Ethanolamines/Glycol Ethers
Tier 3 Procedure

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Title: Mixing Vessel Solution for Water Machine
References: Material Safety Data Sheets

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655 MIXING VESSEL SOLUTION FOR WATER MACHINE

1.0 Objective:
1.1 To insure that vessel solution is mixed correctly and safely.

2.0 Responsibility:
2.1 It is the responsibility of the operations personnel to ensure that this procedure is completed correctly.

3.0 Safety Notation:
3.1 Benzoic acid and vessel solution should be treated as toxic materials. Vessel solution contains methanol, chloroform, sulfur dioxide, and iodine. Care should be taken to avoid contact with these chemicals.

3.2 Monogoggles and rubber gloves are required. Mixing the solution should be done under the hood.

3.3 The waste from the samples must be stored under the hood in a one gallon metal waste container. A thermocouple connected to an alarm must be maintained in the container. The set point of the alarm is 80°C. ARC tests have shown an exothermic onset temperature of 110°C.

3.4 The waste container can be dumped into the lab waste pak when full. A five day isothermal ARC test at 50°C has been conducted by the reactive chemicals group. A mixture of 50% coulometric waste and 50% "normal" lab waste showed no exothermic activity.

4.0 Special Notations:
4.1 Care should be taken not to get any water in the solution.

5.0 Equipment:

5.1 Balance, funnel, benzoic acid, unmixed vessel solution, one gallon sample bottle, and a plastic beaker are needed for this procedure.

6.0 Procedure:

6.1 Weigh approximately 30 g of benzoic acid in a plastic beaker using a balance.

6.2 Using a funnel, pour the benzoic acid into a one gallon bottle.

6.3 Using the same funnel, put 1 L of unmixed vessel solution into the gallon bottle.

6.4 Tightly cap the bottle to prevent water from entering, and thoroughly mix the components.

6.5 Put the vessel solution into service when necessary.

7.0 Revisions:

Revision No. 1	03-24-98	Modified 2.1 and 3.4