercury contamination at the landfill.*

*For purposes of determining treatment under land disposal restrictions, intact mercury-containing equipment would be classified as a container. As such, it does not qualify as debris and must be managed under the normal treatment standards for D009 mercury wastes, which includes retorting.*

## WAC 173-303-610

**Comment 130:** The commenter requests that Ecology allow permitted treatment, storage, and disposal facilities (TSDFs) to use the Class 1 permit modification process to implement any permit modifications prompted by this proposed change to WAC 173-303-610(3)(c)(i) that do not result in permanent closure of a unit. An example would be the case where a tank is due for closure and replacement. In the alternative, Ecology is asked to clarify the regulation to apply only to final closure of units that will not be replaced to maintain existing capacity at a TSDF.

***Response:*** *Notification of closure and schedules for closure are two separate issues. Notification of closure at a permitted facility does not require a permit modification. The requirements for time allowed for closure are outlined in -610(4). Changes to the schedule for closure do require permit modifications, usually a Class 1 permit modification with prior approval of the Department of Ecology.*

*"Partial closure" is defined as the closure of a dangerous waste management unit in accordance with the applicable closure requirements of WAC 173-303-400 and WAC 173-303-600 through -670 at a facility that contains other active dangerous waste management units. For example, partial closure may include the closure of a tank (including its associated piping and underlying containment systems) while other units at the same facility continue to operate. Replacement of a tank with a new tank that continues to be used for the treatment and storage of dangerous waste is not closure. A Class 1 permit modification is required for replacement of a tank with a tank that meets the same design standards and has a capacity within plus or minus ten percent of the replaced tank provided the capacity difference is not more than 1,500 gallons, the facility's permitted tank capacity is not increased, and the replacement tank meets the same conditions in the permit.*

**Comment 131:** Ecology's final status regulations do not require changing (WAC 173-303-610(3)(c)(i)), and the partial closure provisions proposed by Ecology are inconsistent with EPA regulations at 40 CFR 264.112(d)(1). Ecology should have no concerns about partial closure notifications at a TSD unit that needs to have a permit to operate. Section -610 applies to operating facilities seeking a permit, and -610(3)(a) clearly outlines the procedures to get an approved closure plan. If there are partial closure concerns at a facility and there is appropriate justification to impose partial closure notifications, Ecology can impose these through the omnibus provisions of -800(8) as part of the permit issuance process. EPA's requirements for partial closure at 40 CFR 264.112(d)(1) contain an additional sentence not found in -610(3)(c)(i). Ecology should only propose text to make -610(3)(c)(i) consistent with 40 CFR 264.112(d)(1). Other partial closure notifications are not required.

***Response:*** *Notification of partial closure is currently required for closure of surface impoundments, waste piles, land treatment, and landfill units. The proposed amendments extend the notification requirement to treatment and storage tanks, container storage, and incinerator units. It is consistent to expect notification of closure for these units whether it is for partial closure or final closure at a final status facility. Closure notification is required so Ecology can ensure the facility has a current approved closure plan and that the closure proceeds in accordance with approved regulations and with the facility's permit.*

*40 CFR 264.112(d)(1) contains an additional requirement concerning notification for partial and final closure of a boiler or industrial furnace. That requirement is not in -610(3)(c)(i) because the Department of Ecology has not adopted the federal regulations for boilers or industrial furnaces and is not authorized to implement these regulations. EPA Region 10 is the agency in Washington state with compliance and permitting oversight over facilities with these units.*

## WAC 173-303-630(8)(a)

**Comment 132**: The Hanford Facility is subject to Department of Energy Orders which specify that the Uniform Fire Code (UFC) be used. If Ecology now uses the International Fire Code in the *Dangerous Waste regulations*, it will impose two different standards at the Hanford site. Ecology needs to determine whether or not the two codes are equivalent, and if not provide an option to comply with either standard at the discretion of the local fire marshal.

***Response**: In 2003, the Washington state legislature passed an amendment that replaced the Uniform Fire Code (UFC) with the International Fire Code (IFC). All cities and counties around the state are in the process of adopting this code, which has been collectively approved by the Washington State Association of Fire Marshals. Switching to the IFC makes Washington state consistent and in-step with the majority of the United States. Without an extensive review by a fire code expert, it is not possible to provide an analysis of all the differences between the IFC and the UFC, but it does appear that the two codes are not equivalent as they pertain to the dangerous waste rule citations. At facilities where federal facility orders require that the UFC be used, (such as at the Department of Energy Hanford site), Ecology's Hazardous Waste Program inspectors will work with the facility to meet dangerous waste rule requirements.*

## WAC 173-303-640

**Comment 133:** In reviewing the proposed changes to the "notes" in -640, an improper reference to (h)(iv)(A) through (C) was found in two locations. In -640(4)(i)(D) and (E), the reference should be (i)(A) through (C). The sub-subsections (A) through (C) are not found anywhere in (h).

***Response:** These corrections have been made in the final rule.*

**Comment 134:** The proposed language of -640(7)(d) fails to bring the requirement into alignment with other sections of the *Dangerous Waste Regulations*. Instead, the proposed language requires reporting of any release from the tank system regardless of potential impact to human health or the environment, in conflict with the reporting requirements of -145 which only require reporting when a release threatens human health or the environment.

***Response:** The proposed language at -640(7)(d) which states that any release must be reported in accordance with section -145 means that spills from tanks and tank systems must be reported using the same criteria as any other spills subject to -145. Spills must be reported when a release threatens human health or the environment.*

**Comment 135:** The proposal to -640(7)(d) deletes the exception to the spill reporting requirement for very small releases that are immediately cleaned up. The commenters suggest this exception be retained.

***Response:*** *The operator of a tank system is already subject to the reporting requirements of section -145 as well as to those of -640(7)(d), both at the same time. Section -145 currently has no minimal volume reporting requirements, which applies to tank system operators. Therefore, with the amendments to -640(7)(d) the tank operator is not being subject to any new rule that is more stringent than what they are currently subject to. The amendments to -640(7)(d) removes a requirement that is in conflict with section -145, which the tank system operator currently must comply with.*

**Comment 136:** Ecology should merely identify the other requirements from -145 and -360(2) in -640(7)(d)(i) so that it is easier to identify all applicable reporting requirements.

***Response:*** *Ecology is making the rule clearer by using section -145 as the section for reporting requirement since it applies to any person responsible for a spill rather then section 640(7)(d) which only applies to tank operators. There has been confusion expressed by generators in the past regarding these apparently conflicting requirements.*

**Comment 137:** Delete proposed changes to -640(7)(d)(iii) regarding the 15-day contingency plan report. Retain the text as is currently exists.

***Response:*** *The 15-day reporting requirement for contingency plans is not a new or proposed rule; it is currently a requirement in section 360. The 15-day reference was placed in section -640(7)(d) to alert the reader that there may be a shorter reporting period they are subject to if the spill is considered an emergency. By adding the 15-day reporting reference in -640(7)(d) Ecology hopes to make it easier for generators to remain in compliance with reporting time frames.*

**Comment 138:** The proposed revision can be read to require an immediate report of any release to the environment without regard to the circumstances. The commenter suggests the following wording for section -640(7)(d)…."Any release to the environment that threatens human health and the environment must be reported in accordance with section -145"

***Response:*** *Ecology respects the concern of the commenter regarding the circumstances about releases to the environment that "threatens" human health. Since that particular circumstance is outlined in section -145 Ecology felt there was no need to repeat that same statement in section -640(7)(d).*

## WAC 173-303-646

**Comment 139:** The commenter supports provisions that maintain consistency with the federal hazardous waste rules including the federal rule language related to the off-site management of CAMU eligible wastes. This provision affords the state maximum flexibility for the safe and effective management of CAMU eligible wastes in accordance with the federal rules.

***Response:*** *Comment noted.*

**Comment 140:** Waste Management supports the adoption of the federal regulations for corrective action management units (CAMUs), particularly the inclusion of language related to off-site management of CAMU-eligible waste in both in-state and out-of-state facilities.

***Response:*** *Ecology notes your support of these amendments to the* Dangerous Waste Regulations.

**Comment 141:** To further encourage cleanups and more equitably allocate responsibility for corrective actions, the commenter believes Ecology should incorporate the private right of action provision from the Model Toxics Control Act (MTCA) regulations (WAC 173-340-545) into new section -64620(4). At a minimum, corrective actions must be consistent with the sections of the MTCA regulations outlined in this section.

***Response:*** *The purpose of the proposed regulation amendments to WAC 173-303-646 was to adopt the revised federal corrective action management unit (CAMU) regulations. The level of detail in the revised CAMU regulations resulted in a reformatting of the entire section. Although the proposed amendments present the entire section as new, Ecology did not intend to make additional revisions to WAC 173-303-646 at this time. The language proposed in your comment will be considered in future rulemaking.*

## WAC 173-303-802

**Comment 142:** This change to permit-by-rule (WAC 173-303-802(5) and -040 definition of a designated facility) is a very positive improvement. The regulated community can be flexible about how to manage the wastes in a cost effective manner yet still ensure protection of the environment.

***Response:*** *Comment noted.*

**Comment 143:** The proposed change will allow permit-by-rule (PBR) facilities to receive and treat RCRA regulated hazardous wastes without a TSDF permit and without the regulatory scrutiny or stringent requirements applicable under such permits. PSC believes this will increasingly impact TSDFs and make them an uncompetitive alternative for the treatment of the waste streams that will fall under this new exclusion.

***Response:*** *The amendment removes the requirement to have a TSD permit to treat federally-regulated wastewaters generated off-site. It does not change how wastewater treatment units are regulated. Treating wastewater in wastewater treatment units is an activity regulated by an NPDES, state waste discharge, or pretreatment permit or authorization, and the additional PBR requirements*

*It is true that the proposed changes do not impose the same requirements as found in a TSD permit; however, Washington's requirements for treating wastewater generated off-site in wastewater treatment units are considerably more stringent than EPA- EPA exempts this activity. In addition, it should not be presumed that these units will not go without scrutiny by Ecology. The wastewater treatment units being addressed in this rule amendment are generally operated by large businesses that are already subject to Ecology's inspection routine.*

*The proposed change is also narrow in scope. It only applies to wastewater treatment units that: 1) meet the definition of a tank or tank system, 2) treat wastewater, 3) treat wastewater generated off-site with similar characteristics to that generated on-site (for example, wastewaters generated at a satellite location owned by the parent company, 4) treat wastewater that can be effectively treated in the receiving wastewater treatment facility, and 5) are part of a wastewater treatment facility that is regulated under a water quality permit or authorization and the permit or authorization covers the waste stream and constituents being discharged. Ecology believes that this change will only apply to a limited number of facilities and does not expect it to impact business done by TSDFs. Ecology believes that the amendment will provide opportunities for better treatment of wastewater streams with dangerous waste constituents.*

**Comment 144:** Although the new section will impose requirements on these treatment facilities that do not apply under current regulations, the additional regulations are not among those that are the most costly and burdensome to TSDFs that will compete for these same waste streams (e.g., closure and post-closure financial assurance, reporting and recordkeeping requirements).

***Response:*** *Wastewater treatment units treating wastewaters generated off-site will be regulated like other permit-by-rule units. The commenter is correct in stating that these units are not subject to the financial assurance requirements and some of the recordkeeping requirements applicable to TSDFs. However, PBR facilities must comply with WAC 173-303-380(1)(d), operating record and the reporting requirements in WAC 173-303-390. As mentioned previously (see response to comment 143), Washington's PBR requirements are far more stringent than EPA.*

**Comment 145:** This section does not define what is meant by "generated within the same industry" or by "the wastewaters will be effectively treated by the wastewater treatment unit." The NAICS codes are complex, and a single six-digit code may involve one industry that produces numerous waste streams or different waste streams based upon the chemical or products used in the particular industrial process.

***Response:*** *"Same industry" can refer to the same company, a subsidiary of that company, or an industry with the same NAICS code or in the same category of NAICS code. The scope of this rule is limited to treating wastewaters generated off-site that have similar characteristics to wastewaters generated onsite. The water quality permit writer or regulatory authority will review information about the new wastewater stream (including characteristics, concentration levels, and volume) and the capabilities of the receiving wastewater treatment facility to determine if the wastewaters will be effectively treated. "Effectively treated" means that the dangerous waste constituents and other constituents in the wastewater are removed or chemically altered to meet permit limits or standards that are protective of human health and aquatic life.*

**Comment 146:** Neither this section nor the definitions in the *Dangerous Waste Regulations* define what constitutes "wastewater" for purposes of this section. Because the term "wastewater" is not defined, it should be required that these PBR facilities are in fact treating "wastewaters" and not concentrated chemicals or non-aqueous wastes. PSC believes that

Ecology should promulgate a formal definition for "wastewaters" that refers to wastes that are substantially water with contaminants amounting to a few percent at most.

***Response:*** *Neither EPA nor Ecology has defined wastewater for the purposes of treating in wastewater treatment units under permit-by-rule. However, EPA and Ecology have agreed on what wouldn't be considered a wastewater. In order to meet permit-by-rule provisions, a wastewater treatment unit must be treating wastewaters and not concentrated chemicals or non-aqueous wastes.*

*Ecology has defined "wastewater" in permit-by-rule guidance as any waste permitted or authorized under a site's NPDES permit, state waste discharge permit, or pretreatment permit issued by the Department or a local sewage utility delegated pretreatment program pursuant to RCW 90.48.165, which is to be discharged through a wastewater treatment plant. Essentially, the definition of "wastewater" will be any waste the water quality permit authorizes for discharge as a wastewater.*

**Comment 147:** Some criteria must be met for a hazardous waste to qualify as a "wastewater" and for the exclusion to apply to a wastewater treatment facility receiving waste from off-site sources. To meet this exemption, any PBR and each unit thereof, must meet the definition of "tank" and should exclude other unit operations which are not obviously tanks, such as furnaces, boilers, presses, filters, sumps, and many other types of processing equipment that would allow a facility to treat non-aqueous waste materials. The exemption should be limited to only those units that are part of a wastewater treatment facility subject to regulation under the appropriate permit and the unit should be directly involved in the actual treatment. In no event should a wastewater treatment facility that generates a wastewater treatment sludge be allowed to receive such sludge which is hazardous waste from an off-site generator.

***Response:*** *The proposed amendment only applies to wastewater treatment units. The wording in WAC 173-303-802(5)(a) has been revised as follows to clarify this distinction:*

*(a) The owner or operator of a totally enclosed treatment facility or an elementary neutralization unit that treats <u>state-only</u> dangerous wastes generated on or off site <u>or federally regulated hazardous wastes generated on site, or a wastewater treatment unit that treats dangerous wastes generated on or off site,</u> will have a permit by rule, subject to limitations in (b) and (c) of this subsection, if they:*

*In order to be eligible for permit-by-rule, a wastewater treatment unit must have a water quality permit or authorization that covers the waste stream(s) and constituents being discharged and the facility must comply with the conditions of that permit. A wastewater treatment unit must meet the definition of a tank or tank system as found in WAC 173-303-040. This definition does not include furnaces, boilers, presses, filters, sumps, and other types of processing equipment. Wastewater treatment units can not accept any dangerous waste sludge, spent solutions, solids, or commercial chemical products.*

**Comment 148:** The relative reduction in regulatory oversight of dangerous wastes is inconsistent with Ecology's general trend to increase regulation over TSDFs, oil processors, and recycling facilities. PBR facilities that elect to take wastes should be required to meet all of the requirements of WAC 173-303-380 to ensure that adequate records are available for regulatory scrutiny of dangerous wastes that are entering these facilities for "treatment" as well as the actual quality and effectiveness of the PBR facility treatment process in eliminating or reducing the quantity and

toxicity of hazardous wastes. These facilities should also meet requirements for tank systems (WAC 173-303-640) and financial requirements (WAC 173-303-620).

***Response:*** *There will be no change in regulatory oversight for wastewater treatment units treating federally regulated wastewater generated off-site with the proposed amendment. As has always been the case, these units will be subject to the permit-by-rule requirements of WAC 173-303-802(5). Ecology believes that these requirements are sufficiently stringent to ensure that wastewater in these units will be managed appropriately to protect human health and the environment. The tank standards in WAC 173-303-640 and financial requirements in WAC 173-303-620 will not be added to the permit-by-rule regulations.*

*WAC 173-303-802(5)(a)(iii)(I) has been revised as follows to add some additional recordkeeping requirements for owners and operators of wastewater treatment units treating federally regulated hazardous wastes generated off-site:*

*(I) WAC 173-303-380(1)(d), operating record, and WAC 173-303-380(1)(a) when the owner or operator of a wastewater treatment unit is treating federally regulated wastewaters generated off-site;*

*The information required in WAC 173-303-380(1)(a) will be important to track the source and volumes of wastewater received and treated at a facility and is needed to prepare the annual report required in the permit-by-rule provisions (WAC 173-303-802(5)(a)(iii)(J).*

**Comment 149:** If the owner/operator of a wastewater treatment unit would like to treat dangerous wastewater received from off-site, and that wastewater is generated within the same industry and the wastewaters will be effectively treated by the wastewater treatment unit, in some circumstances and on a case-by-case basis, there should be a way to accomplish this without having to re-apply for a modification to the discharge permit or to wait a number of years for the current permit to expire before reapplying.

Reapplication/permit modification may be necessary if the wastewater received from off-site created a significant volume increase in the wastewater intake to the treatment plant, or if the wastewater had significantly different levels of similar contaminants than the receiving treatment plant typically receives from on-site sources. However, there will be cases where the water received from off-site will be virtually identical to what is normally received on-site and received from off-site in quantities of a much lesser volume than is normally received at the permitted facility. If the received wastewater is not contributing significantly to the volume through-put of the plant and contaminants are virtually identical, then there would seem to be no need for a formal reapplication for a new or modified permit. Instead, an option could be inserted into the regulation for a submittal of a Letter of Request to Ecology outlining the proposal and the reason it is believed a formal reapplication would be unnecessary. Ecology could then review the case and issue an approval letter (jointly with the local sewage utility approval if applicable). If Ecology does not agree that justification is sufficient to avoid the reapplication process, then they may deny the request and insist that the company will not be able to proceed without going through the application process. The Letter of Request would be reviewed and either approved or denied within 30 days of receipt by the department.

This option would afford much more flexibility to companies and will avoid the excessive use of resources both at Ecology and at the company making the request. When this option could be taken, it would avoid the time and resources necessary for the permit application process, review of permit, public comment on new or modified permit, issuance of a new permit and all other related documentation and activities.

***Response:*** *In proposing this change to the regulations, Ecology recognized that there would be a workload impact to water quality permit writers. To ensure that a water quality permit or authorization covers the new wastewater stream and constituents and to ensure that the receiving wastewater treatment facility will effectively treat the new wastewater stream, the water quality permit writer will need to thoroughly review the source and characteristics of the wastewater and the capabilities of the receiving wastewater treatment system.*

*Because it is impossible to predict what the various scenarios might be and the extent of review required, Ecology recommends that industries wanting to take advantage of this change should plan to do so when their wastewater discharge permit is up for renewal. However, there is a provision that allows permit writers to approve new sources of wastewater without having to modify the permit or wait for permit renewal if there is no significant impact from a new source of wastewater and the permit does not need to be revised. Whether or not this provision is used will be a case-by-case decision by the permit writer assigned and will depend upon the characteristics of the new wastewater stream and the time the permit writer has available to do their review.*

# Hazardous Waste Facilities Initiative

## WAC 173-303-120(3) Recycling

**HWFI Comment 1:** Change the language so that it does not denote applicability.

***Response:*** *Ecology agrees with the comment. The language has been revised. Applicability is now clarified in section WAC 173-303-610(1).*

**HWFI Comment 2:** The way the rules are structured, recyclers of state-only dangerous waste would not be subject to closure and financial assurance requirements. Revise -610 and -620 accordingly so that it is clear that those recyclers operating under -500 are subject to new requirements.

***Response:*** *The language of WAC 173-303-120(3) makes it clear that anyone conducting recycling listed in -120(3), including those recycling state-only dangerous waste, are subject to closure and financial requirements. No additional clarification is necessary.*

**HWFI Comment 3:** Recycling and reclaiming of CFC/HCFC operating under -120(3)(c) and -506 should not be subject to closure and financial requirements because these materials are valuable, require little processing, are regulated under air pollution control rules and, if spilled, rapidly disappear through evaporation.

***Response:*** *Ecology appreciates the description of recycling and reclamation of refrigerant gases.*

*Ecology intended that the recycling of dangerous wastes covered in this section of the rules would be subject to closure and financial requirements. This is because of the opportunity for accumulating dangerous wastes that may pose threats to human health and the environment, and may represent a significant financial burden if abandoned at the time the recycling operation closes down. However, through an oversight the exemption for closure and financial responsibility in existing section -506 was not deleted. The exemption will exist until a future rule-making procedure. The Department intends that recyclers of spent CFC/HCFC be required to complete closure plans and provide financial assurance for closure, but will attempt to achieve these through voluntary actions by facility owners and operators.*

*Ecology is also including a revision to rules addressing how the estimates for the costs of closing some types of off-site recycling and used oil processing equipment and structures (recycling units) are addressed. See the response to comments for WAC 173-303-620 (HWFI Comments 12 through 16) below.*

## WAC 173-303-120(4) Recycling without Storage

**HWFI Comment 4:** The commenter supports proposal for allowing 72 hours for staging of recyclable materials prior to placing them in an active recycling process.

***Response:*** *The Department appreciates your support for this new rule. Please see the response to HWFI Comment 5, below, for information on changes made to the propose rule.*

**HWFI Comment 5:** The commenter generally supports the intent of this proposed rule but is concerned that its allowing 72 hours for staging of wastes prior to recycling may be less stringent than federal standards.

***Response:*** *The Department explained the reasons for seeking this flexibility in its July 6, 2004 preamble for the proposed rule. We believe it makes sense in Washington because waste acceptance and tracking procedures by recyclers are carefully monitored, waste staging and accumulation must meet standards for TSDs, it encourages recycling because operations are more efficient and cost-effective, it has limited application because there are five such operations in the State, and because there is no defined time period in federal rules before a waste is considered "stored" which triggers the necessity of obtaining a hazardous waste permit for storage. In response to this concern, the rule is being revised to make it a case-by-case determination by the Department to allow up to 72 hours for staging of wastes prior to active recycling. The criteria the Department will consider is also identified in the revised rule, to include but not be limited to: the types and volumes of wastes being recycled, operational factors of the recycling process(es), and the compliance history of the operator. The Department will apply this provision through compliance letters or agreed orders with individual facility operators.*

*It is also worth noting that the State of Vermont has adopted a three day staging rule for the same types of recycling operations. EPA Region 1 authorized the state program including this rule (see 64 FR185, page 51702; September 24, 1999). In its rules, Vermont also requires that recyclers prepare closure plans and provide financial assurance for closure.*

## WAC 173-303-515(9)

**HWFI Comment 6**: The commenter generally supports the effort to assure that used oil processing facilities are held accountable for planning and paying for the closure of their operations.

***Response:*** *The Department appreciates your support.*

**HWFI Comment 7:** Several comments were received that questioned the need to impose closure and financial requirements on used oil processors and re-refiners. Commenters stated that used oil is a valuable resource that is quickly processed and sold to customers as an alternative fuel. One commenter stated that these rules will result in an increase of about $ 0.40 per gallon to used oil generators. The costs imposed by the proposed rules will be burdensome to the point that some used oil generators may illegally dump used oil rather than sent it to a legitimate collector or processor.

***Response:*** *Ecology recognizes that cost of operations for used oil processors will increase as a result of the new rules. These costs will be borne directly by a small number of facilities that are subject to the new requirements and indirectly by their customers. Ecology's economic analysis shows that the long-term benefits of the new rules outweigh the costs incurred (Cost Benefit Analysis, Least Burden Determination, Proposed Dangerous Waste Amendments Chapter 173-303 WAC, publication # 04-04-030).*

*The comment stating that these rules will result in a $0.40 cent per gallon increase in costs to used oil generators provided no evidence to support that claim, so Ecology cannot respond except in very general terms. Used oil processors located in Washington reported a total of approximately 12 million gallons of used oil collected in 2003. This does not include used oil shipped to processors located outside of Washington. If the $0.40 per gallon increase is accurate, it represents an increase in revenue of $480,000 per year to the used oil processors. This figure far exceeds any reasonable estimate of the direct annual cost impacts to used oil processors as a result of this rule.*

*In the final rule, Ecology has included three new factors to help mitigate the increased costs to used oil processors. These include an exclusion for recyclable materials that require only incidental processing and are managed in dedicated tanks or containers from the estimate of closure costs (see response to HWFI Comments 12 and 13 for discussion on WAC 173-303-620(3)(a)(iii)(A)), extending the period of time to fully pay in to a trust fund from three to five years (WAC 173-303-620(4)(d)(ii)), and creating a provision for alternative financial mechanisms (WAC 173-303-620(4)(e)).*

*Do-it-yourself householders and many small business operators, have a variety of options for depositing their used oil at local public and private collection centers at no or minimal charge. These rules are not expected to alter the collection opportunities. The Department does not anticipate an increase in the frequency of illegal dumping as a result of these rules.*

## WAC 173-303-610 Closure and post-closure

**HWFI Comment 8**: Applicability terms should appear in one location, preferably -610(1)(a)(ii) and not spread through several sections of the rules.

***Response:*** *Ecology agrees and has made the changes for clarification by creating a new subsection, 173-303-610(1)(c). Existing subsections (c) and (d) were renumbered to (d) and (e) to accommodate this revision.*

**HWFI Comment 9**: Federal and state agencies conducting recycling that would be subject to this proposed rule should be exempted from the requirement to prepare closure plans. Closure plans are linked to the requirement to provide financial responsibility. Federal and state agencies are exempted from financial requirements, and should therefore be exempted from the need to prepare closure plans.

***Response****: Federal and state agencies are exempted from financial requirements for closure for treatment, storage and disposal (TSD) facilities in both federal RCRA and State dangerous waste rules (see WAC 173-303-620(1)(c)). These agencies, however, are not exempted from the requirement to prepare closure plans for TSDs at WAC 173-303-610. The Department strongly believes that the same approach should apply to recycling units. Agencies should be responsible for the safe and orderly closure of recycling units, as closure plans are an effective and efficient means, and to document and disclose the decontamination and decommissioning procedures.*

## WAC 173-303-610(12) Closure Plans for Off-Site Recyclers and Used Oil Processors

**HWFI Comment 10**: The commenter suggests that a process and time period be included to resubmit a closure plan for which approval has been denied by the Department. Commenter also suggests that the rule clarify that an operator may appeal a decision of the Department to deny approval of a closure plan.

***Response****: Ecology agrees and has included the suggested language in sections WAC 173-303--610(12)(a) and (e).*

**HWFI Comment 11**: In -610(12)(d) the scope of the closure plan should not be for the recycling facility. It should be limited to recycling units.

***Response****: Ecology agrees and has made that change.*

## WAC 173-303-620 Financial Requirements

**HWFI Comment 12:** Several organizations and individuals expressed concern about the additional cost burden that the proposed rules will place on small businesses in Washington.

**HWFI Comment 13:** Two commenters stated that the Department should demonstrate that the required financial assurance mechanisms, particularly insurance for closure, are available to small and medium-sized recyclers in Washington before adopting those requirements. (3, 9) Another commenter stated that Ecology should postpone adoption of these rules until the Legislature creates an insurance program for waste management facilities similar to the existing program administered by the Pollution Liability Insurance Agency (PLIA) for service stations and home heating oil tanks.

***Response to comments 12 and 13:*** *The rules provide that the owner or operator of a TSD, a recycler or used oil processor may choose one of six financial mechanisms to provide financial assurance for closure. This includes a trust fund, surety bond guaranteeing payment, surety bond guaranteeing performance, letter of credit, insurance, and financial test and corporate guarantee. Because of qualifying factors, the financial test and corporate guarantee is typically not available to small and medium-sized businesses. The availability of bonds, letters of credit, and insurance mechanisms depends upon the financial and risk factors of the facility owner or operator, market conditions for financial products, and the dollar amount of the mechanism being sought. Based on an informal inquiry with a limited number of insurance companies, it appears that insurance for closure in amounts of less than $50,000 are difficult to obtain, if at all. Bonds and letters of credit may be available, but the purchaser must provide a high level of collateral and pay annual premiums in order to obtain them. The trust fund is available to owners and operators of small and medium-sized businesses.*

*In recognition of the cost burden associated with the proposed rule, Ecology has made the following revisions to the final rule:*

- *extended the trust fund pay-in period from 36 to 60 months (see WAC 173-303-620(4)(d)(ii);*
- *created an exclusion from the estimate of closure costs for recyclable materials that require incidental processing and are managed in clearly identifiable (dedicated) tanks or containers (see WAC 173-303-620(3)(a)(iii)(A)); and,*
- *created a provision that will allow an owner or operator to propose an alternative financial mechanism that is determined by Ecology to be equivalent to one of the required mechanisms (see WAC 173-303-620(4)(e)). This may include any mechanism that may be created by the Washington Legislature.*

*The time frame for providing financial assurance is sufficiently long enough that should the 2005 Legislature create an alternative mechanism, facilities impacted by the new requirements will be able to consider using such an alternative. By creating this extension, possible exclusion, and provision for an alternative mechanism, Ecology believes that the costs for providing financial assurance for closure may be mitigated or reduced. At the same time, Ecology also recognizes that the reduced costs to facility owners and operators may be offset by some additional financial risk to the public.*

**HWFI Comment 14:** Recyclable materials are valuable, are not held for long periods of time by facility owners and operators and, therefore don't represent a large risk to the taxpayer. Also, if a facility does go through bankruptcy or is abandoned, Ecology may sell the recyclable materials and recover some of the costs for a publicly funded closure. Recycling and used oil processing facilities should not be included in the scope of this rule.

***Response:*** *Please refer to the July 6, 2004 preamble for the proposed rule and the report to the Legislature (September, 2002) for examples of the environmental risks and financial costs associated with dangerous waste recycling and used oil processing facilities in Washington. The costs associated with safely removing wastes, disposing of wastes, and decontaminating structures and equipment may be significant. Ecology's position has been that facility owners and operators should be responsible and accountable for those costs. We have also consistently recognized that by imposing requirements for closure plans and financial assurance for closure on owners and operators of off-site recycling and used*

*oil facilities, the costs of waste recycling will increase. The economic analysis of the proposed rules provides estimates of the increased costs, plus the benefits to be gained from reduced environmental and financial liability (Small Business Economic Impact Statement for Proposed* Dangerous Waste Regulation*, Publication # 04-04-019 and Cost Benefit Analysis, Publication # 04-04-030).*

*In the final rule, Ecology is including three mitigating measures. In WAC 173-303-620(3)(a)(iii)(A), a revision to rules was included addressing how the estimates for the costs of closing some types of off-site recycling and used oil processing equipment and structures (recycling units) are addressed. Normally, an owner or operator of a hazardous waste management facility may not incorporate any salvage value of dangerous wastes, structures or equipment in an estimate for the cost of facility closure. This revision will allow the value of recyclable materials that require only incidental processing before they may be sold as products to the general public to be excluded from the estimate of costs for closing a recycling unit. To qualify for this exclusion, these recyclable materials must be managed in tanks or containers that are dedicated solely to those wastes. Tanks, containers or equipment that are used to stage, store, or process other more contaminated wastes would not qualify for the exclusion. The cost of decontaminating the tanks, containers or equipment dedicated to qualifying recyclable materials must be included in the estimate for closing the recycling unit. "Incidental processing" is specified in this revision to mean simple screening or filtering of debris to remove minor amounts of foreign material or removal of minor amounts of water (less than 5% by volume). The Department expects that this rule will apply to various types of recyclable materials such as refrigerant gases containing CFC/HCFC and "dry" used oil that require only incidental processing before they may be sold as products.*

*In WAC 173-303-620(4)(d)(ii), the period of time to establish fully funded trust funds is extended from three years to five years from the date of approval of a facility closure plan. In WAC 173-303-620(4)(e), facility owners and operators subject to these requirements may request an alternative mechanism for establishing financial assurance for closure.*

**HWFI Comment 15:** The Department should postpone revisions to financial mechanisms until the Environmental Protection Agency completes its review and adopts changes to federal rules that would be effective in all states. Specifically, the Department should not, at this time, adopt the proposed revisions that prohibit performance bonds, prohibit captive insurance, require that insurance companies meet minimum ratings, or revise the financial test and corporate guarantee.

***Response:*** *The Department has asked EPA about the status of their review of financial requirements at the federal level. EPA is conducting two separate activities that have a relationship to financial requirements. The first activity involves EPA's proposed rule that would create a standardized permit for certain types of storage and treatment activities. This rule, which is scheduled for adoption in early 2005, would not apply to commercial hazardous waste treatment, storage and disposal facilities, off-site recyclers or used oil processors. In the standardized rule proposal, EPA included prohibitions on captive insurance and a requirement that insurance companies meet minimum ratings by specified national insurance rating agencies. Captive insurance is a term used to describe when a parent company creates a subsidiary insurance company that provides insurance back to the parent company or other subsidiaries. These captive insurance companies must meet all licensing requirements in the state in which they created.*

*The second activity involves a request by EPA to the Environmental Financial Advisory Board to review the financial test/corporate guarantee and insurance mechanisms of 40 CFR Part 264.143. EPA did not provide a schedule for completion of this review, or for proposing rule revisions. Given the level of interest by financial institutions and the process normally employed by EPA, it will likely be several years before final revisions are adopted on these issues.*

*We have also reviewed the comments associated with captive insurance and ratings of insurance companies. After review of the information submitted, the justification for proposing the changes, evaluation of potential impacts in Washington, and the desire to address financial mechanisms in a timely manner, Ecology is taking these actions in the final rule:*

- *reinserting performance bonds as an acceptable mechanism for providing financial assurance for closure and post-closure;*
- *withdrawing the prohibition on captive insurance;*
- *keeping the requirement that insurance companies must meet minimum ratings by Standard & Poor's, Moody's, and Best, but revising those ratings to accept one lower tier of ratings;*
- *keeping the requirement in the financial test and corporate guarantee that the minimum tangible net worth of the company must be at least $20 million;*

*In regard to captive insurance companies, Ecology believes that if the captive can meet the minimum required insurance ratings it will provide sufficient assurance that the insurance company is financially viable and will be able to pay claims against pollution liability or closure policies.*

**HWFI Comment 16:** The proposed rule states that Ecology must be named as the beneficiary to insurance. Was the intent that Ecology should be named as a secondary beneficiary in case the primary holder of the policy does not or cannot file claims?

***Response:*** *Yes. The final rule has been revised to require that Ecology be named as a secondary beneficiary on insurance for closure.*

## WAC 173-303-960 Special powers and authorities of the department

**HWFI Comment 17:** Several commenters were opposed to the proposal to delete "imminent and substantial endangerment" from this section of the *Dangerous Waste Regulations* and replace it with the term "significant threat." Imminent and substantial endangerment is well understood by the business community and has been tested in several court cases throughout the US. The term "significant threat" has not been defined or tested in a legal sense.

***Response:*** *As explained in the July 6, 2004 preamble to the proposed rules, this revision was intended to make the* Dangerous Waste Regulations *consistent with the scope of authority granted to the Department of Ecology in the State Hazardous Waste Management Act (RCW 70.105.120). The statute does not limit the authority of the Department of Ecology to request the attorney general to file suits to enforce the requirements of that chapter of law. We have found that, in all but a very few instances, the normal inspection, compliance and enforcement methods available to the Department of Ecology have successfully achieved compliance with the* Dangerous Waste Regulations *and hazardous*

*waste permits. Our position, however, is that in some circumstances, there may be a need to request the attorney general to seek injunctive relief against a party that refuses to comply with regulatory and/or permit requirements. Because the existing language of WAC 173-303-960 may be interpreted to be narrower in scope than the statutory authority of RCW 70.105.120, we believe it is prudent to address that inconsistency.*

*In the final rule, Ecology is following the advice of the Attorney General's Office to revise both subsections -960(1) and (2). We are striking the language regarding authority to conduct inspections because this authority already exists in RCW 70.105.130. We are revising the language of this section to maintain consistency with RCW 70.105.120 while also retaining the term "imminent and substantial endangerment." By keeping the term "imminent and substantial endangerment in this section, we trust that the courts will apply the legal tests that apply to the Department for proving the need for action, and that the courts will be guided by decisions of courts in other similar circumstances in Washington and other states.*

# Chemical Testing Methods

***General Response:*** *Ecology has decided to withdraw its proposed update to the guidance document, 'Chemical Testing Methods for Designating Dangerous Waste, February 1998, Publication #97-407.' The proposed changes in the regulations referencing this guidance document are also being withdrawn. Based on comments received, Ecology conducted an initial evaluation to determine how well the revised guidance will work. Ecology has determined that further work is necessary to evaluate the proposed changes before they are finalized. Therefore, Ecology will continue with the efforts begun with this project and will work to improve the guidance to meet the following objectives:*

- *Provide an easy, quick, accurate, and relatively inexpensive method for determining whether or not a waste designates for state-only toxicity,*
- *Better define the universe of persistent chemicals that have a negative impact on human health and the environment, and*
- *Improve the wording in the guidance to make it is easier for the typical generator to understand.*

*Ecology will provide a revised guidance document for public review during the next regulatory update process, tentatively scheduled for 2006.*

*Due to withdrawal of the proposed changes, individual responses were not prepared for comments received on the proposed changes. The comments appear below.*

**CTM Comment 1:** The definition of persistence in 173-303-040 is inconsistent with the new definition of persistence provided by "Chemical Testing Methods for Designating Dangerous Waste" (e.g. 60 days versus 365 days).

**CTM Comment 2:** The suggestion was made that any changes to Appendix 5: HOCs of Concern 'should be systematically and methodically updated in a way that is workable for waste generators.' Specifically, it was suggested that changes to Appendix 5 occur effective the first of each calendar year so the changes in waste designation minimize impact to generators. The suggestion was also made that a column of date of addition or deletion be added to the table in order to help generators more clearly identify changes to the Appendix.

**CTM Comment 3:** The suggestion was made that the list also be 'provided in multiple formats (Microsoft Word, Microsoft Excel, etc.) to make data comparisons easier to accomplish.

**CTM Comment 4:** A table was provided with the following recommendations:

- Change "Chemicals of Concern" to "HOCs of Concern" on page #1 of Appendix 1
- Change "…to provide date in the detection…" to "to provide data in the detection" on page # 5-32 of Appendix 5
- Repeat table heads on each page for Tables 1 & 2 of Appendix 5
- Delete Footnotes 1-3 as the aren't used in Appendix 5 Tables 1 & 2, pages 5-42 & 5-52
- Change all "N.O.S./1/" to "N.O.S" in Tables 1 & 2 of Appendix 5
- Change "…conducted in preparation for this change…" to "…conducted in preparation for this document…" in Chapter 3, Section C.2.b.2, page 25
- Change "…HOC either is or is not concern.." to "…HOC either is or is not of concern…" in Chapter 3, Section C.2.c, page 28
- Change "…The list (Appendix 4).." to "…The List (Appendix 5)…" in Chapter 3, Section C.2.c, page 28
- Change the Heading "SW-846 Method NR" to "SW-846 Method No." in Table 3-3 on page 30.

**CTM Comment 5:** The following suggestions were made:

- Consider changing the title of "Decision Tree #1 General Evaluation" to "Decision Tree #1, HOC General Evaluation" in Chapter 3, Section C.2.a on page # 22.
- In Note 1, correct the typographical error, change "polyaromatic hydrocarbons" to 'polycyclic aromatic hydrocarbons" in Chapter 3, Section C.2.a on page # 22.
- Consider using the abbreviation "dw #" instead of "dw" throughout Decision Tree #1 in Chapter 3, Section C.2.a on page # 22.

**CTM Comment 6:** A concern was raised with the second blue box in Decision Tree #1 in Chapter 3, Section C.2.a on page # 22. The commenter enquires if there are other instances where a waste must be evaluated to determine if it is an EHW under regulatory requirements 173-303-070 (5) (b) & (c).

**CTM Comment 7:** The following suggestions were made:

- Consider changing the title of "Decision Tree #2 Specific Chemical Evaluation" to "Decision Tree #2, HOC Specific Chemical Evaluation" in Chapter 3, Section C.2.a on page # 23.
- Consider using the abbreviation "dw #" instead of "dw" throughout Decision Tree #2 in Chapter 3, Section C.2.a on page # 23.
- In the reference to Table 1, note that this table is in Appendix 5 in Decision Tree #2 in Chapter 3, Section C.2.a on page # 23

**CTM Comment 8:** A comment was made that the definition for persistence in 173-303-040 is not in agreement with the changed definition in the guidance document.

**CTM Comment 9:** The suggestion was made to add both the chemical abstract number and the chemical structure to the examples in Chapter 3, Section C.2.d.1 on page 31 to improve understanding of the principals being discussed.

**CTM Comment 10:** A suggestion was made to remove the footnotes 1-3 from Appendix 5 as they are not used. In addition, it was recommended these references be added to the appropriate discussion in the text.

**CTM Comment 11:** Two major concerns were raised. The first is: 1) the commenters were concerned that challenges exist with the implementation of the new, recommended general evaluation analyses. Those concerns in particular center on the cost of the analysis, whether labs are prepared to conduct the analyses, whether lab standards are available and other possible barriers to implementation. The second is associated with the widespread use of halogenated organic compounds and the lack of information on the biological impact of these compounds. Two specific recommendations were made:

- Require that products containing HOCs be identified and inform purchasers that the products need to be managed as dangerous waste when disposed of and
- Limit the types of products that use HOCs. Developing a PBDE action plan that bans certain uses of PBDES is a step in the right direction.

**CTM Comment 12:** Concerns were raised about the basis for designating HOC as a class of persistent Dangerous Waste. Specifically, the comment was made that 'It would be preferable if WDOE classified each chemical or closely related chemical group based on available acute and chronic toxicity data.' Chlorinated paraffins (CP) were used as an example and the issue was raised that all current persistence information was applicable to short-chain CPs while no ecological impact had been identified for long-change CPs.

**CTM Comment 13:** The suggestion was made that Ecology '…. consider removal (of) all compounds from Appendix 5 (HOCs of Concern) for which there are no data to support such

designation, and revise the determination process to include weighted concentration level for each compound based on its relative hazard.'

**CTM Comment 14:** The commenter identified that there was considerable inconsistency between Ecology's proposed changes to the guidance document "Chemical Testing Methods for Designating Dangerous Waste" and the documents presented on its website. In particular, changes to the Appendices did not agree with the text of the guidance document. Therefore it was suggested that Ecology provide a better explanation of its proposed changes including impacts/flexibility on the regulated community.

**CTM Comment 15:** The suggestion was made that Ecology should not change only the persistence and HOC related portions of its guidance document "Chemical Testing Methods for Designating Dangerous Waste" but should provide '… a complete revision of the subject document, not just revisions related to HOCs and persistence.'

**CTM Comment 16:** The recommendation was made that Ecology should 'delete (the) definition of Chemicals of Concern in Appendix 1.'

**CTM Comment 17:** A concern was raised about Ecology's change to the definition of persistence and specifically the change from 365 to 60 days for the determination of a persistent compound.

**CTM Comment 18:** Concerns were raised about the change to the definition of polymer and how it is supported in Chapter 3, Section C.1.b. In particular, the changes to the definition of polymer in Appendix 1 were not reflected in the text.

**CTM Comment 19:** Concerns were raised about the change in name to one of the PAHs referenced in Appendix 1 definition of PAHs. In addition, a concern was raised about the identification of CAS numbers in the test of the guidance and the CAS numbers did not appear in the posted document.

**CTM Comment 20:** The suggestion was made that Ecology 'Purge the entire subject document of information related to 49 CFR 173.128, organic peroxides….'

**CTM Comment 21:** The comment was made that Ecology should ' … retain the list of methods discussed/footnoted in the body of the subject document, retain the sample containers and preservation table, avoid using the term "general evaluation analysis', and delete the method test for all methods listed.' The suggestion was also made that, if the Appendix does not retain the sample containers and preservation tables, a reference is included to where that information can be found on EPA's SW-846 website.

**CTM Comment 22:** The recommendation was made to delete Appendix 4 as it is not explained, justified or referred to in the text. In addition, the concern was raised that chlorinated paraffins were not regulated in the past and their inclusion is an expansion of Ecology's authority.

**CTM Comment 23:** Several concerns were raised:

- Change 'HOCs of Concern' to 'HOCs Regulated under WAC 173-303",
- Ecology cannot maintain a list on their web page and update it regularly as it fails to comply with the Administrative Procedures Act (RCW 34.05),
- The table is sorted alphabetically inconsistently,
- The last two columns in the table are unnecessary and should be deleted, and
- Change the definition of HOCs in Appendix 1 to be consistent with the definition in -040.

**CTM Comment 24:** Ecology needs to propose a change pertaining to the designation of Division 1.5 reactive waste. Under –090(7)(a)(viii), Ecology needs to remove the reference to Division 1.5 as reactive waste in order to be consistent with the federal rules. Because the Chemical Testing Methods for Designating Dangerous Waste (publication #97-407) document is being amended due to halogenated organic compounds, Ecology needs to put the effort into confirming the accuracy of this comment and make the appropriate change. The change should also be made to update the document Chemical Testing Methods for Designating Dangerous Waste (publication #97-407) to delete reference to Division 1.5 since this document is open for change as part of this rulemaking. The commenter understands that Ecology has inadvertently created a new class of state-only dangerous waste by adding Division 1.5 to the reactive provisions.

**CTM Comment 25:** As Ecology is making changes to the persistence portion of the document, it should also change text to reflect required data sources, in particular NIOSH RTECS, Material Safety Data Sheets and The Hazardous Substances Data Base, National Library of Medicine.

**CTM Comment 26:** Change footnote 6 to read "60 FR 3092, January 13, 1995."

**CTM Comment 27**: Example 3-1 should be removed from the revised document.

**CTM Comment 28**: The comment was made that footnote on page 11 '… still refers to SW-846 Chapter Seven methodology for cyanide, sulfide reactivity.' EPA is in the process of evaluating this analysis and there is a distinct possibility the analysis will be deleted from SW-846. The commenter wanted to make Ecology aware of this possible change and questioned whether Ecology wanted to address the issue in this update of the document.