

Triumvirate Environmental Services, Inc.

Waste Analysis Plan  
&  
Waste Compatibility and Test Manual

## Contents

<b>1.0 INTRODUCTION/PURPOSE.....</b>	<b>4</b>
<b>2.0 FACILITY DESCRIPTION .....</b>	<b>4</b>
<b>3.0 MANAGEMENT OF INBOUND WASTE STREAMS .....</b>	<b>5</b>
<b>4.0 OBJECTIVES OF THE WASTE ANALYSIS PLAN.....</b>	<b>5</b>
<b>5.0 WASTE APPROVAL PROCESS .....</b>	<b>6</b>
5.1 Waste Evaluation Documents .....	7
5.2 Information on The Profile .....	7
5.3 Supporting Documents .....	10
5.4 Assignment of Process Codes .....	11
5.5 Review and Approval of Records.....	12
<b>6.0 WASTE VERIFICATION PROCESS.....</b>	<b>12</b>
6.1 Consolidation/Bulking.....	14
6.2 Re-Packaged Wastes.....	14
6.3 Treatment.....	15
Initial Analysis of Untreated Waste:.....	15
Post-Analysis of Treated Waste: .....	15
<b>7.0 MANAGEMENT OF NON-CONFORMING WASTES.....</b>	<b>16</b>
<b>8.0 MANAGEMENT OF USED OIL.....</b>	<b>16</b>
8.1 Analysis .....	16
8.2 On Specification Used Oil .....	17
<b>9.0 EVALUATION OF WASTES FOR SHIPMENT.....</b>	<b>18</b>
9.1 Consolidated and Repackaged Wastes.....	18
9.2 Treated Wastes .....	19
<b>10.0 LABPACKS .....</b>	<b>19</b>
10.1 Waste Profile Form for Labpacks.....	20
10.2 Evaluation of Wastes in Labpacks.....	20
10.3 Classification and Segregation of Wastes in Labpacks .....	20
<b>11.0 WASTES PERMITTED AND PROHIBITED.....</b>	<b>20</b>
<b>12.0 FREQUENCY OF ANALYSIS .....</b>	<b>21</b>
<b>13.0 SAMPLING METHODS .....</b>	<b>22</b>
Initial Analysis of Untreated Waste:.....	22
Post-Analysis of Treated Waste: .....	23

<b>14.0 ANALYTICAL METHODS.....</b>	<b>23</b>
<b>15.0 COMPATIBILITY TEST METHODS.....</b>	<b>24</b>
<b>16.0 RECORDKEEPING .....</b>	<b>24</b>
<b>TABLE II.A.4.B.-3.....</b>	<b>24</b>
<b>TABLE II.A.5/6-2 .....</b>	<b>84</b>
<b>TABLE II.A.5/6-3 .....</b>	<b>85</b>
<b>TABLE II.A.5/6-4 .....</b>	<b>86</b>
<b>EXHIBIT II.A.5/6.-1: WASTE MATERIAL PROFILE FORM.....</b>	<b>87</b>
<b>EXHIBIT II.A.5/6.-2: COMPLIANCE REVIEW FORM.....</b>	<b>88</b>
<b>EXHIBIT II.A.5/6.-3: NOTICE OF APPROVAL LETTER .....</b>	<b>90</b>
<b>EXHIBIT II.A.5/6.-4: LABPACK/DRUM INVENTORY FORM.....</b>	<b>91</b>

## **WASTE ANALYSIS PLAN**

### **1.0 Introduction/Purpose**

This Waste Analysis Plan will be followed to properly characterize hazardous wastes accepted at the facility. Under 40 CFR 270.14(b)(3), a hazardous waste management facility is required to develop and follow a Waste Analysis Plan (WAP) that meets the requirements of 40 CFR 264.13 (b) and (c).

This WAP describes the procedures and operations that will be utilized to determine the physical and chemical characteristics of the waste. This information is necessary to manage the waste in a safe and effective manner. Chemical and physical parameters are identified in accordance with this plan. Using the chemical and physical parameters the waste can be classified based on the hazards, regulatory status, and requirements for storage, treatment, and disposal. This plan describes the evaluation process that is followed to approve the waste for receipt by the facility, the system used to verify that the waste conforms to the specifications of the Waste Profile, and the methods utilized to manage the waste. The plan also describes the procedure used to evaluate the waste after it has been treated at the facility. The plan also details the procedures to obtain the necessary information to ship the waste to off-site facilities for treatment or disposal.

### **2.0 Facility Description**

Triumvirate Environmental Services, Inc. manages hazardous and non-hazardous wastes onsite at the facility and does not have on-site generated wastes except for conditionally exempt small quantities of expired materials such as paints and cleaners. Triumvirate Environmental Services, Inc. also operates a 10-day transfer station, and manages used oil, oily water, or antifreeze in the one double compartment tank. Waste permitted at Triumvirate Environmental Services, Inc. include D, F, P, U, and K codes (40 CFR 261.31, 40 CFR 261.32, 40 CFR 261.33 and 40 CFR Part 261 Subpart C). Wastes prohibited at Triumvirate Environmental Services, Inc. are; forbidden materials in the hazardous materials table, DOT explosives, temperature controlled material, radioactive materials, listed self-reactive materials, organic peroxides type A and B listed in the HMT and defined at 49 CFR 173.128, and organic peroxides types C, D, E, and F defined in 49 CFR 173.128 and listed in the HMT requiring temperature control.

Wastes accepted at Triumvirate Environmental Services, Inc. are stored, consolidated, repacked, or treated. All storage is in containers, including waste managed through the 10-day transfer area. Consolidation consists of pouring containers together into shippable drums. Re-packaging consists of removing inner containers from outer containers and placing them in appropriate containers for outbound shipments. Treatment consists of stabilization of wastes in roll-off boxes with cement or other suitable material approved by The Department.

Wastes that are identified as hazardous will meet the criteria set forth under the EPA regulations and in the waste approval process identified in this plan.

### **3.0 Management of Inbound Waste Streams**

Upon determination that the waste characterization meets the acceptance criteria for management at the facility, appropriate process codes are assigned to manage the waste. The management method is dictated by the physical and chemical characteristics of the waste. Inbound wastes are managed in accordance with one of four activities: (1) storage in the facility until transported off-site in the same containers that were used for transport into the facility, (2) consolidation into larger containers, (3) repackaging of the wastes, (4) or stabilizing the wastes. Wastes that are stabilized are sent to a subtitle D landfill. Wastes that cannot be stabilized at the facility are shipped to off-site facilities for treatment or disposal. Wastes of similar chemical and physical characteristics maybe consolidated. Compatible wastes may be re-packaged. Wastes that are not treated, consolidated, or repackaged are stored onsite and shipped out in the same container that was used to transport the waste into the facility. The management method for the waste is indicated by a process code, which identifies how the waste will be managed onsite and shipped off site.

Triumvirate Environmental Services, Inc. is knowledgeable and diligent in complying with DOT and RCRA requirements. DOT regulations include proper marking, labeling, placarding, and packaging of hazardous materials and wastes. The DOT description is required for marking the hazardous waste label affixed to the container, selecting the proper DOT label, and placarding in compliance with 40 CFR 262.31 through 262.33. The DOT description is also needed to complete the manifest. Segregation and separation of the wastes during transportation and storage is determined in accordance with the hazard class shown in the DOT description. Information contained in the DOT description identifies wastes exhibiting special hazards. Special hazards consist of explosive, radioactive, and some highly reactive chemicals. Triumvirate Environmental Services, Inc. does not accept waste that is considered a special hazard. Waste that is not permitted is rejected and the materials may be sent back to the generator or to a facility that is permitted to accept the waste provided that all proper documentation, labels, and shipping papers are provided by the generator to the end disposal facility.

### **4.0 Objectives of the Waste Analysis Plan**

The waste analysis plan consists of a uniform set of instructions that have been prepared to:

- a. Evaluate the waste for approval with procedures for qualifying, accepting, and analyzing the contents of each waste container;
- b. Contain the information that will be required to characterize the waste;
- c. Identify the waste verification process;
- d. Document the recordkeeping and reporting procedures;
- e. Ensure that it can be managed by the prescribed operation or process at the facility;
- f. Determine the wastes' regulatory status after it has been treated at the facility in preparation for shipment to off-site facilities and;

- g. Test methods used to obtain samples, and a quality assurance quality control program.

## 5.0 Waste Approval Process

Before waste is accepted at Triumvirate Environmental Services, Inc., the waste characteristics must be evaluated and approved. The approval must contain all of the information so that the waste can be properly treated, consolidated, repackaged or stored in accordance with 40 CFR Part 264 or disposed in accordance with the Land Disposal Restriction (LDR) program. The approval process includes; (1) collecting a representative sample and conducting laboratory analysis or (2) evaluation of published data and generator knowledge of the waste generating process. Conducting a waste analysis using published data and generator knowledge of the waste generating process can be referred to as acceptable knowledge, generator knowledge, or process knowledge. In this WAP the term acceptable knowledge will be used.

Acceptable knowledge consists of reviewing information pertaining to the waste stream in question and determining its regulatory status, special hazards, and the applicable process code. The waste stream information is provided in a waste profile form (The Profile) shown in Exhibit II. A.5/6.-1 and, if it is a lab-pack, information is detailed on lab-pack inventory sheets shown in Exhibit II.A.5/6.-4.

When acceptable knowledge is used for waste determinations Triumvirate Environmental Services, Inc. uses the following checklist:

- (1) Is published data as current as practicable?
- (2) Do materials balances, if used, include the following information (among other things):
  - Raw ingredients descriptions and physical and chemical properties
  - Physical and chemical processes involved prior to and during generation
  - Intermediate products
  - Materials added and removed during the process?
- (3) Does the generator review its original acceptable knowledge determination annually, randomly, and whenever the generating process/waste changes or the TSDF finds a nonconformance?
- (4) Does the generator understand the potential changes in the waste and its classification due to environmental factors or spontaneous changes?
- (5) Are records being kept demonstrating that periodic reviews are being conducted?

## **5.1 Waste Evaluation Documents**

The waste evaluation documents consist of the paperwork that should be completed and submitted by the generator to the facility for a waste approval determination. The paperwork is the waste material profile form (The Profile), which describes the chemical and physical characteristics of the waste and other information that is pertinent for establishing the regulatory status of the waste. When the facility accepts lab-pack waste the lab-pack inventory sheet is used for the approval process in place of The Profile. An example copy of The Profile is included in Exhibit II.A.5/6.-1 and the lab-pack inventory sheet is located in section IIA.5/6-4. In certain cases, only a completed profile form is needed to conduct the approval process, such as when the waste material consists of a discarded virgin material, or media that has been contaminated with a virgin material and a Safety Data Sheet (SDS) for the contaminating material is available in the facility's data base. SDSs for the chemical compounds or products involved are required to support the information contained in the profile when the SDSs are not available in the facility's data base. When an SDS is not available or when it is necessary to clarify information shown in an SDS, other technical information obtained from chemical dictionaries or product literature may be used for the waste determination. Analysis reports are required to support information provided in the profile when there is a need to verify that regulatory concentration levels have not been exceeded or to establish the absence of hazardous constituents that may reasonably be expected to be present in the waste. The waste evaluation documents may include, as applicable, the profile, SDSs, analysis reports, and technical information submitted to support a request for approval of a waste stream for management at the facility.

## **5.2 Information on The Profile**

The example waste material profile form included in Exhibit II.A.5/6.-1 contains several sections for information about the generator, the waste, and the packaging of the waste. The profile form referenced above may be subject to future modifications to accommodate new requirements, or to make the form easier to complete. The information required in the form for use in evaluating the waste as described in the waste approval process, will remain unchanged. The following discussion explains the criteria used for reviewing information contained in the profile form and for determining regulatory status and hazards of the waste. Only those parts in the profile form relevant for the evaluation of the waste are discussed here.

### **Part B of the Profile - Common Name of Waste:**

Information used in the approval process is indicated here such as SDS's and analytical data. Information for how the waste was generated (process generating waste) and information for proper characterization is also included. The section also includes the process code, which dictates how the waste will be handled onsite at Triumvirate Environmental Services, Inc. In this section, the shipment method meaning drums, totes, sizes, and yearly volume is also indicated.

### **Part C of the Profile – Physical Properties**

This part of the profile contains information about ignitability, corrosivity, and physical state of the waste, which is necessary to establish the regulatory status for environmental

management and transportation. It also provides data about chemical and physical parameters, which are important to determine the proper treatment, analytical methods, and operational procedures for the waste. This part requires several boxes to be completed addressing the following issues:

Odor is a relevant factor when handling certain chemicals because of problems caused by the emission of strong odors. Waste containing mercaptans and ammonia are studied carefully to ensure that emission problems for personnel at the site and at neighboring sites will not be created.

Separated layers corroborate the presence of multiphase components listed in the profile form and indicate caution regarding test results which may not reflect the waste mixture due to improper sampling techniques.

The amount of sludge in a waste is a significant factor to determine if non-sludge and sludge components need to be handled or characterized separately.

The flash point of a waste determines if it is hazardous waste due to ignitability and its DOT description due to flammability.

Specific gravity helps corroborate information provided about the composition of the waste.

The pH value determines the corrosivity of the waste and can indicate regulatory status

The amount of water in a waste is an important factor to take into consideration for stabilization operations, and to determine if the untreated waste can be directly shipped to off-site fuel blenders/users.

The concentration of halogens is a significant parameter to determine if the untreated waste can be directly shipped to off-site fuel blenders/users.

Heating value of the waste determines if the untreated waste can be directly shipped to off-site fuel blenders/users.

Information about the presence of free liquids is necessary for assigning the waste code that denotes corrosivity and the proper shipping name.

#### Part D – Waste Composition

The part is reviewed for the description of the constituents that make up the waste and it has approximate ranges for the percent of constituents. If a generic name is used either an SDS will be available at the facility or it will be attached to the profile.

The name and proportional amount of the constituents of the waste must be listed in this part of the profile. Constituents containing toxic components regulated in 261.24 (D004-D043) must be listed in this part. A study of the properties of the chemical components shown



in this part, along with respective proportional amounts in the waste, may provide a rough estimate of the resulting characteristics exhibited by the waste. For example, large proportions of flammable or corrosive components most likely will result in a flammable or corrosive waste, respectively.

#### Part G – Metals

This part is reviewed for TCLP and or totals information on the metals in the waste. This section includes information for D004-D011 and copper, zinc and nickel.

#### Part E – Hazardous Properties

This part of the profile is designed to identify hazardous characteristics that are considered special hazards, and to describe the type of reactivity exhibited by the materials. This part of the profile also requests information about PCBs, which are regulated by the Toxic Substance and Control Act (TSCA). National Emission Standards for Hazardous Air Pollutants is also included in this section and this information is needed to satisfy requirements in the Clean Air Act.

#### Part H - Other Compounds.

This part is reviewed for TCLP or Totals information for hazardous waste codes D012-D043.

#### Part F – DOT Shipping Name

The DOT description that should be entered in this part is one of those found in 49 CFR 172.101, the Hazardous Materials Table (HMT). The DOT description's hazard class and packing group are to be selected in accordance with requirements in the 49 CFR Part 173 and depend on the characteristics of the waste determined from information throughout The Profile. Excluding wastes whose proper shipping name is hazardous waste liquid or solid, the two major components in the waste to be included in this part are the most predominant ones used for establishing the primary and subsidiary hazards of the waste listed in column (6) of the HMT.

This section contains spaces to enter the EPA hazardous waste codes that are determined from information provided in the following parts of the profile.

D001 → Constituents listed in part D of The Profile meeting the definition of ignitability as defined by 40 CFR 261.21

D002 → Constituents listed in part D of The Profile meeting the definition of corrosivity as defined by 40 CFR 261.22

D003 → Constituents listed in part D of The Profile meeting the definition of reactivity as defined by 40 CFR 261.23

D004 - D043: Constituents listed in part D or H of The Profile meeting the definition of D004-D043 hazardous waste codes

F001 — F039: Spent solvents should be listed in part D. Electroplating, conversion coating and metal heat treating sludges, plating, quenching, spent cyanide, and stripping bath solutions and residues should be identified as such, and the heavy metal and cyanide contaminants listed in part D. Products, process wastes, and manufacturing intermediates that either contain or result from the production of chlorophenols, chlorobenzenes, and chlorinated aliphatic hydrocarbons should be described in part B and have the components listed in part D. Wood preserving formulations and wastes, petroleum refinery separation sludges, and landfill leachate should be identified in part B and have the constituents listed in part D.

K001 - K148: Hazardous wastes from specific sources should be described in part B and have the contaminants listed in part D.

P001 – P205 Acute hazardous wastes consisting of discarded and off-specification chemical products, manufacturing intermediates, and container and spill residues should be identified in part C and have the components listed in D.

U001 – U411: Toxic hazardous wastes consisting of discarded and off-specification chemical products, manufacturing intermediates, and container and spill residues should have the components listed in part D.

### 5.3 Supporting Documents

Supporting documents include analysis reports, SDSs, and other technical information used to establish the presence and concentration levels of hazardous constituents and the characteristics of the waste. SDSs are not solely used to make hazardous waste determinations largely because SDSs normally list constituents at a minimum of 10,000 mg/kg. Analysis may be required when information provided in the profile indicates a deviation from a commonly received waste stream. This would trigger a need to verify concentration levels of hazardous constituents in the waste, and a need to determine the actual hazardous characteristics exhibited by the waste. The need for requesting analysis reports is based on the criteria described below:

When materials described in of The Profile indicate the presence of significant amounts of certain hazardous constituents whose characteristics are not reflected in hazardous waste codes assigned to the waste.

When parameters indicated in parts G and H of the profile do not coincide with the properties of predominant components listed in part D.

When concentration levels indicated for constituents shown in part D of the profile do not correspond to the proportional amounts for such constituents shown in parts G and H.

When historical experience or technical information suggests that certain hazardous constituents or characteristics are not addressed in parts of the profile and they may be present in the waste.

When the profile shows a lack of information necessary to determine the regulatory status and hazards posed by the waste.

SDSs are required when part D of the profile lists chemical compounds and products for which SDSs are not available at the facility. Unless the component of the waste is a well-known and widely used chemical compound, an SDS for the component should be submitted with the profile form when one is not available at the facility. The facility has access to an extensive SDS library on the internet. Chemical dictionaries and product literature may be utilized as an alternative for an SDS when necessary.

The profile form and supporting documents described above constitute the waste evaluation documents that are used to review and approve the waste streams before shipment to the facility. The evaluation process explained above is the procedure used to review the documents from a regulatory standpoint. The waste stream must have an assigned process code before this process is complete. However, the assignment of a process code does not affect approval of the waste for receipt by the facility. When assigning the process code waste evaluation documents undergo other reviews related to operational and marketing issues. A review addressing operational issues is conducted by the facility with the following concerns:

Contaminates from commonly accepted waste streams/processes must match the contaminants that would typically be expected in such waste streams

Contaminates in the waste group must be capable of being treated using the same process

Wastes in the group must be compatible with each other

Hazardous waste codes assigned to the waste must be accurate for the type of waste in consideration

The outbound profile, which identifies the outbound waste stream that has been approved for management at an off-site facility, is assigned after the waste has been accepted and reviewed at Triumvirate Environmental Services, Inc.

## **5.4 Assignment of Process Codes**

The facility has established a number of process codes which designate how the waste will be managed at Triumvirate Environmental Services, Inc. The process codes correspond to storage, consolidation, repacking, treatment, as well as the technology and treatment facility that will handle the waste material. When a profile is reviewed an inbound process code is assigned to the waste material. The assignment of the process code is dependent on a review of The Profile by a competent employee at Triumvirate Environmental Services, Inc. Continuously, process codes are updated based on facility requirements, and therefore any list of process codes that would be submitted would not be up to date.

Management methods of waste are determined through characteristics and properties including:

- Hazards such as corrosivity and flash point.
- That contaminants in the waste are capable of being treated using the same process.
- Compatibility of the waste(s)

Consolidation may be utilized for wastes including alkaline corrosives, fuel blendable (contingent upon facility NFPA upgrades), electroplating sludge's, and other widely generated wastes that contain a specific group of contaminants. Triumvirate Environmental Services, Inc. will not consolidate acids, oxidizers, reactives (D003), or poison inhalation hazards under any circumstances. Compatible chemicals may be consolidated in accordance with The Waste Compatibility and Test Manual. The Waste Compatibility and Test Manual includes a review of chemical literature and waste characteristics.

Every management activity requires the implementation of specific procedures in the waste analysis plan for inspecting the waste received to verify that the waste conforms to the specifications of the waste that was approved and for testing the waste to ensure that it may be managed by the prescribed operation or process at the facility.

## **5.5 Review and Approval of Records**

The outcome of the review conducted in accordance with the procedures described in the previous paragraphs is recorded in the Compliance Review form included in Exhibit II.A5/6.-2. This form is used to indicate deficiencies or discrepancies found in the evaluation documents. Once the deficiencies or discrepancies described in the form have been addressed in the evaluation documents, and the permit allows the waste to be managed at the facility, the decision to approve the waste for receipt at the facility or reject it is noted on the form. The Compliance Review form is filed with the waste profile form and supporting documents and is also used to conduct waste stream verification.

The generator is notified that the waste stream has been approved for shipment to the facility with a form letter known as the notice of approval, an example of which is shown in Exhibit II.A.5/6.-3. The approval letter shows the EPA and DOT regulatory status that apply to the waste in question, as well as the notices required by 40 CFR 264.12. The form letter also shows an inbound approval code. This code is the most important piece of data used to identify any waste stream managed at the facility. The notice of approval letter is part of the waste evaluation documents kept in files at the facility.

## **6.0 Waste Verification Process**

This part of the waste analysis plan describes the procedures used to verify that wastes received at the facility conform to the profile. The procedures used to test incoming wastes depend on the management methods that are going to be used to process the waste at the

facility. These management methods are identified by the process code that has been assigned to the waste. This process addresses three issues:

- Compatibility of the incoming wastes with other wastes that have the same process code
- Assurance of treatability by the prescribed process code.
- Procedures used to address non -conforming wastes.

During the waste approval process, information on the waste is reviewed to ensure that it is compatible with other wastes having the same process code. The discovery that the incoming waste is not compatible with other wastes in the same group is an indication that the waste received does not conform to the information provided in the evaluation documents. Upon determination that the incoming waste does not conform to information provided in the evaluation documents, another set of procedures is initiated, resulting in either shipping the waste back to the generator or to an alternate facility, as instructed by the generator, or in amending the evaluation documents to reflect the discrepancies discovered by the verification process.

The waste approval process is repeated as necessary to ensure that it is up to date. At a minimum, the analysis must be repeated:

- (1) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous wastes, or non-hazardous wastes if applicable under 40 CFR 264/265.113(d) has changed; and
- (2) For off-site facilities, when the evaluation of incoming shipments, indicates that the waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

To verify conformance with The Profile Triumvirate Environmental Services, Inc. will verify incoming waste streams. However, the testing requirements may be removed if:

1. Additional hazards are created by inspecting the waste stream Triumvirate Environmental Services, Inc. will not open the container(s). Examples would be inhalation hazards and air-reactive materials.
2. Triumvirate Environmental Services, Inc. prepares and seals the waste for shipment. Triumvirate Environmental Services, Inc. has an ongoing on-site program established with certain generators and it is directly involved in managing the waste collection process. This information is noted on the inspection form and if the drums are received with seals intact, the hazardous waste will not be re-analyzed upon receipt at the facility.
3. Lab-Packs and inner containers packaged by Triumvirate Environmental Services, Inc. will have the packing slip reviewed for DOT and RCRA regulations. The containers will not be opened because they were packaged by trained Triumvirate Environmental Services, Inc. staff.

Notwithstanding the above, all containers are inspected for color and physical state. Ten percent of hazardous wastes that are accepted at Triumvirate Environmental Services, Inc. undergo a quality control, quality assurance (QA/QC) analysis. This QA/QC consists of an analysis to confirm matching characteristics such as pH, specific gravity, flash point, halogen content, and or percent water. Verification of waste using an off-site laboratory will be completed when discrepancies are found. Verification will be documented on the form in Exhibit II.A.5/6.-2. The parameters below are used to identify acceptance procedures for Triumvirate Environmental Services, Inc.

- 100 percent visual inspection for color and physical state.
- Ten Percent QA/QC of each waste stream shipment for each generator
- Using a tiered approach for analyzing incoming shipments, whereby all shipments are inspected and non-conformances between shipment and profiles trigger a mandatory comprehensive analysis to resolve it and update the profile (or create a new one) if needed.
- Documenting tolerance limits for at least one QA QC parameter based on the operating requirements of the facility's management systems. An example is if the pH of an incoming shipment falls outside the regulatory range, causing a regulatory status change for the waste stream
- Visually inspecting lab packs is an acceptable alternative to QA QC for them (e.g. open the containers and verify their contents and packing materials) and reviewing their inventories.

## **6.1 Consolidation/Bulking**

Wastes of the same type are approved at Triumvirate Environmental Services, Inc. for consolidation into common containers. The containers are shipped off-site for treatment or disposal of the consolidated wastes. Wastes of the same type consist of materials that can be treated or disposed of by using the same method of treatment or disposal. Wastes for consolidation come in container sizes that vary from a cubic yard box to 55-gallon drums to containers having a volume equal to or greater than one gallon. Wastes accepted for consolidation come from many sources, which create concern about compatibility of commingling wastes in the consolidation container. Therefore, incoming waste streams should be tested for compatibility in accordance with procedures contained in Attachment II.A.5/6.-1 before being commingled for consolidation. Containers that are consolidated into a new drum will have the date of the oldest container that was consolidated into the drum. Triumvirate Environmental Services, Inc. must remove containers within one year from the time the earliest (consolidation) container enters the facility. When a container, older than the consolidation container is mixed or added to the drum, the drum is re-labeled with the oldest date.

## **6.2 Re-Packaged Wastes**

Compatible inner containers may be re-packaged in DOT shippable containers to comingle compatible wastes. Any container that is re-packaged will not be opened and will be placed inside the outer container in its original, sealed, container. These inner containers will come

from lab-packed material that has been sorted and approved to be packaged in the same container per DOT and RCRA regulations.

### **6.3 Treatment**

The testing and analysis of treated wastes is described here. Treatment operations will consist of mixing stabilization agents with metal contaminated material and will be performed inside a container such as a roll-off box. The procedures to complete the treatment are located in the containers section (Part II.B) of the permit application. Only materials of similar consistency that are less than 60mm (non-debris) particulate size will be treated. These materials will be received in drums or roll-off containers. An example would be sandblast grit contaminated with lead. Treatment will be performed on wastes that fail to meet Universal Treatment Standards (40 CFR 268.48 Table UTS) for RCRA Metals (D004-D008, D010-D011) only. Wastes that are involved in treatment operations will undergo two sets of analysis:

#### **Initial Analysis of Untreated Waste:**

Initial testing of Underlying Hazardous Constituents (UHCs) will be performed by collecting a 5-point composite sample. This sample will be taken before treatment at the client site or at the Triumvirate Environmental Services, Inc. facility. The composite sample will be analyzed for TCLP metals, and other suspected UHCs, in order to determine the initial metals' concentrations prior to treatment. Wastes that fail to meet UTS for constituents other than the RCRA metals (D004-D008, D010-D011) and mercury will not be eligible for treatment. Soils may be initially tested to determine UHCs and contaminant levels.

#### **Post-Analysis of Treated Waste:**

After treatment, all batches will undergo TCLP analysis to verify that the concentrations of RCRA metals are below the Universal Treatment Standards for metals (D004-D008, D010-D011) and no longer exhibit hazardous waste characteristics. A grab sample will be collected for the TCLP analysis.

For soils, the alternative treatment standard may be applied according to 40 CFR 268.49. Post analysis will be conducted to confirm compliance with the 90% reduction (capped by 10X UTS) option, or 10X UTS option. If after the 90% reduction, or the 10X UTS option, the results indicate that the waste is still characteristically hazardous for toxicity, the waste will be sent to a Subtitle C landfill for disposal. See Table II.A.5/6-4 for treatment levels.

All treated waste that are de-characterized and meet the appropriate treatment standards will be sent to a permitted Subtitle D landfill. Any waste that fails to meet applicable treatment standards or exhibits hazardous waste characteristics will be shipped to a permitted TSDF for disposal.

## **7.0 Management of Non-Conforming Wastes**

When inbound waste streams are tested and inspected in accordance with the procedures described in the preceding paragraphs and are found not to conform to information provided in the waste profile evaluation documents, these waste streams are subject to the procedures explained below. Regulations in 40 CFR 264.72(c) indicate the facility may resolve discrepancies in waste types within 15 days from the date the waste in question was received and if not resolved the FDEP must be notified. The first step to resolve a discrepancy created by a non-conforming waste is to obtain instructions from the generator indicating whether the waste should be returned to the generator or an amendment to the waste evaluation documents to correct the deficiencies discovered by the verification process is possible. If the generator chooses to amend the evaluation documents, the waste profile must be modified by the generator and, depending on the nature of the discrepancy, additional analyses or SDSs may be required. If it is found that the waste can be processed by Triumvirate Environmental Services, Inc., under its permit, a corrected letter of approval is issued, and processing of the waste is initiated. If efforts to resolve the discrepancy determine the waste should be assigned waste codes not permitted at the facility, or that the waste exhibits characteristics prohibited at the facility, the waste in question must be rejected by Triumvirate Environmental Services, Inc. Under instructions from the generator, the facility has the option to ship the waste back to the generator or to manage the waste under the transfer facility provisions of Rule 62-730.171 F.A.C., which requires shipment of the waste to an off-site facility within ten days after the discovery date. Waste exhibiting characteristics prohibited at the facility are shipped out immediately after discovery as specified by the generator.

## **8.0 Management of Used Oil**

Used Oil is received from pump trucks, DOT-approved drums, or tanker trailers from generators such as companies in the automotive industry, cruise ships, and industrial manufacturers. Oil contaminated with water is managed as oily waste water utilizing the same testing criteria as used oil.

Used oil and oily water are stored in the used oil tank, Container Storage Unit, or the Waste Consolidation and Stabilization Area. There are no underground tanks or piping located at the facility. All tanks, piping, and ancillary equipment are located within secondary containments.

### **8.1 Analysis**

As stated in 40 CFR 279.10(b)(ii), used oil containing or thought to contain more than 999 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous wastes listed in Subpart D of 40 CFR 261. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix VIII of part 261 of this chapter)



- (A) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffin's if they are processed through a tolling arrangement, as described in 279.24(c), to reclaim metalworking oils/fluids. The presumption does not apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.
- (B) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFC's are destined for reclamation.

## 8.2 On Specification Used Oil

According to 40 CFR 279.11 used oil burned for energy recovery and any fuel produced from used oil by processing, blending, or other treatment is subject to regulation under 40 CFR 279 if it can be shown that the used oil does not exceed any part of the allowable levels for constituents shown below:

<b>Table I</b>	
<b>Constituents / Property</b>	<b>Allowable Levels</b>
Arsenic	5 ppm Maximum
Cadmium	2 ppm Maximum
Chromium	10 ppm Maximum
Lead	100 ppm Maximum
Flash Point	100 F Minimum
PCB	2 ppm Maximum
Total Halogens	1,000 ppm Maximum

Pursuant to 40 CFR 279.72, a generator, transporter, processor, re-refiner, or burner may determine that used oil that is to be burned for energy recovery meets the specifications of the Table I by performing analyses or obtaining copies of analyses or other information documenting that the used oil meets the above specifications.

Triumvirate Environmental Services, Inc. conducts various site-specific analyses for the various generators which they encounter. Regular generators (i.e., generators that produce used oil or oily wastewater as part of a normal on-going operation) and non-regular generators of used oil and oily wastewaters are sampled and analyzed initially using the Dexsil test or other equivalent test method. Subsequent used oil from the same generators is screened for halogens using a Tekmate halogen detector or other equivalent halogen detector. Results of halogen screening are shown on the used oil manifest. If the halogen detector detects halogens,

the used oil is tested using the Dexsil test. If the halogen detector identifies no halogens, the used oil is accepted.

Every load delivered to a facility by an outside transporter is sampled prior to off-loading the material. Non-frequent generators or one-time generators are sampled prior to removal of material from the site.

Before Triumvirate Environmental Services, Inc., accepts used oil from a generator for the first time, a sample of the oil is examined to determine whether or not the total halogen content is less than equal to 999 ppm. Triumvirate Environmental Services, Inc. utilizes SW-846 Method 9077 "Test for Chlorine in New and Used Petroleum Products" and other equivalent method(s) to determine halogen content. If the oil contains less than or equal to 999ppm total halogens, Triumvirate Environmental Services, Inc. shall accept the material for processing. After the initial receipt, subsequent used oil from the same generators is tested for halogens using the Tekmate halogen analyzer or other equivalent halogen analyzer. If the halogen analyzer does not detect halogens, the used oil is accepted. If halogens are detected by the analyzer, the above-mentioned test method used of initial acceptance of used oil is performed.

If use the used oil contains 1,000 ppm or more total halogens, Triumvirate Environmental Services, Inc. shall forward the sample to a contract laboratory or a permitted hazardous waste facility for analysis by EPA method 8010 or an equivalent method(s) to check for significant concentrations of 40 CFR 261, Appendix VIII halogenated constituents. Significant concentrations of halogenated constituents, as outlined by USEPA, is any single halogenated constituent with a concentration exceeding 100 ppm.

If the used oil does not contain significant concentrations of 40 CFR 261, Appendix VIII halogenated compounds; Triumvirate Environmental Services, Inc. shall accept the used oil. If the used oil does contain significant concentrations of 40CFR 261, Appendix VIII halogenated compounds, Triumvirate Environmental Services, Inc. shall inform the generator that use used oil must be managed as a hazardous waste and routed through the Triumvirate Environmental Services, Inc., network of facilities or other permitted hazardous waste facilities.

## **9.0 Evaluation of Wastes for Shipment**

Before wastes are shipped by the facility, an evaluation of the EPA and DOT regulatory status for each shipment is necessary to prepare it for packaging, labeling, marking, and placarding requirements contained in Subpart C of Part 262 in the 40 CFR, and with the land disposal restriction requirements of Part 268. Waste streams that are being shipped off-site in the same containers as received by the facility (Transfer Waste) do not require further evaluation for shipment because the waste's status has not changed during facility storage. Waste streams that were consolidated and treated at the facility are subject to changes in EPA and DOT status, which are determined as described below.

### **9.1 Consolidated and Repackaged Wastes**

Incoming waste streams of similar type are commingled in larger containers for shipment to off-site treatment or disposal facilities. Incoming waste streams are received in DOT-approved

containers. The consolidation container may be a roll-off box, a dump trailer, a tank trailer, a tote, a 55-gallon drum, or smaller container. Information for the manifest used to ship the consolidation container, as well as the markings used on the container and the transport vehicle, are obtained in the following manner:

#### EPA Hazardous Waste Codes and Land Disposal Restriction (LDR) Notification

The manifest and the container hazardous waste label will show the waste codes assigned to every waste stream consolidated in the consolidation container or repackaged into a DOT approved outer container. The LDR notification form and the Universal Treatment Standard (UTS) form will show the waste codes and constituents recorded on the inbound shipping documents for every waste stream consolidated in the consolidation container or repackaged into a DOT approved outer container.

#### DOT Description

Waste streams consolidated in a consolidation container, or repackaged into a DOT approved outer container, may have had different DOT descriptions. The manifest and hazardous waste label for the consolidation container, or DOT approved outer container, may show only one DOT description. This DOT description shall be the generic shipping name that best describes the waste. Wastes that may belong to one or several hazard classes; however, there is always one hazard class that is easily distinguishable and predominant among the ones involved. That hazard class will be shown in the manifest and hazardous waste label. Criteria developed from knowledge of the DOT regulations with respect to the use of the Hazardous Materials Table and knowledge of the definitions of hazard classes are required to determine the resulting DOT description for the consolidated waste.

## **9.2 Treated Wastes**

The container in which waste was treated as described in section 6.3 of this plan will be transported off-site to a subtitle D landfill. All material will be tested as described in section 6.3. All material will be shipped as a non-hazardous waste. Additionally, a one-time notification/certification statement will be provided to the Department.

## **10.0 Labpacks**

The facility receives waste in labpacks. A labpack is a container that holds small containers filled with wastes. The small containers inside a labpack are identified in this plan as inner containers. Inner containers may hold various waste types. Waste removed from a labpack container either remains in the inner container or it may be bulked with other wastes in a 55—gallon, or smaller, drums. Wastes that remain in inner containers are re-packaged individually and placed in a larger container with other wastes to complete a new labpack to be shipped off-site for treatment or disposal. Labpack wastes to be bulked with other wastes are placed in a 55—gallon, or smaller, drum. These bulked drums are then shipped off-site. The same procedures used for approval of shipments of other wastes to the facility are used for accepting

labpacks. A few aspects of the approval process for labpacks deviate somewhat from the acceptance procedure for other wastes. The difference in the approval process for labpacks and other waste is explained as follows.

### **10.1 Waste Profile Form for Labpacks**

Triumvirate Environmental Services, Inc. does not require a waste material profile describing every waste inside a labpack container. A complete labpack inventory form must be submitted with the waste evaluation documents. An example copy of the labpack inventory form is shown in Exhibit II.A.5/6.-4. The inventory form is completed for all lab packs so that it contains the necessary information that would be required on a profile.

The inventory forms provide information not included in a profile for labpacks, as well as other information necessary to process labpacks. A single profile designated as a labpack can include multiple outer containers with different chemicals provided that each outer container has a unique shipping name, waste codes, and chemical inventories. The lab pack generator drum number is shown in the upper right-hand corner of the labpack inventory form. Completed copies of the inventory forms are also required to be included outside the labpack container and with the shipping documents.

Completed lab pack inventory sheets are approved by Triumvirate Environmental Services, Inc. by either approving a unique profile or by signing off on the individual labpack inventory sheets.

### **10.2 Evaluation of Wastes in Labpacks**

The chemicals listed on each inventory sheet for each labpack container are reviewed. A determination for acceptability and compatibility are reviewed per the requirements for bulk containers in the Waste Analysis Plan.

### **10.3 Classification and Segregation of Wastes in Labpacks**

Wastes placed inside a labpack container have to be of the same hazard class or division to comply with DOT regulations. The facility may require a more stringent segregation procedure with respect to the type and amount of material in a labpack container for operational and safety reasons.

## **11.0 Wastes Permitted and Prohibited**

Waste permitted at Triumvirate Environmental Services, Inc. include D, F, P, U, and K codes (40 CFR 261.31, 40 CFR 261.32, 40 CFR 261.33 and 40 CFR Part 261 Subpart C). Wastes prohibited at Triumvirate Environmental Services, Inc. are; forbidden materials in the hazardous materials table, DOT explosives, temperature controlled materials, radioactive materials, listed self-reactive materials, organic peroxides type A and B listed in the HMT and defined at 49 CFR 173.128, and organic peroxides types C, D, E, and F defined in 49 CFR 173.128 and listed in the HMT requiring temperature control.

a. Forbidden Materials in the Hazardous Materials Table

Forbidden Materials: Materials showing the word "forbidden" in column (3) of the 49 CFR 172.101 — Hazardous Materials Table (HMT),

b. DOT Explosive Materials

Materials having a DOT hazardous class 1 (Divisions 1.1, 1.2, 1.3, 1.4, 1.5 and 1.6). are not permitted.

c. Temperature controlled material

Materials that must be maintained at temperatures below the ambient temperature to prevent reactions.

d. Radioactive Materials

Materials having a DOT hazard class 7 are not permitted

e. Listed Self-Reactive Materials

Materials listed in the 49 CFR 173.224(b) as self-reactive materials.

f. Prohibited Organic Peroxide Materials

- (i) Organic peroxides type A and B listed in the HMT and defined at 49 CFR 173.128.
- (ii) Organic peroxides types C, D, E, and F defined in 49 CFR 173.128 and listed in the HMT requiring temperature control.

## 12.0 Frequency of Analysis

For each hazardous waste shipment, all containers are inspected for color and physical state. Ten percent of the hazardous wastes that are accepted at Triumvirate Environmental Services, Inc. undergo a quality control, quality assurance (QA/QC) analysis. This QA/QC consists of an analysis to confirm matching characteristics such as pH, specific gravity, flash point, halogen content, and or percent water. Verification of waste using an off-site laboratory will be completed when discrepancies are found. Verification will be documented on the form in Exhibit II.A.5/6.-2. The parameters below are used to identify acceptance procedures for Triumvirate Environmental Services, Inc.

- 100 percent visual inspection for color and physical state.
- Ten Percent QA/QC of each waste stream shipment for each generator
- Using a tiered approach for analyzing incoming shipments, whereby all shipments are inspected and non-conformances between shipment and profiles

trigger a mandatory comprehensive analysis to resolve it and update the profile (or create a new one) if needed.

- Documenting tolerance limits for at least one QA QC parameter based on the operating requirements of the facility's management systems. An example is if the pH of an incoming shipment falls outside the regulatory range, causing a regulatory status change for the waste stream
- Visually inspecting lab packs is an acceptable alternative to QA QC for them (e.g. open the containers and verify their contents and packing materials) and reviewing their inventories.

However, the testing requirements may be removed if:

1. Additional hazards are created by inspecting the waste stream Triumvirate Environmental Services, Inc. will not open the container(s). Examples would be inhalation hazards and air-reactive materials.
2. Triumvirate Environmental Services, Inc. prepares and seals the waste for shipment. Triumvirate Environmental Services, Inc. has an ongoing on-site program established with certain generators and it is directly involved in managing the waste collection process. This information is noted on the inspection form and if the drums are received with seals intact, the hazardous waste will not be re-analyzed upon receipt at the facility.
3. Lab-Packs and inner containers packaged by Triumvirate Environmental Services, Inc. will have the packing slip reviewed for DOT and RCRA regulations. The containers will not be opened because they were packaged by trained Triumvirate Environmental Services, Inc. staff.

For every waste stream approved for shipment to the facility, an annual certification will be required from the generator stating that the waste stream has not changed since its approval or previous annual certification. A change in a waste stream has occurred if EPA and DOT regulatory status or safety considerations vary (due to a change in the process generating the waste) from those determined during the approval process. Incoming waste is verified in accordance with procedures outlined in Section 6.0 of this plan.

## **13.0 Sampling Methods**

Sampling operations at the facility are conducted on solid and liquid wastes, which may be in containers, and bulk transport containers. Table II.A.5/6.-2 summarizes the methods used to sample wastes at the facility. Table II.A.5/6.-3 shows additional sampling requirements for general parameters to be tested at the facility. Sampling procedures used at the facility conform to methods specified in Appendix I to Part 261 in the 40 CFR (EPA's SW-846), the American Society for Testing Materials (ASTM) methods, or equivalent.

### **Initial Analysis of Untreated Waste:**

Initial testing of Underlying Hazardous Constituents (UHCs) will be performed by collecting a 5-point composite sample. This sample will be taken before treatment at the client site or at the Triumvirate Environmental Services, Inc. facility. The composite sample will be analyzed for TCLP metals in order to determine the initial metals' concentrations prior to treatment. Wastes that fail to meet UTS for ~~constituents other than the RCRA metals (D004-D008, D010-D011)~~ and mercury (D009) will not be eligible for treatment. Soils may be initially tested to determine UHCs and contaminant levels.

### **Post-Analysis of Treated Waste:**

After treatment, all batches will undergo TCLP analysis to verify that the concentrations of RCRA metals are below the Universal Treatment Standards for metals (D004-D008, D010-D011) and no longer exhibit hazardous waste characteristics. A grab sample will be collected for the TCLP analysis. The samples will be taken from each side and the top of the roll-off container.

For soils, the alternative treatment standard may be applied according to 40 CFR 268.49. Post analysis will be conducted to confirm compliance with the 90% reduction (capped by 10X UTS) option, or 10X UTS option. If after the 90% reduction, or the 10X UTS option, the results in a concentration indicate that the waste is still characteristically hazardous for toxicity, the waste will be sent to a Subtitle C landfill for disposal. See Table II.A.5/6-4 for treatment levels.

All treated waste that are de-characterized and meet the appropriate treatment standards will be sent to a permitted Subtitle D landfill. Any waste that fails to meet applicable treatment standards or exhibits hazardous waste characteristics will be shipped to a permitted TSDF for disposal.

## **14.0 Analytical Methods**

The facility utilizes two sets of methods for field testing and for laboratory analysis. One set of the field test methods has been briefly described in the waste verification process of the waste analysis plan. These methods consist of the test paper methods for determining pH value, the floatation test method to determine specific gravity, and the bench test methods for determining compatibility of different waste streams. Visual inspections are also used to determine separation of liquid layers and viscosity of the waste samples.

Analytical test methods used by Triumvirate Environmental Services, Inc. to test for waste parameters are standard laboratory methods as listed in EPA publication SW-846, entitled Test Methods for Evaluating Solid Waste, Physical/Chemical Methods or American Society for Testing and Materials (ASTM) methodologies, or equivalent. Such analyses may be performed at an off-site laboratory, NELAC-approved. A listing of the analytical methods that may be used for pre-approval analysis and received waste inspection is provided in Table II.A.5/6.-3. In any event, characterization of the waste remains the responsibility of the generator.

## 15.0 Compatibility Test Methods

Testing procedures developed and used by Triumvirate Environmental Services, Inc. to determine compatibility of different waste streams consist of mixing a small sample collected from each waste stream and observing the mixture for reaction signs. The signs of reactions are outlined in Waste Compatibility Test manual at the end of the plan. Waste materials to be processed for consolidation in transport and shipping containers are tested to determine compatibility with the waste materials in the containers. Compatibility test procedures are described the Waste Compatibility and Test Manual. These procedures have been successful in preventing incidents related to mixing incompatible waste.

## 16.0 Recordkeeping

Triumvirate Environmental Services, Inc. shall comply with the requirements of 40 CFR 262.40 and 40 CFR268.7

### Table II.A.4.b.-3

Waste permitted at Triumvirate Environmental Services, Inc. include D, F, P, U, and K codes (40 CFR 261.31, 40 CFR 261.32, 40 CFR 261.33 and 40 CFR Part 261 Subpart C).

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: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent 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	(I)*



	mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	
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	(I,T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum	(T)
F007	Spent cyanide plating bath solutions from electroplating operations	(R, T)
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process	(R, T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process	(R, T)
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process	(R, T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations	(R, T)
F012	Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process	(T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process. Wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process will not be subject to this listing at the point of generation if the wastes are not placed outside on the land prior to shipment to a landfill for disposal and are either: disposed in a Subtitle D municipal or industrial landfill unit that is equipped with a single clay liner and is permitted, licensed or otherwise authorized by the state; or disposed	(T)

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

	Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027	
F032	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with § 261.35 of this chapter or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol	(T)
F034	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol	(T)
F035	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol	(T)
F037	Petroleum refinery primary oil/water/solids separation sludge—Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under § 261.4(a)(12)(i), if those residuals are to be disposed of	(T)
F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge—Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing	(T)
F039	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of this part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.)	

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Wood preservation: K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol	(T)
Inorganic pigments:		
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments	(T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments	(T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated)	(T)
K007	Wastewater treatment sludge from the production of iron blue pigments	(T)
K008	Oven residue from the production of chrome oxide green pigments	(T)
Organic chemicals:		
K009	Distillation bottoms from the production of acetaldehyde from ethylene	(T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene	(T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile	(R, T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile	(R, T)

K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile	(T)
K015	Still bottoms from the distillation of benzyl chloride	(T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride	(T)
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin	(T)
K018	Heavy ends from the fractionation column in ethyl chloride production	(T)
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production	(T)
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production	(T)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production	(T)
K022	Distillation bottom tars from the production of phenol/acetone from cumene	(T)
K023	Distillation light ends from the production of phthalic anhydride from naphthalene	(T)
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene	(T)
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene	(T)
K026	Stripping still tails from the production of methy ethyl pyridines	(T)
K027	Centrifuge and distillation residues from toluene diisocyanate production	(R, T)
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane	(T)
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane	(T)

K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene	(T)
K083	Distillation bottoms from aniline production	(T)
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes	(T)
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene	(T)
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene	(T)
K095	Distillation bottoms from the production of 1,1,1-trichloroethane	(T)
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane	(T)
K103	Process residues from aniline extraction from the production of aniline	(T)
K104	Combined wastewater streams generated from nitrobenzene/aniline production	(T)
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes	(T)
K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(C,T)
K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(I,T)
K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(T)
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(T)
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene	(C,T)

K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine	(T)
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene	(T)
K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene	(T)
K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene	(T)
K149	Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups, (This waste does not include still bottoms from the distillation of benzyl chloride.)	(T)
K150	Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups	(T)
K151	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups	(T)
K156	Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)	(T)

K157	Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)	(T)
K158	Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)	(T)
K159	Organics from the treatment of thiocarbamate wastes	(T)
K161	Purification solids (including filtration, evaporation, and centrifugation solids), bag house dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125 or K126.)	(R,T)
K174	Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer (including sludges that result from commingled ethylene dichloride or vinyl chloride monomer wastewater and other wastewater), unless the sludges meet the following conditions: (i) they are disposed of in a subtitle C or non-hazardous landfill licensed or permitted by the state or federal government; (ii) they are not otherwise placed on the land prior to final disposal; and (iii) the generator maintains documentation demonstrating that the waste was either disposed of in an on-site landfill or consigned to a transporter or disposal facility that provided a written commitment to dispose of the waste in an off-site landfill. Respondents in any action brought to enforce the requirements of subtitle C must, upon a showing by the government that the respondent managed wastewater treatment sludges from the production of vinyl chloride monomer or ethylene dichloride, demonstrate that they meet the terms of the exclusion set forth above. In doing so, they must provide appropriate documentation (e.g., contracts between the generator and the landfill owner/operator, invoices documenting delivery of waste to landfill, etc.) that the terms of the exclusion were met	(T)
K175	Wastewater treatment sludges from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process	(T)
K181	Nonwastewaters from the production of dyes and/or pigments (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in paragraph (c) of this section that are equal to or greater than the corresponding paragraph (c) levels, as determined on a calendar year basis. These wastes will not be hazardous if the nonwastewaters are: (i) disposed in a Subtitle D landfill unit subject to the design criteria in § 258.40, (ii) disposed in a Subtitle C landfill unit subject to either § 264.301 or § 265.301, (iii) disposed in other Subtitle D landfill units that meet the design criteria in § 258.40, § 264.301, or § 265.301, or (iv) treated in a combustion unit that is permitted under Subtitle C, or an onsite combustion unit that is permitted under the Clean Air Act. For the purposes of this listing, dyes and/or pigments production is defined in paragraph (b)(1) of this section. Paragraph (d) of this section describes the process for demonstrating that a facility's nonwastewaters are not K181. This listing does not apply to wastes that are otherwise identified as hazardous under §§ 261.21-261.24 and 261.31-261.33 at the point of generation. Also, the listing does not apply to wastes generated before any annual mass loading limit is met	(T)
Inorganic chemicals:		



K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used	(T)
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production	(T)
K106	Wastewater treatment sludge from the mercury cell process in chlorine production	(T)
K176	Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (e.g., antimony metal or crude antimony oxide)	(E)
K177	Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (e.g., antimony metal or crude antimony oxide)	(T)
K178	Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process	(T)
Pesticides:		
K031	By-product salts generated in the production of MSMA and cacodylic acid	(T)
K032	Wastewater treatment sludge from the production of chlordane	(T)
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane	(T)
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane	(T)
K035	Wastewater treatment sludges generated in the production of creosote	(T)
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton	(T)
K037	Wastewater treatment sludges from the production of disulfoton	(T)
K038	Wastewater from the washing and stripping of phorate production	(T)

K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate	(T)
K040	Wastewater treatment sludge from the production of phorate	(T)
K041	Wastewater treatment sludge from the production of toxaphene	(T)
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T	(T)
K043	2,6-Dichlorophenol waste from the production of 2,4-D	(T)
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane	(T)
K098	Untreated process wastewater from the production of toxaphene	(T)
K099	Untreated wastewater from the production of 2,4-D	(T)
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt	(T)
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts	(C, T)
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts	(T)
K126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts	(T)
K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide	(C, T)
K132	Spent absorbent and wastewater separator solids from the production of methyl bromide	(T)
Explosives:		

K044	Wastewater treatment sludges from the manufacturing and processing of explosives	(R)
K045	Spent carbon from the treatment of wastewater containing explosives	(R)
K046	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds	(T)
K047	Pink/red water from TNT operations	(R)
Petroleum refining:		
K048	Dissolved air flotation (DAF) float from the petroleum refining industry	(T)
K049	Slop oil emulsion solids from the petroleum refining industry	(T)
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry	(T)
K051	API separator sludge from the petroleum refining industry	(T)
K052	Tank bottoms (leaded) from the petroleum refining industry	(T)
K169	Crude oil storage tank sediment from petroleum refining operations	(T)
K170	Clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations	(T)
K171	Spent Hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media)	(I,T)
K172	Spent Hydrorefining catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media)	(I,T)
Iron and steel:		
K061	Emission control dust/sludge from the primary production of steel in electric furnaces	(T)

K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332)	(C,T)
Primary aluminum:		
K088	Spent potliners from primary aluminum reduction	(T)
Secondary lead:		
K069	Emission control dust/sludge from secondary lead smelting. ( <b>Note:</b> This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action effecting this stay, EPA will publish a notice of the action in the <b>Federal Register</b> )	(T)
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting	(T)
Veterinary pharmaceuticals:		
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
Ink formulation:		
K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead	(T)
Coking:		
K060	Ammonia still lime sludge from coking operations	(T)

K087	Decanter tank tar sludge from coking operations	(T)
K141	Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludges from coking operations)	(T)
K142	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal	(T)
K143	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal	(T)
K144	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal	(T)
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal	(T)
K147	Tar storage tank residues from coal tar refining	(T)
K148	Residues from coal tar distillation, including but not limited to, still bottoms	(T)

P001	1 81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
P001	1 81-81-2	Warfarin, & salts, when present at concentrations greater than 0.3%
P002	591-08-2	Acetamide, -(aminothioxomethyl)-
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein

P003	107-02-8	2-Propenal
P004	309-00-2	Aldrin
P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-
P005	107-18-6	Allyl alcohol
P005	107-18-6	2-Propen-1-ol
P006	20859-73-8	Aluminum phosphide (R,T)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P008	504-24-5	4-Aminopyridine
P008	504-24-5	4-Pyridinamine
P009	131-74-8	Ammonium picrate (R)
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P010	7778-39-4	Arsenic acid $H_3AsO_4$
P011	1303-28-2	Arsenic oxide $As_2O_5$
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic oxide $As_2O_3$

P012	1327-53-3	Arsenic trioxide
P013	542-62-1	Barium cyanide
P014	108-98-5	Benzenethiol
P014	108-98-5	Thiophenol
P015	7440-41-7	Beryllium powder
P016	542-88-1	Dichloromethyl ether
P016	542-88-1	Methane, oxybis[chloro-
P017	598-31-2	Bromoacetone
P017	598-31-2	2-Propanone, 1-bromo-
P018	357-57-3	Brucine
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P020	88-85-7	Dinoseb
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P021	592-01-8	Calcium cyanide
P021	592-01-8	Calcium cyanide $\text{Ca}(\text{CN})_2$
P022	75-15-0	Carbon disulfide
P023	107-20-0	Acetaldehyde, chloro-

P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	Benzenamine, 4-chloro-
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P027	542-76-7	3-Chloropropionitrile
P027	542-76-7	Propanenitrile, 3-chloro-
P028	100-44-7	Benzene, (chloromethyl)-
P028	100-44-7	Benzyl chloride
P029	544-92-3	Copper cyanide
P029	544-92-3	Copper cyanide Cu(CN)
P030		Cyanides (soluble cyanide salts), not otherwise specified
P031	460-19-5	Cyanogen
P031	460-19-5	Ethanedinitrile
P033	506-77-4	Cyanogen chloride
P033	506-77-4	Cyanogen chloride (CN)Cl
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol



P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-
P036	696-28-6	Arsonous dichloride, phenyl-
P036	696-28-6	Dichlorophenylarsine
P037	60-57-1	Dieldrin
P037	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta, 7aalpha)-
P038	692-42-2	Arsine, diethyl-
P038	692-42-2	Diethylarsine
P039	298-04-4	Disulfoton
P039	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-
P042	51-43-4	Epinephrine
P043	55-91-4	Diisopropylfluorophosphate (DFP)

P043	55-91-4	Phosphorofluoridic acid, bis(1-methylethyl) ester
P044	60-51-5	Dimethoate
P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methyl amino)-2-oxoethyl] ester
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methylamino)carbonyl] oxime
P045	39196-18-4	Thiofanox
P046	122-09-8	Benzeneethanamine, alpha,alpha-dimethyl-
P046	122-09-8	alpha,alpha-Dimethylphenethylamine
P047	1 534-52-1	4,6-Dinitro-o-cresol, & salts
P047	1 534-52-1	Phenol, 2-methyl-4,6-dinitro-, & salts
P048	51-28-5	2,4-Dinitrophenol
P048	51-28-5	Phenol, 2,4-dinitro-
P049	541-53-7	Dithiobiuret
P049	541-53-7	Thioimidodicarbonic diamide $[(H_2 N)C(S)]_2 NH$
P050	115-29-7	Endosulfan
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide
P051	1 72-20-8	2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta, 7aalpha)-, & metabolites

P051	72-20-8	Endrin
P051	72-20-8	Endrin, & metabolites
P054	151-56-4	Aziridine
P054	151-56-4	Ethyleneimine
P056	7782-41-4	Fluorine
P057	640-19-7	Acetamide, 2-fluoro-
P057	640-19-7	Fluoroacetamide
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P058	62-74-8	Fluoroacetic acid, sodium salt
P059	76-44-8	Heptachlor
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P060	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-
P060	465-73-6	Isodrin
P062	757-58-4	Hexaethyl tetraphosphate
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
P063	74-90-8	Hydrocyanic acid

P063	74-90-8	Hydrogen cyanide
P064	624-83-9	Methane, isocyanato-
P064	624-83-9	Methyl isocyanate
P065	628-86-4	Fulminic acid, mercury(2+) salt (R,T)
P065	628-86-4	Mercury fulminate (R,T)
P066	16752-77-5	Ethanimidothioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester
P066	16752-77-5	Methomyl
P067	75-55-8	Aziridine, 2-methyl-
P067	75-55-8	1,2-Propylenimine
P068	60-34-4	Hydrazine, methyl-
P068	60-34-4	Methyl hydrazine
P069	75-86-5	2-Methylactonitrile
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
P070	116-06-3	Aldicarb
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P071	298-00-0	Methyl parathion
P071	298-00-0	Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester

P072	86-88-4	alpha-Naphthylthiourea
P072	86-88-4	Thiourea, 1-naphthalenyl-
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl Ni(CO) <sub>4</sub> , (T-4)-
P074	557-19-7	Nickel cyanide
P074	557-19-7	Nickel cyanide Ni(CN) <sub>2</sub>
P075	1 54-11-5	Nicotine, & salts
P075	1 54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts
P076	10102-43-9	Nitric oxide
P076	10102-43-9	Nitrogen oxide NO
P077	100-01-6	Benzenamine, 4-nitro-
P077	100-01-6	p-Nitroaniline
P078	10102-44-0	Nitrogen dioxide
P078	10102-44-0	Nitrogen oxide NO <sub>2</sub>
P081	55-63-0	Nitroglycerine (R)
P081	55-63-0	1,2,3-Propanetriol, trinitrate (R)
P082	62-75-9	Methanamine, -methyl-N-nitroso-

P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P084	4549-40-0	Vinylamine, -methyl-N-nitroso-
P085	152-16-9	Diphosphoramidate, octamethyl-
P085	152-16-9	Octamethylpyrophosphoramidate
P087	20816-12-0	Osmium oxide OsO <sub>4</sub> , (T-4)-
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	Endothall
P088	145-73-3	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P089	56-38-2	Parathion
P089	56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester
P092	62-38-4	Mercury, (acetato-O)phenyl-
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P093	103-85-5	Thiourea, phenyl-
P094	298-02-2	Phorate

P094	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
P095	75-44-5	Carbonic dichloride
P095	75-44-5	Phosgene
P096	7803-51-2	Hydrogen phosphide
P096	7803-51-2	Phosphine
P097	52-85-7	Famphur
P097	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K(CN)
P099	506-61-6	Argentate(1-), bis(cyano-C)-, potassium
P099	506-61-6	Potassium silver cyanide
P101	107-12-0	Ethyl cyanide
P101	107-12-0	Propanenitrile
P102	107-19-7	Propargyl alcohol
P102	107-19-7	2-Propyn-1-ol
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide

P104	506-64-9	Silver cyanide Ag(CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na(CN)
P108	1 157-24-9	Strychnidin-10-one, & salts
P108	1 157-24-9	Strychnine, & salts
P109	3689-24-5	Tetraethyldithiopyrophosphate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P110	78-00-2	Plumbane, tetraethyl-
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Methane, tetranitro-(R)
P112	509-14-8	Tetranitromethane (R)
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide $Tl_2 O_3$
P114	12039-52-0	Selenious acid, dithallium(1+) salt



P114	12039-52-0	Tetraethyldithiopyrophosphate
P115	7446-18-6	Thiodiphosphoric acid, tetraethyl ester
P115	7446-18-6	Plumbane, tetraethyl-
P116	79-19-6	Tetraethyl lead
P116	79-19-6	Thiosemicarbazide
P118	75-70-7	Methanethiol, trichloro-
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Ammonium vanadate
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide $V_2O_5$
P120	1314-62-1	Vanadium pentoxide
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide $Zn(CN)_2$
P122	1314-84-7	Zinc phosphide $Zn_3P_2$ , when present at concentrations greater than 10% (R,T)
P123	8001-35-2	Toxaphene
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate.
P127	1563-66-2	Carbofuran

P128	315-8-4	Mexacarbate
P128	315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)
P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl]oxime.
P185	26419-73-8	Tirpate
P188	57-64-7	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)
P188	57-64-7	Physostigmine salicylate
P189	55285-14-8	Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester
P189	55285-14-8	Carbosulfan
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester
P190	1129-41-5	Metolcarb
P191	644-64-4	Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester
P191	644-64-4	Dimetilan
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester
P192	119-38-0	Isolan
P194	23135-22-0	Ethanimidthioic acid, 2-(dimethylamino)-N-[[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester
P194	23135-22-0	Oxamyl

P196	15339-36-3	Manganese, bis(dimethylcarbamodithioato-S,S')-,
P196	15339-36-3	Manganese dimethyldithiocarbamate
P197	17702-57-7	Formparanate
P197	17702-57-7	Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[[(methylamino)carbonyl]oxy]phenyl]-
P198	23422-53-9	Formetanate hydrochloride
P198	23422-53-9	Methanimidamide, N,N-dimethyl-N'-[3-[[[(methylamino)-carbonyl]oxy]phenyl]-monohydrochloride
P199	2032-65-7	Methiocarb
P199	2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate
P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate
P201	2631-37-0	Promecarb
P202	64-00-6	m-Cumenyl methylcarbamate
P202	64-00-6	3-Isopropylphenyl N-methylcarbamate
P202	64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate
P203	1646-88-4	Aldicarb sulfone
P203	1646-88-4	Propanal, 2-methyl-2-(methyl-sulfonyl)-, O-[(methylamino)carbonyl] oxime
P204	57-47-6	Physostigmine
P204	57-47-6	Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-

P205	137-30-4	Zinc, bis(dimethylcarbamodithioato-S,S')-,
P205	137-30-4	Ziram

U001	75-07-0	Acetaldehyde (I)
U001	75-07-0	Ethanal (I)
U002	67-64-1	Acetone (I)
U002	67-64-1	2-Propanone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone
U004	98-86-2	Ethanone, 1-phenyl-
U005	53-96-3	Acetamide, -9H-fluoren-2-yl-
U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide
U007	79-06-1	2-Propenamide
U008	79-10-7	Acrylic acid (I)
U008	79-10-7	2-Propenoic acid (I)

U009	107-13-1	Acrylonitrile
U009	107-13-1	2-Propenenitrile
U010	50-07-7	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta,8aalpaha,8balpaha)]-
U010	50-07-7	Mitomycin C
U011	61-82-5	Amitrole
U011	61-82-5	1H-1,2,4-Triazol-3-amine
U012	62-53-3	Aniline (I,T)
U012	62-53-3	Benzenamine (I,T)
U014	492-80-8	Auramine
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl-
U015	115-02-6	Azaserine
U015	115-02-6	L-Serine, diazoacetate (ester)
U016	225-51-4	Benz[c]acridine
U017	98-87-3	Benzal chloride
U017	98-87-3	Benzene, (dichloromethyl)-
U018	56-55-3	Benz[a]anthracene

U019	71-43-2	Benzene (I,T)
U020	98-09-9	Benzenesulfonic acid chloride (C,R)
U020	98-09-9	Benzenesulfonyl chloride (C,R)
U021	92-87-5	Benzidine
U021	92-87-5	[1,1'-Biphenyl]-4,4'-diamine
U022	50-32-8	Benzo[a]pyrene
U023	98-07-7	Benzene, (trichloromethyl)-
U023	98-07-7	Benzotrichloride (C,R,T)
U024	111-91-1	Dichloromethoxy ethane
U024	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U025	111-44-4	Dichloroethyl ether
U025	111-44-4	Ethane, 1,1'-oxybis[2-chloro-
U026	494-03-1	Chlornaphazin
U026	494-03-1	Naphthalenamine, N,N'-bis(2-chloroethyl)-
U027	108-60-1	Dichloroisopropyl ether
U027	108-60-1	Propane, 2,2'-oxybis[2-chloro-
U028	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester

U028	117-81-7	Diethylhexyl phthalate
U029	74-83-9	Methane, bromo-
U029	74-83-9	Methyl bromide
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-
U030	101-55-3	4-Bromophenyl phenyl ether
U031	71-36-3	1-Butanol (I)
U031	71-36-3	n-Butyl alcohol (I)
U032	13765-19-0	Calcium chromate
U032	13765-19-0	Chromic acid H <sub>2</sub> CrO <sub>4</sub> , calcium salt
U033	353-50-4	Carbonic difluoride
U033	353-50-4	Carbon oxyfluoride (R,T)
U034	75-87-6	Acetaldehyde, trichloro-
U034	75-87-6	Chloral
U035	305-03-3	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U035	305-03-3	Chlorambucil
U036	57-74-9	Chlordane, alpha & gamma isomers
U036	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-

U037	108-90-7	Benzene, chloro-
U037	108-90-7	Chlorobenzene
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol
U039	59-50-7	Phenol, 4-chloro-3-methyl-
U041	106-89-8	Epichlorohydrin
U041	106-89-8	Oxirane, (chloromethyl)-
U042	110-75-8	2-Chloroethyl vinyl ether
U042	110-75-8	Ethene, (2-chloroethoxy)-
U043	75-01-4	Ethene, chloro-
U043	75-01-4	Vinyl chloride
U044	67-66-3	Chloroform
U044	67-66-3	Methane, trichloro-
U045	74-87-3	Methane, chloro- (I,T)
U045	74-87-3	Methyl chloride (I,T)
U046	107-30-2	Chloromethyl methyl ether



U046	107-30-2	Methane, chloromethoxy-
U047	91-58-7	beta-Chloronaphthalene
U047	91-58-7	Naphthalene, 2-chloro-
U048	95-57-8	o-Chlorophenol
U048	95-57-8	Phenol, 2-chloro-
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U050	218-01-9	Chrysene
U051		Creosote
U052	1319-77-3	Cresol (Cresylic acid)
U052	1319-77-3	Phenol, methyl-
U053	4170-30-3	2-Butenal
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Benzene, (1-methylethyl)-(l)
U055	98-82-8	Cumene (l)
U056	110-82-7	Benzene, hexahydro-(l)

U056	110-82-7	Cyclohexane (I)
U057	108-94-1	Cyclohexanone (I)
U058	50-18-0	Cyclophosphamide
U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide
U059	20830-81-3	Daunomycin
U059	20830-81-3	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)-
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-
U060	72-54-8	DDD
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-
U061	50-29-3	DDT
U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-di chloro-2-propenyl) ester
U062	2303-16-4	Diallate
U063	53-70-3	Dibenz[a,h]anthracene
U064	189-55-9	Benzo[rs]pentaphene
U064	189-55-9	Dibenzo[a,i]pyrene
U066	96-12-8	1,2-Dibromo-3-chloropropane

U066	96-12-8	Propane, 1,2-dibromo-3-chloro-
U067	106-93-4	Ethane, 1,2-dibromo-
U067	106-93-4	Ethylene dibromide
U068	74-95-3	Methane, dibromo-
U068	74-95-3	Methylene bromide
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U069	84-74-2	Dibutyl phthalate
U070	95-50-1	Benzene, 1,2-dichloro-
U070	95-50-1	o-Dichlorobenzene
U071	541-73-1	Benzene, 1,3-dichloro-
U071	541-73-1	m-Dichlorobenzene
U072	106-46-7	Benzene, 1,4-dichloro-
U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
U073	91-94-1	3,3'-Dichlorobenzidine
U074	764-41-0	2-Butene, 1,4-dichloro-(I,T)
U074	764-41-0	1,4-Dichloro-2-butene (I,T)

U075	75-71-8	Dichlorodifluoromethane
U075	75-71-8	Methane, dichlorodifluoro-
U076	75-34-3	Ethane, 1,1-dichloro-
U076	75-34-3	Ethylidene dichloride
U077	107-06-2	Ethane, 1,2-dichloro-
U077	107-06-2	Ethylene dichloride
U078	75-35-4	1,1-Dichloroethylene
U078	75-35-4	Ethene, 1,1-dichloro-
U079	156-60-5	1,2-Dichloroethylene
U079	156-60-5	Ethene, 1,2-dichloro-, (E)-
U080	75-09-2	Methane, dichloro-
U080	75-09-2	Methylene chloride
U081	120-83-2	2,4-Dichlorophenol
U081	120-83-2	Phenol, 2,4-dichloro-
U082	87-65-0	2,6-Dichlorophenol
U082	87-65-0	Phenol, 2,6-dichloro-
U083	78-87-5	Propane, 1,2-dichloro-

U083	78-87-5	Propylene dichloride
U084	542-75-6	1,3-Dichloropropene
U084	542-75-6	1-Propene, 1,3-dichloro-
U085	1464-53-5	2,2'-Bioxirane
U085	1464-53-5	1,2:3,4-Diepoxybutane (I,T)
U086	1615-80-1	N,N'-Diethylhydrazine
U086	1615-80-1	Hydrazine, 1,2-diethyl-
U087	3288-58-2	O,O-Diethyl S-methyl dithiophosphate
U087	3288-58-2	Phosphorodithioic acid, O,O-diethyl S-methyl ester
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
U088	84-66-2	Diethyl phthalate
U089	56-53-1	Diethylstilbesterol
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-
U090	94-58-6	1,3-Benzodioxole, 5-propyl-
U090	94-58-6	Dihydrosafrole
U091	119-90-4	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-

U091	119-90-4	3,3'-Dimethoxybenzidine
U092	124-40-3	Dimethylamine (l)
U092	124-40-3	Methanamine, -methyl-(l)
U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-
U093	60-11-7	p-Dimethylaminoazobenzene
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
U094	57-97-6	7,12-Dimethylbenz[a]anthracene
U095	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
U095	119-93-7	3,3'-Dimethylbenzidine
U096	80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl-(R)
U097	79-44-7	Carbamic chloride, dimethyl-
U097	79-44-7	Dimethylcarbamoyl chloride
U098	57-14-7	1,1-Dimethylhydrazine
U098	57-14-7	Hydrazine, 1,1-dimethyl-
U099	540-73-8	1,2-Dimethylhydrazine
U099	540-73-8	Hydrazine, 1,2-dimethyl-

U101	105-67-9	2,4-Dimethylphenol
U101	105-67-9	Phenol, 2,4-dimethyl-
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
U102	131-11-3	Dimethyl phthalate
U103	77-78-1	Dimethyl sulfate
U103	77-78-1	Sulfuric acid, dimethyl ester
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-
U105	121-14-2	2,4-Dinitrotoluene
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-
U106	606-20-2	2,6-Dinitrotoluene
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
U107	117-84-0	Di-n-octyl phthalate
U108	123-91-1	1,4-Diethyleneoxide
U108	123-91-1	1,4-Dioxane
U109	122-66-7	1,2-Diphenylhydrazine
U109	122-66-7	Hydrazine, 1,2-diphenyl-
U110	142-84-7	Dipropylamine (I)

U110	142-84-7	1-Propanamine, N-propyl-(I)
U111	621-64-7	Di-n-propylnitrosamine
U111	621-64-7	1-Propanamine, N-nitroso-N-propyl-
U112	141-78-6	Acetic acid ethyl ester (I)
U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)
U114	1111-54-6	Carbamodithioic acid, 1,2-ethanediybis-, salts & esters
U114	1111-54-6	Ethylenebisdithiocarbamic acid, salts & esters
U115	75-21-8	Ethylene oxide (I,T)
U115	75-21-8	Oxirane (I,T)
U116	96-45-7	Ethylenethiourea
U116	96-45-7	2-Imidazolidinethione
U117	60-29-7	Ethane, 1,1'-oxybis-(I)
U117	60-29-7	Ethyl ether (I)
U118	97-63-2	Ethyl methacrylate
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester



U119	62-50-0	Ethyl methanesulfonate
U119	62-50-0	Methanesulfonic acid, ethyl ester
U120	206-44-0	Fluoranthene
U121	75-69-4	Methane, trichlorofluoro-
U121	75-69-4	Trichloromonofluoromethane
U122	50-00-0	Formaldehyde
U123	64-18-6	Formic acid (C,T)
U124	110-00-9	Furan (I)
U124	110-00-9	Furfuran (I)
U125	98-01-1	2-Furancarboxaldehyde (I)
U125	98-01-1	Furfural (I)
U126	765-34-4	Glycidylaldehyde
U126	765-34-4	Oxiranecarboxyaldehyde
U127	118-74-1	Benzene, hexachloro-
U127	118-74-1	Hexachlorobenzene
U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-

U128	87-68-3	Hexachlorobutadiene
U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
U129	58-89-9	Lindane
U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U130	77-47-4	Hexachlorocyclopentadiene
U131	67-72-1	Ethane, hexachloro-
U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene
U132	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-
U133	302-01-2	Hydrazine (R,T)
U134	7664-39-3	Hydrofluoric acid (C,T)
U134	7664-39-3	Hydrogen fluoride (C,T)
U135	7783-06-4	Hydrogen sulfide
U135	7783-06-4	Hydrogen sulfide H <sub>2</sub> S
U136	75-60-5	Arsinic acid, dimethyl-
U136	75-60-5	Cacodylic acid
U137	193-39-5	Indeno[1,2,3-cd]pyrene

U138	74-88-4	Methane, iodo-
U138	74-88-4	Methyl iodide
U140	78-83-1	Isobutyl alcohol (I,T)
U140	78-83-1	1-Propanol, 2-methyl- (I,T)
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
U141	120-58-1	Isosafrole
U142	143-50-0	Kepone
U142	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-
U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-
U143	303-34-4	Lasiocarpine
U144	301-04-2	Acetic acid, lead(2+) salt
U144	301-04-2	Lead acetate
U145	7446-27-7	Lead phosphate
U145	7446-27-7	Phosphoric acid, lead(2+) salt (2:3)
U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-
U146	1335-32-6	Lead subacetate

U147	108-31-6	2,5-Furandione
U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro-
U149	109-77-3	Malononitrile
U149	109-77-3	Propanedinitrile
U150	148-82-3	Melphalan
U150	148-82-3	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-
U151	7439-97-6	Mercury
U152	126-98-7	Methacrylonitrile (I,T)
U152	126-98-7	2-Propenenitrile, 2-methyl- (I,T)
U153	74-93-1	Methanethiol (I,T)
U153	74-93-1	Thiomethanol (I,T)
U154	67-56-1	Methanol (I)
U154	67-56-1	Methyl alcohol (I)
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-
U155	91-80-5	Methapyrilene

U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)
U156	79-22-1	Methyl chlorocarbonate (I,T)
U157	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U157	56-49-5	3-Methylcholanthrene
U158	101-14-4	Benzenamine, 4,4'-methylenebis[2-chloro-
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)
U159	78-93-3	2-Butanone (I,T)
U159	78-93-3	Methyl ethyl ketone (MEK) (I,T)
U160	1338-23-4	2-Butanone, peroxide (R,T)
U160	1338-23-4	Methyl ethyl ketone peroxide (R,T)
U161	108-10-1	Methyl isobutyl ketone (I)
U161	108-10-1	4-Methyl-2-pentanone (I)
U161	108-10-1	Pentanol, 4-methyl-
U162	80-62-6	Methyl methacrylate (I,T)
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U163	70-25-7	Guanidine, -methyl-N'-nitro-N-nitroso-
U163	70-25-7	MNNG

U164	56-04-2	Methylthiouracil
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U165	91-20-3	Naphthalene
U166	130-15-4	1,4-Naphthalenedione
U166	130-15-4	1,4-Naphthoquinone
U167	134-32-7	1-Naphthalenamine
U167	134-32-7	alpha-Naphthylamine
U168	91-59-8	2-Naphthalenamine
U168	91-59-8	beta-Naphthylamine
U169	98-95-3	Benzene, nitro-
U169	98-95-3	Nitrobenzene (I,T)
U170	100-02-7	p-Nitrophenol
U170	100-02-7	Phenol, 4-nitro-
U171	79-46-9	2-Nitropropane (I,T)
U171	79-46-9	Propane, 2-nitro- (I,T)
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-

U172	924-16-3	N-Nitrosodi-n-butylamine
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-
U173	1116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	Ethanamine, -ethyl-N-nitroso-
U174	55-18-5	N-Nitrosodiethylamine
U176	759-73-9	N-Nitroso-N-ethylurea
U176	759-73-9	Urea, N-ethyl-N-nitroso-
U177	684-93-5	N-Nitroso-N-methylurea
U177	684-93-5	Urea, N-methyl-N-nitroso-
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester
U178	615-53-2	N-Nitroso-N-methylurethane
U179	100-75-4	N-Nitrosopiperidine
U179	100-75-4	Piperidine, 1-nitroso-
U180	930-55-2	N-Nitrosopyrrolidine
U180	930-55-2	Pyrrolidine, 1-nitroso-
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-
U181	99-55-8	5-Nitro-o-toluidine

U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-
U182	123-63-7	Paraldehyde
U183	608-93-5	Benzene, pentachloro-
U183	608-93-5	Pentachlorobenzene
U184	76-01-7	Ethane, pentachloro-
U184	76-01-7	Pentachloroethane
U185	82-68-8	Benzene, pentachloronitro-
U185	82-68-8	Pentachloronitrobenzene (PCNB)
U186	504-60-9	1-Methylbutadiene (I)
U186	504-60-9	1,3-Pentadiene (I)
U187	62-44-2	Acetamide, -(4-ethoxyphenyl)-
U187	62-44-2	Phenacetin
U188	108-95-2	Phenol
U189	1314-80-3	Phosphorus sulfide (R)
U189	1314-80-3	Sulfur phosphide (R)
U190	85-44-9	1,3-Isobenzofurandione
U190	85-44-9	Phthalic anhydride



U191	109-06-8	2-Picoline
U191	109-06-8	Pyridine, 2-methyl-
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-
U192	23950-58-5	Pronamide
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide
U193	1120-71-4	1,3-Propane sultone
U194	107-10-8	1-Propanamine (I,T)
U194	107-10-8	n-Propylamine (I,T)
U196	110-86-1	Pyridine
U197	106-51-4	p-Benzoquinone
U197	106-51-4	2,5-Cyclohexadiene-1,4-dione
U200	50-55-5	Reserpine
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester,(3beta,16beta,17alpha,18beta,20alpha)-
U201	108-46-3	1,3-Benzenediol
U201	108-46-3	Resorcinol
U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-

U203	94-59-7	Safrole
U204	7783-00-8	Selenious acid
U204	7783-00-8	Selenium dioxide
U205	7488-56-4	Selenium sulfide
U205	7488-56-4	Selenium sulfide SeS <sub>2</sub> (R,T)
U206	18883-66-4	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoareido)-, D-
U206	18883-66-4	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)-carbonyl]amino]-
U206	18883-66-4	Streptozotocin
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-
U207	95-94-3	1,2,4,5-Tetrachlorobenzene
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-
U208	630-20-6	1,1,1,2-Tetrachloroethane
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-
U209	79-34-5	1,1,2,2-Tetrachloroethane
U210	127-18-4	Ethene, tetrachloro-
U210	127-18-4	Tetrachloroethylene

U211	56-23-5	Carbon tetrachloride
U211	56-23-5	Methane, tetrachloro-
U213	109-99-9	Furan, tetrahydro-(I)
U213	109-99-9	Tetrahydrofuran (I)
U214	563-68-8	Acetic acid, thallium(1+) salt
U214	563-68-8	Thallium(I) acetate
U215	6533-73-9	Carbonic acid, dithallium(1+) salt
U215	6533-73-9	Thallium(I) carbonate
U216	7791-12-0	Thallium(I) chloride
U216	7791-12-0	Thallium chloride TlCl
U217	10102-45-1	Nitric acid, thallium(1+) salt
U217	10102-45-1	Thallium(I) nitrate
U218	62-55-5	Ethanethioamide
U218	62-55-5	Thioacetamide
U219	62-56-6	Thiourea
U220	108-88-3	Benzene, methyl-
U220	108-88-3	Toluene

U221	25376-45-8	Benzenediamine, ar-methyl-
U221	25376-45-8	Toluenediamine
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride
U222	636-21-5	o-Toluidine hydrochloride
U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl- (R,T)
U223	26471-62-5	Toluene diisocyanate (R,T)
U225	75-25-2	Bromoform
U225	75-25-2	Methane, tribromo-
U226	71-55-6	Ethane, 1,1,1-trichloro-
U226	71-55-6	Methyl chloroform
U226	71-55-6	1,1,1-Trichloroethane
U227	79-00-5	Ethane, 1,1,2-trichloro-
U227	79-00-5	1,1,2-Trichloroethane
U228	79-01-6	Ethene, trichloro-
U228	79-01-6	Trichloroethylene
U234	99-35-4	Benzene, 1,3,5-trinitro-
U234	99-35-4	1,3,5-Trinitrobenzene (R,T)

U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt
U236	72-57-1	Trypan blue
U237	66-75-1	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U237	66-75-1	Uracil mustard
U238	51-79-6	Carbamic acid, ethyl ester
U238	51-79-6	Ethyl carbamate (urethane)
U239	1330-20-7	Benzene, dimethyl- (I,T)
U239	1330-20-7	Xylene (I)
U240	1 94-75-7	Acetic acid, (2,4-dichlorophenoxy)-, salts & esters
U240	1 94-75-7	2,4-D, salts & esters
U243	1888-71-7	Hexachloropropene
U243	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-
U244	137-26-8	Thioperoxydicarbonic diamide [(H <sub>2</sub> N)C(S)] <sub>2</sub> S <sub>2</sub> , tetramethyl-
U244	137-26-8	Thiram

U246	506-68-3	Cyanogen bromide (CN)Br
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4- methoxy-
U247	72-43-5	Methoxychlor
U248	1 81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations of 0.3% or less
U248	1 81-81-2	Warfarin, & salts, when present at concentrations of 0.3% or less
U249	1314-84-7	Zinc phosphide $Zn_3 P_2$ , when present at concentrations of 10% or less
U271	17804-35-2	Benomyl
U271	17804-35-2	Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-, methyl ester
U278	22781-23-3	Bendiocarb
U278	22781-23-3	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate
U279	63-25-2	Carbaryl
U279	63-25-2	1-Naphthalenol, methylcarbamate
U280	101-27-9	Barban
U280	101-27-9	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butyryl ester
U328	95-53-4	Benzenamine, 2-methyl-
U328	95-53-4	o-Toluidine

U353	106-49-0	Benzenamine, 4-methyl-
U353	106-49-0	p-Toluidine
U359	110-80-5	Ethanol, 2-ethoxy-
U359	110-80-5	Ethylene glycol monoethyl ether
U364	22961-82-6	Bendiocarb phenol
U364	22961-82-6	1,3-Benzodioxol-4-ol, 2,2-dimethyl-,
U367	1563-38-8	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-
U367	1563-38-8	Carbofuran phenol
U372	10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester
U372	10605-21-7	Carbendazim
U373	122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester
U373	122-42-9	Propham
U387	52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester
U387	52888-80-9	Prosulfocarb
U389	2303-17-5	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester
U389	2303-17-5	Triallate
U394	30558-43-1	A2213

U394	30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester
U395	5952-26-1	Diethylene glycol, dicarbamate
U395	5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate
U404	121-44-8	Ethanamine, N,N-diethyl-
U404	121-44-8	Triethylamine
U409	23564-05-8	Carbamic acid, [1,2-phenylenebis(iminocarbonothioyl)]bis-, dimethyl ester
U409	23564-05-8	Thiophanate-methyl
U410	59669-26-0	Ethanimidothioic acid, N,N'-[thiobis[(methylimino)carbonyloxy]]bis-, dimethyl ester
U410	59669-26-0	Thiodicarb
U411	114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate
U411	114-26-1	Propoxur
See F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
See F027	87-86-5	Pentachlorophenol
See F027	87-86-5	Phenol, pentachloro-
See F027	58-90-2	Phenol, 2,3,4,6-tetrachloro-
See F027	95-95-4	Phenol, 2,4,5-trichloro-
See F027	88-06-2	Phenol, 2,4,6-trichloro-



See F027	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
See F027	93-72-1	Silvex (2,4,5-TP)
See F027	93-76-5	2,4,5-T
See F027	58-90-2	2,3,4,6-Tetrachlorophenol
See F027	95-95-4	2,4,5-Trichlorophenol
See F027	88-06-2	2,4,6-Trichlorophenol

EPA HW No. 1	Contaminant	CAS No. 2	Regulatory Level (mg/L)
D001	Varies	NA	NA
D002	Varies	NA	NA
D003	Varies	NA	NA
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03

D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	4 200.0
D024	m-Cresol	108-39-4	4 200.0
D025	p-Cresol	106-44-5	4 200.0
D026	Cresol		4 200.0
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	3 0.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	3 0.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0

D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	3 5.0
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

**Table II.A.5/6-2**

**METHODS USED TO SAMPLE WASTES**

<b>Hazardous Waste Types</b>	<b>Sample Method</b>	<b>Description of Sampling</b>	<b>Method Reference</b>
Homogeneous Liquids in Containers	Grab Sample	Disposable Coliwasa, Glass Tube, Composite Sample of Grabs from Top, Middle, and Bottom	(1)
Homogeneous Liquids in Bulk	Grab Sample	Same	(1)
Bi-Layered Liquids in Containers	Grab Sample	Same	(1)
Bi-Layered Liquids in Bulk	Grab Sample	Same	(1)
Multi-Layered Liquids in Containers	Grab Sample	Same	(1)
Multi-Layered Liquids in Bulk	Grab Sample	Same	(1)
Solid-Liquid Mixtures in Containers	Grab Sample	(2) Coliwasa, Trowel, or Scoop Composite Sample of Grabs from Top, Middle, and Bottom	(1)
Solid-Liquid Mixtures in Bulk	Grab Sample	(2) Same	(1)

(1)	DEP-SOP-001/01. FS 5000 Waste Sampling
(2)	Devise used is dependent upon density of waste materials.

**Table II.A.5/6-3**

**ANALYSIS METHODS**

<b>CONSTITUENT</b>	<b>SW-846 ANALYSIS METHOD</b>
Cyanide (Total & Amenable)	9010C
Mercury	7470A, 7171B
Sulfide	9030B
Metals (Except Mercury)	7000 Series/6010 [7000B, 7010, 7061A, 7062, 7063, 7195, 7196A]
Volatile Organics	8240B
Semi-Volatile Organics	8270D
TCLP Extraction	1311
Hazardous Waste Corrosivity	1110A
Hazardous Waste Ignitibility	1010A, 1020B
Hazardous Waste Reactivity-Cyanide/Sulfide	The regulations do not require specific test methods for any of these properties. Therefore, generators <u>must</u> use waste knowledge to determine if their waste exhibits the characteristic of reactivity.

**Table II.A.5/6-4**

<b>RCRA Metals</b>	<b>40 CFR 268.48 Table Universal Treatment Standard (mg/L) (Non-wastewaters)</b>	<b>40 CFR 268.49 Alternative Treatment Standards for Soil: 10 x UTS (mg/L)</b>	<b>40 CFR 261.24-TCLP Regulatory Level (mg/L)</b>
<b>D004- Arsenic</b>	5.0	50	5.0
<b>D005- Barium</b>	21	210	100
<b>D006- Cadmium</b>	0.11	1.1	1.0
<b>D007- Chromium</b>	0.60	6	5.0
<b>D008- Lead</b>	0.75	7.5	5.0
<b>D010- Selenium</b>	5.7	57	1.0
<b>D011- Silver</b>	0.14	1.4	5.0

## Exhibit II.A.5/6.-1: WASTE MATERIAL PROFILE FORM



### Waste Profile Sheet

Triumvirate Environmental of Florida, Inc.  
10100 Rocket Blvd.  
Orlando, FL 32824  
Phone (800) 345-6393 Fax (407) 855-2812

Approval Number: \_\_\_\_\_

<b>A. Generator Information:</b>				<b>Customer Information:</b>			
Generator Name:				Customer Name:			
Mail Address:				Address:			
City:	State:	Zip:		City:	State:	Zip:	
Contact:	Title:			Contact:	Title:		
Site Phone:	EPA ID:			Customer Phone:	Sic Code:		
Site Address:				Customer Fax:			
<b>B. COMMON NAME OF WASTE:</b>				<b>MSDS / Analytical (Y/ N )</b>			
Process generating waste:				<b>SAMPLE</b>			
Shipment Method: Drum (size): / (type): Bulk: Quantity: /mo. <input type="checkbox"/> qtr. <input type="checkbox"/> yr. <input type="checkbox"/> one time <input type="checkbox"/>							
<b>C. Physical Properties:</b> Color: Total Halogens (%) Odor: none <input type="checkbox"/> mild <input type="checkbox"/> strong <input type="checkbox"/>							
Liquids (%)	Solids (%)	Sludge (%)	Powder (%)	Debris:	Specific Gravity:		
PH:	BTU/Lb: <input type="checkbox"/> <5000 <input type="checkbox"/> <10,000 <input type="checkbox"/> >10,000	Flash Point (f): <input type="checkbox"/> <100 <input type="checkbox"/> <140 <input type="checkbox"/> <200 <input type="checkbox"/> >200					

<b>D. Waste Composition (list all haz &amp; non-haz components)</b>				<b>G. Metals: None <input type="checkbox"/> TCLP <input type="checkbox"/> TOTAL <input type="checkbox"/></b>			
		-	%	D004 Arsenic 5mg/l:	D005 Barium 100mg/l:		
		-	%				
		-	%	D006 Cadmium 1mg/l:	D007 Chromium 5mg/l:		
		-	%				
		-	%	D008 Lead 5mg/l:	D009 Mercury 0.2 mg/l:		
		-	%	D010 Selenium 1mg/l:	D011 Silver 5mg/l:		
		-	%	Copper:	Nickel:		
Does this waste contain any UHC's? N <input type="checkbox"/> Y <input type="checkbox"/> (Attach UHC Appendix or LDR if Yes)				Zinc:			

<b>E. Hazardous Properties:</b>				<b>H. Other Compounds: TCLP <input type="checkbox"/> Total <input type="checkbox"/></b>			
None <input type="checkbox"/>	Water Reactive <input type="checkbox"/>	Shock Sensitive <input type="checkbox"/>	Radioactive <input type="checkbox"/>	D012 Endrin <input type="checkbox"/>	D029 Dichloroethylene <input type="checkbox"/>		
Dioxins <input type="checkbox"/>	Benzene Neshap <input type="checkbox"/>	Air Sensitive <input type="checkbox"/>	Pyrophoric <input type="checkbox"/>	D013 Lindane <input type="checkbox"/>	D030 2,4-Dinitrotoluene <input type="checkbox"/>		
Explosive <input type="checkbox"/>	Etiological <input type="checkbox"/>	Polymerizable <input type="checkbox"/>	Pathogen <input type="checkbox"/>	D014 Methoxychlor <input type="checkbox"/>	D031 Heptachlor/epoxide <input type="checkbox"/>		
Biological <input type="checkbox"/>	Pesticide/Herbicide/Insecticide <input type="checkbox"/>			D015 Toxaphene <input type="checkbox"/>	D032 Hexachlorobenzene <input type="checkbox"/>		
Special Handling/Compatibility Concerns:				D016 2,4-Dichlorophenoxyacetic Acid <input type="checkbox"/>			
Cyanides <input type="checkbox"/>	Sulfides <input type="checkbox"/>	Amines <input type="checkbox"/>	PCB's <input type="checkbox"/>	D017 2,4,5 TP (Silvex) <input type="checkbox"/>	D033 Hexachlorobutadiene <input type="checkbox"/>		
Phenols <input type="checkbox"/>				D018 Benzene <input type="checkbox"/>	D034 Hexachloroethane <input type="checkbox"/>		
<b>F. DOT Shipping Name:</b>				D019 Carbon Tetrachloride <input type="checkbox"/>	D035 Methyl Ethyl Ketone <input type="checkbox"/>		
Additional Description:				D020 Chlorodane <input type="checkbox"/>	D036 Nitrobenzene <input type="checkbox"/>		
Hazard Class: UN/NA :	Packing Group:			D021 Chlorobenzene <input type="checkbox"/>	D037 Pentachlorophenol <input type="checkbox"/>		
EPA Code:	State Code:			D022 Chloroform <input type="checkbox"/>	D038 Pyridine <input type="checkbox"/>		
Is this material a Hazardous Waste under 40CFR 261.3 <input type="checkbox"/> Yes <input type="checkbox"/> No				D023 o-Cresol <input type="checkbox"/>	D039 Tetrachloroethylene <input type="checkbox"/>		
Is this a Hazardous Substance/Marine Pollutant per 49 CFR (DOT) <input type="checkbox"/> Yes <input type="checkbox"/> No				D024 m-Cresol <input type="checkbox"/>	D040 Trichloroethylene <input type="checkbox"/>		
Form Code:	Source Code:	Subpart CC (voc>500ppm):		D025 p-Cresol <input type="checkbox"/>	D041 2,4,5-Trichlorophenol <input type="checkbox"/>		
				D026-cresol <input type="checkbox"/>	D042 2,4,6- Trichlorophenol <input type="checkbox"/>		
				D027 1,4-Dichlorobenzene <input type="checkbox"/>	D043 Vinyl Chloride <input type="checkbox"/>		
				D028 1,2 Dichloroethane <input type="checkbox"/>	Notes:		

**Generator Certification:** I hereby certify that the waste identified or described on this waste profile conforms with the identifications or descriptions provided, and with analytical data or other specifications provided to the TSDF. To the extent the waste does not conform, the Generator agrees to indemnify Triumvirate Environmental (Florida), Inc. from all liability and damages arising therefrom. No deliberate or willful omissions of composition or properties exist and that all known or suspected hazards have been disclosed. I also certify that the obtained sample is representative of the waste material described above and give this TSDF permission and consent to make amendments and corrections.

<b>Name:</b>	<b>Title:</b>
<b>Signature:</b>	<b>Date:</b>

#### Facility Certification:

As required by 40 CFR 264.12(b) of Florida Hazardous Waste Regulations, Triumvirate Environmental, Florida Inc. certifies that they possess the proper current licenses required by the US Environmental Protection Agency and the Florida Department of Environmental Protection to accept and store the waste listed above. The generator will be notified in writing within seven days of any changes in license status affecting the ability of Triumvirate Environmental Florida, Inc. to accept the above waste.

(For Triumvirate Environmental Use Only)

<b>Authorized Signature:</b>	<b>Printed Name:</b>	<b>Date:</b>	<b>Title:</b>
<b>Off Site Codes:</b>	<b>Disposal Restrictions:</b>		

## **Exhibit II.A.5/6.-2: COMPLIANCE REVIEW FORM**

On the following page



**Exhibit II.A.5/6.-2: COMPLIANCE REVIEW FORM**  
**INCOMING TRACKING-QA/QC LAB FORM**

Shipment #

Date:

Customer Name:

Manifest #

Container #	Line Item	Drum Size	Drum Type	Pnd/Gal	Storage Area	Approval #	Drum Space Quantity	Waste Type/Comments	pH	Specific Grav-ity	% Liquid	% Solid	Layers	Water Solu-ble	Water Re-active	Chlor-n-Oil Test	fp	Lab Re-lease

Drum Type: DM=Drum Metal  
CF=Carton Fiber/Box  
TP=Tote  
BA=Bag  
CW=Carton Wood

Water Solubility: S=Slight  
Y=Yes  
N=No

Water Reactive Y=Yes  
N=No

Chlor-n-oil Test: P=Pos  
N=Neg

Lab Release Y=Yes  
N=No

ALL WASTE RECEIVED IS IN UN SPECIFICATION CONTAINERS

Revised 8-15-01

## Exhibit II.A.5/6.-3: NOTICE OF APPROVAL LETTER

Triumvirate Environmental Services, Inc. –

### NOTICE OF APPROVAL

TSD Facility: Triumvirate Environmental (Florida), Inc. Auth. Date:

Expires:

Waste  
Name:  
Profile #:

As required per 40 CFR 264.12(b), this letter serves as notification that Triumvirate Environmental has the appropriate permits in place to accept and manage your waste(s). Due in part to our permit, non- conforming waste may be rejected at a rate of \$250.00, plus round trip transportation if the discrepancy cannot be resolved via manifest correction or price adjustment.

We appreciate your interest in Triumvirate Environmental Services, Inc. and we look forward to assisting you with the disposal of your waste. To place an order, please contact our customer service department. Our telephone numbers are (407) 859-4441, (800) 345-6393.

Sincerely,

James F.  
Green Vice  
President  
Triumvirate Environmental Services, Inc.

10100 Rocket Boulevard, Orlando, FL 32824 (407) 859 4441 (800) 345-6393  
FLD980559728

## **Exhibit II.A.5/6.-4: LABPACK/DRUM INVENTORY FORM**

On the following page

Triumvirate Environmental / Providing Long-Term, Innovative Solutions / Serving New England to the South-Atlantic  
Corporate Headquarters: Somerville, MA 02143 Tel: (800) 966-9282 Fax: (617) 628-8099

Approval #: \_\_\_\_\_

Labels: \_\_\_\_\_

Manifest #: \_\_\_\_\_

Process Code \_\_\_\_\_

Drum # \_\_\_\_\_

Size: \_\_\_\_\_ Type: \_\_\_\_\_

Proper Shipping \_\_\_\_\_

Class.Div / UN/NA # / P   11  

Special Permits \_\_\_\_\_

Waste Code Itemization

--

Container List

Comments

Source

Packaged By: \_\_\_\_\_

Date: \_\_\_\_\_

