

WASTE MINIMIZATION PLAN SUMMARY - 1993

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Purpose

The purpose of the plan is to reduce the quantity and toxicity of hazardous waste generated at the Stratford Army Engine Plant.

Scope

The plan is prepared with the goal of reducing or eliminating hazardous materials which are now being used. This then results in the subsequent reduction or elimination of hazardous wastes and their commingling and the resultant hazardous waste generated therefrom. A few of the materials such as used oils, are regulated in the State of Connecticut and are handled as if they were hazardous wastes, e.g., use of hw manifests.

Goals

Aside from the major goal of elimination of 1,1,1-trichloroethane in the remaining processes within the plant, which is vapor degreasers, efforts are being made to reduce the metals going into the wastewater stream from the plating facility and to replace the hazardous materials (acid stripping baths) with ammoniacal solution.

Waste Minimization Effort in Progress

The projects below are being actively pursued, and should result in a great reduction (much more than 50%) or elimination of some hazardous waste streams. These are being tracked through the monthly Installation Project Review (IPR) and are funded through the facility contract. The Environmental Services group interacts with the various departments in which the projects are operational.

Solvent Immersion

Cleaning of metal parts by immersion in a solvent bath is being evaluated for potential solvent replacement or process change.

Machining Turnings

Turnings from the machining operations are of concern as the parts are composed of a low-level radioactive alloy with magnesium or nickel. Thus these must be handled differently from ordinary metal machining. The material is being cleaned of surface oils, coated with a flame retardant in the case of magnesium and then remelted back to specification allowing the scrap to be classified as neither a hazardous waste nor low-level radioactive waste.

Vapor Degreasers

Evaluation of substitute cleaning materials and process change has resulted in the elimination of vapor degreaser tanks. This activity is currently in progress.

Plating Rinse

Change of process in the plating operations is being undertaken to greatly reduce the need for treatment of the wastewaters for metals. This in turn is expected to reduce the quantity of metal hydroxide sludge by about 50% from the present generation rates.

Ammoniacal Strip

Use of other materials in the stripping process is expected to meet the specifications but eliminate the chromic acid need.

The primary waste minimization activities are summarized on the following page.

WASTE MINIMIZATION SUMMARY

WASTE OR CHEMICAL	PROCESS	WASTE MIN. METHOD	TIME FRAME	RESPONS.	TARGET REDUCTION
1,1,1-TRICHLOROETHANE	DEGREASING	PRODUCT SUBSTITUTION	DECEMBER 1993	ENVIRON. SERVICES	100%
F006 SLUDGE	PLATING WASTE TREAT.	PROCESS CHANGE	DECEMBER 1992	ENVIRON. SERVICES	50%