

# 61-79.261

## Identification and Listing of Hazardous Waste

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## Table of Contents

SUBPART A. General	60
261.1. Purpose and scope.	60
261.2. Definition of solid waste.	62
261.3. Definition of hazardous waste.	65
261.4. Exclusions.	72
261.5. [Reserved]	99
261.6. Requirements for recyclable materials.	99
261.7. Residues of hazardous waste in empty containers.	101
261.8. PCB wastes regulated under Toxic Substance Control Act.	102
261.9. Requirements for Universal Waste.	102
SUBPART B. Criteria for Identifying the Characteristics of Hazardous Waste and for Listing Hazardous Wastes	103
261.10. Criteria for identifying the characteristics of hazardous waste.	103
261.11. Criteria for listing hazardous waste.	103
SUBPART C. Characteristics of Hazardous Waste	104
261.20. General.	104
261.21. Characteristic of ignitability.	105
261.22. Characteristic of corrosivity.	106
261.23. Characteristic of reactivity.	107
261.24. Toxicity characteristic.	107
SUBPART D. Lists of Toxic Hazardous Waste	109
261.30. General.	109
261.31. Hazardous wastes from nonspecific sources.	109
261.32. Hazardous wastes from specific sources.	114
261.33. Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.	123
261.35. Deletion of certain hazardous waste codes following equipment cleaning and replacement.	146

SUBPART E.	Exclusions/Exemptions	148
261.38.	[Reserved].	148
261.39.	Conditional Exclusion for Used, Broken Cathode Ray Tubes (CRTs) and Processed CRT Glass Undergoing Recycling.	148
261.40.	Conditional Exclusion for Used, Intact Cathode Ray Tubes (CRTs) Exported for Recycling.	152
261.41.	Notification and Recordkeeping for Used, Intact Cathode Ray Tubes (CRTs) Exported for Reuse.	152
SUBPART F.	[Reserved]	153
SUBPART G.	[Reserved]	153
SUBPART H.	Financial Requirements for Management of Excluded Hazardous Secondary Materials	153
261.140.	Applicability.	153
261.141.	Definitions of terms as used in this subpart.	153
261.142.	Cost estimate.	153
261.143.	Financial assurance condition.	154
261.144.	[Reserved]	164
261.145.	[Reserved]	164
261.146.	[Reserved]	164
261.147.	Liability requirements.	165
261.148.	Incapacity of owners or operators, guarantors, or financial institutions.	172
261.151.	Wording of the instruments.	172
261.151.	Appendices A-1 through M-2.	174
SUBPART I.	Use and Management of Containers	212
261.170.	Applicability.	212
261.171.	Condition of containers.	212
261.172.	Compatibility of hazardous secondary materials with containers.	213
261.173.	Management of containers.	213
261.175.	Containment.	213
261.176.	Special requirements for ignitable or reactive hazardous secondary material.	213
261.177.	Special requirements for incompatible materials.	213
261.179.	Air emission standards.	214
SUBPART J.	Tank Systems	214
261.190.	Applicability.	214

261.191.	Assessment of existing tank system's integrity.	214
261.192.	[Reserved]	215
261.193.	Containment and detection of releases.	215
261.194.	General operating requirements.	217
261.195.	[Reserved]	218
261.196.	Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.	218
261.197.	Termination of remanufacturing exclusion.	220
261.198.	Special requirements for ignitable or reactive materials.	220
261.199.	Special requirements for incompatible materials.	220
261.200.	Air emission standards.	220
SUBPART K.	[Reserved]	220
SUBPART L.	[Reserved]	220
SUBPART M.	Emergency Preparedness and Response for Management of Excluded Hazardous Secondary Materials	221
261.400.	Applicability.	221
261.410.	Preparedness and prevention.	221
261.411.	Emergency procedures for facilities generating or accumulating 6000 kilograms or less of hazardous secondary material.	222
261.420.	Contingency planning and emergency procedures for facilities generating or accumulating more than 6000 kilograms of hazardous secondary material.	223
SUBPART N-Z.	[Reserved]	227
SUBPART AA.	Air Emission Standards for Process Vents	227
261.1030.	Applicability.	227
261.1031.	Definitions.	227
261.1032.	Standards: Process vents.	230
261.1033.	Standards: Closed-vent systems and control devices.	230
261.1034.	Test methods and procedures.	237
261.1035.	Recordkeeping requirements.	241
261.1036.-	[Reserved]	246
.1049		
SUBPART BB.	Air Emission Standards for Equipment Leaks	247
261.1050.	Applicability.	247
261.1051.	Definitions.	247
261.1052.	Standards: Pumps in light liquid service.	247
261.1053.	Standards: Compressors.	249

261.1054.	Standards: Pressure relief devices in gas/vapor service.	250
261.1055.	Standards: Sampling connection systems.	250
261.1056.	Standards: Open-ended valves or lines.	250
261.1057.	Standards: Valves in gas/vapor service or in light liquid service.	251
261.1058.	Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors.	252
261.1059.	Standards: Delay of repair.	253
261.1060.	Standards: Closed-vent systems and control devices.	253
261.1061.	Alternative standards for valves in gas/vapor service or in light liquid service: percentage of valves allowed to leak.	254
261.1062.	Alternative standards for valves in gas/vapor service or in light liquid service: skip period leak detection and repair.	255
261.1063.	Test methods and procedures.	255
261.1064.	Recordkeeping requirements.	257
261.1065.-	[Reserved]	260
.1079.		
SUBPART CC.	Air Emission Standards for Tanks and Containers	261
261.1080.	Applicability.	261
261.1081.	Definitions.	261
261.1082.	Standards: General.	264
261.1083.	Material determination procedures.	264
261.1084.	Standards: Tanks.	270
261.1085.	[Reserved]	282
261.1086.	Standards: Containers.	283
261.1087.	Standards: Closed-vent systems and control devices.	290
261.1088.	Inspection and monitoring requirements.	293
261.1089.	Recordkeeping requirements.	293
261.1090.	[Reserved]	296
APPENDIX		
I.	Representative Sampling Methods.	296
III.	Chemical Analysis Test Methods.	297
VII.	Basis for Listing Hazardous Waste.	297
VIII.	Hazardous Constituents.	302
IX.	Wastes Excluded Under 260.20 and 260.22.	316
XI.	Other Designated Wastes.	317

***SUBPART A***  
***General***

**261.1. Purpose and scope.**

(a) This part identifies those solid wastes which are subject to regulation as hazardous wastes under Regulations R.61-79.124, .262 through .266, .268, .270, and 40 CFR 271, and which are subject to the notification requirements of the South Carolina Hazardous Waste Management Act Section 44-56-120 and section 3010 of RCRA. In this part: (revised 11/90; 12/92)

(1) Subpart A defines the terms "solid waste" and "hazardous waste", identifies those wastes which are excluded from regulation under R.61-79.262 through 266, 268, and 270, and establishes special management requirements for hazardous waste produced by very small quantity generators and hazardous waste which is recycled.

(2) Subpart B sets forth the criteria used by the Department to identify characteristics of hazardous waste and to list particular hazardous wastes.

(3) Subpart C identifies characteristics of hazardous waste.

(4) Subpart D lists particular hazardous wastes.

(b)(1) The definition of solid waste contained in this part applies only to wastes that also are hazardous for purposes of the regulations implementing the South Carolina Hazardous Waste Management Act 44-56-10 et seq. and Subtitle C of RCRA. For example, it does not apply to materials (such as nonhazardous scrap, paper, textiles, or rubber) that are not otherwise hazardous wastes and that are recycled (revised 12/92; 12/93).

(2) This part identifies only some of the materials which are solid wastes and hazardous wastes under SCHWMA 44-56-10 et seq. and sections 3007, 3013, and 7003 of RCRA. A material which is not defined as a solid waste in this part, or is not a hazardous waste identified or listed in this part, is still a solid waste and a hazardous waste for purposes of these sections if:

(i) In the case of SCHWMA 44-56-90 and sections 3007 and 3013, the Department has reason to believe that the material may be a solid waste within the meaning of section 44-56-20(6) of the S.C. Code of Laws of 1976, as amended or a solid waste within the meaning of section 1004(27) of RCRA and a hazardous waste within the meaning of section 1004(5) of RCRA; or (11/90)

(ii) In the case of SCHWMA 44-56-50 or Section 7003, the statutory elements are established.

(c) For the purposes of sections 261.2 and 261.6:

(1) A "spent material" is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing;

(2) "Sludge" has the same meaning used in R.61-79.260.10.

(3) A "by-product" is a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms. The term does not include a co-product that is produced for the general public's use and is ordinarily used in the form it is produced by the process.

(4) A material is "reclaimed" if it is processed to recover a usable product, or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents. In addition, for purposes of sections 261.4(a)(23) and (24), smelting, melting, and refining furnaces are considered to be solely engaged in metals reclamation if the metal recovery from the hazardous secondary materials meets the same requirements as those specified for metals recovery from hazardous waste found in section 266.100(d)(1) through (3), and if the residuals meet the requirements specified in section 266.112.

(5) A material is "used or reused" if it is either:

(i) Employed as an ingredient (including use as an inter-mediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or

(ii) Employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment).

(6) "Scrap metal" is bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g., radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled.

(7) A material is "recycled" if it is used, reused, or reclaimed.

(8) A material is "accumulated speculatively" if it is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that-during the calendar year (commencing on January 1)-the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period. Materials must be placed in a storage unit with a label indicating the first date that the material began to be accumulated. If placing a label on the storage unit is not practicable, the accumulation period must be documented through an inventory log or other appropriate method. In calculating the percentage of turnover, the 75 percent requirement is to be applied to each material of the same type (for example, slags from a single smelting process) that is recycled in the same way (i.e., from which the same material is recovered or that is used in the same way). Materials accumulating in units that would be exempt from regulation under Section 261.4(c) are not to be included in making the calculation. Materials that are already defined as solid wastes also are not to be included in making the calculation. Materials are no longer in this category once they are removed from accumulation for recycling, however.

(9) "Excluded scrap metal" is processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal.

(10) "Processed scrap metal" is scrap metal which has been manually or physically altered to either separate it into distinct materials to enhance economic value or to improve the handling of materials. Processed scrap metal includes, but is not limited to scrap metal which has been baled, shredded, sheared, chopped, crushed, flattened, cut, melted, or separated by metal type (i.e., sorted), and, fines, drosses and related materials which have been agglomerated. (Note: shredded circuit boards being sent for recycling are not considered processed scrap metal. They are covered under the exclusion from the definition of solid waste for shredded circuit boards being recycled (261.4(a)(14)).

(11) “Home scrap metal” is scrap metal as generated by steel mills, foundries, and refineries such as turnings, cuttings, punchings, and borings.

(12) “Prompt scrap metal” is scrap metal as generated by the metal working/fabrication industries and includes such scrap metal as turnings, cuttings, punchings, and borings. Prompt scrap is also known as industrial or new scrap metal.

(d) [Reserved 5/06]

## **261.2. Definition of solid waste.**

(a)(1) A solid waste is any discarded material that is not excluded by Section 261.4(a) or that is not excluded by variance granted under R.61-79.260.30 and 260.31.

(2) A discarded material is any material which is:

(i) Abandoned, as explained in paragraph (b) of this section; or

(ii) [Reserved]

(iii) Considered inherently waste-like, as explained in paragraph (d) of this section; or

(iv) A “military munition” identified as a solid waste in 266.202.

(b) Materials are solid waste if they are abandoned by being:

(1) Disposed of; or

(2) Burned or incinerated; or

(3) Accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated; or

(4) Sham recycled, as explained in paragraph (g) of this section.

(c) Materials are solid wastes if they are recycled—or accumulated, stored, or treated before recycling—as specified in paragraphs (c)(1) through (c)(4).

(1) Used in a manner constituting disposal.

(i) Materials noted with an “x” in Column 1 of Table 1 are solid wastes when they are:

(A) Applied to or placed on the land in a manner that constitutes disposal; or

(B) Used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which cases the product itself remains a solid waste).

(ii) However, commercial chemical products listed in Section 261.33 are not solid wastes if they are applied to the land and that is their ordinary manner of use.

(2) Burning for energy recovery.

(i) Materials noted with an “x” in column 2 of Table 1 are solid wastes when they are:

(A) Burned to recover energy;

(B) Used to produce a fuel or are otherwise contained in fuels (in which cases the fuel itself remains a solid waste).

(ii) However, commercial chemical products listed in Section 261.33 are not solid wastes if they are themselves fuels.

(3) Reclaimed. Materials noted with an "\*" in column 3 of Table 1 are solid wastes when reclaimed unless they meet the requirements of section 261.4(a)(17), or section 261.4(a)(23), 261.4(a)(24), or 261.4(a)(27). Materials noted with a "-" in column 3 of Table 1 are not solid wastes when reclaimed.

(4) Accumulated speculatively. Materials noted with an "\*" in column 4 of Table 1 are solid wastes when accumulated speculatively.

261.2 Table 1 Summary of definitions of Solid Waste				
	Use Constituting Disposal (261.2(c)(1))	Energy Recovery/Fuel (261.2(c)(2))	Reclamation (261.2(c)(3)), except as provided in 261.4(a)(17), 261.4(a)(23), 261.4(a)(24), or 261.4(a)(25)	Speculative Accumulation (261.2(c)(4))
	(1)	(2)	(3)	(4)
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in sections 261.31 or 261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	(*)	(*)
Commercial chemical products listed in section 261.33	(*)	(*)	-	-
Scrap metal that is not excluded under section 261.4(a)(13)	(*)	(*)	(*)	(*)

Note: The terms “spent materials,” “sludges,” “by-products,” “scrap metal,” and “processed scrap metal” are defined in 261.1.

(d) Inherently waste-like materials. The following materials are solid wastes when they are recycled in any manner:

(1) Hazardous Waste Nos. F020, F021 (unless used as an ingredient to make a product at the site of generation), F022, F023, F026, and F028.

(2) Secondary materials fed to a halogen acid furnace that exhibit a characteristic of a hazardous waste or are listed as a hazardous waste as defined in subparts C or D of this part, except for brominated material that meets the following criteria: (revised 12/92; 12/93).

(i) The material must contain a bromine concentration of at least 45%; and (added 12/93)

(ii) The material must contain less than a total of 1% of toxic organic compounds listed in appendix VIII; and (added 12/93)

(iii) The material is processed continually on-site in the halogen acid furnace via direct conveyance (hard piping). (added 12/93)

(3) The Department will use the following criteria to add wastes to that list:

(i)(A) The materials are ordinarily disposed of, burned, or incinerated; or

(B) The materials contain toxic constituents listed in Appendix VIII of R.61-79.261 of these Regulations and these constituents are not ordinarily found in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and

(ii) The material may pose a substantial hazard to human health and the environment when recycled.

(e) Materials that are not solid waste when recycled.

(1) Materials are not solid wastes when they can be shown to be recycled by being:

(i) Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed or land disposed; or (revised 5/96)

(ii) Used or reused as effective substitutes for commercial products; or

(iii) Returned to the original process from which they are generated, without first being reclaimed or land disposed. The material must be returned as a substitute for feedstock materials. In cases where the original process to which the material is returned is a secondary process, the materials must be managed such that there is no placement on the land. In cases where the materials are generated and reclaimed within the primary mineral processing industry, the conditions of the exclusion found at 261.4(a)(17) apply rather than this paragraph. (5/96, 11/99)

(2) The following materials are solid wastes, even if the recycling involves use, reuse, or return to the original process (described in paragraphs (e)(1)(i)-(iii):

(i) Materials used in a manner constituting disposal, or used to produce products that are applied to the land; or

(ii) Materials burned for energy recovery, used to produce a fuel, or contained in fuels; or

(iii) Materials accumulated speculatively; or

(iv) Materials listed in paragraphs (d)(1) and (d)(2) of this section. (12/93)

(f) Documentation of claims that materials are not solid wastes or are conditionally exempt from regulation. Respondents in actions to enforce regulations implementing the SC Hazardous Waste Management Act Sections 44-56-10 et seq. and Subtitle C of RCRA who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, must demonstrate that there is a known market or disposition for the material, and that they meet the terms of the exclusion or exemption. In doing so, they must provide appropriate documentation (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste, or is exempt from regulation. In addition, owners or operators of facilities claiming that they actually are recycling materials must show that they have the necessary equipment to do so (revised 12/93).

(g) Sham recycling. A hazardous secondary material found to be sham recycled is considered discarded and a solid waste. Sham recycling is recycling that is not legitimate recycling as defined in Section 260.43.

### **261.3. Definition of hazardous waste.**

(a) A solid waste, as defined in 261.2, is a hazardous waste if: (11/99)

(1) It is not excluded from regulation as a hazardous waste under 261.4(b) and

(2) It meets any of the following criteria:

(i) It exhibits any of the characteristics of hazardous waste identified in subpart C of this part. However, any mixture of a waste from the extraction, beneficiation, and processing of ores and minerals excluded under 261.4(b)(7) and any other solid waste exhibiting a characteristic of hazardous waste under subpart C is a hazardous waste only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred, or if it continues to exhibit any of the characteristics exhibited by the non-excluded wastes prior to mixture. Further, for the purposes of applying the Toxicity Characteristic to such mixtures, the mixture is also a hazardous waste if it exceeds the maximum concentration for any contaminant listed in table 1 to 261.24 that would not have been exceeded by the excluded waste alone if the mixture had not occurred, or if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture. (11/90; 12/93)

(ii) It is listed in subpart D and has not been excluded from the lists in subpart D under 260.20 and 260.22 of this chapter.

(iii) [Reserved] (11/90; 12/93)

(iv) It is a mixture of solid waste and one or more hazardous wastes listed in subpart D of this part and has not been excluded from this paragraph (a)(2) of this section under 260.20 and 260.22, paragraph (g) of this section, or paragraph (h) of this section; however, the following mixtures of solid wastes and hazardous wastes listed in subpart D of this part are not hazardous wastes (except by application of paragraph (a)(2) (i) or (ii) of this section) if the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under the S. C. Pollution Control Act Section 48-1-10 et seq., of the S. C. Code of Laws of 1976, as amended and under either section 402 or section 307(b) of the Clean Water Act (including wastewater at facilities which have eliminated the discharge of wastewater) and: (11/90; 12/93)

(A) One or more of the following spent solvents listed in 261.31 - benzene, carbon tetrachloride, tetrachloroethylene, trichloroethylene or the scrubber waters derived-from the combustion of these spent solvents-- Provided, that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 1 part per million; or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act, as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed 1 part per million on an average weekly basis. Any facility that uses benzene as a solvent and claims this exemption must use an aerated biological wastewater treatment system and must use only lined surface impoundments or tanks prior to secondary clarification in the wastewater treatment system. Facilities that choose to measure concentration levels must file a copy of their sampling and analysis plan with the Department. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Department. The Department may reject the sampling and analysis plan if the Department finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the Department rejects the sampling and analysis plan or if the Department finds that the facility is not following the sampling and analysis plan, the Department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

(B) One or more of the following spent solvents listed in Section 261.31 - methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents, 2-ethoxyethanol, or the scrubber waters derived-from the combustion of these spent solvents - provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pre-treatment system does not exceed 25 parts per million; or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed 25 parts per million on an average weekly basis. Facilities that choose to measure concentration levels must file a copy of their sampling and analysis plan with the the Department as the context requires, or an authorized representative. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Department. The Department may reject the sampling and analysis plan if the Department finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the Department rejects the sampling and analysis plan or if the Department finds that the facility is not following the sampling and analysis plan, the Department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

(C) One of the following wastes listed in 261.32, provided that the wastes are discharged to the refinery oil recovery sewer before primary oil water solids separation heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA Hazardous Waste No. K050), crude oil storage tank

sediment from petroleum refining operations (EPA Hazardous Waste No. K169), clarified slurry oil tank sediment and/or in-line filter separation solids from petroleum refining operations (EPA Hazardous Waste No. K170), spent hydrotreating catalyst (EPA Hazardous Waste No. K171), and spent hydrorefining catalyst (EPA Hazardous Waste No. K172); or

(D) A discarded hazardous waste, commercial chemical product, or chemical intermediate listed in 261.31 through 261.33, arising from de minimis losses of these materials. For purposes of this paragraph (a)(2)(iv)(D), “de minimis” losses are inadvertent releases to a wastewater treatment system, including those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing. Any manufacturing facility that claims an exemption for de minimis quantities of wastes listed in 261.31 through 261.32, or any nonmanufacturing facility that claims an exemption for de minimis quantities of wastes listed in subpart D of this part must either have eliminated the discharge of wastewaters or have included in its Clean Water Act permit application or submission to its pretreatment control authority the constituents for which each waste was listed (in 261 Appendix VII) of this part; and the constituents in the table “Treatment Standards for Hazardous Wastes” in 268.40 for which each waste has a treatment standard (i.e., Land Disposal Restriction constituents). A facility is eligible to claim the exemption once the permit writer or control authority has been notified of possible de minimis releases via the Clean Water Act permit application or the pretreatment control authority submission. A copy of the Clean Water permit application or the submission to the pretreatment control authority must be placed in the facility’s on-site files; or

(E) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in subpart D of this part, Provided, That the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility’s wastewater treatment or pre-treatment system, or provided the wastes, combined annualized average concentration does not exceed one part per million in the headworks of the facility’s wastewater treatment or pre-treatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation; or (revised 5/96)

(F) One or more of the following wastes listed in 261.32 - wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157) - Provided that the maximum weekly usage of formaldehyde, methyl chloride, methylene chloride, and triethylamine (including all amounts that cannot be demonstrated to be reacted in the process, destroyed through treatment, or is recovered, i.e., what is discharged or volatilized) divided by the average weekly flow of process wastewater prior to any dilution into the headworks of the facility’s wastewater treatment system does not exceed a total of 5 parts per million by weight OR the total measured concentration of these chemicals entering the headworks of the facility’s wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed 5 parts per million on an average weekly basis. Facilities that choose to measure concentration levels must file copy of their sampling and analysis plan with the Department or an authorized representative. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility’s operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Department. The Department may reject the sampling and analysis plan if the Department finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable

the facility to calculate the weekly average concentration of these chemicals accurately. If the Department rejects the sampling and analysis plan or if the Department finds that the facility is not following the sampling and analysis plan, the Department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or

(G) Wastewaters derived-from the treatment of one or more of the following wastes listed in 261.32 - organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156). - Provided, that the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 milligrams per liter OR the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed 5 milligrams per liter on an average weekly basis. Facilities that choose to measure concentration levels must file copy of their sampling and analysis plan with the Department or an authorized representative. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Department. The Department may reject the sampling and analysis plan if the Department finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the Department rejects the sampling and analysis plan or if the Department finds that the facility is not following the sampling and analysis plan, the Department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected.

(v) Rebuttable presumption for used oil. Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Third Edition, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix VIII of part 261 of this chapter). EPA Publication SW-846, Third Edition, is available for the cost of \$110.00 from the Government Printing Office, Superintendent of Documents, PO Box 371954, Pittsburgh, PA 15250-7954, 202-783-3238 (document number 955-001-00000-1).

(A) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

(B) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(b) A solid waste which is not excluded from regulation under paragraph (a)(1) becomes a hazardous waste when any of the following events occur:

(1) In the case of a waste listed in Subpart D when the waste first meets the listing description set forth in Subpart D.

(2) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in subpart D is first added to the solid waste.

(3) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in Subpart C.

(c) Unless and until it meets the criteria of paragraph (d) of this part:

(1) A hazardous waste will remain a hazardous waste.

(2)(i) Except as otherwise provided in paragraph (c)(2)(ii), (g) or (h), any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste. (However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.) (6/02)

(ii) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste:

(A) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332).

(B) Waste from burning any of the materials exempted from regulation by section 261.6(a)(3)(iii) and (iv) (12/92; 5/96).

(C)(1) Nonwastewater residues, such as slag, resulting from high temperature metals recovery (HTMR) processing of K061, K062, or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations or industrial furnaces (as defined in paragraphs (6), (7), and (13) of the definition for Industrial furnace” in 260.10), that are disposed in subtitle D units, provided that these residues meet the generic exclusion levels identified in the tables in this paragraph for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements must be incorporated in a facility’s waste analysis plan or a generator’s self-implementing waste analysis plan; at a minimum, composite samples of residues must be collected and analyzed quarterly and/or when the process or operation generating the waste changes. Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements. (revised 12/92; 12/93)

(2) A one-time notification and certification must be placed in the facility’s files and sent to the Department for K061, K062, or F006 HTMR residues that meet the generic exclusion levels for all constituents and do not exhibit any characteristics that are sent to subtitle D units. The notification and certification that is placed in the generators or treaters files must be updated if the process or operation generating the waste changes and/or if the subtitle D unit receiving the waste changes. However, the generator or treater need only notify the Department on an annual basis if such changes occur. Such notification and certification should be sent to the Department by the end of the calendar year, but no later than December 31. The notification must include the following information: The name and address of the subtitle D unit receiving the waste shipments; the EPA Hazardous Waste Number(s) and treatability group(s) at the initial point of generation; and, the treatment standards applicable to the waste at the initial point of generation. The certification must be signed by an authorized representative and must state as

follows: “I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.” (added 12/93; revised 5/96)

(D) Biological treatment sludge from the treatment of one of the following wastes listed in 261.32-organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156), and wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157). (added 5/96)

(E) Catalyst inert support media separated from one of the following wastes listed in 261.32 Spent hydrotreating catalyst (EPA Hazardous Waste No. K171), and Spent hydrorefining catalyst (EPA Hazardous Waste No. K172).

CONSTITUENT	Maximum for any single composite sample (mg/l)
Generic exclusion levels for K061 and K062 nonwastewater HTMR residues	
Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70.
Generic exclusion levels for F006 nonwastewater HTMR residues	
Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Cyanide (total) (mg/kg)	1.8
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70.

(d) Any solid waste described in paragraph (c) is not a hazardous waste if it meets the following criteria:

(1) In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in subpart C. (However, wastes that exhibit a characteristic at the point of generation may still be

subject to the requirements of part 268, even if they no longer exhibit a characteristic at the point of land disposal.)

(2) In the case of a waste which is a listed waste under Subpart D, contains a waste listed under Subpart D or is derived from a waste listed in Subpart D, it also has been excluded from paragraph (c) under R.61-79.260.20 and 260.22.

(e) For the purposes of this regulation the wastes listed in Appendix XI will be considered hazardous.

(f) Notwithstanding paragraphs (a) through (d) of this section and provided the debris as defined in part 268 of this chapter does not exhibit a characteristic identified at subpart C of this part, the following materials are not subject to regulation under 260, 261 to 266, 268, or 270: (added 12/93)

(1) Hazardous debris as defined in part 268 of this chapter that has been treated using one of the required extraction or destruction technologies specified in Table 1 of Section 268.45 of this chapter; persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements; or (added 12/93)

(2) Debris as defined in part 268 of this chapter that the Department, considering the extent of contamination, has determined is no longer contaminated with hazardous waste. (added 12/93)

(g)(1) A hazardous waste that is listed in subpart D of this part solely because it exhibits one or more characteristics of ignitability as defined under 261.21, corrosivity as defined under 261.22, or reactivity as defined under 261.23 is not a hazardous waste, if the waste no longer exhibits any characteristic of hazardous waste identified in subpart C of this part.

(2) The exclusion described in paragraph (g)(1) of this section also pertains to:

(i) Any mixture of a solid waste and a hazardous waste listed in subpart D of this part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (a)(2)(iv) of this section; and

(ii) Any solid waste generated from treating, storing, or disposing of a hazardous waste listed in subpart D of this part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (c)(2)(i) of this section.

(3) Wastes excluded under this section are subject to part 268 of this chapter (as applicable), even if they no longer exhibit a characteristic at the point of land disposal.

(4) Any mixture of a solid waste excluded from regulation under 261.4(b)(7) and a hazardous waste listed in Subpart D solely because it exhibits one or more of the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (a)(2)(iv) is not a hazardous waste, if the mixture no longer exhibits any characteristic of hazardous waste identified in Subpart C for which the hazardous waste listed in Subpart D was listed.

(h)(1) Hazardous waste containing radioactive waste is no longer a hazardous waste when it meets the eligibility criteria and conditions of 266, Subpart N (“eligible radioactive mixed waste”).

(2) The exemption described in paragraph (h)(1) of this section also pertains to:

(i) Any mixture of a solid waste and an eligible radioactive mixed waste; and

(ii) Any solid waste generated from treating, storing, or disposing of an eligible radioactive mixed waste.

(3) Waste exempted under this section must meet the eligibility criteria and specified conditions in 266.225 and 266.230 (for storage and treatment). Waste that fails to satisfy these eligibility criteria and conditions is regulated as hazardous waste.

#### **261.4. Exclusions.**

(a) Materials which are not solid wastes. The following materials are not solid wastes for the purpose of this part:

(1)(i) Domestic sewage; and

(ii) Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly owned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(2) Industrial wastewater discharges that are point source discharges subject to regulation under Section 48-1-10 et seq., of the S. C. Code of Laws of 1976, and section 402 of the Clean Water Act, as amended.

[Comment: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment] (revised 12/92).

(3) Irrigation return flows.

(4) Materials covered under Article 2 of Chapter 7 of Title 13 of the 1976 Code of Laws of S.C., as amended.

(5) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

(6) Pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless it is accumulated speculatively as defined in Section 261.1(c).

(7) Spent sulfuric acid used to produce virgin sulfuric acid provided it is not accumulated speculatively as defined in section 261.1(c).

(8) Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided:

(i) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance;

(ii) Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators);

(iii) The secondary materials are never accumulated in such tanks for over twelve months without

being reclaimed; and

(iv) The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.

(9)(i) Spent wood preserving solutions that have been reclaimed and are reused for their original intended purpose; and

(ii) Wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood.

(iii) Prior to reuse, the wood preserving wastewaters and spent wood preserving solutions described in paragraphs (a)(9)(i) and (a)(9)(ii) of this section, so long as they meet all of the following conditions:

(A) The wood preserving wastewaters and spent wood preserving solutions are reused on-site at water borne plants in the production process for their original intended purpose;

(B) Prior to reuse, the wastewaters and spent wood preserving solutions are managed to prevent release to either land or groundwater or both;

(C) Any unit used to manage wastewaters and/or spent wood preserving solutions prior to reuse can be visually or otherwise determined to prevent such releases;

(D) Any drip pad used to manage the wastewaters and/or spent wood preserving solutions prior to reuse complies with the standards in part 265, subpart W of this chapter, regardless of whether the plant generates a total of less than 100 kg/month of hazardous waste; and

(E) Prior to operating pursuant to this exclusion, the plant owner or operator prepares a one-time notification stating that the plant intends to claim the exclusion, giving the date on which the plant intends to begin operating under the exclusion, and containing the following language: "I have read the applicable regulation establishing an exclusion for wood preserving wastewaters and spent wood preserving solutions and understand it requires me to comply at all times with the conditions set out in the regulation." The plant must maintain a copy of that document in its on-site records until closure of the facility. The exclusion applies so long as the plant meets all of the conditions. If the plant goes out of compliance with any condition, it may apply to the appropriate Department for reinstatement. The Department may reinstate the exclusion upon finding that the plant has returned to compliance with all conditions and that the violations are not likely to recur.

(10) EPA Hazardous Waste Nos. K060, K087, K141, K142, K143, K144, K145, K147, and K148, and any wastes from the coke byproducts processes that are hazardous only because they exhibit the Toxicity Characteristic (TC) specified in section 261.24 of this part when, subsequent to generation, these materials are recycled to coke ovens, to the tar recovery process as a feedstock to produce coal tar, or are mixed with coal tar prior to the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point they are generated to the point they are recycled to coke ovens or the tar recovery or refining processes, or mixed with coal tar.

(11) Nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units, provided it is shipped in drums (if shipped) and not land disposed before recovery.

(12)(i) Oil-bearing hazardous secondary materials (i.e., sludges, byproducts, or spent materials) that are generated at a petroleum refinery (SIC code 2911) and are inserted into the petroleum refining process

(SIC code 2911 - including, but not limited to, distillation, catalytic cracking, fractionation, or thermal cracking units (i.e., cokers)) unless the material is placed on the land, or speculatively accumulated before being so recycled. Materials inserted into thermal cracking units are excluded under this paragraph, provided that the coke product also does not exhibit a characteristic of hazardous waste. Oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another petroleum refinery, and still be excluded under this provision. Except, as provided in paragraph (a)(12)(ii) of this section, oil-bearing hazardous secondary materials generated elsewhere in the petroleum industry (i.e., from sources other than petroleum refineries) are not excluded under this section. Residuals generated from processing or recycling materials excluded under this paragraph (a)(12)(i), where such materials as generated would have otherwise met a listing under subpart D of this part, are designated as F037 listed wastes when disposed of or intended for disposal.

(ii) Recovered oil that is recycled in the same manner and with the same conditions as described in paragraph (a)(12)(i) of this section. Recovered oil is oil that has been reclaimed from secondary materials (including wastewater) generated from normal petroleum industry practices, including refining, exploration and production, bulk storage, and transportation incident thereto (SIC codes 1311, 1321, 1381, 1382, 1389, 2911, 4612, 4613, 4922, 4923, 4789, 5171, and 5172.) Recovered oil does not include oil-bearing hazardous wastes listed in subpart D of this part; however, oil recovered from such wastes may be considered recovered oil. Recovered oil does not include used oil as defined in 40 CFR 279.1.

(13) Excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled.

(14) Shredded circuit boards being recycled provided that they are:

(i) Stored in containers sufficient to prevent a release to the environment prior to recovery; and

(ii) Free of mercury switches, mercury relays and nickel cadmium batteries and lithium batteries.

(15) Condensates derived from the overhead gases from kraft mill steam strippers that are used to comply with 40 CFR 63.446(e). The exemption applies only to combustion at the mill generating the condensates.

(16) [Reserved]

(17) Spent materials (as defined in 261.1) (other than hazardous wastes listed in subpart D of this part) generated within the primary mineral processing industry from which minerals, acids, cyanide, water, or other values are recovered by mineral processing or by beneficiation, provided that: (11/99; 8/00)

(i) The spent material is legitimately recycled to recover minerals, acids, cyanide, water or other values;

(ii) The spent material is not accumulated speculatively;

(iii) Except as provided in paragraph (a)(17)(iv) of this section, the spent material is stored in tanks, containers, or buildings meeting the following minimum integrity standards: a building must be an engineered structure with a floor, walls, and a roof all of which are made of non-earthen materials providing structural support (except smelter buildings may have partially earthen floors provided the secondary material is stored on the non-earthen portion), and have a roof suitable for diverting rainwater away from the foundation; a tank must be free standing, not be a surface impoundment (as defined in 260.10), and be manufactured of a material suitable for containment of its contents; a container must be free standing and

be manufactured of a material suitable for containment of its contents. If tanks or containers contain any particulate which may be subject to wind dispersal, the owner/operator must operate these units in a manner which controls fugitive dust. Tanks, containers, and buildings must be designed, constructed and operated to prevent significant releases to the environment of these materials. (8/00)

(iv) The Department may make a site-specific determination, after public review and comment, that only solid mineral processing spent material may be placed on pads rather than tanks, containers, or buildings. Solid mineral processing spent materials do not contain any free liquid. The decision-maker must affirm that pads are designed, constructed and operated to prevent significant releases of the secondary material into the environment. Pads must provide the same degree of containment afforded by the non-RCRA tanks, containers and buildings eligible for exclusion.

(A) The decision-maker must also consider if storage on pads poses the potential for significant releases via groundwater, surface water, and air exposure pathways. Factors to be considered for assessing the groundwater, surface water, air exposure pathways are: the volume and physical and chemical properties of the secondary material, including its potential for migration off the pad; the potential for human or environmental exposure to hazardous constituents migrating from the pad via each exposure pathway, and the possibility and extent of harm to human and environmental receptors via each exposure pathway.

(B) Pads must meet the following minimum standards: be designed of non earthen material that is compatible with the chemical nature of the mineral processing spent material, capable of withstanding physical stresses associated with placement and removal, have run on/runoff controls, be operated in a manner which controls fugitive dust, and have integrity assurance through inspections and maintenance programs.

(C) Before making a determination under this paragraph, the Department must provide notice and the opportunity for comment to all persons potentially interested in the determination. This can be accomplished by placing notice of this action in major local newspapers, or broadcasting notice over local radio stations.

(v) The owner or operator provides notice to the Department, providing the following information: the types of materials to be recycled; the type and location of the storage units and recycling processes; and the annual quantities expected to be placed in land-based units. This notification must be updated when there is a change in the type of materials recycled or the location of the recycling process. (8/00)

(vi) For purposes of 261.4(b)(7) mineral processing spent materials must be the result of mineral processing and may not include any listed hazardous wastes. Listed hazardous wastes and characteristic hazardous wastes generated by non-mineral processing industries are not eligible for the conditional exclusion from the definition of solid waste.

(18) Petrochemical recovered oil from an associated organic chemical manufacturing facility, where the oil is to be inserted into the petroleum refining process (SIC code 2911) along with normal petroleum refinery process streams, provided:

(i) The oil is hazardous only because it exhibits the characteristic of ignitability (as defined in 261.21) and/or toxicity for benzene (261.24, waste code D018); and

(ii) The oil generated by the organic chemical manufacturing facility is not placed on the land, or speculatively accumulated before being recycled into the petroleum refining process. An "associated organic chemical manufacturing facility" is a facility where the primary SIC code is 2869, but where operations may also include SIC codes 2821, 2822, and 2865; and is physically co-located with a petroleum

refinery; and where the petroleum refinery to which the oil being recycled is returned also provides hydrocarbon feedstocks to the organic chemical manufacturing facility. "Petrochemical recovered oil" is oil that has been reclaimed from secondary materials (i.e., sludges, byproducts, or spent materials, including wastewater) from normal organic chemical manufacturing operations, as well as oil recovered from organic chemical manufacturing processes.

(19) Spent caustic solutions from petroleum refining liquid treating processes used as a feedstock to produce cresylic or naphthenic acid unless the material is placed on the land, or accumulated speculatively as defined in 261.1(c).

(20) Hazardous secondary materials used to make zinc fertilizers, provided that the following conditions specified are satisfied:

(i) Hazardous secondary materials used to make zinc micronutrient fertilizers must not be accumulated speculatively, as defined in 261.1(c)(8).

(ii) Generators and intermediate handlers of zinc-bearing hazardous secondary materials that are to be incorporated into zinc fertilizers must:

(A) Submit a one-time notice to the Department which contains the name, address and EPA ID number of the generator or intermediate handler facility, provides a brief description of the secondary material that will be subject to the exclusion, and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions specified in this paragraph (a)(20).

(B) Store the excluded secondary material in tanks, containers, or buildings that are constructed and maintained in a way that prevents releases of the secondary materials into the environment. At a minimum, any building used for this purpose must be an engineered structure made of non-earthen materials that provide structural support, and must have a floor, walls and a roof that prevent wind dispersal and contact with rainwater. Tanks used for this purpose must be structurally sound and, if outdoors, must have roofs or covers that prevent contact with wind and rain. Containers used for this purpose must be kept closed except when it is necessary to add or remove material, and must be in sound condition. Containers that are stored outdoors must be managed within storage areas that:

(1) have containment structures or systems sufficiently impervious to contain leaks, spills and accumulated precipitation; and

(2) provide for effective drainage and removal of leaks, spills and accumulated precipitation; and

(3) prevent run-on into the containment system.

(C) With each off-site shipment of excluded hazardous secondary materials, provide written notice to the receiving facility that the material is subject to the conditions of this paragraph (a)(20).

(D) Maintain at the generator's or intermediate handler's facility for no less than three years records of all shipments of excluded hazardous secondary materials. For each shipment these records must at a minimum contain the following information:

(1) Name of the transporter and date of the shipment;

(2) Name and address of the facility that received the excluded material, and documentation confirming receipt of the shipment; and

(3) Type and quantity of excluded secondary material in each shipment.

(iii) Manufacturers of zinc fertilizers or zinc fertilizer ingredients made from excluded hazardous secondary materials must:

(A) Store excluded hazardous secondary materials in accordance with the storage requirements for generators and intermediate handlers, as specified in paragraph (a)(20)(ii)(B) of this section.

(B) Submit a one-time notification to the Department that, at a minimum, specifies the name, address and EPA ID number of the manufacturing facility, and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions specified in this paragraph (a)(20).

(C) Maintain for a minimum of three years records of all shipments of excluded hazardous secondary materials received by the manufacturer, which must at a minimum identify for each shipment the name and address of the generating facility, name of transporter and date the materials were received, the quantity received, and a brief description of the industrial process that generated the material.

(D) Submit to the Department an annual report that identifies the total quantities of all excluded hazardous secondary materials that were used to manufacture zinc fertilizers or zinc fertilizer ingredients in the previous year, the name and address of each generating facility, and the industrial process(s) from which they were generated.

(iv) Nothing in this section preempts, overrides or otherwise negates the provision in 262.11 of this chapter, which requires any person who generates a solid waste to determine if that waste is a hazardous waste.

(v) Interim status and permitted storage units that have been used to store only zinc-bearing hazardous wastes prior to the submission of the one-time notice described in paragraph (a)(20)(ii)(A), and that afterward will be used only to store hazardous secondary materials excluded under this paragraph, are not subject to the closure requirements of 264 and 265.

(21) Zinc fertilizers made from hazardous wastes, or hazardous secondary materials that are excluded under paragraph (a)(20) of this section, provided that:

(i) The fertilizers meet the following contaminant limits:

(A) For metal contaminants:

Constituent	Maximum Allowable Total Concentration in Fertilizer, per Unit (1%) of Zinc (ppm)
Arsenic	0.3
Cadmium	1.4
Chromium	0.6
Lead	2.8
Mercury	0.3

(B) For dioxin contaminants the fertilizer must contain no more than eight (8) parts per trillion of

dioxin, measured as toxic equivalent (TEQ).

(ii) The manufacturer performs sampling and analysis of the fertilizer product to determine compliance with the contaminant limits for metals no less than every six months, and for dioxins no less than every twelve months. Testing must also be performed whenever changes occur to manufacturing processes or ingredients that could significantly affect the amounts of contaminants in the fertilizer product. The manufacturer may use any reliable analytical method to demonstrate that no constituent of concern is present in the product at concentrations above the applicable limits. It is the responsibility of the manufacturer to ensure that the sampling and analysis are unbiased, precise, and representative of the product(s) introduced into commerce.

(iii) The manufacturer maintains for no less than three years records of all sampling and analyses performed for purposes of determining compliance with the requirements of paragraph (a)(21)(ii) of this section. Such records must at a minimum include:

(A) The dates and times product samples were taken, and the dates the samples were analyzed;

(B) The names and qualifications of the person(s) taking the samples;

(C) A description of the methods and equipment used to take the samples;

(D) The name and address of the laboratory facility at which analyses of the samples were performed;

(E) A description of the analytical methods used, including any cleanup and sample preparation methods; and

(F) All laboratory analytical results used to determine compliance with the contaminant limits specified in this paragraph (a)(21).

(22) Used Cathode Ray Tubes (CRTs)

(i) Used, intact CRTs as defined in Sec. 260.10 of this chapter are not solid wastes within the United States unless they are disposed, or unless they are speculatively accumulated as defined in 261.1(c)(8) by CRT collectors or glass processors.

(ii) Used, intact CRTs as defined in Sec. 260.10 of this chapter are not solid wastes when exported for recycling provided that they meet the requirements of Sec. 261.40.

(iii) Used, broken CRTs as defined in Sec. 260.10 of this chapter are not solid wastes provided that they meet the requirements of 261.39.

(iv) Glass removed from CRTs is not a solid waste provided that it meets the requirements of 261.39(c).

(23) Hazardous secondary material generated and legitimately reclaimed within the United States or its territories and under the control of the generator, provided that the material complies with paragraphs (a)(23)(i) and (ii) of this section:

(i)(A) The hazardous secondary material is generated and reclaimed at the generating facility (for purposes of this definition, generating facility means all contiguous property owned, leased, or otherwise controlled by the hazardous secondary material generator); or

(B) The hazardous secondary material is generated and reclaimed at different facilities, if the reclaiming facility is controlled by the generator or if both the generating facility and the reclaiming facility are controlled by a person as defined in section 260.10, and if the generator provides one of the following certifications: “on behalf of [insert generator facility name], I certify that this facility will send the indicated hazardous secondary material to [insert reclaimer facility name], which is controlled by [insert generator facility name] and that [insert name of either facility] has acknowledged full responsibility for the safe management of the hazardous secondary material,” or “on behalf of [insert generator facility name], I certify that this facility will send the indicated hazardous secondary material to [insert reclaimer facility name], that both facilities are under common control, and that [insert name of either facility] has acknowledged full responsibility for the safe management of the hazardous secondary material.” For purposes of this paragraph, “control” means the power to direct the policies of the facility, whether by the ownership of stock, voting rights, or otherwise, except that contractors who operate facilities on behalf of a different person as defined in section 260.10 shall not be deemed to “control” such facilities. The generating and receiving facilities must both maintain at their facilities for no less than three (3) years records of hazardous secondary materials sent or received under this exclusion. In both cases, the records must contain the name of the transporter, the date of the shipment, and the type and quantity of the hazardous secondary material shipped or received under the exclusion. These requirements may be satisfied by routine business records (e.g., financial records, bills of lading, copies of Department of Transportation (DOT) shipping papers, or electronic confirmations); or

(C) The hazardous secondary material is generated pursuant to a written contract between a tolling contractor and a toll manufacturer and is reclaimed by the tolling contractor, if the tolling contractor certifies the following: “On behalf of [insert tolling contractor name], I certify that [insert tolling contractor name] has a written contract with [insert toll manufacturer name] to manufacture [insert name of product or intermediate] which is made from specified unused materials, and that [insert tolling contractor name] will reclaim the hazardous secondary materials generated during this manufacture. On behalf of [insert tolling contractor name], I also certify that [insert tolling contractor name] retains ownership of, and responsibility for, the hazardous secondary materials that are generated during the course of the manufacture, including any releases of hazardous secondary materials that occur during the manufacturing process”. The tolling contractor must maintain at its facility for no less than three (3) years records of hazardous secondary materials received pursuant to its written contract with the tolling manufacturer, and the tolling manufacturer must maintain at its facility for no less than three (3) years records of hazardous secondary materials shipped pursuant to its written contract with the tolling contractor. In both cases, the records must contain the name of the transporter, the date of the shipment, and the type and quantity of the hazardous secondary material shipped or received pursuant to the written contract. These requirements may be satisfied by routine business records (e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations). For purposes of this paragraph, tolling contractor means a person who arranges for the production of a product or intermediate made from specified unused materials through a written contract with a toll manufacturer. Toll manufacturer means a person who produces a product or intermediate made from specified unused materials pursuant to a written contract with a tolling contractor.

(ii)(A) The hazardous secondary material is contained as defined in section 260.10. A hazardous secondary material released to the environment is discarded and a solid waste unless it is immediately recovered for the purpose of reclamation. Hazardous secondary material managed in a unit with leaks or other continuing or intermittent unpermitted releases is discarded and a solid waste.

(B) The hazardous secondary material is not speculatively accumulated, as defined in section 261.1(c)(8).

(C) Notice is provided as required by section 260.42.

(D) The material is not otherwise subject to material-specific management conditions under paragraph (a) of this section when reclaimed, and it is not a spent lead-acid battery (see sections 266.80 and 273.2).

(E) Persons performing the recycling of hazardous secondary materials under this exclusion must maintain documentation of their legitimacy determination on-site. Documentation must be a written description of how the recycling meets all three factors in section 260.43(a) and how the factor in section 260.43(b) was considered. Documentation must be maintained for three (3) years after the recycling operation has ceased.

(F) The emergency preparedness and response requirements found in R.61-79.261 subpart M are met.

(24) Hazardous secondary material that is generated and then transferred to another person for the purpose of reclamation is not a solid waste, provided that:

(i) The material is not speculatively accumulated, as defined in section 261.1(c)(8);

(ii) The material is not handled by any person or facility other than the hazardous secondary material generator, the transporter, an intermediate facility or a reclaimer, and, while in transport, is not stored for more than ten (10) days at a transfer facility, as defined in section 260.10, and is packaged according to applicable DOT regulations at 49 CFR parts 173, 178, and 179 while in transport;

(iii) The material is not otherwise subject to material-specific management conditions under paragraph (a) of this section when reclaimed, and it is not a spent lead-acid battery (see sections 266.80 and 273.2);

(iv) The reclamation of the material is legitimate, as specified under section 260.43;

(v) The hazardous secondary material generator satisfies all of the following conditions:

(A) The material must be contained as defined in section 260.10. A hazardous secondary material released to the environment is discarded and a solid waste unless it is immediately recovered for the purpose of recycling. Hazardous secondary material managed in a unit with leaks or other continuing releases is discarded and a solid waste.

(B) Prior to arranging for transport of hazardous secondary materials to a reclamation facility (or facilities) where the management of the hazardous secondary materials is not addressed under a RCRA part B permit (a federally-issued RCRA permit or a hazardous waste permit issued by the Department) or interim status standards, the hazardous secondary material generator must make reasonable efforts to ensure that each reclaimer intends to properly and legitimately reclaim the hazardous secondary material and not discard it, and that each reclaimer will manage the hazardous secondary material in a manner that is protective of human health and the environment. If the hazardous secondary material will be passing through an intermediate facility where the management of the hazardous secondary materials is not addressed under a RCRA part B permit or interim status standards, the hazardous secondary material generator must make contractual arrangements with the intermediate facility to ensure that the hazardous

secondary material is sent to the reclamation facility identified by the hazardous secondary material generator, and the hazardous secondary material generator must perform reasonable efforts to ensure that the intermediate facility will manage the hazardous secondary material in a manner that is protective of human health and the environment. Reasonable efforts must be repeated at a minimum of every three (3) years for the hazardous secondary material generator to claim the exclusion and to send the hazardous secondary materials to each reclaimer and any intermediate facility. In making these reasonable efforts, the generator may use any credible evidence available, including information gathered by the hazardous secondary material generator, provided by the reclaimer or intermediate facility, and/or provided by a third party. The hazardous secondary material generator must affirmatively answer all of the following questions for each reclamation facility and any intermediate facility:

(1) Does the available information indicate that the reclamation process is legitimate pursuant to section 260.43? In answering this question, the hazardous secondary material generator can rely on their existing knowledge of the physical and chemical properties of the hazardous secondary material, as well as information from other sources (e.g., the reclamation facility, audit reports, etc.) about the reclamation process.

(2) Does the publicly available information indicate that the reclamation facility and any intermediate facility that is used by the hazardous secondary material generator notified the appropriate authorities of hazardous secondary materials reclamation activities pursuant to section 260.42 and have they notified the appropriate authorities that the financial assurance condition is satisfied per paragraph (a)(24)(vi)(F) of this section? In answering these questions, the hazardous secondary material generator can rely on the available information documenting the reclamation facility's and any intermediate facility's compliance with the notification requirements per section 260.42, including the requirement in section 260.42(a)(5) to notify the Department whether the reclaimer or intermediate facility has financial assurance.

(3) Does publicly available information indicate that the reclamation facility or any intermediate facility that is used by the hazardous secondary material generator has not had any formal enforcement actions taken against the facility in the previous three (3) years for violations of the South Carolina Hazardous Waste Management Regulations and has not been classified as a significant non-complier with the Department? In answering this question, the hazardous secondary material generator can rely on the publicly available information from EPA or the state. If the reclamation facility or any intermediate facility that is used by the hazardous secondary material generator has had a formal enforcement action taken against the facility in the previous three (3) years for violations of the South Carolina Hazardous Waste Management Regulations and has been classified as a significant non-complier with the Department, does the hazardous secondary material generator have credible evidence that the facilities will manage the hazardous secondary materials properly? In answering this question, the hazardous secondary material generator can obtain additional information from EPA, the state, or the facility itself that the facility has addressed the violations, taken remedial steps to address the violations and prevent future violations, or that the violations are not relevant to the proper management of the hazardous secondary materials.

(4) Does the available information indicate that the reclamation facility and any intermediate facility that is used by the hazardous secondary material generator have the equipment and trained personnel to safely recycle the hazardous secondary material? In answering this question, the generator may rely on a description by the reclamation facility or by an independent third party of the equipment and trained personnel to be used to recycle the generator's hazardous secondary material.

(5) If residuals are generated from the reclamation of the excluded hazardous secondary materials, does the reclamation facility have the permits required (if any) to manage the residuals? If not, does the reclamation facility have a contract with an appropriately permitted facility to dispose of the

residuals? If not, does the hazardous secondary material generator have credible evidence that the residuals will be managed in a manner that is protective of human health and the environment? In answering these questions, the hazardous secondary material generator can rely on publicly available information from EPA or the state, or information provided by the facility itself.

(C) The hazardous secondary material generator must maintain for a minimum of three (3) years documentation and certification that reasonable efforts were made for each reclamation facility and, if applicable, intermediate facility where the management of the hazardous secondary materials is not addressed under a RCRA part B permit or interim status standards prior to transferring hazardous secondary material. Documentation and certification must be made available upon request by a regulatory authority within seventy-two (72) hours, or within a longer period of time as specified by the regulatory authority. The certification statement must:

(1) Include the printed name and official title of an authorized representative of the hazardous secondary material generator company, the authorized representative's signature, and the date signed;

(2) Incorporate the following language: "I hereby certify in good faith and to the best of my knowledge that, prior to arranging for transport of excluded hazardous secondary materials to [insert name(s) of reclamation facility and any intermediate facility], reasonable efforts were made in accordance with section 261.4(a)(24)(v)(B) to ensure that the hazardous secondary materials would be recycled legitimately, and otherwise managed in a manner that is protective of human health and the environment, and that such efforts were based on current and accurate information."

(D) The hazardous secondary material generator must maintain at the generating facility for no less than three (3) years records of all off-site shipments of hazardous secondary materials. For each shipment, these records must, at a minimum, contain the following information:

(1) Name of the transporter and date of the shipment;

(2) Name and address of each reclaimer and, if applicable, the name and address of each intermediate facility to which the hazardous secondary material was sent;

(3) The type and quantity of hazardous secondary material in the shipment.

(E) The hazardous secondary material generator must maintain at the generating facility for no less than three (3) years confirmations of receipt from each reclaimer and, if applicable, each intermediate facility for all off-site shipments of hazardous secondary materials. Confirmations of receipt must include the name and address of the reclaimer (or intermediate facility), the type and quantity of the hazardous secondary materials received and the date which the hazardous secondary materials were received. This requirement may be satisfied by routine business records (e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations of receipt);

(F) The hazardous secondary material generator must comply with the emergency preparedness and response conditions in R.61-79.261 subpart M.

(vi) Reclaimers of hazardous secondary material excluded from regulation under this exclusion and intermediate facilities as defined in section 260.10 satisfy all of the following conditions:

(A) The reclaimer and intermediate facility must maintain at its facility for no less than three (3) years records of all shipments of hazardous secondary material that were received at the facility and, if applicable, for all shipments of hazardous secondary materials that were received and subsequently sent

off-site from the facility for further reclamation. For each shipment, these records must at a minimum contain the following information:

(1) Name of the transporter and date of the shipment;

(2) Name and address of the hazardous secondary material generator and, if applicable, the name and address of the reclaimer or intermediate facility from which the hazardous secondary materials were received;

(3) The type and quantity of hazardous secondary material in the shipment; and

(4) For hazardous secondary materials that, after being received by the reclaimer or intermediate facility, were subsequently transferred off-site for further reclamation, the name and address of the (subsequent) reclaimer and, if applicable, the name and address of each intermediate facility to which the hazardous secondary material was sent.

(B) The intermediate facility must send the hazardous secondary material to the reclaimer(s) designated by the hazardous secondary materials generator.

(C) The reclaimer and intermediate facility must send to the hazardous secondary material generator confirmations of receipt for all off-site shipments of hazardous secondary materials. Confirmations of receipt must include the name and address of the reclaimer (or intermediate facility), the type and quantity of the hazardous secondary materials received and the date which the hazardous secondary materials were received. This requirement may be satisfied by routine business records (e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations of receipt).

(D) The reclaimer and intermediate facility must manage the hazardous secondary material in a manner that is at least as protective as that employed for analogous raw material and must be contained. An “analogous raw material” is a raw material for which a hazardous secondary material is a substitute and serves the same function and has similar physical and chemical properties as the hazardous secondary material.

(E) Any residuals that are generated from reclamation processes will be managed in a manner that is protective of human health and the environment. If any residuals exhibit a hazardous characteristic according to R.61-79.261 subpart C, or if they themselves are specifically listed in R.6-79.261 subpart D, such residuals are hazardous wastes and must be managed in accordance with the applicable requirements of R.61-79.260 through 272.

(F) The reclaimer and intermediate facility have financial assurance as required under R.61-79.261 subpart H,

(vii) In addition, all persons claiming the exclusion under paragraph (a)(24) of this section must provide notification as required under section 260.42.

(25) Hazardous secondary material that is exported from the United States and reclaimed at a reclamation facility located in a foreign country is not a solid waste, provided that the hazardous secondary material generator complies with the applicable requirements of paragraph (a)(24)(i) through (v) of this section (excepting paragraph (a)(24)(v)(B)(2) of this section for foreign reclaimers and foreign intermediate facilities), and that the hazardous secondary material generator also complies with the following requirements:

(i) Notify EPA of an intended export before the hazardous secondary material is scheduled to leave the United States. A complete notification must be submitted at least sixty (60) days before the initial shipment is intended to be shipped off-site. This notification may cover export activities extending over a twelve (12) month or lesser period. The notification must be in writing, signed by the hazardous secondary material generator, and include the following information:

(A) Name, mailing address, telephone number, and EPA Identification Number (if applicable) of the hazardous secondary material generator;

(B) A description of the hazardous secondary material and the EPA hazardous waste number that would apply if the hazardous secondary material was managed as hazardous waste, and the DOT proper shipping name, hazard class, and ID number (UN/NA) for each hazardous secondary material as identified in 49 CFR parts 171 through 177;

(C) The estimated frequency or rate at which the hazardous secondary material is to be exported and the period of time over which the hazardous secondary material is to be exported;

(D) The estimated total quantity of hazardous secondary material;

(E) All points of entry to and departure from each foreign country through which the hazardous secondary material will pass;

(F) A description of the means by which each shipment of the hazardous secondary material will be transported (e.g., mode of transportation vehicle (air, highway, rail, water, etc.), and type(s) of container (drums, boxes, tanks, etc.));

(G) A description of the manner in which the hazardous secondary material will be reclaimed in the country of import;

(H) The name and address of the reclaimer, any intermediate facility and any alternate reclaimer and intermediate facilities; and

(I) The name of any countries of transit through which the hazardous secondary material will be sent and a description of the approximate length of time it will remain in such countries and the nature of its handling while there (for purposes of this section, the terms “EPA Acknowledgement of Consent”, “country of import”, and “country of transit” are used as defined in section 262.81 with the exception that the terms in this section refer to hazardous secondary materials, rather than hazardous waste):

(ii) Notifications must be submitted electronically using EPA’s Waste Import Export Tracking System (WIETS), or its successor system.

(iii) Except for changes to the telephone number in paragraph (a)(25)(i)(A) of this section and decreases in the quantity of hazardous secondary material indicated pursuant to paragraph (a)(25)(i)(D) of this section, when the conditions specified on the original notification change (including any exceedance of the estimate of the quantity of hazardous secondary material specified in the original notification), the hazardous secondary material generator must provide EPA with a written renotification of the change. The shipment cannot take place until consent of the country of import to the changes (except for changes to paragraph (a)(25)(i)(I) of this section and in the ports of entry to and departure from countries of transit pursuant to paragraphs (a)(25)(i)(E) of this section) has been obtained and the hazardous secondary material generator receives from EPA an EPA Acknowledgment of Consent reflecting the country of import’s consent to the changes.

(iv) Upon request by EPA, the hazardous secondary material generator shall furnish to EPA any additional information which a country of import requests in order to respond to a notification.

(v) EPA will provide a complete notification to the country of import and any countries of transit. A notification is complete when EPA receives a notification which EPA determines satisfies the requirements of paragraph (a)(25)(i) of this section. Where a claim of confidentiality is asserted with respect to any notification information required by paragraph (a)(25)(i) of this section, EPA may find the notification not complete until any such claim is resolved in accordance with 40 CFR 260.2.

(vi) The export of hazardous secondary material under this paragraph (a)(25) is prohibited unless the country of import consents to the intended export. When the country of import consents in writing to the receipt of the hazardous secondary material, EPA will send an EPA Acknowledgment of Consent to the hazardous secondary material generator. Where the country of import objects to receipt of the hazardous secondary material or withdraws a prior consent, EPA will notify the hazardous secondary material generator in writing. EPA will also notify the hazardous secondary material generator of any responses from countries of transit.

(vii) For exports to OECD Member countries, the receiving country may respond to the notification using tacit consent. If no objection has been lodged by any country of import or countries of transit to a notification provided pursuant to paragraph (a)(25)(i) of this section within thirty (30) days after the date of issuance of the acknowledgement of receipt of notification by the competent authority of the country of import, the transboundary movement may commence. In such cases, EPA will send an EPA Acknowledgment of Consent to inform the hazardous secondary material generator that the country of import and any relevant countries of transit have not objected to the shipment, and are thus presumed to have consented tacitly. Tacit consent expires one (1) calendar year after the close of the thirty (30) day period; renotification and renewal of all consents is required for exports after that date.

(viii) A copy of the EPA Acknowledgment of Consent must accompany the shipment. The shipment must conform to the terms of the EPA Acknowledgment of Consent.

(ix) If a shipment cannot be delivered for any reason to the reclaimer, intermediate facility, or the alternate reclaimer or alternate intermediate facility, the hazardous secondary material generator must re-notify EPA of a change in the conditions of the original notification to allow shipment to a new reclaimer in accordance with paragraph (iii) of this section and obtain another EPA Acknowledgment of Consent.

(x) Hazardous secondary material generators must keep a copy of each notification of intent to export and each EPA Acknowledgment of Consent for a period of three (3) years following receipt of the EPA Acknowledgment of Consent. They may satisfy this recordkeeping requirement by retaining electronically submitted notifications or electronically generated Acknowledgements in their account on EPA's Waste Import Export Tracking System (WIETS), or its successor system, provided that such copies are readily available for viewing and production if requested by any EPA or authorized state inspector. No hazardous secondary material generator may be held liable for the inability to produce a notification or Acknowledgement for inspection under this section if they can demonstrate that the inability to produce such copies are due exclusively to technical difficulty with EPA's Waste Import Export Tracking System (WIETS), or its successor system for which the hazardous secondary material generator bears no responsibility.

(xi) Hazardous secondary material generators must file with the Administrator no later than March 1 of each year, a report summarizing the types, quantities, frequency, and ultimate destination of all hazardous secondary materials exported during the previous calendar year. Annual reports must be

submitted electronically using EPA's Waste Import Export Tracking System (WIETS), or its successor system. Such reports must include the following information:

(A) Name, mailing and site address, and EPA Identification Number (if applicable) of the hazardous secondary material generator;

(B) The calendar year covered by the report;

(C) The name and site address of each reclaimer and intermediate facility;

(D) By reclaimer and intermediate facility, for each hazardous secondary material exported, a description of the hazardous secondary material and the EPA hazardous waste number that would apply if the hazardous secondary material was managed as hazardous waste, the DOT hazard class, the name and EPA Identification Number (where applicable) for each transporter used, the total amount of hazardous secondary material shipped, and the number of shipments pursuant to each notification;

(E) A certification signed by the hazardous secondary material generator which states: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

(xii) All persons claiming an exclusion under this paragraph (a)(25) must provide notification as required by section 260.42.

(26) Solvent-contaminated wipes that are sent for cleaning and reuse are not solid wastes from the point of generation, provided that:

(i) The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled "Excluded Solvent-Contaminated Wipes." The containers must be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container must be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions;

(ii) The solvent-contaminated wipes may be accumulated by the generator for up to 180 days from the start date of accumulation for each container prior to being sent for cleaning;

(iii) At the point of being sent for cleaning on-site or at the point of being transported off-site for cleaning, the solvent-contaminated wipes must contain no free liquids as defined in Section 260.10 of this chapter.

(iv) Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes must be managed according to the applicable regulations found in parts 260 through 273:

(v) Generators must maintain at their site the following documentation:

(A) Name and address of the laundry or dry cleaner that is receiving the solvent-contaminated

wipes;

(B) Documentation that the 180-day accumulation time limit in 261.4(a)(26)(ii) is being met;

(C) Description of the process the generator is using to ensure the solvent-contaminated wipes contain no free liquids at the point of being laundered or dry cleaned on-site or at the point of being transported off-site for laundering or dry cleaning;

(vi) The solvent-contaminated wipes are sent to a laundry or dry cleaner whose discharge, if any, is regulated under sections 301 and 402 or section 307 of the Clean Water Act.

(27) Hazardous secondary material that is generated and then transferred to another person for the purpose of remanufacturing is not a solid waste, provided that:

(i) The hazardous secondary material consists of one (1) or more of the following spent solvents: Toluene, xylenes, ethylbenzene, 1,2,4-trimethylbenzene, chlorobenzene, n-hexane, cyclohexane, methyl tert-butyl ether, acetonitrile, chloroform, chloromethane, dichloromethane, methyl isobutyl ketone, NN-dimethylformamide, tetrahydrofuran, n-butyl alcohol, ethanol, and/or methanol;

(ii) The hazardous secondary material originated from using one (1) or more of the solvents listed in paragraph (a)(27)(i) of this section in a commercial grade for reacting, extracting, purifying, or blending chemicals (or for rinsing out the process lines associated with these functions) in the pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), and/or the paints and coatings manufacturing sectors (NAICS 325510).

(iii) The hazardous secondary material generator sends the hazardous secondary material spent solvents listed in paragraph (a)(27)(i) of this section to a remanufacturer in the pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), and/or the paints and coatings manufacturing sectors (NAICS 325510).

(iv) After remanufacturing one (1) or more of the solvents listed in paragraph (a)(27)(i) of this section, the use of the remanufactured solvent shall be limited to reacting, extracting, purifying, or blending chemicals (or for rinsing out the process lines associated with these functions) in the pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), and/or the paints and coatings manufacturing sectors (NAICS 325510) or to using them as ingredients in a product. These allowed uses correspond to chemical functional uses enumerated under the Chemical Data Reporting Rule of the Toxic Substances Control Act (40 CFR parts 704, 710, and 711), including Industrial Function Codes U015 (solvents consumed in a reaction to produce other chemicals) and U030 (solvents become part of the mixture);

(v) After remanufacturing one (1) or more of the solvents listed in paragraph (a)(27)(i) of this section, the use of the remanufactured solvent does not involve cleaning or degreasing oil, grease, or similar material from textiles, glassware, metal surfaces, or other articles. (These disallowed continuing uses correspond to chemical functional uses in Industrial Function Code U029 under the Chemical Data Reporting Rule of the Toxic Substances Control Act.); and

(vi) Both the hazardous secondary material generator and the remanufacturer must:

(A) Notify EPA or the Department, if the state is authorized for the program, and update the notification every two (2) years per section 260.42;

(B) Develop and maintain an up-to-date remanufacturing plan which identifies:

(1) The name, address, and EPA Identification Number of the generator(s) and the remanufacturer(s),

(2) The types and estimated annual volumes of spent solvents to be remanufactured,

(3) The processes and industry sectors that generate the spent solvents,

(4) The specific uses and industry sectors for the remanufactured solvents, and

(5) A certification from the remanufacturer stating “on behalf of [insert remanufacturer facility name], I certify that this facility is a remanufacturer under pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), and/or the paints and coatings manufacturing sectors (NAICS 325510), and will accept the spent solvent(s) for the sole purpose of remanufacturing into commercial-grade solvent(s) that will be used for reacting, extracting, purifying, or blending chemicals (or for rinsing out the process lines associated with these functions) or for use as product ingredient(s). I also certify that the remanufacturing equipment, vents, and tanks are equipped with and are operating air emission controls in compliance with the appropriate Clean Air Act regulations under 40 CFR part 60, part 61, or part 63, or, absent such Clean Air Act standards for the particular operation or piece of equipment covered by the remanufacturing exclusion, are in compliance with the appropriate standards in R.61-79.261 subparts AA (vents), BB (equipment), and CC (tank storage),”;

(C) Maintain records of shipments and confirmations of receipts for a period of three (3) years from the dates of the shipments;

(D) Prior to remanufacturing, store the hazardous spent solvents in tanks or containers that meet technical standards found in R.61-79.261 subparts I and J, with the tanks and containers being labeled or otherwise having an immediately available record of the material being stored;

(E) During remanufacturing, and during storage of the hazardous secondary materials prior to remanufacturing, the remanufacturer certifies that the remanufacturing equipment, vents, and tanks are equipped with and are operating air emission controls in compliance with the appropriate Clean Air Act regulations under 40 CFR part 60, part 61, or part 63, or, absent such Clean Air Act standards for the particular operation or piece of equipment covered by the remanufacturing exclusion, are in compliance with the appropriate standards in R.61-79.261 subparts AA (vents), BB (equipment), and CC (tank storage); and

(F) Meet the requirements prohibiting speculative accumulation per section 261.1(c)(8).

(b) Solid wastes which are not hazardous wastes. The following solid wastes are not hazardous wastes:

(1) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel) or reused. “Household waste” means any material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day use recreation areas). A resource recovery facility managing municipal solid waste shall not be

deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of these regulations, if such facility:

(i) Receives and burns only

(A) Household waste (from single and multiple dwellings, hotels, motels, and other residential sources) and

(B) Solid waste from commercial or industrial sources that does not contain hazardous waste; and

(ii) Such facility does not accept hazardous wastes and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.

(2) Solid wastes generated by any of the following and which are returned to the soils as fertilizers:

(i) The growing and harvesting of agricultural crops.

(ii) The raising of animals, including animal manures.

(3) Mining overburden returned to the mine site if such overburden is handled in compliance with all applicable provisions of the S. C. Mining Act, Section 48-20-10 et seq., S. C. Code of Laws, 1976, as amended.

(4) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, except as provided by 266.112 for facilities that burn or process hazardous waste (revised 12/92).

(5) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.

(6)(i) Wastes which fail the test for the Toxicity Characteristic because chromium is present or are listed in Subpart D due to the presence of chromium, which do not fail the test for the Toxicity Characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:

(A) The chromium in the waste is exclusively (or nearly exclusively) trivalent chromium; and

(B) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and

(C) The waste is typically and frequently managed in non-oxidizing environments.

(ii) Specific wastes which meet the standard in paragraphs (b)(6)(i) (A), (B), and (C) (so long as they do not fail the test for the toxicity characteristic for any other constituent, and do not exhibit any other characteristic) are: (amended 11/90)

(A) Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling. (amended 11/90)

(B) Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/ chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(C) Buffing dust generated by the following subcategories of the leather tanning and finishing industry: hair/pulp/chrome tan/retan/wet finish; hair save/chrome tan retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.

(D) Sewer screenings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(E) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(F) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

(G) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.

(H) Wastewater treatment sludges from the production of TiO<sub>2</sub> pigment using chromium-bearing ores by the chloride process.

(7) Solid waste from the extraction, beneficiation, and processing of ores and minerals (including coal, phosphate rock and overburden from the mining of uranium ore), except as provided by 266.112 for facilities that burn or process hazardous waste. For purposes of 261.4(b)(7), beneficiation of ores and minerals is restricted to the following activities: Crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water and/or carbon dioxide; roasting, autoclaving, and/or chlorination in preparation for leaching (except where the roasting (and/or autoclaving and/or chlorination)/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and in situ leaching. For the purposes of 261.4(b)(7), solid waste from the processing of ores and minerals includes only the following wastes:

(i) For the purposes of 261.4(b)(7), beneficiation of ores and minerals is restricted to the following activities; crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water and/or carbon dioxide; roasting, autoclaving, and/or chlorination in preparation for leaching (except where the roasting (and/or autoclaving and/or chlorination)/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and in situ leaching. (12/92)

(ii) For the purposes of 261.4(b)(7), solid waste from the processing of ores and minerals includes only the following wastes as generated:

(A) Slag from primary copper processing;

- (B) Slag from primary lead processing;
- (C) Red and brown muds from bauxite refining;
- (D) Phosphogypsum from phosphoric acid production;
- (E) Slag from elemental phosphorus production;
- (F) Gasifier ash from coal gasification;
- (G) Process wastewater from coal gasification;
- (H) Calcium sulfate wastewater treatment plant sludge from primary copper processing;
- (I) Slag tailings from primary copper processing;
- (J) Fluorogypsum from hydrofluoric acid production;
- (K) Process wastewater from hydrofluoric acid production;
- (L) Air pollution control dust/sludge from iron blast furnaces;
- (M) Iron blast furnace slag;
- (N) Treated residue from roasting/leaching of chrome ore;
- (O) Process wastewater from primary magnesium processing by the anhydrous process;
- (P) Process wastewater from phosphoric acid production;
- (Q) Basic oxygen furnace and open hearth furnace air pollution control dust/sludge from carbon steel production;
- (R) Basic oxygen furnace and open hearth furnace slag from carbon steel production;
- (S) Chloride process waste solids from titanium tetrachloride production;
- (T) Slag from primary zinc processing.

(iii) A residue derived from co-processing mineral processing secondary materials with normal beneficiation raw materials or with normal mineral processing raw materials remains excluded under paragraph (b) of this section if the owner or operator: (11/99)

(A) Processes at least 50 percent by weight normal beneficiation raw materials or normal mineral processing raw materials; and,

(B) Legitimately reclaims the secondary mineral processing materials.

(8) Cement kiln dust waste, except as provided by 266.112 for facilities that burn or process hazardous waste (revised 12/92).

(9) Solid waste which consists of discarded arsenical-treated wood or wood products which fails the test for the Toxicity Characteristic for Hazardous Waste Codes D004 through D017 and which is not a hazardous waste for any other reason, if the waste is generated by persons who utilize the arsenical-treated wood and wood product for these materials' intended end use. (amended 11/90; 12/92)

(10) Petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic of Section 261.24 [Hazardous Waste Codes D016 through D043 only] and are subject to the corrective action requirements of 40 CFR 280.

(11) [Blank]

(12) Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use.

(13) Non-terne plated used oil filters that are not mixed with wastes listed in Subpart D of this part if these oil filters have been gravity hot-drained using one of the following methods:

(i) Puncturing the filter anti-drain back valve or the filter dome end and hot-draining;

(ii) Hot-draining and crushing;

(iii) Dismantling and hot-draining; or

(iv) Any other equivalent hot-draining method that will remove used oil.

(14) Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products.

(15) Leachate or gas condensate collected from landfills where certain solid wastes have been disposed, provided that: (8/00, 6/03)

(i) The solid wastes disposed would meet one or more of the listing descriptions for Hazardous Waste Codes K169, K170, K171, K172, K174, K175, K176, K177, K178, and K181, if these wastes had been generated after the effective date of the listing; (6/03)

(ii) The solid wastes described in paragraph (b)(15)(i) of this section were disposed prior to the effective date of the listing;

(iii) The leachate or gas condensate do not exhibit any characteristic of hazardous waste nor are derived from any other listed hazardous waste;

(iv) Discharge of the leachate or gas condensate, including leachate or gas condensate transferred from the landfill to a POTW by truck, rail, or dedicated pipe, is subject to regulation under sections 307(b) or 402 of the Clean Water Act.

(v) As of February 13, 2001, leachate or gas condensate derived from K169-K172 is no longer exempt if it is stored or managed in a surface impoundment prior to discharge. As of November 21, 2003, leachate or gas condensate derived from K176, K177, and K178 is no longer exempt if it is stored or

managed in a surface impoundment prior to discharge. After February 26, 2007, leachate or gas condensate derived from K181 will no longer be exempt if it is stored or managed in a surface impoundment prior to discharge. There is one exception: if the surface impoundment is used to temporarily store leachate or gas condensate in response to an emergency situation (e.g., shutdown of wastewater treatment system), provided the impoundment has a double liner, and provided the leachate or gas condensate is removed from the impoundment and continues to be managed in compliance with the conditions of this paragraph after the emergency ends. (6/03)

(16) [Reserved]

(17) [Reserved]

(18) Solvent-contaminated wipes, except for wipes that are hazardous waste due to the presence of trichloroethylene, that are sent for disposal are not hazardous wastes from the point of generation provided that:

(i) The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled “Excluded Solvent-Contaminated Wipes.” The containers must be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container must be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions;

(ii) The solvent-contaminated wipes may be accumulated by the generator for up to 180 days from the start date of accumulation for each container prior to being sent for disposal;

(iii) At the point of being transported for disposal, the solvent-contaminated wipes must contain no free liquids as defined in section 260.10 of this chapter.

(iv) Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes must be managed according to the applicable regulations found in parts 260 through 273;

(v) Generators must maintain at their site the following documentation:

(A) Name and address of the landfill or combustor that is receiving the solvent-contaminated wipes;

(B) Documentation that the 180 day accumulation time limit in 261.4(b)(18)(ii) is being met;

(C) Description of the process the generator is using to ensure solvent-contaminated wipes contain no free liquids at the point of being transported for disposal;

(vi) The solvent-contaminated wipes are sent for disposal:

(A) To a municipal solid waste landfill regulated under part 258, including 258.40, or to a hazardous waste landfill regulated under parts 264 or 265; or

(B) To a municipal waste combustor or other combustion facility regulated under section 129 of the Clean Air Act or to a hazardous waste combustor, boiler, or industrial furnace regulated under parts

264, 265, or 266 subpart H.

(c) Hazardous wastes which are exempted from certain regulations. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation under R.61-79.262 through R.61-79.266, R.61-79.268, R.61-79.270, and R.61-79.124 or the notification requirements of South Carolina Hazardous Waste Management Act 44-56-120 and section 3010 RCRA until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials. (amended 11/90)

(d) Samples. (1) Except as provided in paragraph (d)(2) of this section, a sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of this part or R.61-79.262 through R.61-79.266, R.61-79.268, R.61-79.270, or R.61-79.124 or to the notification requirements of section 3010 of RCRA and the South Carolina Hazardous Waste Management Act 44-56-120 when: (amended 11/90)

(i) The sample is being transported to a laboratory for the purpose of testing; or

(ii) The sample is being transported back to the sample collector after testing; or

(iii) The sample is being stored by the sample collector before transport to a laboratory for testing;

or

(iv) The sample is being stored in a laboratory before testing; or

(v) The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

(vi) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

(2) In order to qualify for the exemption in paragraph (d)(1)(i) and (ii), a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

(i) Comply with U. S. Department of Transportation (DOT), U. S. Postal Service (USPS), or any other applicable shipping requirements; or

(ii) Comply with the following requirements if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample:

(A) Assure that the following information accompanies the sample:

(1) The sample collector's name, mailing address, and telephone number;

(2) The laboratory's name, mailing address, and telephone number;

(3) The quantity of the sample;

(4) The date of shipment; and

(5) A description of the sample.

(B) Package the sample so that it does not leak, spill, or vaporize from its packaging.

(3) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in paragraph (d)(1).

(4) In order to qualify for the exemption in paragraphs (d)(1)(i) and (ii) of this section, the mass of a sample that will be exported to a foreign laboratory or that will be imported to a U.S. laboratory from a foreign source must additionally not exceed twenty-five (25) kilograms.

(e) Treatability Study Samples.

(1) Except as provided in paragraph (e)(2) and (4) of this section, persons who generate or collect samples for the purpose of conducting treatability studies as defined in R.61-79.260.10, are not subject to any requirement of R.61-79.261 through 263 or to the notification requirements of SC Hazardous Waste Management Act 44-56-120 and Section 3010 of RCRA, nor are such samples included in the quantity determinations of R.61-79.262.13 when:

(i) The sample is being collected and prepared for transportation by the generator or sample collector; or

(ii) The sample is being accumulated or stored by the generator or sample collector prior to transportation to a laboratory or testing facility; or

(iii) The sample is being transported to the laboratory or testing facility for the purpose of conducting a treatability study.

(2) The exemption in paragraph (e)(1) is applicable to samples of hazardous waste being collected and shipped for the purpose of conducting treatability studies provided that:

(i) The generator or sample collector uses (in “treatability studies”) no more than 10,000 kg of media contaminated with non-acute hazardous waste, 1000 kg of non-acute hazardous waste other than contaminated media, 1 kg of acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste for each process being evaluated for each generated waste stream; and

(ii) The mass of each sample shipment does not exceed 10,000 kg; the 10,000 kg quantity may be all media contaminated with non-acute hazardous waste, or may include 2500 kg of media contaminated with acute hazardous waste, 1000 kg of hazardous waste, and 1 kg of acute hazardous waste; and

(iii) The sample must be packaged so that it will not leak, spill, or vaporize from its packaging during shipment and the requirements of paragraph A or B of this subparagraph are met.

(A) The transportation of each sample shipment complies with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), South Carolina Public Service Commission or any other applicable shipping requirements; or

(B) If the DOT, USPS, South Carolina Public Service Commission or other shipping requirements do not apply to the shipment of the sample, the following information must accompany the sample:

- (1) The name, mailing address, and telephone number of the originator of the sample;
- (2) The name, address, and telephone number of the facility that will perform the treatability study;
- (3) The quantity of the sample;
- (4) The date of shipment; and
- (5) A description of the sample, including its EPA Hazardous Waste Number.

(iv) The sample is shipped to a laboratory or testing facility which is exempt under 261.4(f) or has an appropriate RCRA permit or interim status.

(v) The generator or sample collector maintains the following records for a period ending 3 years after completion of the treatability study:

- (A) Copies of the shipping documents;
- (B) A copy of the contract with the facility conducting the treatability study;
- (C) Documentation showing:

- (1) The amount of waste shipped under this exemption;
- (2) The name, address, and EPA identification number of the laboratory or testing facility that received the waste;
- (3) The date the shipment was made; and
- (4) Whether or not unused samples and residues were returned to the generator.

(vi) The generator reports the information required under paragraph (e)(2)(v)(C) of this section in its annual report.

(3) The Department may grant requests on a case-by-case basis for up to an additional two years for treatability studies involving bioremediation. The Department may grant requests on a case-by-case basis for quantity limits in excess of those specified in paragraphs (e)(2)(i) and (ii) and (f)(4) of this section, for up to an additional 5000 kg of media contaminated with non-acute hazardous waste, 500 kg of non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste and 1 kg of acute hazardous waste;

(i) In response to requests for authorization to ship, store and conduct treatability studies on additional quantities in advance of commencing treatability studies. Factors to be considered in reviewing such requests include the nature of the technology, the type of process (e.g., batch versus continuous), size of the unit undergoing testing (particularly in relation to scale-up considerations), the time/quantity of material required to reach steady state operating conditions, or test design considerations such as mass balance calculations.

(ii) In response to requests for authorization to ship, store and conduct treatability studies on

additional quantities after initiation or completion of initial treatability studies, when: There has been an equipment or mechanical failure during the conduct of a treatability study; there is a need to verify the results of a previously conducted treatability study; there is a need to study and analyze alternative techniques within a previously evaluated treatment process; or there is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment.

(iii) The additional quantities and time frames allowed in paragraph (e)(3) (i) and (ii) of this section are subject to all the provisions in paragraphs (e)(1) and (e)(2)(iii) through (vi) of this section. The generator or sample collector must apply to the Department and provide in writing the following information:

(A) The reason why the generator or sample collector requires additional time or quantity of sample for treatability study evaluation and the additional time or quantity needed;

(B) Documentation accounting for all samples of hazardous waste from the waste stream which have been sent for or undergone treatability studies including the date each previous sample from the waste stream was shipped, the quantity of each previous shipment, the laboratory or testing facility to which it was shipped, what treatability study processes were conducted on each sample shipped, and the available results on each treatability study;

(C) A description of the technical modifications or change in specifications which will be evaluated and the expected results;

(D) If such further study is being required due to equipment or mechanical failure, the applicant must include information regarding the reason for failure or breakdown and also include what procedures or equipment improvements have been made to protect against further breakdowns; and

(E) Such other information that the Department considers necessary.

(4) In order to qualify for the exemption in R.61-79.261.4(e)(1)(i), the mass of a sample that will be exported to a foreign laboratory or testing facility, or that will be imported to a U.S. laboratory or testing facility from a foreign source must additionally not exceed twenty-five (25) kilograms.

(f) **Samples Undergoing Treatability Studies at Laboratories and Testing Facilities.** Samples undergoing treatability studies and the laboratory or testing facility conducting such treatability studies (to the extent such facilities are not otherwise subject to RCRA requirements) are not subject to any requirement of this part, part 124, parts 262 through 266, 268, and 270, or to the notification requirements SCHWMA 44-56-120 and Section 3010 of RCRA provided that the conditions of paragraphs (f) (1) through (11) of this section are met. A mobile treatment unit (MTU) may qualify as a testing facility subject to paragraphs (f) (1) through (11) of this section. Where a group of MTUs are located at the same site, the limitations specified in (f) (1) through (11) of this section apply to the entire group of MTUs collectively as if the group were one MTU. (amended 11/90)

(1) No less than 45 days before conducting treatability studies, the facility notifies the Department in writing that it intends to conduct treatability studies under this paragraph.

(2) The laboratory or testing facility conducting the treatability study has an EPA identification number.

(3) No more than a total of 10,000 kg of “as received” media contaminated with non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste or 250 kg of other “as received” hazardous waste is subject to initiation of treatment in all treatability studies in any single day. “As

received” waste refers to the waste as received in the shipment from the generator or sample collector.

(4) The quantity of “as received” hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed 10,000 kg, the total of which can include 10,000 kg of media contaminated with non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste, 1000 kg of non-acute hazardous wastes other than contaminated media, and 1 kg of acute hazardous waste. This quantity limitation does not include treatment materials (including nonhazardous solid waste) added to “as received” hazardous waste.

(5) No more than 90 days have elapsed since the treatability study for the sample was completed, or no more than one year (two years for treatability studies involving bioremediation) have elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date first occurs. Up to 500 kg of treated material from a particular waste stream from treatability studies may be archived for future evaluation up to five years from the date of initial receipt. Quantities of materials archived are counted against the total storage limit for the facility.

(6) The treatability study does not involve the placement of hazardous waste on the land or open burning of hazardous waste.

(7) The facility maintains records for 3 years following completion of each study that show compliance with the treatment rate limits and the storage time and quantity limits. The following specific information must be included for each treatability study conducted:

(i) The name, address, and EPA identification number of the generator or sample collector of each waste sample;

(ii) The date the shipment was received;

(iii) The quantity of waste accepted;

(iv) The quantity of “as received” waste in storage each day;

(v) The date the treatment study was initiated and the amount of “as received” waste introduced to treatment each day;

(vi) The date the treatability study was concluded;

(vii) The date any unused sample or residues generated from the treatability study were returned to the generator or sample collector or, if sent to a designated facility, the name of the facility and the EPA identification number.

(8) The facility keeps, onsite, a copy of the treatability study contract and all shipping papers associated with the transport of treatability study samples to and from the facility for a period ending 3 years from the completion date of each treatability study.

(f)(9) The facility prepares and submits a report to the Department by March 15 of each year, that includes the following information for the previous calendar year:

(i) The name, address, and EPA identification number of the facility conducting the treatability studies;

- (ii) The types (by process) of treatability studies conducted;
- (iii) The names and addresses of persons for whom studies have been conducted (including their EPA identification numbers);
- (iv) The total quantity of waste in storage each day;
- (v) The quantity and types of waste subjected to treatability studies;
- (vi) When each treatability study was conducted;
- (vii) The final disposition of residues and unused sample from each treatability study.

(10) The facility determines whether any unused sample or residues generated by the treatability study are hazardous waste under 261.3 and, if so, are subject to Parts 261 through 268, and Part 270 of this Chapter, unless the residues and unused samples are returned to the sample originator under the 261.4(e) exemption.

(11) The facility notifies the Department by letter when the facility is no longer planning to conduct any treatability studies at the site.

(g) Dredged material that is not a hazardous waste. Dredged material that is subject to the requirements of a permit that has been issued under 404 of the Federal Water Pollution Control Act (33 U.S.C.1344) or section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413) is not a hazardous waste. For this paragraph (g), the following definitions apply:

(1) The term dredged material has the same meaning as defined in 40 CFR 232.2;

(2) The term permit means:

(i) A permit issued by the U.S. Army Corps of Engineers (Corps) or an approved State under section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344);

(ii) A permit issued by the Corps under section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413); or

(iii) In the case of Corps civil works projects, the administrative equivalent of the permits referred to in paragraphs (g)(2)(i) and (ii) of this section, as provided for in Corps regulations (for example, see 33 CFR 336.1, 336.2, and 337.6).

#### **261.5. [Reserved]**

#### **261.6. Requirements for recyclable materials.**

(a)(1) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of paragraphs (b) and (c) of this section, except for the materials listed in paragraphs (a)(2) and (a)(3) of this section. Hazardous wastes that are recycled will be known as “recyclable materials.”

(2) The following recyclable materials are not subject to the requirements of this section but are regulated under subparts C through N of R.61-79.266 and all applicable provisions in R.61-79.268, 270, and 124.

- (i) Recyclable materials used in a manner constituting disposal (R.61-79.266 subpart C);
- (ii) Hazardous wastes burned (as defined in section 266.100(a)) in boilers and industrial furnaces that are not regulated under subpart O of R.61-79.264 or 265 (R.61-79.266 subpart H);
- (iii) Recyclable materials from which precious metals are reclaimed (R.61-79.266 subpart F);
- (iv) Spent lead-acid batteries that are being reclaimed (R.61-79.266 subpart G).

(3) The following recyclable materials are not subject to regulation under R.61-79.124, 262 through 268, or 270 and are not subject to the notification requirements of the South Carolina Hazardous Waste Management Act 44-56-120 and section 3010 RCRA.

(i) Industrial ethyl alcohol that is reclaimed except that exports and imports of such recyclable materials must comply with the requirements of R.61-79.262 subpart H.

(A) A person initiating a shipment for reclamation in a foreign country, and any intermediary arranging for the shipment, must comply with the requirements applicable to a primary exporter in R.61-79.262 Sections 262.53, 262.56 (a)(1) through (4), (6), and (b), and 262.57, export such materials only upon consent of the receiving country and in conformance with the EPA Acknowledgment of Consent as defined in Subpart E of R.61-79.262 and provide a copy of the EPA Acknowledgment of Consent to the shipment to the transporter transporting the shipment for export;

(B) Transporters transporting a shipment for export may not accept a shipment if he knows the shipment does not conform to the EPA Acknowledgment of Consent, must ensure that a copy of the EPA Acknowledgment of Consent accompanies the shipment and must ensure that it is delivered to the facility designated by the person initiating the shipment.

(ii) Scrap metal that is not excluded under 261.4(a)(13). (10/01);

(iii) Fuels produced from the refining of oil-bearing hazardous waste along with normal process streams at a petroleum refining facility if such wastes result from normal petroleum refining, production, and transportation practices (this exemption does not apply to fuels produced from oil recovered from oil-bearing hazardous waste, where such recovered oil is already excluded under 261.4(a)(12); (10/01)

(iv)(A) Hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from such hazardous wastes, where such hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil so long as the resulting fuel meets the used oil specification under R.61-79.107.279 and so long as no other hazardous wastes are used to produce the hazardous waste fuel; (12/92, 5/96, 6/03)

(B) Hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining production, and transportation practices, where such hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, so long as the fuel meets the used oil fuel specification under R.61-79.107.279; and

(C) Oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used oil fuel specification under R.61-79.107.279; and

(v) [Reserved 5/06]

(vi) Used oil that exhibits one or more of the characteristics of hazardous waste but is recycled in some other manner than being burned for energy recovery (2/92, 8/00, 9/01, 6/03)

(4) Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous characteristic is not subject to the requirements of parts 260 through 268, but is regulated under R.61-79.107.279.11. Used oil that is recycled includes any used oil which is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). Such term includes, but is not limited to, oil which is re-refined, reclaimed, burned for energy recovery, or reprocessed. (12/93)

(5) Hazardous waste that is exported or imported for purpose of recovery is subject to the requirements of R.61-79.262 subpart H.

(b) Generators and transporters of recyclable materials are subject to the applicable requirements of R.61-79.262 and R.61-79.263 of these Regulations, and the notification requirements under 44-56-120 and Section 3010 of RCRA, except as provided in paragraph (a) of this section.

(c)(1) Owners and operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of subparts A through L, AA, BB and CC of R.61-79.264 and R.61-79.265, and under R.61-79.266, R.61-79.268, R.61-79.270, and R.61-79.124 and the notification requirements of section 3010 RCRA and the notification requirements of the South Carolina Hazardous Waste Management Act 44-56-120, except as provided in paragraph (a) of this section. (The recycling process itself is exempt from regulation except as provided in 261.6(d).) (amended 11/90; 12/92)

(2) Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to the following requirements, except as provided in paragraph (a) of this section:

(i) Notification requirements under SCHWMA 44-56-120, and section 264.5 or section 265.5 and section 3010 of RCRA;

(ii) Sections 265.71 and 265.72 (dealing with the use of the manifest and manifest discrepancies) of R.61-79.265.

(iii) Section 261.6(d) of this chapter.

(iv) Section 265.75 of this chapter (quarterly report).

(d) Owners or operators of facilities subject to RCRA permitting requirements with hazardous waste management units that recycle hazardous wastes are subject to the requirements of subparts AA and BB of part 264 or 265 of this chapter.

#### **261.7. Residues of hazardous waste in empty containers.**

(a)(1) Any hazardous waste remaining in either (i) an empty container or (ii) an inner liner removed from an empty container, as defined in paragraph (b) of this section, is not subject to regulation under R.61-79.261 through R.61-79.266, or R.61-79.268, R.61-79.124, and R.61-79.270 or to the notification requirements of Section 3010 RCRA and the South Carolina Hazardous Waste Management Act 44-56-120. (amended 11/90)

(2) Any hazardous waste in either (i) a container that is not empty or (ii) an inner liner removed from

a container that is not empty, as defined in paragraph (b) of this section, is subject to regulation under R.61-79.261 through R.61-79.266, and R.61-79.268, R.61-79.124, and R.61-79.270 and to the notification requirements of section 3010 RCRA and the South Carolina Hazardous Waste Management Act 44-56-120. (amended 11/90)

(b)(1) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acute hazardous waste listed in sections 261.31 or 261.33(e) of this regulation, is empty if:

(i) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, and

(ii) No more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner, or

(iii)(A) No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons in size; or

(B) No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 119 gallons in size.

(2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.

(3) A container or an inner liner removed from a container that has held an acute hazardous waste listed in sections 261.31 or 261.33(e) of this regulation is empty if:

(i) the container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;

(ii) the container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or

(iii) in the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

#### **261.8. PCB wastes regulated under Toxic Substance Control Act.**

The disposal of PCB-containing dielectric fluid and electric equipment containing such fluid authorized for use and regulated under 40 CFR 761 and that are hazardous only because they fail the test for the Toxicity Characteristic (Hazardous Waste Codes D018 through D043 only) are exempt from regulation under parts 261 through 266, and parts 268, 270, and 124, and the notification requirements of section 3010 of RCRA and the South Carolina Hazardous Waste Management Act 44-56-120. (amended 11/90)

#### **261.9. Requirements for Universal Waste.**

The wastes listed in this section are exempt from regulation under parts 262 through 270 except as specified in part 273 and, therefore are not fully regulated as hazardous waste. The wastes listed in this section are subject to regulation under 273: (5/96)

(a) Batteries as described in 273.2;

- (b) Pesticides as described in 273.3;
- (c) Mercury-containing equipment as described in 273; and
- (d) Lamps as described in 273.5.

### ***SUBPART B***

#### ***Criteria for Identifying the Characteristics of Hazardous Waste and for Listing Hazardous Wastes***

#### **261.10. Criteria for identifying the characteristics of hazardous waste.**

(a) The Department shall identify and define a characteristic of hazardous waste in subpart C only upon determination that:

(1) A solid waste that exhibits the characteristic may:

(i) Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(ii) Pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed; and

(2) The characteristic can be:

(i) Measured by an available standardized test method which is reasonably within the capability of generators of solid waste or private sector laboratories that are available to serve generators of solid waste; or

(ii) Reasonably detected by generators of solid waste through their knowledge of their waste.

#### **261.11. Criteria for listing hazardous waste.**

(a) The Department shall list a solid waste as a hazardous waste only upon determining that the solid waste meets one of the following criteria:

(1) It exhibits any of the characteristics of hazardous waste identified in Subpart C.

(2) It has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral LD 50 toxicity (rat) of less than 50 milligrams per kilogram, an inhalation LC 50 toxicity (rat) of less than 2 milligrams per liter, or a dermal LD 50 toxicity (rabbit) of less than 200 milligrams per kilogram or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness. (Waste listed in accordance with these criteria will be designated Acute Hazardous Waste.)

(3) It contains any of the toxic constituents listed in appendix VIII and, after considering the following factors, the Department concludes that the waste is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed:

(i) The nature of the toxicity presented by the constituent.

- (ii) The concentration of the constituent in the waste.
  - (iii) The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in paragraph (a)(3)(vii).
  - (iv) The persistence of the constituent or any toxic degradation product of the constituent.
  - (v) The potential for the constituent or any toxic degradation product of the constituent to degrade into non-harmful constituents and the rate of degradation.
  - (vi) The degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems.
  - (vii) The plausible types of improper management to which the waste could be subjected.
  - (viii) The quantities of the waste generated at individual generation sites or on a regional or national basis.
  - (ix) The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent.
  - (x) Action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent.
  - (xi) Such other factors as may be appropriate. Substances will be listed in Appendix VIII only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on humans or other life forms. (Wastes listed in accordance with these criteria will be designated Toxic wastes.)
- (b) The Department list classes or types of solid waste as hazardous waste if there is reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste in Section 261.3 and found in section 1004(5) of RCRA.
- (c) The Department will use the criteria for listing specified in this section to establish the exclusion limits referred to in section 262.13.

***SUBPART C***  
***Characteristics of Hazardous Waste***

**261.20. General.**

(a) A solid waste, as defined in section 261.2, which is not excluded from regulation as a hazardous waste under section 261.4(b), is a hazardous waste if it exhibits any of the characteristics identified in this subpart.

[Comment: 262.11 of this chapter sets forth the generators responsibility to determine whether his waste exhibits one or more of the characteristics identified in this subpart]

(b) A hazardous waste which is identified by a characteristic in this subpart is assigned every EPA Hazardous Waste Number that is applicable as set forth in this subpart. This number must be used in

complying with the notification requirements of section 3010 of the Act and all applicable recordkeeping and reporting requirements under R.61-79.262 through R.61-79.266, R.61-79.268, R.61-79.270 and the notification requirements of the South Carolina Hazardous Waste Management Act 44-56-120 (amended 11/90).

(c) For purposes of this subpart, the Department will consider a sample obtained using any of the applicable sampling methods specified in Appendix I to be a representative sample within the meaning of R.61-79.260.

[Comment: Since the appendix I sampling methods are not being formally adopted by the Department, a person who desires to employ an alternative sampling method is not required to demonstrate the equivalency of his method under the procedures set forth in 260.20 and 260.21.]

### **261.21. Characteristic of ignitability.**

(a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

(1) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and has flash point less than 60 degrees C (140 degrees F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79 or D-93-80 (incorporated by reference, see 260.11) or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78 (incorporated by reference, see 260.11) or as determined by an equivalent test method approved by the Department under procedures set forth in R.61-79.260.20 and 260.21. (amended 11/90)

(2) It is not a liquid and is capable under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes, and when ignited, burns so vigorously and persistently that it creates a hazard.

(3) It is an ignitable compressed gas.

(i) The term “compressed gas” shall designate any material or mixture having in the container an absolute pressure exceeding 40 p.s.i. at 70 degrees F or, regardless of the pressure at 70 degrees F, having an absolute pressure exceeding 104 p.s.i. at 130 degrees F; or any liquid flammable material having a vapor pressure exceeding 40 p.s.i. absolute at 100 degrees F as determined by ASTM Test D-323.

(ii) A compressed gas shall be characterized as ignitable if any one of the following occurs:

(A) Either a mixture of 13 percent or less (by volume) with air forms a flammable mixture or the flammable range with air is wider than 12 percent regardless of the lower limit. These limits shall be determined at atmospheric temperature and pressure. The method of sampling and test procedure shall be acceptable to the Bureau of Explosives and approved by the Department, Pipeline and Hazardous Materials Technology, US. Department of Transportation (see Note 2).

(B) Using the Bureau of Explosives’ Flame Projection Apparatus (see Note 1), the flame projects more than 18 inches beyond the ignition source with valve opened fully, or, the flame flashes back and burns at the valve with any degree of valve opening.

(C) Using the Bureau of Explosives’ Open Drum Apparatus (see Note 1), there is any significant propagation of flame away from the ignition source.

(D) Using the Bureau of Explosives' Closed Drum Apparatus (see Note 1), there is any explosion of the vapor-air mixture in the drum.

(4) It is an oxidizer. An oxidizer for the purpose of this subchapter is a substance such as a chlorate, permanganate, inorganic peroxide, or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter. (See Note 4)

(i) An organic compound containing the bivalent -O-O- structure and which may be considered a derivative of hydrogen peroxide where one or more of the hydrogen atoms have been replaced by organic radicals must be classed as an organic peroxide unless:

(A) The material meets the definition of a Class A explosive or a Class B explosive, as defined in 261.23(a)(8), in which case it must be classed as an explosive,

(B) The material is forbidden to be offered for transportation according to 49 CFR 172.101 and 49 CFR 173.21,

(C) It is determined that the predominant hazard of the material containing an organic peroxide is other than that of an organic peroxide, or

(D) According to data on file with the Pipeline and Hazardous Materials Safety Administration in the U.S. Department of Transportation (see Note 3), it has been determined that the material does not present a hazard in transportation.

(b) A solid waste that exhibits the characteristic of ignitability has the EPA Hazardous Waste Number of D001.

Note 1: A description of the Bureau of Explosives' Flame Projection Apparatus, Open Drum Apparatus, Closed Drum Apparatus, and method of tests may be procured from the Bureau of Explosives.

Note 2: As part of a U.S. Department of Transportation (DOT) reorganization, the Office of Hazardous Materials Technology (OHMT), which was the office listed in the 1980 publication of 49 CFR 173.300 for the purposes of approving sampling and test procedures for a flammable gas, ceased operations on February 20, 2005. OHMT programs have moved to the Pipeline and Hazardous Materials Safety Administration (PHMSA) in the DOT.

Note 3: As part of a U.S. Department of Transportation (DOT) reorganization, the Research and Special Programs Administration (RSPA), which was the office listed in the 1980 publication of 49 CFR 173.151a for the purposes of determining that a material does not present a hazard in transport, ceased operations on February 20, 2005. RSPA programs have moved to the Pipeline and Hazardous Materials Safety Administration (PHMSA) in the DOT.

Note 4: The DOT regulatory definition of an oxidizer was contained in 173.151 of 49 CFR and the definition of an organic peroxide was contained in paragraph 173.151a. An organic peroxide is a type of oxidizer.

## **261.22. Characteristic of corrosivity.**

(a)(1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in 260.11. (12/93)

(2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE (National Association of Corrosion Engineers) Standard TM-01-69 as standardized in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA publication SW-846, incorporated by reference in R.61-79.260.11 (revised 12/93)

(b) A solid waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number of D002.

### **261.23. Characteristic of reactivity.**

(a) A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

(1) It is normally unstable and readily undergoes violent change without detonating.

(2) It reacts violently with water.

(3) It forms potentially explosive mixtures with water.

(4) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

(5) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

(6) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.

(7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

(8) It is a forbidden explosive as defined in 49 CFR 173.54, or is a Division 1.1, 1.2 or 1.3 explosive as defined in 49 CFR 173.50 and 173.53.

(b) A solid waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number of D003.

### **261.24. Toxicity characteristic.**

(a) A solid waste (except manufactured gas plant waste) exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procedure, test Method 1311 in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, as incorporated by reference in 260.11, the extract from a representative sample of the waste contains any of the contaminants listed in Table I at the concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purpose of this section. (12/92; 12/93; 12/94)

(b) A solid waste that exhibits the characteristic of toxicity has the EPA Hazardous Waste Number

specified in Table 1 which corresponds to the toxic contaminant causing it to be hazardous.

Table I.—Maximum Concentration of Contaminants for the Toxicity Characteristic  
(amended 11/90)

EPA HW No.1	Contaminant	CAS No.2	Regulatory Level
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	4200.0
D024	m-Cresol	108-39-4	4200.0
D025	p-Cresol	106-44-5	4200.0
D026	Cresol	.....	4200.0
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	30.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	30.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methy ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	35.0
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,5-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

1Hazardous waste number.

2Chemical abstracts service number.

3Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore

becomes the regulatory level.
4If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

**SUBPART D**  
***Lists of Toxic Hazardous Wastes***

**261.30. General.**

(a) A solid waste is a hazardous waste if it is listed in this Subpart, unless it has been excluded from this list under R.61-79.260.20 and 260.22.

(b) The Department will indicate the basis for listing the classes or types of wastes listed in this Subpart by employing one or more of the following Hazard Codes:

Ignitable Waste	(I)
Corrosive Waste	(C)
Reactive Waste	(R)
Toxicity Characteristic Waste	(E)
Acute Hazardous Waste	(H)
Toxic Waste	(T)

Appendix VII identifies the constituent which caused the Department to list the waste as a Toxic Characteristic (E) or Toxic Waste (T) in Sections 261.31 and 261.32.

(c) Each hazardous waste listed in this Subpart is assigned an EPA Hazardous Waste Number which precedes the name of the waste. This number must be used in complying with notification requirements and certain recordkeeping and reporting requirements under R.61-79.262 through R.61-79.265, R.61-79.268, and R.61-79.270.

(d) The following hazardous wastes listed in section 261.31 are subject to the exclusion limits for acutely hazardous wastes established in section 261.5: EPA Hazardous Wastes Nos. F020, F021, F022, F023, F026 and F027.

**261.31. Hazardous wastes from nonspecific sources.**

(a) The following solid wastes are listed hazardous wastes from non-specific sources unless they are excluded under R.61-79.260.20 and 260.22 and listed in appendix IX; [only changes are listed; see Appendix A-1].

Industry and EPA HW #	Table 261.31 Hazardous waste from nonspecific sources (amended 11/90; 12/92)	Hazard code
Generic:		
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005, and still bottoms from the recovery of these spent solvents and spent solvent	(T)

	mixtures.	
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1, 1, 2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvents mixtures.	(T)
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I)*
F004	The following spent non-halogenated solvents; Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvents mixtures.	(T)
F005	The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I,T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating a carbon steel; (5) cleaning/stripping associated with ten, zinc and aluminum plating a carbon steel, and (6) chemical etching and milling of aluminum.	(T)
F007	Spent cyanide plating bath solutions from electroplating operations.	(R,T)
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.	(R,T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	(R,T)
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	(R,T)
F011	Spent cyanide solutions from salt bath pot clearing from metal heat treating operations.	(R,T)
F012	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.	(T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.(revised 12/93) Wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process will not be subject to this listing at the point of generation if the wastes are not placed outside on the land prior to shipment to a landfill for	(T)

	disposal and are either: disposed in a Subtitle D municipal or industrial landfill unit that is equipped with a single clay liner and is permitted, licensed or otherwise authorized by the state; or disposed in a landfill unit subject to, or otherwise meeting, the landfill requirements in 258.40, 264.301 or 265.301. For the purposes of this listing, motor vehicle manufacturing is defined in paragraph (b)(4)(i) of this section and (b)(4)(ii) of this section describes the recordkeeping requirements for motor vehicle manufacturing facilities.	
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol).	(H)
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol or of intermediates used to produce its derivatives.	(H)
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra, penta-, or hexachlorobenzenes under alkaline conditions.	(H)
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) or tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of Hexachlorophene from highly purified 2,4,5-trichlorophenol.)	(H)
F024	Process wastes, including, but not limited to, distillation residues, heavy ends, tars, and reactor cleanout wastes from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. [This listing does not include wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in Section 261.31 or 261.32]. (revised 12/93)	(T)
F025	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and depositions of chlorine substitution.	(T)
F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.	(H)
F027	Discarded unused formulations containing tri-, tetra- or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from pre-purified 2,4,5-trichlorophenol as the sole component.)	(H)
F028	Residues resulting from the incineration or thermal treatment of soil contaminated	(T)

	with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.	
F032	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with 261.35 or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. (revised 12/93)	(T)
F034	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. (revised 12/93)	(T)
F035	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. (revised 12/93)	(T)
F037	Petroleum refinery primary oil/water/solids separation sludge-Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to: those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under 261.4(a)(12)(i), if those residuals are to be disposed of. (8/00)	(T)
F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge-Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in 261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing (revised 12/92).	(T)

F039	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of this part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F023, F026, F027, and/or F028.) (revised 12/92; 12/93).	(T)
*(I,T) should be used to specify mixtures that are ignitable and contain toxic constituents.		

(b) Listing Specific Definitions:

(1) For the purposes of the F037 and F038 listings, oil/water/solids is defined as oil and/or water and/or solids.

(2)(i) For the purposes of the F037 and F038 listings, aggressive biological treatment units are defined as units which employ one of the following four treatment methods: activated sludge; trickling filter; rotating biological contactor for the continuous accelerated biological oxidation of wastewaters; or high-rate aeration. High-rate aeration is a system of surface impoundments or tanks, in which intense mechanical aeration is used to completely mix the wastes, enhance biological activity, and (A) the units employs a minimum of 6 hp per million gallons of treatment volume; and either (B) the hydraulic retention time of the unit is no longer than 5 days; or (C) the hydraulic retention time is no longer than 30 days and the unit does not generate a sludge that is a hazardous waste by the Toxicity Characteristic.

(ii) Generators and treatment, storage and disposal facilities have the burden of proving that their sludges are exempt from listing as F037 and F038 wastes under this definition. Generators and treatment, storage and disposal facilities must maintain, in their operating or other onsite records, documents and data sufficient to prove that:

(A) the unit is an aggressive biological treatment unit as defined in this subsection; and

(B) the sludges sought to be exempted from the definitions of F037 and/or F038 were actually generated in the aggressive biological treatment unit.

(3)(i) For the purposes of the F037 listing, sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement.

(ii) For the purposes of the F038 listing,

(A) sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement and

(B) floats are considered to be generated at the moment they are formed in the top of the unit.

(4) For the purposes of F019 listing, the following apply to wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process.

(i) Motor vehicle manufacturing is defined to include the manufacture of automobiles and light trucks/utility vehicles (including light duty vans, pick-up trucks, minivans, and sport utility vehicles). Facilities must be engaged in manufacturing complete vehicles (body and chassis or unibody) or chassis only.

(ii) Generators must maintain in their on-site records documentation and information sufficient to prove that the wastewater treatment sludges to be exempted from the F019 listing meet the conditions of the listing. These records must include: the volume of waste generated and disposed of off site; documentation showing when the waste volumes were generated and sent off site; the name and address of the receiving facility; and documentation confirming receipt of the waste by the receiving facility. Generators must maintain these documents on site for no less than three (3) years. The retention period for the documentation is automatically extended during the course of any enforcement action or as requested by the Department or the state regulatory authority.

**261.32. Hazardous wastes from specific sources.**

(a) The following solid wastes are listed hazardous wastes from specific sources unless they are excluded under 260.20 and 260.22 and listed in Appendix IX. 261.32. Table is now also (a) (12/92, 5/96, 9/98, 9/01)

Industry, SC & EPA HW #	261.32 Hazardous Wastes from specific sources - Hazardous waste	Hazard code
Wood preservation:		
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
Inorganic pigments:		
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments.	(T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments.	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments.	(T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).	(T)
K007	Wastewater treatment sludge from the production of iron blue pigments.	(T)
K008	Oven residue from the production of chrome oxide green pigments.	(T)
Organic chemicals:		
K009	Distillation bottoms from the production of acetaldehyde from ethylene.	(T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene.	(T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile.	(R, T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile.	(R, T)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile.	(T)
K015	Still bottoms from the distillation of benzyl chloride.	(T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.	(T)
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.	(T)
K018	Heavy ends from the fractionation column in ethyl chloride production.	(T)

K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.	(T)
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.	(T)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production.	(T)
K022	Distillation bottom tars from the production of phenol/acetone from cumene.	(T)
K023	Distillation light ends from the production of phthalic anhydride from naphthalene.	(T)
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.	(T)
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	(T)
K026	Stripping still tails from the production of methy ethyl pyridines.	(T)
K027	Centrifuge and distillation residues from toluene diisocyanate production.	(R, T)
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.	(T)
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.	(T)
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.	(T)
K083	Distillation bottoms from aniline production.	(T)
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.	(T)
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene.	(T)
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.	(T)
K095	Distillation bottoms from the production of 1,1,1-trichloroethane.	(T)
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.	(T)
K103	Process residues from aniline extraction from the production of aniline.	(T)
K104	Combined wastewater streams generated from nitrobenzene/aniline production.	(T)
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.	(T)
K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(C, T)
K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(I, T)
K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(T)
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(T)
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene.	(C, T)
K112	Reaction by-product water from the drying column in the production of	(T)

	toluenediamine via hydrogenation of dinitrotoluene.	
K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.	(T)
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.	(T)
K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K149	Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups, (This waste does not include still bottoms from the distillation of benzyl chloride.).	(T)
K150	Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	(T)
K151	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	(T)
K156	Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.).	(T)
K157	Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.).	(T)
K158	Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.).	(T)
K159	Organics from the treatment of thiocarbamate wastes	(T)
K161	Purification solids (including filtration, evaporation, and centrifugation solids), bag house dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125 or K126.).	(R, T)
K174	Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer (including sludges that result from commingled ethylene dichloride or vinyl chloride monomer wastewater and other wastewater), unless the sludges meet the following conditions: (i) they are disposed of in a subtitle C or non-hazardous landfill licensed or permitted	(T)

	by the state or federal government; (ii) they are not otherwise placed on the land prior to final disposal; and (iii) the generator maintains documentation demonstrating that the waste was either disposed of in an on-site landfill or consigned to a transporter or disposal facility that provided a written commitment to dispose of the waste in an off-site landfill. Respondents in any action brought to enforce the requirements of subtitle C must, upon a showing by the government that the respondent managed wastewater treatment sludges from the production of vinyl chloride monomer or ethylene dichloride, demonstrate that they meet the terms of the exclusion set forth above. In doing so, they must provide appropriate documentation (e.g., contracts between the generator and the landfill owner/operator, invoices documenting delivery of waste to landfill, etc.) that the terms of the exclusion were met. (6/02)	
K175	Wastewater treatment sludges from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process. (6/02)	(T)
K181	Nonwastewaters from the production of dyes and/or pigments (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in paragraph (c) of this section that are equal to or greater than the corresponding paragraph (c) levels, as determined on a calendar year basis. These wastes will not be hazardous if the nonwastewaters are: (i) disposed in a Subtitle D landfill unit subject to the design criteria in R 61-107.258.40, (ii) disposed in a Subtitle C landfill unit subject to either 264.301 or 265.301, (iii) disposed in other Subtitle D landfill units that meet the design criteria in R. 61-107.258.40, 264.301, or 265.301, or (iv) treated in a combustion unit that is permitted under Subtitle C, or an onsite combustion unit that is permitted under the Clean Air Act. For the purposes of this listing, dyes and/or pigments production is defined in paragraph (b)(1) of this section. Paragraph (d) of this section describes the process for demonstrating that a facility's nonwastewaters are not K181. This listing does not apply to wastes that are otherwise identified as hazardous under 261.21-261.24 and 261.31-261.33 at the point of generation. Also, the listing does not apply to wastes generated before any annual mass loading limit is met. (2/07)	(T)
Inorganic chemicals:		
K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.	(T)
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	(T)
K106	Wastewater treatment sludge from the mercury cell process in chlorine production.	(T)
K176	Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (e.g., antimony metal or crude antimony oxide). (6/03)	(E)
K177	Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (e.g., antimony metal or crude antimony oxide). (6/03)	(T)
K178	Residues from manufacturing and manufacturing site storage of ferric	(T)

	chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process. (6/03)	
Pesticides:		
K031	By-product salts generated in the production of MSMA and cacodylic acid.	(T)
K032	Wastewater treatment sludge from the production of chlordane.	(T)
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.	(T)
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.	(T)
K035	Wastewater treatment sludges generated in the production of creosote.	(T)
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton.	(T)
K037	Wastewater treatment sludges from the production of disulfoton.	(T)
K038	Wastewater from the washing and stripping of phorate production.	(T)
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.	(T)
K040	Wastewater treatment sludge from the production of phorate.	(T)
K041	Wastewater treatment sludge from the production of toxaphene.	(T)
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.	(T)
K043	2,6-Dichlorophenol waste from the production of 2,4-D.	(T)
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.	(T)
K098	Untreated process wastewater from the production of toxaphene.	(T)
K099	Untreated wastewater from the production of 2,4-D.	(T)
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt.	(T)
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.	(C, T)
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.	(T)
K126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.	(T)
K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.	(C, T)
K132	Spent absorbent and wastewater separator solids from the production of methyl bromide.	(T)
Explosives:		
K044	Wastewater treatment sludges from the manufacturing and processing of explosives.	(R)
K045	Spent carbon from the treatment of wastewater containing explosives.	(R)
K046	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.	(T)
K047	Pink/red water from TNT operations.	(R)
Petroleum refining:		
K048	Dissolved air flotation (DAF) float from the petroleum refining industry.	(T)
K049	Slop oil emulsion solids from the petroleum refining industry.	(T)

K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.	(T)
K051	API separator sludge from the petroleum refining industry.	(T)
K052	Tank bottoms (leaded) from the petroleum refining industry.	(T)
K169	Crude oil storage tank sediment from petroleum refining operations (8/00)	(T)
K170	Clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations (8/00)	(T)
K171	Spent Hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media)	(I, T)
K172	Spent Hydrorefining catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media.) (8/00)	(I, T)
Iron and Steel		
K061	Emission control dust/sludge from the primary production of steel in electric furnaces.	(T)
K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332).	(C, T)
Primary aluminum:		
K088	Spent potliners from primary aluminum reduction.	(T)
Secondary lead:		
K069	Emission control dust/sludge from secondary lead smelting. (Note: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action affecting this stay, EPA will publish a notice of the action in the Federal Register).	(T)
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.	(T)
Veterinary pharmaceuticals:		
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
Ink formulation:		
K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.	(T)
Coking:		
K060	Ammonia still lime sludge from coking operations.	(T)
K087	Decanter tank tar sludge from coking operations(6/95).	(T)
K141	Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the	(T)

	recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludges from coking operations).	
K142	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.	(T)
K143	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.	(T)
K144	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.	(T)
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.	(T)
K147	Tar storage tank residues from coal tar refining.	(T)
K148	Residues from coal tar distillation, including but not limited to, still bottoms.	(T)
Organotins:		
K900	Waste residues from the manufacture of organotin compounds which contain tri-(organo) substituted tin compounds, to include tributyltin and its analogs. (5/02)	(T)

(b) Listing Specific Definitions:

(1) For the purposes of the K181 listing, dyes and/or pigments production is defined to include manufacture of the following product classes: dyes, pigments, or FDA certified colors that are classified as azo, triarylmethane, perylene or anthraquinone classes. Azo products include azo, monoazo, diazo, triazo, polyazo, azoic, benzidine, and pyrazolone products. Triarylmethane products include both triarylmethane and triphenylmethane products. Wastes that are not generated at a dyes and/or pigments manufacturing site, such as wastes from the offsite use, formulation, and packaging of dyes and/or pigments, are not included in the K181 listing.

(c) K181 Listing Levels. Nonwastewaters containing constituents in amounts equal to or exceeding the following levels during any calendar year are subject to the K181 listing, unless the conditions in the K181 listing are met.

261.32 (c) Constituent	Chemical abstracts No.	Mass levels (kg/yr)
Aniline	62-53-3	9,300
o-Anisidine	90-04-0	110
4-Chloroaniline	106-47-8	4,800
p-Cresidine	120-71-8	660
2,4-Dimethylaniline	95-68-1	100
1,2-Phenylenediamine	95-54-5	710
1,3-Phenylenediamine	108-45-2	1,200

(d) Procedures for demonstrating that dyes and/or pigment nonwastewaters are not K181. The procedures described in paragraphs (d)(1)-(d)(3) and (d)(5) of this section establish when nonwastewaters from the production of dyes/pigments would not be hazardous (these procedures apply to wastes that are not disposed in landfill units or treated in combustion units as specified in paragraph (a) of this section). If the nonwastewaters are disposed in landfill units or treated in combustion units as described in paragraph (a)

of this section, then the nonwastewaters are not hazardous. In order to demonstrate that it is meeting the landfill disposal or combustion conditions contained in the K181 listing description, the generator must maintain documentation as described in paragraph (d)(4) of this section.

(1) Determination based on no K181 constituents. Generators that have knowledge (e.g., knowledge of constituents in wastes based on prior sampling and analysis data and/or information about raw materials used, production processes used, and reaction and degradation products formed) that their wastes contain none of the K181 constituents (see paragraph (c) of this section) can use their knowledge to determine that their waste is not K181. The generator must document the basis for all such determinations on an annual basis and keep each annual documentation for three years.

(2) Determination for generated quantities of 1,000 MT/yr or less for wastes that contain K181 constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is 1,000 metric tons or less, the generator can use knowledge of the wastes (e.g., knowledge of constituents in wastes based on prior analytical data and/or information about raw materials used, production processes used, and reaction and degradation products formed) to conclude that annual mass loadings for the K181 constituents are below the listing levels of paragraph (c) of this section. To make this determination, the generator must:

(i) Each year document the basis for determining that the annual quantity of nonwastewaters expected to be generated will be less than 1,000 metric tons.

(ii) Track the actual quantity of nonwastewaters generated from January 1 through December 31 of each year. If, at any time within the year, the actual waste quantity exceeds 1,000 metric tons, the generator must comply with the requirements of paragraph (d)(3) of this section for the remainder of the year.

(iii) Keep a running total of the K181 constituent mass loadings over the course of the calendar year.

(iv) Keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:

(A) The quantity of dyes and/or pigment nonwastewaters generated.

(B) The relevant process information used.

(C) The calculations performed to determine annual total mass loadings for each K181 constituent in the nonwastewaters during the year.

(3) Determination for generated quantities greater than 1,000 MT/yr for wastes that contain K181 constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is greater than 1,000 metric tons, the generator must perform all of the steps described in paragraphs (d)(3)(i)-(d)(3)(xi) of this section in order to make a determination that its waste is not K181.

(i) Determine which K181 constituents (see paragraph (c) of this section) are reasonably expected to be present in the wastes based on knowledge of the wastes (e.g., based on prior sampling and analysis data and/or information about raw materials used, production processes used, and reaction and degradation products formed).

(ii) If 1,2-phenylenediamine is present in the wastes, the generator can use either knowledge or sampling and analysis procedures to determine the level of this constituent in the wastes. For determinations based on use of knowledge, the generator must comply with the procedures for using knowledge described in paragraph (d)(2) of this section and keep the records described in paragraph (d)(2)(iv) of this section. For

determinations based on sampling and analysis, the generator must comply with the sampling and analysis and recordkeeping requirements described below in this section.

(iii) Develop a waste sampling and analysis plan (or modify an existing plan) to collect and analyze representative waste samples for the K181 constituents reasonably expected to be present in the wastes. At a minimum, the plan must include:

(A) A discussion of the number of samples needed to characterize the wastes fully;

(B) The planned sample collection method to obtain representative waste samples;

(C) A discussion of how the sampling plan accounts for potential temporal and spatial variability of the wastes.

(D) A detailed description of the test methods to be used, including sample preparation, clean up (if necessary), and determinative methods.

(iv) Collect and analyze samples in accordance with the waste sampling and analysis plan.

(A) The sampling and analysis must be unbiased, precise, and representative of the wastes.

(B) The analytical measurements must be sufficiently sensitive, accurate and precise to support any claim that the constituent mass loadings are below the listing levels of paragraph (c) of this section.

(v) Record the analytical results.

(vi) Record the waste quantity represented by the sampling and analysis results.

(vii) Calculate constituent-specific mass loadings (product of concentrations and waste quantity).

(viii) Keep a running total of the K181 constituent mass loadings over the course of the calendar year.

(ix) Determine whether the mass of any of the K181 constituents listed in paragraph (c) of this section generated between January 1 and December 31 of any year is below the K181 listing levels.

(x) Keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:

(A) The sampling and analysis plan.

(B) The sampling and analysis results (including QA/QC data)

(C) The quantity of dyes and/or pigment nonwastewaters generated.

(D) The calculations performed to determine annual mass loadings.

(xi) Nonhazardous waste determinations must be conducted annually to verify that the wastes remain nonhazardous.

(A) The annual testing requirements are suspended after three consecutive successful annual

demonstrations that the wastes are nonhazardous. The generator can then use knowledge of the wastes to support subsequent annual determinations.

(B) The annual testing requirements are reinstated if the manufacturing or waste treatment processes generating the wastes are significantly altered, resulting in an increase of the potential for the wastes to exceed the listing levels.

(C) If the annual testing requirements are suspended, the generator must keep records of the process knowledge information used to support a nonhazardous determination. If testing is reinstated, a description of the process change must be retained.

(4) Recordkeeping for the landfill disposal and combustion exemptions. For the purposes of meeting the landfill disposal and combustion condition set out in the K181 listing description, the generator must maintain on site for three years documentation demonstrating that each shipment of waste was received by a landfill unit that is subject to or meets the landfill design standards set out in the listing description, or was treated in combustion units as specified in the listing description.

(5) Waste holding and handling. During the interim period, from the point of generation to completion of the hazardous waste determination, the generator is responsible for storing the wastes appropriately. If the wastes are determined to be hazardous and the generator has not complied with the subtitle C requirements during the interim period, the generator could be subject to an enforcement action for improper management.

### **261.33. Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.**

The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded as described in Section 261.2(a)(2)(i), when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when they are otherwise applied to the land in lieu of their original intended use or when they are contained in products that are applied to the land in lieu of their original intended use, or when, in lieu of their original intended use, they are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a fuel.

(a) Any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in paragraphs (e) or (f).

(b) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraphs (e) or (f) of this section.

(c) Any residue remaining in a container or in an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (e) or (f) of this section, unless the container is empty as defined in Section 261.7(b).

[Comment: Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed; or being accumulated, stored, transported or treated prior to such use, reuse, recycling or reclamation, the Department considers the residue to be intended for discard, and thus, a hazardous waste. An example of a legitimate reuse of the residue would be where the residue remains in the container and the container is used to hold the same commercial chemical product or manufacturing chemical intermediate it previously held. An example of the discard of the residue would be where the drum is sent to a drum reconditioner who reconditions the drum but discards the residue.]

(d) Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (e) or (f) of this section, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) or (f) of this section.

[Comment: The phrase “commercial chemical product or manufacturing chemical intermediate having the generic name listed in ...” refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in paragraph (e) or (f). Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in paragraph (e) or (f), such waste will be listed in either sections 261.31 or 261.32 or will be identified as a hazardous waste by the characteristics set forth in subpart C of this part.]

(e) The commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products or manufacturing chemical intermediates referred to in paragraphs (a) through (d) of this section, are identified as acute hazardous wastes (H).

[Comment: For the convenience of the regulated community the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity (revised 12/92). Wastes are first listed in alphabetical order by substance and then listed again in numerical order by Hazardous Waste Number.]

These wastes and their corresponding EPA Hazardous Waste Numbers are:

Section 261.33(e) Lists of Acute Hazardous Wastes (amended 11/90; 12/92; 5/96)		
HW No.	Chemical Abstracts No.	Substance
P023	107-20-0	Acetaldehyde, chloro-
P002	591-08-2	Acetamide, N- (aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro-
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-3	Aldicarb
P203	1646-88-4	Aldicarb sulfone.(added 5/96)
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide (R,T)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium picrate (R)
P119	7803-55-6	Ammonium vanadate
P099	506-61-6	Argentate(1-), bis(cyano-C-), potassium
P010	7778-39-4	Arsenic acid H3AsO4

P012	1327-53-3	Arsenic oxide As <sub>2</sub> O <sub>3</sub>
P011	1303-28-2	Arsenic oxide As <sub>2</sub> O <sub>5</sub>
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl-
P036	696-28-6	Arsonous dichloride, phenyl-
P054	151-56-4	Aziridine
P067	75-55-8	Aziridine, 2-methyl-
P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro-
P028	100-44-7	Benzene, (chloromethyl)
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2- (methylamino)ethyl-], (R)
P046	122-09-8	Benzeneethanamine, alpha, alpha-dimethyl-
P014	108-98-5	Benzenethiol
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2, 2-dimethyl-, methylcarbamate. (added 5/96)
P188	57-64-7	Benzoic acid, 2-hydroxy-, compd. with (3a <i>S</i> -cis)-1,2,3,3a,8,8a- hexahydro-1,3a,8-trimethyl- pyrrolo[2,3- <i>b</i> ]indol-5-yl methylcarbamate ester (1:1). (added 5/96)
P001	181-81-2	2H-1-Benzopyran-2-one, 4- hydroxy-3- (3-oxo-1- phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
P028	100-44-7	Benzyl chloride
P015	7440-41-7	Beryllium powder
P017	598-31-2	Bromoacetone
P018	357-57-3	Brucine
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1- (methylthio)- O-[(methyl-amino)carbonyl]oxime
P021	592-01-8	Calcium cyanide
P021	592-01-8	Calcium cyanide Ca(CN) <sub>2</sub>
P022	75-15-0	Carbon disulfide
P189	55285-14-8	Carbamic acid, [(dibutylamino)- thio]methyl-, 2,3-dihydro-2, 2-dimethyl- 7-benzofuranyl ester (added 5/96)
P191	644-64-4	Carbamic acid, dimethyl-, 1- [(dimethyl-amino)carbonyl]- 5-methyl-1H-pyrazol-3-yl ester. (added 5/96)
P192	119-38-0	Carbamic acid, dimethyl-, 3- methyl-1- (1-methylethyl) -1H- pyrazol-5-yl ester. (added 5/96)
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester. (added 5/96)
P127	1563-66-2	Carbofuran. (added 5/96)
P095	75-44-5	Carbonic dichloride
P189	55285-14-8	Carbosulfan. (added 5/96)
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
P027	542-76-7	3-Chloropropionitrile
P029	544-92-3	Copper cyanide
P029	544-92-3	Copper cyanide Cu(CN)
P202	64-00-6	m-Cumenyl methylcarbamate. (added 5/96)
P030		Cyanides (soluble cyanide salts), not otherwise specified

P031	460-19-5	Cyanogen
P033	506-77-4	Cyanogen chloride
P033	506-77-4	Cyanogen chloride (CN)Cl
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol
P016	542-88-1	Dichloromethyl ether
P036	696-28-6	Dichlorophenylarsine
P037	60-57-1	Dieldrin
P038	692-42-2	Diethylarsine
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	55-91-4	Diisopropylfluorophosphate (DFP)
P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa- chloro- 1,4,4a,5,8,8a-, hexahydro-, (1alpha,4alpha,4abeta, 5alpha,8alpha,8abeta)-
P060	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10- hexa- chloro- 1,4,4a,5,8,8a- hexahydro-, (1alpha,4alpha,4abeta, 5beta,8beta,8abeta)-
P037	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b] oxirene, 3,4,5,6,9,9- hexachloro- 1a,2,2a,3,6,6a,7, 7a-octahydro-, (1alpha,2beta, 2alpha,3beta, 6beta, 6alpha,7beta,7alpha)-
P051	172-20-8	2,7:3,6-Dimethanonaphth [2,3-b] oxirene, 3,4,5,6,9,9- hexachloro- 1a,2,2a,3,6,6a,7,7a-octahydro-, (1alpha, 2beta,2abeta,3alpha, 6alpha,6abeta,7beta, 7alpha)-, & metabolites
P044	60-51-5	Dimethoate
P191	644-64-4	Dimetilan.(added 5/96)
P046	122-09-8	alpha,alpha-Dimethyl-phenethylamine
P047	1534-52-1	4,6-Dinitro-o-cresol, & salts
P048	51-28-5	2,4-Dinitrophenol
P020	88-85-7	Dinoseb
P085	152-16-9	Diphosphoramidate, octamethyl-
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P039	298-04-4	Disulfoton
P049	541-53-7	Dithiobiuret
P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O- [(methyl- amino)- carbonyl]oxime. (added 5/96)
P050	115-29-7	Endosulfan
P088	145-73-3	Endothall
P051	72-20-8	Endrin
P051	72-20-8	Endrin, & metabolites
P042	51-43-4	Epinephrine
P031	460-19-5	Ethanedinitrile
P194	23135-22-0	Ethanimidothioic acid, 2- (dimethylamino)-N- [[(methylamino)carbonyl]oxy] -2-oxo-, methyl ester. (added 5/96)
P066	16752-77-5	Ethanimidothioic acid, N- [[(methylamino)carbonyl]oxy]-, methyl ester
P101	107-12-0	Ethyl cyanide
P054	151-56-4	Ethyleneimine
P097	52-85-7	Famphur
P056	7782-41-4	Fluorine
P057	640-19-7	Fluoroacetamide
P198	23422-53-9	Formetanate hydrochloride. (added 5/96)

P197	17702-57-7	Formparanate.(added 5/96)
P058	62-74-8	Fluoroacetic acid, sodium salt
P065	628-86-4	Fulminic acid, mercury(2+) salt (R,T)
P059	76-44-8	Heptachlor
P062	757-58-4	Hexaethyl tetraphosphate
P116	79-19-6	Hydrazinecarbothioamide
P068	60-34-4	Hydrazine, methyl-
P063	74-90-8	Hydrocyanic acid
P063	74-90-8	Hydrogen cyanide
P096	7803-51-2	Hydrogen phosphide
P060	465-73-6	Isodrin
P192	119-38-0	Isolan.(added 5/96)
P202	64-00-6	3-Isopropylphenyl N-methyl- carbamate. (added 5/96)
P007	2763-96-4	3(2H)-Isoxazolone, 5- (aminomethyl)-
P196	15339-36-3	Manganese, bis(dimethyl- carbamodithioato-S,S')-, (added 5/96)
P196	15339-36-3	Manganese dimethyldithio- carbamate. (added 5/96)
P092	62-38-4	Mercury, (acetato-O)phenyl-
P065	628-86-4	Mercury fulminate (R,T)
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P064	624-83-9	Methane, isocyanato-
P016	542-88-1	Methane, oxybis[chloro-
P112	509-14-8	Methane, tetranitro- (R)
P198	23422-53-9	Methanimidamide, N,N-dimethyl- N'-[3- [[(methylamino) - carbonyl]oxy]phenyl]-, monohydrochloride. (added 5/96)
P197	17702-57-7	Methanimidamide, N,N-dimethyl- N'-[2-methyl-4-[[[(methylamino) carbonyl]oxy]phenyl]- (added 5/96)
P199	2032-65-7	Methiocarb. (added 5/96)
P118	75-70-7	Methanethiol, trichloro-
P050	115-29-7	6,9-Methano-2,4,3- benzodioxathiepin, 6,7, 8,9,10,10- hexachloro-1,5, 5a,6,9,9a-hexahydro-, 3-oxide
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6, 7,8,8-heptachloro-3a,4,7, 7a-tetrahydro-
P066	16752-77-5	Methomyl
P068	60-34-4	Methyl hydrazine
P064	624-83-9	Methyl isocyanate
P069	75-86-5	2-Methylactonitrile
P071	298-00-0	Methyl parathion
P190	1129-41-5	Metolcarb. (added 5/96)
P128	315-18-4	Mexacarbate. (added 5/96)
P072	86-88-4	alpha-Naphthylthiourea
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl Ni(CO)4, (T-4)-
P074	557-19-7	Nickel cyanide
P074	557-19-7	Nickel cyanide Ni(CN)2
P075	154-11-5	Nicotine, & salts
P076	10102-43-9	Nitric oxide
P077	100-01-6	p-Nitroaniline
P078	10102-44-0	Nitrogen dioxide
P076	10102-43-9	Nitrogen oxide NO

P078	10102-44-0	Nitrogen oxide NO2
P081	55-63-0	Nitroglycerine (R)
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P085	152-16-9	Octamethylpyrophosphoramidate
P087	20816-12-0	Osmium oxide OsO4, (T-4)-
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	7-Oxabicyclo[2.2.1]heptane-2, 3-dicarboxylic acid
P194	23135-22-0	Oxamyl. (added 5/96)
P089	56-38-2	Parathion
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-
P048	51-28-5	Phenol, 2,4-dinitro
P047	1534-52-1	Phenol, 2-methyl-4,6-dinitro, & salts
P020	88-85-7	Phenol, 2-(1-methylpropyl)4,6- dinitro-
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P128	315-18-4	Phenol, 4-(dimethylamino)-3,5- dimethyl-, methylcarbamate (ester). (added 5/96)
P199	2032-65-7	Phenol, (3,5-dimethyl-4- (methylthio)-, methylcarbamate (added 5/96)
P202	64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate. (added 5/96)
P201	2631-37-0	Phenol, 3-methyl-5-(1- methylethyl)-, methyl carbamate. (added 5/96)
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P094	298-02-2	Phorate
P095	75-44-5	Phosgene
P096	7803-51-2	Phosphine
P041	311-45-5	Phosphoric acid, diethyl 4- nitrophenyl ester
P039	298-04-4	Phosphorodithioic acid, O,O- diethyl S-[2-(ethyl- thio)ethyl]ester
P094	298-02-2	Phosphorodithioic acid, O,O- diethyl S-[(ethyl- thio)methyl]ester
P044	60-51-5	Phosphorodithioic acid, O,O- dimethyl S-[2-(methyl- amino)-2-oxoethyl] ester
P043	55-91-4	Phosphorofluoridic acid, bis (1-methylethyl) ester
P040	297-97-2	Phosphorothioic acid, O,O- diethyl O-pyrazinyl ester
P097	52-85-7	Phosphorothioic acid, O-[4- [(dimethylamino)sulfonyl] phenyl] O,Odimethyl ester
P071	298-00-0	Phosphorothioic acid, O,O,- dimethyl O-(4-nitrophenyl) ester
P204	57-47-6	Physostigmine. (added 5/96)
P188	57-64-7	Physostigmine salicylate. (added 5/96)
P110	78-00-2	Plumbane, tetraethyl-
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K(CN)
P099	506-61-6	Potassium silver cyanide
P201	2631-37-0	Promecarb (added 5/96)
P203	1646-88-4	Propanal, 2-methyl-2-(methyl- sulfonyl)-, O-[(methylamino) carbonyl] oxime. (added 5/96)
P070	116-06-3	Propanal, 2-methyl-2- (methylthio)-, O-[(methyl- amino)carbonyl]oxime
P101	107-12-0	Propanenitrile
P027	542-76-7	Propanenitrile, 3-chloro-
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl
P081	55-63-0	1,2,3-Propanetriol, trinitrate

P089	56-38-2	Phosphorothioic acid, O,O- diethyl O-(4-nitrophenyl) (R)
P017	598-31-2	2-Propanone, 1-bromo-
P102	107-19-7	Propargyl alcohol
P003	107-02-8	2-Propenal
P005	107-18-6	2-Propen-1-ol
P067	75-55-8	1,2Propylenimine
P102	107-19-7	2-Propyn-1-ol
P008	504-24-5	4-Pyridinamine
P075	154-11-5	Pyridine, 3-(1-methyl-2- pyrrolidinyl)-, (S)-, & salts
P204	57-47-6	Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1, 3a,8-trimethyl-, methyl-carbamate (ester), (3aS-cis)-. (added 5/96)
P114	12039-52-0	Selenious acid, dithallium(1+) salt
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag(CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na(CN)
P108	157-24-9	Strychnidin-10-one, & salts
P018	357-57-3	Strychnidin-10-one, 2,3- dimethoxy-
P108	157-24-9	Strychnine, & salts
P115	7446-18-6	Sulfuric acid, dithallium(1+) salt
P109	3689-24-5	Tetraethyldithiopyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Tetranitromethane (R)
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl <sub>2</sub> O <sub>3</sub>
P114	12039-52-0	Thallium(I) selenite
P115	7446-18-6	Thallium(I) sulfate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P045	39196-18-4	Thiofanox
P049	541-53-7	Thioimidodicarbonic diamide [(H <sub>2</sub> N)C(S)] <sub>2</sub> NH
P014	108-98-5	Thiophenol
P116	79-19-6	Thiosemicarbazide
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P072	86-88-4	Thiourea, 1-naphthalenyl-
P093	103-85-5	Thiourea, phenyl-
P185	26419-73-8	Tirpate. (added 5/96)
P123	8001-35-2	Toxaphene
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V <sub>2</sub> O <sub>5</sub>
P120	1314-62-1	Vanadium pentoxide
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-
P001	181-81-2	Warfarin, & salts, when present at concentrations greater than 0.3%
P205	137-30-4	Zinc, bis(dimethylcarbamodithioato-S,S')-, (added 5/96)

P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide Zn(CN) <sub>2</sub>
P122	1314-84-7	Zinc phosphide Zn <sub>3</sub> P <sub>2</sub> , when present at concentrations greater than 10% (R,T)
P205	137-30-4	Ziram. (added 5/96)
FOOTNOTE: ICAS Number given for parent compound only.		

(f) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products referred to in paragraphs (a) through (d) of this section, are identified as toxic wastes (T), unless otherwise designated.

[Comment: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability) and C (Corrosivity). Absence of a letter indicates that the compound is only listed for toxicity (revised 12/92; 5/96). Wastes are first listed in alphabetical order by substance and then listed again in numerical order by Hazardous Waste Number.]

These wastes and their corresponding EPA Hazardous Waste Numbers are:

261.33(f) Lists of Subpart D Toxic Hazardous Wastes		
HW #	CAS#	Substance (11/90; 12/92; 12/93; 5/96, 9/98)
U394	30558-43-1	A2213 (5/96)
U001	75-07-0	Acetaldehyde (I)
U034	75-87-6	Acetaldehyde, trichloro-
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)-
U005	53-96-3	Acetamide, N-9H-fluoren-2-yl-
U240	194-75-7	Acetic acid, (2,4-dichlorophenoxy)-, salts & esters
U112	141-78-6	Acetic acid ethyl ester (I)
U144	301-04-2	Acetic acid, lead(2+) salt
U214	563-68-8	Acetic acid, thallium(1+) salt
see F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
U002	67-64-1	Acetone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone
U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide
U008	79-10-7	Acrylic acid (I)
U009	107-13-1	Acrylonitrile
U011	61-82-5	Amitrole
U012	62-53-3	Aniline (I,T)
U136	75-60-5	Arsinic acid, dimethyl-

U014	492-80-8	Auramine
U015	115-02-6	Azaserine
U010	50-07-7	Azirino[2',3':3,4]pyrrolo(1,2-a)indole-4,7-dione, 6-amino-8-[[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta,8aalpha,8balpha)]-
U280	101-27-9	Barban. (5/96)
U278	22781-23-3	Bendiocarb. (5/96)
U364	22961-82-6	Bendiocarb phenol. (5/96)
U271	17804-35-2	Benomyl. (5/96)
U157	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U016	225-51-4	Benz[c]acridine
U017	98-87-3	Benzal chloride
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-
U018	56-55-3	Benz[a]anthracene
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
U012	62-53-3	Benzenamine (I,T)
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl-
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-
U328	95-53-4	Benzenamine, 2-methyl-
U353	106-49-0	Benzenamine, 4-methyl-
U158	101-14-4	Benzenamine, 4,4'-methylenebis[2-chloro-
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-
U019	71-43-2	Benzene (I,T)
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-
U035	305-03-3	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U037	108-90-7	Benzene, chloro-
U221	25376-45-8	Benzenediamine, ar-methyl-
U028	117-81-	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester

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U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
U070	95-50-1	Benzene, 1,2-dichloro-
U071	541-73-1	Benzene, 1,3-dichloro-
U072	106-46-7	Benzene, 1,4-dichloro-
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-
U017	98-87-3	Benzene, (dichloromethyl)-
U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl- (R,T)
U239	1330-20-7	Benzene, dimethyl- (I)
U201	108-46-3	1,3-Benzenediol
U127	118-74-1	Benzene, hexachloro-
U056	110-82-7	Benzene, hexahydro- (I)
U220	108-88-3	Benzene, methyl-
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-
U055	98-82-8	Benzene, (1-methylethyl)- (I)
U169	98-95-3	Benzene, nitro-
U183	608-93-5	Benzene, pentachloro-
U185	82-68-8	Benzene, pentachloronitro-
U020	98-09-9	Benzenesulfonic acid chloride (C,R)
U020	98-09-9	Benzenesulfonyl chloride (C,R)
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4- chloro-
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4- methoxy-
U023	98-07-7	Benzene, (trichloromethyl)-
U234	99-35-4	Benzene, 1,3,5-trinitro-
U021	92-87-5	Benzidine
U202	181-07-2	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts
U278	22781-23-3	1,3Benzodioxol-4ol, 2,2dimethyl, methyl carbamate. (5/96)
U364	22961-82-6	1,3Benzodioxol4ol, 2,2dimethyl,

U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
U367	1563-38-8	7Benzofuranol, 2,3-dihydro2,2-dimethyl (5/96)
U090	94-58-6	1,3-Benzodioxole, 5-propyl-
U064	189-55-9	Benzo[rsst]pentaphene
U248	181-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl- butyl)-, & salts, when present at concentrations of 0.3% or less
U022	50-32-8	Benzo[a]pyrene
U197	106-51-4	p-Benzoquinone
U023	98-07-7	Benzotrichloride (C,R,T)
U085	1464-53-5	2,2'-Bioxirane
U021	92-87-5	[1,1'-Biphenyl]-4,4'-diamine
U073	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
U091	119-90-4	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-
U095	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
U225	75-25-2	Bromoform
U030	101-55-3	4-Bromophenyl phenyl ether
U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-
U031	71-36-3	1-Butanol (I)
U159	78-93-3	2-Butanone (I,T)
U160	1338-23-4	2-Butanone, peroxide (R,T)
U053	4170-30-3	2-Butenal
U074	764-41-0	2-Butene, 1,4-dichloro- (I,T)
U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]- 2,3,5,7a-tetrahydro-1H- pyrrolizin-1-yl ester,... [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-
U031	71-36-3	n-Butyl alcohol (I)
U136	75-60-5	Cacodylic acid
U032	13765-19-0	Calcium chromate
U372	10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl, methyl
U271	17804-35-2	Carbamic acid, [1-[(butylamino)carbonyl]-1H- benzimidazol-2-yl]-, methyl ester. (5/96)
U280	101-27-9	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2- butynyl ester. (5/96)

U373	122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester.
U409	23564-05-8	Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)]bis-, dimethyl ester. (5/96)
U238	51-79-6	Carbamic acid, ethyl ester
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester
U097	79-44-7	Carbamic chloride, dimethyl-
U114	1111-54-6	Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters
U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester
U389	2303-17-5	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester. (5/96)
U387	52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester. (5/96)
U279	63-25-2	Carbaryl. (5/96)
U372	10605-21-7	Carbendazim. (5/96)
U367	1563-38-8	Carbofuran phenol. (5/96)
U215	6533-73-9	Carbonic acid, dithallium(1+) salt
U033	353-50-4	Carbonic difluoride
U156	79-22-1	Carbonochloridic acid, methyl ester (I, T)
U033	353-50-4	Carbon oxyfluoride (R, T)
U211	56-23-5	Carbon tetrachloride
U034	75-87-6	Chloral
U035	305-03-3	Chlorambucil
U036	57-74-9	Chlordane, alpha & gamma isomers
U026	494-03-1	Chlornaphazin
U037	108-90-7	Chlorobenzene
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol
U042	110-75-8	2-Chloroethyl vinyl ether
U044	67-66-3	Chloroform
U046	107-30-2	Chloromethyl methyl ether
U047	91-58-7	beta-Chloronaphthalene
U048	95-57-8	o-Chlorophenol
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride

U032	13765-19-0	Chromic acid H <sub>2</sub> CrO <sub>4</sub> , calcium salt
U050	218-01-9	Chrysene
U051	----	Creosote
U052	1319-77-3	Cresol (Cresylic acid)
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Cumene (I)
U246	506-68-3	Cyanogen bromide (CN)Br
U197	106-51-4	2,5-Cyclohexadiene-1,4-dione
U056	110-82-7	Cyclohexane (I)
U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
U057	108-94-1	Cyclohexanone (I)
U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U058	50-18-0	Cyclophosphamide
U240	194-75-7	2,4-D, salts & esters
U059	20830-81-3	Daunomycin
U060	72-54-8	DDD
U061	50-29-3	DDT
U062	2303-16-4	Diallate
U063	53-70-3	Dibenz[a,h]anthracene
U064	189-55-9	Dibenzo[a,i]pyrene
U066	96-12-8	1,2-Dibromo-3-chloropropane
U069	84-74-2	Dibutyl phthalate
U070	95-50-1	o-Dichlorobenzene
U071	541-73-1	m-Dichlorobenzene
U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	3,3'-Dichlorobenzidine
U074	764-41-0	1,4-Dichloro-2-butene (I, T)
U075	75-71-8	Dichlorodifluoromethane
U078	75-35-4	1,1-Dichloroethylene
U079	156-60-5	1,2-Dichloroethylene
U025	111-44-4	Dichloroethyl ether
U027	108-60-	Dichloroisopropyl ether

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U024	111-91-1	Dichloromethoxy ethane
U081	120-83-2	2,4-Dichlorophenol
U082	87-65-0	2,6-Dichlorophenol
U084	542-75-6	1,3-Dichloropropene
U085	1464-53-5	1,2:3,4-Diepoxybutane (I, T)
U108	123-91-1	1,4-Diethyleneoxide
U028	117-81-7	Diethylhexyl phthalate
U395	5952-26-1	Diethylene glycol, dicarbamate. (5/96)
U086	1615-80-1	N,N'-Diethylhydrazine
U087	3288-58-2	O,O-Diethyl S-methyl dithiophosphate
U088	84-66-2	Diethyl phthalate
U089	56-53-1	Diethylstilbesterol
U090	94-58-6	Dihydrosafrole
U091	119-90-4	3,3'-Dimethoxybenzidine
U092	124-40-3	Dimethylamine (I)
U093	60-11-7	p-Dimethylaminoazobenzene
U094	57-97-6	7,12-Dimethylbenz[a]anthracene
U095	119-93-7	3,3'-Dimethylbenzidine
U096	80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U097	79-44-7	Dimethylcarbonyl chloride
U098	57-14-7	1,1-Dimethylhydrazine
U099	540-73-8	1,2-Dimethylhydrazine
U101	105-67-9	2,4-Dimethylphenol
U102	131-11-3	Dimethyl phthalate
U103	77-78-1	Dimethyl sulfate
U105	121-14-2	2,4-Dinitrotoluene
U106	606-20-2	2,6-Dinitrotoluene
U107	117-84-0	Di-n-octyl phthalate
U108	123-91-1	1,4-Dioxane

U109	122-66-7	1,2-Diphenylhydrazine
U110	142-84-7	Dipropylamine (I)
U111	621-64-7	Di-n-propylnitrosamine
U041	106-89-8	Epichlorohydrin
U001	75-07-0	Ethanal (I)
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-
U404	121-44-8	Ethanamine, N,N-diethyl- (5/96)
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2- pyridinyl-N'-(2-thienylmethyl)-
U067	106-93-4	Ethane, 1,2-dibromo-
U076	75-34-3	Ethane, 1,1-dichloro-
U077	107-06-2	Ethane, 1,2-dichloro-
U131	67-72-1	Ethane, hexachloro-
U024	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U117	60-29-7	Ethane, 1,1'-oxybis-(I)
U025	111-44-4	Ethane, 1,1'-oxybis[2-chloro-
U184	76-01-7	Ethane, pentachloro-
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-
U218	62-55-5	Ethanethioamide
U226	71-55-6	Ethane, 1,1,1-trichloro-
U227	79-00-5	Ethane, 1,1,2-trichloro-
U410	59669-26-0	Ethanimidothioic acid, N,N'-[thiobis[(methylimino)carbonyloxy]]bis-, dimethyl ester (5/96)
U394	30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-N- hydroxy-2-oxo-, methyl ester.
U359	110-80-5	Ethanol, 2-ethoxy-
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-
U395	5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate. (5/96)
U004	98-86-2	Ethanone, 1-phenyl-
U043	75-01-4	Ethene, chloro-
U042	110-75-8	Ethene, (2-chloroethoxy)-
U078	75-35-4	Ethene, 1,1-dichloro-
U079	156-60-5	Ethene, 1,2-dichloro-, (E)-
U210	127-18-	Ethene, tetrachloro-

	4	
U228	79-01-6	Ethene, trichloro-
U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)
U238	51-79-6	Ethyl carbamate (urethane)
U117	60-29-7	Ethyl ether (I)
U114	1111-54-6	Ethylenebisdithiocarbamic acid, salts & esters
U067	106-93-4	Ethylene dibromide
U077	107-06-2	Ethylene dichloride
U359	110-80-5	Ethylene glycol monoethyl ether
U115	75-21-8	Ethylene oxide (I, T)
U116	96-45-7	Ethylenethiourea
U076	75-34-3	Ethylidene dichloride
U118	97-63-2	Ethyl methacrylate
U119	62-50-0	Ethyl methanesulfonate
U120	206-44-0	Fluoranthene
U122	50-00-0	Formaldehyde
U123	64-18-6	Formic acid (C, T)
U124	110-00-9	Furan (I)
U125	98-01-1	2-Furancarboxaldehyde (I)
U147	108-31-6	2,5-Furandione
U213	109-99-9	Furan, tetrahydro-(I)
U125	98-01-1	Furfural (I)
U124	110-00-9	Furfuran (I)
U206	18883-66-4	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-
U206	18883-66-4	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)- carbonyl]amino]-
U126	765-34-4	Glycidylaldehyde
U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-
U127	118-74-1	Hexachlorobenzene
U128	87-68-3	Hexachlorobutadiene
U130	77-47-4	Hexachlorocyclopentadiene
U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene
U243	1888-	Hexachloropropene

	71-7	
U133	302-01-2	Hydrazine (R, T)
U086	1615-80-1	Hydrazine, 1,2-diethyl-
U098	57-14-7	Hydrazine, 1,1-dimethyl-
U099	540-73-8	Hydrazine, 1,2-dimethyl-
U109	122-66-7	Hydrazine, 1,2-diphenyl-
U134	7664-39-3	Hydrofluoric acid (C, T)
U134	7664-39-3	Hydrogen fluoride (C, T)
U135	7783-06-4	Hydrogen sulfide
U135	7783-06-4	Hydrogen sulfide H <sub>2</sub> S
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U116	96-45-7	2-Imidazolidinethione
U137	193-39-5	Indeno[1,2,3-cd]pyrene
U190	85-44-9	1,3-Isobenzofurandione
U140	78-83-1	Isobutyl alcohol (I, T)
U141	120-58-1	Isosafrole
U142	143-50-0	Kepone
U143	303-34-4	Lasiocarpine
U144	301-04-2	Lead acetate
U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-
U145	7446-27-7	Lead phosphate
U146	1335-32-6	Lead subacetate
U129	58-89-9	Lindane
U163	70-25-7	MNNG
U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide
U149	109-77-3	Malononitrile
U150	148-82-3	Melphalan
U151	7439-	Mercury

	97-6	
U152	126-98-7	Methacrylonitrile (I, T)
U092	124-40-3	Methanamine, N-methyl- (I)
U029	74-83-9	Methane, bromo-
U045	74-87-3	Methane, chloro- (I, T)
U046	107-30-2	Methane, chloromethoxy-
U068	74-95-3	Methane, dibromo-
U080	75-09-2	Methane, dichloro-
U075	75-71-8	Methane, dichlorodifluoro-
U138	74-88-4	Methane, iodo-
U119	62-50-0	Methanesulfonic acid, ethyl ester
U211	56-23-5	Methane, tetrachloro-
U153	74-93-1	Methanethiol (I, T)
U225	75-25-2	Methane, tribromo-
U044	67-66-3	Methane, trichloro-
U121	75-69-4	Methane, trichlorofluoro-
U036	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8- octachloro-2,3,3a,4,7,7a-hexahydro-
U154	67-56-1	Methanol (I)
U155	91-80-5	Methapyrilene
U142	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-
U247	72-43-5	Methoxychlor
U154	67-56-1	Methyl alcohol (I)
U029	74-83-9	Methyl bromide
U186	504-60-9	1-Methylbutadiene (I)
U045	74-87-3	Methyl chloride (I, T)
U156	79-22-1	Methyl chlorocarbonate (I, T)
U226	71-55-6	Methyl chloroform
U157	56-49-5	3-Methylcholanthrene
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)
U068	74-95-3	Methylene bromide
U080	75-09-2	Methylene chloride
U159	78-93-3	Methyl ethyl ketone (MEK) (I, T)
U160	1338-23-4	Methyl ethyl ketone peroxide (R, T)
U138	74-88-4	Methyl iodide
U161	108-10-1	Methyl isobutyl ketone (I)
U162	80-62-6	Methyl methacrylate (I, T)
U161	108-10-1	4-Methyl-2-pentanone (I)
U164	56-04-2	Methylthiouracil
U010	50-07-7	Mitomycin C

U059	20830-81-3	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxohexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-
U167	134-32-7	1-Naphthalenamine
U168	91-59-8	2-Naphthalenamine
U026	494-03-1	Naphthalenamine, N,N'-bis(2-chloroethyl)-
U165	91-20-3	Naphthalene
U047	91-58-7	Naphthalene, 2-chloro-
U166	130-15-4	1,4-Naphthalenedione
U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt
U279	63-25-2	1-Naphthalenol, methylcarbamate. (5/96)
U166	130-15-4	1,4-Naphthoquinone
U167	134-32-7	alpha-Naphthylamine
U168	91-59-8	beta-Naphthylamine
U217	10102-45-1	Nitric acid, thallium(1+) salt
U169	98-95-3	Nitrobenzene (I, T)
U170	100-02-7	p-Nitrophenol
U171	79-46-9	2-Nitropropane (I, T)
U172	924-16-3	N-Nitrosodi-n-butylamine
U173	1116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	N-Nitrosodiethylamine
U176	759-73-9	N-Nitroso-N-ethylurea
U177	684-93-5	N-Nitroso-N-methylurea
U178	615-53-2	N-Nitroso-N-methylurethane
U179	100-75-4	N-Nitrosopiperidine
U180	930-55-2	N-Nitrosopyrrolidine
U181	99-55-8	5-Nitro-o-toluidine
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide
U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine, N,N- bis(2-chloroethyl)tetrahydro-, 2-oxide
U115	75-21-8	Oxirane (I, T)
U126	765-34-4	Oxiranecarboxyaldehyde
U041	106-89-8	Oxirane, (chloromethyl)-

U182	123-63-7	Paraldehyde
U183	608-93-5	Pentachlorobenzene
U184	76-01-7	Pentachloroethane
U185	82-68-8	Pentachloronitrobenzene (PCNB)
See F027	87-86-5	Pentachlorophenol
U161	108-10-1	Pentanol, 4-methyl-
U186	504-60-9	1,3-Pentadiene (I)
U187	62-44-2	Phenacetin
U188	108-95-2	Phenol
U048	95-57-8	Phenol, 2-chloro-
U039	59-50-7	Phenol, 4-chloro-3-methyl-
U081	120-83-2	Phenol, 2,4-dichloro-
U082	87-65-0	Phenol, 2,6-dichloro-
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-
U101	105-67-9	Phenol, 2,4-dimethyl-
U052	1319-77-3	Phenol, methyl-
U132	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-
U411	114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate. (5/96)
U170	100-02-7	Phenol, 4-nitro-
See F027	87-86-5	Phenol, pentachloro-
See F027	58-90-2	Phenol, 2,3,4,6-tetrachloro-
See F027	95-95-4	Phenol, 2,4,5-trichloro-
See F027	88-06-2	Phenol, 2,4,6-trichloro-
U150	148-82-3	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-
U145	7446-27-7	Phosphoric acid, lead(2+) salt (2:3)
U087	3288-58-2	Phosphorodithioic acid, O,O-diethyl S-methyl ester
U189	1314-80-3	Phosphorus sulfide (R)
U190	85-44-9	Phthalic anhydride
U191	109-06-8	2-Picoline

U179	100-75-4	Piperidine, 1-nitroso-
U192	23950-58-5	Pronamide
U194	107-10-8	1-Propanamine (I, T)
U111	621-64-7	1-Propanamine, N-nitroso-N-propyl-
U110	142-84-7	1-Propanamine, N-propyl- (I)
U066	96-12-8	Propane, 1,2-dibromo-3-chloro-
U083	78-87-5	Propane, 1,2-dichloro-
U149	109-77-3	Propanedinitrile
U171	79-46-9	Propane, 2-nitro- (I, T)
U027	108-60-1	Propane, 2,2'-oxybis[2-chloro-
U193	1120-71-4	1,3-Propane sultone
See F027	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U140	78-83-1	1-Propanol, 2-methyl- (I, T)
U002	67-64-1	2-Propanone (I)
U007	79-06-1	2-Propenamide
U084	542-75-6	1-Propene, 1,3-dichloro-
U243	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-
U009	107-13-1	2-Propenenitrile
U152	126-98-7	2-Propenenitrile, 2-methyl- (I, T)
U008	79-10-7	2-Propenoic acid (I)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester (I, T)
U373	112-42-9	Propham. (5/96)
U411	114-26-1	Propoxur. (5/96)
U194	107-10-8	n-Propylamine (I, T)
U083	78-87-5	Propylene dichloride
U387	52888-80-9	Prosulfocarb. (5/96)
U148	123-33-	3,6-Pyridazinedione, 1,2-dihydro-

	1	
U196	110-86-1	Pyridine
U191	109-06-8	Pyridine, 2-methyl-
U237	66-75-1	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thio-
U180	930-55-2	Pyrrolidine, 1-nitroso-
U200	50-55-5	Reserpine
U201	108-46-3	Resorcinol
U203	94-59-7	Safrole
U204	7783-00-8	Selenious acid
U204	7783-00-8	Selenium dioxide
U205	7488-56-4	Selenium sulfide
U205	7488-56-4	Selenium sulfide SeS <sub>2</sub> (R, T)
U015	115-02-6	L-Serine, diazoacetate (ester)
See F027	93-72-1	Silvex (2,4,5-TP)
U206	18883-66-4	Streptozotocin
U103	77-78-1	Sulfuric acid, dimethyl ester
U189	1314-80-3	Sulfur phosphide (R)
See F027	93-76-5	2,4,5-T
U207	95-94-3	1,2,4,5-Tetrachlorobenzene
U208	630-20-6	1,1,1,2-Tetrachloroethane
U209	79-34-5	1,1,2,2-Tetrachloroethane
U210	127-18-4	Tetrachloroethylene
See F027	58-90-2	2,3,4,6-Tetrachlorophenol
U213	109-99-9	Tetrahydrofuran (I)
U214	563-68-8	Thallium(I) acetate
U215	6533-73-9	Thallium(I) carbonate
U216	7791-12-0	Thallium(I) chloride
U216	7791-	Thallium chloride TlCl

	12-0	
U217	10102-45-1	Thallium(I) nitrate
U218	62-55-5	Thioacetamide
U410	59669-26-0	Thiodicarb. (5/96)
U153	74-93-1	Thiomethanol (I, T)
U244	137-26-8	Thioperoxydicarbonic diamide [(H2N)C(S)]2S2,tetramethyl-
U409	23564-05-8	Thiophanate-methyl. (5/96)
U219	62-56-6	Thiourea
U244	137-26-8	Thiram
U220	108-88-3	Toluene
U221	25376-45-8	Toluenediamine
U223	26471-62-5	Toluene diisocyanate (R, T)
U328	95-53-4	o-Toluidine
U353	106-49-0	p-Toluidine
U222	636-21-5	o-Toluidine hydrochloride
U389	2303-17-5	Triallate. (5/96)
U011	61-82-5	1H-1,2,4-Triazol-3-amine
U227	79-00-5	1,1,2-Trichloroethane
U228	79-01-6	Trichloroethylene
U121	75-69-4	Trichloromonofluoromethane
See F027	95-95-4	2,4,5-Trichlorophenol
See F027	88-06-2	2,4,6-Trichlorophenol
U404	121-44-8	Triethylamine.(5/96)
U234	99-35-4	1,3,5-Trinitrobenzene (R, T)
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	Trypan blue
U237	66-75-1	Uracil mustard
U176	759-73-9	Urea, N-ethyl-N-nitroso-
U177	684-93-5	Urea, N-methyl-N-nitroso-
U043	75-01-4	Vinyl chloride

U248	181-81-2	Warfarin, & salts, when present at concentrations of 0.3% or less
U239	1330-20-7	Xylene (I)
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-
U249	1314-84-7	Zinc phosphide Zn <sub>3</sub> P <sub>2</sub> , when present at concentrations of 10% or less
ICAS Number given for parent compound only.		

### 261.35. Deletion of certain hazardous waste codes following equipment cleaning and replacement.

(a) Wastes from wood preserving processes at plants that do not resume or initiate use of chlorophenolic preservatives will not meet the listing definition of F032 once the generator has met all of the requirements of paragraphs (b) and (c) of this section. These wastes may, however, continue to meet another hazardous waste listing description or may exhibit one or more of the hazardous waste characteristics.

(b) Generators must either clean or replace all process equipment that may have come into contact with chlorophenolic formulations or constituents thereof, including, but not limited to, treatment cylinders, sumps, tanks, piping systems, drip pads, fork lifts, and trams, in a manner that minimizes or eliminates the escape of hazardous waste or constituents, leachate, contaminated drippage, or hazardous waste decomposition products to the ground water, surface water, or atmosphere.

(1) Generators shall do one of the following:

(i) Prepare and follow an equipment cleaning plan and clean equipment in accordance with this section;

(ii) Prepare and follow an equipment replacement plan and replace equipment in accordance with this section; or

(iii) Document cleaning and replacement in accordance with this section, carried out after termination of use of chlorophenolic preservations.

(2) Cleaning Requirements.

(i) Prepare and sign a written equipment cleaning plan that describes:

(A) The equipment to be cleaned;

(B) How the equipment will be cleaned;

(C) The solvent to be used in cleaning;

(D) How solvent rinses will be tested; and

(E) How cleaning residues will be disposed.

(ii) Equipment must be cleaned as follows:

(A) Remove all visible residues from process equipment;

(B) Rinse process equipment with an appropriate solvent until dioxins and dibenzofurans are not detected in the final solvent rinse.

(iii) Analytical requirements.

(A) Rinses must be tested in accordance with SW-846, Method 8290.

(B) “Not detected” means at or below the lower method calibration limit (MCL) in Method 8290, Table 1.

(iv) The generator must manage all residues from the cleaning process as F032 waste.

(3) Replacement requirements.

(i) Prepare and sign a written equipment replacement plan that describes:

(A) The equipment to be replaced;

(B) How the equipment will be replaced; and

(C) How the equipment will be disposed.

(ii) The generator must manage the discarded equipment as F032 waste.

(4) Documentation requirements.

(i) Document that previous equipment cleaning and/or replacement was performed in accordance with this section and occurred after cessation of use of chlorophenolic preservatives.

(c) The generator must maintain the following records documenting the cleaning and replacement as part of the facility’s operating record:

(1) The name and address of the facility;

(2) Formulations previously used and the date on which their use ceased in each process at the plant;

(3) Formulations currently used in each process at the plant;

(4) The equipment cleaning or replacement plan;

(5) The name and address of any persons who conducted the cleaning and replacement;

(6) The dates on which cleaning and replacement were accomplished;

(7) The dates of sampling and testing;

(8) A description of the sample handling and preparation techniques, including techniques used for extraction, containerization, preservation, and chain-of-custody of the samples;

- (9) A description of the tests performed, the date the tests were performed, and the results of the tests;
- (10) The name and model numbers of the instrument(s) used in performing the tests;
- (11) QA/QC documentation; and
- (12) The following statement signed by the generator or his authorized representative:

I certify under penalty of law that all process equipment required to be cleaned or replaced under 261.35 was cleaned or replaced as represented in the equipment cleaning and replacement plan and accompanying documentation. I am aware that there are significant penalties for providing false information, including the possibility of fine or imprisonment.

***SUBPART E***  
***Exclusions/Exemptions***

**261.38. [Reserved].**

**261.39. Conditional Exclusion for Used, Broken Cathode Ray Tubes (CRTs) and Processed CRT Glass Undergoing Recycling.**

Used, broken CRTs are not solid wastes if they meet the following conditions:

(a) Prior to processing: These materials are not solid wastes if they are destined for recycling and if they meet the following requirements:

(1) Storage. The broken CRTs must be either:

(i) Stored in a building with a roof, floor, and walls, or

(ii) Placed in a container (i.e., a package or a vehicle) that is constructed, filled, and closed to minimize releases to the environment of CRT glass (including fine solid materials).

(2) Labeling. Each container in which the used, broken CRT is contained must be labeled or marked clearly with one of the following phrases: "Used Cathode Ray Tube(s)-contains leaded glass" or "Leaded glass from televisions or computers." It must also be labeled: "Do not mix with other glass materials."

(3) Transportation. The used, broken CRTs must be transported in a container meeting the requirements of paragraphs (a)(1)(ii) and (2) of this section.

(4) Speculative accumulation and use constituting disposal. The used, broken CRTs are subject to the limitations on speculative accumulation as defined in paragraph (c)(8) of this section. If they are used in a manner constituting disposal, they must comply with the applicable requirements of part 266, subpart C instead of the requirements of this section.

(5) Exports. In addition to the applicable conditions specified in paragraphs (a)(1)-(4) of this section, exporters of used, broken CRTs must comply with the following requirements:

(i) Notify EPA of an intended export before the CRTs are scheduled to leave the United States. A complete notification should be submitted sixty (60) days before the initial shipment is intended to be shipped off-site. This notification may cover export activities extending over a twelve (12) month or lesser

period. The notification must be in writing, signed by the exporter, and include the following information:

(A) Name, mailing address, telephone number and EPA ID number (if applicable) of the exporter of the CRTs.

(B) The estimated frequency or rate at which the CRTs are to be exported and the period of time over which they are to be exported.

(C) The estimated total quantity of CRTs specified in kilograms.

(D) All points of entry to and departure from each foreign country through which the CRTs will pass.

(E) A description of the means by which each shipment of the CRTs will be transported (e.g., mode of transportation vehicle (air, highway, rail, water, etc.), type(s) of container (drums, boxes, tanks, etc.)).

(F) The name and address of the recycler or recyclers and the estimated quantity of used CRTs to be sent to each facility, as well as the names of any alternate recyclers.

(G) A description of the manner in which the CRTs will be recycled in the foreign country that will be receiving the CRTs.

(H) The name of any transit country through which the CRTs will be sent and a description of the approximate length of time the CRTs will remain in such country and the nature of their handling while there.

(ii) Notifications must be submitted electronically using EPA's Waste Import Export Tracking System (WIETS), or its successor system.

(iii) Upon request by EPA, the exporter shall furnish to EPA any additional information which a receiving country requests in order to respond to a notification.

(iv) EPA will provide a complete notification to the receiving country and any transit countries. A notification is complete when EPA receives a notification which EPA determines satisfies the requirements of paragraph (a)(5)(i) of this section.

(v) The export of CRTs is prohibited unless all of the following occur:

(A) The receiving country consents to the intended export. When the receiving country consents in writing to the receipt of the CRTs, EPA will forward an Acknowledgement of Consent to Export CRTs to the exporter. Where the receiving country objects to receipt of the CRTs or withdraws a prior consent, EPA will notify the exporter in writing. EPA will also notify the exporter of any responses from transit countries.

(B) On or after the AES filing compliance date, the exporter or a U.S. authorized agent must:

(1) Submit Electronic Export Information (EEI) for each shipment to the Automated Export System (AES) or its successor system, under the International Trade Data System (ITDS) platform, in accordance with 15 CFR 30.4(b).

(2) Include the following items in the EEI, along with the other information required under 15 CFR 30.6:

(i) EPA license code;

(ii) Commodity classification code per 15 CFR 30.6(a)(12);

(iii) EPA consent number;

(iv) Country of ultimate destination per 15 CFR 30.6(a)(5);

(v) Date of export per 15 CFR 30.6(a)(2);

(vi) Quantity of waste in shipment and units for reported quantity, if required reporting units established by value for the reported commodity classification number are in units of weight or volume per 15 CFR 30.6(a)(15); or

(vii) EPA net quantity reported in units of kilograms, if required reporting units established by value for the reported commodity classification number are not in units of weight or volume.

(vi) When the conditions specified on the original notification change, the exporter must provide EPA with a written renotification of the change using the allowable methods listed in paragraph (a)(5)(ii) of this section, except for changes to the telephone number in paragraph (a)(5)(i)(A) of this section and decreases in the quantity indicated pursuant to paragraph (a)(5)(i)(C) of this section. The shipment cannot take place until consent of the receiving country to the changes has been obtained (except for changes to information about points of entry and departure and transit countries pursuant to paragraphs (a)(5)(i)(D) and (H) of this section) and the exporter of CRTs receives from EPA a copy of the Acknowledgment of Consent to Export CRTs reflecting the receiving country's consent to the changes.

(vii) A copy of the Acknowledgment of Consent to Export CRTs must accompany the shipment of CRTs. The shipment must conform to the terms of the Acknowledgment.

(viii) If a shipment of CRTs cannot be delivered for any reason to the recycler or the alternate recycler, the exporter of CRTs must renotify EPA of a change in the conditions of the original notification to allow shipment to a new recycler in accordance with paragraph (a)(5)(vi) of this section and obtain another Acknowledgment of Consent to Export CRTs.

(ix) Exporters must keep copies of notifications and Acknowledgments of Consent to Export CRTs for a period of three years following receipt of the Acknowledgment. Exporters may satisfy this recordkeeping requirement by retaining electronically submitted notifications or electronically generated Acknowledgments in the CRT exporter's account on EPA's Waste Import Export Tracking System (WIETS), or its successor system, provided that such copies are readily available for viewing and production if requested by any EPA or authorized state inspector. No CRT exporter may be held liable for the inability to produce a notification or Acknowledgment for inspection under this section if the CRT exporter can demonstrate that the inability to produce such copies is due exclusively to technical difficulty with WIETS, or its successor system for which the CRT exporter bears no responsibility.

(x) CRT exporters must file with EPA no later than March 1 of each year, an annual report summarizing the quantities (in kilograms), frequency of shipment, and ultimate destination(s) (for example, the facility or facilities where the recycling occurs) of all used CRTs exported during the previous calendar year. Such reports must also include the following:

- (A) The name, EPA ID number (if applicable), and mailing and site address of the exporter;
- (B) The calendar year covered by the report;
- (C) A certification signed by the CRT exporter that states:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

(xi) Prior to one (1) year after the AES filing compliance date, annual reports must be sent to the following mailing address: Office of Land and Emergency Management, Office of Resource Conservation and Recovery, Materials Recovery and Waste Management Division, International Branch (Mail Code 2255A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460. Hand-delivered annual reports on used CRTs exported during 2016 should be sent to: Office of Land and Emergency Management, Office of Resource Conservation and Recovery, Materials Recovery and Waste Management Division, International Branch (Mail Code 2255A), Environmental Protection Agency, William Jefferson Clinton South Building, Room 6144, 1200 Pennsylvania Ave. NW, Washington, DC 20004. Subsequently, annual reports must be submitted to the office listed using the allowable methods specified in paragraph (a)(5)(ii) of this section. Exporters must keep copies of each annual report for a period of at least three (3) years from the due date of the report. Exporters may satisfy this recordkeeping requirement by retaining electronically submitted annual reports in the CRT exporter’s account on EPA’s Waste Import Export Tracking System (WIETS), or its successor system, provided that a copy is readily available for viewing and production if requested by any EPA or authorized state inspector. No CRT exporter may be held liable for the inability to produce an annual report for inspection under this section if the CRT exporter can demonstrate that the inability to produce the annual report is due exclusively to technical difficulty with WIETS, or its successor system for which the CRT exporter bears no responsibility.

(b) Requirements for used CRT processing: Used, broken CRTs undergoing CRT processing as defined in Sec. 260.10 of this chapter are not solid wastes if they meet the following requirements:

(1) Storage. Used, broken CRTs undergoing processing are subject to the requirement of paragraph (a)(4) of this section.

(2) Processing.

(i) All activities specified in paragraphs (2) and (3) of the definition of “CRT processing” in Sec. 260.10 of this chapter must be performed within a building with a roof, floor, and walls; and

(ii) No activities may be performed that use temperatures high enough to volatilize lead from CRTs.

(c) Processed CRT glass sent to CRT glass making or lead smelting: Glass from used CRTs that is destined for recycling at a CRT glass manufacturer or a lead smelter after processing is not a solid waste unless it is speculatively accumulated as defined in Sec. 261.1(c)(8).

(d) Use constituting disposal: Glass from used CRTs that is used in a manner constituting disposal must comply with the requirements of R.61-79.266 subpart C instead of the requirements of this section.

**261.40. Conditional Exclusion for Used, Intact Cathode Ray Tubes (CRTs) Exported for Recycling.**

Used, intact CRTs exported for recycling are not solid wastes if they meet the notice and consent conditions of Sec. 261.39(a)(5), and if they are not speculatively accumulated as defined in Sec. 261.1(c)(8).

**261.41. Notification and Recordkeeping for Used, Intact Cathode Ray Tubes (CRTs) Exported for Reuse.**

(a) Persons who export used, intact CRTs for reuse must send a notification to the Regional Administrator. The notification may cover export activities extending over a twelve (12) month or lesser period.

(1) The notification must be in writing, signed by the exporter, and include the following information:

(i) Name, mailing address, telephone number, and EPA ID number (if applicable) of the exporter of the used, intact CRTs;

(ii) The estimated frequency or rate at which the used, intact CRTs are to be exported for reuse and the period of time over which they are to be exported;

(iii) The estimated total quantity of used, intact CRTs specified in kilograms;

(iv) All points of entry to and departure from each transit country through which the used, intact CRTs will pass, a description of the approximate length of time the used, intact CRTs will remain in such country, and the nature of their handling while there;

(v) A description of the means by which each shipment of the used, intact CRTs will be transported (for example, mode of transportation vehicle (air, highway, rail, water, etc.), type(s) of container (drums, boxes, tanks, etc.));

(vi) The name and address of the ultimate destination facility or facilities where the used, intact CRTs will be reused, refurbished, distributed, or sold for reuse and the estimated quantity of used, intact CRTs to be sent to each facility, as well as the name of any alternate destination facility or facilities;

(vii) A description of the manner in which the used, intact CRTs will be reused (including reuse after refurbishment) in the foreign country that will be receiving the used, intact CRTs; and

(viii) A certification signed by the CRT exporter that states:

“I certify under penalty of law that the CRTs described in this notice are intact and fully functioning or capable of being functional after refurbishment and that the used CRTs will be reused or refurbished and reused. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

(2) Notifications submitted by mail should be sent to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460. Hand-delivered notifications should be sent to: Office of Enforcement and

Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, William Jefferson Clinton Building, Room 6144, 1200 Pennsylvania Ave. NW., Washington, DC 20004. In both cases, the following shall be prominently displayed on the front of the envelope: “Attention: Notification of Intent to Export CRTs.”

(b) CRT exporters of used, intact CRTs sent for reuse must keep copies of normal business records, such as contracts, demonstrating that each shipment of exported used, intact CRTs will be reused. This documentation must be retained for a period of at least three years from the date the CRTs were exported. If the documents are written in a language other than English, CRT exporters of used, intact CRTs sent for reuse must provide both the original, non-English version of the normal business records as well as a third-party translation of the normal business records into English within thirty (30) days upon request by EPA.

**SUBPART F: [Reserved]**

**SUBPART G: [Reserved]**

**SUBPART H: Financial Requirements for Management of Excluded Hazardous Secondary Materials**

**261.140. Applicability.**

(a) The requirements of this subpart apply to owners or operators of reclamation and intermediate facilities managing hazardous secondary materials excluded under section 261.4(a)(24), except as provided otherwise in this section.

(b) States and the federal government are exempt from the financial assurance requirements of this subpart.

**261.141. Definitions of terms as used in this subpart.**

The terms defined in section 265.141(d), (f), (g), and (h) have the same meaning in this subpart as they do in section 265.141.

**261.142. Cost estimate.**

(a) The owner or operator must have a detailed written estimate, in current dollars, of the cost of disposing of any hazardous secondary material as listed or characteristic hazardous waste, and the potential cost of closing the facility as a treatment, storage, and disposal facility.

(1) The estimate must equal the cost of conducting the activities described in paragraph (a) of this section at the point when the extent and manner of the facility’s operation would make these activities the most expensive; and

(2) The cost estimate must be based on the costs to the owner or operator of hiring a third party to conduct these activities. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation in section 265.141(d)). The owner or operator may use costs for on-site disposal in accordance with applicable requirements if it can be demonstrated that on-site disposal capacity will exist at all times over the life of the facility.

(3) The cost estimate may not incorporate any salvage value that may be realized with the sale of hazardous secondary materials, or hazardous or non-hazardous wastes if applicable under section 265.5113(d) facility structures or equipment, land, or other assets associated with the facility.

(4) The owner or operator may not incorporate a zero cost for hazardous secondary materials, or hazardous or non-hazardous wastes if applicable under section 265.5113(d) that might have economic value.

(b) During the active life of the facility, the owner or operator must adjust the cost estimate for inflation within sixty (60) days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with section 261.143. For owners and operators using the financial test or corporate guarantee, the cost estimate must be updated for inflation within thirty (30) days after the close of the firm's fiscal year and before submission of updated information to the Department as specified in section 261.143(e)(3). The adjustment may be made by recalculating the cost estimate in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business, as specified in paragraphs (b)(1) and (2) of this section. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.

(1) The first adjustment is made by multiplying the cost estimate by the inflation factor. The result is the adjusted cost estimate.

(2) Subsequent adjustments are made by multiplying the latest adjusted cost estimate by the latest inflation factor.

(c) During the active life of the facility, the owner or operator must revise the cost estimate no later than thirty (30) days after a change in the facility's operating plan or design that would increase the costs of conducting the activities described in paragraph (a) or no later than sixty (60) days after an unexpected event which increases the cost of conducting the activities described in paragraph (a) of this section. The revised cost estimate must be adjusted for inflation as specified in paragraph (b) of this section.

(d) The owner or operator must keep the following at the facility during the operating life of the facility: The latest cost estimate prepared in accordance with paragraphs (a) and (c) and, when this estimate has been adjusted in accordance with paragraph (b), the latest adjusted cost estimate.

### **261.143. Financial assurance condition.**

Per section 261.4(a)(24)(vi)(F), an owner or operator of a reclamation or intermediate facility must have financial assurance as a condition of the exclusion as required under section 261.4(a)(24). They must choose from the options as specified in paragraphs (a) through (e) of this section.

(a) Trust fund.

(1) An owner or operator may satisfy the requirements of this section by establishing a trust fund which conforms to the requirements of this paragraph and submitting an originally signed duplicate of the trust agreement to the Department. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

(2) The wording of the trust agreement must be identical to the wording specified in section 261.151(a)(1), and the trust agreement must be accompanied by a formal certification of acknowledgment

(for example, see section 261.151(a)(2)). Schedule A of the trust agreement must be updated within sixty (60) days after a change in the amount of the current cost estimate covered by the agreement.

(3) The trust fund must be funded for the full amount of the current cost estimate before it may be relied upon to satisfy the requirements of this section.

(4) Whenever the current cost estimate changes, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within sixty (60) days after the change in the cost estimate, must either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current cost estimate, or obtain other financial assurance as specified in this section to cover the difference.

(5) If the value of the trust fund is greater than the total amount of the current cost estimate, the owner or operator may submit a written request to the Department for release of the amount in excess of the current cost estimate.

(6) If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, a written request may be submitted to the Department for release of the amount in excess of the current cost estimate covered by the trust fund.

(7) Within sixty (60) days after receiving a request from the owner or operator for release of funds as specified in paragraph (a)(5) or (6) of this section, the Department will instruct the trustee to release to the owner or operator such funds as the Department specifies in writing. If the owner or operator begins final closure under subpart G of R.61-79.264 or 265, an owner or operator may request reimbursements for partial or final closure expenditures by submitting itemized bills to the Department. The owner or operator may request reimbursements for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over its remaining operating life. No later than sixty (60) days after receiving bills for partial or final closure activities, the Department will instruct the trustee to make reimbursements in those amounts as the Department specifies in writing, if the Department determines that the partial or final closure expenditures are in accordance with the approved closure plan, or otherwise justified. If the Department has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, it may withhold reimbursements of such amounts as deemed prudent until it determines, in accordance with section 265.143(i) that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the Department does not instruct the trustee to make such reimbursements, it will provide to the owner or operator a detailed written statement of reasons.

(8) The Department will agree to termination of the trust when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Department releases the owner or operator from the requirements of this section in accordance with paragraph (i) of this section.

(b) Surety bond guaranteeing payment into a trust fund.

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this paragraph and submitting the bond to the Department. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond must be identical to the wording specified in section 261.151(b).

(3) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the Department. This standby trust fund must meet the requirements specified in paragraph (a) of this section, except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the Department with the surety bond; and

(ii) Until the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in paragraph (a) of this section;

(B) Updating of Schedule A of the trust agreement (see section 261.151(a)) to show current cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond must guarantee that the owner or operator will:

(i) Fund the standby trust fund in an amount equal to the penal sum of the bond before loss of the exclusion under section 261.4(a)(24);

(ii) Fund the standby trust fund in an amount equal to the penal sum within fifteen (15) days after an administrative order to begin closure issued by the Department becomes final, or within fifteen (15) days after an order to begin closure is issued by a U.S. district court or other court of competent jurisdiction; or

(iii) Provide alternate financial assurance as specified in this section, and obtain the Department's written approval of the assurance provided, within ninety (90) days after receipt by both the owner or operator and the Department of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

(6) The penal sum of the bond must be in an amount at least equal to the current cost estimate, except as provided in paragraph (f) of this section.

(7) Whenever the current cost estimate increases to an amount greater than the penal sum, the owner or operator, within sixty (60) days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the Department, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current cost estimate decreases, the penal sum may be reduced to the amount of the current cost estimate following written approval by the Department.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Department. Cancellation may not occur, however, during

the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Department, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the Department has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in this section.

(c) Letter of credit.

(1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this paragraph and submitting the letter to the Department. The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.

(2) The wording of the letter of credit must be identical to the wording specified in section 261.151(c).

(3) An owner or operator who uses a letter of credit to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Department will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Department. This standby trust fund must meet the requirements of the trust fund specified in paragraph (a) of this section, except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the Department with the letter of credit; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in paragraph (a) of this section;

(B) Updating of Schedule A of the trust agreement (see section 261.151(a)) to show current cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: The EPA Identification Number (if any issued), name, and address of the facility, and the amount of funds assured for the facility by the letter of credit.

(5) The letter of credit must be irrevocable and issued for a period of at least one (1) year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one (1) year unless, at least one hundred twenty (120) days before the current expiration date, the issuing institution notifies both the owner or operator and the Department by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the one hundred twenty (120) days will begin on the date when both the owner or operator and the Department have received the notice, as evidenced by the return receipts.

(6) The letter of credit must be issued in an amount at least equal to the current cost estimate, except as provided in paragraph (f) of this section.

(7) Whenever the current cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within sixty (60) days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current cost estimate and submit evidence of such increase to the Department, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current cost estimate decreases, the amount of the credit may be reduced to the amount of the current cost estimate following written approval by the Department.

(8) Following a determination by the Department that the hazardous secondary materials do not meet the conditions of the exclusion under section 261.4(a)(24), the Department may draw on the letter of credit.

(9) If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the Department within ninety (90) days after receipt by both the owner or operator and the Department of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the Department will draw on the letter of credit. The Department may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last thirty (30) days of any such extension the Department will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the Department.

(10) The Department will return the letter of credit to the issuing institution for termination when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Department releases the owner or operator from the requirements of this section in accordance with paragraph (i) of this section.

(d) Insurance.

(1) An owner or operator may satisfy the requirements of this section by obtaining insurance which conforms to the requirements of this paragraph and submitting a certificate of such insurance to the Department. At a minimum, the insurer must be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

(2) The wording of the certificate of insurance must be identical to the wording specified in section 261.151(d).

(3) The insurance policy must be issued for a face amount at least equal to the current cost estimate, except as provided in paragraph (f) of this section. The term “face amount” means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer’s future liability will be lowered by the amount of the payments.

(4) The insurance policy must guarantee that funds will be available whenever needed to pay the cost of removal of all hazardous secondary materials from the unit, to pay the cost of decontamination of the unit, and to pay the costs of the performance of activities required under subpart G of R.61-79.264 or 265, as applicable, for the facilities covered by this policy. The policy must also guarantee that once funds are needed, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Department, to such party or parties as the Department specifies.

(5) After beginning partial or final closure under R.61-79.264 or 265, as applicable, an owner or operator or any other authorized person may request reimbursements for closure expenditures by submitting

itemized bills to the Department. The owner or operator may request reimbursements only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over its remaining operating life. Within sixty (60) days after receiving bills for closure activities, the Department will instruct the insurer to make reimbursements in such amounts as the Department specifies in writing if the Department determines that the expenditures are in accordance with the approved plan or otherwise justified. If the Department has reason to believe that the maximum cost over the remaining life of the facility will be significantly greater than the face amount of the policy, it may withhold reimbursement of such amounts as deemed prudent until it determines, in accordance with paragraph (h) of this section, that the owner or operator is no longer required to maintain financial assurance for the particular facility. If the Department does not instruct the insurer to make such reimbursements, it will provide to the owner or operator a detailed written statement of reasons.

(6) The owner or operator must maintain the policy in full force and effect until the Department consents to termination of the policy by the owner or operator as specified in paragraph (i)(10) of this section. Failure to pay the premium, without substitution of alternate financial assurance as specified in this section, will constitute a significant violation of these regulations warranting such remedy as the Department deems necessary. Such violation will be deemed to begin upon receipt by the Department of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

(7) Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

(8) The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Department. Cancellation, termination, or failure to renew may not occur, however, during the one hundred twenty (120) days beginning with the date of receipt of the notice by both the Department and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

(i) The Department deems the facility abandoned; or

(ii) Conditional exclusion or interim status is lost, terminated, or revoked; or

(iii) Closure is ordered by the Department or a U.S. district court or other court of competent jurisdiction; or

(iv) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

(v) The premium due is paid.

(9) Whenever the current cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within sixty (60) days after the increase, must either cause the face amount to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the Department, or obtain other financial assurance as specified in this section to cover the increase.

Whenever the current cost estimate decreases, the face amount may be reduced to the amount of the current cost estimate following written approval by the Department.

(10) The Department will give written consent to the owner or operator that the insurance policy may be terminated when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Department releases the owner or operator from the requirements of this section in accordance with paragraph (i) of this section.

(e) Financial test and corporate guarantee.

(1) An owner or operator may satisfy the requirements of this section by demonstrating that they pass a financial test as specified in this paragraph. To pass this test the owner or operator must meet the criteria of either paragraph (e)(1)(i) or (ii) of this section:

(i) The owner or operator must have:

(A) Two of the following three ratios: A ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(B) Net working capital and tangible net worth each at least six (6) times the sum of the current cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least ten (10) million dollars; and

(D) Assets located in the United States amounting to at least ninety (90) percent of total assets or at least six (6) times the sum of the current cost estimates and the current plugging and abandonment cost estimates.

(ii) The owner or operator must have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth at least six (6) times the sum of the current cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least ten (10) million dollars; and

(D) Assets located in the United States amounting to at least ninety (90) percent of total assets or at least six (6) times the sum of the current cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase "current cost estimates" as used in paragraph (e)(1) of this section refers to the cost estimates required to be shown in paragraphs (1) through (4) of the letter from the owner's or operator's chief financial officer (section 261.151(e)). The phrase "current plugging and abandonment cost estimates" as used in paragraph (e)(1) of this section refers to the cost estimates required to be shown in paragraphs (1) through (4) of the letter from the owner's or operator's chief financial officer (40 CFR 144.70(f)).

(3) To demonstrate that they meet this test, the owner or operator must submit the following items to the Department:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in section 261.151(e); and

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(iii) If the chief financial officer's letter providing evidence of financial assurance includes financial data showing that the owner or operator satisfies paragraph (e)(1)(i) of this section that are different from the data in the audited financial statements referred to in paragraph (e)(3)(ii) of this section or any other audited financial statement or data filed with the U.S. Securities and Exchange Commission (SEC), then a special report from the owner's or operator's independent certified public accountant to the owner or operator is required. The special report shall be based on an agreed upon procedures engagement in accordance with professional auditing standards and shall describe the procedures performed in comparing the data in the chief financial officer's letter derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements, the findings of the comparison, and the reasons for any differences.

(4) The owner or operator may obtain an extension of the time allowed for submission of the documents specified in paragraph (e)(3) of this section if the fiscal year of the owner or operator ends during the ninety (90) days prior to the effective date of these regulations and if the year-end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than ninety (90) days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer must send, by the effective date of these regulations, a letter to the Department. This letter from the chief financial officer must:

(i) Request the extension;

(ii) Certify that they have grounds to believe that the owner or operator meets the criteria of the financial test;

(iii) Specify for each facility to be covered by the test the EPA Identification Number (if any issued), name, address, and current cost estimates to be covered by the test;

(iv) Specify the date ending the owner's or operator's last complete fiscal year before the effective date of these regulations in this subpart;

(v) Specify the date, no later than ninety (90) days after the end of such fiscal year, when the documents specified in paragraph (e)(3) of this section will be submitted; and

(vi) Certify that the year-end financial statements of the owner or operator for such fiscal year will be audited by an independent certified public accountant.

(5) After the initial submission of items specified in paragraph (e)(3) of this section, the owner or operator must send updated information to the Department within ninety (90) days after the close of each succeeding fiscal year. This information must consist of all three (3) items specified in paragraph (e)(3) of this section.

(6) If the owner or operator no longer meets the requirements of paragraph (e)(1) of this section, notice must be sent to the Department of intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within ninety (90) days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within one hundred twenty (120) days after the end of such fiscal year.

(7) The Department may, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraph (e)(1) of this section, require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (e)(3) of this section. If the Department finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of paragraph (e)(1) of this section, the owner or operator must provide alternate financial assurance as specified in this section within thirty (30) days after notification of such a finding.

(8) The Department may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see paragraph (e)(3)(ii) of this section). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The Department will evaluate other qualifications on an individual basis. The owner or operator must provide alternate financial assurance as specified in this section within thirty (30) days after notification of the disallowance.

(9) The owner or operator is no longer required to submit the items specified in paragraph (e)(3) of this section when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Department releases the owner or operator from the requirements of this section in accordance with paragraph (i) of this section.

(10) An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (e)(1) through (8) of this section and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in section 261.151(g)(1). A certified copy of the guarantee must accompany the items sent to the Department as specified in paragraph (e)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

(i) Following a determination by the Department that the hazardous secondary materials at the owner or operator's facility covered by this guarantee do not meet the conditions of the exclusion under section 261.4(a)(24), the guarantor will dispose of any hazardous secondary material as hazardous waste and close the facility in accordance with closure requirements found in R.61-79.264 or 265, as applicable, or establish a trust fund as specified in paragraph (a) of this section in the name of the owner or operator in the amount of the current cost estimate.

(ii) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Department. Cancellation may not occur, however, during the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Department, as evidenced by the return receipts.

(iii) If the owner or operator fails to provide alternate financial assurance as specified in this section and obtain the written approval of such alternate assurance from the Department within ninety (90) days after receipt by both the owner or operator and the Department of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternate financial assurance in the name of the owner or operator.

(f) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this section by establishing more than one (1) financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds, letters of credit, and insurance. The mechanisms must be as specified in paragraphs (a) through (d) of this section, respectively, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at least equal to the current cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, the trust fund may be used as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two (2) or more mechanisms. The Department may use any or all of the mechanisms to provide for the facility.

(g) Use of a financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in this section to meet the requirements of this section for more than one (1) facility. Evidence of financial assurance submitted to the Department must include a list showing, for each facility, the EPA Identification Number (if any issued), name, address, and the amount of funds assured by the mechanism. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for any of the facilities covered by the mechanism, the Department may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(h) Removal and Decontamination Plan for Release.

(1) An owner or operator of a reclamation facility or an intermediate facility who wishes to be released from financial assurance obligations under section 261.4(a)(24)(vi)(F) must submit a plan for removing all hazardous secondary material residues to the Department at least one hundred eighty (180) days prior to the date on which operations are expected to cease under the exclusion.

(2) The plan must include, at least:

(i) For each hazardous secondary materials storage unit subject to financial assurance requirements under section 261.4(a)(24)(vi)(F), a description of how all excluded hazardous secondary materials will be recycled or sent for recycling, and how all residues, contaminated containment systems (liners, etc), contaminated soils, subsoils, structures, and equipment will be removed or decontaminated as necessary to protect human health and the environment;

(ii) A detailed description of the steps necessary to remove or decontaminate all hazardous secondary material residues and contaminated containment system components, equipment, structures, and soils including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination necessary to protect human health and the environment;

(iii) A detailed description of any other activities necessary to protect human health and the environment during this timeframe, including, but not limited to, leachate collection, run-on and run-off control, etc; and

(iv) A schedule for conducting the activities described which, at a minimum, includes the total time required to remove all excluded hazardous secondary materials for recycling and decontaminate all units subject to financial assurance under section 261.4(a)(24)(vi)(F) and the time required for intervening activities which will allow tracking of the progress of decontamination.

(3) The Department will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the plan and request modifications to the plan no later than thirty (30) days from the date of the notice. The Department will also, in response to a request or at its discretion, hold a public hearing whenever such a hearing might clarify one (1) or more issues concerning the plan. The Department will give public notice of the hearing at least thirty (30) days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two (2) notices may be combined.) The Department will approve, modify, or disapprove the plan within ninety (90) days of its receipt. If the Department does not approve the plan, it shall provide the owner or operator with a detailed written statement of reasons for the refusal and the owner or operator must modify the plan or submit a new plan for approval within thirty (30) days after receiving such written statement. The Department will approve or modify this plan in writing within sixty (60) days. If the Department modifies the plan, this modified plan becomes the approved plan. The Department must assure that the approved plan is consistent with paragraph (h) of this section. A copy of the modified plan with a detailed statement of reasons for the modifications must be mailed to the owner or operator.

(4) Within sixty (60) days of completion of the activities described for each hazardous secondary materials management unit, the owner or operator must submit to the Department, by registered mail, a certification that all hazardous secondary materials have been removed from the unit and the unit has been decontaminated in accordance with the specifications in the approved plan. The certification must be signed by the owner or operator and by a qualified Professional Engineer. Documentation supporting the Professional Engineer's certification must be furnished to the Department upon request, until it releases the owner or operator from the financial assurance requirements for section 261.4(a)(24)(vi)(F).

(i) Release of the owner or operator from the requirements of this section. Within sixty (60) days after receiving certifications from the owner or operator and a qualified Professional Engineer that all hazardous secondary materials have been removed from the facility or a unit at the facility, and the facility or a unit has been decontaminated in accordance with the approved plan per paragraph (h), the Department will notify the owner or operator in writing that they are no longer required under section 261.4(a)(24)(vi)(F) to maintain financial assurance for that facility or a unit at the facility, unless the Department has reason to believe that all hazardous secondary materials have not been removed from the facility or unit at a facility, or that the facility or unit has not been decontaminated in accordance with the approved plan. The Department shall provide the owner or operator a detailed written statement of any such reason to believe that all hazardous secondary materials have not been removed from the unit or that the unit has not been decontaminated in accordance with the approved plan.

**261.144. [Reserved]**

**261.145. [Reserved]**

**261.146. [Reserved]**

## **261.147. Liability requirements.**

(a) Coverage for sudden accidental occurrences. An owner or operator of a hazardous secondary material reclamation facility or an intermediate facility subject to financial assurance requirements under section 261.4(a)(24)(vi)(F), or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for sudden accidental occurrences in the amount of at least one (1) million dollars per occurrence with an annual aggregate of at least two (2) million dollars, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in paragraphs (a)(1), (2), (3), (4), (5), or (6) of this section:

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this paragraph.

(i) Each insurance policy must be amended by attachment of the Hazardous Secondary Material Facility Liability Endorsement, or evidenced by a Certificate of Liability Insurance. The wording of the endorsement must be identical to the wording specified in section 261.151(h). The wording of the certificate of insurance must be identical to the wording specified in section 261.151(i). The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the Department. If requested by a Department, the owner or operator must provide a signed duplicate original of the insurance policy.

(ii) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one (1) or more states.

(2) An owner or operator may meet the requirements of this section by passing a financial test or using the guarantee for liability coverage as specified in paragraphs (f) and (g) of this section.

(3) An owner or operator may meet the requirements of this section by obtaining a letter of credit for liability coverage as specified in paragraph (h) of this section.

(4) An owner or operator may meet the requirements of this section by obtaining a surety bond for liability coverage as specified in paragraph (i) of this section.

(5) An owner or operator may meet the requirements of this section by obtaining a trust fund for liability coverage as specified in paragraph (j) of this section.

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this paragraph, the owner or operator shall specify at least one (1) such assurance as “primary” coverage and shall specify other assurance as “excess” coverage.

(7) An owner or operator shall notify the Department in writing within thirty (30) days whenever:

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (a)(1) through (a)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous secondary material reclamation facility or intermediate facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (a)(1) through (a)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous secondary material reclamation facility or intermediate facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (a)(1) through (a)(6) of this section.

(b) Coverage for nonsudden accidental occurrences. An owner or operator of a hazardous secondary material reclamation facility or intermediate facility with land-based units, as defined in section 260.10, which are used to manage hazardous secondary materials excluded under section 261.4(a)(24) or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least three (3) million dollars per occurrence with an annual aggregate of at least \$6 million, exclusive of legal defense costs. An owner or operator who must meet the requirements of this section may combine the required per-occurrence coverage levels for sudden and nonsudden accidental occurrences into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and nonsudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and nonsudden accidental occurrences must maintain liability coverage in the amount of at least four (4) million dollars per occurrence and eight (8) million dollars annual aggregate. This liability coverage may be demonstrated as specified in paragraph (b)(1), (2), (3), (4), (5), or (6) of this section:

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this paragraph.

(i) Each insurance policy must be amended by attachment of the Hazardous Secondary Material Facility Liability Endorsement or evidenced by a Certificate of Liability Insurance. The wording of the endorsement must be identical to the wording specified in section 261.151(h). The wording of the certificate of insurance must be identical to the wording specified in section 261.151(i). The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the Department. If requested by the Department, the owner or operator must provide a signed duplicate original of the insurance policy.

(ii) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one (1) or more states.

(2) An owner or operator may meet the requirements of this section by passing a financial test or using the guarantee for liability coverage as specified in paragraphs (f) and (g) of this section.

(3) An owner or operator may meet the requirements of this section by obtaining a letter of credit for liability coverage as specified in paragraph (h) of this section.

(4) An owner or operator may meet the requirements of this section by obtaining a surety bond for liability coverage as specified in paragraph (i) of this section.

(5) An owner or operator may meet the requirements of this section by obtaining a trust fund for liability coverage as specified in paragraph (j) of this section.

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this paragraph, the owner or operator shall specify at least one (1) such assurance as “primary” coverage and shall specify other assurance as “excess” coverage.

(7) An owner or operator shall notify the Department in writing within thirty (30) days whenever:

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (b)(1) through (b)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous secondary material treatment and/or storage facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (b)(1) through (b)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous secondary material treatment and/or storage facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (b)(1) through (b)(6) of this section.

(c) Request for variance. If an owner or operator can demonstrate to the satisfaction of the Department that the levels of financial responsibility required by paragraph (a) or (b) of this section are not consistent with the degree and duration of risk associated with treatment and/or storage at the facility or group of facilities, the owner or operator may obtain a variance from the Department. The request for a variance must be submitted in writing to the Department. If granted, the variance will take the form of an adjusted level of required liability coverage, such level to be based on the Department’s assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The Department may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the Department to determine a level of financial responsibility other than that required by paragraph (a) or (b) of this section.

(d) Adjustments by the Department. If the Department determines that the levels of financial responsibility required by paragraph (a) or (b) of this section are not consistent with the degree and duration of risk associated with treatment and/or storage at the facility or group of facilities, the Department may adjust the level of financial responsibility required under paragraph (a) or (b) of this section as may be necessary to protect human health and the environment. This adjusted level will be based on the Department’s assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the Department determines that there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operations of a facility that is not a surface impoundment, pile, or land treatment facility, it may require that an owner or operator of the facility comply with paragraph (b) of this section. An owner or operator must furnish to the

Department, within a reasonable time, any information which the Department requests to determine whether cause exists for such adjustments of level or type of coverage.

(e) Period of coverage. Within sixty (60) days after receiving certifications from the owner or operator and a qualified Professional Engineer that all hazardous secondary materials have been removed from the facility or a unit at the facility and the facility or a unit has been decontaminated in accordance with the approved plan per section 261.143(h), the Department will notify the owner or operator in writing that they are no longer required under section 261.4(a)(24)(vi)(F) to maintain liability coverage for that facility or a unit at the facility, unless the Department has reason to believe that that all hazardous secondary materials have not been removed from the facility or unit at a facility or that the facility or unit has not been decontaminated in accordance with the approved plan.

(f) Financial test for liability coverage.

(1) An owner or operator may satisfy the requirements of this section by demonstrating that they pass a financial test as specified in this paragraph. To pass this test the owner or operator must meet the criteria of paragraph (f)(1) (i) or (ii) of this section:

(i) The owner or operator must have:

(A) Net working capital and tangible net worth each at least six (6) times the amount of liability coverage to be demonstrated by this test; and

(B) Tangible net worth of at least ten (10) million dollars; and

(C) Assets in the United States amounting to either:

(1) At least ninety (90) percent of their total assets; or

(2) At least six (6) times the amount of liability coverage to be demonstrated by this test.

(ii) The owner or operator must have:

(A) A current rating for their most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth of at least ten (10) million dollars; and

(C) Tangible net worth at least six (6) times the amount of liability coverage to be demonstrated by this test; and

(D) Assets in the United States amounting to either:

(1) At least ninety (90) percent of their total assets; or

(2) at least six (6) times the amount of liability coverage to be demonstrated by this test.

(2) The phrase "amount of liability coverage" as used in paragraph (f)(1) of this section refers to the annual aggregate amounts for which coverage is required under paragraphs (a) and (b) of this section and the annual aggregate amounts for which coverage is required under paragraphs (a) and (b) of sections 264.147 and 265.147.

(3) To demonstrate that they meet this test, the owner or operator must submit the following three (3) items to the Department:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in section 261.151(f). If an owner or operator is using the financial test to demonstrate both assurance as specified by section 261.143(e), and liability coverage, the letter specified in section 261.151(f) must be submitted to cover both forms of financial responsibility; a separate letter as specified in section 261.151(e) is not required.

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.

(iii) If the chief financial officer's letter providing evidence of financial assurance includes financial data showing that the owner or operator satisfies paragraph (f)(1)(i) of this section that are different from the data in the audited financial statements referred to in paragraph (f)(3)(ii) of this section or any other audited financial statement or data filed with the SEC, then a special report from the owner's or operator's independent certified public accountant to the owner or operator is required. The special report shall be based on an agreed upon procedures engagement in accordance with professional auditing standards and shall describe the procedures performed in comparing the data in the chief financial officer's letter derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements, the findings of the comparison, and the reasons for any difference.

(4) The owner or operator may obtain a one-time extension of the time allowed for submission of the documents specified in paragraph (f)(3) of this section if the fiscal year of the owner or operator ends during the ninety (90) days prior to the effective date of these regulations and if the year-end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than ninety (90) days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer must send, by the effective date of these regulations, a letter to the Department and to each state agency or Regional Administrator, as appropriate, where the owner's or operator's facilities to be covered by the financial test are located. This letter from the chief financial officer must:

(i) Request the extension;

(ii) Certify that there are grounds to believe that the owner or operator meets the criteria of the financial test;

(iii) Specify for each facility to be covered by the test the EPA Identification Number, name, address, the amount of liability coverage and, when applicable, current closure and post-closure cost estimates to be covered by the test;

(iv) Specify the date ending the owner's or operator's last complete fiscal year before the effective date of these regulations;

(v) Specify the date, no later than ninety (90) days after the end of such fiscal year, when the documents specified in paragraph (f)(3) of this section will be submitted; and

(vi) Certify that the year-end financial statements of the owner or operator for such fiscal year will be audited by an independent certified public accountant.

(5) After the initial submission of items specified in paragraph (f)(3) of this section, the owner or operator must send updated information to the Department within ninety (90) days after the close of each succeeding fiscal year. This information must consist of all three items specified in paragraph (f)(3) of this section.

(6) If the owner or operator no longer meets the requirements of paragraph (f)(1) of this section, insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in this section must be obtained. Evidence of liability coverage must be submitted to the Department within ninety (90) days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the test requirements.

(7) The Department may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see paragraph (f)(3)(ii) of this section). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The Department will evaluate other qualifications on an individual basis. The owner or operator must provide evidence of assurance for the entire amount of required liability coverage as specified in this section within thirty (30) days after notification of disallowance.

(g) Guarantee for liability coverage.

(1) Subject to paragraph (g)(2) of this section, an owner or operator may meet the requirements of this section by obtaining a written guarantee, hereinafter referred to as "guarantee." The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (f)(1) through (f)(6) of this section. The wording of the guarantee must be identical to the wording specified in section 261.151(g)(2). A certified copy of the guarantee must accompany the items sent to the Department as specified in paragraph (f)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, this letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee.

(i) If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden or nonsudden accidental occurrences (or both as the case may be), arising from the operation of facilities covered by this corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage.

(ii) [Reserved]

(2)(i) In the case of corporations incorporated in the United States, a guarantee may be used to satisfy the requirements of this section only if the Attorney General or Insurance Commissioner of:

(A) The state in which the guarantor is incorporated; and

(B) Each state in which a facility covered by the guarantee is located have submitted a written statement to the Department that a guarantee executed as described in this section and section 264.151(g)(2) is a legally valid and enforceable obligation in South Carolina

(ii) In the case of corporations incorporated outside the United States, a guarantee may be used to satisfy the requirements of this section only if:

(A) The non-U.S. corporation has identified a registered agent for service of process in each state in which a facility covered by the guarantee is located and in the state in which it has its principal place of business; and if

(B) The Attorney General or Insurance Commissioner of each state in which a facility covered by the guarantee is located and the state in which the guarantor corporation has its principal place of business, has submitted a written statement to the Department that a guarantee executed as described in this section and section 261.151(h)(2) is a legally valid and enforceable obligation in that state.

(h) Letter of credit for liability coverage.

(1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit that conforms to the requirements of this paragraph and submitting a copy of the letter of credit to the Department.

(2) The financial institution issuing the letter of credit must be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.

(3) The wording of the letter of credit must be identical to the wording specified in section 261.151(j).

(4) An owner or operator who uses a letter of credit to satisfy the requirements of this section may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust will be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

(5) The wording of the standby trust fund must be identical to the wording specified in section 261.151(m).

(i) Surety bond for liability coverage.

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond that conforms to the requirements of this paragraph and submitting a copy of the bond to the Department.

(2) The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in the most recent Circular 570 of the U.S. Department of the Treasury.

(3) The wording of the surety bond must be identical to the wording specified in section 261.151(k) of this chapter.

(4) A surety bond may be used to satisfy the requirements of this section only if the Attorney General or Insurance Commissioner of:

(i) The state in which the surety is incorporated; and

(ii) Each state in which a facility covered by the surety bond is located have submitted a written statement to the Department that a surety bond executed as described in this section and section 261.151(k) is a legally valid and enforceable obligation in South Carolina.

(j) Trust fund for liability coverage.

(1) An owner or operator may satisfy the requirements of this section by establishing a trust fund that conforms to the requirements of this paragraph and submitting an originally signed duplicate of the trust agreement to the Department.

(2) The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

(3) The trust fund for liability coverage must be funded for the full amount of the liability coverage to be provided by the trust fund before it may be relied upon to satisfy the requirements of this section. If at any time after the trust fund is created the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the owner or operator, by the anniversary date of the establishment of the trust fund, must either add sufficient funds to the trust fund to cause its value to equal the full amount of liability coverage to be provided, or obtain other financial assurance as specified in this section to cover the difference. For purposes of this paragraph, “the full amount of the liability coverage to be provided” means the amount of coverage for sudden and/or nonsudden occurrences required to be provided by the owner or operator by this section, less the amount of financial assurance for liability coverage that is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the owner or operator.

(4) The wording of the trust fund must be identical to the wording specified in section 261.151(l).

#### **261.148. Incapacity of owners or operators, guarantors, or financial institutions.**

(a) An owner or operator must notify the Department by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within ten (10) days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in section 261.143(e) must make such a notification if named as debtor, as required under the terms of the corporate guarantee.

(b) An owner or operator who fulfills the requirements of section 261.143 or section 261.147 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator must establish other financial assurance or liability coverage within sixty (60) days after such an event.

#### **261.151. Wording of the instruments.**

(a)(1) A trust agreement for a trust fund, as specified in section 261.143(a) must be worded as noted in section 261.151 Appendix A-1, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(2) Section 261.151 Appendix A-2 is an example of the certification of acknowledgment which must accompany the trust agreement for a trust fund as specified in section 261.143(a).

(b) A surety bond guaranteeing payment into a trust fund, as specified in section 261.143(b), must be worded as noted in section 261.151 Appendix B, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(c) A letter of credit, as specified in section 261.143(c), must be worded as noted in section 261.151 Appendix C, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(d) A certificate of insurance, as specified in section 261.143(e), must be worded as noted in section 261.151 Appendix D, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(e) A letter from the chief financial officer, as specified in section 261.143(e), must be worded as noted in section 261.151 Appendix E, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(f) A letter from the chief financial officer, as specified in section 261.147(f) must be worded as noted in section 261.151 Appendix F, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(g)(1) A corporate guarantee, as specified in section 261.143(e), must be worded as noted in section 261.151 Appendix G-1, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(2) A guarantee, as specified in section 261.147(g), must be worded as noted in section 261.151 Appendix G-2, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(h) A hazardous waste facility liability endorsement as required in section 261.147 must be worded as noted in section 261.151 Appendix H, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(i) A certificate of liability insurance as required in section 261.147 must be worded as noted in section 261.151 Appendix I, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(j) A letter of credit, as specified in section 261.147(h), must be worded as noted in section 261.151 Appendix J, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(k) A surety bond, as specified in section 261.147(i), must be worded as noted in section 261.151 Appendix K, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(l)(1) A trust agreement, as specified in section 261.147(j), must be worded as noted in section 261.151 Appendix L-1, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(2) Section 261.151 Appendix L-2 is an example of the certification of acknowledgement which must accompany the trust agreement for a trust fund as specified in section 261.147(j).

(m)(1) A standby trust agreement, as specified in section 261.147(h), must be worded as noted in section 261.151 Appendix M-1, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

(2) Section 261.151 Appendix M-2 is an example of the certification of acknowledgement which must accompany the trust agreement for a standby trust fund as specified in section 261.147(h).

## **261.151. APPENDIX A-1**

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT TRUST AGREEMENT, the "Agreement," entered into as of [date] by and between [name of the owner or operator], a [name of State] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert "incorporated in the State of \_\_\_-----" or "a national bank"], the "Trustee."

WHEREAS, the South Carolina Department of Health and Environmental Control, hereafter referred to as the "Department," an agency of South Carolina, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a facility regulated under R.61-79.264 or 265, or satisfying the conditions of the exclusion under section 261.4(a)(24) shall provide assurance that funds will be available if needed for care of the facility under subpart G of R.61-79.264 or 265, as applicable,

WHEREAS, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein,

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A [on Schedule A, for each facility list the EPA Identification Number (if available), name, address, and the current cost estimates, or portions thereof, for which financial assurance is demonstrated by this Agreement].

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the Department in the event that the hazardous secondary materials of the Grantor no longer meet the conditions of the exclusion under section 261.4(a)(24). The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy

of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the Department.

Section 4. Payments from the Fund. The Trustee shall make payments from the Fund as the Department shall direct, in writing, to provide for the payment of the costs of the performance of activities required under subpart G of R.61-79.264 or 265 for the facilities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the Department from the Fund for expenditures for such activities in such amounts as the beneficiary shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the Department specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the federal or state government;

(b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and

(c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, at least thirty (30) days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the Department a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than sixty (60) days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within ninety (90) days after the statement has been furnished to the Grantor and the Department shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting

the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Department, and the present Trustee by certified mail ten (10) days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Department to the Trustee shall be in writing, signed by the Department, or their designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Department hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or Department, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Department, or by the Trustee and the Department if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Department, or by the Trustee and the Department, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Department issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of South Carolina

Section 19. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written: The parties below certify that the wording of this Agreement is identical to the wording specified in section 261.151 Appendix A-1 as such regulations were constituted on the date set forth above.

[Signature of Grantor]	

[Title]		
Attest:		
	[Title]	
	[Seal]	
[Signature of Trustee]		
Attest:		
	[Title]	
	[Seal]	

**261.151. APPENDIX A-2**

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT**

Certificate of Acknowledgement

State of \_\_\_\_\_  
 County of \_\_\_\_\_

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that they reside at [address], that they are [title] of [corporation], the corporation described in and which executed the above instrument; that they know the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that they signed their name thereto by like order.

[Signature of Notary Public]

**261.151. APPENDIX B**

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT**

Financial Guarantee Bond

Date bond executed: \_\_\_\_\_  
 Effective date: \_\_\_\_\_  
 Principal: [legal name and business address of owner or operator] \_\_\_\_\_  
 Type of Organization: [insert "individual," "joint venture," "partnership," or "corporation"] \_\_\_\_\_  
 State of incorporation: \_\_\_\_\_  
 Surety(ies): [name(s) and business address(es)] \_\_\_\_\_  
 EPA Identification Number, name, address, and amount(s) for each facility guaranteed by this bond: \_\_\_\_\_  
 Total penal sum of bond: \$ \_\_\_\_\_  
 Surety's bond number: \_\_\_\_\_

Know All Persons By These Presents, That we, the Principal and Surety(ies) are firmly bound to the South Carolina Department of Health and Environmental Control, hereafter referred to as the "Department," in the event that the hazardous secondary materials at the reclamation or intermediate facility listed below no longer meet the conditions of the exclusion under section 261.4(a)(24), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

WHEREAS said Principal is required, under the South Carolina Hazardous Waste Management Regulation to have a permit or interim status in order to own or operate each facility identified above, or to meet conditions under section 261.4(a)(24),

WHEREAS said Principal is required to provide financial assurance as a condition of the permit or interim status or as a condition of an exclusion under R.61-79.261.4(a)(24),

WHEREAS said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance,

NOW, THEREFORE, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of final closure of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility,

OR, if the Principal shall satisfy all the conditions established for exclusion of hazardous secondary materials from coverage as solid waste under section 261.4(a)(24),

OR, if the Principal shall fund the standby trust fund in such amount(s) within fifteen (15) days after a final order to begin closure is issued by the Department or a U.S. district court or other court of competent jurisdiction,

OR, if the Principal shall provide alternate financial assurance, as specified in subpart H of R.61-79.261, as applicable, and obtain the Department 's written approval of such assurance, within ninety (90) days after the date notice of cancellation is received by both the Principal and the Department from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Department that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the Department.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the Department, provided, however, that cancellation shall not occur during the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by both the Principal and the Department, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Department.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new amount, provided that the penal sum does not increase by more than twenty (20) percent in any one year, and no decrease in the penal sum takes place without the written permission of the Department.

IN WITNESS WHEREOF, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in section 261.151 Appendix B as such regulations were constituted on the date this bond was executed.

Principal

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

Corporate Surety(ies)

[Name and address]

State of incorporation: \_\_\_\_\_

Liability limit: \$ \_\_\_\_\_

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$ \_\_\_\_\_

## **261.151. APPENDIX C**

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU  
OF LAND AND WASTE MANAGEMENT

Irrevocable Standby Letter of Credit

Chief

Bureau of Land and Waste Management

2600 Bull Street

Columbia, SC, 29021

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. \_\_\_\_\_ in your favor, in the event that the hazardous secondary materials at the covered reclamation or intermediary facility(ies) no longer meet the conditions of the exclusion under section 261.4(a)(24), at the request and for the account

of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars \$\_\_\_\_, available upon presentation of

(1) your sight draft, bearing reference to this letter of credit No.\_\_\_\_, and

(2) your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the South Carolina Hazardous Waste Management Act."

This letter of credit is effective as of [date] and shall expire on [date at least one (1) year later], but such expiration date shall be automatically extended for a period of [at least one (1) year] on [date] and on each successive expiration date, unless, at least one hundred twenty (120) days before the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for one hundred twenty (120) days after the date of receipt by both you and [owner's or operator's name], as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner's or operator's name] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in section 261.151 Appendix C as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution] [Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce," or "the Uniform Commercial Code"].

## **261.151. APPENDIX D**

### **SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT**

#### **Certificate of Insurance**

Name and Address of Insurer (herein called the "Insurer"):

Name and Address of Insured (herein called the "Insured"):

Facilities Covered: [List for each facility: The EPA Identification Number (if any issued), name, address, and the amount of insurance for all facilities covered, which must total the face amount shown below.

Face Amount:

Policy Number: \_\_\_\_\_

Effective Date:

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance so that in accordance with applicable regulations all hazardous secondary materials can be removed from the facility or any unit at the facility, and the facility or any unit at the facility can be decontaminated at the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of section 261.143(d) as applicable and as such regulations

were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Department, the Insurer agrees to furnish to the Department a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in section 261.151 Appendix D as such regulations were constituted on the date shown immediately below.

[Authorized signature for Insurer]

[Name of person signing]

[Title of person signing]

Signature of witness or notary: \_\_\_\_\_

[Date]

## **261.151. APPENDIX E**

### **SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT**

Letter from Chief Financial Officer

Chief  
Bureau of Land and Waste Management  
2600 Bull Street  
Columbia, SC 29201

Dear Sir or Madam: I am the chief financial officer of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance, as specified in subpart H of R.61-79.261.

[Fill out the following nine paragraphs regarding facilities and associated cost estimates. If your firm has no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number (if any issued), name, address, and current cost estimates.]

1. This firm is the owner or operator of the following facilities for which financial assurance is demonstrated through the financial test specified in subpart H of R.61-79.261. The current cost estimates covered by the test are shown for each facility: \_\_\_\_.

2. This firm guarantees, through the guarantee specified in subpart H of R.61-79.261, the following facilities owned or operated by the guaranteed party. The current cost estimates so guaranteed are shown for each facility: \_\_\_\_\_. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee\_\_\_\_; or (3) engaged in the following substantial business relationship with the owner or operator \_\_\_\_\_, and receiving the following value in consideration of this guarantee\_\_\_\_\_]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter].

3. In states outside of South Carolina, where the Department is not administering the financial requirements of subpart H of R.61-79.261, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the following facilities through the use of a test equivalent or substantially equivalent

to the financial test specified in subpart H of R.61-79.261. The current cost estimates covered by such a test are shown for each facility:\_\_\_\_\_.

4. This firm is the owner or operator of the following hazardous secondary materials management facilities for which financial assurance is not demonstrated to the Department through the financial test or any other financial assurance mechanism specified in subpart H of R.61-79.261 or equivalent or substantially equivalent state mechanisms. The current cost estimates not covered by such financial assurance are shown for each facility:\_\_\_\_\_.

5. This firm is the owner or operator of the following UIC facilities for which financial assurance for plugging and abandonment is required under 40 CFR part 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility:\_\_\_\_\_.

6. This firm is the owner or operator of the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in subpart H of R.61-79.264 and 265. The current closure and/or post-closure cost estimates covered by the test are shown for each facility:\_\_\_\_\_.

7. This firm guarantees, through the guarantee specified in subpart H of R.61-79.264 and 265, the closure or post-closure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility: \_\_\_\_\_. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee \_\_\_\_; or (3) engaged in the following substantial business relationship with the owner or operator \_\_, and receiving the following value in consideration of this guarantee \_\_]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter].

8. In states outside of South Carolina, where the Department is not administering the financial requirements of subpart H of R.61-79.264 or 265, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in subpart H of R.61-79.264 and 265. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility: \_\_\_\_.

9. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated to the Department through the financial test or any other financial assurance mechanism specified in subpart H of R.61-79.264 and 265 or equivalent or substantially equivalent state mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: \_\_\_\_.

This firm [insert “is required” or “is not required”] to file a Form 10K with the U.S. Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm’s independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Fill in Alternative I if the criteria of paragraph (e)(1)(i) of section 261.143 are used. Fill in Alternative II if the criteria of paragraph (e)(1)(ii) of section 261.143(e) are used.]

ALTERNATIVE I

	1.	Sum of current cost estimates [total of all cost estimates shown in the nine paragraphs above]	\$_____
*	2.	Total liabilities [if any portion of the cost estimates is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4]	\$_____
*	3.	Tangible net worth	\$_____
*	4.	Net worth	\$_____
*	5.	Current assets	\$_____
*	6.	Current liabilities	\$_____
	7.	Net working capital [line 5 minus line 6]	\$_____
*	8.	The sum of net income plus depreciation, depletion, and amortization	\$_____
*	9.	Total assets in U.S. (required only if less than ninety (90) percent of firm's assets are located in the U.S.)	\$_____
	10.	Is line 3 at least \$10 million?	Yes/No
	11.	Is line 3 at least 6 times line 1?	Yes/No
	12.	Is line 7 at least 6 times line 1?	Yes/No
*	13.	Are at least ninety (90) percent of firm's assets located in the U.S.? If not, complete line 14	Yes/No
	14.	Is line 9 at least 6 times line 1?	Yes/No
	15.	Is line 2 divided by line 4 less than 2.0?	Yes/No
	16.	Is line 8 divided by line 2 greater than 0.1?	Yes/No
	17.	Is line 5 divided by line 6 greater than 1.5?	Yes/No

ALTERNATIVE II

	1.	Sum of current cost estimates [total of all cost estimates shown in the eight paragraphs above]	\$_____
	2.	Current bond rating of most recent issuance of this firm and name of rating service	
	3.	Date of issuance of bond	
	4.	Date of maturity of bond	
*	5.	Tangible net worth [if any portion of the cost estimates is included in "total liabilities" on your firm's financial statements, you may add the amount of that portion to this line]	\$_____
*	6.	Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.)	\$_____
	7.	Is line 5 at least \$10 million?	Yes/No
	8.	Is line 5 at least 6 times line 1?	Yes/No
*	9.	Are at least 90% of firm's assets located in the U.S.? If not, complete line 10	Yes/No
	10.	Is line 6 at least 6 times line 1?	Yes/No

I hereby certify that the wording of this letter is identical to the wording specified in section 261.151 Appendix E as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

## 261.151. APPENDIX F

Letter from Chief Financial Officer

Chief  
Bureau of Land and Waste Management  
2600 Bull Street  
Columbia, SC 29201

Dear Sir or Madam: I am the chief financial officer of [firm's name and address]. This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage under section 261.147 [insert "and costs assured section 261.143(e)" if applicable] as specified in subpart H of R.61-79.261.

[Fill out the following paragraphs regarding facilities and liability coverage. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number (if any issued), name, and address].

The firm identified above is the owner or operator of the following facilities for which liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences is being demonstrated through the financial test specified in subpart H of R.61-79.261: \_\_\_\_\_

The firm identified above guarantees, through the guarantee specified in subpart H of R.61-79.261, liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences at the following facilities owned or operated by the following: \_\_\_\_\_. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee -\_\_\_\_; or (3) engaged in the following substantial business relationship with the owner or operator \_\_\_\_\_, and receiving the following value in consideration of this guarantee \_\_\_\_]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.]

The firm identified above is the owner or operator of the following facilities for which liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences is being demonstrated through the financial test specified in subpart H of R.61-79.264 and 265: \_\_\_\_\_

The firm identified above guarantees, through the guarantee specified in subpart H of R.61-79.264 and 265, liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences at the following facilities owned or operated by the following: \_\_\_\_\_. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee \_\_\_\_; or (3) engaged in the following substantial business relationship with the owner or operator \_\_\_\_\_, and receiving the following value in consideration of this guarantee \_\_\_\_]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.]

[If you are using the financial test to demonstrate coverage of both liability and costs assured under section 261.143(e) or closure or post-closure care costs under sections 264.143, 264.145, 265.143, or 265.145, fill in the following nine paragraphs regarding facilities and associated cost estimates. If there are

no facilities that belong in a particular paragraph, write “None” in the space indicated. For each facility, include its EPA identification number (if any issued), name, address, and current cost estimates.]

1. This firm is the owner or operator of the following facilities for which financial assurance is demonstrated through the financial test specified in subpart H of R.61-79.261. The current cost estimates covered by the test are shown for each facility: \_\_\_\_.

2. This firm guarantees, through the guarantee specified in subpart H of R.61-79.261, the following facilities owned or operated by the guaranteed party. The current cost estimates so guaranteed are shown for each facility: \_\_\_\_\_. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee \_\_\_\_; or (3) engaged in the following substantial business relationship with the owner or operator \_\_\_\_, and receiving the following value in consideration of this guarantee \_\_\_\_]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.]

3. In states outside of South Carolina, where the Department is not administering the financial requirements of subpart H of R.61-79.261, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in subpart H of R.61-79.261. The current cost estimates covered by such a test are shown for each facility: \_\_\_\_.

4. This firm is the owner or operator of the following hazardous secondary materials management facilities for which financial assurance is not demonstrated to the Department through the financial test or any other financial assurance mechanism specified in subpart H of R.61-79.261 or equivalent or substantially equivalent state mechanisms. The current cost estimates not covered by such financial assurance are shown for each facility: \_\_\_\_.

5. This firm is the owner or operator of the following UIC facilities for which financial assurance for plugging and abandonment is required under 40 CFR part 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: \_\_\_\_.

6. This firm is the owner or operator of the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in subpart H of R.61-79.264 and 265. The current closure and/or post-closure cost estimates covered by the test are shown for each facility: \_\_\_\_.

7. This firm guarantees, through the guarantee specified in subpart H of R.61-79.264 and 265, the closure or post-closure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility: \_\_\_\_\_. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee \_\_\_\_; or (3) engaged in the following substantial business relationship with the owner or operator \_\_\_\_, and receiving the following value in consideration of this guarantee \_\_\_\_].

[Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.]

8. In states outside of South Carolina, where the Department is not administering the financial requirements of subpart H of R.61-79.264 or 265, this firm, as owner or operator or guarantor, is

demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in subpart H of R.61-79.264 and 265. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility: \_\_\_\_.

9. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated to the Department through the financial test or any other financial assurance mechanism specified in subpart H of R.61-79.264 and 265 or equivalent or substantially equivalent state mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: \_\_\_\_.

This firm [insert “is required” or “is not required”] to file a Form 10K with the U.S. Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm’s independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

Part A. Liability Coverage for Accidental Occurrences

[Fill in Alternative I if the criteria of paragraph (f)(1)(i) of section 261.147 are used. Fill in Alternative II if the criteria of paragraph (f)(1)(ii) of section 261.147 are used.]

ALTERNATIVE I

	1.	Amount of annual aggregate liability coverage to be demonstrated	\$ ____
*	2.	Current assets	\$ ____
*	3.	Current liabilities	\$ ____
	4.	Net working capital (line 2 minus line 3)	\$ ____
*	5.	Tangible net worth	\$ ____
*	6.	If less than ninety (90) percent of assets are located in the U.S., give total U.S. assets	\$ ____
	7.	Is line 5 at least ten (10) million dollars?	Yes/No
	8.	Is line 4 at least six (6) times line 1?	Yes/No
	9.	Is line 5 at least six (6) times line 1?	Yes/No
*	10.	Are at least ninety (90) percent of assets located in the U.S.? If not, complete line 11	Yes/No
	11.	Is line 6 at least six (6) times line 1?	Yes/No

ALTERNATIVE II

	1.	Amount of annual aggregate liability coverage to be demonstrated	\$ ____
	2.	Current bond rating of most recent issuance and name of rating service	
	3.	Date of issuance of bond	
	4.	Date of maturity of bond	
	5.	Tangible net worth	\$ ____
	6.	Total assets in U.S. (required only if less than ninety (90) percent of assets are located in the U.S.)	\$ ____
	7.	Is line 5 at least ten (10) million dollars?	Yes/No
	8.	Is line 5 at least six (6) times line 1?	Yes/No
	9.	Are at least ninety (90) percent of assets located in the U.S.? If not, complete line 10.	Yes/No

10.	Is line 6 at least six (6) times line 1?	Yes/No
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[Fill in part B if you are using the financial test to demonstrate assurance of both liability coverage and costs assured under section 261.143(e) or closure or post-closure care costs under sections 264.143, 264.145, 265.143, or 265.145.]

#### Part B. Facility Care and Liability Coverage

[Fill in Alternative I if the criteria of paragraphs (e)(1)(i) of section 261.143 and (f)(1)(i) of section 261.147 are used. Fill in Alternative II if the criteria of paragraphs (e)(1)(ii) of section 261.143 and (f)(1)(ii) of section 261.147 are used.]

#### ALTERNATIVE I

	1.	Sum of current cost estimates (total of all cost estimates listed above)	\$ _____
	2.	Amount of annual aggregate liability coverage to be demonstrated	\$ _____
	3.	Sum of lines 1 and 2	\$ _____
*	4.	Total liabilities (if any portion of your cost estimates is included in your total liabilities, you may deduct that portion from this line and add that amount to lines 5 and 6)	\$ _____
*	5.	Tangible net worth	\$ _____
*	6.	Net worth	\$ _____
*	7.	Current assets	\$ _____
*	8.	Current liabilities	\$ _____
	9.	Net working capital (line 7 minus line 8)	\$ _____
*	10.	The sum of net income plus depreciation, depletion, and amortization	\$ _____
*	11.	Total assets in U.S. (required only if less than ninety (90) percent of assets are located in the U.S.)	\$ _____
	12.	Is line 5 at least ten (10) million dollars?	Yes/No
	13.	Is line 5 at least six (6) times line 3?	Yes/No
	14.	Is line 9 at least six (6) times line 3?	Yes/No
*	15.	Are at least ninety (90) percent of assets located in the U.S.? If not, complete line 16.	Yes/No
	16.	Is line 11 at least six (6) times line 3?	Yes/No
	17.	Is line 4 divided by line 6 less than 2.0?	Yes/No
	18.	Is line 10 divided by line 4 greater than 0.1?	Yes/No
	19.	Is line 7 divided by line 8 greater than 1.5?	Yes/No

#### ALTERNATIVE II

	1.	Sum of current cost estimates (total of all cost estimates listed above)	\$ _____
	2.	Amount of annual aggregate liability coverage to be demonstrated	\$ _____
	3.	Sum of lines 1 and 2	\$ _____
	4.	Current bond rating of most recent issuance and name of rating service	
	5.	Date of issuance of bond	
	6.	Date of maturity of bond	
*	7.	Tangible net worth (if any portion of the cost estimates is included in "total liabilities" on your financial statements you may add that portion to this line)	\$ _____
*	8.	Total assets in the U.S. (required only if less than ninety (90) percent of assets are located in the U.S.)	\$ _____

	9.	Is line 7 at least ten (10) million dollars?	Yes/No
	10.	Is line 7 at least six (6) times line 3?	Yes/No
*	11.	Are at least ninety (90) percent of assets located in the U.S.? If not complete line 12.	Yes/No
	12.	Is line 8 at least six (6) times line 3?	Yes/No

I hereby certify that the wording of this letter is identical to the wording specified in sections 261.151 Appendix F as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

### **261.151. APPENDIX G-1**

#### **SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT**

##### **Corporate Guarantee for Facility Care**

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of South Carolina, herein referred to as guarantor. This guarantee is made on behalf of the [owner or operator] of [business address], which is [one of the following: “our subsidiary”; “a subsidiary of [name and address of common parent corporation], of which guarantor is a subsidiary”; or “an entity with which guarantor has a substantial business relationship, as defined in sections 264.141(h) and 265.141(h)” to the South Carolina Department of Health and Environmental Control, hereafter referred to as the “Department.”

##### **Recitals**

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in section 261.143(e).

2. [Owner or operator] owns or operates the following facility(ies) covered by this guarantee: [List for each facility: EPA Identification Number (if any issued), name, and address.]

3. “Closure plans” as used below refer to the plans maintained as required by subpart H of R.61-79.261 for the care of facilities as identified above.

4. For value received from [owner or operator], guarantor guarantees that in the event of a determination by the Department that the hazardous secondary materials at the owner or operator’s facility covered by this guarantee do not meet the conditions of the exclusion under section 261.4(a)(24), the guarantor will dispose of any hazardous secondary material as hazardous waste, and close the facility in accordance with closure requirements found in R.61-79.264 or 265 of this chapter, as applicable, or establish a trust fund as specified in section 261.143(a) in the name of the owner or operator in the amount of the current cost estimate.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within ninety (90) days, by certified mail, notice to the Department and to [owner or operator] that they intend to provide alternate financial assurance as specified in subpart H of R.61-79.261, as applicable, in the name of [owner or operator]. Within one

hundred twenty (120) days after the end of such fiscal year, the guarantor shall establish such financial assurance unless [owner or operator] has done so.

6. The guarantor agrees to notify the Department by certified mail, of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within ten (10) days after commencement of the proceeding.

7. Guarantor agrees that within thirty (30) days after being notified by the Department of a determination that guarantor no longer meets the financial test criteria or that they are disallowed from continuing as a guarantor, they shall establish alternate financial assurance as specified in of R.61-79.264, 265, or subpart H of R.61-79.261, as applicable, in the name of [owner or operator] unless [owner or operator] has done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the closure plan, the extension or reduction of the time of performance, or any other modification or alteration of an obligation of the owner or operator pursuant to R.61-79.264, 265, or subpart H of R.61-79.261.

9. Guarantor agrees to remain bound under this guarantee for as long as [owner or operator] must comply with the applicable financial assurance requirements of R.61-79.264 and 265 or the financial assurance condition of section 261.4(a)(24)(vi)(F) for the above-listed facilities, except as provided in paragraph 10 of this agreement.

10. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator]:

Guarantor may terminate this guarantee by sending notice by certified mail to the Department and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the Department approves, alternate coverage complying with section 261.143.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its “substantial business relationship” with the owner or operator]:

Guarantor may terminate this guarantee one hundred twenty (120) days following the receipt of notification, through certified mail, by the Department and by [the owner or operator].

11. Guarantor agrees that if [owner or operator] fails to provide alternate financial assurance as specified in R.61-79.264, 265, or subpart H of R.61-79.261, as applicable, and obtain written approval of such assurance from the Department within ninety (90) days after a notice of cancellation by the guarantor is received by the Department from guarantor, guarantor shall provide such alternate financial assurance in the name of [owner or operator].

12. Guarantor expressly waives notice of acceptance of this guarantee by the Department or by [owner or operator]. Guarantor also expressly waives notice of amendments or modifications of the closure plan and of amendments or modifications of the applicable requirements of R.61-79.264, 265, or subpart H of R.61-79.261.

I hereby certify that the wording of this guarantee is identical to the wording specified in section 261.151 Appendix G-1 as such regulations were constituted on the date first above written.

Effective date:

[Name of guarantor]  
[Authorized signature for guarantor]  
[Name of person signing]  
[Title of person signing]  
Signature of witness or notary:

## **261.151. APPENDIX G-2**

### Guarantee for Liability Coverage

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of South Carolina, herein referred to as guarantor. This guarantee is made on behalf of [owner or operator] of [business address], which is one of the following: “our subsidiary”; “a subsidiary of [name and address of common parent corporation], of which guarantor is a subsidiary”; or “an entity with which guarantor has a substantial business relationship, as defined in R.61-79 [either 264.141(h) or 265.141(h)],” to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee.

#### Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in section 261.147(g).

2. [Owner or operator] owns or operates the following facility(ies) covered by this guarantee: [List for each facility: EPA Identification Number (if any issued), name, and address; and if guarantor is incorporated outside the United States list the name and address of the guarantor’s registered agent in each state.] This corporate guarantee satisfies RCRA third-party liability requirements for [insert “sudden” or “nonsudden” or “both sudden and nonsudden”] accidental occurrences in above-named owner or operator facilities for coverage in the amount of [insert dollar amount] for each occurrence and [insert dollar amount] annual aggregate.

3. For value received from [owner or operator], guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operations of the facility(ies) covered by this guarantee that in the event that [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [sudden and/or nonsudden] accidental occurrences, arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor will satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage identified above.

4. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert owner or operator] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert owner or operator] under a workers’ compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert owner or operator]. This exclusion applies:

(A) Whether [insert owner or operator] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert owner or operator];

(2) Premises that are sold, given away, or abandoned by [insert owner or operator] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert owner or operator];

(4) Personal property in the care, custody, or control of [insert owner or operator];

(5) That particular part of real property on which [insert owner or operator] or any contractors or subcontractors working directly or indirectly on behalf of [insert owner or operator] are performing operations, if the property damage arises out of these operations.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within ninety (90) days, by certified mail, notice to the Department and to [owner or operator] that they intend to provide alternate liability coverage as specified in R.61-79.261.147, as applicable, in the name of [owner or operator]. Within one hundred twenty (120) days after the end of such fiscal year, the guarantor shall establish such liability coverage unless [owner or operator] has done so.

6. The guarantor agrees to notify the Department by certified mail of a voluntary or involuntary proceeding under title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within ten (10) days after commencement of the proceeding. Guarantor agrees that within thirty (30) days after being notified by the Department of a determination that guarantor no longer meets the financial test criteria or that they are disallowed from continuing as a guarantor, they shall establish alternate liability coverage as specified in R.61-79.261.147 in the name of [owner or operator], unless [owner or operator] has done so.

7. Guarantor reserves the right to modify this agreement to take into account amendment or modification of the liability requirements set by R.61-79.261.147, provided that such modification shall become effective only if the Department does not disapprove the modification within thirty (30) days of receipt of notification of the modification.

8. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable requirements of R.61-79.261.147 for the above-listed facility(ies), except as provided in paragraph 10 of this agreement.

9. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator]:

Guarantor may terminate this guarantee by sending notice by certified mail to the Department and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the Department approve, alternate liability coverage complying with R.61-79.261.147.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its “substantial business relationship” with the owner or operator]:

Guarantor may terminate this guarantee one hundred twenty (120) days following receipt of notification, through certified mail, by the Department and by [the owner or operator].

11. Guarantor hereby expressly waives notice of acceptance of this guarantee by any party.

12. Guarantor agrees that this guarantee is in addition to and does not affect any other responsibility or liability of the guarantor with respect to the covered facilities.

13. The Guarantor shall satisfy a third-party liability claim only on receipt of one of the following documents:

(a) Certification from the Principal and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

#### Certification of Valid Claim

The undersigned, as parties [insert Principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Principal’s] facility should be paid in the amount of \$[insert amount].

[Signatures]

Principal

(Notary) Date

[Signatures]

Claimant(s)

(Notary) Date

(b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal’s facility or group of facilities.

14. In the event of combination of this guarantee with another mechanism to meet liability requirements, this guarantee will be considered [insert “primary” or “excess”] coverage.

I hereby certify that the wording of the guarantee is identical to the wording specified in section 261.151 Appendix G-2 as such regulations were constituted on the date shown immediately below.

Effective date:

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

## **261.151. APPENDIX H**

### **SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT**

#### **Hazardous Secondary Material Reclamation/Intermediate Facility Liability Endorsement**

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the insured's obligation to demonstrate financial responsibility under section 261.147. The coverage applies at [list EPA Identification Number (if any issued), name, and address for each facility] for [insert "sudden accidental occurrences," "nonsudden accidental occurrences," or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability], exclusive of legal defense costs.

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with subsections (a) through (e) of this Paragraph 2 are hereby amended to conform with subsections (a) through (e):

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy to which this endorsement is attached.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in section 261.147(f).

(c) Whenever requested by the Department, the Insurer agrees to furnish to the Department a signed duplicate original of the policy and all endorsements.

(d) Cancellation of this endorsement, whether by the Insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the facility, will be effective only upon written notice and only after the expiration of sixty (60) days after a copy of such written notice is received by the Department.

(e) Any other termination of this endorsement will be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such written notice is received by the Department.

Attached to and forming part of policy No. \_\_\_ issued by [name of Insurer], herein called the Insurer, of [address of Insurer] to [name of insured] of [address] this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_. The effective date of said policy is \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

I hereby certify that the wording of this endorsement is identical to the wording specified in section 261.151 Appendix H as such regulation was constituted on the date set forth above, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

[Signature of Authorized Representative of Insurer]  
[Type name]  
[Title], Authorized Representative of [name of Insurer]  
[Address of Representative]

## **261.151. APPENDIX I**

### **SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT**

#### **Hazardous Secondary Material Reclamation/Intermediate Facility Certificate of Liability Insurance**

1. [Name of Insurer], (the “Insurer”), of [address of Insurer] hereby certifies that it has issued liability insurance covering bodily injury and property damage to [name of insured], (the “insured”), of [address of insured] in connection with the insured’s obligation to demonstrate financial responsibility under R.61-79.264, 265, and the financial assurance condition of section 261.4(a)(24)(vi)(F). The coverage applies at [list EPA Identification Number (if any issued), name, and address for each facility] for [insert “sudden accidental occurrences,” “nonsudden accidental occurrences,” or “sudden and nonsudden accidental occurrences”]; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the “each occurrence” and “annual aggregate” limits of the Insurer’s liability], exclusive of legal defense costs. The coverage is provided under policy number, issued on [date]. The effective date of said policy is [date].

2. The Insurer further certifies the following with respect to the insurance described in Paragraph 1:

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in section 261.147.

(c) Whenever requested by the South Carolina Department of Health and Environmental Control, hereafter referred to as the “Department,” the Insurer agrees to furnish to the Department a signed duplicate original of the policy and all endorsements.

(d) Cancellation of the insurance, whether by the insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, will be effective

only upon written notice and only after the expiration of sixty (60) days after a copy of such written notice is received by the Department.

(e) Any other termination of the insurance will be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such written notice is received by the Department.

I hereby certify that the wording of this instrument is identical to the wording specified in section 261.151 Appendix I as such regulation was constituted on the date set forth above, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

[Signature of authorized representative of Insurer]  
[Type name]  
[Title], Authorized Representative of [name of Insurer]  
[Address of Representative]

## **261.151. APPENDIX J**

### **SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT**

#### **Irrevocable Standby Letter of Credit**

Chief  
Bureau of Land and Waste Management  
2600 Bull Street  
Columbia, SC 29201

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. \_\_\_\_ in the favor of [“any and all third-party liability claimants” or insert name of trustee of the standby trust fund], at the request and for the account of [owner or operator’s name and address] for third-party liability awards or settlements up to [in words] U.S. dollars \$\_\_\_\_ per occurrence and the annual aggregate amount of [in words] U.S. dollars \$\_\_\_\_, for sudden accidental occurrences and/or for third-party liability awards or settlements up to the amount of [in words] U.S. dollars \$\_\_\_\_----- per occurrence, and the annual aggregate amount of [in words] U.S. dollars \$\_\_\_\_, for nonsudden accidental occurrences available upon presentation of a sight draft bearing reference to this letter of credit No. \_\_\_\_, and [insert the following language if the letter of credit is being used without a standby trust fund: (1) a signed certificate reading as follows]:

#### **Certificate of Valid Claim**

The undersigned, as parties [insert principal] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operations of [principal’s] facility should be paid in the amount of \$[insert amount]. We hereby certify that the claim does not apply to any of the following:

(a) Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert principal] under a workers’ compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal].

This exclusion applies:

(A) Whether [insert principal] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert principal];

(2) Premises that are sold, given away, or abandoned by [insert principal] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert principal];

(4) Personal property in the care, custody, or control of [insert principal];

(5) That particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

[Signatures]

Grantor

[Signatures]

Claimant(s)

or (2) a valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date and on each successive expiration date, unless, at least one hundred twenty (120) days before the current expiration date, we notify you, the Department, and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us.

[Insert the following language if a standby trust fund is not being used: “In the event that this letter of credit is used in combination with another mechanism for liability coverage, this letter of credit shall be considered [insert “primary” or “excess” coverage].”

We certify that the wording of this letter of credit is identical to the wording specified in section 261.151 Appendix J as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution] [Date].

This credit is subject to [insert “the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce,” or “the Uniform Commercial Code”].

**261.151. APPENDIX K**

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT**

Payment Bond

Surety Bond No. [Insert number]

Parties [Insert name and address of owner or operator], Principal, incorporated in [Insert state of incorporation] of [Insert city and state of principal place of business] and [Insert name and address of surety company(ies)], Surety Company(ies), of [Insert surety(ies) place of business].

EPA Identification Number (if any issued), name, and address for each facility guaranteed by this bond:	
Sudden accidental occurrences	Nonsudden accidental occurrences
Penal Sum Per Occurrence	[insert amount] [insert amount]
Annual Aggregate	[insert amount] [insert amount]

Purpose: This is an agreement between the Surety(ies) and the Principal under which the Surety(ies), its(their) successors and assignees, agree to be responsible for the payment of claims against the Principal for bodily injury and/or property damage to third parties caused by [“sudden” and/or “nonsudden”] accidental occurrences arising from operations of the facility or group of facilities in the sums prescribed herein; subject to the governing provisions and the following conditions.

Governing Provisions:

(1) SC Hazardous Waste Management Act 44-56 et seq. and section 3004 of the Resource Conservation and Recovery Act of 1976, as amended.

(2) Rules and regulations of the U.S. Environmental Protection Agency (EPA), particularly 40 CFR parts 264, 265, and subpart H of 40 CFR part 261 (if applicable).

(3) Rules and regulations of the South Carolina Department of Health and Environmental Control, particularly R.61-79.264, 265, and subpart H of R.61-79.261.

Conditions:

(1) The Principal is subject to the applicable governing provisions that require the Principal to have and maintain liability coverage for bodily injury and property damage to third parties caused by [“sudden” and/or “nonsudden”] accidental occurrences arising from operations of the facility or group of facilities. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which [insert Principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert Principal] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert Principal] under a workers’ compensation, disability benefits, or unemployment compensation law or similar law.

(c) Bodily injury to:

(1) An employee of [insert Principal] arising from, and in the course of, employment by [insert principal]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert Principal]. This exclusion applies:

(A) Whether [insert Principal] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert Principal];

(2) Premises that are sold, given away, or abandoned by [insert Principal] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert Principal];

(4) Personal property in the care, custody, or control of [insert Principal];

(5) That particular part of real property on which [insert Principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert Principal] are performing operations, if the property damage arises out of these operations.

(2) This bond assures that the Principal will satisfy valid third party liability claims, as described in condition 1.

(3) If the Principal fails to satisfy a valid third party liability claim, as described above, the Surety(ies) becomes liable on this bond obligation.

(4) The Surety(ies) shall satisfy a third party liability claim only upon the receipt of one of the following documents:

(a) Certification from the Principal and the third party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

#### Certification of Valid Claim

The undersigned, as parties [insert name of Principal] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Principal's] facility should be paid in the amount of \$[insert amount].

[Signature]

Principal

[Notary] Date

[Signature(s)]

Claimant(s)

[Notary] Date

or (b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

(5) In the event of combination of this bond with another mechanism for liability coverage, this bond will be considered [insert "primary" or "excess"] coverage.

(6) The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond. In no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum, provided that the Surety(ies) furnish(es) notice to the Department forthwith of all claims filed and payments made by the Surety(ies) under this bond.

(7) The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and the Department, provided, however, that cancellation shall not occur during the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by the Principal and the Department, as evidenced by the return receipt.

(8) The Principal may terminate this bond by sending written notice to the Surety(ies) and to the Department.

(9) The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

(10) This bond is effective from [insert date] (12:01 a.m., standard time, at the address of the Principal as stated herein) and shall continue in force until terminated as described above.

IN WITNESS WHEREOF, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in section 261.151 Appendix K, as such regulations were constituted on the date this bond was executed.

**PRINCIPAL**

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate Seal]

**CORPORATE SURETY [IES]**

[Name and address]

State of incorporation:

Liability Limit: \$

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$

**261.151. APPENDIX L-1**

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU OF LAND AND WASTE MANAGEMENT**

**Trust Agreement**

Trust Agreement, the “Agreement,” entered into as of [date] by and between [name of the owner or operator] a [name of state] [insert “corporation,” “partnership,” “association,” or “proprietorship”], the “Grantor,” and [name of corporate trustee], [insert, “incorporated in the state of \_\_\_\_” or “a national bank”], the “trustee.”

WHEREAS, the South Carolina Department of Health and Environmental Control, hereafter referred to as the “Department,” an agency of South Carolina, has established certain regulations applicable to the Grantor, requiring that an owner or operator must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

WHEREAS, the Grantor has elected to establish a trust to assure all or part of such financial responsibility for the facilities identified herein.

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term “Grantor” means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term “Trustee” means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities. This agreement pertains to the facilities identified on attached schedule A [on schedule A, for each facility list the EPA Identification Number (if any issued), name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement].

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, hereinafter the “Fund,” for the benefit of any and all third parties injured or damaged by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of \_\_\_\_-[up to \$1 million] per occurrence and [up to \$2 million] annual aggregate for sudden accidental occurrences and \_\_\_\_ [up to \$3 million] per occurrence and \_\_\_\_-[up to \$6 million] annual aggregate for nonsudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which [insert Grantor] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert Grantor] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert Grantor] under a workers’ compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert Grantor] arising from, and in the course of, employment by [insert Grantor]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert Grantor]. This exclusion applies:

(A) Whether [insert Grantor] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert Grantor];

(2) Premises that are sold, given away, or abandoned by [insert Grantor] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert Grantor];

(4) Personal property in the care, custody, or control of [insert Grantor];

(5) That particular part of real property on which [insert Grantor] or any contractors or subcontractors working directly or indirectly on behalf of [insert Grantor] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the Fund shall be considered [insert “primary” or “excess”] coverage.

The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the Department.

Section 4. Payment for Bodily Injury or Property Damage. The Trustee shall satisfy a third party liability claim by making payments from the Fund only upon receipt of one of the following documents;

(a) Certification from the Grantor and the third party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

#### Certification of Valid Claim

The undersigned, as parties [insert Grantor] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Grantor’s] facility or group of facilities should be paid in the amount of \$[insert amount].

[Signatures]

Grantor

[Signatures]

Claimant(s)

(b) A valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor’s facility or group of facilities.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the

circumstance then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held unless they are securities or other obligations of the federal or a state government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common commingled, or collective trust fund created by the Trustee in which the fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 81a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuations. The Trustee shall annually, at least thirty (30) days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the appropriate Department a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than sixty (60) days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within ninety (90) days after the statement has been furnished to the Grantor and the Department shall constitute a conclusively binding assent by the Grantor barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Department, and the present Trustee by certified mail ten (10) days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Department to the Trustee shall be in writing, signed by the Department, or their designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Department hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Department, except as provided for herein.

Section 15. Notice of Nonpayment. If a payment for bodily injury or property damage is made under Section 4 of this trust, the Trustee shall notify the Grantor of such payment and the amount(s) thereof within

five (5) days. The Grantor shall, on or before the anniversary date of the establishment of the Fund following such notice, either make payments to the Trustee in amounts sufficient to cause the trust to return to its value immediately prior to the payment of claims under Section 4, or shall provide written proof to the Trustee that other financial assurance for liability coverage has been obtained equaling the amount necessary to return the trust to its value prior to the payment of claims. If the Grantor does not either make payments to the Trustee or provide the Trustee with such proof, the Trustee shall within 10 (ten) working days after the anniversary date of the establishment of the Fund provide a written notice of nonpayment to the Department.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the appropriate Department, or by the Trustee and the appropriate Department if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Department, or by the Trustee and the Department, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

The Department will agree to termination of the Trust when the owner or operator substitutes alternate financial assurance as specified in this section.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Department issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of South Carolina.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date set forth above. The parties below certify that the wording of this Agreement is identical to the wording specified in R.61-79.261.151 Appendix L as such regulations were constituted on the date set forth above.

[Signature of Grantor]

[Title]

Attest:

[Title]

[Seal]

[Signature of Trustee]

Attest:

[Title]

[Seal]

**261.151. APPENDIX L-2**

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU  
OF LAND AND WASTE MANAGEMENT

State of \_\_\_\_\_

County of \_\_\_\_\_

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that they reside at [address], that they are [title] of [corporation], the corporation described in and which executed the above instrument; that they know the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that they signed their name thereto by like order.

[Signature of Notary Public]

**261.151. APPENDIX M-1**

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL BUREAU  
OF LAND AND WASTE MANAGEMENT

Standby Trust Agreement

Trust Agreement, the “Agreement,” entered into as of [date] by and between [name of the owner or operator] a [name of a state] [insert “corporation,” “partnership,” “association,” or “proprietorship”], the “Grantor,” and [name of corporate trustee], [insert, “incorporated in [name of state] or “a national bank”], the “trustee.”

WHEREAS the South Carolina Department of Health and Environmental Control, hereafter referred to as the “Department,” an agency of South Carolina, has established certain regulations applicable to the Grantor, requiring that an owner or operator must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

WHEREAS, the Grantor has elected to establish a standby trust into which the proceeds from a letter of credit may be deposited to assure all or part of such financial responsibility for the facilities identified herein.

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term Grantor means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term Trustee means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities. This Agreement pertains to the facilities identified on attached schedule A [on schedule A, for each facility list the EPA Identification Number (if any issued), name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement].

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a standby trust fund, hereafter the “Fund,” for the benefit of any and all third parties injured or damaged by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of \_\_\_\_-[up to \$1 million] per occurrence and \_\_\_\_-[up to \$2 million] annual aggregate for sudden accidental occurrences and \_\_\_\_-[up to \$3 million] per occurrence and \_\_\_\_-[up to \$6 million] annual aggregate for nonsudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which [insert Grantor] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert Grantor] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert Grantor] under a workers’ compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert Grantor] arising from, and in the course of, employment by [insert Grantor]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert Grantor].

This exclusion applies:

(A) Whether [insert Grantor] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert Grantor];

(2) Premises that are sold, given away, or abandoned by [insert Grantor] if the property damage arises out of any part of those premises;

(3) Property loaned by [insert Grantor];

(4) Personal property in the care, custody, or control of [insert Grantor];

(5) That particular part of real property on which [insert Grantor] or any contractors or subcontractors working directly or indirectly on behalf of [insert Grantor] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the Fund shall be considered [insert “primary” or “excess”] coverage.

The Fund is established initially as consisting of the proceeds of the letter of credit deposited into the Fund. Such proceeds and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the Department.

Section 4. Payment for Bodily Injury or Property Damage. The Trustee shall satisfy a third party liability claim by drawing on the letter of credit described in Schedule B and by making payments from the Fund only upon receipt of one of the following documents:

(a) Certification from the Grantor and the third party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

#### Certification of Valid Claim

The undersigned, as parties [insert Grantor] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Grantor’s] facility should be paid in the amount of \$[insert amount]

[Signature]

Grantor

[Signatures]

Claimant(s)

(b) A valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor’s facility or group of facilities.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of the proceeds from the letter of credit drawn upon by the Trustee in accordance with the requirements of section 261.151(k) and Section 4 of this Agreement.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;

(b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or a state government; and

(c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements to the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Department, and the present Trustee by certified mail ten (10) days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee. All orders, requests, certifications of valid claims, and instructions to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Department hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Department, except as provided for herein.

Section 14. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Department, or by the Trustee and the Department if the Grantor ceases to exist.

Section 15. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Department, or by the Trustee and the Department, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be paid to the Grantor.

The Department will agree to termination of the Trust when the owner or operator substitutes alternative financial assurance as specified in this section.

Section 16. Immunity and indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor and the Department issued in accordance with this Agreement. The

Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of South Carolina.

Section 18. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation of the legal efficacy of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date set forth above. The parties below certify that the wording of this Agreement is identical to the wording specified in section 261.151 Appendix M as such regulations were constituted on the date set forth above.

[Signature of Grantor]

[Title]

Attest:

[Title]

[Seal]

[Signature of Trustee]

Attest:

[Title]

[Seal]

## **261.151. APPENDIX M-2**

State of \_\_\_\_\_

County of \_\_\_\_\_

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that they reside at [address], that they are [title] of [corporation], the corporation described in and which executed the above instrument; that they know the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that they signed their name thereto by like order.

[Signature of Notary Public]

### **Subpart I: Use and Management of Containers**

#### **261.170. Applicability.**

This subpart applies to hazardous secondary materials excluded under the remanufacturing exclusion at section 261.4(a)(27) and stored in containers.

#### **261.171. Condition of containers.**

If a container holding hazardous secondary material is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the hazardous secondary material must be transferred

from this container to a container that is in good condition or managed in some other way that complies with the requirements of this part.

**261.172. Compatibility of hazardous secondary materials with containers.**

The container must be made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous secondary material to be stored, so that the ability of the container to contain the material is not impaired.

**261.173. Management of containers.**

(a) A container holding hazardous secondary material must always be closed during storage, except when it is necessary to add or remove the hazardous secondary material.

(b) A container holding hazardous secondary material must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

**261.175. Containment.**

(a) Container storage areas must have a containment system that is designed and operated in accordance with paragraph (b) of this section.

(b) A containment system must be designed and operated as follows:

(1) A base must underlie the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

(2) The base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids;

(3) The containment system must have sufficient capacity to contain ten (10) percent of the volume of containers or the volume of the largest container, whichever is greater.

(4) Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in paragraph (b)(3) of this section to contain any run-on which might enter the system; and

(5) Spilled or leaked material and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

**261.176. Special requirements for ignitable or reactive hazardous secondary material.**

Containers holding ignitable or reactive hazardous secondary material must be located at least fifteen (15) meters (50 feet) from the facility's property line.

**261.177. Special requirements for incompatible materials.**

(a) Incompatible materials must not be placed in the same container.

(b) Hazardous secondary material must not be placed in an unwashed container that previously held an incompatible material.

(c) A storage container holding a hazardous secondary material that is incompatible with any other materials stored nearby must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

#### **261.179. Air emission standards.**

The remanufacturer or other person that stores or treats the hazardous secondary material shall manage all hazardous secondary material placed in a container in accordance with the applicable requirements of R.61-79.261 subparts AA, BB, and CC.

### **SUBPART J: Tank Systems**

#### **261.190. Applicability.**

(a) The requirements of this subpart apply to tank systems for storing or treating hazardous secondary material excluded under the remanufacturing exclusion at section 261.4(a)(27).

(b) Tank systems, including sumps, as defined in section 260.10, that serve as part of a secondary containment system to collect or contain releases of hazardous secondary materials are exempted from the requirements in section 261.193(a).

#### **261.191. Assessment of existing tank system's integrity.**

(a) Tank systems must meet the secondary containment requirements of section 261.193, or the remanufacturer or other person that handles the hazardous secondary material must determine that the tank system is not leaking or is unfit for use. Except as provided in paragraph (c) of this section, a written assessment reviewed and certified by a qualified Professional Engineer must be kept on file at the remanufacturer's facility or other facility that stores or treats the hazardous secondary material that attests to the tank system's integrity.

(b) This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the material(s) to be stored or treated, to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must consider the following:

(1) Design standard(s), if available, according to which the tank and ancillary equipment were constructed;

(2) Hazardous characteristics of the material(s) that have been and will be handled;

(3) Existing corrosion protection measures;

(4) Documented age of the tank system, if available (otherwise, an estimate of the age); and

(5) Results of a leak test, internal inspection, or other tank integrity examination such that:

(i) For non-enterable underground tanks, the assessment must include a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects; and

(ii) For other than non-enterable underground tanks and for ancillary equipment, this assessment must include either a leak test, as described above, or other integrity examination that is certified by a qualified Professional Engineer that addresses cracks, leaks, corrosion, and erosion.

Note to paragraph (b)(5)(ii): The practices described in the American Petroleum Institute (API) Publication, Guide for Inspection of Refinery Equipment, Chapter XIII, "Atmospheric and Low-Pressure Storage Tanks," 4th edition, 1981, may be used, where applicable, as guidelines in conducting other than a leak test.

(c) If, as a result of the assessment conducted in accordance with paragraph (a) of this section, a tank system is found to be leaking or unfit for use, the remanufacturer or other person that stores or treats the hazardous secondary material must comply with the requirements of section 261.196.

#### **261.192. [Reserved]**

#### **261.193. Containment and detection of releases.**

(a) Secondary containment systems must be:

(1) Designed, installed, and operated to prevent any migration of materials or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and

(2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

Note to paragraph (a): If the collected material is a hazardous waste under R.61-79.261, it is subject to management as a hazardous waste in accordance with all applicable requirements of R.61-79.262 through 265, 266, and 268. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of sections 301, 304, and 402 of the Clean Water Act, as amended. If discharged to a Publicly Owned Treatment Works (POTW), it is subject to the requirements of section 307 of the Clean Water Act, as amended. If the collected material is released to the environment, it may be subject to the reporting requirements of 40 CFR part 302.

(b) To meet the requirements of paragraph (a) of this section, secondary containment systems must be at a minimum:

(1) Constructed of or lined with materials that are compatible with the materials(s) to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the material to which it is exposed, climatic conditions, and the stress of daily operation (including stresses from nearby vehicular traffic);

(2) Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift;

(3) Provided with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous secondary material or accumulated liquid in the secondary containment system at the earliest practicable time; and

(4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked material and accumulated precipitation must be removed from the secondary containment system within twenty-four (24) hours, or in as timely a manner as is possible to prevent harm to human health and the environment.

(c) Secondary containment for tanks must include one (1) or more of the following devices:

- (1) A liner (external to the tank);
- (2) A vault; or
- (3) A double-walled tank.

(d) In addition to the requirements of paragraphs (a), (b), and (c) of this section, secondary containment systems must satisfy the following requirements:

(1) External liner systems must be:

(i) Designed or operated to contain one hundred (100) percent of the capacity of the largest tank within its boundary;

(ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a twenty-five-year, twenty-four-hour rainfall event.

(iii) Free of cracks or gaps; and

(iv) Designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the material if the material is released from the tank(s) (i.e., capable of preventing lateral as well as vertical migration of the material).

(2) Vault systems must be:

(i) Designed or operated to contain one hundred (100) percent of the capacity of the largest tank within its boundary;

(ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a twenty-five-year, twenty-four-hour rainfall event;

(iii) Constructed with chemical-resistant water stops in place at all joints (if any);

(iv) Provided with an impermeable interior coating or lining that is compatible with the stored material and that will prevent migration of material into the concrete;

(v) Provided with a means to protect against the formation of and ignition of vapors within the vault, if the material being stored or treated is ignitable or reactive; and

(vi) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

(3) Double-walled tanks must be:

(i) Designed as an integral structure (i.e., an inner tank completely enveloped within an outer shell) so that any release from the inner tank is contained by the outer shell;

(ii) Protected, if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell; and

(iii) Provided with a built-in continuous leak detection system capable of detecting a release within twenty-four (24) hours, or at the earliest practicable time.

Note to paragraph (d)(3): The provisions outlined in the Steel Tank Institute's (STI) "Standard for Dual Wall Underground Steel Storage Tanks" may be used as guidelines for aspects of the design of underground steel double-walled tanks.

(e) [Reserved]

(f) Ancillary equipment must be provided with secondary containment (e.g., trench, jacketing, double-walled piping) that meets the requirements of paragraphs (a) and (b) of this section except for:

(1) Aboveground piping (exclusive of flanges, joints, valves, and other connections) that are visually inspected for leaks on a daily basis;

(2) Welded flanges, welded joints, and welded connections that are visually inspected for leaks on a daily basis;

(3) Sealless or magnetic coupling pumps and sealless valves that are visually inspected for leaks on a daily basis; and

(4) Pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices) that are visually inspected for leaks on a daily basis.

#### **261.194. General operating requirements.**

(a) Hazardous secondary materials or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum:

(1) Spill prevention controls (e.g., check valves, dry disconnect couplings);

(2) Overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and

(3) Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

(c) The remanufacturer or other person that stores or treats the hazardous secondary material must comply with the requirements of section 261.196 if a leak or spill occurs in the tank system.

#### **261.195. [Reserved]**

#### **261.196. Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.**

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the remanufacturer or other person that stores or treats the hazardous secondary material must satisfy the following requirements:

(a) Cessation of use; prevent flow or addition of materials. The remanufacturer or other person that stores or treats the hazardous secondary material must immediately stop the flow of hazardous secondary material into the tank system or secondary containment system and inspect the system to determine the cause of the release.

(b) Removal of material from tank system or secondary containment system.

(1) If the release was from the tank system, the remanufacturer or other person that stores or treats the hazardous secondary material must, within twenty-four (24) hours after detection of the leak or, if the remanufacturer or other person that stores or treats the hazardous secondary material demonstrates that it is not possible, at the earliest practicable time, remove as much of the material as is necessary to prevent further release of hazardous secondary material to the environment and to allow inspection and repair of the tank system to be performed.

(2) If the material released was to a secondary containment system, all released materials must be removed within twenty-four (24) hours or in as timely a manner as is possible to prevent harm to human health and the environment.

(c) Containment of visible releases to the environment. The remanufacturer or other person that stores or treats the hazardous secondary material must immediately conduct a visual inspection of the release and, based upon that inspection:

(1) Prevent further migration of the leak or spill to soils or surface water; and

(2) Remove, and properly dispose of, any visible contamination of the soil or surface water.

(d) Notifications, reports.

(1) Any release to the environment, except as provided in paragraph (d)(2) of this section, must be reported to the Department within twenty-four (24) hours of its detection. If the release has been reported pursuant to 40 CFR part 302, that report will satisfy this requirement.

(2) A leak or spill of hazardous secondary material is exempted from the requirements of this paragraph if it is:

(i) Less than or equal to a quantity of one (1) pound, and

(ii) Immediately contained and cleaned up.

(3) Within thirty (30) days of detection of a release to the environment, a report containing the following information must be submitted to the Department:

(i) Likely route of migration of the release;

(ii) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);

(iii) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within thirty (30) days, these data must be submitted to the Department as soon as they become available.

(iv) Proximity to downgradient drinking water, surface water, and populated areas; and

(v) Description of response actions taken or planned.

(e) Provision of secondary containment, repair, or closure.

(1) Unless the remanufacturer or other person that stores or treats the hazardous secondary material satisfies the requirements of paragraphs (e)(2) through (4) of this section, the tank system must cease to operate under the remanufacturing exclusion at section 261.4(a)(27).

(2) If the cause of the release was a spill that has not damaged the integrity of the system, the remanufacturer or other person that stores or treats the hazardous secondary material may return the system to service as soon as the released material is removed and repairs, if necessary, are made.

(3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.

(4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the remanufacturer or other person that stores or treats the hazardous secondary material must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of section 261.193 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of paragraph (f) of this section are satisfied. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g., the bottom of an inground or onground tank), the entire component must be provided with secondary containment in accordance with section 261.193 of this subpart prior to being returned to use.

(f) Certification of major repairs. If the remanufacturer or other person that stores or treats the hazardous secondary material has repaired a tank system in accordance with paragraph (e) of this section, and the repair has been extensive (e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the remanufacturer or other person that stores or treats the hazardous secondary material has obtained a certification by a qualified Professional Engineer that the repaired system is capable of handling hazardous secondary materials without release for the intended life of the system. This certification must be kept on file at the facility and maintained until closure of the facility.

Note 1 to section 261.196: EPA may, on the basis of any information received that there is or has been a release of hazardous secondary material or hazardous constituents into the environment, issue an order under RCRA section 7003(a) requiring corrective action or such other response as deemed necessary to protect human health or the environment.

Note 2 to section 261.196: 40 CFR part 302 may require the owner or operator to notify the National Response Center of certain releases.

#### **261.197. Termination of remanufacturing exclusion.**

Hazardous secondary material stored in units more than ninety (90) days after the unit ceases to operate under the remanufacturing exclusion at section 261.4(a)(27) or otherwise ceases to be operated for manufacturing, or for storage of a product or a raw material, then becomes subject to regulation as hazardous waste under R.61-79.124, 261 through 266, 268, 270, and 271, as applicable.

#### **261.198. Special requirements for ignitable or reactive materials.**

(a) Ignitable or reactive material must not be placed in tank systems, unless the material is stored or treated in such a way that it is protected from any material or conditions that may cause the material to ignite or react.

(b) The remanufacturer or other person that stores or treats hazardous secondary material which is ignitable or reactive must store or treat the hazardous secondary material in a tank that is in compliance with the requirements for the maintenance of protective distances between the material management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code," (1977 or 1981), (incorporated by reference, see section 260.11).

#### **261.199. Special requirements for incompatible materials.**

(a) Incompatible materials must not be placed in the same tank system.

(b) Hazardous secondary material must not be placed in a tank-system that has not been decontaminated and that previously held an incompatible material.

#### **261.200. Air emission standards.**

The remanufacturer or other person that stores or treats the hazardous secondary material shall manage all hazardous secondary material placed in a tank in accordance with the applicable requirements of R.61-79.261 subparts AA, BB, and CC.

**SUBPART K: [Reserved]**

**SUBPART L: [Reserved]**

## **SUBPART M: Emergency Preparedness and Response for Management of Excluded Hazardous Secondary Materials**

### **261.400. Applicability.**

The requirements of this subpart apply to those areas of an entity managing hazardous secondary materials excluded under section 261.4(a)(23) and/or (24) where hazardous secondary materials are generated or accumulated on site.

(a) A generator of hazardous secondary material, or an intermediate or reclamation facility that accumulates six thousand (6000) kilograms or less of hazardous secondary material at any time must comply with sections 261.410 and 261.411.

(b) A generator of hazardous secondary material, or an intermediate or reclamation facility that accumulates more than six thousand (6000) kilograms of hazardous secondary material at any time must comply with sections 261.410 and 261.420.

### **261.410. Preparedness and prevention.**

(a) Maintenance and operation of facility. Facilities generating or accumulating hazardous secondary material must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous secondary materials or hazardous secondary material constituents to air, soil, or surface water which could threaten human health or the environment.

(b) Required equipment. All facilities generating or accumulating hazardous secondary material must be equipped with the following, unless none of the hazards posed by hazardous secondary material handled at the facility could require a particular kind of equipment specified below:

(1) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;

(2) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;

(3) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

(4) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

(c) Testing and maintenance of equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.

(d) Access to communications or alarm system.

(1) Whenever hazardous secondary material is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency

communication device, either directly or through visual or voice contact with another employee, unless such a device is not required under paragraph (b) of this section.

(2) If there is ever just one (1) employee on the premises while the facility is operating, a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, must be immediately accessible unless such a device is not required under paragraph (b) of this section.

(e) Required aisle space. The hazardous secondary material generator or intermediate or reclamation facility must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

(f) Arrangements with local authorities.

(1) The hazardous secondary material generator or an intermediate or reclamation facility must attempt to make the following arrangements, as appropriate for the type of waste handled at the facility and the potential need for the services of these organizations:

(i) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous secondary material handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;

(ii) Where more than one (1) police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;

(iii) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and

(iv) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(2) Where state or local authorities decline to enter into such arrangements, the hazardous secondary material generator or an intermediate or reclamation facility must document the refusal in the operating record.

**261.411. Emergency procedures for facilities generating or accumulating 6000 kilograms or less of hazardous secondary material.**

A generator or an intermediate or reclamation facility that generates or accumulates six thousand (6000) kilograms or less of hazardous secondary material must comply with the following requirements:

(a) At all times there must be at least one (1) employee either on the premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures specified in paragraph (d) of this section. This employee is the emergency coordinator.

(b) The generator or intermediate or reclamation facility must post the following information next to the telephone:

- (1) The name and telephone number of the emergency coordinator;
- (2) Location of fire extinguishers and spill control material, and, if present, fire alarm; and
- (3) The telephone number of the fire department, unless the facility has a direct alarm.

(c) The generator or an intermediate or reclamation facility must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies;

(d) The emergency coordinator or his designee must respond to any emergencies that arise. The applicable responses are as follows:

- (1) In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher;
- (2) In the event of a spill, contain the flow of hazardous waste to the extent possible, and as soon as is practicable, clean up the hazardous waste and any contaminated materials or soil;

(3) In the event of a fire, explosion, or other release which could threaten human health outside the facility or when the generator or an intermediate or reclamation facility has knowledge that a spill has reached surface water, the generator or an intermediate or reclamation facility must immediately notify the National Response Center (using their twenty-four-hour toll free number 800/424-8802). The report must include the following information:

- (i) The name, address, and EPA Identification Number of the facility;
- (ii) Date, time, and type of incident (e.g., spill or fire);
- (iii) Quantity and type of hazardous waste involved in the incident;
- (iv) Extent of injuries, if any; and
- (v) Estimated quantity and disposition of recovered materials, if any.

**261.420. Contingency planning and emergency procedures for facilities generating or accumulating more than 6000 kilograms of hazardous secondary material.**

A generator or an intermediate or reclamation facility that generates or accumulates more than six thousand (6000) kilograms of hazardous secondary material must comply with the following requirements:

(a) Purpose and implementation of contingency plan.

(1) Each generator or an intermediate or reclamation facility that accumulates more than six thousand (6000) kilograms of hazardous secondary material must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous secondary material or hazardous secondary material constituents to air, soil, or surface water.

(2) The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous secondary material or hazardous secondary material constituents which could threaten human health or the environment.

(b) Content of contingency plan.

(1) The contingency plan must describe the actions facility personnel must take to comply with paragraphs (a) and (f) in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous secondary material or hazardous secondary material constituents to air, soil, or surface water at the facility.

(2) If the generator or an intermediate or reclamation facility accumulating more than six thousand (6000) kg of hazardous secondary material has already prepared a Spill Prevention, Control, and Countermeasure (SPCC) Plan in accordance with part 112 of this chapter, or some other emergency or contingency plan, they need only to amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this part. The hazardous secondary material generator or an intermediate or reclamation facility may develop one (1) contingency plan which meets all regulatory requirements. EPA recommends that the plan be based on the National Response Team's Integrated Contingency Plan Guidance ("One Plan"). When modifications are made to non-South Carolina Hazardous Waste Management provisions in an integrated contingency plan, the changes do not trigger the need for a South Carolina Hazardous Waste Management permit modification.

(3) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services, pursuant to section 262.410(f).

(4) The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see paragraph (e) of this section), and this list must be kept up-to-date. Where more than one (1) person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.

(5) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.

(6) The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).

(c) Copies of contingency plan. A copy of the contingency plan and all revisions to the plan must be:

(1) Maintained at the facility; and

(2) Submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.

(d) Amendment of contingency plan. The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

(1) Applicable regulations are revised;

(2) The plan fails in an emergency;

(3) The facility changes—in its design, construction, operation, maintenance, or other circumstances—in a way that materially increases the potential for fires, explosions, or releases of hazardous secondary material or hazardous secondary material constituents, or changes the response necessary in an emergency;

(4) The list of emergency coordinators changes; or

(5) The list of emergency equipment changes.

(e) Emergency coordinator. At all times, there must be at least one (1) employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan. The emergency coordinator's responsibilities are more specified in paragraph (f). Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of hazardous secondary material(s) handled by the facility, and type and complexity of the facility.

(f) Emergency procedures.

(1) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or the designee when the emergency coordinator is on call) must immediately:

(i) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

(ii) Notify appropriate state or local agencies with designated response roles if their help is needed.

(2) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. This may be done by observation or review of facility records or manifests and, if necessary, by chemical analysis.

(3) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions).

(4) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, the findings must be reported as follows:

(i) If the assessment indicates that evacuation of local areas may be advisable, appropriate local authorities must be immediately notified. The emergency coordinator must be available to help appropriate officials decide whether local areas should be evacuated; and

(ii) The government official designated as the on-scene coordinator for that geographical area or the National Response Center (using their twenty-four (24)-hour toll free number 800/424-8802) must be immediately notified. The report must include:

- (A) Name and telephone number of reporter;
- (B) Name and address of facility;
- (C) Time and type of incident (e.g., release, fire);
- (D) Name and quantity of material(s) involved, to the extent known;
- (E) The extent of injuries, if any; and
- (F) The possible hazards to human health, or the environment, outside the facility.

(5) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous secondary material at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released material, and removing or isolating containers.

(6) If the facility stops operations in response to a fire, explosion or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(7) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered secondary material, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility. Unless the hazardous secondary material generator can demonstrate, in accordance with section 261.3(c) or (d), that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of R.61-79.262, 263, and 265.

(8) The emergency coordinator must ensure that, in the affected area(s) of the facility:

(i) No secondary material that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

(ii) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(9) The hazardous secondary material generator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen (15) days after the incident, a written report must be submitted on the incident to the Department. The report must include:

- (i) Name, address, and telephone number of the hazardous secondary material generator;
- (ii) Name, address, and telephone number of the facility;
- (iii) Date, time, and type of incident (e.g., fire, explosion);

- (iv) Name and quantity of material(s) involved;
- (v) The extent of injuries, if any;
- (vi) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
- (vii) Estimated quantity and disposition of recovered material that resulted from the incident.

## **SUBPART N-Z: [Reserved]**

### **SUBPART AA: Air Emission Standards for Process Vents**

#### **261.1030. Applicability.**

The regulations in this subpart apply to process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or stream stripping operations that manage hazardous secondary materials excluded under the remanufacturing exclusion at section 261.4(a)(27) with concentrations of at least ten (10) parts per million by weight (ppmw), unless the process vents are equipped with operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63.

#### **261.1031. Definitions.**

As used in this subpart, all terms not defined herein shall have the meaning given them in the South Carolina Hazardous Waste Management Act and R.61-79.260 through 266.

**“Air stripping operation”** is a desorption operation employed to transfer one (1) or more volatile components from a liquid mixture into a gas (air) either with or without the application of heat to the liquid. Packed towers, spray towers, and bubble-cap, sieve, or valve-type plate towers are among the process configurations used for contacting the air and a liquid.

**“Bottoms receiver”** means a container or tank used to receive and collect the heavier bottoms fractions of the distillation feed stream that remain in the liquid phase.

**“Closed-vent system”** means a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device.

**“Condenser”** means a heat-transfer device that reduces a thermodynamic fluid from its vapor phase to its liquid phase.

**“Connector”** means flanged, screwed, welded, or other joined fittings used to connect two (2) pipelines or a pipeline and a piece of equipment. For the purposes of reporting and recordkeeping, connector means flanged fittings that are not covered by insulation or other materials that prevent location of the fittings.

**“Continuous recorder”** means a data-recording device recording an instantaneous data value at least once every fifteen (15) minutes.

**“Control device”** means an enclosed combustion device, vapor recovery system, or flare. Any device the primary function of which is the recovery or capture of solvents or other organics for use, reuse, or sale (e.g., a primary condenser on a solvent recovery unit) is not a control device.

**“Control device shutdown”** means the cessation of operation of a control device for any purpose.

**“Distillate receiver”** means a container or tank used to receive and collect liquid material (condensed) from the overhead condenser of a distillation unit and from which the condensed liquid is pumped to larger storage tanks or other process units.

**“Distillation operation”** means an operation, either batch or continuous, separating one (1) or more feed stream(s) into two (2) or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and vapor phase as they approach equilibrium within the distillation unit.

**“Double block and bleed system”** means two (2) block valves connected in series with a bleed valve or line that can vent the line between the two (2) block valves.

**“Equipment”** means each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange or other connector, and any control devices or systems required by this subpart.

**“Flame zone”** means the portion of the combustion chamber in a boiler occupied by the flame envelope.

**“Flow indicator”** means a device that indicates whether gas flow is present in a vent stream.

**“First attempt at repair”** means to take rapid action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

**“Fractionation operation”** means a distillation operation or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some proportion of one (1) of the components.

**“Hazardous secondary material management unit shutdown”** means a work practice or operational procedure that stops operation of a hazardous secondary material management unit or part of a hazardous secondary material management unit. An unscheduled work practice or operational procedure that stops operation of a hazardous secondary material management unit or part of a hazardous secondary material management unit for less than twenty-four (24) hours is not a hazardous secondary material management unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping operation are not hazardous secondary material management unit shutdowns.

**“Hot well”** means a container for collecting condensate as in a steam condenser serving a vacuum-jet or steam-jet ejector.

**“In gas/vapor service”** means that the piece of equipment contains or contacts a hazardous secondary material stream that is in the gaseous state at operating conditions.

**“In heavy liquid service”** means that the piece of equipment is not in gas/vapor service or in light liquid service.

**“In light liquid service”** means that the piece of equipment contains or contacts a material stream where the vapor pressure of one (1) or more of the organic components in the stream is greater than 0.3 kilopascals (kPa) at twenty degrees Celsius (20°C), the total concentration of the pure organic components having a vapor pressure greater than 0.3 kilopascals (kPa) at twenty degrees Celsius (20°C) is equal to or greater than twenty (20) percent by weight, and the fluid is a liquid at operating conditions.

**“In situ sampling systems”** means nonextractive samplers or in-line samplers.

**“In vacuum service”** means that equipment is operating at an internal pressure that is at least five (5) kilopascals (kPa) below ambient pressure.

**“Malfunction”** means any sudden failure of a control device or a hazardous secondary material management unit, or failure of a hazardous secondary material management unit to operate in a normal or usual manner, so that organic emissions are increased.

**“Open-ended valve or line”** means any valve, except pressure relief valves, having one (1) side of the valve seat in contact with hazardous secondary material and one (1) side open to the atmosphere, either directly or through open piping.

**“Pressure release”** means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device.

**“Process heater”** means a device that transfers heat liberated by burning fuel to fluids contained in tubes, including all fluids except water that are heated to produce steam.

**“Process vent”** means any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (e.g., distillate receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous secondary material distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.

**“Repaired”** means that equipment is adjusted, or otherwise altered, to eliminate a leak.

**“Sampling connection system”** means an assembly of equipment within a process or material management unit used during periods of representative operation to take samples of the process or material fluid. Equipment used to take non-routine grab samples is not considered a sampling connection system.

**“Sensor”** means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

**“Separator tank”** means a device used for separation of two (2) immiscible liquids.

**“Solvent extraction operation”** means an operation or method of separation in which a solid or solution is contacted with a liquid solvent (the two being mutually insoluble) to preferentially dissolve and transfer one (1) or more components into the solvent.

**“Startup”** means the setting in operation of a hazardous secondary material management unit or control device for any purpose.

**“Steam stripping operation”** means a distillation operation in which vaporization of the volatile constituents of a liquid mixture takes place by the introduction of steam directly into the charge.

**“Surge control tank”** means a large-sized pipe or storage reservoir sufficient to contain the surging liquid discharge of the process tank to which it is connected.

**“Thin-film evaporation operation”** means a distillation operation that employs a heating surface consisting of a large diameter tube that may be either straight or tapered, horizontal or vertical. Liquid is spread on the tube wall by a rotating assembly of blades that maintain a close clearance from the wall or actually ride on the film of liquid on the wall.

**“Vapor incinerator”** means any enclosed combustion device that is used for destroying organic compounds and does not extract energy in the form of steam or process heat.

**“Vented”** means discharged through an opening, typically an open-ended pipe or stack, allowing the passage of a stream of liquids, gases, or fumes into the atmosphere. The passage of liquids, gases, or fumes is caused by mechanical means such as compressors or vacuum-producing systems or by process-related means such as evaporation produced by heating and not caused by tank loading and unloading (working losses) or by natural means such as diurnal temperature changes.

#### **261.1032. Standards: Process vents.**

(a) The remanufacturer or other person that stores or treats hazardous secondary materials in hazardous secondary material management units with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations managing hazardous secondary material with organic concentrations of at least ten (10) parts per million by weight (ppmw) shall either:

(1) Reduce total organic emissions from all affected process vents at the facility below 1.4 kilograms/hour (3 lbs/h) and 2.8 Megagram/year (3.1 tons/yr), or

(2) Reduce, by use of a control device, total organic emissions from all affected process vents at the facility by ninety-five (95) weight percent.

(b) If the remanufacturer or other person that stores or treats the hazardous secondary material installs a closed-vent system and control device to comply with the provisions of paragraph (a) of this section the closed-vent system and control device must meet the requirements of section 261.1033.

(c) Determinations of vent emissions and emission reductions or total organic compound concentrations achieved by add-on control devices may be based on engineering calculations or performance tests. If performance tests are used to determine vent emissions, emission reductions, or total organic compound concentrations achieved by add-on control devices, the performance tests must conform with the requirements of section 261.1034(c).

(d) When a remanufacturer or other person that stores or treats the hazardous secondary material and the Department do not agree on determinations of vent emissions and/or emission reductions or total organic compound concentrations achieved by add-on control devices based on engineering calculations, the procedures in section 261.1034(c) shall be used to resolve the disagreement.

#### **261.1033. Standards: Closed-vent systems and control devices.**

(a)(1) The remanufacturer or other person that stores or treats the hazardous secondary materials in hazardous secondary material management units using closed-vent systems and control devices used to comply with provisions of this part shall comply with the provisions of this section.

(2) [Reserved]

(b) A control device involving vapor recovery (e.g., a condenser or adsorber) shall be designed and operated to recover the organic vapors vented to it with an efficiency of ninety-five (95) weight percent or greater unless the total organic emission limits of section 261.1032(a)(1) for all affected process vents can be attained at an efficiency less than ninety-five (95) weight percent.

(c) An enclosed combustion device (e.g., a vapor incinerator, boiler, or process heater) shall be designed and operated to reduce the organic emissions vented to it by ninety-five (95) weight percent or greater; to achieve a total organic compound concentration of twenty (20) ppmv, expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to three (3) percent oxygen; or to provide a minimum residence time of 0.50 seconds at a minimum temperature of seven hundred and sixty degrees Celsius (760°C). If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(d)(1) A flare shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (e)(1) of this section, except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.

(2) A flare shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f)(2)(iii) of this section.

(3) A flare shall be used only if the net heating value of the gas being combusted is 11.2 megajoules (MJ)/standard cubic meter (scm) (300 British thermal units (Btu)/standard cubic foot (scf)) or greater if the flare is steam-assisted or air-assisted; or if the net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (e)(2) of this section.

(4)(i) A steam-assisted or nonassisted flare shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3) of this section, less than 18.3 meters/second (60 ft/s), except as provided in paragraphs (d)(4)(ii) and (iii) of this section.

(ii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3) of this section, equal to or greater than 18.3 m/s (60 ft/s) but less than 122 m/s (400 ft/s) is allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1000 Btu/scf).

(iii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3) of this section, less than the velocity,  $V_{max}$ , as determined by the method specified in paragraph (e)(4) of this section and less than 122 m/s (400 ft/s) is allowed.

(5) An air-assisted flare shall be designed and operated with an exit velocity less than the velocity,  $V_{max}$ , as determined by the method specified in paragraph (e)(5) of this section.

(6) A flare used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(e)(1) Reference Method 22 in 40 CFR part 60 shall be used to determine the compliance of a flare with the visible emission provisions of this subpart. The observation period is two (2) hours and shall be used according to Method 22.

(2) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K[\sum_{i=1}^n C_i H_i]$$

Where:

$H_T$  = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at twenty-five degrees Celsius (25°C) and 760 millimeters of Mercury (mm Hg), but the standard temperature for determining the volume corresponding to one (1) mol is 20°C;

$K$  = constant,  $1.74 \times 10^{-7}$  (1/ppm) (g mol/scm) (MJ/kcal) where standard temperature for (g mol/scm) is 20°C;

$C_i$  = Concentration of sample component “i” in ppm on a wet basis, as measured for organics by Reference Method 18 in 40 CFR part 60 and measured for hydrogen and carbon monoxide by ASTM D 1946-82 (incorporated by reference as specified in section 260.11); and

$H_i$  = Net heat of combustion of sample component “i”, kcal/9 mol at 25°C and 760 mm Hg. The heats of combustion may be determined using ASTM D 2382-83 (incorporated by reference as specified in section 260.11) if published values are not available or cannot be calculated.

(3) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D in 40 CFR part 60 as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(4) The maximum allowed velocity in m/s,  $V_{max}$ , for a flare complying with paragraph (d)(4)(iii) of this section shall be determined by the following equation:

$$\text{Log}_{10}(V_{max}) = (H_T + 28.8)/31.7$$

Where:

28.8 = constant,

31.7 = constant,

$H_T$  = The net heating value as determined in paragraph (e)(2) of this section.

(5) The maximum allowed velocity in m/s,  $V_{max}$ , for an air-assisted flare shall be determined by the following equation:

$$V_{max} = 8.706 + 0.7084 (H_T)$$

Where:

8.706 = constant,

0.7084 = constant,

$H_T$  = The net heating value as determined in paragraph (e)(2) of this section.

(f) The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor and inspect each control device required to comply with this section to ensure proper operation and maintenance of the control device by implementing the following requirements:

(1) Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor shall be installed in the vent stream at the nearest feasible point to the control device inlet but before the point at which the vent streams are combined.

(2) Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below:

(i) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of  $\pm 1$  percent of the temperature being monitored in degrees Celsius ( $^{\circ}\text{C}$ ) or  $\pm 0.5$  degrees Celsius ( $^{\circ}\text{C}$ ), whichever is greater. The temperature sensor shall be installed at a location in the combustion chamber downstream of the combustion zone.

(ii) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations and have an accuracy of  $\pm 1$  (one) percent of the temperature being monitored in degrees Celsius ( $^{\circ}\text{C}$ ) or  $\pm 0.5$  degrees Celsius ( $^{\circ}\text{C}$ ), whichever is greater. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(iii) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

(iv) For a boiler or process heater having a design heat input capacity less than forty-four (44) Megawatts (MW), a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of  $\pm 1$  (one) percent of the temperature being monitored in degrees Celsius ( $^{\circ}\text{C}$ ) or  $\pm 0.5$  degrees Celsius ( $^{\circ}\text{C}$ ), whichever is greater. The temperature sensor shall be installed at a location in the furnace downstream of the combustion zone.

(v) For a boiler or process heater having a design heat input capacity greater than or equal to forty-four (44) MW, a monitoring device equipped with a continuous recorder to measure a parameter(s) that indicates good combustion operating practices are being used.

(vi) For a condenser, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the condenser, or

(B) A temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of  $\pm 1$  (one) percent of the temperature being monitored in degrees Celsius ( $^{\circ}\text{C}$ ) or  $\pm 0.5$  degrees Celsius ( $^{\circ}\text{C}$ ), whichever is greater. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser exit (i.e., product side).

(vii) For a carbon adsorption system that regenerates the carbon bed directly in the control device such as a fixed-bed carbon adsorber, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the carbon bed, or

(B) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular, predetermined time cycle.

(3) Inspect the readings from each monitoring device required by paragraphs (f)(1) and (2) of this section at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of this section.

(g) A remanufacturer or other person that stores or treats hazardous secondary material in a hazardous secondary material management unit using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon at a regular, predetermined time interval that is no longer than the carbon service life established as a requirement of section 261.1035(b)(4)(iii)(F).

(h) A remanufacturer or other person that stores or treats hazardous secondary material in a hazardous secondary material management unit using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:

(1) Monitor the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency shall be daily or at an interval no greater than twenty (20) percent of the time required to consume the total carbon working capacity established as a requirement of section 261.1035(b)(4)(iii)(G), whichever is longer.

(2) Replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of section 261.1035(b)(4)(iii)(G).

(i) An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.

(j) A remanufacturer or other person that stores or treats hazardous secondary material at an affected facility seeking to comply with the provisions of this part by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.

(k) A closed-vent system shall meet either of the following design requirements:

(1) A closed-vent system shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than five hundred (500) ppmv above background as determined by the procedure in section 261.1034(b) of this subpart, and by visual inspections; or

(2) A closed-vent system shall be designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can

be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

(l) The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor and inspect each closed-vent system required to comply with this section to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:

(1) Each closed-vent system that is used to comply with paragraph (k)(1) of this section shall be inspected and monitored in accordance with the following requirements:

(i) An initial leak detection monitoring of the closed-vent system shall be conducted by the remanufacturer or other person that stores or treats the hazardous secondary material on or before the date that the system becomes subject to this section. The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor the closed-vent system components and connections using the procedures specified in section 261.1034(b) to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than five hundred (500) ppmv above background.

(ii) After initial leak detection monitoring required in paragraph (l)(1)(i) of this section, the remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor the closed-vent system as follows:

(A) Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two (2) sections of hard piping or a bolted and gasketed ducting flange) shall be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor a component or connection using the procedures specified in section 261.1034(b) of this subpart to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted).

(B) Closed-vent system components or connections other than those specified in paragraph (l)(1)(ii)(A) of this section shall be monitored annually and at other times as requested by the Department, except as provided for in paragraph (o) of this section, using the procedures specified in section 261.1034(b) to demonstrate that the components or connections operate with no detectable emissions.

(iii) In the event that a defect or leak is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect or leak in accordance with the requirements of paragraph (l)(3) of this section.

(iv) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 261.1035.

(2) Each closed-vent system that is used to comply with paragraph (k)(2) of this section shall be inspected and monitored in accordance with the following requirements:

(i) The closed-vent system shall be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping or loose connections.

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this section. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform the inspections at least once every year.

(iii) In the event that a defect or leak is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of paragraph (1)(3) of this section.

(iv) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 261.1035.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material shall repair all detected defects as follows:

(i) Detectable emissions, as indicated by visual inspection, or by an instrument reading greater than five hundred (500) ppmv above background, shall be controlled as soon as practicable, but not later than fifteen (15) days after the emission is detected, except as provided for in paragraph (1)(3)(iii) of this section.

(ii) A first attempt at repair shall be made no later than five (5) days after the emission is detected.

(iii) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the remanufacturer or other person that stores or treats the hazardous secondary material determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

(iv) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the defect repair in accordance with the requirements specified in section 261.1035 of this subpart.

(m) Closed-vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(n) The owner or operator using a carbon adsorption system to control air pollutant emissions shall document that all carbon that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:

(1) Regenerated or reactivated in a thermal treatment unit that meets one of the following:

(i) The owner or operator of the unit has been issued a final permit under R.61-79.270 which implements the requirements of 40 CFR 261 subpart X; or

(ii) The unit is equipped with and operating air emission controls in accordance with the applicable requirements of subparts AA and CC of either R.61-79.261 or 265; or

(iii) The unit is equipped with and operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR part 61 or 40 CFR part 63.

(2) Incinerated in a hazardous waste incinerator for which the owner or operator either:

(i) Has been issued a final permit under R.61-79.270 which implements the requirements of 40 CFR 261 subpart O; or

(ii) Has designed and operates the incinerator in accordance with the interim status requirements of 40 CFR 265 subpart O.

(3) Burned in a boiler or industrial furnace for which the owner or operator either:

(i) Has been issued a final permit under R.61-79.270 which implements the requirements of R.61-79.266 subpart H; or

(ii) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of R.61-79.266 subpart H.

(o) Any components of a closed-vent system that are designated, as described in section 261.1035(c)(9) of this subpart, as unsafe to monitor are exempt from the requirements of paragraph (l)(1)(ii)(B) of this section if:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material in a hazardous secondary material management unit using a closed-vent system determines that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (l)(1)(ii)(B) of this section; and

(2) The remanufacturer or other person that stores or treats the hazardous secondary material in a hazardous secondary material management unit using a closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in paragraph (l)(1)(ii)(B) of this section as frequently as practicable during safe-to-monitor times.

#### **261.1034. Test methods and procedures.**

(a) Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of this subpart shall comply with the test methods and procedural requirements provided in this section.

(b) When a closed-vent system is tested for compliance with no detectable emissions, as required in section 261.1033(l) of this subpart, the test shall comply with the following requirements:

(1) Monitoring shall comply with Reference Method 21 in 40 CFR part 60.

(2) The detection instrument shall meet the performance criteria of Reference Method 21.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.

(4) Calibration gases shall be:

(i) Zero air (less than ten (10) parts per million (ppm) of hydrocarbon in air).

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand (10,000) ppm methane or n-hexane.

(5) The background level shall be determined as set forth in Reference Method 21.

(6) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(7) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with five hundred (500) ppm for determining compliance.

(c) Performance tests to determine compliance with section 261.1032(a) and with the total organic compound concentration limit of section 261.1033(c) shall comply with the following:

(1) Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices shall be conducted and data reduced in accordance with the following reference methods and calculation procedures:

(i) Method 2 in 40 CFR part 60 for velocity and volumetric flow rate.

(ii) Method 18 or Method 25A in 40 CFR part 60, appendix A, for organic content. If Method 25A is used, the organic HAP used as the calibration gas must be the single organic HAP representing the largest percent by volume of the emissions. The use of Method 25A is acceptable if the response from the high-level calibration gas is at least twenty (20) times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(iii) Each performance test shall consist of three separate runs; each run conducted for at least one (1) hour under the conditions that exist when the hazardous secondary material management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs shall apply. The average shall be computed on a time-weighted basis.

(iv) Total organic mass flow rates shall be determined by the following equation:

(A) For sources utilizing Method 18.

$$E_K = Q_{2sd} \left\{ \sum_{i=1}^n C_i MW_i \right\} [0.0416] [10^{-6}]$$

Where:

$E_h$  = Total organic mass flow rate, kg/h;

$Q_{2sd}$  = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

$n$  = Number of organic compounds in the vent gas;

$C_i$  = Organic concentration in ppm, dry basis, of compound "i" in the vent gas, as determined by Method 18;

$MW_i$  = Molecular weight of organic compound "i" in the vent gas, kg/kg-mol;

0.0416 = Conversion factor for molar volume, kg-mol/m<sup>3</sup> (@293 K and 760 mm Hg);

10<sup>-6</sup> = Conversion from ppm.

(B) For sources utilizing Method 25A.

$$E_h = (Q)(C)(MW)(0.0416)(10^{-6})$$

Where:

$E_h$  = Total organic mass flow rate, kg/h;

$Q$  = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

$C$  = Organic concentration in ppm, dry basis, as determined by Method 25A;

$MW$  = Molecular weight of propane, 44;

0.0416 = Conversion factor for molar volume, kg-mol/m<sup>3</sup> (@293 K and 760 mm Hg);

10<sup>-6</sup> = Conversion from ppm.

(v) The annual total organic emission rate shall be determined by the following equation:

$$E_A = (E_h)(H)$$

Where:

$E_A$  = Total organic mass emission rate, kg/y;

$E_h$  = Total organic mass flow rate for the process vent, kg/h;

$H$  = Total annual hours of operations for the affected unit, h.

(vi) Total organic emissions from all affected process vents at the facility shall be determined by summing the hourly total organic mass emission rates ( $E_h$ , as determined in paragraph (c)(1)(iv) of this section) and by summing the annual total organic mass emission rates ( $E_A$ , as determined in paragraph (c)(1)(v) of this section) for all affected process vents at the facility.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall record such process information as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material at an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for the test methods specified in paragraph (c)(1) of this section.

- (ii) Safe sampling platform(s).
- (iii) Safe access to sampling platform(s).
- (iv) Utilities for sampling and testing equipment.

(4) For the purpose of making compliance determinations, the time-weighted average of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the remanufacturer's or other person's that stores or treats the hazardous secondary material control, compliance may, upon the Department's approval, be determined using the average of the results of the two other runs.

(d) To show that a process vent associated with a hazardous secondary material distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of this subpart, the remanufacturer or other person that stores or treats the hazardous secondary material must make an initial determination that the time-weighted, annual average total organic concentration of the material managed by the hazardous secondary material management unit is less than ten (10) ppmw using one of the following two (2) methods:

(1) Direct measurement of the organic concentration of the material using the following procedures:

(i) The remanufacturer or other person that stores or treats the hazardous secondary material must take a minimum of four (4) grab samples of material for each material stream managed in the affected unit under process conditions expected to cause the maximum material organic concentration.

(ii) For material generated onsite, the grab samples must be collected at a point before the material is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the material after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For material generated offsite, the grab samples must be collected at the inlet to the first material management unit that receives the material provided the material has been transferred to the facility in a closed system such as a tank truck and the material is not diluted or mixed with other material.

(iii) Each sample shall be analyzed and the total organic concentration of the sample shall be computed using Method 9060A (incorporated by reference under section 260.11) of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, or analyzed for its individual organic constituents.

(iv) The arithmetic mean of the results of the analyses of the four (4) samples shall apply for each material stream managed in the unit in determining the time-weighted, annual average total organic concentration of the material. The time-weighted average is to be calculated using the annual quantity of each material stream processed and the mean organic concentration of each material stream managed in the unit.

(2) Using knowledge of the material to determine that its total organic concentration is less than ten (10) ppmw. Documentation of the material determination is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the material is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to generate a material stream having a total organic content less than ten (10) ppmw, or prior

speciation analysis results on the same material stream where it can also be documented that no process changes have occurred since that analysis that could affect the material total organic concentration.

(e) The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous secondary materials with time-weighted, annual average total organic concentrations less than ten (10) ppmw shall be made as follows:

(1) By the effective date that the facility becomes subject to the provisions of this subpart or by the date when the material is first managed in a hazardous secondary material management unit, whichever is later, and

(2) For continuously generated material, annually, or

(3) Whenever there is a change in the material being managed or a change in the process that generates or treats the material.

(f) When a remanufacturer or other person that stores or treats the hazardous secondary material and the Department do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous secondary material with organic concentrations of at least ten (10) ppmw based on knowledge of the material, the dispute may be resolved by using direct measurement as specified at paragraph (d)(1) of this section.

#### **261.1035. Recordkeeping requirements.**

(a)(1) Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) A remanufacturer or other person that stores or treats the hazardous secondary material of more than one (1) hazardous secondary material management unit subject to the provisions of this subpart may comply with the recordkeeping requirements for these hazardous secondary material management units in one recordkeeping system if the system identifies each record by each hazardous secondary material management unit.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material must keep the following records on-site:

(1) For facilities that comply with the provisions of section 261.1033(a)(2), an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule must also include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule must be kept on-site at the facility by the effective date that the facility becomes subject to the provisions of this subpart.

(2) Up-to-date documentation of compliance with the process vent standards in section 261.1032, including:

(i) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e., the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous secondary material management units on a facility plot plan).

(ii) Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values (e.g., temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the hazardous secondary material management unit is operating at the highest load or capacity level reasonably expected to occur. If the remanufacturer or other person that stores or treats the hazardous secondary material takes any action (e.g., managing a material of different composition or increasing operating hours of affected hazardous secondary material management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.

(3) Where a remanufacturer or other person that stores or treats the hazardous secondary material chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan must be developed and include:

(i) A description of how it is determined that the planned test is going to be conducted when the hazardous secondary material management unit is operating at the highest load or capacity level reasonably expected to occur. This shall include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.

(ii) A detailed engineering description of the closed-vent system and control device including:

(A) Manufacturer's name and model number of control device.

(B) Type of control device.

(C) Dimensions of the control device.

(D) Capacity.

(E) Construction materials.

(iii) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(4) Documentation of compliance with section 261.1033 shall include the following information:

(i) A list of all information references and sources used in preparing the documentation.

(ii) Records, including the dates, of each compliance test required by section 261.1033(k).

(iii) If engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" (incorporated by reference as specified in section 260.11) or other engineering texts acceptable to the Department that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with paragraphs (b)(4)(iii)(A) through (G) of this section may be used to comply with this requirement. The design analysis shall address the vent stream characteristics and control device operation parameters as specified below.

(A) For a thermal vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(C) For a boiler or process heater, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the combustion zone.

(D) For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in section 261.1033(d).

(E) For a condenser, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet.

(F) For a carbon adsorption system such as a fixed-bed adsorber that regenerates the carbon bed directly onsite in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

(G) For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(iv) A statement signed and dated by the remanufacturer or other person that stores or treats the hazardous secondary material certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous secondary material management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(v) A statement signed and dated by the remanufacturer or other person that stores or treats the hazardous secondary material certifying that the control device is designed to operate at an efficiency of ninety-five (95) percent or greater unless the total organic concentration limit of section 261.1032(a) is achieved at an efficiency less than ninety-five (95) weight percent or the total organic emission limits of section 261.1032(a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than ninety-five (95) weight percent. A statement provided by the

control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.

(vi) If performance tests are used to demonstrate compliance, all test results.

(c) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of this part shall be recorded and kept up-to-date at the facility. The information shall include:

(1) Description and date of each modification that is made to the closed-vent system or control device design.

(2) Identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with section 261.1033 (f)(1) and (2).

(3) Monitoring, operating, and inspection information required by section 261.1033(f) through (k).

(4) Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified below:

(i) For a thermal vapor incinerator designed to operate with a minimum residence time of 0.50 seconds at a minimum temperature of seven hundred and sixty degrees Celsius (760°C), period when the combustion temperature is below 760°C.

(ii) For a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of ninety-five (95) weight percent or greater, period when the combustion zone temperature is more than twenty-eight degrees Celsius (28°C) below the design average combustion zone temperature established as a requirement of paragraph (b)(4)(iii)(A) of this section.

(iii) For a catalytic vapor incinerator, period when:

(A) Temperature of the vent stream at the catalyst bed inlet is more than twenty-eight degrees Celsius (28°C) below the average temperature of the inlet vent stream established as a requirement of paragraph (b)(4)(iii)(B) of this section, or

(B) Temperature difference across the catalyst bed is less than eighty (80) percent of the design average temperature difference established as a requirement of paragraph (b)(4)(iii)(B) of this section.

(iv) For a boiler or process heater, period when:

(A) Flame zone temperature is more than twenty-eight degrees Celsius (28°C) below the design average flame zone temperature established as a requirement of paragraph (b)(4)(iii)(C) of this section, or

(B) Position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of paragraph (b)(4)(iii)(C) of this section.

(v) For a flare, period when the pilot flame is not ignited.

(vi) For a condenser that complies with section 261.1033(f)(2)(vi)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the

condenser are more than twenty (20) percent greater than the design outlet organic compound concentration level established as a requirement of paragraph (b)(4)(iii)(E) of this section.

(vii) For a condenser that complies with section 261.1033(f)(2)(vi)(B), period when:

(A) Temperature of the exhaust vent stream from the condenser is more than six degrees Celsius (6°C) above the design average exhaust vent stream temperature established as a requirement of paragraph (b)(4)(iii)(E) of this section; or

(B) Temperature of the coolant fluid exiting the condenser is more than six degrees Celsius (6°C) above the design average coolant fluid temperature at the condenser outlet established as a requirement of paragraph (b)(4)(iii)(E) of this section.

(viii) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device and complies with section 261.1033(f)(2)(vii)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than twenty (20) percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of paragraph (b)(4)(iii)(F) of this section.

(ix) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device and complies with section 261.1033(f)(2)(vii)(B), period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of paragraph (b)(4)(iii)(F) of this section.

(5) Explanation for each period recorded under paragraph (c)(4) of the cause for control device operating parameter exceeding the design value and the measures implemented to correct the control device operation.

(6) For a carbon adsorption system operated subject to requirements specified in section 261.1033(g) or (h)(2), date when existing carbon in the control device is replaced with fresh carbon.

(7) For a carbon adsorption system operated subject to requirements specified in section 261.1033(h)(1), a log that records:

(i) Date and time when control device is monitored for carbon breakthrough and the monitoring device reading.

(ii) Date when existing carbon in the control device is replaced with fresh carbon.

(8) Date of each control device startup and shutdown.

(9) A remanufacturer or other person that stores or treats the hazardous secondary material designating any components of a closed-vent system as unsafe to monitor pursuant to section 261.1033(o) of this subpart shall record in a log that is kept at the facility the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of section 261.1033(o) of this subpart, an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.

(10) When each leak is detected as specified in section 261.1033(l), the following information shall be recorded:

(i) The instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number.

(ii) The date the leak was detected and the date of first attempt to repair the leak.

(iii) The date of successful repair of the leak.

(iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonreparable.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within fifteen (15) days after discovery of the leak.

(A) The remanufacturer or other person that stores or treats the hazardous secondary material may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(d) Records of the monitoring, operating, and inspection information required by paragraphs (c)(3) through (10) of this section shall be maintained by the owner or operator for at least three (3) years following the date of each occurrence, measurement, maintenance, corrective action, or record.

(e) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the Department will specify the appropriate recordkeeping requirements.

(f) Up-to-date information and data used to determine whether or not a process vent is subject to the requirements in section 261.1032, including supporting documentation as required by section 261.1034(d)(2) when application of the knowledge of the nature of the hazardous secondary material stream or the process by which it was produced is used, shall be recorded in a log that is kept at the facility.

**261.1036. [Reserved]**

**261.1037. [Reserved]**

**261.1038. [Reserved]**

**261.1039. [Reserved]**

**261.1040. [Reserved]**

**261.1041. [Reserved]**

**261.1042. [Reserved]**

**261.1043. [Reserved]**

**261.1044. [Reserved]**

**261.1045. [Reserved]**

**261.1046. [Reserved]**

**261.1047. [Reserved]**

**261.1048. [Reserved]**

**261.1049. [Reserved]**

## **SUBPART BB: Air Emission Standards for Equipment Leaks**

### **261.1050. Applicability.**

The regulations in this subpart apply to equipment that contains hazardous secondary materials excluded under the remanufacturing exclusion at section 261.4(a)(27), unless the equipment operations are subject to the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63.

### **261.1051. Definitions.**

As used in this subpart, all terms shall have the meaning given them in section 261.1031, the South Carolina Hazardous Waste Management Act and R.61-79.260 through 266.

### **261.1052. Standards: Pumps in light liquid service.**

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in section 261.1063(b), except as provided in paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b)(1) If an instrument reading of ten thousand (10,000) parts per million (ppm) or greater is measured, a leak is detected.

(2) If there are indications of liquids dripping from the pump seal, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen (15) calendar days after it is detected, except as provided in section 261.1059.

(2) A first attempt at repair (e.g., tightening the packing gland) shall be made no later than five (5) calendar days after each leak is detected.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the following requirements are met:

(1) Each dual mechanical seal system must be:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure, or

(ii) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of section 261.1060, or

(iii) Equipped with a system that purges the barrier fluid into a hazardous secondary material stream with no detectable emissions to the atmosphere.

(2) The barrier fluid system must not be a hazardous secondary material with organic concentrations ten (10) percent or greater by weight.

(3) Each barrier fluid system must be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump must be checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(5)(i) Each sensor as described in paragraph (d)(3) of this section must be checked daily or be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly.

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material must determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6)(i) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph (d)(5)(ii) of this section, a leak is detected.

(ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen (15) calendar days after it is detected, except as provided in section 261.1059.

(iii) A first attempt at repair (e.g., relapping the seal) shall be made no later than five (5) calendar days after each leak is detected.

(e) Any pump that is designated, as described in section 261.1064(g)(2), for no detectable emissions, as indicated by an instrument reading of less than five hundred (500) ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump meets the following requirements:

(1) Must have no externally actuated shaft penetrating the pump housing.

(2) Must operate with no detectable emissions as indicated by an instrument reading of less than five hundred (500) ppm above background as measured by the methods specified in section 261.1063(c).

(3) Must be tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times as requested by the Department.

(f) If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of section 261.1060, it is exempt from the requirements of paragraphs (a) through (e) of this section.

### **261.1053. Standards: Compressors.**

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of total organic emissions to the atmosphere, except as provided in paragraphs (h) and (i) of this section.

(b) Each compressor seal system as required in paragraph (a) of this section shall be:

(1) Operated with the barrier fluid at a pressure that is at all times greater than the compressor stuffing box pressure;

(2) Equipped with a barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of section 261.1060; or

(3) Equipped with a system that purges the barrier fluid into a hazardous secondary material stream with no detectable emissions to atmosphere.

(c) The barrier fluid must not be a hazardous secondary material with organic concentrations ten (10) percent or greater by weight.

(d) Each barrier fluid system as described in paragraphs (a) through (c) of this section shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) of this section shall be checked daily or shall be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly unless the compressor is located within the boundary of an unmanned plant site, in which case the sensor must be checked daily.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen (15) calendar days after it is detected, except as provided in section 261.1059.

(2) A first attempt at repair (e.g., tightening the packing gland) shall be made no later than five (5) calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of section 261.1060, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in section 261.1064(g)(2), for no detectable emissions as indicated by an instrument reading of less than five hundred (500) ppm above background is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor:

(1) Is determined to be operating with no detectable emissions, as indicated by an instrument reading of less than five hundred (500) ppm above background, as measured by the method specified in section 261.1063(c).

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times as requested by the Department.

**261.1054. Standards: Pressure relief devices in gas/vapor service.**

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than five hundred (500) ppm above background, as measured by the method specified in section 261.1063(c).

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than five hundred (500) ppm above background, as soon as practicable, but no later than five (5) calendar days after each pressure release, except as provided in section 261.1059.

(2) No later than five (5) calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than five hundred (500) ppm above background, as measured by the method specified in section 261.1063(c).

(c) Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in section 261.1060 is exempt from the requirements of paragraphs (a) and (b) of this section.

**261.1055. Standards: Sampling connection systems.**

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system. This system shall collect the sample purge for return to the process or for routing to the appropriate treatment system. Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall meet one (1) of the following requirements:

(1) Return the purged process fluid directly to the process line;

(2) Collect and recycle the purged process fluid; or

(3) Be designed and operated to capture and transport all the purged process fluid to a material management unit that complies with the applicable requirements of sections 261.1084 through 264.1086 of this subpart or a control device that complies with the requirements of section 261.1060 of this subpart.

(c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

**261.1056. Standards: Open-ended valves or lines.**

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve.

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring hazardous secondary material stream flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the hazardous secondary material stream end is closed before the second valve is closed.

(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) of this section at all other times.

**261.1057. Standards: Valves in gas/vapor service or in light liquid service.**

(a) Each valve in gas/vapor or light liquid service shall be monitored monthly to detect leaks by the methods specified in section 261.1063(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section and sections 261.1061 and 261.1062.

(b) If an instrument reading of ten thousand (10,000) ppm or greater is measured, a leak is detected.

(c)(1) Any valve for which a leak is not detected for two successive months may be monitored the first month of every succeeding quarter, beginning with the next quarter, until a leak is detected.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two (2) successive months,

(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than fifteen (15) calendar days after the leak is detected, except as provided in section 261.1059.

(2) A first attempt at repair shall be made no later than five (5) calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts.

(2) Replacement of bonnet bolts.

(3) Tightening of packing gland nuts.

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in section 261.1064(g)(2), for no detectable emissions, as indicated by an instrument reading of less than five hundred (500) ppm above background, is exempt from the requirements of paragraph (a) of this section if the valve:

(1) Has no external actuating mechanism in contact with the hazardous secondary material stream.

(2) Is operated with emissions less than five hundred (500) ppm above background as determined by the method specified in section 261.1063(c).

(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times as requested by the Department.

(g) Any valve that is designated, as described in section 261.1064(h)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in section 261.1064(h)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material determines that the valve cannot be monitored without elevating the monitoring personnel more than two (2) meters above a support surface.

(2) The hazardous secondary material management unit within which the valve is located was in operation before January 13, 2015.

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

**261.1058. Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors.**

(a) Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors shall be monitored within five (5) days by the method specified in section 261.1063(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.

(b) If an instrument reading of ten thousand (10,000) ppm or greater is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen (15) calendar days after it is detected, except as provided in section 261.1059.

(2) The first attempt at repair shall be made no later than five (5) calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under section 261.1057(e).

(e) Any connector that is inaccessible or is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined) is exempt from the monitoring requirements of paragraph (a) of this section and from the recordkeeping requirements of section 261.1064.

**261.1059. Standards: Delay of repair.**

(a) Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a hazardous secondary material management unit shutdown. In such a case, repair of this equipment shall occur before the end of the next hazardous secondary material management unit shutdown.

(b) Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the hazardous secondary material management unit and that does not continue to contain or contact hazardous secondary material with organic concentrations at least ten (10) percent by weight.

(c) Delay of repair for valves will be allowed if:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material determines that emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair.

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with section 261.1060.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system.

(2) Repair is completed as soon as practicable, but not later than six (6) months after the leak was detected.

(e) Delay of repair beyond a hazardous secondary material management unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the hazardous secondary material management unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next hazardous secondary material management unit shutdown will not be allowed unless the next hazardous secondary material management unit shutdown occurs sooner than six (6) months after the first hazardous secondary material management unit shutdown.

**261.1060. Standards: Closed-vent systems and control devices.**

(a) The remanufacturer or other person that stores or treats the hazardous secondary material in a hazardous secondary material management units using closed-vent systems and control devices subject to this subpart shall comply with the provisions of section 261.1033.

(b)(1) The remanufacturer or other person that stores or treats the hazardous secondary material at an existing facility who cannot install a closed-vent system and control device to comply with the provisions of this subpart on the effective date that the facility becomes subject to the provisions of this subpart must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to thirty (30) months after the effective date that the facility becomes subject to this subpart for installation and startup.

(2) Any unit that begins operation after July 13, 2015, and is subject to the provisions of this subpart when operation begins, must comply with the rules immediately (i.e., must have control devices installed and operating on startup of the affected unit); the thirty (30)-month implementation schedule does not apply.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material at any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to this subpart shall comply with all requirements of this subpart as soon as practicable but no later than thirty (30) months after the amendment's effective date. When control equipment required by this subpart cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: Specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of on-site installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of this subpart. The remanufacturer or other person that stores or treats the hazardous secondary material shall keep a copy of the implementation schedule at the facility.

(4) Remanufacturers or other persons that store or treat the hazardous secondary materials at facilities and units that become newly subject to the requirements of this subpart after January 13, 2015, due to an action other than those described in paragraph (b)(3) of this section, must comply with all applicable requirements immediately (i.e., must have control devices installed and operating on the date the facility or unit becomes subject to this subpart; the thirty (30)-month implementation schedule does not apply).

**261.1061. Alternative standards for valves in gas/vapor service or in light liquid service: percentage of valves allowed to leak.**

(a) A remanufacturer or other person that stores or treats the hazardous secondary material subject to the requirements of section 261.1057 may elect to have all valves within a hazardous secondary material management unit comply with an alternative standard that allows no greater than two (2) percent of the valves to leak.

(b) The following requirements shall be met if a remanufacturer or other person that stores or treats the hazardous secondary material decides to comply with the alternative standard of allowing two (2) percent of valves to leak:

(1) A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Department.

(2) If a valve leak is detected, it shall be repaired in accordance with section 261.1057(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves subject to the requirements in section 261.1057 within the hazardous secondary material management unit shall be monitored within one (1) week by the methods specified in section 261.1063(b).

(2) If an instrument reading of ten thousand (10,000) ppm or greater is measured, a leak is detected.

(3) The leak percentage shall be determined by dividing the number of valves subject to the requirements in section 261.1057 for which leaks are detected by the total number of valves subject to the requirements in section 261.1057 within the hazardous secondary material management unit.

**261.1062. Alternative standards for valves in gas/vapor service or in light liquid service: skip period leak detection and repair.**

(a) A remanufacturer or other person that stores or treats the hazardous secondary material subject to the requirements of section 261.1057 may elect for all valves within a hazardous secondary material management unit to comply with one (1) of the alternative work practices specified in paragraphs (b)(2) and (3) of this section.

(b)(1) A remanufacturer or other person that stores or treats the hazardous secondary material shall comply with the requirements for valves, as described in section 261.1057, except as described in paragraphs (b)(2) and (3) of this section.

(2) After two (2) consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two (2) percent, a remanufacturer or other person that stores or treats the hazardous secondary material may begin to skip one (1) of the quarterly leak detection periods (i.e., monitor for leaks once every six (6) months) for the valves subject to the requirements in section 261.1057 of this subpart.

(3) After five (5) consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two (2) percent, a remanufacturer or other person that stores or treats the hazardous secondary material may begin to skip three (3) of the quarterly leak detection periods (i.e., monitor for leaks once every year) for the valves subject to the requirements in section 261.1057 of this subpart.

(4) If the percentage of valves leaking is greater than two (2) percent, the remanufacturer or other person that stores or treats the hazardous secondary material shall monitor monthly in compliance with the requirements in section 261.1057, but may again elect to use this section after meeting the requirements of section 261.1057(c)(1).

**261.1063. Test methods and procedures.**

(a) Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section.

(b) Leak detection monitoring, as required in sections 261.1052 through 261.1062, shall comply with the following requirements:

(1) Monitoring shall comply with Reference Method 21 in 40 CFR part 60.

(2) The detection instrument shall meet the performance criteria of Reference Method 21.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.

(4) Calibration gases shall be:

(i) Zero air (less than ten (10) ppm of hydrocarbon in air).

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand (10,000) ppm methane or n-hexane.

(5) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(c) When equipment is tested for compliance with no detectable emissions, as required in sections 261.1052(e), 261.1053(i), 261.1054, and 261.1057(f), the test shall comply with the following requirements:

(1) The requirements of paragraphs (b)(1) through (4) of this section shall apply.

(2) The background level shall be determined as set forth in Reference Method 21.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with five hundred (500) ppm for determining compliance.

(d) A remanufacturer or other person that stores or treats the hazardous secondary material must determine, for each piece of equipment, whether the equipment contains or contacts a hazardous secondary material with organic concentration that equals or exceeds ten (10) percent by weight using the following:

(1) Methods described in ASTM Methods D 2267-88, E 169-87, E 168-88, E 260-85 (incorporated by reference under section 260.11);

(2) Method 9060A (incorporated by reference under section 260.11) of “Test Methods for Evaluating Solid Waste,” EPA Publication SW-846, for computing total organic concentration of the sample, or analyzed for its individual organic constituents; or

(3) Application of the knowledge of the nature of the hazardous secondary material stream or the process by which it was produced. Documentation of a material determination by knowledge is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the material is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to have a total organic content less than ten (10) percent, or prior speciation analysis results on the same material stream where it can also be documented that no process changes have occurred since that analysis that could affect the material total organic concentration.

(e) If a remanufacturer or other person that stores or treats the hazardous secondary material determines that a piece of equipment contains or contacts a hazardous secondary material with organic concentrations at least ten (10) percent by weight, the determination can be revised only after following the procedures in paragraph (d)(1) or (2) of this section.

(f) When a remanufacturer or other person that stores or treats the hazardous secondary material and the Department do not agree on whether a piece of equipment contains or contacts a hazardous secondary material with organic concentrations at least ten (10) percent by weight, the procedures in paragraph (d)(1) or (2) of this section can be used to resolve the dispute.

(g) Samples used in determining the percent organic content shall be representative of the highest total organic content hazardous secondary material that is expected to be contained in or contact the equipment.

(h) To determine if pumps or valves are in light liquid service, the vapor pressures of constituents may be obtained from standard reference texts or may be determined by ASTM D-2879-86 (incorporated by reference under section 260.11).

(i) Performance tests to determine if a control device achieves ninety-five (95) weight percent organic emission reduction shall comply with the procedures of section 261.1034(c)(1) through (4).

#### **261.1064. Recordkeeping requirements.**

(a)(1) Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) A remanufacturer or other person that stores or treats the hazardous secondary material in more than one (1) hazardous secondary material management unit subject to the provisions of this subpart may comply with the recordkeeping requirements for these hazardous secondary material management units in one (1) recordkeeping system if the system identifies each record by each hazardous secondary material management unit.

(b) Remanufacturer's and other person's that store or treat the hazardous secondary material must record and keep the following information at the facility:

(1) For each piece of equipment to which R.61-79.261 subpart BB applies:

(i) Equipment identification number and hazardous secondary material management unit identification.

(ii) Approximate locations within the facility (e.g., identify the hazardous secondary material management unit on a facility plot plan).

(iii) Type of equipment (e.g., a pump or pipeline valve).

(iv) Percent-by-weight total organics in the hazardous secondary material stream at the equipment.

(v) Hazardous secondary material state at the equipment (e.g., gas/vapor or liquid).

(vi) Method of compliance with the standard (e.g., "monthly leak detection and repair" or "equipped with dual mechanical seals").

(2) For facilities that comply with the provisions of section 261.1033(a)(2), an implementation schedule as specified in section 261.1033(a)(2).

(3) Where a remanufacturer or other person that stores or treats the hazardous secondary material chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan as specified in section 261.1035(b)(3).

(4) Documentation of compliance with section 261.1060, including the detailed design documentation or performance test results specified in section 261.1035(b)(4).

(c) When each leak is detected as specified in sections 261.1052, 261.1053, 261.1057, and 261.1058, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, the date evidence of a potential leak was found in accordance with section 261.1058(a), and the date the leak was detected, shall be attached to the leaking equipment.

(2) The identification on equipment, except on a valve, may be removed after it has been repaired.

(3) The identification on a valve may be removed after it has been monitored for two (2) successive months as specified in section 261.1057(c) and no leak has been detected during those two (2) months.

(d) When each leak is detected as specified in sections 261.1052, 261.1053, 261.1057, and 261.1058, the following information shall be recorded in an inspection log and shall be kept at the facility:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date evidence of a potential leak was found in accordance with section 261.1058(a).

(3) The date the leak was detected and the dates of each attempt to repair the leak.

(4) Repair methods applied in each attempt to repair the leak.

(5) “Above 10,000” if the maximum instrument reading measured by the methods specified in section 261.1063(b) after each repair attempt is equal to or greater than ten thousand (10,000) ppm.

(6) “Repair delayed” and the reason for the delay if a leak is not repaired within fifteen (15) calendar days after discovery of the leak.

(7) Documentation supporting the delay of repair of a valve in compliance with section 261.1059(c).

(8) The signature of the remanufacturer or other person that stores or treats the hazardous secondary material (or designate) whose decision it was that repair could not be effected without a hazardous secondary material management unit shutdown.

(9) The expected date of successful repair of the leak if a leak is not repaired within fifteen (15) calendar days.

(10) The date of successful repair of the leak.

(e) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of section 261.1060 shall be recorded and kept up-to-date at the facility as specified in section 261.1035(c). Design documentation is specified in section 261.1035(c)(1) and (2) and monitoring, operating, and inspection information in section 261.1035(c)(3) through (8).

(f) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the Department will specify the appropriate recordkeeping requirements.

(g) The following information pertaining to all equipment subject to the requirements in sections 261.1052 through 261.1060 shall be recorded in a log that is kept at the facility:

(1) A list of identification numbers for equipment (except welded fittings) subject to the requirements of this subpart.

(2)(i) A list of identification numbers for equipment that the remanufacturer or other person that stores or treats the hazardous secondary material elects to designate for no detectable emissions, as indicated by an instrument reading of less than five hundred (500) ppm above background, under the provisions of sections 261.1052(e), 261.1053(i), and 261.1057(f).

(ii) The designation of this equipment as subject to the requirements of sections 261.1052(e), 261.1053(i), or 261.1057(f) shall be signed by the remanufacturer or other person that stores or treats the hazardous secondary material.

(3) A list of equipment identification numbers for pressure relief devices required to comply with section 261.1054(a).

(4)(i) The dates of each compliance test required in sections 261.1052(e), 261.1053(i), 261.1054, and 261.1057(f).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(6) Identification, either by list or location (area or group) of equipment that contains or contacts hazardous secondary material with an organic concentration of at least ten (10) percent by weight for less than three hundred (300) hours per calendar year.

(h) The following information pertaining to all valves subject to the requirements of section 261.1057(g) and (h) shall be recorded in a log that is kept at the facility:

(1) A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.

(2) A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

(i) The following information shall be recorded in a log that is kept at the facility for valves complying with section 261.1062:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(j) The following information shall be recorded in a log that is kept at the facility:

(1) Criteria required in sections 261.1052(d)(5)(ii) and 261.1053(e)(2) and an explanation of the design criteria.

(2) Any changes to these criteria and the reasons for the changes.

(k) The following information shall be recorded in a log that is kept at the facility for use in determining exemptions as provided in the applicability section of this subpart and other specific subparts:

(1) An analysis determining the design capacity of the hazardous secondary material management unit.

(2) A statement listing the hazardous secondary material influent to and effluent from each hazardous secondary material management unit subject to the requirements in sections 261.1052 through 261.1060 and an analysis determining whether these hazardous secondary materials are heavy liquids.

(3) An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in sections 261.1052 through 261.1060. The record shall include supporting documentation as required by section 261.1063(d)(3) when application of the knowledge of the nature of the hazardous secondary material stream or the process by which it was produced is used. If the remanufacturer or other person that stores or treats the hazardous secondary material takes any action (e.g., changing the process that produced the material) that could result in an increase in the total organic content of the material contained in or contacted by equipment determined not to be subject to the requirements in sections 261.1052 through 261.1060, then a new determination is required.

(l) Records of the equipment leak information required by paragraph (d) of this section and the operating information required by paragraph (e) of this section need be kept only three (3) years.

(m) The remanufacturer or other person that stores or treats the hazardous secondary material at a facility with equipment that is subject to this subpart and to regulations at 40 CFR part 60, part 61, or part 63 may elect to determine compliance with this subpart either by documentation pursuant to section 261.1064, or by documentation of compliance with the regulations at 40 CFR part 60, part 61, or part 63 pursuant to the relevant provisions of the regulations at 40 part 60, part 61, or part 63. The documentation of compliance under regulations at 40 CFR part 60, part 61, or part 63 shall be kept with or made readily available at the facility.

**261.1065. [Reserved]**

**261.1066. [Reserved]**

**261.1067. [Reserved]**

**261.1068. [Reserved]**

**261.1069. [Reserved]**

**261.1070. [Reserved]**

**261.1071. [Reserved]**

**261.1072. [Reserved]**

**261.1073. [Reserved]**

**261.1074. [Reserved]**

**261.1075. [Reserved]**

**261.1076. [Reserved]**

**261.1077. [Reserved]**

**261.1078. [Reserved]**

**261.1079. [Reserved]**

## **SUBPART CC: Air Emission Standards for Tanks and Containers**

### **261.1080. Applicability.**

(a) The regulations in this subpart apply to tanks and containers that contain hazardous secondary materials excluded under the remanufacturing exclusion at section 261.4(a)(27), unless the tanks and containers are equipped with and operating air emission controls in accordance with the requirements of applicable Clean Air Act regulations codified under 40 CFR part 60, part 61, or part 63.

(b) [Reserved]

### **261.1081. Definitions.**

As used in this subpart, all terms not defined herein shall have the meaning given to them in the South Carolina Hazardous Waste Management Act and R.61-79.260 through 266.

**“Average volatile organic concentration or average VO concentration”** means the mass-weighted average volatile organic concentration of a hazardous secondary material as determined in accordance with the requirements of section 261.1084.

**“Closure device”** means a cap, hatch, lid, plug, seal, valve, or other type of fitting that blocks an opening in a cover such that when the device is secured in the closed position it prevents or reduces air pollutant emissions to the atmosphere. Closure devices include devices that are detachable from the cover (e.g., a sampling port cap), manually operated (e.g., a hinged access lid or hatch), or automatically operated (e.g., a spring-loaded pressure relief valve).

**“Continuous seal”** means a seal that forms a continuous closure that completely covers the space between the edge of the floating roof and the wall of a tank. A continuous seal may be a vapor-mounted seal, liquid-mounted seal, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

**“Cover”** means a device that provides a continuous barrier over the hazardous secondary material managed in a unit to prevent or reduce air pollutant emissions to the atmosphere. A cover may have openings (such as access hatches, sampling ports, gauge wells) that are necessary for operation, inspection, maintenance, and repair of the unit on which the cover is used. A cover may be a separate piece of equipment which can be detached and removed from the unit or a cover may be formed by structural features permanently integrated into the design of the unit.

**“Empty hazardous secondary material container”** means:

(1) A container from which all hazardous secondary materials have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring,

pumping, and aspirating, and no more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner;

(2) A container that is less than or equal to one hundred nineteen (119) gallons in size and no more than three (3) percent by weight of the total capacity of the container remains in the container or inner liner; or

(3) A container that is greater than one hundred nineteen (119) gallons in size and no more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner.

**“Enclosure”** means a structure that surrounds a tank or container, captures organic vapors emitted from the tank or container, and vents the captured vapors through a closed-vent system to a control device.

**“External floating roof”** means a pontoon-type or double-deck type cover that rests on the surface of the material managed in a tank with no fixed roof.

**“Fixed roof”** means a cover that is mounted on a unit in a stationary position and does not move with fluctuations in the level of the material managed in the unit.

**“Floating membrane cover”** means a cover consisting of a synthetic flexible membrane material that rests upon and is supported by the hazardous secondary material being managed in a surface impoundment.

**“Floating roof”** means a cover consisting of a double deck, pontoon single deck, or internal floating cover which rests upon and is supported by the material being contained, and is equipped with a continuous seal.

**“Hard-piping”** means pipe or tubing that is manufactured and properly installed in accordance with relevant standards and good engineering practices.

**“In light material service”** means the container is used to manage a material for which both of the following conditions apply: The vapor pressure of one (1) or more of the organic constituents in the material is greater than 0.3 kilopascals (kPa) at twenty degrees Celsius (20°C); and the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kilopascals (kPa) at 20°C is equal to or greater than twenty (20) percent by weight.

**“Internal floating roof”** means a cover that rests or floats on the material surface (but not necessarily in complete contact with it) inside a tank that has a fixed roof.

**“Liquid-mounted seal”** means a foam or liquid-filled primary seal mounted in contact with the hazardous secondary material between the tank wall and the floating roof continuously around the circumference of the tank.

**“Malfunction”** means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

**“Material determination”** means performing all applicable procedures in accordance with the requirements of section 261.1084 to determine whether a hazardous secondary material meets standards specified in this subpart. Examples of a material determination include performing the procedures in accordance with the requirements of section 261.1084 of this subpart to determine the average VO concentration of a hazardous secondary material at the point of material origination; the average VO

concentration of a hazardous secondary material at the point of material treatment and comparing the results to the exit concentration limit specified for the process used to treat the hazardous secondary material; the organic reduction efficiency and the organic biodegradation efficiency for a biological process used to treat a hazardous secondary material and comparing the results to the applicable standards; or the maximum volatile organic vapor pressure for a hazardous secondary material in a tank and comparing the results to the applicable standards.

**“Maximum organic vapor pressure”** means the sum of the individual organic constituent partial pressures exerted by the material contained in a tank, at the maximum vapor pressure-causing conditions (i.e., temperature, agitation, pH effects of combining materials, etc.) reasonably expected to occur in the tank. For the purpose of this subpart, maximum organic vapor pressure is determined using the procedures specified in section 261.1084(c).

**“Metallic shoe seal”** means a continuous seal that is constructed of metal sheets which are held vertically against the wall of the tank by springs, weighted levers, or other mechanisms and is connected to the floating roof by braces or other means. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

**“No detectable organic emissions”** means no escape of organics to the atmosphere as determined using the procedure specified in section 261.1084(d).

**“Point of material origination”** means as follows:

(1) When the remanufacturer or other person that stores or treats the hazardous secondary material is the generator of the hazardous secondary material, the point of material origination means the point where a material produced by a system, process, or material management unit is determined to be a hazardous secondary material excluded under section 261.4(a)(27).

Note to paragraph (1) of the definition of “Point of material origination”: In this case, this term is being used in a manner similar to the use of the term “point of generation” in air standards established under authority of the Clean Air Act in 40 CFR parts 60, 61, and 63.

(2) When the remanufacturer or other person that stores or treats the hazardous secondary material is not the generator of the hazardous secondary material, point of material origination means the point where the remanufacturer or other person that stores or treats the hazardous secondary material accepts delivery or takes possession of the hazardous secondary material.

**“Safety device”** means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of this subpart, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the remanufacturer or other person that stores or treats the hazardous secondary material based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.

**“Single-seal system”** means a floating roof having one (1) continuous seal. This seal may be vapor-mounted, liquid-mounted, or a metallic shoe seal.

**“Vapor-mounted seal”** means a continuous seal that is mounted such that there is a vapor space between the hazardous secondary material in the unit and the bottom of the seal.

**“Volatile organic concentration”** or **“VO concentration”** means the fraction by weight of the volatile organic compounds contained in a hazardous secondary material expressed in terms of parts per million by weight (ppmw) as determined by direct measurement or by knowledge of the material in accordance with the requirements of section 261.1084. For the purpose of determining the VO concentration of a hazardous secondary material, organic compounds with a Henry’s law constant value of at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in the liquid-phase (0.1 Y/X) (which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/m<sup>3</sup>) at twenty-five degrees Celsius (25°C) must be included.

### **261.1082. Standards: General.**

(a) This section applies to the management of hazardous secondary material in tanks and containers subject to this subpart.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from each hazardous secondary material management unit in accordance with standards specified in sections 261.1084 through 261.1087, as applicable to the hazardous secondary material management unit, except as provided for in paragraph (c) of this section.

(c) A tank or container is exempt from standards specified in sections 261.1084 through 261.1087, as applicable, provided that the hazardous secondary material management unit is a tank or container for which all hazardous secondary material entering the unit has an average VO concentration at the point of material origination of less than five hundred (500) parts per million by weight (ppmw). The average VO concentration shall be determined using the procedures specified in section 261.1083(a) of this subpart. The remanufacturer or other person that stores or treats the hazardous secondary material shall review and update, as necessary, this determination at least once every twelve (12) months following the date of the initial determination for the hazardous secondary material streams entering the unit.

### **261.1083. Material determination procedures.**

(a) Material determination procedure to determine average volatile organic (VO) concentration of a hazardous secondary material at the point of material origination.

(1) Determining average VO concentration at the point of material origination. A remanufacturer or other person that stores or treats the hazardous secondary material shall determine the average VO concentration at the point of material origination for each hazardous secondary material placed in a hazardous secondary material management unit exempted under the provisions of section 261.1082(c)(1) from using air emission controls in accordance with standards specified in sections 261.1084 through 261.1087, as applicable to the hazardous secondary material management unit.

(i) An initial determination of the average VO concentration of the material stream shall be made before the first time any portion of the material in the hazardous secondary material stream is placed in a hazardous secondary material management unit exempted under the provisions of section 261.1082(c)(1) of this subpart from using air emission controls, and thereafter an initial determination of the average VO concentration of the material stream shall be made for each averaging period that a hazardous secondary material is managed in the unit; and

(ii) Perform a new material determination whenever changes to the source generating the material stream are reasonably likely to cause the average VO concentration of the hazardous secondary material to increase to a level that is equal to or greater than the applicable VO concentration limits specified in section 261.1082.

(2) Determination of average VO concentration using direct measurement or knowledge. For a material determination that is required by paragraph (a)(1) of this section, the average VO concentration of a hazardous secondary material at the point of material origination shall be determined using either direct measurement as specified in paragraph (a)(3) of this section or by knowledge as specified in paragraph (a)(4) of this section.

(3) Direct measurement to determine average VO concentration of a hazardous secondary material at the point of material origination—

(i) Identification. The remanufacturer or other person that stores or treats the hazardous secondary material shall identify and record in a log that is kept at the facility the point of material origination for the hazardous secondary material.

(ii) Sampling. Samples of the hazardous secondary material stream shall be collected at the point of material origination in a manner such that volatilization of organics contained in the material and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

(A) The averaging period to be used for determining the average VO concentration for the hazardous secondary material stream on a mass-weighted average basis shall be designated and recorded. The averaging period can represent any time interval that the remanufacturer or other person that stores or treats the hazardous secondary material determines is appropriate for the hazardous secondary material stream but shall not exceed one (1) year.

(B) A sufficient number of samples, but no less than four (4) samples, shall be collected and analyzed for a hazardous secondary material determination. All of the samples for a given material determination shall be collected within a one-hour period. The average of the four or more sample results constitutes a material determination for the material stream. One (1) or more material determinations may be required to represent the complete range of material compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the source or process generating the hazardous secondary material stream. Examples of such normal variations are seasonal variations in material quantity or fluctuations in ambient temperature.

(C) All samples shall be collected and handled in accordance with written procedures prepared by the remanufacturer or other person that stores or treats the hazardous secondary material and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous secondary material stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained at the facility. An example of acceptable sample collection and handling procedures for a total volatile organic constituent concentration may be found in Method 25D in 40 CFR part 60, appendix A.

(D) Sufficient information, as specified in the “site sampling plan” required under paragraph (a)(3)(ii)(C) of this section, shall be prepared and recorded to document the material quantity represented

by the samples and, as applicable, the operating conditions for the source or process generating the hazardous secondary material represented by the samples.

(iii) Analysis. Each collected sample shall be prepared and analyzed in accordance with Method 25D in 40 CFR part 60, appendix A for the total concentration of volatile organic constituents, or using one (1) or more methods when the individual organic compound concentrations are identified and summed and the summed material concentration accounts for and reflects all organic compounds in the material with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/m<sup>3</sup>] at twenty-five degrees Celsius (25°C). At the discretion of the remanufacturer or other person that stores or treats the hazardous secondary material, the test data obtained may be adjusted by any appropriate method to discount any contribution to the total volatile organic concentration that is a result of including a compound with a Henry's law constant value of less than 0.1 Y/X at 25°C). To adjust these data, the measured concentration of each individual chemical constituent contained in the material is multiplied by the appropriate constituent-specific adjustment factor ( $f_{m25D}$ ). If the remanufacturer or other person that stores or treats the hazardous secondary material elects to adjust the test data, the adjustment must be made to all individual chemical constituents with a Henry's law constant value greater than or equal to 0.1 Y/X at 25°C) contained in the material. Constituent-specific adjustment factors ( $f_{m25D}$ ) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711. Other test methods may be used if they meet the requirements in paragraph (a)(3)(iii)(A) or (B) of this section and provided the requirement to reflect all organic compounds in the material with Henry's law constant values greater than or equal to 0.1 Y/X [which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/m<sup>3</sup>] at 25°C), is met.

(A) Any EPA standard method that has been validated in accordance with "Alternative Validation Procedure for EPA Waste and Wastewater Methods," 40 CFR part 63, appendix D.

(B) Any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 or Section 5.3, and the corresponding calculations in Section 6.1 or Section 6.3, of Method 301 in 40 CFR part 63, appendix A. The data are acceptable if they meet the criteria specified in Section 6.1.5 or Section 6.3.3 of Method 301. If correction is required under section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 are not required.

(iv) Calculations.

(A) The average VO concentration (C) on a mass-weighted basis shall be calculated by using the results for all material determinations conducted in accordance with paragraphs (a)(3)(ii) and (iii) of this section and the following equation

$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^n (Q_i \times C_i)$$

Where:

$\bar{C}$  = Average VO concentration of the hazardous secondary material at the point of material origination on a mass-weighted basis, ppmw.

i = Individual material determination "i" of the hazardous secondary material.

$n$  = Total number of material determinations of the hazardous secondary material conducted for the averaging period (not to exceed one (1) year).

$Q_i$  = Mass quantity of hazardous secondary material stream represented by  $C_i$ , kg/hr.

$Q_T$  = Total mass quantity of hazardous secondary material during the averaging period, kg/hr.

$C_i$  = Measured VO concentration of material determination “i” as determined in accordance with the requirements of paragraph (a)(3)(iii) of this section (i.e., the average of the four or more samples specified in paragraph (a)(3)(ii)(B) of this section), ppmw.

(B) For the purpose of determining  $C_i$ , for individual material samples analyzed in accordance with paragraph (a)(3)(iii) of this section, the remanufacturer or other person that stores or treats the hazardous secondary material shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

(1) If Method 25D in 40 CFR part 60, appendix A is used for the analysis, one-half the blank value determined in the method at section 4.4 of Method 25D in 40 CFR part 60, appendix A.

(2) If any other analytical method is used, one-half the sum of the limits of detection established for each organic constituent in the material that has a Henry’s law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/ $m^3$ ] at twenty-five degrees Celsius (25°C).

(4) Use of knowledge by the remanufacturer or other person that stores or treats the hazardous secondary material to determine average VO concentration of a hazardous secondary material at the point of material origination.

(i) Documentation shall be prepared that presents the information used as the basis for the knowledge by the remanufacturer or other person that stores or treats the hazardous secondary material of the hazardous secondary material stream’s average VO concentration. Examples of information that may be used as the basis for knowledge include: Material balances for the source or process generating the hazardous secondary material stream; constituent-specific chemical test data for the hazardous secondary material stream from previous testing that are still applicable to the current material stream; previous test data for other locations managing the same type of material stream; or other knowledge based on information included in shipping papers or material certification notices.

(ii) If test data are used as the basis for knowledge, then the remanufacturer or other person that stores or treats the hazardous secondary material shall document the test method, sampling protocol, and the means by which sampling variability and analytical variability are accounted for in the determination of the average VO concentration. For example, a remanufacturer or other person that stores or treats the hazardous secondary material may use organic concentration test data for the hazardous secondary material stream that are validated in accordance with Method 301 in 40 CFR part 63, appendix A as the basis for knowledge of the material.

(iii) A remanufacturer or other person that stores or treats the hazardous secondary material using chemical constituent-specific concentration test data as the basis for knowledge of the hazardous secondary material may adjust the test data to the corresponding average VO concentration value which would have been obtained had the material samples been analyzed using Method 25D in 40 CFR part 60, appendix A.

To adjust these data, the measured concentration for each individual chemical constituent contained in the material is multiplied by the appropriate constituent-specific adjustment factor ( $f_{m25D}$ ).

(iv) In the event that the Department and the remanufacturer or other person that stores or treats the hazardous secondary material disagree on a determination of the average VO concentration for a hazardous secondary material stream using knowledge, then the results from a determination of average VO concentration using direct measurement as specified in paragraph (a)(3) of this section shall be used to establish compliance with the applicable requirements of this subpart. The Department may perform or request that the remanufacturer or other person that stores or treats the hazardous secondary material perform this determination using direct measurement. The remanufacturer or other person that stores or treats the hazardous secondary material may choose one (1) or more appropriate methods to analyze each collected sample in accordance with the requirements of paragraph (a)(3)(iii) of this section.

(b) [Reserved]

(c) Procedure to determine the maximum organic vapor pressure of a hazardous secondary material in a tank.

(1) A remanufacturer or other person that stores or treats the hazardous secondary material shall determine the maximum organic vapor pressure for each hazardous secondary material placed in a tank using Tank Level 1 controls in accordance with standards specified in section 261.1084(c).

(2) A remanufacturer or other person that stores or treats the hazardous secondary material shall use either direct measurement as specified in paragraph (c)(3) of this section or knowledge of the waste as specified by paragraph (c)(4) of this section to determine the maximum organic vapor pressure which is representative of the hazardous secondary material composition stored or treated in the tank.

(3) Direct measurement to determine the maximum organic vapor pressure of a hazardous secondary material.

(i) Sampling. A sufficient number of samples shall be collected to be representative of the hazardous secondary material contained in the tank. All samples shall be collected and handled in accordance with written procedures prepared by the remanufacturer or other person that stores or treats the hazardous secondary material and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous secondary material are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained at the facility. An example of acceptable sample collection and handling procedures may be found in Method 25D in 40 CFR part 60, appendix A.

(ii) Analysis. Any one (1) of the appropriate following methods may be used to analyze the samples and compute the maximum organic vapor pressure of the hazardous secondary material:

(A) Method 25E in 40 CFR part 60 appendix A;

(B) Methods described in American Petroleum Institute Publication 2517, Third Edition, February 1989, "Evaporative Loss from External Floating-Roof Tanks," (incorporated by reference—refer to section 260.11 of this chapter);

(C) Methods obtained from standard reference texts;

(D) ASTM Method 2879-92 (incorporated by reference—refer to section 260.11); and

(E) Any other method approved by the Department.

(4) Use of knowledge to determine the maximum organic vapor pressure of the hazardous secondary material. Documentation shall be prepared and recorded that presents the information used as the basis for the knowledge by the remanufacturer or other person that stores or treats the hazardous secondary material that the maximum organic vapor pressure of the hazardous secondary material is less than the maximum vapor pressure limit listed in section 261.1085(b)(1)(i) for the applicable tank design capacity category. An example of information that may be used is documentation that the hazardous secondary material is generated by a process for which at other locations it previously has been determined by direct measurement that the hazardous secondary material's waste maximum organic vapor pressure is less than the maximum vapor pressure limit for the appropriate tank design capacity category.

(d) Procedure for determining no detectable organic emissions for the purpose of complying with this subpart:

(1) The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: The interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure relief valve.

(2) The test shall be performed when the unit contains a hazardous secondary material having an organic concentration representative of the range of concentrations for the hazardous secondary material expected to be managed in the unit. During the test, the cover and closure devices shall be secured in the closed position.

(3) The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the organic constituents in the hazardous secondary material placed in the hazardous secondary management unit, not for each individual organic constituent.

(4) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(5) Calibration gases shall be as follows:

(i) Zero air (less than ten (10) ppmv hydrocarbon in air), and

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand (10,000) ppmv methane or n-hexane.

(6) The background level shall be determined according to the procedures in Method 21 of 40 CFR part 60, appendix A.

(7) Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21 of 40 CFR part 60, appendix A. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration

of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.

(8) The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of five hundred (500) ppmv except when monitoring a seal around a rotating shaft that passes through a cover opening, in which case the comparison shall be as specified in paragraph (d)(9) of this section. If the difference is less than five hundred (500) ppmv, then the potential leak interface is determined to operate with no detectable organic emissions.

(9) For the seals around a rotating shaft that passes through a cover opening, the arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of ten thousand (10,000) ppmw. If the difference is less than ten thousand (10,000) ppmw, then the potential leak interface is determined to operate with no detectable organic emissions.

#### **261.1084. Standards: Tanks.**

(a) The provisions of this section apply to the control of air pollutant emissions from tanks for which section 261.1082(b) subpart references the use of this section for such air emission control.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from each tank subject to this section in accordance with the following requirements as applicable:

(1) For a tank that manages hazardous secondary material that meets all of the conditions specified in paragraphs (b)(1)(i) through (iii) of this section, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the tank in accordance with the Tank Level 1 controls specified in paragraph (c) of this section or the Tank Level 2 controls specified in paragraph (d) of this section.

(i) The hazardous secondary material in the tank has a maximum organic vapor pressure which is less than the maximum organic vapor pressure limit for the tank's design capacity category as follows:

(A) For a tank design capacity equal to or greater than one hundred fifty-one cubic meters (151 m<sup>3</sup>), the maximum organic vapor pressure limit for the tank is 5.2 kilopascals (kPa).

(B) For a tank design capacity equal to or greater than seventy-five (75) m<sup>3</sup> but less than one hundred fifty-one (151) m<sup>3</sup>, the maximum organic vapor pressure limit for the tank is 27.6 kPa.

(C) For a tank design capacity less than seventy-five (75) m<sup>3</sup>, the maximum organic vapor pressure limit for the tank is 76.6 kPa.

(ii) The hazardous secondary material in the tank is not heated by the remanufacturer or other person that stores or treats the hazardous secondary material to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous secondary material is determined for the purpose of complying with paragraph (b)(1)(i) of this section.

(2) For a tank that manages hazardous secondary material that does not meet all of the conditions specified in paragraphs (b)(1)(i) through (iii) of this section, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the tank by using Tank Level 2 controls in accordance with the requirements of paragraph (d) of this section. An example of tanks

required to use Tank Level 2 controls is a tank for which the hazardous secondary material in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category as specified in paragraph (b)(1)(i) of this section.

(c) Remanufacturers or other persons that store or treats the hazardous secondary material controlling air pollutant emissions from a tank using Tank Level 1 controls shall meet the requirements specified in paragraphs (c)(1) through (4) of this section:

(1) The remanufacturer or other person that stores or treats that hazardous secondary material shall determine the maximum organic vapor pressure for a hazardous secondary material to be managed in the tank using Tank Level 1 controls before the first time the hazardous secondary material is placed in the tank. The maximum organic vapor pressure shall be determined using the procedures specified in section 261.1083(c) of this subpart. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform a new determination whenever changes to the hazardous secondary material managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in paragraph (b)(1)(i) of this section, as applicable to the tank.

(2) The tank shall be equipped with a fixed roof designed to meet the following specifications:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the hazardous secondary material in the tank. The fixed roof may be a separate cover installed on the tank (e.g., a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (e.g., a horizontal cylindrical tank equipped with a hatch).

(ii) The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

(iii) Each opening in the fixed roof, and any manifold system associated with the fixed roof, shall be either:

(A) Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or

(B) Connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organics in the vent stream, and shall be operating whenever hazardous secondary material is managed in the tank, except as provided for in paragraphs (c)(2)(iii)(B)(1) and (2) of this section.

(1) During periods when it is necessary to provide access to the tank for performing the activities of paragraph (c)(2)(iii)(B)(2) of this section, venting of the vapor headspace underneath the fixed roof to the control device is not required, opening of closure devices is allowed, and removal of the fixed roof is allowed. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, and resume operation of the control device.

(2) During periods of routine inspection, maintenance, or other activities needed for normal operations, and for removal of accumulated sludge or other residues from the bottom of the tank.

(iv) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, and will maintain

the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: organic vapor permeability, the effects of any contact with the hazardous secondary material or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(3) Whenever a hazardous secondary material is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows:

(i) Opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of tank.

(ii) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the remanufacturer or other person that stores or treats the hazardous secondary material based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the tank internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

(iii) Opening of a safety device, as defined in section 261.1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the air emission control equipment in accordance with the following requirements.

(i) The fixed roof and its closure devices shall be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform the inspections at least once every year except under the special conditions provided for in paragraph (l) of this section.

(iii) In the event that a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(iv) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in section 261.1089(b) of this subpart.

(d) Remanufacturers or other persons that store or treat the hazardous secondary material controlling air pollutant emissions from a tank using Tank Level 2 controls shall use one (1) of the following tanks:

(1) A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in paragraph (e) of this section;

(2) A tank equipped with an external floating roof in accordance with the requirements specified in paragraph (f) of this section;

(3) A tank vented through a closed-vent system to a control device in accordance with the requirements specified in paragraph (g) of this section;

(4) A pressure tank designed and operated in accordance with the requirements specified in paragraph (h) of this section; or

(5) A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in paragraph (i) of this section.

(e) The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions from a tank using a fixed roof with an internal floating roof shall meet the requirements specified in paragraphs (e)(1) through (3) of this section.

(1) The tank shall be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:

(i) The internal floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The internal floating roof shall be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:

(A) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in section 261.1081; or

(B) Two (2) continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

(iii) The internal floating roof shall meet the following specifications:

(A) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(B) Each opening in the internal floating roof shall be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains.

(C) Each penetration of the internal floating roof for the purpose of sampling shall have a slit fabric cover that covers at least ninety (90) percent of the opening.

(D) Each automatic bleeder vent and rim space vent shall be gasketed.

(E) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(F) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.

(ii) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(iii) Prior to filling the tank, each cover, access hatch, gauge float well or lid on any opening in the internal floating roof shall be bolted or fastened closed (i.e., no visible gaps). Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the internal floating roof in accordance with the procedures specified as follows:

(i) The floating roof and its closure devices shall be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: The internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears, or other openings are visible in the seal fabric; the gaskets no longer close off the hazardous secondary material surface from the atmosphere; or the slotted membrane has more than ten (10) percent open area.

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the internal floating roof components as follows except as provided in paragraph (e)(3)(iii) of this section:

(A) Visually inspect the internal floating roof components through openings on the fixed-roof (e.g., manholes and roof hatches) at least once every twelve (12) months after initial fill, and

(B) Visually inspect the internal floating roof, primary seal, secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every ten (10) years.

(iii) As an alternative to performing the inspections specified in paragraph (e)(3)(ii) of this section for an internal floating roof equipped with two (2) continuous seals mounted one above the other, the remanufacturer or other person that stores or treats the hazardous secondary material may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every five (5) years.

(iv) Prior to each inspection required by paragraph (e)(3)(ii) or (iii) of this section, the remanufacturer or other person that stores or treats the hazardous secondary material shall notify the Department in advance of each inspection to provide the Department with the opportunity to have an observer present during the inspection. The remanufacturer or other person that stores or treats the hazardous secondary material shall notify the Department of the date and location of the inspection as follows:

(A) Prior to each visual inspection of an internal floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the remanufacturer or other person that stores or treats the hazardous secondary material so that it is received by the Department at least thirty (30) calendar days before refilling the tank except when an inspection is not planned as provided for in paragraph (e)(3)(iv)(B) of this section.

(B) When a visual inspection is not planned and the remanufacturer or other person that stores or treats the hazardous secondary material could not have known about the inspection thirty (30) calendar days before refilling the tank, the remanufacturer or other person that stores or treats the hazardous secondary material shall notify the Department as soon as possible, but no later than seven (7) calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Department at least seven (7) calendar days before refilling the tank.

(v) In the event that a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(vi) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in section 261.1089(b).

(4) Safety devices, as defined in section 261.1081, may be installed and operated as necessary on any tank complying with the requirements of paragraph (e) of this section.

(f) The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions from a tank using an external floating roof shall meet the requirements specified in paragraphs (f)(1) through (3) of this section.

(1) The remanufacturer or other person that stores or treats the hazardous secondary material shall design the external floating roof in accordance with the following requirements:

(i) The external floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The floating roof shall be equipped with two (2) continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be a liquid-mounted seal or a metallic shoe seal, as defined in section 261.1081. The total area of the gaps between the tank wall and the primary seal shall not exceed two hundred twelve square centimeters (212 cm<sup>2</sup>) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 3.8 centimeters (cm). If a metallic shoe seal is used for the primary seal, the metallic shoe seal shall be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least sixty-one (61) cm above the liquid surface.

(B) The secondary seal shall be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter, and the width of any portion of these gaps shall not exceed 1.3 cm.

(iii) The external floating roof shall meet the following specifications:

(A) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface.

(B) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid.

(C) Each access hatch and each gauge float well shall be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position.

(D) Each automatic bleeder vent and each rim space vent shall be equipped with a gasket.

(E) Each roof drain that empties into the liquid managed in the tank shall be equipped with a slotted membrane fabric cover that covers at least ninety (90) percent of the area of the opening.

(F) Each unslotted and slotted guide pole well shall be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.

(G) Each unslotted guide pole shall be equipped with a gasketed cap on the end of the pole.

(H) Each slotted guide pole shall be equipped with a gasketed float or other device which closes off the liquid surface from the atmosphere.

(I) Each gauge hatch and each sample well shall be equipped with a gasketed cover.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.

(ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be secured and maintained in a closed position at all times except when the closure device must be open for access.

(iii) Covers on each access hatch and each gauge float well shall be bolted or fastened when secured in the closed position.

(iv) Automatic bleeder vents shall be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(v) Rim space vents shall be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(vi) The cap on the end of each unslotted guide pole shall be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.

(vii) The cover on each gauge hatch or sample well shall be secured in the closed position at all times except when the hatch or well must be opened for access.

(viii) Both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the external floating roof in accordance with the procedures specified as follows:

(i) The remanufacturer or other person that stores or treats the hazardous secondary material shall measure the external floating roof seal gaps in accordance with the following requirements:

(A) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform measurements of gaps between the tank wall and the primary seal within sixty (60) calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every five (5) years.

(B) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform measurements of gaps between the tank wall and the secondary seal within sixty (60) calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year.

(C) If a tank ceases to hold hazardous secondary material for a period of one (1) year or more, subsequent introduction of hazardous secondary material into the tank shall be considered an initial operation for the purposes of paragraphs (f)(3)(i)(A) and (B) of this section.

(D) The remanufacturer or other person that stores or treats the hazardous secondary material shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure:

(1) The seal gap measurements shall be performed at one (1) or more floating roof levels when the roof is floating off the roof supports.

(2) Seal gaps, if any, shall be measured around the entire perimeter of the floating roof in each place where a 0.32-centimeter (cm) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the tank and measure the circumferential distance of each such location.

(3) For a seal gap measured under paragraph (f)(3) of this section, the gap surface area shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(4) The total gap area shall be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal diameter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type as specified in paragraph (f)(1)(ii) of this section.

(E) In the event that the seal gap measurements do not conform to the specifications in paragraph (f)(1)(ii) of this section, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(F) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in section 261.1089(b).

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the external floating roof in accordance with the following requirements:

(A) The floating roof and its closure devices shall be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: Holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(B) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform the inspections at least once every year except for the special conditions provided for in paragraph (l) of this section.

(C) In the event that a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(D) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in section 261.1089(b).

(iii) Prior to each inspection required by paragraph (f)(3)(i) or (ii) of this section, the remanufacturer or other person that stores or treats the hazardous secondary material shall notify the Department in advance of each inspection to provide the Department with the opportunity to have an observer present during the inspection. The remanufacturer or other person that stores or treats the hazardous secondary material shall notify the Department of the date and location of the inspection as follows:

(A) Prior to each inspection to measure external floating roof seal gaps as required under paragraph (f)(3)(i) of this section, written notification shall be prepared and sent by the remanufacturer or other person that stores or treats the hazardous secondary material so that it is received by the Department at least thirty (30) calendar days before the date the measurements are scheduled to be performed.

(B) Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the remanufacturer or other person that stores or treats the hazardous secondary material so that it is received by the Department at least thirty (30) calendar days before refilling the tank except when an inspection is not planned as provided for in paragraph (f)(3)(iii)(C) of this section.

(C) When a visual inspection is not planned and the remanufacturer or other person that stores or treats the hazardous secondary material could not have known about the inspection thirty (30) calendar days before refilling the tank, the owner or operator shall notify the Department as soon as possible, but no later than seven (7) calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Department at least seven (7) calendar days before refilling the tank.

(4) Safety devices, as defined in section 261.1081, may be installed and operated as necessary on any tank complying with the requirements of paragraph (f) of this section.

(g) The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in paragraphs (g)(1) through (3) of this section.

(1) The tank shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.

(ii) Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions.

(iii) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: Organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of section 261.1087.

(2) Whenever a hazardous secondary material is in the tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of a tank.

(ii) Opening of a safety device, as defined in section 261.1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(i) The fixed roof and its closure devices shall be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The closed-vent system and control device shall be inspected and monitored by the remanufacturer or other person that stores or treats the hazardous secondary material in accordance with the procedures specified in section 261.1087.

(iii) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to this section. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform the inspections at least once every year except for the special conditions provided for in paragraph (l) of this section.

(iv) In the event that a defect is detected, the remanufacture or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(v) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in section 261.1089(b).

(h) The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions by using a pressure tank shall meet the following requirements.

(1) The tank shall be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.

(2) All tank openings shall be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in section 261.1083(d).

(3) Whenever a hazardous secondary material is in the tank, the tank shall be operated as a closed system that does not vent to the atmosphere except under either or the following conditions as specified in paragraph (h)(3)(i) or (h)(3)(ii) of this section.

(i) At those times when opening of a safety device, as defined in section 261.1081, is required to avoid an unsafe condition.

(ii) At those times when purging of inerts from the tank is required and the purge stream is routed to a closed-vent system and control device designed and operated in accordance with the requirements of section 261.1087.

(i) The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in paragraphs (i)(1) through (4) of this section.

(1) The tank shall be located inside an enclosure. The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The remanufacturer or other person that stores or treats the hazardous secondary material shall perform the verification procedure for the enclosure as specified in Section 5.0 to “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” initially when the enclosure is first installed and, thereafter, annually.

(2) The enclosure shall be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in section 261.1087.

(3) Safety devices, as defined in section 261.1081, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of paragraphs (i)(1) and (2) of this section.

(4) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor the closed-vent system and control device as specified in section 261.1087.

(j) The remanufacturer or other person that stores or treats the hazardous secondary material shall transfer hazardous secondary material to a tank subject to this section in accordance with the following requirements:

(1) Transfer of hazardous secondary material, except as provided in paragraph (j)(2) of this section, to the tank from another tank subject to this section shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the hazardous secondary material to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR—National Emission Standards for Individual Drain Systems.

(2) The requirements of paragraph (j)(1) of this section do not apply when transferring a hazardous secondary material to the tank under any of the following conditions:

(i) The hazardous secondary material meets the average VO concentration conditions specified in section 261.1082(c)(1) at the point of material origination.

(ii) The hazardous secondary material has been treated by an organic destruction or removal process to meet the requirements in section 261.1082(c)(2).

(iii) The hazardous secondary material meets the requirements of section 261.1082(c)(4).

(k) The remanufacturer or other person that stores or treats the hazardous secondary material shall repair each defect detected during an inspection performed in accordance with the requirements of paragraph (c)(4), (e)(3), (f)(3), or (g)(3) of this section as follows:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material shall make first efforts at repair of the defect no later than five (5) calendar days after detection, and repair shall be completed as soon as possible but no later than forty-five (45) calendar days after detection except as provided in paragraph (k)(2) of this section.

(2) Repair of a defect may be delayed beyond forty-five (45) calendar days if the remanufacturer or other person that stores or treats the hazardous secondary material determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous secondary material normally managed in the tank. In this case, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect the next time the process or unit that is generating the hazardous secondary material managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(l) Following the initial inspection and monitoring of the cover as required by the applicable provisions of this subpart, subsequent inspection and monitoring may be performed at intervals longer than one (1) year under the following special conditions:

(1) In the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions, then the remanufacturer or other person that stores or treats the hazardous secondary material may designate a cover as an “unsafe to inspect and monitor cover” and comply with all of the following requirements:

(i) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

(ii) Develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable section of this subpart, as frequently as practicable during those times when a worker can safely access the cover.

(2) In the case when a tank is buried partially or entirely underground, a remanufacturer or other person that stores or treats the hazardous secondary material is required to inspect and monitor, as required by the applicable provisions of this section, only those portions of the tank cover and those connections to the tank (e.g., fill ports, access hatches, gauge wells, etc.) that are located on or above the ground surface.

#### **261.1085. [Reserved]**

## **261.1086. Standards: Containers.**

(a) Applicability. The provisions of this section apply to the control of air pollutant emissions from containers for which section 261.1082(b) references the use of this section for such air emission control.

(b) General requirements.

(1) The remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from each container subject to this section in accordance with the following requirements, as applicable to the container.

(i) For a container having a design capacity greater than 0.1 cubic meters (m<sup>3</sup>) and less than or equal to 0.46 m<sup>3</sup>, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in paragraph (c) of this section.

(ii) For a container having a design capacity greater than 0.46 m<sup>3</sup> that is not in light material service, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in paragraph (c) of this section.

(iii) For a container having a design capacity greater than 0.46 m<sup>3</sup> that is in light material service, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the container in accordance with the Container Level 2 standards specified in paragraph (d) of this section.

(2) [Reserved]

(c) Container Level 1 standards.

(1) A container using Container Level 1 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in paragraph (f) of this section.

(ii) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (e.g., a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a “portable tank” or bulk cargo container equipped with a screw-type cap).

(iii) An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous secondary material in the container such that no hazardous secondary material is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.

(2) A container used to meet the requirements of paragraph (c)(1)(ii) or (iii) of this section shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous secondary material to the atmosphere and to maintain the equipment integrity, for as long as the container is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor

permeability; the effects of contact with the hazardous secondary material or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.

(3) Whenever a hazardous secondary material is in a container using Container Level 1 controls, the remanufacturer or other person that stores or treats the hazardous secondary material shall install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the purpose of adding hazardous secondary material or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within fifteen (15) minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the hazardous secondary material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous secondary material from the container as follows:

(A) For the purpose of meeting the requirements of this section, an empty hazardous secondary material container may be open to the atmosphere at any time (i.e., covers and closure devices on such a container are not required to be secured in the closed position).

(B) In the case when discrete quantities or batches of material are removed from the container, but the container is not an empty hazardous secondary material container, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within fifteen (15) minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous secondary material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose

of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the remanufacturer or other persons that stores or treats the hazardous secondary material based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in section 261.1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The remanufacturer or other person that stores or treats the hazardous secondary material using containers with Container Level 1 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous secondary material already is in the container at the time the remanufacturer or other person that stores or treats the hazardous secondary material first accepts possession of the container at the facility and the container is not emptied within twenty-four (24) hours after the container is accepted at the facility (i.e., is not an empty hazardous secondary material container) the remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility (i.e., the date the container becomes subject to the subpart CC container standards).

(ii) In the case when a container used for managing hazardous secondary material remains at the facility for a period of one (1) year or more, the remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every twelve (12) months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of paragraph (c)(4)(iii) of this section.

(iii) When a defect is detected for the container, cover, or closure devices, the remanufacturer or other person that stores or treats the hazardous secondary material shall make first efforts at repair of the defect no later than twenty-four (24) hours after detection and repair shall be completed as soon as possible but no later than five (5) calendar days after detection. If repair of a defect cannot be completed within five (5) calendar days, then the hazardous secondary material shall be removed from the container and the container shall not be used to manage hazardous secondary material until the defect is repaired.

(5) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain at the facility a copy of the procedure used to determine that containers with capacity of 0.46 m<sup>3</sup> or greater, which do not meet applicable DOT regulations as specified in paragraph (f) of this section, are not managing hazardous secondary material in light material service.

(d) Container Level 2 standards.

(1) A container using Container Level 2 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in paragraph (f) of this section.

(ii) A container that operates with no detectable organic emissions as defined in section 261.1081 and determined in accordance with the procedure specified in paragraph (g) of this section.

(iii) A container that has been demonstrated within the preceding twelve (12) months to be vapor-tight by using 40 CFR part 60, appendix A, Method 27 in accordance with the procedure specified in paragraph (h) of this section.

(2) Transfer of hazardous secondary material in or out of a container using Container Level 2 controls shall be conducted in such a manner as to minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, considering the physical properties of the hazardous secondary material and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the EPA considers to meet the requirements of this paragraph include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous secondary material is filled and subsequently purging the transfer line before removing it from the container opening.

(3) Whenever a hazardous secondary material is in a container using Container Level 2 controls, the remanufacturer or other person that stores or treats the hazardous secondary material shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the purpose of adding hazardous secondary material or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within fifteen (15) minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous secondary material from the container as follows:

(A) For the purpose of meeting the requirements of this section, an empty hazardous secondary material container may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container).

(B) In the case when discrete quantities or batches of material are removed from the container, but the container is not an empty hazardous secondary materials container, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within fifteen (15) minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous secondary material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the remanufacturer or other person that stores or treats the hazardous secondary material based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in section 261.1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The remanufacture or other person that stores or treats the hazardous secondary material using containers with Container Level 2 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous secondary material already is in the container at the time the remanufacturer or other person that stores or treats the hazardous secondary material first accepts possession of the container at the facility and the container is not emptied within twenty-four (24) hours after the container is accepted at the facility (i.e., is not an empty hazardous secondary material container), the remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility (i.e., the date the container becomes subject to the subpart CC container standards).

(ii) In the case when a container used for managing hazardous secondary material remains at the facility for a period of one (1) year or more, the remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every twelve (12) months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of paragraph (d)(4)(iii) of this section.

(iii) When a defect is detected for the container, cover, or closure devices, the remanufacturer or other person that stores or treats the hazardous secondary material shall make first efforts at repair of the defect no later than twenty-four (24) hours after detection, and repair shall be completed as soon as possible but no later than five (5) calendar days after detection. If repair of a defect cannot be completed within five (5) calendar days, then the hazardous secondary material shall be removed from the container and the container shall not be used to manage hazardous secondary material until the defect is repaired.

(e) Container Level 3 standards.

(1) A container using Container Level 3 controls is one of the following:

(i) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of paragraph (e)(2)(ii) of this section.

(ii) A container that is vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with the requirements of paragraphs (e)(2)(i) and (ii) of this section.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall meet the following requirements, as applicable to the type of air emission control equipment selected by the remanufacturer or other person that stores or treats the hazardous secondary material:

(i) The container enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The remanufacturer or other person that stores or treats the hazardous secondary material shall perform the verification procedure for the enclosure as specified in Section 5.0 to “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” initially when the enclosure is first installed and, thereafter, annually.

(ii) The closed-vent system and control device shall be designed and operated in accordance with the requirements of section 261.1087.

(3) Safety devices, as defined in section 261.1081, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of paragraph (e)(1) of this section.

(4) Remanufacturers or other persons that store or treat the hazardous secondary material using Container Level 3 controls in accordance with the provisions of this subpart shall inspect and monitor the closed-vent systems and control devices as specified in section 261.1087.

(5) Remanufacturers or other persons that store or treat the hazardous secondary material that use Container Level 3 controls in accordance with the provisions of this subpart shall prepare and maintain the records specified in section 261.1089(d).

(6) Transfer of hazardous secondary material in or out of a container using Container Level 3 controls shall be conducted in such a manner as to minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, considering the physical properties of the hazardous secondary material and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the EPA considers to meet the requirements of this paragraph include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous secondary material is filled and subsequently purging the transfer line before removing it from the container opening.

(f) For the purpose of compliance with paragraph (c)(1)(i) or (d)(1)(i) of this section, containers shall be used that meet the applicable DOT regulations on packaging hazardous materials for transportation as follows:

(1) The container meets the applicable requirements specified in 49 CFR part 178 or part 179.

(2) Hazardous secondary material is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107, subpart B and 49 CFR parts 172, 173, and 180.

(3) For the purpose of complying with this subpart, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed.

(g) To determine compliance with the no detectable organic emissions requirement of paragraph (d)(1)(ii) of this section, the procedure specified in section 261.1083(d) shall be used.

(1) Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, shall be checked. Potential leak interfaces that are associated with containers include, but are not limited to: the interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(2) The test shall be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the hazardous secondary materials expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.

(h) Procedure for determining a container to be vapor-tight using Method 27 of 40 CFR part 60, appendix A for the purpose of complying with paragraph (d)(1)(iii) of this section.

(1) The test shall be performed in accordance with Method 27 of 40 CFR part 60, appendix A of this chapter.

(2) A pressure measurement device shall be used that has a precision of  $\pm 2.5$  mm water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.

(3) If the test results determined by Method 27 indicate that the container sustains a pressure change less than or equal to 750 Pascals within five (5) minutes after it is pressurized to a minimum of 4,500 Pascals, then the container is determined to be vapor-tight.

**261.1087. Standards: Closed-vent systems and control devices.**

(a) This section applies to each closed-vent system and control device installed and operated by the remanufacturer or other person who stores or treats the hazardous secondary material to control air emissions in accordance with standards of this subpart.

(b) The closed-vent system shall meet the following requirements:

(1) The closed-vent system shall route the gases, vapors, and fumes emitted from the hazardous secondary material in the hazardous secondary material management unit to a control device that meets the requirements specified in paragraph (c) of this section.

(2) The closed-vent system shall be designed and operated in accordance with the requirements specified in section 261.1033(k).

(3) In the case when the closed-vent system includes bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in paragraph (b)(3)(i) of this section or a seal or locking device as specified in paragraph (b)(3)(ii) of this section. For the purpose of complying with this paragraph, low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring loaded pressure relief valves, and other fittings used for safety purposes are not considered to be bypass devices.

(i) If a flow indicator is used to comply with paragraph (b)(3) of this section, the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For this paragraph, a flow indicator means a device which indicates the presence of either gas or vapor flow in the bypass line.

(ii) If a seal or locking device is used to comply with paragraph (b)(3) of this section, the device shall be placed on the mechanism by which the bypass device position is controlled (e.g., valve handle, damper lever) when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configuration valve. The remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the seal or closure mechanism at least once every month to verify that the bypass mechanism is maintained in the closed position.

(4) The closed-vent system shall be inspected and monitored by the remanufacturer or other person that stores or treats the hazardous secondary material in accordance with the procedure specified in section 261.1033(l).

(c) The control device shall meet the following requirements:

(1) The control device shall be one of the following devices:

(i) A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least ninety-five (95) percent by weight;

(ii) An enclosed combustion device designed and operated in accordance with the requirements of section 261.1033(c); or

(iii) A flare designed and operated in accordance with the requirements of section 261.1033(d).

(2) The remanufacturer or other person that stores or treats the hazardous secondary material who elects to use a closed-vent system and control device to comply with the requirements of this section shall comply with the requirements specified in paragraphs (c)(2)(i) through (vi) of this section.

(i) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of paragraph (c)(1)(i), (ii), or (iii) of this section, as applicable, shall not exceed two hundred forty (240) hours per year.

(ii) The specifications and requirements in paragraphs (c)(1)(i) through (iii) of this section for control devices do not apply during periods of planned routine maintenance.

(iii) The specifications and requirements in paragraphs (c)(1)(i) through (iii) of this section for control devices do not apply during a control device system malfunction.

(iv) The remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate compliance with the requirements of paragraph (c)(2)(i) of this section (i.e., planned routine maintenance of a control device, during which the control device does not meet the specifications of paragraph (c)(1)(i), (ii), or (iii) of this section, as applicable, shall not exceed two hundred forty (240) hours per year) by recording the information specified in section 261.1089(e)(1)(v).

(v) The remanufacturer or other person that stores or treats the hazardous secondary material shall correct control device system malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of air pollutants.

(vi) The remanufacturer or other person that stores or treats the hazardous secondary material shall operate the closed-vent system such that gases, vapors, or fumes are not actively vented to the control device during periods of planned maintenance or control device system malfunction (i.e., periods when the control device is not operating or not operating normally) except in cases when it is necessary to vent the gases, vapors, and/or fumes to avoid an unsafe condition or to implement malfunction corrective actions or planned maintenance actions.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material using a carbon adsorption system to comply with paragraph (c)(1) of this section shall operate and maintain the control device in accordance with the following requirements:

(i) Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of section 261.1033(g) or (h) of this part.

(ii) All carbon that is hazardous waste and that is removed from the control device shall be managed in accordance with the requirements of section 261.1033(n), regardless of the average volatile organic concentration of the carbon.

(4) A remanufacturer or other person that stores or treats the hazardous secondary material using a control device other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon

adsorption system to comply with paragraph (c)(1) of this section shall operate and maintain the control device in accordance with the requirements of section 261.1033(j).

(5) The remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate that a control device achieves the performance requirements of paragraph (c)(1) of this section as follows:

(i) A remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate using either a performance test as specified in paragraph (c)(5)(iii) of this section or a design analysis as specified in paragraph (c)(5)(iv) of this section the performance of each control device except for the following:

(A) A flare;

(B) A boiler or process heater with a design heat input capacity of forty-four (44) megawatts or greater;

(C) A boiler or process heater into which the vent stream is introduced with the primary fuel;

(ii) A remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate the performance of each flare in accordance with the requirements specified in section 261.1033(e).

(iii) For a performance test conducted to meet the requirements of paragraph (c)(5)(i) of this section, the remanufacturer or other person that stores or treats the hazardous secondary material shall use the test methods and procedures specified in section 261.1034(c)(1) through (4).

(iv) For a design analysis conducted to meet the requirements of paragraph (c)(5)(i) of this section, the design analysis shall meet the requirements specified in section 261.1035(b)(4)(iii).

(v) The remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate that a carbon adsorption system achieves the performance requirements of paragraph (c)(1) of this section based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal.

(6) If the remanufacturer or other person that stores or treats the hazardous secondary material and the Department do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the remanufacturer or other person that stores or treats the hazardous secondary material in accordance with the requirements of paragraph (c)(5)(iii) of this section. The Department may choose to have an authorized representative observe the performance test.

(7) The closed-vent system and control device shall be inspected and monitored by the remanufacturer or other person that stores or treats the hazardous secondary material in accordance with the procedures specified in section 261.1033(f)(2) and (l). The readings from each monitoring device required by section 261.1033(f)(2) shall be inspected at least once each operating day to check control device operation. Any necessary corrective measures shall be immediately implemented to ensure the control device is operated in compliance with the requirements of this section.

### **261.1088. Inspection and monitoring requirements.**

(a) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor air emission control equipment used to comply with this subpart in accordance with the applicable requirements specified in sections 261.1084 through 261.1087.

(b) The remanufacture or other person that stores or treats the hazardous secondary material shall develop and implement a written plan and schedule to perform the inspections and monitoring required by paragraph (a) of this section. The remanufacturer or other person that stores or treats the hazardous secondary material shall keep the plan and schedule at the facility.

### **261.1089. Recordkeeping requirements.**

(a) Each remanufacturer or other person that stores or treats the hazardous secondary material subject to requirements of this subpart shall record and maintain the information specified in paragraphs (b) through (j) of this section, as applicable to the facility. Except for air emission control equipment design documentation and information required by paragraphs (i) and (j) of this section, records required by this section shall be maintained at the facility for a minimum of three (3) years. Air emission control equipment design documentation shall be maintained at the facility until the air emission control equipment is replaced or otherwise no longer in service. Information required by paragraphs (i) and (j) of this section shall be maintained at the facility for as long as the hazardous secondary material management unit is not using air emission controls specified in sections 261.1084 through 261.1087 in accordance with the conditions specified in section 261.1080(b)(7) or (d), respectively.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material using a tank with air emission controls in accordance with the requirements of section 261.1084 shall prepare and maintain records for the tank that include the following information:

(1) For each tank using air emission controls in accordance with the requirements of section 261.1084, the remanufacturer or other person that stores or treats the hazardous secondary material shall record:

(i) A tank identification number (or other unique identification description as selected by the remanufacturer or other person that stores or treats the hazardous secondary material).

(ii) A record for each inspection required by section 261.1084 that includes the following information:

(A) Date inspection was conducted.

(B) For each defect detected during the inspection: The location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the requirements of section 261.1084, the remanufacturer or other person that stores or treats the hazardous secondary material shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(2) In addition to the information required by paragraph (b)(1) of this section, the remanufacturer or other person that stores or treats the hazardous secondary material shall record the following information, as applicable to the tank:

(i) The remanufacturer or other person that stores or treats the hazardous secondary material using a fixed roof to comply with the Tank Level 1 control requirements specified in section 261.1084(c) shall

prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous secondary material in the tank performed in accordance with the requirements of section 261.1084(c). The records shall include the date and time the samples were collected, the analysis method used, and the analysis results.

(ii) The remanufacturer or other person that stores or treats the hazardous secondary material using an internal floating roof to comply with the Tank Level 2 control requirements specified in section 261.1084(e) shall prepare and maintain documentation describing the floating roof design.

(iii) Remanufacturer or other persons that store or treat the hazardous secondary material using an external floating roof to comply with the Tank Level 2 control requirements specified in section 261.1084(f) shall prepare and maintain the following records:

(A) Documentation describing the floating roof design and the dimensions of the tank.

(B) Records for each seal gap inspection required by section 261.1084(f)(3) describing the results of the seal gap measurements. The records shall include the date that the measurements were performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in section 261.1084(f)(1), the records shall include a description of the repairs that were made, the date the repairs were made, and the date the tank was emptied, if necessary.

(iv) Each remanufacturer or other person that stores or treats the hazardous secondary material using an enclosure to comply with the Tank Level 2 control requirements specified in section 261.1084(i) shall prepare and maintain the following records:

(A) Records for the most recent set of calculations and measurements performed by the remanufacturer or other person that stores or treats the hazardous secondary material to verify that the enclosure meets the criteria of a permanent total enclosure as specified in “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” under 40 CFR 52.741, appendix B.

(B) Records required for the closed-vent system and control device in accordance with the requirements of paragraph (e) of this section.

(c) [Reserved]

(d) The remanufacturer or other person that stores or treats the hazardous secondary material using containers with Container Level 3 air emission controls in accordance with the requirements of section 261.1086 shall prepare and maintain records that include the following information:

(1) Records for the most recent set of calculations and measurements performed by the remanufacturer or other person that stores or treats the hazardous secondary material to verify that the enclosure meets the criteria of a permanent total enclosure as specified in “Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure” under 40 CFR 52.741, Appendix B.

(2) Records required for the closed-vent system and control device in accordance with the requirements of paragraph (e) of this section.

(e) The remanufacturer or other person that stores or treats the hazardous secondary material using a closed-vent system and control device in accordance with the requirements of section 261.1087 shall prepare and maintain records that include the following information:

(1) Documentation for the closed-vent system and control device that includes:

(i) Certification that is signed and dated by the remanufacturer or other person that stores or treats the hazardous secondary material stating that the control device is designed to operate at the performance level documented by a design analysis as specified in paragraph (e)(1)(ii) of this section or by performance tests as specified in paragraph (e)(1)(iii) of this section when the tank or container is or would be operating at capacity or the highest level reasonably expected to occur.

(ii) If a design analysis is used, then design documentation as specified in section 261.1035(b)(4). The documentation shall include information prepared by the remanufacturer or other person that stores or treats the hazardous secondary material or provided by the control device manufacturer or vendor that describes the control device design in accordance with section 261.1035(b)(4)(iii) and certification by the remanufacturer or other person that stores or treats the hazardous secondary material that the control equipment meets the applicable specifications.

(iii) If performance tests are used, then a performance test plan as specified in section 261.1035(b)(3) and all test results.

(iv) Information as required by sections 261.1035(c)(1) and 261.1035(c)(2), as applicable.

(v) A remanufacturer or other person that stores or treats the hazardous secondary material shall record, on a semiannual basis, the information specified in paragraphs (e)(1)(v)(A) and (B) of this section for those planned routine maintenance operations that would require the control device not to meet the requirements of section 261.1087(c)(1)(i), (ii), or (iii), as applicable.

(A) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next six (6)-month period. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(B) A description of the planned routine maintenance that was performed for the control device during the previous six (6)-month period. This description shall include the type of maintenance performed and the total number of hours during those six (6) months that the control device did not meet the requirements of section 261.1087(c)(1)(i), (ii), or (iii), as applicable, due to planned routine maintenance.

(vi) A remanufacturer or other person that stores or treats the hazardous secondary material shall record the information specified in paragraphs (e)(1)(vi)(A) through (C) of this section for those unexpected control device system malfunctions that would require the control device not to meet the requirements of section 261.1087(c)(1)(i), (ii), or (iii), as applicable.

(A) The occurrence and duration of each malfunction of the control device system.

(B) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the hazardous secondary material management unit through the closed-vent system to the control device while the control device is not properly functioning.

(C) Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.

(vii) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with section 261.1087(c)(3)(ii).

(f)(1) The remanufacturer or other person that stores or treats the hazardous secondary material using a tank or container exempted under the hazardous secondary material organic concentration conditions specified in section 261.1082(c)(1) or (c)(2)(i) through (vi), shall prepare and maintain at the facility records documenting the information used for each material determination (e.g., test results, measurements, calculations, and other documentation). If analysis results for material samples are used for the material determination, then the remanufacturer or other person that stores or treats the hazardous secondary material shall record the date, time, and location that each material sample is collected in accordance with applicable requirements of section 261.1083.

(2) [Reserved]

(g) A remanufacturer or other person that stores or treats the hazardous secondary material designating a cover as “unsafe to inspect and monitor” pursuant to sections 261.1084(l) or 261.1085(g) shall record and keep at facility the following information: The identification numbers for hazardous secondary material management units with covers that are designated as “unsafe to inspect and monitor,” the explanation for each cover stating why the cover is unsafe to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.

(h) The remanufacturer or other person that stores or treats the hazardous secondary material that is subject to this subpart and to the control device standards in 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to demonstrate compliance with the applicable sections of this subpart by documentation either pursuant to this subpart, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR parts 60 or 61 duplicates the documentation required by this section.

**261.1090. [Reserved]**

## APPENDICES

### Appendix I. Representative Sampling Methods

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, will be considered by the Agency to be representative of the waste.

Extremely viscous liquid—ASTM Standard D140-70 Crushed or powdered material—ASTM Standard D346-75 Soil or rock-like material—ASTM Standard D1452-65

Fly Ash-like material—ASTM Standard D2234-76 [ASTM Standards are available from ASTM, 1916 Race Street, Philadelphia, P.A. 19103]

Containerized liquid wastes - “COLIWASA” described in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” 1A U.S. Environmental Protection Agency Publication SW-846.

Liquid waste in pits, ponds, lagoons, and similar reservoirs. “Pond Sampler” described in “Test Methods for the Evaluating Solid Waste, Physical/Chemical Methods.” 1A

This manual also contains additional information on application of these protocols.

1A These methods are also described in Samplers and Sampling Procedures for Hazardous Waste Streams, EPA 600/2-80-018, January 1980. The Department will consider other methodologies for testing from other sources (such as) i.e., Standard Methods, other Federal Regulations, as long as the proper QA/QC is provided.

### Appendix III. Chemical Analysis Test Methods

Note: Appropriate analytical procedures to determine whether a sample contains a given toxic constituent are specified in Chapter Two, “Choosing the Correct Procedure” found in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, as incorporated by reference in 260.11. Prior to final sampling and analysis method selection, the individual should consult the specific section or method described in SW-846 for additional guidance on which of the approved methods should be employed for a specific sample analysis situation.

### Appendix VII. Basis for Listing Hazardous Waste

EPA Hazardous Waste No.	Hazardous constituents for which listed
F001	Tetrachloroethylene, methylene chloride trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons.
F002	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane.
F003	N.A.
F004	Cresols and cresylic acid, nitrobenzene.
F005	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-ethoxyethanol, benzene, 2-nitropropane.
F006	Cadmium, hexavalent chromium, nickel, cyanide (complexed).
F007	Cyanide (salts).
F008	Cyanide (salts).
F009	Cyanide (salts).
F010	Cyanide (salts).
F011	Cyanide (salts).
F012	Cyanide (complexed).
F019	Hexavalent chromium, cyanide (complexed).
F020	Tetra- and pentachlorodibenzo-p-dioxins; tetra and pentachlorodi-benzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F021	Penta- and hexachlorodibenzo-p-dioxins; penta- and hexachlorodibenzofurans; pentachlorophenol and its derivatives.
F022	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans.
F023	Tetra-, and pentachlorodibenzo-p-dioxins; tetra- and pentachlorodibenzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F024	Chloromethane, dichloromethane, trichloromethane, carbon tetrachloride, chloroethylene, 1,1-dichloroethane, 1,2-dichloroethane, trans-1-2-dichloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,1,2-tetra-chloroethane,

	1,1,2,2-tetrachloroethane, tetrachloroethylene, pentachloroethane, hexachloroethane, allyl chloride (3-chloropropene), dichloropropane, dichloropropene, 2-chloro-1,3-butadiene, hexachloro-1,3-butadiene, hexachlorocyclopentadiene, hexachlorocyclohexane, benzene, chlorobenzene, dichlorobenzenes, 1,2,4-trichlorobenzene, tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, toluene, naphthalene.
F025	Chloromethane; Dichloromethane; Trichloromethane; Carbon tetrachloride; Chloroethylene; 1,1-Dichloroethane; 1,2-Dichloroethane; trans-1,2-Dichloroethylene; 1,1-Dichloroethylene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; Tetrachloroethylene; Pentachloroethane; Hexachloroethane; Allyl chloride (3-Chloropropene); Dichloropropane; Dichloropropene; 2-Chloro-1,3-butadiene; Hexachloro-1,3-butadiene; Hexachlorocyclopentadiene; Benzene; Chlorobenzene; Dichlorobenzene; 1,2,4-Trichlorobenzene; Tetrachlorobenzene; Pentachlorobenzene; Hexachlorobenzene; Toluene; Naphthalene.
F026	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans.
F027	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F028	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F032	Benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)-anthracene, indeno(1,2,3-cd)pyrene, pentachlorophenol, arsenic, chromium, tetra-, penta-, hexa-, heptachlorodibenzo-p-dioxins, tetra-, penta-, hexa-, heptachlorodibenzofurans (added 12/92) .
F034	Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium (added 12/92).
F035	Arsenic, chromium, lead (added 12/92).
F037	Benzene, benzo(a)pyrene, chrysene, lead, chromium (added 12/92).
F038	Benzene, benzo(a)pyrene, chrysene, lead, chromium (added 12/92).
F039	All constituents for which treatment standards are specified for multi-source leachate (wastewaters and nonwastewaters) under 268.43, Table CCW (added 12/92).
K001	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene.
K002	Hexavalent chromium, lead
K003	Hexavalent chromium, lead.
K004	Hexavalent chromium.
K005	Hexavalent chromium, lead.
K006	Hexavalent chromium.
K007	Cyanide (complexed), hexavalent chromium.
K008	Hexavalent chromium.
K009	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid.
K010	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde.
K011	Acrylonitrile, acetonitrile, hydrocyanic acid.
K013	Hydrocyanic acid, acrylonitrile, acetonitrile.
K014	Acetonitrile, acrylamide.

K015	Benzyl chloride, chlorobenzene, toluene, benzotrichloride.
K016	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene.
K017	Epichlorohydrin, chloroethers [bis(chloromethyl) ether and bis (2-chloroethyl) ethers], trichloropropane, dichloropropanols.
K018	1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene.
K019	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K020	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K021	Antimony, carbon tetrachloride, chloroform.
K022	Phenol, tars (polycyclic aromatic hydrocarbons).
K023	Phthalic anhydride, maleic anhydride.
K024	Phthalic anhydride, 1,4-naphthoquinone.
K025	Meta-dinitrobenzene, 2,4-dinitrotoluene.
K026	Paraldehyde, pyridines, 2-picoline.
K027	Toluene diisocyanate, toluene-2, 4-diamine.
K028	1,1,1-trichloroethane, vinyl chloride.
K029	1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform.
K030	Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride.
K031	Arsenic.
K032	Hexachlorocyclopentadiene.
K033	Hexachlorocyclopentadiene.
K034	Hexachlorocyclopentadiene.
K035	Creosote, chrysene, naphthalene, fluoranthene benzo(b) fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd) pyrene, benzo(a)anthracene, dibenzo(a)anthracene, acenaphthalene.
K036	Toluene, phosphorodithioic and phosphorothioic acid esters.
K037	Toluene, phosphorodithioic and phosphorothioic acid esters.
K038	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
K039	Phosphorodithioic and phosphorothioic acid esters.
K040	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
K041	Toxaphene.
K042	Hexachlorobenzene, ortho-dichlorobenzene.
K043	2,4-dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol.
K044	N.A.
K045	N.A.
K046	Lead.
K047	N.A.
K048	Hexavalent chromium, lead.
K049	Hexavalent chromium, lead.
K050	Hexavalent chromium.
K051	Hexavalent chromium, lead.
K052	Lead.
K060	Cyanide, naphthalene, phenolic compounds, arsenic.
K061	Hexavalent chromium, lead, cadmium.

K062	Hexavalent chromium, lead.
K069	Hexavalent chromium, lead, cadmium.
K071	Mercury.
K073	Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane.
K083	Aniline, diphenylamine, nitrobenzene, phenylenediamine.
K084	Arsenic.
K085	Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride.
K086	Lead, hexavalent chromium.
K087	Phenol, naphthalene.
K088	Cyanide (complexes).
K093	Phthalic anhydride, maleic anhydride.
K094	Phthalic anhydride.
K095	1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane.
K096	1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane.
K097	Chlordane, heptachlor.
K098	Toxaphene.
K099	2,4-dichlorophenol, 2,4,6-trichlorophenol.
K100	Hexavalent chromium, lead, cadmium.
K101	Arsenic.
K102	Arsenic.
K103	Aniline, nitrobenzene, phenylenediamine.
K104	Aniline, benzene, diphenylamine, nitrobenzene, phenylenediamine.
K105	Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol.
K106	Mercury.
K107	1,1-Dimethylhydrazine (UDMH) (added 12/92).
K108	1,1-Dimethylhydrazine (UDMH) (added 12/92).
K109	1,1-Dimethylhydrazine (UDMH) (added 12/92).
K110	1,1-Dimethylhydrazine (UDMH) (added 12/92).
K111	2,4-Dinitrotoluene.
K112	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline.
K113	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline.
K114	2,4-Toluenediamine, o-toluidine, p-toluidine.
K115	2,4-Toluenediamine.
K116	Carbon tetrachloride, tetrachloroethylene, chloroform, phosgene.
K117	Ethylene dibromide.
K118	Ethylene dibromide.
K123	Ethylene thiourea.
K124	Ethylene thiourea.
K125	Ethylene thiourea.
K126	Ethylene thiourea.
K131	Dimethyl sulfate, methyl bromide.
K132	Methyl bromide.
K136	Ethylene dibromide.
K141	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. (added 12/93)
K142	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene,

	dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.(added 12/93)
K143	Benzene, benz(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene. (added 12/93)
K144	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene. (added 12/93)
K145	Benzene, benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene, naphthalene. (added 12/93)
K147	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. (added 12/93)
K148	Benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. (added 12/93)
K149	Benzotrichloride, benzyl chloride, chloroform, chloromethane, chlorobenzene, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, toluene. (added 12/93)
K150	Carbon tetrachloride, chloroform, chloromethane, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, 1,1,2,2-tetrachloroethane, tetrachloroethylene, 1,2,4-trichlorobenzene. (added 12/93)
K151	Benzene, carbon tetrachloride, chloroform, hexachlorobenzene, pentachlorobenzene, toluene, 1,2,4,5-tetrachlorobenzene, tetrachloroethylene. (added 12/93)
K156	Benomyl, carbaryl, carbendazim, carbofuran, carbosulfan, formaldehyde, methylene chloride, triethylamine. (added 5/96)
K157	Carbon tetrachloride, formaldehyde, methyl chloride, methylene chloride, pyridine, triethylamine. (added 5/96)
K158	Benomyl, carbendazim, carbofuran, carbosulfan, chloroform, methylene chloride. (added 5/96)
K159	Benzene, butylate, eptc, molinate, pebulate, vernolate. (added 5/96)
K160	Benzene, butylate, eptc, molinate, pebulate, vernolate. (added 5/96)
K161	Antimony, arsenic, metam-sodium, ziram. (added 5/96)
K169	Benzene.
K170	Benzo(a)pyrene, dibenz(a,h)anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, 3-methylcholanthrene, 7,12 dimethylbenz(a)anthracene.
K171	Benzene, arsenic.
K172	Benzene, arsenic.
K174	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD), 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF), 1,2,3,4,7,8,9- Heptachlorodibenzofuran (1,2,3,6,7,8,9-HpCDF), HxCDDs (All Hexachlorodibenzo-p- dioxins), HxCDFs (All Hexachlorodibenzofurans), PeCDDs (All Pentachlorodibenzo-p-dioxins), OCDD (1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin, OCDF (1,2,3,4,6,7,8,9-Octachlorodibenzofuran), PeCDFs (All Pentachlorodibenzofurans), TCDDs (All tetrachlorodi-benzo- p-dioxins), TCDFs (All tetrachlorodibenzofurans).
K175	Mercury
K176	Arsenic, Lead.
K177	Antimony.
K178	Thallium.
K181	Aniline, o-anisidine, 4-chloroaniline, p-cresidine, 2,4-dimethylaniline, 1,2-phenylenediamine, 1,3-phenylenediamine.
K900	Tributyltin, Tributyltin Oxide, Tributyltin Chloride, Tributyltin Hydroxide, Tributyltin Bromide, Tributyltin Acetate, Tributyltin Fluoride, Triethyltin, Triethyltin Chloride

N.A.—Waste is hazardous because it fails the test for the characteristic of ignitability, corrosivity, or

reactivity.

**Appendix VIII. Hazardous Constituents (amended 11/90, 12/92, 12/93)**

Appendix VIII to Part 261—Hazardous Constituents

Appendix VIII Hazardous Constituents		
Common name	Chemical abstracts name (9/98)	CAS #
A2213 (5/96)	Ethanimidothioic acid, 2- (dimethylamino)-N-hydroxy-2-oxo-, methyl ester	30558-43-1
Acetonitrile	Same	75-05-8
Acetophenone	Ethanone, 1-phenyl-	98-86-2
2-Acetylaminefluorone	Acetamide, N-9H-fluoren-2-yl-	53-96-3
Acetyl chloride	Same	75-36-5
1-Acetyl-2-thiourea	Acetamide, N-(aminothioxomethyl)-	591-08-2
Acrolein	2-Propenal	107-02-8
Acrylamide	2-Propenamide	79-06-1
Acrylonitrile	2-Propenenitrile	107-13-1
Aflatoxins	Same	1402-68-2
Aldicarb	Propanal, 2-methyl-2-(methylthio)-, [(methylamino)carbonyl]oxime	O-116-06-3
Aldicarb sulfone (5/96)	Propanal, 2-methyl-2-(methylsulfonyl), [(methylamino) carbonyl] oxime	O-1646-88-4
Aldrin	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha, 8abeta)-	309-00-2
Allyl alcohol	2-Propen-1-ol	107-18-6
Allyl chloride	1-Propane, 3-chloro	107-05-1
Aluminum phosphide	Same	20859-73-8
4-Aminobiphenyl	[1,1'-Biphenyl]-4-amine	92-67-1
5-(Aminomethyl)-3-isoxazolol	3(2H)-Isoxazolone, 5-(aminomethyl)-	2763-96-4
4-Aminopyridine	4-Pyridinamine	504-24-5
Amitrole	1H-1,2,4-Triazol-3-amine	61-82-5
Ammonium vanadate	Vanadic acid, ammonium salt	7803-55-6
Aniline	Benzenamine	62-53-3
o-Anisidine (2-methoxyaniline)	Benzenamine, 2-Methoxy-	90-04-0
Antimony	Same	7440-36-0
Antimony compounds, N.O.S.1		
Aramite	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8
Arsenic	Same	7440-38-2
Arsenic compounds, N.O.S.1		
Arsenic acid	Arsenic acid H3AsO4	7778-39-

		4
Arsenic pentoxide	Arsenic oxide As <sub>2</sub> O <sub>5</sub>	1303-28-2
Arsenic trioxide	Arsenic oxide As <sub>2</sub> O <sub>3</sub>	1327-53-3
Auramine	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl	492-80-8
Azaserine	L-Serine, diazoacetate (ester)	115-02-6
Barban (5/96)	Carbamic acid, (3-chlorophenyl) -, 4-chloro-2-butynyl ester	101-27-9
Barium	Same	7440-39-3
Barium compounds, N.O.S.1		
Barium cyanide	Same	542-62-1
Bendiocarb (5/96)	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate	22781-23-3
Bendiocarb phenol (5/96)	1,3-Benzodioxol-4-ol, 2,2-dimethyl-,	22961-82-6
Benomyl (5/96)	Carbamic acid, [1- [(butylamino) carbonyl]- 1H-benzimidazol-2-yl] -, methyl ester	17804-35-2
Benz[c]acridine	Same	225-51-4
Benz[a]anthracene	Same	56-55-3
Benzal chloride	Benzene, (dichloromethyl)-	98-87-3
Benzene	Same	71-43-2
Benzearsonic acid	Arsonic acid, phenyl-	98-05-5
Benzidine	[1,1'-Biphenyl]-4,4'-diamine	92-87-5
Benzo[b]fluoranthene	Benz[e]acephenanthrylene	205-99-2
Benzo[j]fluoranthene	Same	205-82-3
Benzo(k)fluoranthene (5/96)	Same	207-08-9
Benzo[a]pyrene	Same	50-32-8
p-Benzoquinone	2,5-Cyclohexadiene-1,4-dione	106-51-4
Benzotrichloride	Benzene, (trichloromethyl)-	98-07-7
Benzyl chloride	Benzene, (chloromethyl)-	100-44-7
Beryllium powder	Same	7440-41-7
Beryllium compounds, N.O.S.1		
Bis (pentamethylene)-thiuram tetrasulfide.	Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis-	120-54-7
Bromoacetone	2-Propanone, 1-bromo-	598-31-2
Bromoform	Methane, tribromo-	75-25-2
4-Bromophenyl phenyl ether	Benzene, 1-bromo-4-phenoxy-	101-55-3
Brucine	Strychnidin-10-one, 2,3-dimethoxy-	357-57-3
Butyl benzyl phthalate	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	85-68-7
Butylate (5/96)	Carbamothioic acid, bis (2-methylpropyl)-, S-ethyl ester	2008-41-5
Cacodylic acid	Arsinic acid, dimethyl-	75-60-5
Cadmium	Same	7440-43-9

Cadmium compounds, N.O.S.1		
Calcium chromate	Chromic acid H <sub>2</sub> CrO <sub>4</sub> , calcium salt	13765-19-0
Calcium cyanide	Calcium cyanide Ca(CN) <sub>2</sub>	592-01-8
Carbaryl (5/96)	1-Naphthalenol, methylcarbamate	63-25-2
Carbendazim (5/96)	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester	10605-21-7
Carbofuran (5/96)	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate	1563-66-2
Carbofuran phenol (9/96)	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-	1563-38-8
Carbon disulfide	Same	75-15-0
Carbon oxyfluoride	Carbonic difluoride	353-50-4
Carbon tetrachloride	Methane, tetrachloro-	56-23-5
Carbosulfan (6/96)	Carbamic acid, [(dibutylamino) thio] methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester	55285-14-8
Chloral	Acetaldehyde, trichloro-	75-87-6
Chlorambucil	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-	305-03-3
Chlordane	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-	57-74-9
Chlordane (alpha and gamma isomers)		
Chlorinated benzenes, N.O.S.1		
Chlorinated ethane, N.O.S.1		
Chlorinated fluorocarbons, N.O.S.1		
Chlorinated naphthalene, N.O.S.1		
Chlorinated phenol, N.O.S.1		
Chlornaphazin	Naphthalenamine, N,N'-bis(2-chloroethyl)-	494-03-1
Chloroacetaldehyde	Acetaldehyde, chloro-	107-20-0
Chloroalkyl ethers, N.O.S.1		
p-Chloroaniline	Benzenamine, 4-chloro-	106-47-8
Chlorobenzene	Benzene, chloro-	108-90-7
Chlorobenzilate	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510-15-6
p-Chloro-m-cresol	Phenol, 4-chloro-3-methyl-	59-50-7
2-Chloroethyl vinyl ether	Ethene, (2-chloroethoxy)-	110-75-8
Chloroform	Methane, trichloro-	67-66-3
Chloromethyl methyl ether	Methane, chloromethoxy-	107-30-2
beta-Chloronaphthalene	Naphthalene, 2-chloro-	91-58-7
o-Chlorophenol	Phenol, 2-chloro-	95-57-8
1-(o-Chlorophenyl)thiourea	Thiourea, (2-chlorophenyl)-	5344-82-1
Chloroprene	1,3-Butadiene, 2-chloro-	126-99-8
3-Chloropropionitrile	Propanenitrile, 3-chloro-	542-76-7
Chromium	Same	7440-47-3
Chromium compounds, N.O.S.1		

Chrysene	Same	218-01-9
Citrus red No. 2	2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]-	6358-53-8
Coal tar creosote	Same	8007-45-2
Copper cyanide	Copper cyanide CuCN	544-92-3
Copper dimethyldithiocarbamate	Copper, bis(dimethylcarbamo-dithioato-S,S <sup>2</sup> )-, (6/96)	137-29-1
Creosote	Same	
p-Cresidine	2-Methoxy-5-methylbenzenamine	120-71-8
Cresol (Cresylic acid)	Phenol, methyl-	1319-77-3
Crotonaldehyde	2-Butenal	4170-30-3
m-Cumenyl methylcarbamate	Phenol, 3-(methylethyl)-, methyl carbamate (5/96)	64-00-6
Cyanides (soluble salts and complexes) N.O.S.1		
Cyanogen	Ethanedinitrile	460-19-5
Cyanogen bromide	Cyanogen bromide (CN)Br	506-68-3
Cyanogen chloride	Cyanogen chloride (CN)Cl	506-77-4
Cycasin	beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl	14901-08-7
Cycloate	Carbamothioic acid, cyclohexylethyl-, S-ethyl ester	1134-23-2
2-Cyclohexyl-4,6-dinitrophenol	Phenol, 2-cyclohexyl-4,6-dinitro-	131-89-5
Cyclophosphamide	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide	50-18-0
2,4-D	Acetic acid, (2,4-dichlorophenoxy)-	94-75-7
2,4-D, salts, esters		
Daunomycin	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-	20830-81-3
Dazomet (5/96)	2H-1,3,5-thiadiazine-2-thione,tetrahydro-3,5-dimethyl	533-74-4
DDD	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-	72-54-8
DDE	Benzene, 1,1'-(dichloroethenylidene)bis[4-chloro-	72-55-9
DDT	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-	50-29-3
Diallate	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester	2303-16-4
Dibenz[a,h]acridine	Same	226-36-8
Dibenz[a,j]acridine	Same	224-42-0
Dibenz[a,h]anthracene	Same	53-70-3
7H-Dibenzo[c,g]carbazole	Same	194-59-2
Dibenzo[a,e]pyrene	Naphtho[1,2,3,4-def]chrysene	192-65-4
Dibenzo[a,h]pyrene	Dibenzo[b,def]chrysene	189-64-0
Dibenzo[a,i]pyrene	Benzo[rst]pentaphene	189-55-9
1,2-Dibromo-3-chloropropane	Propane, 1,2-dibromo-3-chloro-	96-12-8
Dibutyl phthalate	1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2
o-Dichlorobenzene	Benzene, 1,2-dichloro-	95-50-1
m-Dichlorobenzene	Benzene, 1,3-dichloro-	541-73-1

p-Dichlorobenzene	Benzene, 1,4-dichloro-	106-46-7
Dichlorobenzene, N.O.S.1	Benzene, dichloro-	25321-22-6
3,3'-Dichlorobenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	91-94-1
1,4-Dichloro-2-butene	2-Butene, 1,4-dichloro-	764-41-0
Dichlorodifluoromethane	Methane, dichlorodifluoro-	75-71-8
Dichloroethylene, N.O.S.1	Dichloroethylene	25323-30-2
1,1-Dichloroethylene	Ethene, 1,1-dichloro-	75-35-4
1,2-Dichloroethylene	Ethene, 1,2-dichloro-, (E)-	156-60-5
Dichloroethyl ether	Ethane, 1,1'-oxybis[2-chloro-	111-44-4
Dichloroisopropyl ether	Propane, 2,2'-oxybis[2-chloro-	108-60-1
Dichloromethoxy ethane	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	111-91-1
Dichloromethyl ether	Methane, oxybis[chloro-	542-88-1
2,4-Dichlorophenol	Phenol, 2,4-dichloro-	120-83-2
2,6-Dichlorophenol	Phenol, 2,6-dichloro-	87-65-0
Dichlorophenylarsine	Arsonous dichloride, phenyl-	696-28-6
Dichloropropane, N.O.S.1	Propane, dichloro-	26638-19-7
Dichloropropanol, N.O.S.1	Propanol, dichloro-	26545-73-3
Dichloropropene, N.O.S.1	1-Propene, dichloro-	26952-23-8
1,3-Dichloropropene	1-Propene, 1,3-dichloro-	542-75-6
Dieldrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-	60-57-1
1,2:3,4-Diepoxybutane	2,2'-Bioxirane	1464-53-5
Diethylarsine	Arsine, diethyl-	692-42-2
Diethylene glycol, dicarbamate (5/96)	Ethanol, 2,2'-oxybis-, dicarbamate	5952-26-1
1,4-Diethyleneoxide	1,4-Dioxane	123-91-1
Diethylhexyl phthalate	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117-81-7
N,N'-Diethylhydrazine	Hydrazine, 1,2-diethyl-	1615-80-1
O,O-Diethyl dithiophosphate S-methyl	Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288-58-2
Diethyl-p-nitrophenyl phosphate	Phosphoric acid, diethyl 4-nitrophenyl ester	311-45-5
Diethyl phthalate	1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2
O,O-Diethyl phosphoro- thioate O-pyrazinyl	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297-97-2
Diethylstilbesterol	Phenol, 4,4'-((1,2-diethyl-1,2-ethenediyl)bis-, (E)-	56-53-1
Dihydrosafrole	1,3-Benzodioxole, 5-propyl-	94-58-6
Diisopropylfluorophosphate (DFP)	Phosphorofluoric acid, bis(1-methylethyl) ester	55-91-4
Dimethoate	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester	60-51-5
3,3'-Dimethoxybenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	119-90-4

p-Dimethylaminoazobenzene	Benzenamine, N,N-dimethyl-4-(phenylazo)-	60-11-7
2,4-Dimethylaniline (2,4-xylidine)	Benzenamine, 2,4-dimethyl-	95-68-1
7,12-Dimethylbenz[a]anthracene	Benz[a]anthracene, 7,12-dimethyl-	57-97-6
3,3'-Dimethylbenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-	119-93-7
Dimethylcarbamoyl chloride	Carbamic chloride, dimethyl-	79-44-7
1,1-Dimethylhydrazine	Hydrazine, 1,1-dimethyl-	57-14-7
1,2-Dimethylhydrazine	Hydrazine, 1,2-dimethyl-	540-73-8
alpha,alpha-Dimethylphenethylamine	Benzenethanamine, alpha,alpha-dimethyl-	122-09-8
2,4-Dimethylphenol	Phenol, 2,4-dimethyl-	105-67-9
Dimethyl phthalate	1,2-Benzenedicarboxylic acid, dimethyl ester	131-11-3
Dimethyl sulfate	Sulfuric acid, dimethyl ester	77-78-1
Dimetilan (5/96)	Carbamic acid, dimethyl-, 1-[(dimethylamino) carbonyl]-5-methyl-1H-pyrazol-3-yl ester	644-64-4
Dinitrobenzene, N.O.S.1	Benzene, dinitro-	25154-54-5
4,6-Dinitro-o-cresol	Phenol, 2-methyl-4,6-dinitro-	534-52-1
4,6-Dinitro-o-cresol salts		
2,4-Dinitrophenol	Phenol, 2,4-dinitro-	51-28-5
2,4-Dinitrotoluene	Benzene, 1-methyl-2,4-dinitro-	121-14-2
2,6-Dinitrotoluene	Benzene, 2-methyl-1,3-dinitro-	606-20-2
Dinoseb	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	88-85-7
Di-n-octyl phthalate	1,2-Benzenedicarboxylic acid, dioctyl ester	117-84-0
Diphenylamine	Benzenamine, N-phenyl-	122-39-4
1,2-Diphenylhydrazine	Hydrazine, 1,2-diphenyl-	122-66-7
Di-n-propylnitrosamine	1-Propanamine, N-nitroso-N-propyl-	621-64-7
Disulfiram (5/96)	Thioperoxydicarbonic diamide, tetraethyl	97-77-8
Disulfoton	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	298-04-4
Dithiobiuret	Thioimidodicarbonic diamide [(H2N)C(S)]2NH	541-53-7
Endosulfan	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide	115-29-7
Endothall	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	145-73-3
Endrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-	72-20-8
Endrin metabolites		
Epichlorohydrin	Oxirane, (chloromethyl)-	106-89-8
Epinephrine	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-	51-43-4
EPTC	Carbamothioic acid, dipropyl-, S-ethyl ester	759-94-4
Ethyl carbamate (urethane)	Carbamic acid, ethyl ester	51-79-6
Ethyl cyanide	Propanenitrile	107-12-0
Ethylenebisdithiocarbamic acid	Carbamodithioic acid, 1,2-ethanediylbis-	111-54-6
Ethylenebisdithiocarbamic acid, salts and esters		
Ethylene dibromide	Ethane, 1,2-dibromo-	106-93-4

Ethylene dichloride	Ethane, 1,2-dichloro-	107-06-2
Ethylene glycol monoethyl ether	Ethanol, 2-ethoxy-	110-80-5
Ethyleneimine	Aziridine	151-56-4
Ethylene oxide	Oxirane	75-21-8
Ethylenethiourea	2-Imidazolidinethione	96-45-7
Ethylidene dichloride	Ethane, 1,1-dichloro-	75-34-3
Ethyl methacrylate	2-Propenoic acid, 2-methyl-, ethyl ester	97-63-2
Ethyl methanesulfonate	Methanesulfonic acid, ethyl ester	62-50-0
Ethyl Ziram (5/96)	Zinc, bis(diethylcarbamo-dithioato-S,S')-	14324-55-1
Famphur	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester	52-85-7
Ferbam (5/96)	Iron, tris(dimethylcarbamo-dithioat-S,S')-,	14484-64-1
Fluoranthene	Same	206-44-0
Fluorine	Same	7782-41-4
Fluoroacetamide	Acetamide, 2-fluoro-	640-19-7
Fluoroacetic acid, sodium salt	Acetic acid, fluoro-, sodium salt	62-74-8
Formaldehyde	Same	50-00-0
Formetanate hydrochloride	Methanimidamide, N,N-dimethyl-N'-[3-[(methylamino) carbonyl]oxy]phenyl]-, monohydrochloride (5/96)	23422-53-9
Formic acid	Same	64-18-6
Formparanate (5/96)	Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[(methylamino) carbonyl]oxy]phenyl]-.	17702-57-7
Glycidylaldehyde	Oxiranecarboxyaldehyde	765-34-4
Halomethanes, N.O.S.1		
Heptachlor	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	76-44-8
Heptachlor epoxide	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)-	1024-57-3
Heptachlor epoxide (alpha, beta, and gamma isomers)		
Heptachlorodibenzofurans	(5/96)	
Heptachlorodibenzo-p-dioxins	(5/96)	
Hexachlorobenzene	Benzene, hexachloro-	118-74-1
Hexachlorobutadiene	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-68-3
Hexachlorocyclopentadiene	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77-47-4
Hexachlorodibenzo-p-dioxins		
Hexachlorodibenzofurans		
Hexachloroethane	Ethane, hexachloro-	67-72-1
Hexachlorophene	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	70-30-4
Hexachloropropene	1-Propene, 1,1,2,3,3,3-hexachloro-	1888-71-7
Hexaethyl tetraphosphate	Tetraphosphoric acid, hexaethyl ester	757-58-4
Hydrazine	Same	302-01-2

Hydrogen cyanide	Hydrocyanic acid	74-90-8
Hydrogen fluoride	Hydrofluoric acid	7664-39-3
Hydrogen sulfide	Hydrogen sulfide H <sub>2</sub> S	7783-06-4
Indeno[1,2,3-cd]pyrene	Same	193-39-5
3-Iodo-2-propynyl butylcarbamate (5/96)	n- Carbamic acid, butyl-, 3-iodo-2-propynyl ester	55406-53-6
Isobutyl alcohol	1-Propanol, 2-methyl-	78-83-1
Isodrin	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,-8abeta) -	465-73-6
Isolan (5/96)	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester	119-38-0
Isosafrole	1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1
Kepone	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-	143-50-0
Lasiocarpine	2-Butenoic acid, 2-methyl-,7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-	303-34-4
Lead	Same	7439-92-1
Lead compounds, N.O.S.1		
Lead acetate	Acetic acid, lead(2+) salt	301-04-2
Lead phosphate	Phosphoric acid, lead(2+) salt (2:3)	7446-27-7
Lead subacetate	Lead, bis(acetato-O)tetrahydroxytri-	1335-32-6
Lindane	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-	58-89-9
Maleic anhydride	2,5-Furandione	108-31-6
Maleic hydrazide	3,6-Pyridazinedione, 1,2-dihydro-	123-33-1
Malononitrile	Propanedinitrile	109-77-3
Manganese dimethyldithiocarbamate (5/96)	Manganese, bis(dimethylcarbamodithioato-S,S')-,	15339-36-3
Melphalan	L-Phenylalanine, 4-[bis(2-chloroethyl)aminol]-	148-82-3
Mercury	Same	7439-97-6
Mercury compounds, N.O.S.1		
Mercury fulminate	Fulminic acid, mercury(2+) salt	628-86-4
Metam Sodium (5/96)	Carbamodithioic acid, methyl-, monosodium salt	137-42-8
Methacrylonitrile	2-Propenenitrile, 2-methyl-	126-98-7
Methapyrilene	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	91-80-5
Methiocarb (5/96)	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate	2032-65-7
Methomyl	Ethanimidothioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester	16752-77-5

Methoxychlor	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-	72-43-5
Methyl bromide	Methane, bromo-	74-83-9
Methyl chloride	Methane, chloro-	74-87-3
Methyl chlorocarbonate	Carbonochloridic acid, methyl ester	79-22-1
Methyl chloroform	Ethane, 1,1,1-trichloro-	71-55-6
3-Methylcholanthrene	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	56-49-5
4,4'-Methylenebis(chloroaniline)	(2-Benzenamine, 4,4'-methylenebis[2-chloro-	101-14-4
Methylene bromide	Methane, dibromo-	74-95-3
Methylene chloride	Methane, dichloro-	75-09-2
Methyl ethyl ketone (MEK)	2-Butanone	78-93-3
Methyl ethyl ketone peroxide	2-Butanone, peroxide	1338-23-4
Methyl hydrazine	Hydrazine, methyl-	60-34-4
Methyl iodide	Methane, iodo-	74-88-4
Methyl isocyanate	Methane, isocyanato-	624-83-9
2-Methylacetonitrile	Propanenitrile, 2-hydroxy-2-methyl-	75-86-5
Methyl methacrylate	2-Propenoic acid, 2-methyl-, methyl ester	80-62-6
Methyl methanesulfonate	Methanesulfonic acid, methyl ester	66-27-3
Methyl parathion	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	298-00-0
Methylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	56-04-2
Metolcarb (5/96)	Carbamic acid, methyl-, 3-methylphenyl ester	1129-41-5
Mexacarbate (5/96)	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)	315-18-4
Mitomycin C	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[aminocarbonyloxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha,8beta,8alpha,8balpha)]-	50-07-7
MNNG	Guanidine, N-methyl-N'-nitro-N-nitroso-	70-25-7
Molinate (5/96)	1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester	2212-67-1
Mustard gas	Ethane, 1,1'-thiobis[2-chloro-	505-60-2
Naphthalene	Same	91-20-3
1,4-Naphthoquinone	1,4-Naphthalenedione	130-15-4
alpha-Naphthylamine	1-Naphthalenamine	134-32-7
beta-Naphthylamine	2-Naphthalenamine	91-59-8
alpha-Naphthylthiourea	Thiourea, 1-naphthalenyl-	86-88-4
Nickel	Same	7440-02-0
Nickel compounds, N.O.S.1		
Nickel carbonyl	Nickel carbonyl Ni(CO) <sub>4</sub> , (T-4)-	13463-39-3
Nickel cyanide	Nickel cyanide Ni(CN) <sub>2</sub>	557-19-7
Nicotine	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-	54-11-5
Nicotine salts		

Nitric oxide	Nitrogen oxide NO	10102-43-9
p-Nitroaniline	Benzenamine, 4-nitro-	100-01-6
Nitrobenzene	Benzene, nitro-	98-95-3
Nitrogen dioxide	Nitrogen oxide NO <sub>2</sub>	10102-44-0
Nitrogen mustard	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-	51-75-2
Nitrogen mustard, hydro-chloride salt		
Nitrogen mustard N-oxide	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-, N-oxide	126-85-2
Nitrogen mustard, N-oxide, hydrochloride salt		
Nitroglycerin	1,2,3-Propanetriol, trinitrate	55-63-0
p-Nitrophenol	Phenol, 4-nitro-	100-02-7
2-Nitropropane	Propane, 2-nitro-	79-46-9
Nitrosamines, N.O.S.1		35576-91-1
N-Nitrosodi-n-butylamine	1-Butanamine, N-butyl-N-nitroso-	924-16-3
N-Nitrosodiethanolamine	Ethanol, 2,2'-(nitrosoimino)bis-	1116-54-7
N-Nitrosodiethylamine	Ethanamine, N-ethyl-N-nitroso-	55-18-5
N-Nitrosodimethylamine	Methanamine, N-methyl-N-nitroso-	62-75-9
N-Nitroso-N-ethylurea	Urea, N-ethyl-N-nitroso-	759-73-9
N-Nitrosomethylethylamine	Ethanamine, N-methyl-N-nitroso-	10595-95-6
N-Nitroso-N-methylurea	Urea, N-methyl-N-nitroso-	684-93-5
N-Nitroso-N-methylurethane	Carbamic acid, methylnitroso-, ethyl ester	615-53-2
N-Nitrosomethylvinylamine	Vinylamine, N-methyl-N-nitroso-	4549-40-0
N-Nitrosomorpholine	Morpholine, 4-nitroso-	59-89-2
N-Nitrosornicotine	Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-, (S)-	16543-55-8
N-Nitrosopiperidine	Piperidine, 1-nitroso-	100-75-4
N-Nitrosopyrrolidine	Pyrrolidine, 1-nitroso-	930-55-2
N-Nitrososarcosine	Glycine, N-methyl-N-nitroso-	13256-22-9
5-Nitro-o-toluidine	Benzenamine, 2-methyl-5-nitro-	99-55-8
Octachlorodibenzo-p-dioxin (OCDD)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (7/02)	
Octachlorodibenzofuran(OCDF)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (7/02)	
Octamethylpyrophos-phoramide	Diphosphoramide, octamethyl-	152-16-9
Osmium tetroxide	Osmium oxide OsO <sub>4</sub> , (T-4)-	20816-12-0
Oxamyl (5/96)	Ethanimidothioc acid, 2-(dimethylamino)-N-[[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester	23135-22-0
Paraldehyde	1,3,5-Trioxane, 2,4,6-trimethyl-	123-63-7
Parathion	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	56-38-2

Pebulate	Carbamothioic acid, butylethyl-, S-propyl ester	1114-71-2
Pentachlorobenzene	Benzene, pentachloro-	608-93-5
Pentachlorodibenzo-p-dioxins		
Pentachlorodibenzofurans		
Pentachloroethane	Ethane, pentachloro-	76-01-7
Pentachloronitrobenzene (PCNB)	Benzene, pentachloronitro-	82-68-8
Pentachlorophenol	Phenol, pentachloro-	87-86-5
Phenacetin	Acetamide, N-(4-ethoxyphenyl)-	62-44-2
Phenol	Same	108-95-2
1,2-Phenylenediamine	1,2-Benzenediamine	95-54-5
1,3-Phenylenediamine	1,3-Benzenediamine	108-45-2
Phenylenediamine	Benzenediamine	25265-76-3
Phenylmercury acetate	Mercury, (acetato-O)phenyl-	62-38-4
Phenylthiourea	Thiourea, phenyl-	103-85-5
Phosgene	Carbonic dichloride	75-44-5
Phosphine	Same	7803-51-2
Phorate	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester	298-02-2
Phthalic acid esters, N.O.S.1		
Phthalic anhydride	1,3-Isobenzofurandione	85-44-9
Physostigmine (5/96)	Pyrrolo[2,3-b]indol-5-01, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-	57-47-6
Physostigmine salicylate (5/96)	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis) - 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo [2,3-b]indol-5-yl methylcarbamate ester (1:1).	57-64-7
2-Picoline	Pyridine, 2-methyl-	109-06-8
Polychlorinated biphenyls, N.O.S.1		
Potassium cyanide	Potassium cyanide K(CN)	151-50-8
Potassium dimethyldithiocarbamate (5/96)	Carbamodithioc acid, dimethyl, potassium salt	128-03-0
Potassium n-hydroxymethyl-n-methyl-dithiocarbamate	Carbamodithioic acid, (hydroxymethyl)methyl-, monopotassium salt	51026-28-9
Potassium methyl-dithiocarbamate (5/96)	Carbamodithioc acid, methyl-monopotassium salt	137-41-7
Potassium pentachlorophenate	Pentachlorophenol, potassium salt	7778736
Potassium silver cyanide	Argentate(1-), bis(cyano-C)-, potassium	506-61-6
Promecarb (5/96)	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate	2631-37-0
Pronamide	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	23950-58-5
1,3-Propane sultone	1,2-Oxathiolane, 2,2-dioxide	1120-71-4
n-Propylamine	1-Propanamine	107-10-8
Propargyl alcohol	2-Propyn-1-ol	107-19-7
Propham	Carbamic acid, phenyl-, 1-methylethyl ester	122-42-9
Propoxur	Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1

Propylene dichloride	Propane, 1,2-dichloro-	78-87-5
1,2-Propylenimine	Aziridine, 2-methyl-	75-55-8
Propylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thioxo-	51-52-5
Prosulfocarb	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester	52888-80-9
Pyridine	Same	110-86-1
Reserpine	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-smethyl ester, (3beta,16beta,17alpha,18beta,20alpha)-	50-55-5
Resorcinol	1,3-Benzenediol	108-46-3
Safrole	1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7
Selenium	Same	7782-49-2
Selenium compounds, N.O.S.1		
Selenium dioxide	Selenious acid	7783-00-8
Selenium sulfide	Selenium sulfide SeS <sub>2</sub>	7488-56-4
Selenium, tetrakis (dimethyl-dithiocarbamate).	Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid.	144-34-3
Selenourea	Same	630-10-4
Silver	Same	7440-22-4
Silver compounds, N.O.S.1		
Silver cyanide	Silver cyanide Ag(CN)	506-64-9
Silvex (2,4,5-TP)	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	93-72-1
Sodium cyanide	Sodium cyanide Na(CN)	143-33-9
Sodium dibutyldithiocarbamate	Carbamodithioic acid, dibutyl, sodium salt (5/96)	136-30-1
Sodium diethyldithiocarbamate	Carbamodithioic acid, diethyl-, sodium salt (5/96)	148-18-5
Sodium dimethyldithiocarbamate	Carbamodithioic acid, dimethyl-, sodium salt (5/96)	128-04-1
Sodium pentachlorophenate	Pentachlorophenol, sodium salt	131522
Streptozotocin	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)carbonyl]amino]-	18883-66-4
Strychnine	Strychnidin-10-one	57-24-9
Strychnine salts		
Sulfallate (5/96)	Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester	95-06-7
TCDD	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-	1746-01-6
Tetrabutylthiuram disulfide	Thioperoxydicarbonic diamide, tetrabutyl (5/96)	1634-02-2
1,2,4,5-Tetrachlorobenzene	Benzene, 1,2,4,5-tetrachloro-	95-94-3
Tetrachlorodibenzo-p-dioxins		
Tetrachlorodibenzofurans		
Tetrachloroethane, N.O.S.1	Ethane, tetrachloro-, N.O.S.	25322-20-7
1,1,1,2-Tetrachloroethane	Ethane, 1,1,1,2-tetrachloro-	630-20-6
1,1,2,2-Tetrachloroethane	Ethane, 1,1,2,2-tetrachloro-	79-34-5
Tetrachloroethylene	Ethene, tetrachloro-	127-18-4

2,3,4,6-Tetrachlorophenol	Phenol, 2,3,4,6-tetrachloro-	58-90-2
2,3,4,6-tetrachlorophenol, potassium salt	same	53535276
2,3,4,6-tetrachlorophenol, sodium salt	same	25567559
Tetraethyldithiopyrophosphate	Thiodiphosphoric acid, tetraethyl ester	3689-24-5
Tetraethyl lead	Plumbane, tetraethyl-	78-00-2
Tetraethyl pyrophosphate	Diphosphoric acid, tetraethyl ester	107-49-3
Tetramethylthiuram monosulfide	Bis(dimethylthiocarbamoyl) sulfide	97-74-5
Tetranitromethane	Methane, tetranitro-	509-14-8
Thallium	Same	7440-28-0
Thallium compounds, N.O.S.1		
Thallic oxide	Thallium oxide Tl <sub>2</sub> O <sub>3</sub>	1314-32-5
Thallium(I) acetate	Acetic acid, thallium(1+) salt	563-68-8
Thallium(I) carbonate	Carbonic acid, dithallium(1+) salt	6533-73-9
Thallium(I) chloride	Thallium chloride TlCl	7791-12-0
Thallium(I) nitrate	Nitric acid, thallium(1+) salt	10102-45-1
Thallium selenite	Selenious acid, dithallium(1+) salt	12039-52-0
Thallium(I) sulfate	Sulfuric acid, dithallium(1+) salt	7446-18-6
Thioacetamide	Ethanethioamide	62-55-5
Thiodicarb (5/96)	Ethanimidothioic acid, N,N'-[thiobis [(methylimino) carbonyloxy]] bis-, dimethyl ester.	59669-26-0
Thiofanox	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methylamino)carbonyl] oxime	39196-18-4
Thiomethanol	Methanethiol	74-93-1
Thiophanate-methyl	Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)] bis-, dimethyl ester	23564-05-8
Thiophenol	Benzenethiol	108-98-5
Thiosemicarbazide	Hydrazinecarbothioamide	79-19-6
Thiourea	Same	62-56-6
Thiram	Thioperoxydicarbonic diamide [(H <sub>2</sub> N)C(S)] <sub>2</sub> S <sub>2</sub> , tetramethyl-	137-26-8
Tirpate (5/96)	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino) carbonyl] oxime.	26419-73-8
Toluene	Benzene, methyl-	108-88-3
Toluenediamine	Benzenediamine, ar-methyl-	25376-45-8
Toluene-2,4-diamine	1,3-Benzenediamine, 4-methyl-	95-80-7
Toluene-2,6-diamine	1,3-Benzenediamine, 2-methyl-	823-40-5
Toluene-3,4-diamine	1,2-Benzenediamine, 4-methyl-	496-72-0
Toluene diisocyanate	Benzene, 1,3-diisocyanatomethyl-	26471-

		62-5
o-Toluidine	Benzenamine, 2-methyl-	95-53-4
o-Toluidine hydrochloride	Benzenamine, 2-methyl-, hydrochloride	636-21-5
p-Toluidine	Benzenamine, 4-methyl-	106-49-0
Toxaphene	Same	8001-35-2
Triallate (5/96)	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester	2303-17-5
2,4,6-Tribromophenol. (11/99)	Tribromophenol, 2,4,6-	118-79-6
Tributyltin	Tributylstannane (6/02)	688-73-3
Tributyltin Oxide	Bis(tri-n-butyltin) Oxide (6/02)	56-35-9
Tributyltin Chloride	Tributylchlorostannane (6/02)	1461-22-9
Tributyltin Hydroxide	Tributylhydroxystannane (6/02)	1067-97-6
Tributyltin Bromide	Tributylbromostannane (6/02)	1461-23-0
Tributyltin Acetate	(acetyloxy)tributylstannane (6/02)	56-36-0
Tributyltin Fluoride	Tributylfluorostannane (6/02)	1983-23-0
Triethyltin	Triethylstannane (6/02)	997-50-2
Triethyltin Chloride	Triethyltin Chloride (6/02)	994-31-0
1,2,4-Trichlorobenzene	Benzene, 1,2,4-trichloro-	120-82-1
1,1,2-Trichloroethane	Ethane, 1,1,2-trichloro-	79-00-5
Trichloroethylene	Ethene, trichloro-	79-01-6
Trichloromethanethiol	Methanethiol, trichloro-	75-70-7
Trichloromonofluoromethane	Methane, trichlorofluoro-	75-69-4
2,4,5-Trichlorophenol	Phenol, 2,4,5-trichloro-	95-95-4
2,4,6-Trichlorophenol	Phenol, 2,4,6-trichloro-	88-06-2
2,4,5-T	Acetic acid, (2,4,5-trichlorophenoxy)-	93-76-5
Trichloropropane, N.O.S.1		25735-29-9
1,2,3-Trichloropropane	Propane, 1,2,3-trichloro-	96-18-4
Triethylamine (5/96)	Ethanamine, N,N-diethyl-	121-44-8
O,O,O-Triethyl phosphorothioate	Phosphorothioic acid, O,O,O-triethyl ester	126-68-1
1,3,5-Trinitrobenzene	Benzene, 1,3,5-trinitro-	99-35-4
Tris(1-aziridinyl)phosphine sulfide	Aziridine, 1,1',1''-phosphinothioylidynetris-	52-24-4
Tris(2,3-dibromopropyl) phosphate	1-Propanol, 2,3-dibromo-, phosphate (3:1)	126-72-7
Trypan blue	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]-bis[5-amino-4-hydroxy-, tetrasodium salt	72-57-1
Uracil mustard	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-	66-75-1
Vanadium pentoxide	Vanadium oxide V2O5	1314-62-1
Vernolate (5/96)	Carbamothioic acid, dipropyl-, S-propyl ester	1929-77-7
Vinyl chloride	Ethene, chloro-	75-01-4

Warfarin	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations less than 0.3%	81-81-2
Warfarin	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations greater than 0.3%	81-81-2
Warfarin salts, when present at concentrations less than 0.3%		
Warfarin salts, when present at concentrations greater than 0.3%		
Zinc cyanide	Zinc cyanide Zn(CN) <sub>2</sub>	557-21-1
Zinc phosphide	Zinc phosphide Zn <sub>3</sub> P <sub>2</sub> , when present at concentrations greater than 10%	1314-84-7
Zinc phosphide	Zinc phosphide Zn <sub>3</sub> P <sub>2</sub> , when present at concentrations of 10% or less	1314-84-7
Ziram	Zinc, bis(dimethylcarbamodithioato-S,S')-, (T-4)-	137-30-4
1.The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.		

#### Appendix IX. Wastes Excluded Under 260.20 and 260.22

**TABLE 1 - WASTES EXCLUDED FROM NON-SPECIFIC SOURCES**

Facility and address	Waste description
Ford Motor Company, Michigan Truck Plant and Wayne Integrated Stamping and Assembly Plant. - Wayne, Michigan	Waste water treatment plant sludge, F019, that is generated by Ford Motor Company at the Wayne Integrated Stamping and Assembly Plant from wastewaters from both the Wayne Integrated Stamping and Assembly Plant and the Michigan Truck Plant, Wayne, Michigan at a maximum annual rate of 2,000 cubic yards per year. The sludge must be disposed of in a lined landfill with leachate collection, which is licensed, permitted, or otherwise authorized to accept the delisted wastewater treatment sludge in accordance with 40 CFR part 258. The exclusion becomes effective as of July 30, 2003, per 68 FR 44657, 44658.
Ford Motor Company, Wixom Assembly Plant: -Wixom, Michigan	Waste water treatment plant sludge, F019, that is generated by Ford Motor Company at the Wixom Assembly Plant, Wixom, Michigan at a maximum annual rate of 2,000 cubic yards per year. The sludge must be disposed of in a lined landfill with leachate collection, which is licensed, permitted, or otherwise authorized to accept the delisted wastewater treatment sludge in accordance with 40 CFR Part 258. The exclusion becomes effective as of July 30, 2003, per 68 FR 44657, 44658.
General Motors Corporation, Flint Truck: - Flint, Michigan	Waste water treatment plant sludge, F019, that is generated by General Motors Corporation at Flint Truck, Flint, Michigan at a maximum annual rate of 3,000 cubic yards per year. The sludge must be disposed of in a lined landfill with leachate collection, which is licensed, permitted, or otherwise authorized to accept the delisted wastewater treatment sludge in accordance with 40 CFR part 258. The exclusion becomes effective as of July 30, 2003, per 68 FR 44657, 44658.
General Motors Corporation,	Waste water treatment plant sludge, F019, that is generated by General

Hamtramck: -Detroit, Michigan	Motors Corporation at Hamtramck, Detroit, Michigan at a maximum annual rate of 3,000 cubic yards per year. The sludge must be disposed of in a lined landfill with leachate collection, which is licensed, permitted, or otherwise authorized to accept the delisted wastewater treatment sludge in accordance with 40 CFR part 258. The exclusion becomes effective as of July 30, 2003, per 68 FR 44657, 44658.
General Motors Corporation, Pontiac East: -Pontiac, Michigan	Waste water treatment plant sludge, F019, that is generated by General Motors Corporation at Pontiac East, Pontiac, Michigan at a maximum annual rate of 3,000 cubic yards per year. The sludge must be disposed of in a lined landfill with leachate collection, which is licensed, permitted, or otherwise authorized to accept the delisted wastewater treatment sludge in accordance with 40 CFR part 258. The exclusion becomes effective as of July 30, 2003, per 68 FR 44657, 44658.
Trigen/Cinergy-USFOS of Lansing LLC at General Motors Corporation, Lansing Grand River: -Lansing, Michigan	Waste water treatment plant sludge, F019, that is generated at General Motors Corporation's Lansing Grand River (GM-Grand River) facility by Trigen/Cinergy-USFOS of Lansing LLC exclusively from wastewaters from GM Grand River, Lansing, Michigan at a maximum annual rate of 2,000 cubic yards per year. The sludge must be disposed of in a lined landfill with leachate collection, which is licensed, permitted, or otherwise authorized to accept the delisted wastewater treatment sludge in accordance with 40 CFR Part 258. The exclusion becomes effective as of July 30, 2003, per 68 FR 44657, 44658.

#### Appendix XI. Other Designated Wastes

Hazardous Waste No.	Substance
Section 5555	Any solid waste the Department determines constitutes a hazard and requires greater control
Section 6666	Any waste that is declared hazardous by the generator, transporter, treater, storer, or disposer of such waste. (Deleted)
Section 7777	Non-hazardous waste received by a hazardous waste facility.
Section 8888	Waste lubricating, hydraulic and cutting oil (Deleted June 23, 1989)
Section 9999	Waste batteries (Deleted Jan 24, 1986)