WASTE ANALYSIS PLAN

FOR

TEXAS STATE UNIVERSITY – SAN MARCOS

601 UNIVERSITY DRIVE
SAN MARCOS, TEXAS 78666

JULY 2005
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TABLE OF CONTENTS

ATTACHMENTS

1.0 INTRODUCTION

This Waste Analysis Plan (WAP) was prepared for Texas State University – San Marcos (the University) to comply with 30 TAC 335.62 and 40 CFR 264.13(a) and 40 CFR 264.13(b). These regulations require generators of hazardous wastes (large quantity and small quantity) to characterize the waste streams generated at a facility in accordance with a written plan (WAP) and maintain documentation of these characterizations. This WAP follows guidance from the following documents:

- EPA, April 1994, Waste Analysis at Facilities that Generate, Treat, Store and Dispose of Hazardous Waste, A Guidance Manuel, PB94-963603.

- TCEQ, February 2005, Guidelines for the Classification and Coding of Industrial and Hazardous Wastes, RG-022.

1.1 FACILITY DESCRIPTION

Texas State University – San Marcos is a four-year accredited university located at 601 University Drive in San Marcos, Texas serving a student population of greater than 33,000. The University offers undergraduate and graduate programs in nine colleges: Applied Arts, Business Administration, Education, Fine Arts and Communication, Liberal Arts, Science, Health Professions, Graduate College and University College.

From various maintenance activities and routine laboratory practices, the University generates hazardous and non-hazardous waste. The University is registered with the Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ) as a large quantity municipal generator. The Texas solid waste registration number is 66137 and the EPA I.D. number is TXD980812168.

1.2 SOURCES OF HAZARDOUS WASTE GENERATION

Hazardous wastes are generated as a result of teaching, research and operational activities at the University. The University is responsible for proper handling and ultimate disposal of these wastes. This responsibility is executed by the Environmental Health Safety and Risk Management Office (EHSRM). The Resource Conservation and Recovery Act (RCRA) hazardous wastes and industrial wastes are generated at the following departments:

1. Physical Plant Shops and Garage
2. Print Shop

3. Art Department
4. Chemistry and Biochemistry
5. Aquatic Biology
6. Biology
7. Physics
8. Family and Consumer Science
9. Health Professions
10. Engineering and Technology
11. Edwards Aquifer Research and Data Center
12. Theater
13. West Campus Paint Shop
14. Photo Labs
15. LBJ Student Center
16. STAR Complex

The various departments may generate general types of wastes such as solvent waste or acid waste, or specific wastes such as mercury or silver laden waste. Each of these wastes is assigned a unique waste code in accordance with the TCEQ Guidance (February 2005, Guidelines for the Classification and Coding of Industrial and Hazardous Wastes, RG-022). The waste codes are included on the TCEQ Notice of Registration (NOR).

1.3 WASTE IDENTIFICATION

Table 1 lists the hazardous and Class 1 non-hazardous wastes generated at the University. A more detailed description of each waste code is presented in **Attachment A**. These descriptions are not comprehensive, but they do provide examples of the various waste streams that can be classified under each waste code. Prior to preparing the Waste Analysis Plan, each of the above departments was visited and the waste streams were identified by the department representatives.

As shown in **Table 1**, most of the hazardous waste is managed by a permitted treatment, storage and disposal facility (TSDF) that is allowed to bulk waste and send it with wastes from multiple generators to appropriate disposal facilities. Once the wastes are disposed, the University receives a certificate-of-destruction from the TSDF identifying the disposal method used for each waste stream. This information, in turn, is reported on the Annual Waste Summary Report submitted to the TCEQ in January.

2.0 WASTE CLASSIFICATION

The University classifies waste streams in accordance with TCEQ regulations (30 TAC Sections 335.501 – 335.515, Subchapter R). The TCEQ classifies wastes as hazardous or non-hazardous industrial Class 1, Class 2 or Class 3. Hazardous wastes are either listed or hazardous due to one or more characteristics.

Figure 1 shows the general waste classification system defined by RCRA and the TCEQ. Generators are allowed to classify their waste streams based on process knowledge or chemical analyses.

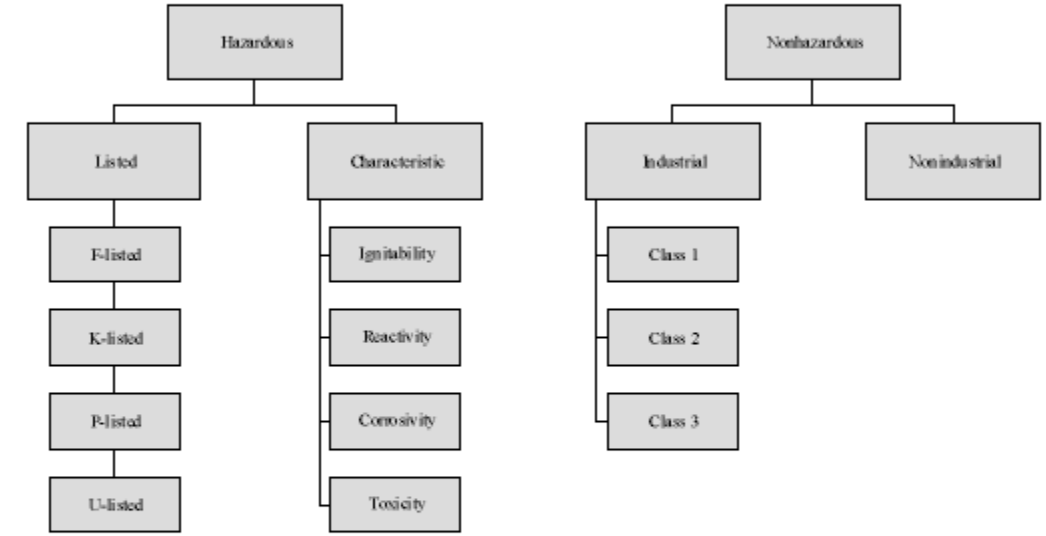
2.1 PROCESS KNOWLEDGE

The University classifies many of the waste streams based on process knowledge. This method is appropriate since each department is familiar with the chemicals they use and that ultimately become waste products. As a conservative approach, the University uses primarily hazardous waste and Class 1 non-hazardous waste classifications. These classifications require fewer analytical determinations as long as the generator is familiar with the chemical characteristics or listed wastes in the waste stream. One exception is the latex and acrylic paint waste which is classified as Class 2 based on analyses.

Listed wastes are those defined by EPA as "F", "K", "U" or "P" wastes (**Figure 1**). The University does not generate any "K" listed wastes, but the other codes may apply. Descriptions of these waste codes are in 40 CFR 261.31 and 261.33 and in **Attachment B** of this plan. The University uses these lists to code the existing and newly generated waste streams on campus.

Characteristic wastes are also generated at the University and these wastes are identified in **Table 1** with the EPA codes beginning with a "D". **Figure 1** shows the four characteristics EPA uses to identify a hazardous waste: ignitability (flashpoint <140 degrees F), reactivity (unstable or undergoes a violent chemical reaction when mixed with other materials; also sulfide or cyanide bearing wastes), corrosivity (pH < 2 or >12.5) and toxicity (list of 40 organic and inorganic constituents with maximum concentrations). **Attachment B** contains the list of constituents and maximum concentrations for determining if a waste is hazardous due to toxicity.

The TCEQ provides a similar list for determining if a non-hazardous waste is a Class 1 industrial waste. This list includes numerous organic and inorganic constituents and their



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DWG NO: 001-43

FIGURE 1

Hazardous & Nonhazardous Waste Designations Per EPA and TCEQ Regulations

Texas State University - San Marcos, Texas

maximum concentrations (also in **Attachment B**). If a liquid waste stream or the leachate from a solid waste stream contains greater than the concentration of one or more constituents on the Class 1 list, the waste is considered a Class 1 waste. The University conservatively classifies its non-hazardous chemical wastes as Class 1 industrial. This eliminates the need for extensive laboratory analysis, while keeping the disposal method conservatively protective. The only exceptions to this are the latex paint rinse water classified as Class 2 based on analysis (00432092) and limestone sludge (00455012).

2.2 CLASSIFICATION BY ANALYSIS

Occasionally a waste stream may require laboratory analysis to properly characterize it. This could occur with a non-routine large volume solid waste such as soil contaminated with a spill or spent limestone from a neutralization pit. It may also apply to a chemical aqueous stream that does not contain chemicals listed in **Attachment B**. The silver containing photo wastes are classified based on chemical analysis. In order to classify a newly identified waste stream by chemical analysis a representative sample of the waste will be analyzed for the parameters in **Table 2**.

If the analytical data show that the waste is not hazardous by characteristic, it will be classified as Class 1 industrial non-hazardous. Samples will be collected following the procedures in Section 2.3 and sent to a commercial laboratory for analysis.

2.3 WASTE SAMPLING PROCEDURES

The University will ensure that samples collected for chemical analyses are representative of the waste. These procedures include non-bias sampling, using clean laboratory-supplied sample containers, using clean or decontaminated sampling equipment, wearing clean gloves for each sample to prevent cross contamination and using standard chain-of-custody procedures to ship samples to a commercial laboratory.

Aqueous wastes are generally stored in 5-gallon high density plastic containers provided by EHSRM. Samples of these wastes will be collected by simply mixing the contents in the container (by gently swirling) and using a coliwasa or other similar sampling device to pull a sample from the container and into the laboratory-supplied containers (see **Table 3**). The sampler will wear clean disposable gloves and will be careful not to overfill the bottles. Sample container for volatile analyses (40-ml VOA vials) will be filled with a meniscus and will have zero headspace in the vials. The sample I.D., sampler's initials, date and time of sample collection will be noted in a field log book as well as on the sample label for each bottle.

Non-aqueous or solid wastes will be collected by combining four grab samples of the waste into a stainless steel bowl. The grab samples will be collected from different areas of the waste (spatially and with depth) with a new or decontaminated hand trowel and placed into the clean bowl. The sampler will wear clean disposable gloves. The bowl will be covered with aluminum foil after each grab sample is added to minimize loss of volatile organics. The samples will be mixed together with a stainless steel hand trowel or spoon and then added to the laboratory-supplied sample containers. The sample I.D., sampler's initials, date and time of sample collection will be noted in a field log book as well as on the sample label for each bottle. **Table 4** shows the recommended sample bottles for the non-aqueous wastes.

If the waste is in drums, grab samples from each drum will be combined to form one composite.

A chain of custody (COC) form will be completed listing the samples collected and the analyses requested. The sample I.D. should identify the location (i.e. Chemistry Bldg) and type of sample collected (e.g. limestone solids, inorganic wastewater).

The COC is a three-part form provided by the laboratory. One copy will remain with the sampler, while the remaining two copies will accompany the samples to the laboratory. The laboratory will send a signed copy of the COC along with the data package.

2.4 HEALTH AND SAFETY

Due to the potential presence of numerous chemicals in the hazardous waste streams, the sampling personnel may wear half face respirators with organic cartridges during sample collection, if appropriate. Latex gloves will be worn to protect the sampler's hands and ensure sample integrity. Under no circumstances will the sampler enter a tank or other confined space to collect a sample unless proper training and equipment is in place to do so.

3.0 WASTE COLLECTION/DISPOSAL PROCEDURES

3.1 SATELLITE ACCUMULATION AREAS

Waste is collected at the generating departments at the University in Satellite Accumulation Areas (SAA). Satellite Accumulation Areas receive or collect hazardous waste at or near where the waste is generated. These areas may accumulate up to 55 gallons of hazardous waste prior to having the waste moved to the less than 90-day waste Container Accumulation Area (CAA). The University will use, as a policy, a trigger volume of 30 gallons for moving the waste to the CAA. For acutely hazardous wastes (i.e. those with the "P" codes, or F020, F021, F022, F023, F026 and F027), the accumulation limit is 1 quart. Once an area accumulates this volume, the department hazardous waste contact should call EHSRM and have the waste moved to the CAA within 3 days. The accumulation time of 90 days begins once the waste reaches the CAA. The waste must be transported from the CAA to a permitted TSDF in less than 90 days.

Satellite Accumulation Area containers must be marked with the words "Hazardous Wastes" prior to placing waste in them. Wastes are generally stored in the Satellite Accumulation Areas in heavy plastic 5-gallon containers provided by EHSRM. An accumulation of six of these containers would trigger notification of the EHSRM for pickup. The waste containers should be provided with secondary containment and a spill kit appropriate for the waste should be nearby and accessible. Emergency phone numbers should also be posted in the event of a spill in the SAA. **Attachment C** shows a listing of the SAA's on campus and the Emergency Procedures/Contact information that will be posted at the Satellite Accumulation Areas. Satellite Accumulation Areas are inspected monthly using the inspection form in **Attachment D**.

3.2 CONTAINER ACCUMULATION AREA (CAA)

The CAA is the central location where the hazardous wastes are stored. Texas State has two active CAA areas. These units are exempt from RCRA permitting as long as the waste is stored for less than 90 days. The units are inspected weekly using the inspection form in **Attachment D.** An inventory of the waste in the main CAA (NOR Unit 007) is updated each week as new waste is brought into the unit. An example inventory form is shown in **Attachment D**. The second CAA is in the Chemistry Building, Room 205 (NOR Unit 008). Waste is brought to this area from labs in the Chemistry and Centennial buildings, and removed once a week to NOR 007.

General procedures for collecting and transferring wastes are shown in **Table 5**. University Standard Operating Procedures are in **Attachment E** for waste pickup from the Satellite Accumulation Areas and transfer to the main CAA. These procedures also list the Satellite Accumulation Area contact numbers and building/floor locations. These procedures will be followed to ensure that waste is safely collected at each department, transferred to the CAA and shipped offsite using proper manifest, DOT and RCRA labeling requirements. The responsible party for each task is shown in **Table 5.** Additional details concerning waste labeling and transfer is provided in Section 3.3.

3.3 ADDITIONAL WASTE HANDLING PROCEDURES

Acceptable Packaging for Specific Waste Types

1. Flammable liquids – glass bottles, steel cans or high-density plastic containers (provided by EHSRM).

2. Concentrated acids and bases – 2.5-liter "acid" bottle. NOTE: One-gallon glass bottles are unacceptable due to thinner glass that cannot support the high specific gravity of concentrated acids or bases. Store the acids separately from the bases. Metal containers and caps or cap liners made of cardboard are unacceptable for corrosive materials.

3. Dilute acids (aqueous mixtures with inorganics) – 5-gallon high density plastic containers provided by EHSRM.

4. Aqueous mixtures of solvents or solvents mixed with acids – high density plastic containers provided by EHSRM.

5. Trace contaminated solid wastes (contaminated paper, gloves, etc.) – double bag using polyethylene bags. Bags should be sealed and placed in sturdy cardboard cartons that are sealed with tape.

6. Aqueous solutions with metals or trace organics and inorganics, 5-gallon high-density plastic containers provided by EHSRM.

7. Broken mercury thermometers – broken thermometers without free flowing mercury may be packaged in the same manner as trace contaminated solid waste. Broken thermometers with mercury should be contained in a glass or plastic bottle with a tight cap.

8. Photographic Wastes - 5-gallon or 30-gallon high-density plastic containers provided by EHSRM.

9. Ethidium bromide - 5-gallon high-density plastic containers provided by EHSRM. Keep separated from other waste streams and clearly label as a skin absorption hazard.

10. Hydrofluoric Acid - 5-gallon high-density plastic containers (do not use glass) provided by EHSRM. Keep separated from other waste streams and clearly label. Special pickup procedures by EHSRM staff only (i.e. no student workers) apply to this waste.

11. Old chemicals – Leave in their original containers. Place them in a sturdy box or other suitable container for pickup by EHSRM. The chemicals will be more carefully packaged in lab packs at the less than 90-day storage building.

12. Flammable rags – Rags that contain flammable solvents such as paint thinner, varsol, linseed oil, roller cleaner, acetone, toluene, etc. Rags are stored in a metal drum with a plastic bag liner at the SAA. When the bag is full, the bag is removed to a larger drum at the CAA (NOR 007). The lid on the drum is kept on at all times.

13. Other types of waste or unknowns – Call EHSRM for advice at 245-3616.

Unknowns

An unknown is defined as a chemical in an unlabeled container for which the identity is unknown. Federal regulations specifically prohibit transportation, storage, or disposal of wastes of unknown identity. For this reason and for the safety of personnel, the University faculty, staff and students will make an effort to not generate unknowns by:

a. **Labeling** all containers properly. This should be done even when creating reagent solutions for temporary use. Labeling will also prevent using the wrong material accidentally.
b. **Inspecting** containers and labels periodically. Replace fading or deteriorating labels.

If an unknown is discovered, EHSRM staff working in conjunction with the appropriate department will attempt to identify the material by:

a. Asking area personnel about the container. Someone may remember its contents.
b. Contacting groups that previously used the area to see if they can recall the waste's identity.
c. Conducting basic tests such as pH.
d. Checking fresh reagents present.
e. Reviewing projects currently in progress.
f. Providing for chemistry and/or laboratory analysis.

3.4 LAND DISPOSAL RESTRICTION (LDR) COMPLIANCE

LDR compliance will be met with hazardous waste streams using process knowledge to determine if any of the waste constituents meet or exceed the LDR limits. If the concentration of one or more of the constituents in the waste exceeds the LDR limits, the waste disposal facility will be provided a one-time notification for the waste stream. Land disposal will not be an option until the waste is treated to meet the limits.

3.5 EMPTY CONTAINER MANAGEMENT

Empty containers are defined by federal and state regulations. The definitions change depending on the size of the container and whether it contained an acute (P-listed) material. To simplify the disposal practices, Texas State will use the following conservative measures:

1. For a chemical reagent bottle, triple rinse the container and place the rinsate in the aqueous waste carboy. Write the words "Empty" on the bottle and discard in regular trash.
2. For a chemical reagent that held any of the P-listed compounds (see list in **Attachment B**), call EHSRM for pick up as a hazardous waste. Do not triple rinse.
3. For a 55-gallon drum, remove as much product as possible, leaving less than 1 gallon in the drum.
4. For a 5-gallon bucket, leave less than ½ inch in the bucket.
5. Compressed cylinders are empty if they are at atmospheric pressure. Empty aerosol cans should be placed in the regular trash if at atmospheric pressure.
6. Return empty compressed gas cylinders to the gas manufacturer and call EHSRM to pick up empty compressed gas lecture bottles.
7. Broken glass should be placed in the Broken Glass boxes for disposal in the dumpsters.
8. Pesticide containers should be triple rinsed (with the rinsate added as part of the application solution). The container should be punctured, labeled "Empty" and disposed of in the dumpster.

4.0 UNIVERSAL WASTE

The EPA has designated certain often-generated hazardous wastes as "universal wastes". Universal waste is a specific type of hazardous waste that is subject to more relaxed regulatory requirements regarding accumulation, record keeping and shipping. Universal waste does not count toward a facility's hazardous waste generator status, and is not subject to end-of-year hazardous waste generation fees (or annual waste reporting). The wastes may be shipped using a common carrier and a bill of lading rather than by a permitted hazardous waste transporter and a waste manifest. Paint waste is only recognized as a universal waste in Texas, so transport in this manner is limited to Texas.

Universal wastes are defined by 40 CFR 273 and 30 TAC 335.261 and 262. Universal wastes must be managed to minimize any releases to the environment. Disposal options include hazardous waste landfill or recycling. Universal wastes cannot be disposed of in a municipal landfill.

4.1 IDENTIFICATION

Texas regulations do not require a listing of the universal wastes on the University's Notice of Registration. For disposal and tracking purposes, the University uses a code that is similar to the Texas Waste Code to describe the waste. The following provides a more complete description of the universal wastes and those generated at the University:

Lamps: lead and mercury containing fluorescent bulbs or tubes such as the tube-style lamps and compact globe shapes. Other lamps covered under the universal waste lamp are high-intensity discharge lamps with blue-white light used as exterior yard lights, high and low pressure sodium vapor lamps used in streetlights and commercial settings (orange high-intensity discharge lights) and metal halide lamps. The University code for this waste is UNIV117H. If the bulb is a *green tipped* bulb, it contains less than 0.2 mg/L of TCLP mercury and is not a hazardous or universal waste. The *green tipped* fluorescent bulbs can be disposed of in the dumpsters (Phillips is the only manufacturer of this type bulb).

Fluorescent light ballasts are not universal wastes. Separate management requirements exist for these wastes under the Toxic Substances Control Act (TSCA) if they contain PCBs. In Texas, light ballasts are considered a special Class 1 waste under 30 TAC 335.508(5) if they contain more than 50 ppm PCBs. The University will consider all ballasts that do not contain the words "Contains No PCBs" on the casing to be Class 1 Industrial waste (waste code 00264961). Additional special waste handling procedures will be applied if the ballasts are leaking. Ballasts bearing the message "Contains no PCBs" are not Class 1 wastes and can be disposed of in the dumpster.

Batteries: nickel-cadmium (NiCd), lead acid batteries, small sealed lead acid batteries, rechargeable batteries, batteries used for backup power source and alkaline batteries manufactured before 1992 (may contain mercury). Automotive lead acid batteries can be returned to the manufacture to be reclaimed and not disposed of as waste. Texas State manages sealed lead acid batteries by 40CFR266 Subpart G: Standards for Management of Specific Hazardous Wastes, Spent Lead-Acid Batteries Being Reclaimed. Batteries are picked up by a battery manufacturer for reclamation. Rechargable batteries including nickel cadmium, nickel metal halide, and lithium ion are reclaimed by sending them to Rechargeable Battery Recycling Corporation (RBRC).

Alkaline batteries generated after 1992 do not contain mercury, but as a matter of policy, the University collects them for disposal through our contracted waste disposal company. Alkaline batteries are sent for recycle at Inmetco in Ellwood City, PA. The batteries are recycled into low grade steel such as rebar. This practice keeps the relatively large number of batteries generated at the University (more than 2000/year) out of the municipal solid waste landfills. The University code for this waste is 00313091

Paint Waste: used or unused oil-based paint, lacquers, thinners, varnishes, rags or personal protective equipment contaminated with paint, cleanup residues from spills of paint, blast sand and paint chips and spent paint related solvents. Also includes paint booth stripping materials and paint sludge from water-wash curtains. The art department generates a paint rinsewater with cadmium and this is a characteristic hazardous waste (D006) and a universal waste. The University code for this waste is UNIV209H.

Mercury Thermostats and Mercury Containing Equipment (MCE): thermostats that have a mercury containing ampoule attached to a bimetal sensing element, and the mercury containing ampoules that have been removed. MCE include thermostats, barometers, manometers, and convenience light switches in automobiles. The University code for this waste is UNIV117H (same as bulbs due to the mercury content).

Pesticides: recalled pesticides that are stocks of a suspended and cancelled pesticide that are part of a voluntary or mandatory recall under FIFRA. Also includes stocks of pesticides that are not in compliance with FIFRA that are part of a voluntary recall, or stocks that are collected and managed under a waste pesticide collection program. The University code for this waste is UNIV219H.

4.2 WASTE MANAGEMENT

The University is considered a large quantity handler of universal waste because it can generate more than 5000 Kg (11,025 pounds) of all classes of universal waste in one year. In 2010 and 2011, the University generated 14188 pounds and 10,230 pounds of combined universal waste, respectively and the volume has not increased in later years. As a large quantity handler, the requirements in **Table 6** will be followed. Standard Operating Procedures for identifying, segregating, boxing and labeling the fluorescent and high intensity universal waste bulbs are in **Attachment E**.

5.0 USED OIL, OIL FILTERS AND ANTIFREEZE

Used oil and oil filters are not subject to the hazardous waste regulations, but are managed under regulations in 40 CFR 279 and TAC 324. It is not necessary to list used oil on the Notice of Registration or Annual Report. The departments that generate used oil at the University include the CoGen Plant, garage at the Physical Plant, garage for UPD near the Print Shop, the AC shop (from changing out compressor oil), and the Physics and Technology labs. Used oil filters are generated at the two garages and the CoGen plant.

Storage of the used oil is in 5-gallon plastic containers, 55-gallon drums or in 385-gallon double walled tanks (above ground). The Physical Plant garage and the CoGen plant use the double walled tanks and the oil is picked up periodically by a registered used oil processor for recycle. The used oil containers must be marked with the words "Used Oil" in accordance with 40CFR279.22(c). All used oil spills must be cleaned up and spills that are greater than 25-gallons must be reported to the TCEQ at 512/463-7727.

The waste oil filters at the garage are placed in drums labeled "Used Oil Filters". The University will not exceed the storage limit of six drums of used oil filters (to keep from registering as a storage facility). The oil and oil filters are picked up on a routine basis by a registered used oil processor for recycle.

Although not as strictly regulated, antifreeze wastes generated at the garages are managed in the same manner as the used oil. This is a voluntary action implemented by the University as a good management procedure.

Used oil is not considered a hazardous waste unless mixed with a hazardous waste. This requirement may apply to oil removed by the AC shop from refrigerant units since this shop oil may contain chlorofluorocarbons (CFCs). Oil collected from refrigerant units is managed as hazardous waste per 40 CFR 279.10(b)(ii)(B). CFCs recovered from the units serviced by the AC shop are excluded from hazardous waste definition by 40 CFR 261.4(b)(12).

TABLES

Waste Analysis Plan

TABLE 1

Hazardous and Class 1 Non-hazardous Wastes Generated
Texas State University
San Marcos, Texas

TCEQ Waste Code	*Waste Description*	EPA Waste Code	Most Common Method of Disposal
Hazardous			
0001204H	Mixed halogenated/non-halogenated solvents from labs throughout campus and solvents consolidated at the storage facility.	D001, F001, F002, F003, F005	Incineration or fuel blending
0002103H	Acids with metals from campus labs	D002,D005, D006, D007, D008, D009, D011	Wastewater treatment
0003003H	Mixed lab packs containing hazardous chemicals from campus labs.	D001, D002, F001, F002, F003, F005, U057, U196, U239	Incineration
0004198H	Photographic waste may contain silver, may be reactive	D002, D003, D011	Silver recovery and wastewater treatment
0007119H	Laboratory waste – inorganic, may contain oxidizers.	D001, D002, D005, D006, D007, D008, D009, D011	Wastewater treatment
0010117H	Mercury waste or aqueous mercuric salt solutions	D009, D002	Mercury recovery and wastewater treatment
0016219H	Caustic liquids from consolidating lab wastes, flammable caustics	D001, D002, F002, F003	Incineration

TABLE 1 (continued)

Hazardous and Class 1 Non-hazardous Wastes Generated
Texas State University
San Marcos, Texas

TCEQ Waste Code	*Waste Description*	EPA Waste Code	Most Common Method of Disposal
0017219H	Lab waste consolidation, flammable acids	D001, D002, F002, F003	Incineration
0020310H	Activated carbon filters, spent or out of date	D001	Regenerate
0021202H	Spent halogenated solvents and aqueous mixtures	D001, F001, F002	Incineration or Fuel blending
0022203H	Spent non-halogenated solvents and aqueous mixtures	D001, F003, F005	Incineration or Fuel blending
0025207H	Organic solutions with aquatic organisms. May be formaldehyde, ethanol or formalin.	D001	Incineration or Fuel blending
0029310H	Waste Rags containing F003 and/or F005 solvents.	D001, F003, F005, D035	Incineration or Fuel blending
0030310H	Waste Sorbents, may contain gasoline and oil	D018	Incineration or Fuel blending
0034119H	Aqueous waste containing sodium azide from a laboratory analysis	P105	Incineration
0035110H	Caustic Aqueous Waste from Labs and Shops	D002	Wastewater treatment or hazardous waste landfill
0036319H	Old sodium hydroxide pellets in drums	D002	Hazardous waste landfill
0037310H	Solids that fail one or more TCLP metal	D004-D011	Hazardous waste landfill
0038219H	Old glycolic acid in drums	D002	Neutralization/Incineration
0040403H	Acid bed water softener resin	D002	Neutralization/Incineration

TCEQ Waste Code	*Waste Description*	EPA Waste Code	Most Common Method of Disposal
0041110H	Old chemical in drums, caustic/aqueous	D002	Hazardous waste landfill
0044202H	Old Freon no longer in use	U121	Incineration
Class 1			
00080091	Lab waste from campus.	NA	Class 1 landfill
00193081	Empty metal drums or containers	NA	Recycle or Class 1 landfill
00231191	Aqueous solutions with organics and inorganics.	N/A	Wastewater treatment
00245011	Limestone sludge from cleanout of neutralization/filtration sumps (waiting on laboratory analyses).	N/A	Class 1 landfill
00264961	Electrical ballasts with PCBs >50 ppm	N/A	Class 1 landfill or recycle
00273101	Waste rags with total petroleum hydrocarbon concentration greater than 1500 ppm.	NA	Class 1 Landfill
00282091	Waste latex and acrylic paint and paint related substances (nonhazardous) including paint rinsewater	NA	Wastewater treatment or Class 1 landfill.
00313091	Alkaline Batteries	NA	Recycle
00323111	Asbestos Materials	NA	Class 1 Landfill
00423191	Old soda ash used for spill response	NA	Class 1 landfill
00432092	Paint Rinse Water Acrylic or Latex	NA	Class 2 landfill
00455012	Limestone and water slurry sludge	NA	Class 2 landfill
00462191	Combustible liquid or solid from discarded material or labs	NA	Fuel blending

TCEQ Waste Code	*Waste Description*	EPA Waste Code	Most Common Method of Disposal
00474031	Nano particle waste mixed with resins or other organics for research	NA	Hazardous waste landfill
00482191	Nonhazardous aqueous waste with organic generated from labs and shops	NA	Waste water treatment

TABLE 2

Method of Analysis for Hazardous Waste Characterization
Texas State University
San Marcos, Texas

Analysis	**EPA Method For Liquids (a)**	**EPA Method For Solids (a)(b)**
Hazardous Waste Characteristics:		
pH	9045	Not applicable
Reactivity	9010 (cyanide) 9030 (sulfide)	1311/9010, 9030
Ignitability	1010 or 1020	1010 or 1020
TCLP		
• Mercury	7140	1311/7140
• All other metals	6010	1311/6010
• Volatiles	8260B	1311/8260B
• Semivolatiles	8270C	1311/8270C
• Pesticides	8081	1311/8081
• Herbicides	8151	1311/8151
Class 1 Characteristics	TCEQ method 1005	TCEQ method 1005

Notes:
(a) Reference: EPA SW846, Test Methods for Evaluating Solid Waste – Physical and Chemical Methods

(b) Toxicity Characteristic Leaching Procedure (Method 1311) is performed on solid wastes, and the analysis is run on the leachate.

TABLE 3

Sample Containers, Preservation and Holding Times for Aqueous Waste Samples
Texas State University
San Marcos, Texas

Analysis	Sample Size/Container	Preservation	Holding Time
TCLP Volatiles	2x 40 ml glass vials	Cool to 4ºC HCl to pH <2	14 days
TCLP Semivolatiles	2 x 1000 ml glass (amber)	Cool to 4ºC $Na_2S_2O_3$	7 days for extraction 40 days for analysis
TCLP Pesticides/Herbicides	2 x 1000 mL glass (amber)	Cool to 4ºC pH: 5 to 9	7 days for extraction 40 days for analysis
TCLP Metals	500 mL/plastic or glass	HNO_3 to pH < 2	6 months except mercury (28 days)
pH	50 mL/plastic or glass	Cool to 4ºC	Analyze immediately
Ignitability	1 4 oz glass	Cool to 4ºC	7 days
Total Cyanide	1 x 1000 mL/glass	Cool to 4ºC ascorbic acid, NaOH to pH > 12	14 days
Total Sulfide	1 x 500 mL/glass	Cool to 4ºC Zn acetate NaOH to pH > 9	7 days
Total Petroleum Hydrocarbons	2 x 40 ml glass vials	Cool to 4ºC HCl to pH <2	14 days (7 days if no HCL preservative used)

TABLE 4

Sample Containers, Preservation and Holding Times
for Non-Aqueous (Solid) Waste Samples
Texas State University
San Marcos, Texas

Analysis	Sample Size/Container	Preservation	Holding Time
TCLP Volatiles	2x 4-oz glass jars	Cool to 4ºC	14 days for TCLP 14 days for analysis
TCLP Semivolatiles	3 x 32 oz wide mouth glass	Cool to 4ºC	14 days for TCLP 7 days for extraction 40 days for analysis
TCLP Pesticides/Herbicides	with semivolatiles	Cool to 4ºC	14 days for TCLP 7 days for extraction 40 days for analysis
TCLP Metals	with semivolatiles	Cool to 4ºC	14 days for TCLP 6 months except mercury (28 days) to analyze
pH	with semivolatiles	Cool to 4ºC	Analyze immediately
Total Sulfide	with semivolatiles	Cool to 4ºC	14 days
Total Cyanide	with semivolatiles	Cool to 4ºC	14 days
Ignitability	with semivolatiles	Cool to 4ºC	analyze immediately
Total Petroleum Hydrocarbons	3 x 32 oz wide mouth glass (or ask lab, media dependent)	Cool to 4ºC	14 days

TABLE 5

Collection and Transfer Procedures for Waste
Texas State University
San Marcos, Texas

Action	**Generating Department Responsible**	**EHSRM Responsible**
1. Collect waste in suitable containers at the Satellite Accumulation Areas (a). Keep the containers in a centralized area controlled by the generator.	X	
2. Keep waste segregated in waste types as shown in **Attachment A** to this waste analysis plan.	X	
3. Label the containers using the preprinted self adhesive labels FREE from EHSRM. 245-3616. Write on the label the % composition, based on process knowledge, of each major component (i.e. xylene, toluene, acetone), the room number and building number. Waste tags already have the required words "Hazardous Waste".	X	
4. For Chemistry and Centennial Buildings, transfer the full waste containers to Chemistry Room 249 (NOR Unit 008). For all other SAAs, respond to the weekly e-mail sent by EHSRM letting EHSRM know if you need a pickup for that week.	X	
5. Transport the waste to the CAA using the designated waste transport truck (State Vehicle).		X
6. Write the accumulation start date on the container and the TCEQ waste code (see **Attachment A** or NOR)		X

TABLE 5 (continued)

Collection and Transfer Procedures for Waste
Texas State University
San Marcos, Texas

Action	**Generating Department Responsible**	**EHSRM Responsible**
7. Coordinate with the TSDF to properly manifest the waste for disposal. Review manifest for waste code I.D., waste description, quantity, and facility I.D.		X
10. Prepare proper DOT and RCRA labeling. (oversee TSDF staff)		X
11. Ensure waste pickup, sign manifest and get transporter signature on manifest.		X
12. Contact the TSDF if the white copy of the manifest has not been returned, signed within 35 days after the waste was transported offsite. File an exception report to the TCEQ if the white copy has not been mailed within 10 days of notifying the TSDF. (b)		X
13. For first time shipments of hazardous waste to a TSDF, send a signed one-time Land Disposal Restriction notification for those wastes that exceed LDRs. (usually provided by the TSDF)		X
14. Keep copies of completed manifests (signed by the TSDF facility) and Certificates of Destruction at the EHSRM office for at least 3 years.		X

(a) see section 3.3 on Waste Collection Containers.
(b) mail the exception report (no special form needed) to TCEQ Registration Review and Reporting Section, MC129, P.O. Box 13087, Austin, Texas 78711-3087

TABLE 6

Management Requirements for
Large Quantity Handlers (LQHs) of Universal Waste
Texas State University
San Marcos, Texas

ISSUE	REQUIREMENT
Accumulation Limits	• Can accumulate more than 11,025 pounds (5000 kg) of universal wastes (all classes of universal wastes) at any one time.
Container Management	• Manage in a way that minimizes the potential for a release of the universal waste's hazardous components (e.g., place spent fluorescent lamps in a container that protects them from breakage, place spent NiCad batteries in a plastic tub or pail). • For old (non green tip bulbs) place them in the box that contained the replacement new bulb. • For new green tip bulbs, OK to discard in municipal trash.
Accumulation Time	• Cannot accumulate for more than one year.
Labeling/Marking	• Label the container mark the date and name of the waste on the earliest date the waste was placed in the container such as: • • Universal Waste – Batteries (start date:____) • Universal Waste – Fluorescent Bulbs (start date:_____) • Universal Waste –Paint and Paint Related Waste(start date:_____)
Employee Training	• Train staff on the proper universal waste handling and emergency procedures appropriate to the type(s) of universal waste generated. For example, all maintenance staff that could potentially handle universal wastes must be properly trained on managing universal waste and emergency procedures to be followed • Provide refresher training annually.
Notification	• Notify EPA and receive an EPA I.D. number. Since Texas State already has an EPA I.D. number (from hazardous waste activities), this step is not necessary to repeat.

TABLE 6 (continued)

Management Requirements for
Large Quantity Handlers (LQHs) of Universal Waste
Texas State University
San Marcos, Texas

ISSUE	REQUIREMENT
Release Response	• Immediately contain all releases and other residues of universal wastes. • Determine whether any material resulting from a universal waste release is hazardous waste, and if so, manage the resulting hazardous waste in compliance with all applicable requirements.

Shipping	.
	• Package, label, mark and placard the shipment and prepare the proper shipping papers. Texas State uses the uniform hazardous waste manifest for universal waste shipments.
	• Send universal waste to an approved "destination facility."
	• Most state environmental agencies provide generators with a list of approved destination facilities (e.g., generally recyclers).
	• Shipping by common carrier is allowed unless it is paint waste leaving Texas (hazardous waste transporter required).
	• Include the University's waste code for internal tracking:
	  • UNIV117H: Fluorescent bulbs or Mercury Thermostats and MCE
	  • UNIV209H: Paint Waste
	  • UNIV309H: Batteries
	  • UNIV219H: Pesticides

Recordkeeping	• As a recommended practice, maintain documentation indicating that universal wastes were recycled. Since Federal regulations do not require documentation, approved destination facilities may not provide a written record that the waste was recycled. For example, a box of batteries could be mailed to an approved recycler and it would not be necessary to create a receipt. • Keep the bills of lading, invoice or an internal memo to the files documenting the shipment of universal waste to an approved facility. • The internal record will indicate the type and weight of universal waste sent to the destination facility, the date the universal waste was delivered, and the name of the destination facility.

ATTACHMENT A

Waste Descriptions

Texas State University – San Marcos

0001204H
Mixed Halogenated and Non-halogenated Solvents

This waste code consists of halogenated and non-halogenated solvents generated at various laboratories on campus. The solvents may include aqueous or non-aqueous mixtures of methylene chloride, carbon tetrachloride, acetone, chloroform, formaldehyde, hexane, toluene, methanol, xylene, ethyl ether, ethyl acetate, acetonitrile, isopropyl alcohol, and petroleum ether. The solvents are collected at the generating source in either 2.5 to 4-litter glass bottles or 5-gallon high-density plastic containers. The solvents are sent offsite to a permitted treatment storage disposal facility (TSDF) for either fuel blending or incineration. The solvents are hazardous due to listing (F001, F002, F003, F005) and/or ignitability characteristic (D001).

This waste code has been supplemented with two new codes (8/2004). See 0021202H and 0022203H

0002103H
Acids With Metals From Campus Labs

This waste code consists of various acids and aqueous acid mixtures from campus laboratories. The acids may include chromic, nitric, sulfuric, acetic, citric, hydrochloric and hydrofluoric acid and contain one or more of the following metals: barium, cadmium, chromium, lead, mercury, molybdenum, silver or tin. Aqueous acid mixtures are collected at the generating source in 5-gallon high-density plastic containers. Concentrated acid wastes are stored in heavy glass acid bottles to prevent breakage due to the high specific gravity of the acids. The acid solutions are sent offsite to a permitted treatment storage disposal facility (TSDF) for treatment by wastewater treatment. This waste code is hazardous due to the corrosivity characteristic (D002) and due to metals (D005, D006, D007, D008, D009, D011).

0003003H
Mixed Lab Packs

This waste code consists of mixed lab packs containing hazardous chemicals from laboratories on campus. The chemicals are outdated, discarded or spent commercial chemical products. The old chemicals are collected periodically during laboratory, refrigerator, or stock room cleanouts. The chemicals are segregated into hazardous and non-hazardous groupings (based on characteristics or the U and P lists) and sent offsite to a permitted treatment storage disposal facility (TSDF) for incineration. The waste codes are assigned for each lab pack based on the contents. .

0004198H
Photographic Waste Containing Silver

This waste code consists of developer, finisher and fixer photographic wastes that may contain silver above the toxicity characteristic limit of 5 mg/L (D011) or may be hazardous due to reactivity (D003). This waste type is generated at the print shop, art department, technology department and laboratories with electron and high magnification microscopes. The photographic solutions may emit sulfur dioxide if exposed to strong acids. The photographic solutions are collected at the generating source in 5-gallon high-density plastic containers. . The photo waste is sent offsite to a permitted treatment storage disposal facility (TSDF) for treatment by wastewater treatment system and silver recovery. The waste may be hazardous due to the characteristic of reactivity (D003) or toxicity-silver (D011).
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0007119H
Laboratory Wastes - Inorganic

This waste stream includes aqueous mixtures of wastes from the laboratories on campus that contains inorganic constituents such as copper sulfate, barium chloride, cadmium chloride, potassium hydrosulfate, sodium biosulfate, electrophoresis chemicals, chlorohydrate and spent oxidizers (e.g. ammonium nitrate, pool chemicals). The aqueous inorganic solutions are collected at the generating source in 5-gallon high density plastic containers. The solutions may exhibit oxidizer characteristics and contain nitrates. The solutions are sent offsite a permitted treatment, storage and disposal facility for treatment by wastewater treatment system. The waste stream may be hazardous due to reactivity (D001), corrosivity (D002) and toxicity characteristic (D005, D006, D007, D008, D009, D011).

0010117H
Mercury Waste

This waste code includes mercury from various sources including thermometers, manometers, sphygmomanometers (blood pressure cuffs), thermocouples, instruments and gauges and mercury switches. The waste code may also include debris or soil contaminated from a mercury spill or aqueous mixtures containing mercuric salts. Examples of aqueous solutions include mercuric nitrate with sulfuric acid. Aqueous mixtures are contained in 5-gallon high-density plastic containers. The waste is transported to a permitted offsite TSDF by wastewater treatment/mercury reclamation. The EPA waste code for mercury waste is D009 and the solutions may also carry the D002 code for corrosivity.

0016219H
Caustic Liquids from Consolidating Lab Wastes

This waste code covers caustic waste streams, caustic waste with inorganics and caustic/organic mixtures. Examples of this waste stream are the sodium hydroxide mixed with sodium acetate and sodium phosphate used in etching, potassium hydroxide/ethanol baths for cleaning. The caustic liquids are collected at the generating source in 5-gallon high density plastic containers. The solutions are sent offsite to a permitted treatment storage and disposal facility (TSDF) for treatment by incineration or wastewater treatment. This waste carries the waste codes D001 (ignitability), D002 (corrosivity), F002 (spent halogenated solvents) and F003 (spent non-halogenated solvents).

0017219H
Lab Waste Consolidation Flammable Acids

This waste code covers acidic wastes that contain organics (flammable acid liquids or organic acids). Examples of this waste code are methanol/hydrochloric acid solutions and ethanol/acetic acids generated in the Biology Department. These wastes are collected in 5-gallon high density plastic containers or 4-litter glass bottles. The solutions are sent offsite to a permitted treatment storage and disposal facility (TSDF) for treatment by incineration. This waste carries the waste codes D001 (ignitability), D002 (corrosivity), F002 (spent halogenated solvents) and F003 (spent non-halogenated solvents).

0020310H
Activated Carbon Filters

This waste code is for spent or out-of-date activated carbon canisters or filters. The carbon canisters are generated from wastewater treatment for specific projects and not on a continuous basis. These carbon canisters may be regenerated by a permitted offsite carbon reclaiming facility. The filters may contain trace organics, or carry the code for ignitability (D001).

0021202H
Spent Halogenated Solvents

This waste code consists of spent halogenated solvents generated at various laboratories on campus. The solvents may include aqueous or non-aqueous mixtures of methylene chloride (also called dichloromethane), carbon tetrachloride, tetrachloroethylene, trichloroethylene, trichloroethane, chloroform and chlorobenzene. This waste also included used refrigerant oil mixed with trichlorofluoromethane (CFCs) or Freon 11 removed from AC units or other units. The solvents are collected at the generating source in either 2.5 to 4-litter glass bottles or 5-gallon high-density plastic containers. The solvents are sent offsite to a permitted treatment storage disposal facility (TSDF) for either fuel blending or incineration. The solvents are hazardous due to listing (F001, F002) and/or ignitability characteristic (D001).

0022203H
Spent Non-halogenated Solvents

This waste code includes spent non-halogenated solvents generated at various laboratories on campus. The solvents may include aqueous or non-aqueous mixtures of acetone, formaldehyde, hexane, toluene, methanol, xylene, ethyl ether, ethyl acetate, ethyl benzene, isopropyl alcohol, petroleum ether, methyl ethyl ketone (MEK), methyl ethyl isobutyl ketone (MIBK) and cyclohexanone. The solvents are collected at the generating source in either 2.5 to 4-litter glass bottles or 5-gallon high-density plastic containers. The containers are transported and consolidated into larger bulk containers at the hazardous waste storage facility. The bulked solvents are sent offsite to a permitted treatment storage disposal facility (TSDF) for either fuel blending or incineration. The solvents are hazardous due to listing (F003, F005) and/or ignitability characteristic (D001).

0025207H
Organic Solutions Mixed with Specimens

This waste stream includes aqueous organic solution (formaldehyde, formalin or ethanol) mixed with aquatic or other dead specimens. The organic solutions are not solvents. This waste is generated in the life science departments where specimens are used for study or research. In smaller specimens, the liquid is poured off and the specimens are labpacked and carry the nonhazardous code 00080091. The liquid collected carries the code 0022203H. However, if the specimens are large or if separation of specimen and liquid is not feasible, the mixture carries this waste code (0025207H). The waste will be transported to a permitted hazardous waste facility for disposal.

0029310H
Waste Rags with F003 and F005 Solvents

This waste code covers disposable rags that are generated at locations such as the Art Department, Roy F. Mitte Technology location (Chemical Coatings) and the Print Shop. The rags may contain residual paint thinner, toluene, (F005 solvents) and linseed oil (also called Plate Oil (D001). The rags from the Print Shop also may contain Rogersol Blanket and Roller Wash (containing xylene, trimethylbenzene, and naptha) and Rogersol 184 Rubber Rejuvenator (containing ethyl acetate, acetone, naptha, methanol and 2 butoxyethanol). Several of these solvents in Rogersol products are F003 solvents.

0030310H
Waste Absorbents and Sand Mixed with Gasoline

This waste code covers sorbents (sand, snakes, pads, etc.) that are contaminated with gasoline and/or a mixture of other petroleum hydrocarbons (oil, diesel, hydraulic oil, etc.). The waste is generated as a result of cleanups of incidental spills and releases. The waste can originate from all areas of the campus. The waste is hazardous due to the characteristic of toxicity (benzene D018) present in gasoline.

0034119H
Aqueous Waste Containing Sodium Azide From Laboratory Analyses

This waste code covers an aqueous laboratory waste that contains sodium azide. The waste is hazardous due to the P listing for sodium azide (P105). Due to this listing, the waste stream is incinerated.

0035110H
Caustic Aqueous Waste From Labs and Shops

This waste code covers an aqueous waste that is hazardous due to the characteristic of corrosivity (pH >12.5). This waste stream differs from 0016219H because it contains no flammable solvents. It includes wastes from chemistry, and often ethidium bromide solutions. It can also include spent chemical solutions from the shops that have a high pH. The waste is hazardous due to D002 characteristic.

0036319H
Old Sodium Hydroxide Pellets in Drums

This waste code covers drums of sodium hydroxide that are no longer needed. This chemical is used primarily by the CoGen in this quantity. This waste code applies to primarily solid chemical with a small amount of water. Waste code 0041110H applies to caustic that is primarily aqueous with a small amount of solid pellets. The waste is hazardous due to D002 characteristic.

0037310H
Solids That Fail One or More TCLP Metals

This waste code covers any solid material that fails the TCLP test for metals. One example is a silver recovery unit that would fail the leachate test for silver. Another waste is generated in a chemistry research lab that works with inorganics and metals. This solid waste could fail for arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver. The waste may be hazardous due to D004, D005, D006, D007, D008, D009, D010, and/or D011 characteristic.

0038219H
Old Glycolic Acid in Drums

This waste code covers unused or out of date Glycolic Acid generated at the CoGen. The waste may be hazardous due to D002, characteristic.

0040403H
Acid Bed Water Softener Resin

This waste code covers unwashed, spent acid bed resin generated at the CoGen for water softening. The waste may be hazardous due to D002, characteristic.

0041110H
Old Chemical Drums, Caustic Aqueous

This waste code covers spent or out of date aqueous caustic solutions generated at the CoGen for treatment. The waste may be hazardous due to pH >12.5 (D002 characteristic).

0044202H
Old Freon No Longer in Use

This waste code covers old freon canisters disposed of from the CoGen main plant. The waste carries the U121 listing and the disposal method is incineration.

00080091
Lab Waste From Campus

This waste code describes lab packs generated from cleanout of the campus labs of spent or out-of date chemical. The lab packs contain only non-hazardous, Class 1 wastes that are ***not*** on the U or P lists. The lab packs are inventoried and may be disposed of at a permitted Class 1 Industrial landfill.

00193081
Empty Metal Drums or Containers,

This waste includes empty drums or containers that have stored hazardous waste or Class 1 waste. TCEQ regulations define empty containers based on their size and contents in 30TAC335.41(f). If the containers meet these specifications, they are considered empty and a Class 1 waste by 30TAC335.508(2). These containers would carry the waste code 00193081 and can be disposed of at a permitted Class 1 landfill.

00231191
Aqueous Solutions with Inorganic Constituents

This waste includes solutions of water and a variety of inorganic salts or constituents that are not on the RCRA TC list or the U or P lists. Examples are wastewater generated at the art department from metal sculpturing that contains sodium bisulfate and potassium hydrosulfate. Photo developer is also included with this waste code. These wastes are classified as Class 1 non-hazardous and can be disposed of at an offsite TSDF facility by wastewater treatment.

00245011
Organic Sludge from Sump Cleanout
Non Soil

This waste stream includes hardness sludge and dirt from the cleanout of cooling towers and various tanks that process hard water or soft water. It can also include spent limestone rocks and sludge from cleanout of neutralization sumps located on campus (only one remaining at the CoGen). The waste can be a slurry of water and sludge or of water, sludge and limestone. The sludge can contain heavy metals, but none of them exceed the TCLP limits. The waste is transported to a permitted Class 1 landfill for solidification (if necessary) and disposal.

00264961
Fluorescent Light Ballast

Electrical equipment that contains PCBs at greater than 50 ppm are designated as Class 1 waste by 30TAC 335.508(5). Ballasts manufactured after 1978 generally do not contain PCBs and may bear the label "No PCBs". Ballasts delivered to the bulb room by the maintenance crews will be examined for identifying labels. If they do not bear the "No PCB" label, they will be assigned this Class 1 code and managed with the industrial and hazardous wastes. Those with the "No PCB" label will be disposed of in a dumpster/municipal solid waste landfill.

00273101
Waste Rags

This waste code covers rags that have no solvent waste, but are primarily oily waste. These rags are generated in the garage and as a result of spill cleanup across campus. Rags from the garage are disposed of along with oil filters as oil related wastes by a permitted commercial recycler. All other rags are disposed of by our commercial hazardous waste contractor as a Class 1 waste. The TPH of the rags is above 1,500 ppm so they meet the definition of a Class 1 waste. This waste also includes granular sorbent used for oil spill cleanup and containing more than 1,500 ppm TPH.

00282091
Latex Paint/Paint Rinse Water

This waste covers paint and paint rinse water consisting of non oil-based paints such as latex and acrylic paints. These paints are used in the art departments, Theater building and Paint Shops (Physical Plant and West Campus). The rinse water is contained in 5-gallon carboys or 30-gallon drums and does not have any of the hazardous waste characteristics. This waste stream has been characterized by chemical analyses and may have a Chemical Oxygen Demand of 3,000 mg/L to 33,000 mg/L. It may also have zinc in concentrations ranging from 1 to 6 mg/L.

Paint from the Theater building, Physical Plant and West Campus has been reclassified as Class 2 based on chemical analysis. See waste code 00432092.

00313091
Waste Alkaline Batteries

This waste code is for spent alkaline batteries generated on campus. It covers all types of alkaline (AA, AAA, C, D, 9-volt, etc). These are not covered under the universal waste code, because these batteries are not hazardous waste. Rechargeable batteries are included in the universal waste code and not this code.

0032311
Asbestos Materials

This waste consists of ceiling tile, floor tile, pipe insulation and other asbestos containing materials that are generated from renovation or demolition of buildings on campus. Asbestos containing material is considered a special waste and TCEQ classifies it as a Class 1 material. This waste is disposed of at a landfill that is permitted to accept asbestos containing materials.

00423191
Old Soda Ash Used for Spill Response

This waste code covers spent or out of date soda ash located at the CoGen for acid spill response. The waste is not hazardous due to corrosivity characteristic, but is irritating and possibly has a pH of greater than 7 and less than 12.5. It is classified as a Class 1 waste.

00432092
Acrylic or Latex Paint Rinse Water

This waste code covers paint rinse water generated at the paint shops or Theater building. The waste includes latex or acrylic paint rinsed from brushes. It was classified as a Class 2 waste in the summer of 2009 based on a complete analysis of the 8 RCRA metals, volatile organics, semivolatile organics, and flashpoint. None of the organic constituents in the scan were detected and the flashpoint was greater than 200 degrees F. This waste code will replace 00282091 for wastes generated from these departments. Paint rinse water collected from the art studios will continue to have either the 00282091 listing or UNIV2091 (for cadmium paint rinse water).

00455012
Limestone and Water Slurry Sludge

This waste code covers limestone rock and slurry generated from rockbox tanks or cooling tower cleanouts. The slurry or rock may contain metals such as iron, copper, zinc or nickel at elevated concentrations, but does not fail the TCLP limits for heavy metals and does not fail the Class 1 limits for metals. The waste in an inorganic mixture of limestone, slurry of dust and hardness minerals and corrosion products and is not characteristic hazardous. If the concentrations of metals are elevated in the leachate to above Class 1 limits, the waste code **00245011** applies instead.

00462191
Combustible Liquid or Solid from Discarded Material or Labs

This waste code covers liquids or solids with a flashpoint of greater than 140 °F, but less than 150 °F. It can include drums of unused product (for example 1,3 propanediol in the Chemistry stockroom), drums of unused chemicals from the shops or CoGen plants or old product in the labs. It can also cover unknowns that test out with a flashpoint in the range. It is not hazardous waste since it does not carry the D001 listing, but it is a Class 1 waste by definition 30 TAC §335.505.2

00474031
Nanoparticle Waste Mixed with Resins or Other Organics for Research

This waste code covers engineered, industrial and natural nanoparticles. Engineered nanoparticles include carbon nanotubes and fullerenes. Industrial nanoparticles are produced as a byproduct of industrial operations (welding fumes, alumina particles) and natural particles such as clay particles (Kaolin, Halloysite and Cloisite). The waste includes these particles in empty cans or mixed with resins or other organic materials. The waste is not a listed hazardous waste or a characteristic hazardous waste.It is not specified as a Class 1 waste with the TCEQ. There is uncertainty about the fate of nanoparticles in the environment, so Texas State chooses to classify it as Class 1 with Hazardous Waste Landfill as the disposal method.

00482191
Aqueous Waste With Organic Constituents

This waste code covers primarily aqueous waste streams from labs, research or shops that contain organic constituents. The waste is not a listed hazardous waste and does not have a hazardous waste characteristic. It can contain low percentages of organics, or preservatives such as Carosafe.

ATTACHMENT B

Listing Criteria/Characteristics for Hazardous Waste and Class 1 Nonhazardous Waste

Texas State University – San Marcos

Attachment B

Summary of Toxicity Characteristic Analyses
Texas State University
San Marcos, Texas

Contaminant	Regulatory Level (mg/L)
Arsenic	5.0
Barium	100.0
Benzene	0.5
Cadmium	1.0
Carbon tetrachloride	0.5
Chlorobenzene	100.0
Chloroform	6.0
Chromium	5.0
o-Cresol	200.0
m-Cresol	200.0
p-Cresol	200.0
Cresol	200.0
1,4-Dichlorobenzene	7.5
1,2-Dichloroethane	0.5
1,1-Dichloroethylene	0.7
2,4-Dinitrotoluene	0.13
Hexachlorobenzene	0.13
Hexachlorobutadiene	0.5
Hexachloroethane	3.0
Lead	5.0
Mercury	0.2
Methyl ethyl ketone	200.0
Nitrobenzene	2.0
Pentachlorophenol	100.0
Pyridine	5.0
Selenium	1.0
Silver	5.0
Tetrachloroethylene	0.7
Trichloroethylene	0.5
2,4,5-Trichlorophenol	400.0
2,4,6-Trichloroprophenol	2.0
2,4,5-TP (Silvex)	1.0
Vinyl Chloride	0.2

40CFR 261.24 Toxicity Characteristic

Class 1 Toxic Constituents' Maximum Leachable Concentrations
(30 TAC Chapter 335 Subchapter R Appendix 1 Table I)

Applicability: Class 1, 2, and 3 Waste Evaluations

Values are based on information contained in Federal Registers Vol. 55/Friday, July 27, 1990; Vol. 56/June 7, 1991; and Integrated Risk Information Systems, Environmental Protection Agency, and 40 CFR 264 Appendix 9.

Compound	Concentration (mg/l)
Acenaphthene	210
Acetone	400
Acetonitrile	20
Acetophenone	400
Acrylamide	0.08
Acrylonitrile	0.6
Aniline	60
Anthracene	1050
Antimony	1
Arsenic	1.8
Barium	100.0
Benzene	0.50
Benzidine	0.002
Beryllium	0.08
Bis(2-chloroethyl) ether	0.3
Bis(2-ehtylhexyl) phthalate	30
Bromodichloromethane	0.3
Bromomethane	5
Butylbenzyl phthalate	700
Cadmium	0.5
Carbon disulfide	400
Carbon tetrachloride	0.50
Chlordane	0.03
Chlorobenzene	70
Chloroform	6.0
Chloro-m-cresol, p	7000
2-Chlorophenol	20
Chromium	5.0
m-Cresol	200.0*
o-Cresol	200.0*
p-Cresol	200.0*
DDD	1
DDE	1
DDT	1
Dibutyl phthalate	400
1,4-Dichlorobenzene	7.5
3,3-Dichlorobenzidine	0.8
1,2-Dichloroethane	0.50
Dichlorodifluoromethane	700
1,1-Dichloroethylene	0.6
1,3-Dichloropropene	1

Compound	Concentration (mg/l)
2,4-Dichlorophenol	10
2,4-Dichlorophenoxyacetic acid (2,4-D)	10.0
Dieldrin	0.02
Diethyl phthalate	3000
Dimethoate	70
2,4-Dimethyphenol	70
2,6-Dimethyphenol	21
m-Dinitrobenzene	0.4
2,4-Dinitrophenol	7
2,4-Dinitrolouene (and 2,6-, mixture)	0.13
Dinoseb	3.5
1,4-Dioxane	30
Dioxins (Polychlorinated dibenzo-p-dioxins)	
2,3,7,8-TCDD	0.005
1,2,3,7,8-PeCDD	0.010
1,2,3,4,7,8-HxCDD	0.050
1,2,3,6,7,8-HxCDD	0.050
1,2,3,7,8,9-HxCDD	0.050
Diphenylamine	90
1,2-Diphenylhydrazine	0.4
Disulfoton	0.1
Endosulfan	0.2
Endrin	.02
2-Ethoxyethanol	1400
Ethylbenzene	400
Ethylene dibromide	0.004
Ethlene glycol	7000
Fluoranthene	140
Fluorene	140
Furans (Polychlorinated dibenzofurans)	
2,3,7,8-TCDF	0.050
1,2,3,7,8-PeCDF	0.100
2,3,4,7,8-PeCDF	0.010
1,2,3,4,7,8-HxCDF	0.050
1,2,3,6,7,8-HxCDF	0.050
1,2,3,7,8,9-HxCDF	0.050
Heptachlor	0.008

Compound	Concentration (mg/l)
Heptachlor epoxide	0.04
Hexachlorobenzene	0.13
Hexachloro-1,3-butadiene	0.4
Hexachlorocyclopentadiene	20
Hexachloroethane	3.0
Hexachlorophene	1
Isobutyl alcohol	1000
Isophorone	90
Lead	1.5
Lindane	0.3
Mercury	0.2
Methacrylonitrile	0.4
Methomyl	90
Methoxychlor	10.0
2-Methoxyethanol	14.0
Methyl ethyl ketone	200.0
Methyl isobutyl ketone	200
Methylene chloride	50
Methyl parathion	0.9
Mirez	0.7
Nickel	70
Nitrobenzene	2.0
N-Nitroso-di-n-butylamine	0.06
N-Nitrosodiphenylamine	70
N-Nitrosomethylethylamine	0.02
N-Nitroso-n-propylamine	0.05
N-Nitrosopyrrolidine	0.2
p-Phenylenediamine	20
Parathion	20
Pentachlorobenzene	3
Pentachloronitrobenzene	10
Pentachlorophenol	100.0
Phenol	2000

Compound	Concentration (mg/l)
Pronamide	300
Pyrene	5.9
Pyridine	4
Selenium	1.0
Silver	5.0
Styrene	700
1,1,1,2-Tetrachloroethane	10
1,1,2,2-Tetrachloroethane	2
Tetrachloroethylene	0.7
2,3,4,6-Tetrachlorophenol	100
Toluene	1000
Toxaphene	0.3
trans-1,3-Dichloropropene	1
Tribromomethane (Bromoform)	70
1,2,4-Trichlorobenzene	70
1,1,1-Trichloroethane	300
Trichloroethylene	0.5
1,1,2-Trichloroethane	6
Trichlorofluoromethane	1000
2,4,5-Trichlorophenoxy-propionic acid (2,4,5-TP or Silvex)	1.0
1,2,3-Trichloropropane	20
2,4,5-Trichlorophenol	400.0
2,4,6-Trichlorophenol	2`
Vanadium pentoxide	30
Vinyl chloride	0.2
Xylenes (all isomers)	7000

* If o-, m-, and p-cresol concentrations cannot be differentiated, the total cresol concentration is used.
The Maximum Concentration for total cresol is 200.0 mg/l

261.33 (e) Commercial Chemical Products
Manufacturing Chemical Intermediates or Off-Spec Chemical Products
Most of these are listed due to toxicity (T) and are the acute hazardous wastes*

Environmental Protection agency §261.33

Hazardous Waste No.	Substance
P023	Acetaldehyde, chloro-
P002	Acetamide, N-(aminothioxomethyl)-
P057	Acetamide, 2-fluoro-
P058	Acetic acid, fluoro-, sodium salt
P002	Acetyl-2-thiourea
P003	Acrolein
P070	Aldicarb
P203	Aldicarb sulfone.
P004	Aldrin
P005	Allyl alcohol
P006	Aluminum phosphide (R,T)
P007	5-(Aminomethyl)-3-isoxazolol
P008	4-Aminopyridine
P009	Ammonium picrate (R)
P119	Ammonium vanadate
P099	Argentate(1-), bis(cyano-C)-, potassium
P010	Arsenic acid H3 AsO4
P012	Arsenic oxide As2 O3
P011	Arsenic oxide As2 O5
P011	Arsenic pentoxide
P012	Arsenic trioxide
P038	Arsine, diethyl-
P036	Arsonous dichloride, phenyl-
P054	Aziridine
P067	Aziridine, 2-methyl-
P013	Barium cyanide
P024	Benzenamine, 4-chloro-
P077	Benzenamine, 4-nitro-
P028	Benzene, (chloromethyl)-
P042	1,2-Benzenediol, 4-[1-hydroxy-2- (methylamino)ethyl]-, (R)-
P046	Benzeneethanamine, alpha,alpha- dimethyl-
P014	Benzenethiol
P127	7-Benzofuranol, 2,3-dihydro-2,2- dimethyl-, methylcarbamate.
P188	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).
P001	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3- oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
P028	Benzyl chloride
P015	Beryllium powder
P017	Bromoacetone
P018	Brucine
P045	2-Butanone, 3,3-dimethyl-1- (methylthio)-, O-[methylamino)carbonyl] oxime
P021	Calcium cyanide
P021	Calcium cyanide Ca(CN)2
P189	Carbamic acid, [(dibutylamino)- thio]methyl-, 2,3-dihydro-2,2- dimethyl- 7-benzofuranyl

Hazardous Waste No.	Substance
	ester.
P191	Carbamic acid, dimethyl-, 1-[(dimethyl- amino)carbonyl]- 5-methyl-1H- pyrazol- 3-yl ester.
P192	Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)-1H- pyrazol-5-yl ester.
P190	Carbamic acid, methyl-, 3-methylphenyl ester.
P127	Carbofuran.
P022	Carbon disulfide
P095	Carbonic dichloride
P189	Carbosulfan.
P023	Chloroacetaldehyde
P024	p-Chloroaniline
P026	1-(o-Chlorophenyl)thiourea
P027	3-Chloropropionitrile
P029	Copper cyanide
P029	Copper cyanide Cu(CN)
P202	m-Cumenyl methylcarbamate.
P030	Cyanides (soluble cyanide salts), not otherwise specified
P031	Cyanogen
P033	Cyanogen chloride
P033	Cyanogen chloride (CN)Cl
P034	2-Cyclohexyl-4,6-dinitrophenol
P016	Dichloromethyl ether
P036	Dichlorophenylarsine
P037	Dieldrin
P038	Diethylarsine
P041	Diethyl-p-nitrophenyl phosphate
P040	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	Diisopropylfluorophosphate (DFP)
P004	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,8 abeta)-
P060	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,8ab eta)-
P037	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,6a alpha,7beta, 7aalpha)-
P051	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,6 abeta,7beta, 7aalpha)-, & metabolites
P044	Dimethoate
P046	alpha,alpha-Dimethylphenethylamine
P191	Dimetilan.
P047	4,6-Dinitro-o-cresol, & salts
P048	2,4-Dinitrophenol
P020	Dinoseb
P085	Diphosphoramide, octamethyl-
P111	Diphosphoric acid, tetraethyl ester
P039	Disulfoton
P049	Dithiobiuret
P185	1,3-Dithiolane-2-carboxaldehyde, 2,4- dimethyl-, O- [(methylamino)- carbonyl]oxime.
P050	Endosulfan
P088	Endothall
P051	Endrin
P051	Endrin, & metabolites
P042	Epinephrine

Hazardous Waste No.	Substance
P031	Ethanedinitrile
P194	acid, 2- (dimethylamino)-N-[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester.
P066	Ethanimidothioic acid, N-[[(methylamino)carbonyl]oxy]-, methyl ester
P101	Ethyl cyanide
P054	Ethyleneimine
P097	Famphur
P056	Fluorine
P057	Fluoroacetamide
P058	Fluoroacetic acid, sodium salt
P198	Formetanate hydrochloride.
P197	Formparanate.
P065	Fulminic acid, mercury(2+) salt (R,T)
P059	Heptachlor
P062	Hexaethyl tetraphosphate
P116	Hydrazinecarbothioamide
P068	Hydrazine, methyl-
P063	Hydrocyanic acid
P063	Hydrogen cyanide
P096	Hydrogen phosphide
P060	Isodrin
P192	Isolan.
P202	3-Isopropylphenyl N-methylcarbamate.
P007	3(2H)-Isoxazolone, 5-(aminomethyl)-
P196	Manganese, bis(dimethylcarbamodithioato-S,S')-,
P196	Manganese dimethyldithiocarbamate.
P092	Mercury, (acetato-O)phenyl-
P065	Mercury fulminate (R,T)
P082	Methanamine, N-methyl-N-nitroso-
P064	Methane, isocyanato-
P016	Methane, oxybis[chloro-
P112	Methane, tetranitro- (R)
P118	Methanethiol, trichloro-
P198	Methanimidamide, N,N-dimethyl-N'-[3- [[(methylamino)-carbonyl]oxy]phenyl]- , monohydrochloride.
P197	Methanimidamide, N,N-dimethyl-N'-[2- methyl-4- [[(methylamino)carbonyl]oxy]phenyl]-
P050	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10- hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide
P059	4,7-Methano-1H-indene, 1,4,5,6,7,8,8- heptachloro- 3a,4,7,7a-tetrahydro-
P199	Methiocarb.
P066	Methomyl
P068	Methyl hydrazine
P064	Methyl isocyanate
P069	2-Methyllactonitrile
P071	Methyl parathion
P190	Metolcarb.
P128	Mexacarbate.
P072	alpha-Naphthylthiourea
P073	Nickel carbonyl
P073	Nickel carbonyl Ni(CO)4, (T-4)-
P074	Nickel cyanide
P074	Nickel cynaide Ni(CN)2

Hazardous Waste No.	Substance
P075	Nicotine, & salts
P076	Nitric oxide
P077	p-Nitroaniline
P078	Nitrogen dioxide
P076	Nitrogen oxide NO
P078	Nitrogen oxide NO2
P081	Nitroglycerine (R)
P082	N-Nitrosodimethylamine
P084	N-Nitrosomethylvinylamine
P085	Octamethylpyrophosphoramide
P087	Osmium oxide OsO4, (T-4)-
P087	Osmium tetroxide
P088	7-Oxabicyclo[2.2.1]heptane-2,3- dicarboxylic acid
P194	Oxamyl.
P089	Parathion
P034	Phenol, 2-cyclohexyl-4,6-dinitro-
P048	Phenol, 2,4-dinitro-
P047	Phenol, 2-methyl-4,6-dinitro-, & salts
P020	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P009	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P128	Phenol, 4-(dimethylamino)-3,5-dimethyl- , methylcarbamate (ester).
P199	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate
P202	Phenol, 3-(1-methylethyl)-, methyl carbamate.
P201	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate.
P092	Phenylmercury acetate
P093	Phenylthiourea
P094	Phorate
P095	Phosgene
P096	Phosphine
P041	Phosphoric acid, diethyl 4-nitrophenyl ester
P039	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
P094	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
P044	Phosphorodithioic acid, O,O-dimethyl S- [2-(methylamino)-2-oxoethyl] ester
P043	Phosphorofluoridic acid, bis(1- methylethyl) ester
P089	Phosphorothioic acid, O,O-diethyl O-(4- nitrophenyl) ester
P040	Phosphorothioic acid, O,O-diethyl O- pyrazinyl ester
P097	Phosphorothioic acid, O-[4- [(dimethylamino)sulfonyl]phenyl] O,O- dimethyl ester
P071	Phosphorothioic acid, O,O,-dimethyl O- (4-nitrophenyl) ester
P204	Physostigmine.
P188	Physostigmine salicylate.
P110	Plumbane, tetraethyl-
P098	Potassium cyanide
P098	Potassium cyanide K(CN)
P099	Potassium silver cyanide
P201	Promecarb
P070	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P203	Propanal, 2-methyl-2-(methyl-sulfonyl)- , O-[(methylamino)carbonyl] oxime.
P101	Propanenitrile
P027	Propanenitrile, 3-chloro-
P069	Propanenitrile, 2-hydroxy-2-methyl-

Hazardous Waste No.	Substance
P081	1,2,3-Propanetriol, trinitrate (R)
P017	2-Propanone, 1-bromo-
P102	Propargyl alcohol
P003	2-Propenal
P005	2-Propen-1-ol
P067	1,2-Propylenimine
P102	2-Propyn-1-ol
P008	4-Pyridinamine
P075	Pyridine, 3-(1-methyl-2-pyrrolidinyl)- , (S)-, & salts
P204	Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8- trimethyl-, methylcarbamate (ester), (3aS-cis)-.
P114	Selenious acid, dithallium(1+) salt
P103	Selenourea
P104	Silver cyanide
P104	Silver cyanide Ag(CN)
P105	Sodium azide
P106	Sodium cyanide
P106	Sodium cyanide Na(CN)
P108	Strychnidin-10-one, & salts
P018	Strychnidin-10-one, 2,3-dimethoxy-
P108	Strychnine, & salts
P115	Sulfuric acid, dithallium(1+) salt
P109	Tetraethyldithiopyrophosphate
P110	Tetraethyl lead
P111	Tetraethyl pyrophosphate
P112	Tetranitromethane (R)
P062	Tetraphosphoric acid, hexaethyl ester
P113	Thallic oxide
P113	Thallium oxide Tl2 O3
P114	Thallium(I) selenite
P115	Thallium(I) sulfate
P109	Thiodiphosphoric acid, tetraethyl ester
P045	Thiofanox
P049	Thioimidodicarbonic diamide [(H2 N)C(S)]2 NH
P014	Thiophenol
P116	Thiosemicarbazide
P026	Thiourea, (2-chlorophenyl)-
P072	Thiourea, 1-naphthalenyl-
P093	Thiourea, phenyl-
P185	Tirpate.
P123	Toxaphene
P118	Trichloromethanethiol
P119	Vanadic acid, ammonium salt
P120	Vanadium oxide V2 O5
P120	Vanadium pentoxide
P084	Vinylamine, N-methyl-N-nitroso-
P001	Warfarin, & salts, when present at concentrations greater than 0.3%
P205	Zinc, bis(dimethylcarbamodithioato- S,S')-,
P121	Zinc cyanide
P121	Zinc cyanide Zn(CN)2
P122	Zinc phosphide Zn3 P2, when present at concentrations greater than 10% (R,T)
P205	Ziram.

261.33 (F) Commercial Chemical Products, Manufacturing Chemical Intermediates or Off-Spec Commercial Chemical Products

Hazardous waste No.	**Substance**
U394	A2213.
U001	Acetaldehyde (I)
U034	Acetaldehyde, trichloro-
U187	Acetamide, N-(4-ethoxyphenyl)-
U005	Acetamide, N-9H-fluoren-2-yl-
U240	Acetic acid, (2,4-dichlorophenoxy)-, salts & esters
U112	Acetic acid ethyl ester (I)
U144	Acetic acid, lead(2+) salt
U214	Acetic acid, thallium(1+) salt
see F027	Acetic acid, (2,4,5-trichlorophenoxy)-
U002	Acetone (I)
U003	Acetonitrile (I,T)
U004	Acetophenone
U005	2-Acetylaminofluorene
U006	Acetyl chloride (C,R,T)
U007	Acrylamide
U008	Acrylic acid (I)
U009	Acrylonitrile
U011	Amitrole
U012	Aniline (I,T)
U136	Arsinic acid, dimethyl-
U014	Auramine
U015	Azaserine
U010	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	Barban.
U278	Bendiocarb.
U364	Bendiocarb phenol.
U271	Benomyl.
U157	Benz[j]aceanthrylene, 1,2-dihydro-3- methyl-
U016	Benz[c]acridine
U017	Benzal chloride
U192	Benzamide, 3,5-dichloro-N-(1,1- dimethyl-2-propynyl)-
U018	Benz[a]anthracene
U094	Benz[a]anthracene, 7,12-dimethyl-
U012	Benzenamine (I,T)
U014	Benzenamine, 4,4'-carbonimidoylbis[N,N- dimethyl-
U049	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U093	Benzenamine, N,N-dimethyl-4- (phenylazo)-
U328	Benzenamine, 2-methyl-
U353	Benzenamine, 4-methyl-
U158	Benzenamine, 4,4'-methylenebis[2- chloro-
U222	Benzenamine, 2-methyl-, hydrochloride
U181	Benzenamine, 2-methyl-5-nitro-
U019	Benzene (I,T)
U038	Benzeneacetic acid, 4-chloro-alpha-(4- chlorophenyl)-alpha-hydroxy-, ethyl ester
U030	Benzene, 1-bromo-4-phenoxy-

Hazardous waste No.	Substance
U035	Benzenebutanoic acid, 4-[bis(2- chloroethyl)amino]-
U037	Benzene, chloro-
U221	Benzenediamine, ar-methyl-
U028	1,2-Benzenedicarboxylic acid, bis(2- ethylhexyl) ester
U069	1,2-Benzenedicarboxylic acid, dibutyl ester
U088	1,2-Benzenedicarboxylic acid, diethyl ester
U102	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	1,2-Benzenedicarboxylic acid, dioctyl ester
U070	Benzene, 1,2-dichloro-
U071	Benzene, 1,3-dichloro-
U072	Benzene, 1,4-dichloro-
U060	Benzene, 1,1'-(2,2- dichloroethylidene)bis[4-chloro-
U017	Benzene, (dichloromethyl)-
U223	Benzene, 1,3-diisocyanatomethyl- (R,T)
U239	Benzene, dimethyl- (I,T)
U201	1,3-Benzenediol
U127	Benzene, hexachloro-
U056	Benzene, hexahydro- (I)
U220	Benzene, methyl-
U105	Benzene, 1-methyl-2,4-dinitro-
U106	Benzene, 2-methyl-1,3-dinitro-
U055	Benzene, (1-methylethyl)- (I)
U169	Benzene, nitro-
U183	Benzene, pentachloro-
U185	Benzene, pentachloronitro-
U020	Benzenesulfonic acid chloride (C,R)
U020	Benzenesulfonyl chloride (C,R)
U207	Benzene, 1,2,4,5-tetrachloro-
U061	Benzene, 1,1'-(2,2,2- trichloroethylidene)bis[4-chloro-
U247	Benzene, 1,1'-(2,2,2- trichloroethylidene)bis[4- methoxy-
U023	Benzene, (trichloromethyl)-
U234	Benzene, 1,3,5-trinitro-
U021	Benzidine
U202	1,2-Benzisothiazol-3(2H)-one, 1,1- dioxide, & salts
U278	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate.
U364	1,3-Benzodioxol-4-ol, 2,2-dimethyl-,
U203	1,3-Benzodioxole, 5-(2-propenyl)-
U141	1,3-Benzodioxole, 5-(1-propenyl)-
U367	7-Benzofuranol, 2,3-dihydro-2,2- dimethyl-
U090	1,3-Benzodioxole, 5-propyl-
U064	Benzo[rst]pentaphene
U248	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3- oxo-1-phenyl-butyl)-, & salts, when present at concentrations of 0.3% or less
U022	Benzo[a]pyrene
U197	p-Benzoquinone
U023	Benzotrichloride (C,R,T)
U085	2,2'-Bioxirane
U021	[1,1'-Biphenyl]-4,4'-diamine
U073	[1,1'-Biphenyl]-4,4'-diamine, 3,3'- dichloro-
U091	[1,1'-Biphenyl]-4,4'-diamine, 3,3'- dimethoxy-
U095	[1,1'-Biphenyl]-4,4'-diamine, 3,3'- dimethyl-

Hazardous waste No.	Substance
U225	Bromoform
U030	4-Bromophenyl phenyl ether
U128	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172	1-Butanamine, N-butyl-N-nitroso-
U031	1-Butanol (I)
U159	2-Butanone (I,T)
U160	2-Butanone, peroxide (R,T)
U053	2-Butenal
U074	2-Butene, 1,4-dichloro- (I,T)
U143	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	n-Butyl alcohol (I)
U136	Cacodylic acid
U032	Calcium chromate
U372	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester.
U271	Carbamic acid, [1- [(butylamino)carbonyl]-1H- benzimidazol-2-yl]-, methyl ester.
U280	Carbamic acid, (3-chlorophenyl)-, 4- chloro-2-butynyl ester.
U238	Carbamic acid, ethyl ester
U178	Carbamic acid, methylnitroso-, ethyl ester
U373	Carbamic acid, phenyl-, 1-methylethyl ester.
U409	Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)]bis-, dimethyl ester.
U097	Carbamic chloride, dimethyl-
U389	Carbamothioic acid, bis(1-methylethyl)- , S-(2,3,3-trichloro-2-propenyl) ester.
U387	Carbamothioic acid, dipropyl-, S- (phenylmethyl) ester.
U114	Carbamodithioic acid, 1,2- ethanediylbis-, salts & esters
U062	Carbamothioic acid, bis(1-methylethyl)- , S-(2,3-dichloro-2-propenyl) ester
U279	Carbaryl.
U372	Carbendazim.
U367	Carbofuran phenol.
U215	Carbonic acid, dithallium(1+) salt
U033	Carbonic difluoride
U156	Carbonochloridic acid, methyl ester (I,T)
U033	Carbon oxyfluoride (R,T)
U211	Carbon tetrachloride
U034	Chloral
U035	Chlorambucil
U036	Chlordane, alpha & gamma isomers
U026	Chlornaphazin
U037	Chlorobenzene
U038	Chlorobenzilate
U039	p-Chloro-m-cresol
U042	2-Chloroethyl vinyl ether
U044	Chloroform
U046	Chloromethyl methyl ether
U047	beta-Chloronaphthalene
U048	o-Chlorophenol
U049	4-Chloro-o-toluidine, hydrochloride
U032	Chromic acid H2 CrO4, calcium salt
U050	Chrysene
U051	Creosote

Hazardous waste No.	Substance
U052	Cresol (Cresylic acid)
U053	Crotonaldehyde
U055	Cumene (I)
U246	Cyanogen bromide (CN)Br
U197	2,5-Cyclohexadiene-1,4-dione
U056	Cyclohexane (I)
U129	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6 beta)-
U057	Cyclohexanone (I)
U130	1,3-Cyclopentadiene, 1,2,3,4,5,5- hexachloro-
U058	Cyclophosphamide
U240	2,4-D, salts & esters
U059	Daunomycin
U060	DDD
U061	DDT
U062	Diallate
U063	Dibenz[a,h]anthracene
U064	Dibenzo[a,i]pyrene
U066	1,2-Dibromo-3-chloropropane
U069	Dibutyl phthalate
U070	o-Dichlorobenzene
U071	m-Dichlorobenzene
U072	p-Dichlorobenzene
U073	3,3'-Dichlorobenzidine
U074	1,4-Dichloro-2-butene (I,T)
U075	Dichlorodifluoromethane
U078	1,1-Dichloroethylene
U079	1,2-Dichloroethylene
U025	Dichloroethyl ether
U027	Dichloroisopropyl ether
U024	Dichloromethoxy ethane
U081	2,4-Dichlorophenol
U082	2,6-Dichlorophenol
U084	1,3-Dichloropropene
U085	1,2:3,4-Diepoxybutane (I,T)
U108	1,4-Diethyleneoxide
U028	Diethylhexyl phthalate
U395	Diethylene glycol, dicarbamate.
U086	N,N'-Diethylhydrazine
U087	O,O-Diethyl S-methyl dithiophosphate
U088	Diethyl phthalate
U089	Diethylstilbesterol
U090	Dihydrosafrole
U091	3,3'-Dimethoxybenzidine
U092	Dimethylamine (I)
U093	p-Dimethylaminoazobenzene
U094	7,12-Dimethylbenz[a]anthracene
U095	3,3'-Dimethylbenzidine
U096	alpha,alpha- Dimethylbenzylhydroperoxide (R)
U097	Dimethylcarbamoyl chloride
U098	1,1-Dimethylhydrazine

Hazardous waste No.	Substance
U099	1,2-Dimethylhydrazine
U101	2,4-Dimethylphenol
U102	Dimethyl phthalate
U103	Dimethyl sulfate
U105	2,4-Dinitrotoluene
U106	2,6-Dinitrotoluene
U107	Di-n-octyl phthalate
U108	1,4-Dioxane
U109	1,2-Diphenylhydrazine
U110	Dipropylamine (I)
U111	Di-n-propylnitrosamine
U041	Epichlorohydrin
U001	Ethanal (I)
U404	121-44-8 Ethanamine, N,N-diethyl-
U174	Ethanamine, N-ethyl-N-nitroso-
U155	1,2-Ethanediamine, N,N-dimethyl-N'-2- pyridinyl-N'-(2-thienylmethyl)-
U067	Ethane, 1,2-dibromo-
U076	Ethane, 1,1-dichloro-
U077	Ethane, 1,2-dichloro-
U131	Ethane, hexachloro-
U024	Ethane, 1,1'-[methylenebis(oxy)]bis[2- chloro-
U117	Ethane, 1,1'-oxybis-(I)
U025	Ethane, 1,1'-oxybis[2-chloro-
U184	Ethane, pentachloro-
U208	Ethane, 1,1,1,2-tetrachloro-
U209	Ethane, 1,1,2,2-tetrachloro-
U218	Ethanethioamide
U226	Ethane, 1,1,1-trichloro-
U227	Ethane, 1,1,2-trichloro-
U410	Ethanimidothioic acid, N,N'- [thiobis[(methylimino)carbonyloxy]]bi s-, dimethyl ester
U394	Ethanimidothioic acid, 2- (dimethylamino)-N-hydroxy-2-oxo-, methyl ester.
U359	Ethanol, 2-ethoxy-
U173	Ethanol, 2,2'-(nitrosoimino)bis-
U395	Ethanol, 2,2'-oxybis-, dicarbamate.
U004	Ethanone, 1-phenyl-
U043	Ethene, chloro-
U042	Ethene, (2-chloroethoxy)-
U078	Ethene, 1,1-dichloro-
U079	Ethene, 1,2-dichloro-, (E)-
U210	Ethene, tetrachloro-
U228	Ethene, trichloro-
U112	Ethyl acetate (I)
U113	Ethyl acrylate (I)
U238	Ethyl carbamate (urethane)
U117	Ethyl ether (I)
U114	Ethylenebisdithiocarbamic acid, salts & esters
U067	Ethylene dibromide
U077	Ethylene dichloride
U359	Ethylene glycol monoethyl ether
U115	Ethylene oxide (I,T)

Hazardous waste No.	Substance
U116	Ethylenethiourea
U076	Ethylidene dichloride
U118	Ethyl methacrylate
U119	Ethyl methanesulfonate
U120	Fluoranthene
U122	Formaldehyde
U123	Formic acid (C,T)
U124	Furan (I)
U125	2-Furancarboxaldehyde (I)
U147	2,5-Furandione
U213	Furan, tetrahydro-(I)
U125	Furfural (I)
U124	Furfuran (I)
U206	Glucopyranose, 2-deoxy-2-(3-methyl-3- nitrosoureido)-, D-
U206	D-Glucose, 2-deoxy-2- [[(methylnitrosoamino)- carbonyl]amino]-
U126	Glycidylaldehyde
U163	Guanidine, N-methyl-N'-nitro-N-nitroso-
U127	Hexachlorobenzene
U128	Hexachlorobutadiene
U130	Hexachlorocyclopentadiene
U131	Hexachloroethane
U132	Hexachlorophene
U243	Hexachloropropene
U133	Hydrazine (R,T)
U086	Hydrazine, 1,2-diethyl-
U098	Hydrazine, 1,1-dimethyl-
U099	Hydrazine, 1,2-dimethyl-
U109	Hydrazine, 1,2-diphenyl-
U134	Hydrofluoric acid (C,T)
U134	Hydrogen fluoride (C,T)
U135	Hydrogen sulfide
U135	Hydrogen sulfide H2 S
U096	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U116	2-Imidazolidinethione
U137	Indeno[1,2,3-cd]pyrene
U190	1,3-Isobenzofurandione
U140	Isobutyl alcohol (I,T)
U141	Isosafrole
U142	Kepone
U143	Lasiocarpine
U144	Lead acetate
U146	Lead, bis(acetato-O)tetrahydroxytri-
U145	Lead phosphate
U146	Lead subacetate
U129	Lindane
U163	MNNG
U147	Maleic anhydride
U148	Maleic hydrazide
U149	Malononitrile
U150	Melphalan

Hazardous waste No.	Substance
U151	Mercury
U152	Methacrylonitrile (I, T)
U092	Methanamine, N-methyl- (I)
U029	Methane, bromo-
U045	Methane, chloro- (I, T)
U046	Methane, chloromethoxy-
U068	Methane, dibromo-
U080	Methane, dichloro-
U075	Methane, dichlorodifluoro-
U138	Methane, iodo-
U119	Methanesulfonic acid, ethyl ester
U211	Methane, tetrachloro-
U153	Methanethiol (I, T)
U225	Methane, tribromo-
U044	Methane, trichloro-
U121	Methane, trichlorofluoro-
U036	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8- octachloro-2,3,3a,4,7,7a-hexahydro-
U154	Methanol (I)
U155	Methapyrilene
U142	1,3,4-Metheno-2H-cyclobuta[cd]pentalen- 2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
U247	Methoxychlor
U154	Methyl alcohol (I)
U029	Methyl bromide
U186	1-Methylbutadiene (I)
U045	Methyl chloride (I,T)
U156	Methyl chlorocarbonate (I,T)
U226	Methyl chloroform
U157	3-Methylcholanthrene
U158	4,4'-Methylenebis(2-chloroaniline)
U068	Methylene bromide
U080	Methylene chloride
U159	Methyl ethyl ketone (MEK) (I,T)
U160	Methyl ethyl ketone peroxide (R,T)
U138	Methyl iodide
U161	Methyl isobutyl ketone (I)
U162	Methyl methacrylate (I,T)
U161	4-Methyl-2-pentanone (I)
U164	Methylthiouracil
U010	Mitomycin C
U059	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)-
U167	1-Naphthalenamine
U168	2-Naphthalenamine
U026	Naphthalenamine, N,N'-bis(2- chloroethyl)-
U165	Naphthalene
U047	Naphthalene, 2-chloro-
U166	1,4-Naphthalenedione
U236	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	1-Naphthalenol, methylcarbamate.

Hazardous waste No.	Substance
U166	1,4-Naphthoquinone
U167	alpha-Naphthylamine
U168	beta-Naphthylamine
U217	Nitric acid, thallium(1+) salt
U169	Nitrobenzene (I,T)
U170	p-Nitrophenol
U171	2-Nitropropane (I,T)
U172	N-Nitrosodi-n-butylamine
U173	N-Nitrosodiethanolamine
U174	N-Nitrosodiethylamine
U176	N-Nitroso-N-ethylurea
U177	N-Nitroso-N-methylurea
U178	N-Nitroso-N-methylurethane
U179	N-Nitrosopiperidine
U180	N-Nitrosopyrrolidine
U181	5-Nitro-o-toluidine
U193	1,2-Oxathiolane, 2,2-dioxide
U058	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2- oxide
U115	Oxirane (I,T)
U126	Oxiranecarboxyaldehyde
U041	Oxirane, (chloromethyl)-
U182	Paraldehyde
U183	Pentachlorobenzene
U184	Pentachloroethane
U185	Pentachloronitrobenzene (PCNB)
See F027	Pentachlorophenol
U161	Pentanol, 4-methyl-
U186	1,3-Pentadiene (I)
U187	Phenacetin
U188	Phenol
U048	Phenol, 2-chloro-
U039	Phenol, 4-chloro-3-methyl-
U081	Phenol, 2,4-dichloro-
U082	Phenol, 2,6-dichloro-
U089	Phenol, 4,4'-(1,2-diethyl-1,2- ethenediyl)bis-, (E)-
U101	Phenol, 2,4-dimethyl-
U052	Phenol, methyl-
U132	Phenol, 2,2'-methylenebis[3,4,6- trichloro-
U411	Phenol, 2-(1-methylethoxy)-, methylcarbamate.
U170	Phenol, 4-nitro-
See F027	Phenol, pentachloro-
See F027	Phenol, 2,3,4,6-tetrachloro-
See F027	Phenol, 2,4,5-trichloro-
See F027	Phenol, 2,4,6-trichloro-
U150	L-Phenylalanine, 4-[bis(2- chloroethyl)amino]-
U145	Phosphoric acid, lead(2+) salt (2:3)
U087	Phosphorodithioic acid, O,O-diethyl S- methyl ester
U189	Phosphorus sulfide (R)
U190	Phthalic anhydride
U191	2-Picoline

Hazardous waste No.	Substance
U179	Piperidine, 1-nitroso-
U192	Pronamide
U194	1-Propanamine (I,T)
U111	1-Propanamine, N-nitroso-N-propyl-
U110	1-Propanamine, N-propyl- (I)
U066	Propane, 1,2-dibromo-3-chloro-
U083	Propane, 1,2-dichloro-
U149	Propanedinitrile
U171	Propane, 2-nitro- (I,T)
U027	Propane, 2,2'-oxybis[2-chloro-
U193	1,3-Propane sultone
See F027	Propanoic acid, 2-(2,4,5- trichlorophenoxy)-
U235	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U140	1-Propanol, 2-methyl- (I,T)
U002	2-Propanone (I)
U007	2-Propenamide
U084	1-Propene, 1,3-dichloro-
U243	1-Propene, 1,1,2,3,3,3-hexachloro-
U009	2-Propenenitrile
U152	2-Propenenitrile, 2-methyl- (I,T)
U008	2-Propenoic acid (I)
U113	2-Propenoic acid, ethyl ester (I)
U118	2-Propenoic acid, 2-methyl-, ethyl ester
U162	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U373	Propham.
U411	Propoxur.
U387	Prosulfocarb.
U194	n-Propylamine (I,T)
U083	Propylene dichloride
U148	3,6-Pyridazinedione, 1,2-dihydro-
U196	Pyridine
U191	Pyridine, 2-methyl-
U237	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2- chloroethyl)amino]-
U164	4(1H)-Pyrimidinone, 2,3-dihydro-6- methyl-2-thioxo-
U180	Pyrrolidine, 1-nitroso-
U200	Reserpine
U201	Resorcinol
U202	Saccharin, & salts
U203	Safrole
U204	Selenious acid
U204	Selenium dioxide
U205	Selenium sulfide
U205	Selenium sulfide SeS2 (R,T)
U015	L-Serine, diazoacetate (ester)
See F027	Silvex (2,4,5-TP)
U206	Streptozotocin
U103	Sulfuric acid, dimethyl ester
U189	Sulfur phosphide (R)
See F027	2,4,5-T
U207	1,2,4,5-Tetrachlorobenzene

Hazardous waste No.	Substance
U208	1,1,1,2-Tetrachloroethane
U209	1,1,2,2-Tetrachloroethane
U210	Tetrachloroethylene
See F027	2,3,4,6-Tetrachlorophenol
U213	Tetrahydrofuran (I)
U214	Thallium(I) acetate
U215	Thallium(I) carbonate
U216	Thallium(I) chloride
U216	Thallium chloride Tlcl
U217	Thallium(I) nitrate
U218	Thioacetamide
U410	Thiodicarb.
U153	Thiomethanol (I,T)
U244	Thioperoxydicarbonic diamide [(H2 N)C(S)]2 S2, tetramethyl-
U409	Thiophanate-methyl.
U219	Thiourea
U244	Thiram
U220	Toluene
U221	Toluenediamine
U223	Toluene diisocyanate (R,T)
U328	o-Toluidine
U353	p-Toluidine
U222	o-Toluidine hydrochloride
U389	Triallate.
U011	1H-1,2,4-Triazol-3-amine
U227	1,1,2-Trichloroethane
U228	Trichloroethylene
U121	Trichloromonofluoromethane
See F027	4 2,4,5-Trichlorophenol
See F027	2,4,6-Trichlorophenol
U404	Triethylamine.
U234	1,3,5-Trinitrobenzene (R,T)
U182	1,3,5-Trioxane, 2,4,6-trimethyl-
U235	Tris(2,3-dibromopropyl) phosphate
U236	Trypan blue
U237	Uracil mustard
U176	Urea, N-ethyl-N-nitroso-
U177	Urea, N-methyl-N-nitroso-
U043	Vinyl chloride
U248	Warfarin, & salts, when present at concentrations of 0.3% or less
U239	Xylene (I)
U200	Yohimban-16-carboxylic acid, 11,17- dimethoxy-18-[(3,4,5- trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-
U249	Zinc phosphide Zn3 P2, when present at concentrations of 10% or less

§261.31 Hazardous wastes from non-specific sources.

(a) The following solid wastes are listed hazardous wastes from non-specific sources unless they are excluded under §§260.20 and 260.22 and listed in Appendix IX.

Industry and EPA hazardous waste No.	Hazardous waste	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 mixtures.	(T)
F002	The following spent halogenated solvents: Tetrachloroethlene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,2,3-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 solvent 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 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 solvent 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.	(T,I)

ATTACHMENT C

List of SAA Locations on Campus and Emergency Procedures/Contact Information

Texas State University – San Marcos

List of Satellite Accumulation Areas on Campus

Department	Building	Contact	Phone Number	Special Requests
1. Aquatic Biology	Freeman - Room 104 Freeman - Room 140 Freeman - Room 208 Freeman - Room 220 Freeman - Room 258 Freeman - Room 260	Phillip Ramirez	245-7991	
2. Biology	Supple - Room 331 Supple - Room 352 Supple - Room 313 Supple - Room 270 Supple - Room 283 Supple - Room 422 Supple - Room 437A	John Word Dr. McLean Dr. Upchurch Dr. Forstner Dr. Forstner Dr. Erica Simpson Dr. Garcia	245-3313 245-3365 245-3751 245-2178 245-2178 245-2178 245-3368	
3. Chemistry	Chemistry/Centennial Stock Room 249 (CAA is 249A)	Donnie Cantu	245-3118	
4. EARDC	Freeman - Room 248B Freeman - Room 246 Freeman - Room 268	Joe Guerrero	245-2329	

List of Satellite Accumulation Areas on Campus

Department	Building	Contact	Phone Number	Special Requests
5. Physical Plant Shops	HVAC Shop Paint Shop West Campus Paint Grounds West Campus Soccer	Michael Burkepile Larry Rodriguez Jessi Diaz Brad Smith Brent Cochran	245-2830 245-2838 245-9131 245-7846 245-2392	
6. Art-Mitte	JC Mitte - Room 4105 JC Mitte - Room 4112 JC Mitte - Room 4112B JC Mitte - Room 4107G JC Mitte - Room 1126D JC Mitte - Room 1130 JC Mitte - Room 1124 JC Mitte - Room 2104 JC Mitte - Room 2115 JC Mitte - Room 2120 JC Mitte - Room 2131	Thomas Fitzpatrick Jeff Dell Jeff Dell Barry Stone Beverly Penn Roxana Tuff Kay Bading Mary Mikel Stump Roxana Tuff Roxana Tuff Roxana Tuff	245-3767 245-1815 245-1815 245-1320 245-2611 245-2611 245-2611 245-2664 245-2611 245-2611 245-2611	(metals)
7. Technology-Mitte And Engineering	RF Mitte - 1225B (Paint Shop) RF Mitte - 1227B (outside cage) RF Mitte - 1210 RF Mitte - 1218 RF Mitte - 1236 RF Mitte - 2233 RF Mitte - 2234	Shane Arabie Shane Arabie Shane Arabie Dr. Tate Nate England Eric Shires Eric Shires	245-7778 245-7778 245-7778 245-1826 245-2131 245-6772 245-6772	
8. Print Shop	RR 12 Location	Robert Espinoza	245-2601	

List of Satellite Accumulation Areas on Campus

Department	Building	Contact	Phone Number	Special Requests
9. Photo	Sabinal - Room 222 Sabinal - Room 246	Barry Stone Barry Stone	245-1320 245-1320	CODE 1222
10. Family and Consumer Science	FCS - Room 295A FCS - Room 287M FCS - Room 287E	Dr. Raj Vatteem Dr. Vatsala Maitin Dr. Michelle Lane	245-7655 245-3786 245-2155	(very small quantity)
11. Theater	Theater - Room 215	Dwight Markus	245-2147	
12. Pecos	Pecos - Room 103	Randall Reed	245-2611	
13. Agriculture	Agriculture - Room 226	Boyd Brown	245-2373	
14. LBJ Student Center	Loading Dock	Dave Rader	245-3683	
15. Smith House	Container Storage Shed	Lisa Arceneaux	245-8252	
16. CoGen	CoGen-001 CoGen-002	Carl Teague Carl Teague	245-2235 245-2235	Engine Rm Lower Level Mechanic Break Room

TEXAS STATE UNIVERSITY
SAN MARCOS
The rising STAR of Texas

HAZARDOUS WASTE EMERGENCY PROCEDURES

IN CASE OF EMERGENCY DIAL: 911

PRIMARY CONTACTS FOR BUILDING_____ROOM_____

-- EMERGENCY RESPONSE SUPPLY LOCATIONS --

SPILL RESPONSE SUPPLIES ARE LOCATED _____

A FIRST AID KIT IS LOCATED _____

A TYPE:_____FIRE EXTINGUISHER IS LOCATED _____

-- EMERGENCY PROCEDURES –
Remember! Personnel and Public Safety are the First Priority!

1. IN THE EVENT OF A SPILL

   A. ELIMINATE SOURCES OF IGNITION

   B. ISOLATE THE DISCHARGE; MINIMIZE FURTHER FLOW

   C. MAKE INTERNAL NOTIFICATIONS (University Police Department, Supervisor)

   D. CLEANUP MATERIAL USING PROPER SUPPLIES AND PERSONAL PROTECTIVE EQUIPMENT

   E. CONTACT ENVIRONMENTAL HEALTH, SAFETY AND RISK MANAGEMENT FOR MATERIAL DISPOSAL

2. IN THE EVENT OF A FIRE

   A. ACTIVATE THE BUILDING FIRE ALARM

   B. EVACUATE THE BUILDING

   C. CALL 911 FROM ANY UNIVERSITY PHONE AND SPECIFICALLY REPORT A FIRE (All calls on campus routed through University Police Department)

-- HAZARDOUS MATERIALS COORDINATOR FOR CAMPUS --

LISA ARCENEAUX ENVIRONMENTAL, HEALTH AND SAFETY SPECIALIST
TELEPHONE - (512) 245-8252 OR (512) 245-3616

EHSRM-EH-6 (Revised: 7/2012)

ATTACHMENT D

SAA and CAA Inspection Forms and Example Inventory Logs For Container Accumulation Area (NOR 007)

Texas State University – San Marcos

TEXAS STATE
ENVIRONMENTAL HEALTH,
SAFETY & RISK MANAGEMENT

CAA Weekly Inspection Checklist

Name of Inspector: _____ Date: ___/___ /___

Accumulation start date of oldest container:___/___ /___

Criteria	Status	
	Yes	No
1. Condition of Containers		
a. Are any open? (LQG,SQG)		
b. Are any severely rusted? (LQG,SQG)		
c. Are any container heads bulging? (LQG,SQG)		
d. Are any leaking? (LQG,SQG)		
e. Are liquid wastes in secondary containment? (BMP)		
f. Are incompatible wastes segregated by hazard class? (LQG,SQG)		
2. Container Markings:		
a. Hazardous Waste label on container(s)? (BMP)		
b. Accumulation Start Date on container(s)? (LQG,SQG)		
c. Contents marked on container(s)? (BMP)		
d. Texas waste code marked on container(s)? (BMP)		
3. Condition of Accumulation Room or Building:		
a. Is adequate aisle space present to allow unobstructed movement? (LQG,SQG)		
b. Is emergency contact information available and up to date? (LQG,SQG)		
c. Is the emergency coordinator contact information available? (LQG,SQG)		
d. Is a telephone easily accessible in case of emergency? (LQG,SQG)		
e. Are the inspectors carrying a cellular phone? (LQG,SQG)		
f. Is an empty salvage drum nearby? (LQG,SQG)		
g. Are adequate spill control materials nearby and accessible? (LQG,SQG)		
h. Is adequate personal protective equipment nearby? (LQG,SQG)		
i. Is a fire extinguisher readily accessible? (LQG,SQG)		
j. Is the fire extinguisher fully-charged? (BMP)		
k. Is the fire extinguisher seal in tact? (BMP)		
l. Has the monthly fire inspection occurred and is it documented on the tag?		
m. Is semiannual inspection of Fire Suppression System current?		
n. Is the safety shower readily accessible? (BMP)		
o. Is the emergency eyewash readily accessible? (OSHA requirement)		
p. Is the emergency eyewash working? (OSHA requirement)		
q. Is a water source nearby to provide adequate supply for emergency equipment (fire hose, sprinkler)? (LQG,SQG)		
r. Are hazardous containers holding ignitable or reactive waste stored at least 50 feet from the facility property line?		

Deficiencies Noted and Corrective Action Summary

Note Checklist item designation (e.g. 2a), describe the deficiency in detail, then describe what specific corrective actions were taken and when. If additional follow up actions were required, continue the corrective action summary on additional sheets being sure to note the date and time of each follow up action and which checklist item it is related to.

Deficiency	Corrective Action/Date

Satellite Accumulation Area Checklist

Location: _____ – _____

Date: _____ **Inspector(s):** _____

Use this checklist to perform monthly inspections of satellite accumulation areas. More frequent inspections can be performed if deemed necessary by RMSO. Keep a copy on file at RMSO and send a copy to the department SAA contact. If you notice deficiencies, describe them in the "Notes" section as well as follow-up actions you took to correct them.

	Yes	No	N/A
1. Waste containers properly labeled?			
2. Are waste containers closed?			
3. Are waste containers in good condition?			
4. Are waste containers compatible with contents?			
5. Are incompatible waste types well separated from each other?			
6. Are waste containers provided with secondary containment?			
7. Is emergency contact information posted nearby?			
8. Are suitable spill control materials nearby and in a well marked location?			
9. SAA sign posted?			
10. Good housekeeping?			

Notes:

_____

_____

_____

_____

_____

_____

_____

Please put the building codes and room numbers in the line for "Location" followed by the name of the building. The following codes are to be used: Aquatic Biology (768), Biology/Supple (818), Chemistry (783), EARDC (768), Agriculture (718), Physical Plant Shops (778), Joanne Cole Mitte/Art (846), Roy F. Mitte (845), Sabinal/Photography (737), Print Shop (102), Custodial (101), Family & Consumer Science (756).

Hazardous Waste Pickup/Transport Record

Department Information				**Waste Information**			**Pickup**		
Date	Department	Contact (name/ext)	Designated Pickup location	Type of waste (bags, sharps, containers)	Qty	Labeled Correctly	**Date**	Time	**Comment**

ATTACHMENT E

Standard Operating Procedures for Hazardous Waste Pickup
And
Universal Waste Bulb Management

Texas State University – San Marcos

I. PURPOSE

This procedure defines the methods used to ensure that hazardous and non-hazardous waste are collected, transported and labeled in accordance with hazardous waste regulations 40CFR264 Subpart I (use and management of containers) and 40CFR262.34 (less than 90-day storage).

II. SCOPE

This procedure applies to Texas State University – San Marcos (TxState) Environmental Health, Safety and Risk Management employees involved in the management of hazardous and non-hazardous waste. This procedure includes contacting departments for pickups, identifying properly labeled and safe containers to transport; additional labeling and documentation for completion at the Container Accumulation Area 007, coding and storing the waste at the CAA and completing and distributing the updated inventory of wastes.

III. TERMS

- CAA (Container Accumulation Area): Designated area on campus used to store waste. Container storage building as noted on TxState Notice of Registration (NOR 007) located in the Roy F. Mitte building service yard and Chemistry Room 249 (NOR 008).
- EHS: Environmental Health and Safety
- SAA (Satellite Accumulation Area): Designated areas on campus used to store up to 54 gallons of hazardous waste with no time limit restrictions.
- SAA Contact: Person or persons designated as the point-of-contact for matters regarding a specified SAA (see Attachment A).
- RCRA: Resource Conservation Recovery Act

IV. LIMITATIONS

4.1 This procedure does not apply to:

- Universal lamp waste
- Biohazardous waste
- Radioactive waste

4.2 A maximum of 54 gallons of hazardous waste may be stored in the SAA with no time limit.

4.3 TxState is considered a large quantity generator of hazardous waste based on records showing greater than 2,200 pounds of hazardous waste generated in any one month.

4.4 The white Ford pickup truck at the EHS Office, equipped with secondary containment and spill response equipment, is used for transporting waste. Do not use any other vehicle (golf cart, van, personal vehicle).

4.5 Waste is picked up using the "buddy system" by at least two people. Normally, the EHS person in charge of the Hazardous Waste Program or alternate and a second helper.

4.6 Carry at least one cell phone during waste pickups.

4.7 Pickup personnel are required to sign out at the office.

4.8 In an emergency, contact Campus Police (911) then the EHS office 245-3616.

V. PROCEDURE

5.1 Contact each SAA Contact to determine the following:

- Waste to be picked up
- Supplies needed (containers, labels)

5.2 Check supplies in truck (gloves, markers, emergency response equipment).

5.3 Obtain replacement waste containers and labels as necessary. New containers are stored in the garage next to the office or the caged area behind the Steam Shop.

5.4 Take Lab set or Master set keys.

5.5 During transport of chemicals, wear the following PPE:

- Closed toed shoes
- Long pants
- Disposable gloves

5.6 Drive to the designated SAA to retrieve chemical waste. (See locations listed on Attachment A)

5.7 Observe the condition of the containers to be picked up. The containers should be:

- In good condition
- Lid screwed on tight
- Labeled with contents (Hazardous Waste Tag in Attachment B)
- Clean (i.e. no outside drips and spills)

!WARNING!

Do not pick up loose chemicals that require special storage conditions (cool, dark) or have high numbers 3 or 4 in two of more of the NFPA diamond label. This will be picked up by the outside contractor (PSC or current contractor).

5.8 Pack loose containerized chemicals in a plastic tub or box with paper towels or other packing material to keep them secure.

5.9 Put the 5-gallon carboys and/or containerized chemicals on a cart and transport them to the truck.

5.10 If not already present, attach a Hazardous Waste tag to the container and enter the date of pickup in the Accumulation Start Time line.

5.11 Place the 5-gallon carboys in the secondary containment tray of the truck.

5.12 Record the waste picked up on the Hazardous Waste Pickup/Transport Record (HWPTR) (Attachment C). Leave the content section blank for Waste Code to be added.

5.13 Repeat Steps 5.6 through 5.12 for each SAA requiring pickup.

5.14 Transport waste to the CAA.

5.15 Prior to entering the CAA for the first time that day, perform the following checks:

- Turn on the lights to the CAA at the switch on the south end of the building.
- Verify that the exhaust fan is left on at all times (switch next to the light switch).

5.16 Unload the containers to an empty black secondary containment.

5.17 On each 5-gallon carboy that does not have a waste code, perform a field test for pH and oxidizer potential.

5.18 Using this information, the label information and the Notice of Registration, determine the most appropriate Texas Waste Code, and record it on the Hazardous Waste code tag and the HWPTR.

5.19 Place the coded waste on the waste shelves or below the shelves in containment trays in the area designated for that code.

5.20 Enter the information from the HWPTR onto the current waste inventory sheet for the CAA (Excel spreadsheet at T:\Environmental\TransporterRecord).

5.21 EHS Specialist over Hazardous Waste will review transport record.xls.

5.22 Email inventory to the Emergency Coordinator (UPD).

VI. PERFORMANCE METRICS

Performance metrics will be measured by: Zero (0) violations during external regulatory audits and inspections.

VII. ATTACHMENTS

7.1 Attachment A – Contact List

7.2 Attachment B – Hazardous Waste Tag and Container Instructions

7.3 Attachment C – Hazardous Waste Pickup/Transport Record

Contact List: Hazardous and Non Hazardous Waste Pickup
Texas State University

Department	Building	Contact	Phone Number	Special Requests
1. Aquatic Biology	Freeman - Room 104 Freeman - Room 140 Freeman - Room 208 Freeman - Room 220 Freeman - Room 258 Freeman - Room 260	Phillip Ramirez	245-7991	
2. Biology	Supple - Room 331 Supple - Room 352 Supple - Room 313 Supple - Room 270 Supple - Room 283 Supple - Room 422 Supple - Room 437A	John Word Dr. McLean Dr. Upchurch Dr. Forstner Dr. Forstner Dr. Erica Simpson Dr. Garcia	245-3313 245-3365 245-3751 245-2178 245-2178 245-2178 245-3368	
3. Chemistry	Chemistry/Centennial Stock Room 249 (CAA is 249A)	Donnie Cantu	245-3118	
4. EARDC	Freeman - Room 248B Freeman - Room 246 Freeman - Room 268	Joe Guerrero	245-2329	

Contact List: Hazardous and Non Hazardous Waste Pickup
Texas State University

Department	Building	Contact	Phone Number	Special Requests
5. Physical Plant Shops	HVAC Shop Paint Shop West Campus Paint Grounds West Campus Soccer	Michael Burkepile Larry Rodriguez Jessi Diaz Brad Smith Brent Cochran	245-2830 245-2838 245-9131 245-7846 245-2392	
6. Art-Mitte	JC Mitte - Room 4105 JC Mitte - Room 4112 JC Mitte - Room 4112B JC Mitte - Room 4107G JC Mitte - Room 1126D JC Mitte - Room 1130 JC Mitte - Room 1124 JC Mitte - Room 2104 JC Mitte - Room 2115 JC Mitte - Room 2120 JC Mitte - Room 2131	Thomas Fitzpatrick Jeff Dell Jeff Dell Barry Stone Beverly Penn Roxana Tuff Kay Bading Mary Mikel Stump Roxana Tuff Roxana Tuff Roxana Tuff	245-3767 245-1815 245-1815 245-1320 245-2611 245-2611 245-2611 245-2664 245-2611 245-2611 245-2611	(metals)

Contact List: Hazardous and Non Hazardous Waste Pickup
Texas State University

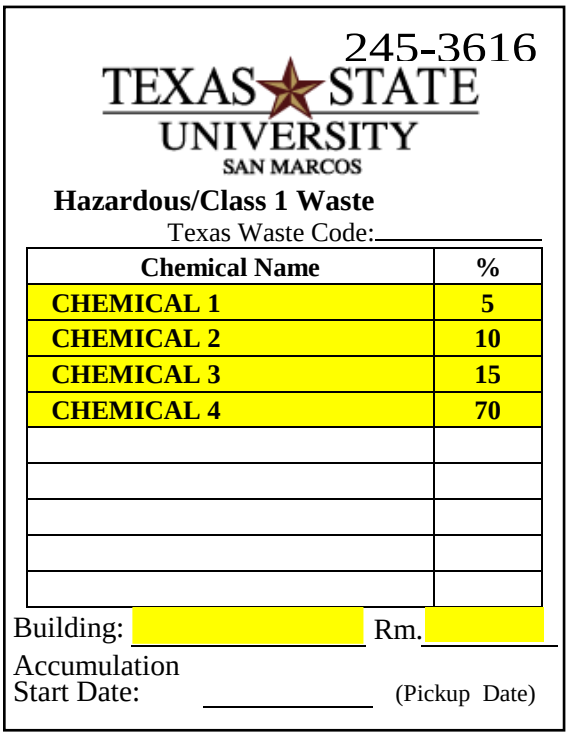
Department	Building	Contact	Phone Number	Special Requests
7. Technology-Mitte And Engineering	RF Mitte - 1225B (Paint Shop) RF Mitte - 1227B (outside cage) RF Mitte - 1210 RF Mitte - 1218 RF Mitte - 1236 RF Mitte - 2233 RF Mitte - 2234	Shane Arabie Shane Arabie Shane Arabie Dr. Tate Nate England Eric Shires Eric Shires	245-7778 245-7778 245-7778 245-1826 245-2131 245-6772 245-6772	
8. Print Shop	RR 12 Location	Robert Espinoza	245-2601	
9. Photo	Sabinal - Room 222 Sabinal - Room 246	Barry Stone Barry Stone	245-1320 245-1320	CODE 1222
10. Family and Consumer Science	FCS - Room 295A FCS - Room 287M FCS - Room 287E	Dr. Raj Vatteem Dr. Vatsala Maitin Dr. Michelle Lane	245-7655 245-3786 245-2155	(very small quantity)
11. Theater	Theater - Room 215	Dwight Markus	245-2147	
12. Pecos	Pecos - Room 103	Randall Reed	245-2611	

Contact List: Hazardous and Non Hazardous Waste Pickup
Texas State University

Department	Building	Contact	Phone Number	Special Requests
13. Agriculture	Agriculture - Room 226	Boyd Brown	245-2373	
14. LBJ Student Center	Loading Dock	Dave Rader	245-3683	
15. Smith House	Container Storage Shed	Lisa Arceneaux	245-8252	
16. CoGen	CoGen-001 CoGen-002	Carl Teague Carl Teague	245-2235 245-2235	Engine Rm Lower Level Mechanic Break Room

Waste Containers

- Should be in good condition, clean on the outside, and have a lid on.
- Should have a waste tag with contents listed.



245-3616

TEXAS STATE UNIVERSITY
SAN MARCOS

Hazardous/Class 1 Waste

Texas Waste Code:_____

Chemical Name	%
CHEMICAL 1	5
CHEMICAL 2	10
CHEMICAL 3	15
CHEMICAL 4	70

Building: _____ Rm._____

Accumulation Start Date: _____ (Pickup Date)

WASTE TAG EXAMPLE

Hazardous Waste Pickup/Transport Record

Department Information				Waste Information			Pickup		Content
Date	Department	Contact (name/ext.)	Designated Pickup Location	Type of Waste (bags, sharps, containers)	Qty	Labeled Correctly	Date	Time	

I. PURPOSE

The purpose of this procedure is to define the methods used to ensure spent lamps are prepared for shipping under 30TAC§335.261 Universal Waste Rule.

II. SCOPE

This procedure applies to Texas State University – San Marcos Environmental Health, Safety and Risk Management employees involved in the management of spent lamps. This includes packaging of lamps, labeling packages and housekeeping in the waste lamp storage area. The operations are conducted in a dedicated portion of building 503, the old Power Plant.

III. PRECAUTIONS & LIMITATIONS

- Do NOT crush spent lamps.
- Texas State is a Large Quantity Handler of Universal Waste and can accumulate 5,000 kilograms (11,025 pounds) or more of universal waste at any one time.
- Accumulation time for Universal Waste lamps is limited to one year
- Use boxes provided by PSC or the recycle facility to store spent lamps.
- Broken lamps shall be swept up and debris will be bagged for disposal as "Crushed Lamps".

IV. TERMS

- Green Tips = Lamps that do not meet the definition of hazardous waste. These contain lower concentrations of mercury and will pass the TCLP test for mercury (i.e. they will leach less than 0.2 mg/L of mercury. They can be disposed of in a dumpster as municipal solid waste.
- Lamp = Defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, mercury vapor, high pressure sodium, and metal halide lamps
- RCRA = Resource Conservation Recovery Act
- Large Quantity Handler of Universal Waste = A universal waste handler who accumulates more than 5,000 kilograms (11,025 pounds) of universal waste (batteries, pesticides, thermostats, paint and paint products or lamps) calculated collectively at any one time.
- Universal Waste (UW) = Any of the following hazardous wastes that are subject to the universal waste requirements of 30 TAC§335.261 and 262: Batteries, Pesticides, Thermostats, Lamps, Paint and paint related products

- Treatment, Storage, Disposal Facility (TSDF) = The commercial waste disposal facility contracted by Texas State University to manage offsite disposal of wastes.

V. PROCEDURE

! NOTE !

Used tube shaped lamps should be packaged in the large cardboard boxes purchased from our TSDF or repacked in the new bulb boxes.

U-shaped and miscellaneous shaped fluorescent bulbs are packaged in cardboard boxes obtained from the TxState recycle center.

Metal halide bulbs and high pressure sodium lamps are packaged in cardboard boxes obtained from the TxState recycle center.

Packaging

5.1 Obtain appropriate pre-printed UW labels from TSDF in accordance with the following:
- ED77496- Tube shaped fluorescent lamps
- ED77497 - Metal halide and sodium lamps
- ED77498 – Miscellaneous shaped fluorescent lamps
- ED83820 – Crushed fluorescent light bulbs

5.2 If necessary, use pictorial guide for assistance.

5.3 Write accumulation start date (month/day/year) in ink on one label and place it on the box when the box is first being filled.

! CAUTION !

Use enough tape to ensure box will not open under normal handling and transportation conditions.

5.4 When box is full, seal the box using 3 inch clear tape or duct tape.

5.5 Move box to appropriate UW lamp storage area. (Generally inside on pallets.)

5.6 Stack boxes in a safe and secure manner.

Maintenance

5.7 Sweep floor and place debris into trash bin.

5.8 When trash bin is 2/3 full, remove the bag and properly dispose in dumpster.

5.9 Inventory supplies, (labels, tape, boxes).

5.10 Notify Waste Management Program EHS Specialist when additional supplies are needed.

VI. PERFORMANCE METRICS

Performance metrics will be measured by zero (0) violations during external regulatory audits and inspections

VII. ATTACHMENTS/APPENDICES

Appendix A – Preprinted Universal Waste Labels

PREPRINTED UNIVERSAL WASTE LABELS

UNIVERSAL WASTE

**This waste is not regulated by 40CFR Part 261,
but may be subject to Department of Transportation regulations.**

Generator - Epa Id TXD 980 812 168 **Phone** (512) 245-3616

TEXAS STATE UNIVERSITY
736 SMITH RD
SAN MARCOS, TX 78666

Proper D.O.T. Shipping Name
NON DOT/NON RCRA REGULATED (UNIVERSAL WASTE, FLUORESCENT)

UNIV117H

Waste Categ: REC06
Profile#: ED77496-03 **Accumulation Date:**_____
WCN: 54801-FLUORESCENT LIGHT BULBS-UNIV WASTE

UNIVERSAL WASTE

**This waste is not regulated by 40CFR Part 261,
but may be subject to Department of Transportation regulations.**

Generator - Epa Id TXD 980 812 168 **Phone** (512) 245-3616

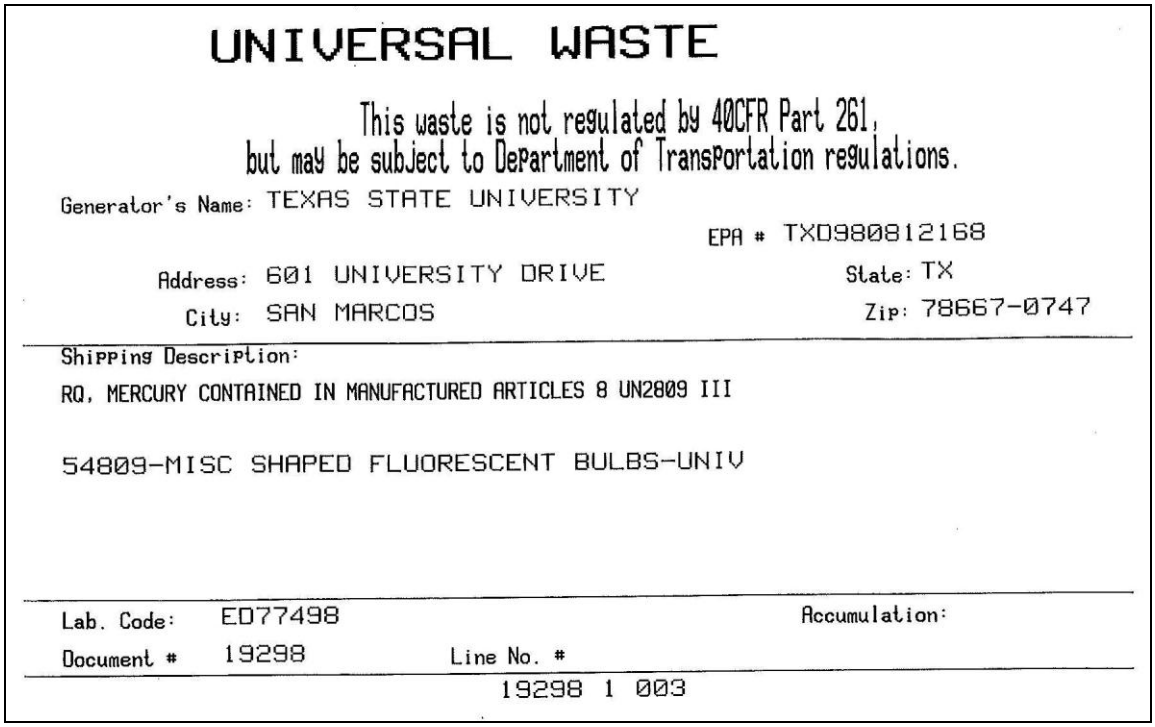
TEXAS STATE UNIVERSITY
736 SMITH RD
SAN MARCOS, TX 78666

Proper D.O.T. Shipping Name
NON REGULATED/NON RCRA REGULATED (UNIV WASTE, CRUSHED BULBS)

UNIV117H

Waste Categ: REC15
Profile#: ED83820-02 **Accumulation Date:**_____
WCN: 43619-CRUSHED FLUORESCENT LAMPS

PREPRINTED UNIVERSAL WASTE LABELS



UNIVERSAL WASTE

This waste is not regulated by 40CFR Part 261,
but may be subject to Department of Transportation regulations.

Generator's Name: TEXAS STATE UNIVERSITY

EPA # TXD980812168

Address: 601 UNIVERSITY DRIVE State: TX

City: SAN MARCOS Zip: 78667-0747

Shipping Description:

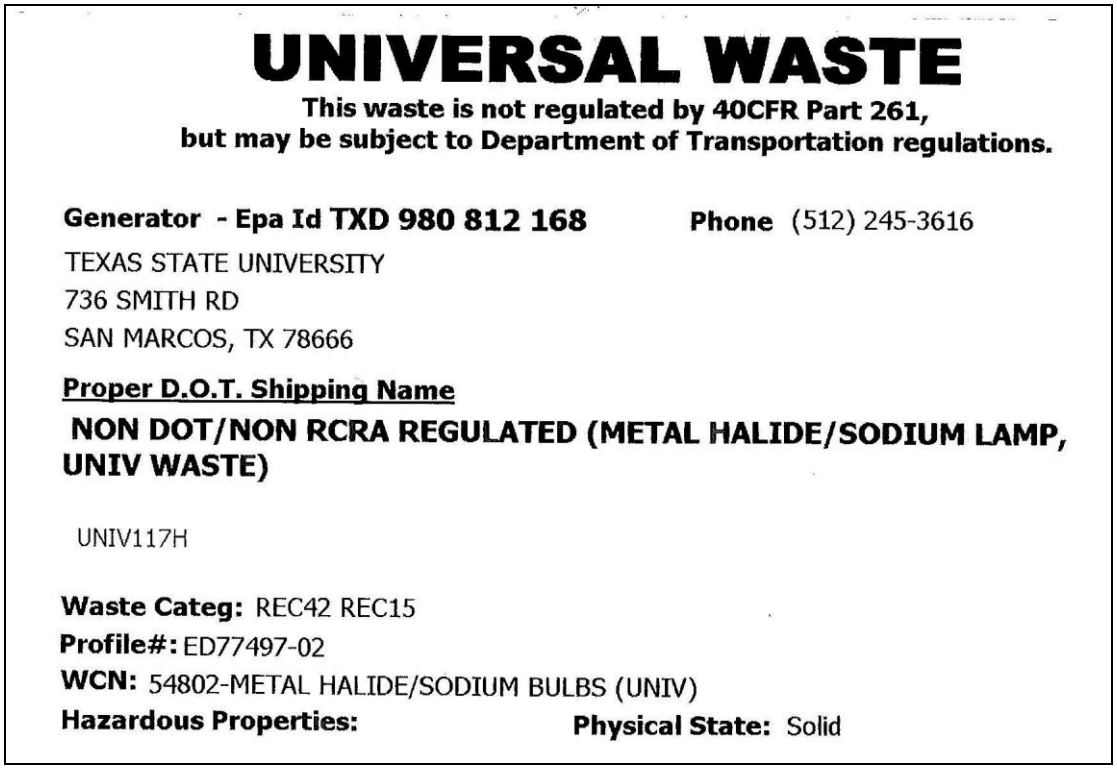
RQ, MERCURY CONTAINED IN MANUFACTURED ARTICLES 8 UN2809 III

54809-MISC SHAPED FLUORESCENT BULBS-UNIV

Lab. Code: ED77498 Accumulation:

Document # 19298 Line No. #

19298 1 003



UNIVERSAL WASTE

**This waste is not regulated by 40CFR Part 261,
but may be subject to Department of Transportation regulations.**

Generator - Epa Id TXD 980 812 168 **Phone** (512) 245-3616

TEXAS STATE UNIVERSITY
736 SMITH RD
SAN MARCOS, TX 78666

Proper D.O.T. Shipping Name

NON DOT/NON RCRA REGULATED (METAL HALIDE/SODIUM LAMP, UNIV WASTE)

UNIV117H

Waste Categ: REC42 REC15
Profile#: ED77497-02
WCN: 54802-METAL HALIDE/SODIUM BULBS (UNIV)
Hazardous Properties: **Physical State:** Solid