

ATTACHMENT II-1-2  
WASTE ANALYSIS PLAN  
FOR TREATMENT WASTES

I. PURPOSE AND SCOPE

The purpose of this plan shall be to verify that wastes treated at the facility meet the applicable treatment standards in UAC R315-13-1 and other treatment objectives.

This plan is an attachment to the Waste Analysis Plan and shall apply to wastes subject to the Land Disposal Restrictions in UAC R315-13-1, which shall be treated at the facility.

This plan describes the additional and alternative waste analysis procedures applicable for wastes to be treated by stabilization. For purposes of this plan, treatment refers to stabilization.

II. ADDITIONAL REQUIREMENTS FOR WASTES TO BE TREATED

1. The Permittee shall meet the following requirements when a waste is to be treated at the facility:
  - a. Requirements listed in this Attachment; and
  - b. requirements listed in Attachment II-1, *Waste Analysis Plan*.

3. ESTABLISHMENT OF A TREATMENT FORMULA

1. The Permittee shall establish a formula for treating the waste as follows:
  - a. The Permittee shall establish and document the following treatment parameters:
    - 1) Composition and amount of treatment reagents as listed in Attachment II-1-2-1, *Approved Treatment Reagents* to be used;
    - 2) consistency of treatment residues;

- 3) measurement and documentation of the physiochemical changes to the treatability sample as the result of measured amounts of water and reagents added;
  - 4) mixing effort applied;
  - 5) sequence, by amount, of reagents and water as added;
  - 6) whether a pH adjustment is necessary; and
  - 7) the amount of water required to prepare a slurry.
- b. The Permittee shall not add reagents that have known or suspected interference with the proper and accurate determination of any hazardous waste constituent.
  - c. The Permittee shall establish tolerances for full scale up operations not to exceed 10% for each reagent or water added, or exceed the dilution factor.
2. This formula may be adjusted, updated and revised as conditions change and as additional results from treatment runs are obtained. Adjustments shall be documented in the Operating Record.

#### IV QUALITY CONTROL OF ESTABLISHED FORMULA

1. Once a formula has been developed, a duplicate must be completed as a comparison and precision check for the items listed below. These precision objectives require re-analysis if one or more of the ranges are not met:
  - a. Mass of sample ∇1%
  - b. Volume of water added ∇1%
  - c. Mass of reagents added ∇1%
  - d. Final mass of treated material ∇1%
2. The Permittee shall perform analytical verification of the treatment formula using current SW-846 Methods or alternative methods approved by the Executive

Secretary.

5. TREATMENT

1. The Permittee shall follow the approved or adjusted treatment formula for the treatment of waste.
2. A treatment run shall be defined as all residues of one waste stream that is treated using the same treatment unit during one calendar day of operation. Different waste streams shall not be processed together in the same treatment run. Whenever a different treatment system is used for treatment (i.e., Treatment Building Tanks and Mixer Tank No. 1, non-identical Small-Scale Mixer, or non-identical unit) of a waste stream, the initial and subsequent sampling and analytical frequencies shall re-start for that waste stream.
3. All mixer loads of treated waste shall pass a Paint Filter Liquids Test (PFLT) or pass a visual inspection assuring no free liquids are present before being removed from the mixer system unless the treated waste is to be stored in liquid-waste storage areas and the waste shall be re-treated prior to disposal.
4. Samples shall be taken using a scoop, shovel, or other sampling device. Since the material has been thoroughly mixed by this point in the process, no compositing of samples shall be necessary.
5. The treatment residues shall be managed in containers until analytical verification is completed.

6. TREATMENT VERIFICATION

1. Samples of treatment residues treated by the Permittee shall be taken for analysis in accordance with the following minimum frequency, to verify that the applicable treatment standards of UAC R315-13-1 and other treatment objectives have been met using EPA-approved analytical methods:

One sample from each of the initial three treatment runs for each waste stream

-- THEREAFTER --

One sample from ten percent of the treatment runs until 15 treatment runs have

been tested

-- THEREAFTER --

One sample from five percent of the treatment runs

2. If the analytical results show that the treatment standards are met, the treatment residues may be disposed. If the wastes are not within the treatment standards or the treatment objectives have not been met, the treatment run shall be re-processed, re-tested, or, returned to the generator.
3. In addition to the requirements of this plan, the Permittee shall follow Attachment II-1-3, *Waste Stabilization Plan*, and Method EC-2301, in Attachment II-1-4-1, *Analytical Procedures for Formula Development for Liquid Waste Solidification*.
4. The reprocessing formula shall be developed as outlined in this plan.

#### IV. METHOD FOR DEVELOPING REPROCESSING FORMULA

Should a verification sample indicate that the treatment standards or objectives were not met, the following procedure shall be accomplished:

1. The Permittee shall determine:
  - a. which standards were not met,
  - b. which treatment runs were affected,
  - c. what were possible causes of the incomplete treatment, and
  - d. what steps will be taken to remediate the situation.
2. The Permittee shall document the determinations made above in the Operating Record.
3. If an adjustment to a treatment formula can be identified and established, the affected waste residues may be re-treated using that formula.
4. If it has been determined, based on analytical results, that a waste needs to be retreated using the same formula to meet the treatment standards, the following shall apply:

- a. The analytical results shall show that the waste retreated with that formula will meet treatment standards, and the dilution factor will not be exceeded; and
  - b. The dilution factor for the combined treatment shall not be exceeded.
5. The affected treatment runs shall be re-treated using the adjusted treatment formula or alternatively managed. Alternative management may include manifesting the waste to another treatment, storage or disposal facility or storing the waste pursuant to future management.

END OF ATTACHMENT II-1-2