

## ATTACHMENT IV-2

### MIXER EFFECTIVENESS PLAN

#### 1. PURPOSE

- a. The purpose of this attachment is to specify the requirements for a mixer effectiveness test to confirm that any mixer used to treat waste in the Permittee's treatment facility provides thorough mixing of the entire contents of the mixer and minimizes areas where reagent and waste may not adequately mix.
- b. This attachment shall be implemented upon initial use of each mixer and when needed upon significant repairs including the use of non-equivalent replacement parts.
- c. At a minimum, for any mixer undergoing effectiveness testing, the sections described in this Attachment shall be included in a mixer effectiveness test plan that shall be submitted to the Director.
- d. Prior to use for treating waste, a new or repaired mixer shall require Director approval. This approval shall be based, in part, on a successful mixer effectiveness test.

#### 2. PROCEDURE

- a. Each individual mixer effectiveness test plan shall contain procedures detailing the materials that shall be used to demonstrate the proper operation of the mixer.
- b. This description shall also include the amounts of each material that should be utilized during the demonstration.
- c. Other pertinent information such as time of mixing and discharge requirements shall also be included in the procedure section.

#### 3. EXAMINATION

- a. The mixture shall be examined for signs of incomplete mixing. The examination shall be a thorough examination of the entire contents of the mixer.

- b. If necessary, cores shall also be taken from the mixture and examined. The size of any cores taken shall be documented in the mixer effectiveness test plan.
- c. Within this section of the plan, the Permittee shall also define the criteria for satisfactory results as well as actions that should occur if unsatisfactory results are identified.
- d. For unsatisfactory results, the following may occur:
  - i. Revise the test procedures and perform an additional test.
    - A. The Permittee may perform as many tests as required to achieve a test with acceptable mixing actions.
  - ii. The mixer may be modified or adjusted to provide a better mixing action.
- e. The data and experience gained from these tests may be used as a basis to modify this Permit, or procedures or equipment used by the Permittee to process waste at the treatment facility.

#### 4. REPORT

- a. The suitability of the mixer shall be addressed in a written report to the Director. At a minimum, this report shall include the following:
  - i. a brief description of the mixer;
  - ii. the amount of each material added to the mixer;
  - iii. the time of mixing;
  - iv. the results and extent of the examinations; and
  - v. a determination of the suitability of the mixer.
- b. The report may also contain additional information such as pictures or suggestions for additional testing.

END OF ATTACHMENT IV-2