Eckoff, Michael

From: Wyluda, John H. [jwyluda@triumvirate.com]
Sent: Wednesday, February 13, 2013 10:58 AM
To: Eckoff, Michael
Cc: Buckley, Charles P.; LoRusso, Christopher M.
Subject: Triumvirate Orlando Consolidation Activities
Attachments: Orlando Consolidation Activities.pdf

Dear Michael,

As discussed over the phone attached is the revised letter along with the associated portions of our Part B permit which pertain to consolidation activities. For further clarification or for additional information please email or call me at 443-370-8041.

Best Regards,

John H. Wyluda
Lab Services and Compliance Coordinator | Triumvirate Environmental
P: 954.583.3795 | M: 443.370.8041
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January 21, 2013

Michael Eckoff
Florida Department of Environmental Protection
Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

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DEP Central Dist.

Commencement of Consolidation Activities
Triumvirate Environmental (Florida), Inc.
10100 Rocket Boulevard, Orlando, Florida 32824
EPA ID# FLD 980559728
WACS ID: 95376

Contingency plan

Dear Mr. Eckoff,

Triumvirate Environmental (Florida) Inc., at 10100 Rocket Boulevard, Orlando, FL would like to resume consolidation activities per the Part B permit as described in sections 5.2 and 7.1.2. Consolidation activities would consist of consolidating non-reactive and non-ignitable waste streams by trained personnel as outlined in the permit application. We understand that there is a twenty one day period after notification before we can commence consolidations. This letter is to serve as the notification.

Contingency plan

Sincerely,

John Wyluda
Lab Services and Compliance Coordinator
Triumvirate Environmental, Inc.

1-28-13 8:55A
called Kip Buckley
left message
1-28-13 3:55P
~~thank~~ Jim Green called
he stated he would send
information he had regarding
the above information as none
of it is stated in the permit

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February 13, 2013

Michael Eckoff
Florida Department of Environmental Protection
Central District
3319 Maguire Boulevard, Suite 232
Orlando Florida, 32803-3767

Commencement of Consolidation Activities
Triumvirate Environmental (Florida), Inc.
10100 Rocket Boulevard, Orlando FL 32828
EPA ID#: 980559728
WACS ID: 95376

Dear Mr. Eckoff,

Triumvirate Environmental (Florida), Inc. located at 10100 Rocket Blvd, Orlando Florida would like to resume consolidation activities per the Part B Permit described in section(s) : Attachment II.A.5/6.1 (Section 14.0 page 2A-102, page 2A-150 thru 2A-156), Permit Application Section NO. II.A.5/6 (pages2A-84-2A-97) and II.B (pages 2B-10-2B-14. Consolidation activities would consist of consolidating non-reactive and non-ignitable waste streams by trained chemists as outline in the permit application. This letter serves as our 21 day notification.

Sincerely,

John Wyluda
Lab Services and Compliance Coordinator
Triumvirate Environmental (Florida), Inc.

5. *Attach a copy of the reports of the chemical and physical analysis of the hazardous wastes handled at the facility, including all information which must be known to treat, store or dispose of the wastes in accordance with 264.13(270.14(b)(2)] .*

6. *Attach a copy of the waste analysis plan required by 264.13(b)1270.14(b)(3)] . Include the following:*

   a. *Parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters;*
   b. *Test methods used;*
   c. *Sampling methods used;*
   d. *Frequency of analysis to ensure accuracy;*
   e. *Waste analyses that generators supply;*
   f. *Methods used to meet additional waste analysis requirements; and if applicable,*
   g. *For off-site facilities, the procedures used to inspect and ensure that the wastes received match the accompanying manifest.*

Item 5 above requires the applicant to include copies of analysis reports for wastes managed at the facility. The number of pages of analysis reports the facility keeps in files for waste managed at the site would add several voluminous books to this application, without adding significant information that could be used to review the method used by the facility to evaluate incoming waste. Instead of submitting the analysis reports required in item 5, the facility's waste analysis plan included in this application to satisfy the requirements contained in item 6. above is considered to define the information to be shown in the waste evaluation documents. This information is that needed to properly treat, store, or dispose of the wastes in accordance with 264.13. This section of the permit application has been identified with the number II.A.5/6 because it addresses the requirements contained in items 5 and 6 above.

TABLE OF CONTENTS
FOR
WASTE ANALYSIS PLAN
PERMIT APPLICATION SECTION NO. II.A.5/6

TABLE OF CONTENTS
FOR

WASTE ANALYSIS PLAN
PERMIT APPLICATION SECTION NO. II.A.5/6
(continued)

TABLES

EXHIBITS

ATTACHMENTS

WASTE ANALYSIS PLAN

1.0 INTRODUCTION

The waste analysis plan describes the procedures and operations that should 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. Results from evaluation of the waste in accordance with this plan should provide information about each wastes' chemical and physical parameters, from which a classification of the hazards, regulatory status, and requirements for storage, treatment, and disposal can be made for proper management of the waste at the facility. 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 approved, and the method utilized to ensure that the recommended management method for the waste is appropriate. The plan also describes the method used to evaluate the waste after it has been treated at the facility and the procedures followed to obtain the necessary information to ship the waste to off-site facilities for treatment or disposal. An explanation of the methods utilized by the facility to manage inbound waste streams is necessary before proceeding with the development of the plan.

2.0 WASTE MANAGEMENT METHODS AT THE FACILITY

Waste management methods are those hazardous waste operations and processes permitted at the facility. TEI utilizes three waste management methods: storage, consolidation, and treatment. Storage is conducted in containers. The treatment process at the facility consists of stabilization of wastes in a container. Waste consolidation conducted at the facility includes sorting labpacks for repackaging and combining compatible waste into larger containers. Storage and consolidation are identified in this application as operations, whereas the treatment methods are identified as processes.

3.0 MANAGEMENT OF INBOUND WASTE STREAMS

Waste approved to come into the facility is classified depending on the type of management it will receive at the facility. The first management method every waste stream receives at the facility is storage in containers. Wastes are either stored in the facility until being shipped off-site in the same containers that were used for transport into the facility, consolidated into larger containers or lab-packed, or stabilized in container(s) at the 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 evaluate the waste:

a. for approval to come into the facility;
b. to verify that it conforms to the information used to evaluate it for approval;
c. to ensure that it can be managed by the prescribed operation or process at the facility; and

d. to determine its regulatory status after it has been treated at the facility in preparation for shipment to off-site facilities.

5.0 WASTE APPROVAL PROCESS

Before the waste is shipped to the facility, the waste characteristics must be evaluated and approved for shipment in accordance with procedures established in the waste approval process. The evaluation consists of reviewing information pertaining to the waste stream in question and determining its regulatory status, special hazards, and applicable management method. The waste stream information is provided in a waste profile form (the profile) shown in Exhibit II. A.5/6.-1.

The regulatory status consists of the hazardous waste codes and the DOT description assigned to the waste. The facility is permitted to accept certain hazardous waste codes. If the facility is not permitted to accept the waste codes assigned to the waste, the waste cannot be accepted by the facility. TEI is a hazardous waste transporter subject to the DOT regulations with respect to description, marking, labeling, placarding, and packaging of hazardous wastes, which are regulated by DOT as hazardous materials during transportation. TEI is knowledgeable and diligent in complying with DOT requirements. 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 for the waste in question. 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 identified in Chart 1 of Table II.A.5/6-la. TEI does not accept waste that is considered a special hazard. The waste should also be evaluated for other hazards that may jeopardize the safety of personnel at the facility. The regulatory status of the waste and the hazards it presents are used to determine whether the waste may be accepted by the facility as "permitted waste". If the permit does not allow the facility to accept the waste as "permitted waste", the facility may elect to accept the waste as "transfer waste", which is subject to the transfer facility requirements of F.A.C., Section 62-730.171. A discussion on "transfer waste" is outside the scope of this plan.

Upon determination that the waste characterization meets the acceptance criteria for management at the facility, the next step in the waste approval process is to determine the appropriate management method for the waste at the facility. The management method is dictated by the physical and chemical characteristics of the waste. Wastes that cannot be treated at the facility are shipped to off-site facilities for treatment or disposal. Waste that cannot be treated at the facility may be consolidated with other wastes that have similar chemical and physical characteristics. Other waste may be shipped in the same container that was used to transport it into the facility without being treated or consolidated. The management method for the waste is indicated by a consolidation code, which identifies the waste group to be applied to the waste.

A waste group may be subject to one or more specific management activities; only storage for waste in transfer, storage and consolidation for a waste that is to be bulked and shipped with other wastes, and storage and treatment for a waste that is going to be treated at the facility

before shipment. Waste treated at the facility is also consolidated with other wastes before or during treatment.

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, which describes the chemical and physical characteristics of the waste and other information that is pertinent for establishing the regulatory status of the waste. An example copy of the profile is included in Exhibit II.A.5/6.-1. 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 an MSDS for the contaminating material is available in the facility's data base. MSDSs for the chemical compounds or products involved are required to support the information contained in the profile when the MSDSs are not available in the facility's data base. When an MSDS is not available or when it is necessary to clarify information shown in an MSDS, other technical information obtained from chemical dictionaries or product literature may be submitted with the profile. 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, MSDSs, analysis reports, and technical information submitted to support a request for approval of a waste stream for management at the facility.

5.2 Rationale for Evaluation Profiles

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.

C. DESCRIBE WASTE AND PROCESS: The description of the waste depends on the nature of the waste or how it was generated. Sometimes the information provided in this part of the profile is descriptive enough to establish the regulatory status of the waste. A description of the process, service, or incident that generated the waste constitutes an important factor for identifying the regulatory status and hazards of the waste. There is a space at the bottom of this part of the profile form for the identification of spent solvents, virgin, and off-spec materials. This part of the profile form is designed to identify hazardous wastes from specific and from non-specific sources, including discarded commercial chemical products, off-specification commercial products, manufacturing chemical intermediates, container residues, and spill residues. It may also provide information helpful for identifying other waste types.

D. COMPOSITION OF WASTE: The name and proportional amount of the components of the waste must be listed in this part of the profile even if the component is present in the waste in very small amounts. Components containing toxic constituents 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.

F. PHYSICAL DATA: 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. It also helps to determine which components are present in the waste.

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

Pumpability is a relevant parameter when materials need to be transferred between containers using pumps.

The amount of sludge in a waste is a significant factor to determine if non-sludge and sludge components need to be handled 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 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 chlorides is a significant parameter to determine if the untreated waste can be directly shipped to off-site fuel blenders/users.

The pH value determines the corrosivity of the waste and the EPA and DOT regulatory status.

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.

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

D1: Ignitable liquids are indicated by the flash point entered in part F and by the presence of ignitable components that are listed in part D. Oxidizers are identified by the hazard classes 5.1 and 5.2 and are ignitable hazardous waste. A few 4.1 and 4.3 and most 4.2 hazard class materials are also classified as EPA ignitables.

D2: Materials containing free liquids and having a pH unit equal or less than 2.0 or equal or greater than 12.5 as indicated in part D of the profile as being hazardous waste acids or caustics, respectively.

D3: Wastes containing reactive cyanides and sulfides shown in part D to be present in concentrations greater than 250 and 500 ppm, respectively are hazardous waste reactives. Information provided in this part and in parts E and G should also be studied to determine whether the wastes meet the definition of reactivity in 261.23.

D004 - D043: Constituents listed in part D and/or indicated in part G to exceed regulatory limits for specific organics and inorganics.

F001 — F039: Spent solvents should be identified as such at the bottom of part C and the constituents listed in parts D and G. Electroplating, conversion coating and metal heat treating sludges, plating, quenching, spent cyanide, and stripping bath solutions and residues should be identified as such in part C, and the heavy metal and cyanide contaminants listed in parts D and G. 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 C and have the components listed in parts D and G. Wood preserving formulations and wastes, petroleum refinery separation sludges, and landfill leachate should be identified in part C and have the constituents listed in parts D and G.

K001 - K136: Hazardous wastes from specific sources should be described in part C and have the contaminants listed in parts D and G.

P001 - P123: 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 part D.

U001 - U359: Toxic 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 part D.

J. SHIPPING INFORMATION: 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 is to be selected in accordance with requirements in the 49 CFR Part 173, and depend on the characteristics of the waste determined from information provided in parts C, D, and G. 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.

E. HAZARDOUS CHARACTERISTICS/CONTENT: 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 a separate program. The reason this part requests information on hexavalent chromium, halogenated organic carbon (HOC), and volatile organics (VOCs) is because there are operational and regulatory factors that limit the concentration levels in certain processes.

H. BENZENE - NESHAP: This information is needed to satisfy requirements in the Clean Air Act.

I. PACKAGING/QUANTITY: The quantity of waste to be included in each shipment may have an impact on safety and operational aspects at the facility when handling certain types of waste materials.

5.3 Supporting Documents

Supporting documents include analysis reports, MSDSs, and other technical information used to establish the presence and concentration levels of hazardous constituents and the characteristics of the waste. Analysis reports are required when information provided in the profile indicates a reasonable suspicion regarding the presence of problem constituents, 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 parts D and G 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 E and F 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 G of the profile do not correspond to the proportional amounts for such constituents shown in part D.

When historical experience or technical information suggests that certain hazardous constituents or characteristics not addressed in parts D, E, F, or G of the profile 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.

MSDSs are required when parts D and G of the profile list chemical compounds and products for which MSDSs are not available at the facility. Unless the component of the waste is a well-known and widely used chemical compound, an MSDS 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 MSDS library on the internet. Chemicals for which neither the generator nor the facility have MSDSs available may utilize MSDSs for chemicals that belong to the same family as the one listed in the profile, as long as both chemicals have similar formulas and relevant properties. Information from chemical dictionaries and product literature may also substitute for MSDSs not available, or may be used to supplement information contained in MSDSs.

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 management method before this process is complete. However, the assignment of a management method does not affect approval of the waste for receipt by the facility. The waste evaluation documents undergo other reviews related to operational and marketing issues. A review addressing operational issues is conducted by the facility manager who has the following concerns:

Available capacity in the container storage units to store the waste.
Safety considerations related to handling, storing, and treating the waste.
Physical and chemical characteristics that may render the waste unsuitable for treatment at the facility.

The operations or plant manager assigns an outbound approval code, which identifies the outbound waste stream that has been approved for management at an off-site facility after the waste has been managed at TEI.

5.4 Assignment of Management Methods

As explained in previous parts of this plan, the management method is an important factor in the development and implementation of the waste analysis plan, because procedures used to carry out the plan depend on the type of management activity used to process the waste at the facility.

This part of the waste evaluation process describes the system used to determine and assign a management method for the waste.

The facility has established a number of consolidation groups, which are divided into two sub-groups. One sub-group consists of consolidation groups for wastes that are widely generated and easy to classify following the criteria described below. The consolidation groups within this subgroup include a large volume of the waste received by the facility. The second sub-group includes consolidation groups for wastes that have unique regulatory status, contaminants, characteristics, or composition, and cannot be classified in the same manner as the general sub-group. The latter sub-group has a larger number of consolidation groups; they consist of waste types representing a small volume of the incoming waste.

The first step of this process is to search for a consolidation group that comprises wastes that are compatible, that require the same treatment method, and that have similar chemical and physical properties as the waste in question. Every consolidation group is identified with a consolidation code. The goal of the consolidation group is to enable the facility to put together the largest number of inbound waste streams that may be processed by the same treatment method on-site or off-site. Wastes having the same consolidation code are managed together using the same method. To select the appropriate consolidation group the following factors are taken into consideration:

Contaminants in the waste group should be of the same type, or should be reasonably expected to be the type of waste in consideration.
Contaminants in the waste group should be capable of being treated using the same process.
Wastes in the group should be compatible with each other.
Hazardous waste codes assigned to the waste should be the ones that are reasonably expected for the type of waste in consideration.

The consolidation system explained in the previous paragraphs works well for certain waste types like corrosives, fuel blendables, electroplating sludges, and other widely generated wastes that contain a specific group of contaminants. However, a system capable of providing a consolidation group for every possible waste type by using the criteria described above would be a cumbersome one. The number of consolidation groups established by the facility that are selected using the criteria described above is small, but encompass a large volume of the waste received by the facility. Wastes that do not fit into any of the consolidation groups that have been established by the facility are classified in a group within the second sub-group and are identified by DOT hazard class. Every hazard class becomes a consolidation group. The reason for using the DOT hazard class of the waste rather than other parameters or designations is because the DOT hazard class is designed to group wastes that have similar characteristics and treatment requirements. The consolidation code not only indicates the single or multiple management activities to be used to process the waste at the facility, but also facilitates the process for obtaining approval from other facilities for off-site treatment or disposal of the consolidated waste. The fact that a consolidation code has been assigned to a waste stream does not guarantee that the waste will be consolidated with wastes having the same consolidation code. The decision to consolidate the waste with others that have the same consolidation code is left to the discretion of the chemist in charge of the consolidation operation.

The previous paragraphs describe the system used to determine the management methods that are going to be used to process the waste at the facility. The determination results in the assignment of a consolidation code, which indicates the planned management activities for the waste at the facility. 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 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 form also has a space to enter the consolidation code. The Compliance Review form is filed with the waste profile form and supporting documents.

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 specification of the waste approved for shipment to the facility. 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 consolidation 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 consolidation code.
Assurance of treatability by the prescribed management method.
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 consolidation 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. The same conclusion is reached when it is found that the incoming waste cannot be treated with the prescribed management method specified by the consolidation code. 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 procedures used to test or inspect the incoming waste to verify conformance with approval conditions depend on the management method prescribed for the waste. Therefore, the most convenient approach to describe the waste verification process is to describe it by the management method conducted at the facility. The management methods conducted at the facility are storage in containers, consolidation, and stabilization

CONTAINER STORAGE

Waste in transfer is kept inside the container until it is shipped out, and the container is never opened while it is stored at the facility. Since waste in transfer is not commingled with other wastes, compatibility with other wastes is not a concern unless the waste leaks from its container and it happens to come into contact with an incompatible waste that also leaks from its container at the same time. Although such an occurrence is remote, the facility has a system to ensure that only compatible wastes are stored within a common secondary containment. The facility uses a segregation system required by the DOT for hazardous materials, which establishes a compatibility pattern for hazardous materials depending on hazard class. As explained in the waste approval process, the facility advises the generator of the appropriate hazard class for the waste in the notice of approval to assure the correct hazard class is used in the manifest and to mark the container. The facility reviews the hazard class entered on the hazardous waste label upon receipt of the waste to verify that the appropriate hazard class is displayed on the label. The waste container is stored in a cell designated for the hazard class shown on the label. Wastes approved for consolidation or treatment that are first stored in this unit are subject to additional test and inspection procedures that are required in this plan after removal from the unit and before consolidation or treatment.

MISCELLANEOUS CONSOLIDATION

Wastes of the same type are approved at TEI 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 very small volume. The small containers usually come in labpack containers. Wastes accepted for consolidation come from many sources, which creates 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 Exhibit II.A.5/6.-1 before being commingled for consolidation.

STABILIZATION

Stabilization refers to two operations: solidification of wastes containing free liquids and treating with stabilizing agents wastes containing leachable hazardous constituents (e.g., metals). These operations will be performed inside a container such as a roll-off. Mixing inside the roll-off is

expected to be performed using a front-end loader or a backhoe. Stabilized hazardous waste will be sampled and analyzed to ensure it meets the land disposal restriction regulations before shipping it to a permitted landfill. The analyses will include RCRA metals by TCLP Method and, if applicable, other constituents (i.e., underlying hazardous constituents as outlined in 40 CFR 268).

6.1 Management of Non-Conforming Waste Streams

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(b) indicate the facility may resolve discrepancies in waste types within 15 days from the date the waste in question was received. 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 MSDSs may be required. If it is found that the waste can be processed by TEI 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 TEI. 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 F.A.C., Section 17-730.171, 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.

7.0 EVALUATION OF WASTES FOR PROCESSING

Wastes with free liquids (e.g., sludges) would be primary candidates for solidification. The solidification process will use cement kiln dust, flue dust, fly ash, or other suitable material as a solidification agent. After solidification, the waste will be inspected to confirm that it does not contain free liquids. Wastes with RCRA metal codes and less than 500 ppm of organics would be primary candidates for stabilization treatment.

8.0 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 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.

13.0 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 TEI 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. 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.

14.0 COMPATIBILITY TEST METHODS

Testing procedures developed and used by TEI 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. 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 in Attachment II.A.5/6.-1. Similar test procedures have been put in practice at other facilities that conduct operations analogous to the ones included in this permit application. These procedures have been successful in preventing incidents related to mixing incompatible waste.

Chemical showing an "X' in the column having a DNC (do not consolidate) heading in Charts 2 through 10 of Table II.A.5/6.-la will not be consolidated. This table consists of eleven charts that list the names of highly hazardous chemicals. One purpose of this table is to prevent the consolidation of chemicals that are dangerous to handle outside the container and may react with a large number of other materials.

WASTE COMPATIBILITY TEST MANUAL
FOR
TRIUMVIRATE ENVIRONMENTAL (FLORIDA), INC.
ORLANDO, FLORIDA

TABLE OF CONTENTS
NARRATIVE

FIGURES

EXHIBITS

1.0 INTRODUCTION

The testing procedures contained in this manual are designed to simulate actual operating conditions that occur during consolidation operations. The objective of this test is to determine whether or not waste streams intended for consolidation will react when mixed. An incompatible test result may not indicate the waste streams must be banned from consolidation. Such a result will lead to a more exhaustive evaluation to establish the magnitude of the expected reaction and ways to mitigate the reaction, within permissible health and safety limits.

Another objective is to impose as little burden as possible on the existing sampling and testing process. This manual seeks to develop a plan that is easy to follow and to minimize necessary tasks.

2.0 OPERATIONS DESCRIPTION

Consolidation of waste takes place at two locations in the facility: 1. inside the north building, and 2. an area west of the north building. In the consolidation areas in the north building, liquid and solid waste is consolidated into containers (tote tanks, 55-gallon drums, or smaller sized containers). In the consolidation area just outside the north building, solid wastes are consolidated into bulk containers (such as roll-off boxes, dump trucks, etc). The consolidation areas are identified in Figure I **B 1.**

At the consolidation areas, similar liquids arriving in inbound containers are transferred into tote tanks.

Waste consolidated in the consolidation areas may be from labpacks or wastes of similar type arriving in small containers or partially empty containers. Placement in a larger container is intended to take advantage of shipping in larger containers. The term container means pails, drums, tote tanks, and other relatively small size containers that can be moved around by hand, with drum carts, or with forklift trucks. Transportation container refers to a larger sized container intended for bulk transport, such as a roll-off box, dump trailer, and tank trailer (tanker).

3.0 TEST CRITERIA

Incompatible materials are seldom present among a group of wastes that have been determined to be similar in type. The cause of incompatibility may be due to an anomaly in the identification of the name or property of materials. The intensity of the reaction between an incompatible waste and each waste stream in a consolidation batch will depend on the concentration levels and types of components present in the incompatible waste.

Chemical reactions caused by an incompatible waste during operations conducted in the consolidation areas may result in the generation of toxic and/or flammable gases or an exothermic reaction.

Labpacks consolidated in the consolidation area consist of small containers (inner containers) packed in a larger container. The size and type of inner containers range from vials containing a

few milliliters to 5-gallon pails. Waste in the inner containers are consolidated by mixing in a 5 gallon compatibility container before being transferred to the final, larger shipping container. Small portions of the inner containers are mixed in the compatibility container to reduce the consequences of reaction incident.

Waste in solid form is consolidated as noted above. The following test procedures apply to waste in a liquid state. Consolidation of solids occurs for labpack wastes, wastewater treatment sludge from electroplating operations, and when filling partially full containers.

4.0 TEST DESCRIPTION

A compatibility test for consolidation operations will be conducted as follows:

For labpacks, samples similar in volume from containers to be consolidated are combined in a test vessel one after another within the shortest possible period of time to achieve the maximum effect of a reaction. This part of the test is designed to detect any reactions that may occur if all waste streams to be mixed are mixed together. At this point, physical and chemical changes are observed.

The next step consists of adding to the mixture in the test vessel described above to sample of the waste stored in the consolidation container. The sample size should be about two times larger than the original test vessel mixture and representative of the waste currently stored in the consolidation container. Physical and chemical changes are observed. This step of the test is designed to determine the compatibility of waste streams to be added to the waste stored in the consolidation container. For labpack consolidation, a record of the results of the compatibility test will not be kept per Exhibit II.A.5/6.-1-1 to reduce the paperwork burden. However, for each labpack shipping container, documentation will be kept to indicate whether the compatibility test was performed or not.

For Bulk Containers

Samples similar in volume from containers to be consolidated are combined in the test vessel one after another within the shortest possible period of time to achieve the maximum effect of a reaction. This part of the test is designed to detect any reactions that may occur if all waste streams to be mixed are mixed together. At this point, a reading of the mixture temperature, time, observation of gases emanating from the mixture, bubbling action in the mixture, and any other visual observation that may indicate a reaction is taking place is entered in the log shown in Figure 4-1. This part of the compatibility test is labeled "STEP A."

The next step, labeled "STEP B," consists of adding to the mixture resulting from STEP A to a sample of the waste stored in the consolidation container. The sample size should be about two times larger than the STEP A mixture and representative of the waste currently stored in the consolidation container. Another record of the mixture temperature, time, and visual observations, as described for STEP A, should be entered in the log. This step of the test is designed to determine the compatibility of waste streams to be added to the waste stored in the consolidation container. A reading of the ambient temperature and its reading time is completed in STEP C, which should be entered in the log immediately after STEP B.

STEP D and STEP E consist of recording the mixture temperature, time, and visual observations fifteen and thirty minutes, respectively, after the temperature and time readings entered in the log for STEP C. An alarm watch or clock should be used to keep the fifteen- and thirty-minute time. An example of the test log used for the compatibility test for bulk containers is included as Exhibit II.A.5/6-1-1.

Consolidation of waste could take place in a tanker. For such consolidation, waste in containers should be transferred into a tote tank before pumping it into a tanker. The same compatibility test operations must be followed for consolidation of waste in tankers. Tote tanks will serve the same purpose as the large container used to transfer waste to storage tanks.

5.0 HEALTH AND SAFETY CONSIDERATIONS

The following precautions and personnel protection equipment should be used when conducting the compatibility test:

Respiratory: Respirators are not needed provided an exhaust fan is in use for removing fumes and gases from the test area. Otherwise, respirators equipped with cartridges for organic vapor or acid gas should be used for waste consolidation.

Face Protection: A face shield or full mask respirator should be worn.

Hand Protection: A latex or rubber glove covering up to the wrist or to the elbow should be worn for fuel blending or waste consolidation, respectively.

Body Protection: Level D protection clothing (same as the one used for normal plant operations) should be worn.

Precautions: If gas generation or bubbling action is observed, the exhaust fan should be left on, the test area should be evacuated, and nearby personnel should be advised that gases with toxic and/or flammable characteristics are being generated.

6.0 TEST EQUIPMENT

The following equipment should be used for conducting the compatibility test:

Testing vessel
Alarm clock or watch
Ambient temperature indicator
Mixture temperature indicator

7.0 INDICATION OF SUSPECTED REACTANTS

An increase in temperature of the mixture as recorded in STEP D and STEP E of 10% over the ambient temperature recorded in STEP C is an indication that there may be reactants in the

mixture. A generation of gases from the mixture or a bubbling action in the mixture is an indication that there may be reactants in the mixture.

8.0 EVALUATION OF SUSPECTED REACTANTS

Should compatibility test results indicate the presence of reactants, an evaluation of waste streams in the shipment or group of drums will be made to identify the reacting waste streams and determine the type and magnitude of the reaction. From this evaluation, a decision is made on the potential to obtain successful consolidation of the reacting waste streams. Mitigation will be applied in a manner that eliminates or minimizes the reaction effects under permissible safety and health limits. The decision to proceed with the consolidation of suspected reactants is made by the Facility Manager following the criteria described in the paragraph below.

Reacting materials will be classified with reaction codes depending on the consequences described in the table shown below. Only reacting materials classified with Reaction Codes H and G will be considered for mixing.

Reaction Codes and Consequences

Reaction Codes	Reaction Consequences
H	Generates heat by chemical reactions
F	Produces fire from extremely exothermic reactions, ignition of reaction mixtures, or of the reaction products
G	Generates innocuous gases such as nitrogen gas (N2), carbon dioxide (CO2), etc.
GT	Generates toxic gases such as hydrogen cyanide (HCN), hydrogen sulfide (H2S), etc.
GF	Generates flammable gases such as hydrogen gas (H2), acetylene (C2H2), etc.
E	Produces explosion due to extremely vigorous reactions or reactions producing enough heat to detonate unstable reactants or reaction products
P	Produces violet polymerization resulting in the generation of extreme heat and sometimes toxic and flammable gases

Figure I B 1: FACILITY LAYOUT

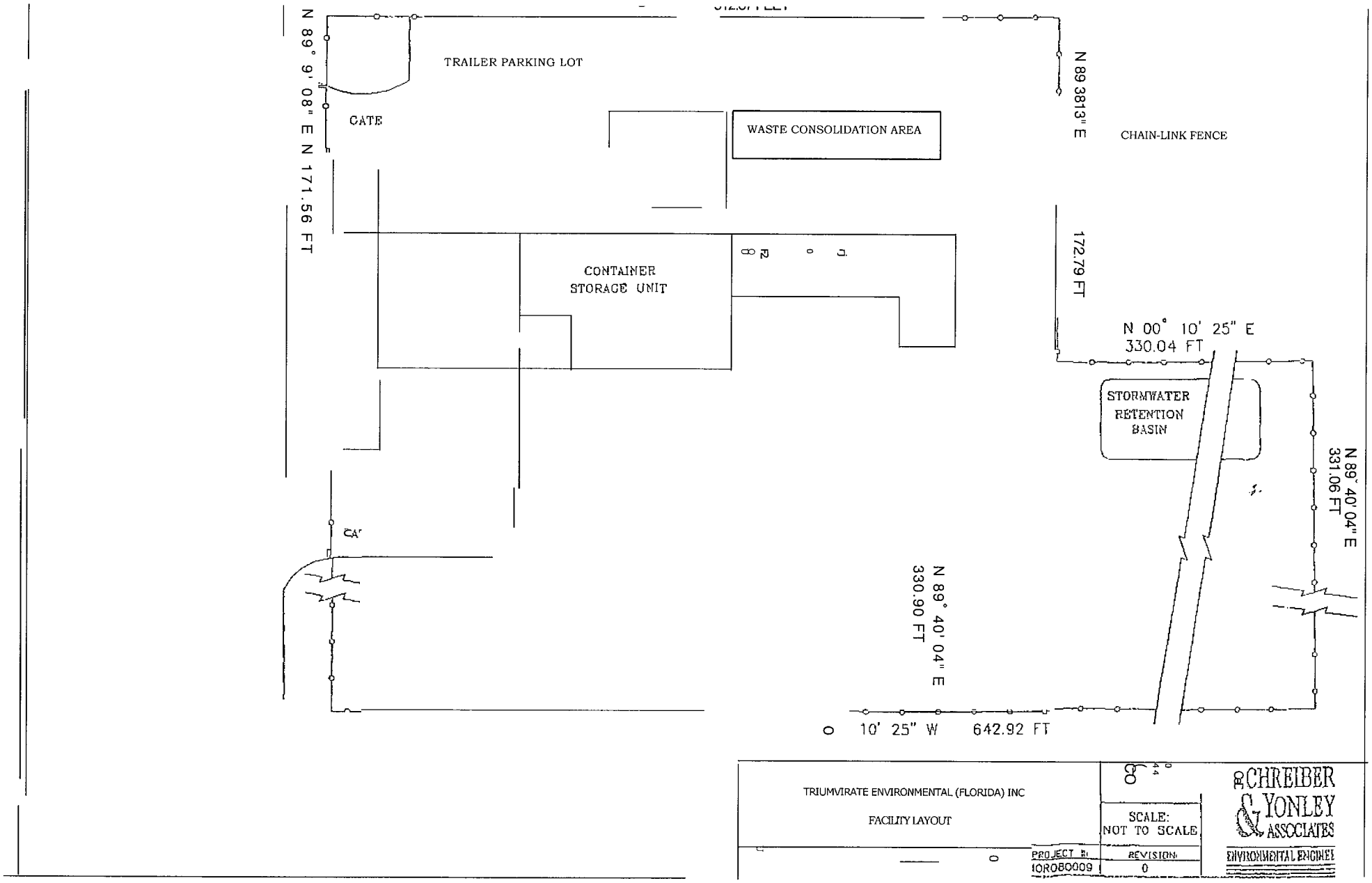
TRAILER PARKING LOT
GATE
WASTE CONSOLIDATION AREA
CHAIN-LINK FENCE
CONTAINER
STORAGE UNIT
STORMWATER
RETENTION
BASIN
N 89° 9' 08" E N 171.56 FT
N 89 3813" E
172.79 FT
N 00° 10' 25" E
330.04 FT
N 89° 40' 04" E
331.06 FT
N 89° 40' 04" E
330.90 FT
0 10' 25" W 642.92 FT
TRIUMVIRATE ENVIRONMENTAL (FLORIDA) INC
FACILITY LAYOUT
SCALE:
NOT TO SCALE
PROJECT #:
10R080009
REVISION:
0
SCHREIBER
YONLEY
& ASSOCIATES
ENVIRONMENTAL ENGINEER

EXHIBIT II.A.5/6.-1-1

COMPATIBILITY TEST LOG

OPERATORS NAME:	
TEST DATE:	CONSOLIDATION CONTAINER #:

STEP	TIME	MIX TEMP	AMB. TEMP	OBSERVATIONS (WRITE "NONE" IF NO REACTION EFFECTS WERE OBSERVED)
A				
B				
C				ADD 10% TO AMB. TEMP. AMB. TEMP. + 10% =
D				
E				

RESULTS

1. IS STEP A MIX TEMP ( )AMB. TEMP. + 10% ( )?	YES_____	NO_____
WERE REACTION EFFECTS OBSERVED IN STEP A?	YES_____	NO_____
2. IS STEP B MIX TEMP ( )AMB. TEMP. + 10% ( )?	YES_____	NO_____
WERE REACTION EFFECTS OBSERVED IN STEP B?	YES_____	NO_____
3. IS STEP D MIX TEMP ( )AMB. TEMP. + 10% ( )?	YES_____	NO_____
WERE REACTION EFFECTS OBSERVED IN STEP D?	YES_____	NO_____
4. IS STEP E MIX TEMP ( )AMB. TEMP. + 10% ( )?	YES_____	NO_____
WERE REACTION EFFECTS OBSERVED IN STEP E?	YES_____	NO_____

INSTRUCTIONS: IF ANY OF THE **YES** BOXES IN THE RIGHT HAND COLUMN ABOVE HAS BEEN CHECKED, PLEASE ADVISE THE FACILITY MANAGER IMMEDIATELY

EXHIBIT II.A.5/6.-1-1

COMPATIBILITY TEST LOG

OPERATOR NAME _____

TEST DATE _____ CONSOLIDATION CONTAINER NO. _____

STEP	TIME	MIX. TEMP	AMB. TEMP.	OBSERVATIONS (Write None if no reaction effects observed)
A				
B				
C				ADD 10% TO AMB. TEMP. AMB. TEMP. + 10% =
D				
E				

RESULTS

1. IS STEP A MIX. TEMP. (____) AMB. TEMP. + 10% (____)? NO ___ YES____
   WERE REACTION EFFECTS OBSERVED IN STEP A? NO _____ YES ___

2. IS STEP B MIX. TEMP. (___) AMB. TEMP. + 10% (____)? NO ___YES ___
   WERE REACTION EFFECTS OBSERVED IN STEP B? NO ___YES____

3. IS STEP D MIX. TEMP. (___) AMB. TEMP. + 10% (____)? NO ___YES ___
   WERE REACTION EFFECTS OBSERVED IN STEP D? NO ___YES____

4. IS STEP E MIX. TEMP. (___) AMB. TEMP. + 10% (____)? NO ___YES ___
   WERE REACTION EFFECTS OBSERVED IN STEP E? NO ___YES

INSTRUCTIONS: IF ANY OF THE YES BOXES IN THE RIGHT HAND COLUMN ABOVE HAS BEEN CHECKED, PLEASE ADVISE THE FACILITY MANAGER IMMEDIATELY.

(PF Version)

of contents. The bung hole plugs of the drums to be sampled are initially loosened so that the plugs can be easily removed by hand. The plugs are not removed until the drum is actually sampled or inspected. A hand-held explosion meter is kept on-site to detect high concentrations of flammable vapors.

CONSOLIDATION AND STABILIZATION OPERATIONS

TEI consolidates and stabilizes compatible hazardous wastes at two locations at the facility. One is inside the north building and the other is on the west side of the north building, where solid wastes are consolidated in bulk containers. The consolidation and stabilization areas are identified in Figure I D 1.

Consolidation operations include consolidation of wastes in labpack containers conducted in the north building. Wastes taken out of labpack inner containers are poured or "bulked" into a larger container and shipped to other facilities for treatment or disposal. Wastes left in inner containers are placed in another container to complete another labpack to be shipped to other facilities for treatment or disposal.. Labpack consolidation operations are conducted in the north building. Also, non-labpack waste streams that come in several small containers may be consolidated into larger containers. Partially full containers are filled to capacity to reduce the number of drums to be shipped off-site. The non-labpack consolidation of solid wastes into bulk containers is conducted just outside the north building on the west side. The consolidation operations, including labpacking, may occur anywhere in the north building.

The facility does not consolidate or store incompatible wastes in the consolidation areas. Procedures and systems are in use to prevent placement of incompatible wastes in the same container. The next paragraphs describe the type of consolidation conducted at the facility and the measures taken to prevent commingling incompatible wastes and to avoid hazardous situations.

Consolidation in Bulk Transport Containers

Consolidation in bulk transport containers presents very little chance for commingling incompatible wastes because waste streams consolidated there do not have the components necessary for ignition or reaction. Examples of such wastes are wastewater treatment sludges from electroplating operations or from chemical conversion coating of aluminum. These waste streams do not have ignitable properties. Wastes consolidated in bulk transport containers do not need to be tested for compatibility because of known compatibility. Solid or liquid wastes other than the ones described above may be consolidated in transport containers without testing for compatibility if the wastes belong to the same waste stream. The same applies to waste streams generated by a well-known and defined process similar to the ones mentioned above, which do not have ignitable properties or components that may react with other materials.

Consolidation of Labpack Containers

Wastes inside a labpack container consist of materials having the same hazard class or division. Waste in labpacks having division 2.1, 2.2, and 2.3 materials remain in the same inner containers as shipped in the labpack because the inner containers are cylinders, canisters, and cartridges containing pressurized gases or unpressurized gas remnants. Such materials are usually managed at the facility as waste in transfer, which means the labpack container is shipped off-site as received from the generator. Sometimes inner containers in the labpack are transferred to other labpack containers. The procedures described in the sub-section 14.0, Compatibility Test Method of the Waste Analysis Plan is followed for ignitable wastes in inner containers. Class 3 materials that are consolidated into another labpack do not need to be tested for compatibility.

Division 4.1 materials in a labpack may be consolidated into a drum with other materials having the same DOT classification only if the Reactivity Group Numbers (RGN) for the materials are compatible. Such wastes must also be checked by the procedures described in sub-section 14.0, Compatibility Test Method of the Waste Analysis Plan, before consolidation. The RGN for a given material may be determined from A METHOD FOR DETERMINING THE COMPATIBILITY OF HAZARDOUS WASTE, Report No. EPA - 600/2-80-076. Appendix 1 of the EPA report lists the RGNs for many materials. Materials may have many names and synonyms. If the information on the material does not show any of the names or synonyms that appear in the Appendix 1 list of the EPA report, chemical encyclopedias, dictionaries, or publications should be checked for other names or synonyms for the material that may appear in the list. The RGN can also be determined from Appendix 2 of the EPA report if the molecular functional group or chemical family that has been determined for the waste material can be classified within one of the group names listed in Appendix 2. Division 4.1 waste in labpacks inner containers that are placed into another labpack may be consolidated without having to follow the procedures for compatibility described above (RGN determination and compatibility test) as long as the other wastes belong to DOT division 4.1.

Inner containers in a labpack containing division 4.2 materials may be consolidated in bulk only with materials having the same name after completing the procedures described in sub-section 14.0, Compatibility Test Method of the Waste Analysis Plan. The consolidated materials should be overpacked, and each inner container should not exceed a volume of one-half gallon if the material is pyrophoric. The compatibility test is not required if the inner containers are consolidated into another labpack with materials having the same DOT hazard classification. Consolidation of labpacks containing division 5.1 and 5.2 materials follows the same procedures used for division 4.1 and 4.2 materials, respectively, except that the volume restrictions that apply to pyrophorics in division 4.2 also apply to organic peroxides of types C and D in division 5.2. Consolidation of waste materials in labpacks consisting of division 6.1, class 8 and class 9 follow the procedures that have been established above for consolidation of class 3 materials.

Labpacks are consolidated in batches consisting of materials that have the same DOT hazard class or division. Wastes from labpacks are unpacked from inner containers and consolidated following procedures described in the previous paragraphs. Labpack drums are unpacked in the north building. The inner containers are placed on tables that can be moved around the area. These containers are segregated by waste material type to prevent commingling of incompatible materials. Labpack waste materials are consolidated in the manner described in previous paragraphs. Emissions generated by this operation are insignificant and do not pose a threat to human health or the environment. Personnel conducting this operation wear protective equipment to prevent injury in the event of a chemical reaction. Because of the small amount of waste materials involved, an incident from this operation will not result in significant damage or harm, even in a worst-case scenario.

Drum Consolidation of Non-Labpack Wastes

As explained above, consolidation of non-labpack wastes is conducted for waste streams that arrive at the facility either in small containers or in partially full drums. These waste streams are bulked into other containers or transferred from one partially full drum to another until all the drums holding the waste stream are filled to capacity. Consolidation of wastes in drums that do not belong to the same waste stream are tested for compatibility before being commingled. To prevent the generation of sparks, the area inside the north building where consolidation of non-labpack wastes occurs is provided with explosion-proof lighting and electrical systems. Electric driven equipment uses explosion-proof motors, and tools are made of materials that do not produce sparks upon impact.

Consolidation of Corrosives

Acidic liquids that arrive in drums at the facility are transferred to the consolidation areas to be tested and inspected before being pumped into a tote tank. Prior to transfer of the waste from the drum, a sample taken from the drum is mixed with corrosive liquids stored in the tote tank, and the mixture is observed for signs of a reaction. Test results that do not indicate a reaction between the contents in the drum and the contents in the tote establish compatibility. The waste is then transferred from the drum into the tote tank tested.

Consolidation of Non-Corrosives

Non-corrosive wastes are liquids contaminated with organic and/or inorganic constituents. These wastes are managed the same way corrosive liquids are managed in the consolidation areas. These wastes are pumped into bigger containers after the compatibility test results detect no reaction between the samples.

Solidification refers to adding absorbents such as clay or cement kiln dust to wastes containing free liquids. Stabilization refers to treating wastes containing leachable

Solidification and Stabilization

hazardous constituents to render them non-hazardous. Some wastes will be consolidated and then solidified/stabilized. In this case, the procedures described for consolidation will apply. Some wastes may be solidified/stabilized before consolidation.

The stabilization operation (including solidification) will be performed in bulk containers (e.g., roll-off, concrete mixer) at the outside area on the west side of the North Building or inside the North Building. The stabilization operation will also be performed inside the North Building in smaller containers (e.g., 55-gallon drums) using small-scale mixing equipment. Mixing inside the roll-off would be conducted using a backhoe or a front-end loader. Consolidation of similar wastes may occur prior to stabilization, and the compatibility test would be conducted for such consolidation, as described previously.

Table II.B.3.-1

Se re ation Table for Hazardous Material

Class or Division	2.1	2.2	2.3 gas Zone A	2.3 gas Zone B	3	4.1	4.2	4.3	5.1	5.2	6.1 liquids PG I Zone A	8 liquids only	9 H.S.
Flammable gases 2.1			X	0							0	0	
Non-toxic, non-flammable gases..... 2.2													
Poisonous gas Zone A 2.3	X				X	X	X	X	X	X		X	
Poisonous gas Zone B..... 2.3	O				0	0	0	0	0	0		0	
Flammable liquids ..... 3.			X	O					O		X		
Flammable solids 4.1			X	O							X	O	
Spontaneously combustible materials 4.2			X	O							X	X	
Dangerous when wet materials 4.3			X	O							X	O	
Oxidizers..... 5.1			X	0	0						X	0	
Organic peroxides..... 5.2			X	0							X	0	
Poisonous liquids PG 1 Zone A 6.1	O				X	X	X	X	X	X		X	
Corrosive liquids 8			X	O		0	X	0	0	0	X		
Hazardous substances.....9													

Note: Codes X and 0 indicate prohibitions and restrictions as noted below.

- An "X" in the table indicates that these materials may not be loaded, transported, or stored together.

- An "0" indicates that these materials may not be transported or stored together unless separated in such a way that, in the event or leakage from packages under normal transportation conditions, the hazardous materials could not commingle. Regardless of the methods of separation employed, Class 8 (corrosive) liquid materials may not be loaded above Class 4 (flammable solid) materials or Class 5 (oxidizing) materials.

- Cyanides or cyanide mixtures must not be loaded or stored with acids or acidic materials. The reaction of cyanides with acids releases deadly hydrogen cyanide gas.

- When the 172.101 Table or 49 CFR 172.402 requires a package to bear a subsidiary hazard label, segregation appropriate to the subsidiary hazard must be applied when that segregation is more restrictive than that required by the primary hazard. However, hazardous materials of the same class may be stored together without regard to segregation required for any secondary hazard if the materials are not capable of reacting dangerously with each other and causing combustion or dangerous evolution of heat;

evolution of flammable, poisonous, or asphyxiant gases; or formation of corrosive or unstable materials.