

## UNIVERSITY OF GUAM HAZARDOUS WASTE PROGRAM

### **PURPOSE AND BACKGROUND**

In accordance with the University of Guam (UOG) Rules, Regulations, and Procedure Manual the University's Safety Office has been given the responsibility of removing outdated hazardous materials and waste. Recognizing the difficulty of managing and/or disposing of hazardous waste on Guam, the University of Guam Safety Office and Institutional Safety Committee were tasked by the Vice President for Administration and Finance (VPAF) with the responsibility of devising and overseeing a Hazardous Waste Disposal Program. The following manual has been prepared to provide the University community with information to facilitate the management and disposal of hazardous and/or controlled waste including universal hazardous waste in accordance with University policies and procedures and with local and federal requirements, laws and guidelines ( Article VII, Section K, UOG Rules, Regulations, and Procedure Manual and Chemical Hygiene Plan, Environmental Protection Agency: Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), Toxic Substances Control Act (TSCA), Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Department of Transportation (DOT) and the Occupational Safety and Health Administration (OSHA) (University of Maryland, 2004; Appendix I).

### **TERMS AND DEFINITIONS**

- Hazardous Waste Materials – Shall include all types of hazardous and/or controlled waste; hazardous chemical, biological, radioactive, and universal waste.
- Controlled Waste – All hazardous waste listed under Title 40 CFR, Part 261-265 (Appendix V).

### **DUTIES AND RESPONSIBILITIES**

Each college, division, individual, laboratory, research center, shop, maintenance facility, etc. that generates and disposes of materials regulated as hazardous waste (Exhibit I) is a generator. Each generator shall comply with local and federal laws and regulations as well as with University policies and procedures.

#### **I. Division Chairs/Directors, Faculty, Managers, Supervisors, and Superintendents**

1. Designate (in writing to the Safety Office) a Hazardous Materials Program Coordinator for any unit generating hazardous waste and a Hazardous Materials Contact for other units.
2. Identify and designate an area for the storage of hazardous chemical, biological and low-level radioactive waste within the respective laboratories (Exhibit II).
3. Identify and designate a secure and covered area for storage of universal hazardous waste (Exhibit II).
4. Inform the Safety Office in writing of the location of all designated hazardous waste storage areas.
5. Become familiar with existing manuals and guidelines; the Occupational Safety section of the Rules, Regulations, and Procedure Manual; and the Chemical Hygiene Plan (Appendices II & III).
6. Become familiar with the chemical or hazardous material selection, usage and subsequent generation of controlled wastes in their facilities.
7. Identify (label), segregate, collect, package, and store hazardous wastes appropriately (Exhibit II).
8. Keep accurate documentation of stored hazardous waste materials (Appendix IV).
9. Develop and implement an active waste minimization program in their units by investigating material substitutions, scale reduction, chemical exchange, and purchase control.
10. Insure that no chemicals or other hazardous waste are abandoned in place due to personnel retirement, termination of employment, graduation, etc.

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## **II. Hazardous Materials Program Coordinator / Contact Person**

1. Assist the Safety Office in managing the University's Hazardous Waste Program.
2. Coordinate the Program within the respective college, division, laboratory, shop, etc.
3. Provide faculty, staff, and students with the necessary equipment, training and information to properly handle hazardous materials and waste.
4. Assure proper labeling and storage of hazardous waste and universal hazardous waste, and arrange for its pickup and/or removal by notifying Plant and Facilities and the Safety Office in writing (Exhibit II).
5. Assure proper documentation of stored and or disposed hazardous waste (Appendix IV ).
6. Arrange for transfer of universal hazardous waste to the Plant and Facilities storage facility and provide the staff with the appropriate documentation of the universal waste items to be transferred.
7. Communicate with the Safety Office when needed.
8. File copies of all documents regarding storage, transfer and/or disposal of hazardous waste materials with the Safety Office.

## **III. Plant and Facilities**

1. Establish secure, managed, safe, and compliant storage facility(-ies) for holding areas of universal hazardous waste prior to disposal.
2. Transport universal hazardous waste from a designated collection points to secure, managed, safe and compliant storage facility.
3. Assure proper documentation of stored and disposed universal hazardous waste materials (Appendix IV).
4. File and maintain all documents. Provide copies to the Safety Office.

## **IV. Safety Office**

1. Oversee the University's Hazardous Waste Program with the assistance of the Institutional Safety Committee and the Hazardous Materials Program Coordinators.
2. Provide the Program Coordinators and Hazardous Materials Contacts with all necessary equipment, training, and information.
3. Conduct regular reviews of the hazardous waste management practices throughout the University community to ensure compliance with the hazardous waste management procedures.
4. Initiate non-compliance actions.
5. Maintain proper documentation of all stored and/or disposed hazardous waste materials.
6. Arrange for disposal of universal hazardous waste, on-island when possible.
7. Negotiate with environmental consulting firms to enter into a "Blanket Purchasing Agreement" for the purpose of an emergency response, in case of major chemical spills, and/or removal and disposal of accumulated hazardous waste that cannot be disposed of on island.
8. Communicate with local or federal regulatory agencies, as needed.
9. Provide timely quarterly reports (within 30 days following the end of the calendar quarter) to the Vice President of Administration and Finance detailing the locations of hazardous and/or controlled waste storage areas, all hazardous waste disposals; a summary of compliance issues and actions taken; a listing of all communications to/from local and federal regulatory agencies; and minutes of each Institutional Safety Committee meeting.

## **V. INSTITUTIONAL SAFETY COMMITTEE**

1. Assist the Safety Office in overseeing the University's Hazardous Waste Program.
2. Conduct program or policy reviews on a regular basis.
3. Develop non-compliance and accountability procedures pertaining to the University's Hazardous Waste Program.
4. Handle appeals of all non-compliance actions pertaining to the University's Hazardous Waste Program.

**EXHIBIT I  
IDENTIFICATION OF HAZARDOUS AND CONTROLLED WASTE**

**I. CHEMICAL WASTE**

Ignitable, flammable chemical wastes

Liquids with a flashpoint of less than 140° F (60° C).

Material other than liquids capable of causing fire by friction, absorption of moisture, or spontaneous chemical changes; when ignited they burn vigorously.

Flammable compressed gases, including those that produce flammable mixtures with air.

Oxidizers that stimulate combustion of organic materials.

Corrosive chemicals wastes

Aqueous solutions with a pH of less than or equal to 2, or a pH of greater than or equal to 12.5.

Liquid substance that corrodes steel at a rate greater than 6.35 millimeters (0.25 inches) per year at a test temperature of 130° F (55° C).

Reactive wastes

Waste that is normally unstable and readily undergoes violent changes without detonating; or reacts violently with water; or forms potentially explosive mixtures with water; or when mixed with water generated toxic gases, vapors or fumes; or cyanide or sulfide bearing waste that generates toxic gases vapors or fumes when exposed to pH conditions between 2 and 12.5; or is capable of detonation or explosive reaction.

Toxic wastes

Waste whose extract under the test procedure contains one or more constituents at concentrations greater than those specified in Table 1 of 40 CRF Part 261.24 ( <http://ecfr.gpoaccess.gov/>).

Acute hazardous wastes

Any wastes that are considered exceptionally toxic as listed under 40 CFR Part 261.33 (listed wastes having codes beginning with "P").

Pesticides

Substance or mixture of substances intended for preventing, destroying, repelling, or mitigating pests, or intended for use as a plant regulator, defoliant, or desiccant.

**II. BIOLOGICAL (OR SPECIAL) WASTE**

Microbiological Waste

Discarded cultures and stock of infectious agents.

Discarded live and attenuated vaccines, excluding the empty containers thereof.

Discarded used disposable culture dishes and devices to transfer, inoculate and/or mix cultures.

Animal Waste

Carcasses of animals and/or body parts.

Whole blood, serum, plasma and/or other blood components and body fluids.

Bedding of animals intentionally exposed to pathogens.

Human Blood and Blood Products

Human blood, serum, plasma and/of other blood components and bodily fluids.  
Disposable items contaminated with blood and/or bodily fluids.

Pathological Waste

Laboratory specimens of blood and tissue after completion of laboratory experiment.  
Anatomical remains.

Sharps

Hypodermic needles and syringes with attached needles.  
Scalpels and razor blades, disposable scissors.  
Pasteur and glass pipettes, when contaminated.  
Broken glass.

**III. LOW LEVEL RADIOACTIVE WASTE (LLRW)**

LLRW is subdivided into three classes A, B, and C depending on the concentration, energy levels, half-life, and the sources of radioisotopes present in the waste.

**IV. HAZARDOUS WASTE**

Any solid waste that is specifically listed by EPA as hazardous waste (see Appendix V), or meets one or more of the hazardous waste characteristics, or is a regulated mixture of hazardous and non-hazardous waste.

**V. UNIVERSAL HAZARDOUS WASTE**

Batteries (Ni-Cad-Nickel-Cadmium, Alkaline, Button, Lead-Acid etc.)  
Cathode Ray Tubes (e.g. Computer monitors and TV's)  
Mercury containing lamps (e.g. Fluorescent lamps and HID lamps)  
Mercury containing thermostats, mercury containing devices (e.g.  
Mercury switches, relays, manometers, etc.)  
Asbestos  
Gas cylinders

**VI. UNKNOWN WASTE**

Any waste item that is unidentified.

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**EXHIBIT II**  
**STORAGE OF CONTROLLED AND HAZARDOUS WASTE**

**STORAGE GUIDELINES**

All hazardous waste shall be stored in a designated area in accordance with existing procedures, rules and regulations. All items must be clearly labeled, designating it as "Hazardous Waste" and specifying its content, and stored in the designated storage areas. Prior written notification is required before Plant and Facilities will transfer universal hazardous waste to their storage facility. Waste items ready for pickup must be accompanied by a Hazardous Material Transfer Form (Appendix IV), a copy of which must also be filed with the Safety Office.

**I. CHEMICAL WASTE**

- Chemical waste accumulated from individual laboratories must be stored at designated locations within each laboratory.
- Incompatible chemicals should be kept separate and different hazard classes segregated.
- Broken and/or leaking containers must be repackaged into non-leaking containers.
- Outdated and obsolete chemicals should be disposed of and not stored.
- Ethers and other material which degrade to unstable compounds shall be shelf dated for disposal six (6) months after being opened, and not more than 12 month after purchase, even if unopened.
- Elemental mercury should be recycled when possible or placed into a sturdy leak-proof container with a screw cap.
- Each container must be properly and clearly labeled (no abbreviations or chemical formulas). Concentration, if known, must be provided on the label.
- Hazardous waste packaging, storage, and disposal shall be in accordance with all applicable local and federal regulations.
- Unknown chemicals are extremely difficult and expensive to dispose. Unknowns should be packaged and stored separately from other waste.
- Pesticides are generally managed under the federal Insecticide, Fungicide and Rodenticide Act. Waste pesticides should be managed in accordance with the disposal instructions on the label.
- All stored chemical waste must be documented.
- Material Safety Data Sheets must be available on location for stored chemical waste.

**II. BIOLOGICAL WASTE**

- All biological waste must be rendered safe before disposal. This can be accomplished by autoclaving, chemical disinfection or incineration.
- All biological waste must be properly packaged and labeled for safe pickup.
- All animal carcasses, bedding, embryos, and eggs and other animal waste should be double bagged, labeled and incinerated or stored in a freezer until pickup.
- Liquid culture materials and biological specimens, including bacterial or cell cultures must be treated with freshly prepared 10% chlorine bleach solution and flushed down the drain with copious amounts of water.
- Solid and semi-solid biological waste should be placed in biohazard bags, autoclaved daily and disposed.
- All needles, needle and syringe units, Pasteur pipettes, scalpels and razors disposed directly into a rigid and labeled sharps container. All sharps containers must be treated as biological waste.
- All broken glass must be discarded into a lined broken glass container or into heavy-duty cardboard closable boxes.
- Contaminated broken glass must be decontaminated before disposal. Do not overfill broken glass containers! Laboratory personnel should tape boxes closed and store in a dry area until pickup.

### III. LOW LEVEL RADIOACTIVE WASTE

Regulating authority COMAR 26.12, Control of ionizing radiation. All personnel generating low-level radioactive waste shall comply with the following guidelines:

- \_ Complete the online Radioactive Waste Generator Training.
- \_ Use only radioactive waste containers.
- \_ Keep waste containers closed and properly labeled at all times.
- \_ Document the date and activity on the container content sheet when waste is added.

### IV. UNIVERSAL HAZARDOUS WASTE

- \_ Under no circumstances should universal waste be stored outside.
- \_ Storage areas must be clearly marked with a sign reading "Universal Hazardous Waste Storage".
- \_ Isle space must be maintained to view container, labels and dates.
- \_ An inventory control system, approved by the Safety Office, must be developed to provide for the identification and accountability of all stored hazardous waste materials.
- \_ Universal waste must be handled and packaged in a manner that prevents breakage.
- \_ Batteries:
  - Spent batteries should be considered hazardous material. Store lead acid, nickel cadmium, alkaline, and other batteries separately. Lead acid batteries should be stored indoors or in a container. Attempts should be made to make arrangements with qualified companies to recycle batteries. Batteries that show evidence of leakage must be stored in a closed container compatible with the contents of the battery.
- \_ Cathode Ray Tubes (e.g. Computer monitors, TV's) should be stored in secured and covered area.
- Mercury and mercury containing lamps (e.g. Fluorescent lamps and HID lamps), thermostats and other devices (e.g. Mercury switches, relays, manometers, etc.). Any waste mercury containing devices should be carefully packaged to prevent breakage, stored in a secure area and labeled.
- \_ Asbestos. Any waste containing asbestos should be treated as hazardous material and should be double bagged, sealed and clearly labeled.
- \_ Gas cylinders are difficult to dispose. Cylinders should be purchased from manufacturers who will accept them back after use. Never dispose of gas cylinders, small propane canisters, or chemical aerosol cans in the general trash.

### V. HAZARDOUS WASTE

- \_ All guidelines listed under all previous categories apply.

### VI. UNKNOWN WASTE

- \_ Any unknown waste should be labeled as such and kept separate from other waste items.
- \_ All other guidelines apply.

### REFERENCES

- University of Main. 2005. Universal Hazardous Waste Procedure.
- University of Maryland. 2004. Hazardous and Regulated Waste Procedures Manual.
- University of Guam. 2000. UOG Rules, Regulations and Procedure Manual.
- Office of Environmental Health and Safety, Hazardous Materials Division. 1998. Procedure for Disposal of Hazardous Waste.
- University of Texas. 1996. Handbook of Operating Procedures.
- National Archives and Records Administration. 1985. Electronic Code of Federal Regulations (eCFR); Title 40 (Protection of Environment), Part 261 (Identification and Listing of Hazardous Waste), Subparts A-D.

## APPENDIX I FEDERAL REQUIREMENTS, LAWS AND GUIDELINES FOR STORAGE AND DISPOSAL OF HAZARDOUS AND/OR CONTROLLED UNIVERSAL HAZARDOUS WASTE

### EPA, ENVIRONMENTAL PROTECTION AGENCY

– Regulates controlled waste through six major regulatory programs.

**RCRA** (1976) Resource Conservation and Recovery Act. Defines and regulates solid and hazardous waste (Regulations directly impact hazardous generators).

**CERCLA** (1980) Comprehensive Environmental Response, Compensation and Liability Act (Superfund). Provides mechanism to assign liability to corporations and individuals (May impact the hazardous waste generator).

**TSCA** (1980) Toxic Substances control Act. Regulates chemical usage, including PCB usage, storage, and disposal.

**FIFRA** (1988) Federal Insecticide, Fungicide, and Rodenticide Act. Controls the manufacture and use of pesticides intended to kill, repel, or control living organisms.

**CAA** (1963) Clean Air Act. Regulates discharges to the air (Regulations directly impact waste generator).

**CWA** (1977) Clean Water Act. Regulates discharges to water. (Regulations directly impact hazardous waste generator).

### DOT, DEPARTMENT OF TRANSPORTATION

**HMTA** (1991) Hazardous Materials Transportation Act. Regulates packaging and transport of hazardous materials.

### OSHA, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

**HAZWOPPER** (1989) Hazardous Waste Operation and Emergency Response. Sets standards for employees safety.

**HAZCOM** (1983) Hazard Communication (Right-to-know). Employer must inform employees of chemical hazards (Regulations directly impact the hazardous waster generator).

**LSS** (1991) Laboratory Safety Standards (Occupational Exposure to Hazardous Chemicals in Laboratories). Laboratories must develop Chemical Hygiene Plans (Regulations directly impact the hazardous waste generator)

**APPENDIX IV  
HAZARDOUS MATERIALS STORAGE, TRANSFER AND/OR DISPOSAL FORM**

**UNIVERSITY OF GUAM  
UNBETSEDAT GUAHAN**

**HAZARDOUS WASTE INVENTORY FORM  
(Storage, Transfer, Disposal)**

DATE: 01/03/2007

DEPARTMENT: Marine Lab (M. L.)

HAZARDOUS WASTE ITEMS (NAME OF ITEM)	Amt.	Storage Area Designation	Stor. Date	Transf. Date	Disp. Date
Hydrochloric Acid	1 liter	M. L., Rm. 120	01/05 /07		



**APPENDIX V**  
**ELECTRONIC CODE OF FEDERAL REGULATIONS (E-CFR)**  
**TITLE 40: PROTECTION OF ENVIRONMENT**  
**§ 261.3 DEFINITION OF HAZARDOUS WASTE.**

**Regulations**

**Electronic Code of Federal Regulations (e-CFR)**

**BETA TEST SITE**

*e-CFR Data is current as of December 28, 2006*

Title 40: Protection of Environment  
**PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE**  
**Subpart A—General**

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§ 261.3 Definition of hazardous waste.

(a) A solid waste, as defined in §261.2, is a hazardous waste if:

(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.

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

(iii) [Reserved]

(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 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 either section

402 or section 307(b) of the Clean Water Act (including wastewater at facilities which have eliminated the discharge of wastewater) and;

(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 Regional Administrator, or State Director, as the context requires, or an authorized representative ("Director" as defined in 40 CFR 270.2). 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 Director. The Director may reject the sampling and analysis plan if he/she 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 Director rejects the sampling and analysis plan or if the Director finds that the facility is not following the sampling and analysis plan, the Director 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 §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 pretreatment 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 Regional Administrator, or State Director, as the context requires, or an authorized representative ("Director" as defined in 40 CFR 270.2). 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 Director. The Director may reject the sampling and analysis plan if he/she 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 Director rejects the sampling and analysis plan or if the Director finds that the facility is not following the sampling and analysis plan, the Director 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 40 CFR 261 appendix VII) of this part; and the constituents in the table "Treatment Standards for Hazardous Wastes" in 40 CFR 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

(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 Regional Administrator, or State Director, as the context requires, or an authorized representative ("Director" as defined in 40 CFR 270.2). 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 Director. The Director may reject the sampling and analysis plan if he/she 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 Director rejects the sampling and analysis plan or if the Director finds that the facility is not following the sampling and analysis plan, the Director 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 Regional Administrator, or State Director, as the context requires, or an authorized representative ("Director" as defined in 40 CFR 270.2). 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 Director. The Director may reject the sampling and analysis plan if he/she 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 Director rejects the sampling and analysis plan or if the Director finds that the facility is not following the sampling and analysis plan, the Director 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, 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).

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

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

(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 of this part.

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

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

(2)(i) Except as otherwise provided in paragraph (c)(2)(ii), (g) or (h) of this section, 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.)

(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 §261.6(a)(3)(iii) and (iv).

(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 40 CFR 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.

Maximum for any  
single  
Constituent composite  
sample\_TCLP (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

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(2) A one-time notification and certification must be placed in the facility's files and sent to the EPA region or authorized state 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 EPA region or an authorized state on an annual basis if such changes occur. Such notification and certification should be sent to the EPA region or authorized state 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."

(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).

(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).

(d) Any solid waste described in paragraph (c) of this section 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 of this part. (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 of this part, contains a waste listed under subpart D of this part or is derived from a waste listed in subpart D of this part, it also has been excluded from paragraph (c) of this section under §§260.20 and 260.22 of this chapter.

(e) [Reserved]

(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 40 CFR parts 260, 261 to 266, 268, or 270:

(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 §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

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

(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 of this part solely because it exhibits one or more of the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (a)(2)(iv) of this section is not a hazardous waste, if the mixture no longer exhibits any characteristic of hazardous waste identified in subpart C of this part for which the hazardous waste listed in subpart D of this part was listed.

(h)(1) Hazardous waste containing radioactive waste is no longer a hazardous waste when it meets the eligibility criteria and conditions of 40 CFR part 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 40 CFR 266.225 and 40 CFR 266.230 (for storage and treatment) and in 40 CFR 266.310 and 40 CFR 266.315 (for transportation and disposal). Waste that fails to satisfy these eligibility criteria and conditions is regulated as hazardous waste.

[57 FR 7632, Mar. 3, 1992; 57 FR 23063, June 1, 1992, as amended at 57 FR 37263, Aug. 18, 1992; 57 FR 41611, Sept. 10, 1992; 57 FR 49279, Oct. 30, 1992; 59 FR 38545, July 28, 1994; 60 FR 7848, Feb. 9, 1995; 63 FR 28637, May 26, 1998; 63 FR 42184, Aug. 6, 1998; 66 FR 27297, May 16, 2001; 66 FR 50333, Oct. 3, 2001; 70 FR 34561, June 14, 2005; 70 FR 57784, Oct. 4, 2005; 71 FR 40258, July 14, 2006]

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