

SOURCE REDUCTION / WASTE MINIMIZATION CASE STUDIES AT LCRA.

1. Project # 02-0002.94

Pollution Prevention Project Name: Krylon Paint Source Reduction

Project Identification:

This project involves the reduction of Krylon paint usage through the implementation of inventory controls and the reduction of hazardous waste by depressurizing aerosol cans prior to disposal. A total of 885 cans were used last year at FPP. Stores reports that there are ten colors and 1,026 cans currently available for use and that 281 cans have already been used this year. Last year the aerosols cost FPP \$1,796.55 to purchase and \$3,655.05 to dispose. To date FPP has spent approximately \$1,730.96 in aerosol spray paint purchases and disposals.

Project Classification: Source Reduction/Waste Minimization

Project Prioritization: High

Explanation:

FPP generates an average of 14 pounds of hazardous paint related waste per day. The reported annual volume of hazardous paint related waste generated in 1993 was 2.65 tons. The volumes were reported as 1.66 tons of liquid paint waste and 0.92 tons of waste paint containers. The aerosol paint cans were estimated to make up approximately 275 lbs or 15% of the waste paint containers.

The first step of the project is to control inventory and remove broken or discarded aerosols from the work areas by organizing a "clean house" day and by setting up an employee awareness program.

This first phase of the project will allow the waste coordinator to purge all empty or broken cans from the facility and the paint lockers.

The second phase involves the setting up of depressurizing stations at satellites near areas of high aerosol spray paint usage. Following set-up, employees who use the paint should be trained how to use the device. The employees can then depressure the paint aerosol cans before exchanging. Once exchanged, the depressurized spray cans can be placed directly into the scrap metal recycling bin without transferring to the waste storage building.

Technical Considerations:

As the project does involve new procedures some training and education will required.

Some additional labor may be required initially to remove and de-pressurize all waste aerosols in circulation; however, once phase two of the project is implemented a considerable amount of labor savings should be realized. Waste coordinators will not be managing and tracking as much waste.

Economic Considerations:

The cost savings of this project relate to the savings in waste management and disposal costs. Additional costs will be realized from the inventory controls and the reduction of raw materials used. Basing calculations on an average of 885 spray cans used per year generating approximately 275 lbs of hazardous waste at a total cost of \$5,451.60 per year. The project will reduce the current hazardous waste generation by an estimated 220 lbs or 80%. The project will require the purchase of three depressurizing devices for a total cost of \$2,100. The annual net disposal and waste management cost savings is estimated at \$3,229.40 per year with a pay back of less than eight months. These figures are conservative and do not include an estimated 10% savings associated with inventory reductions and revenues from the recycling of scrap metal.

Estimation of Reductions:

The first phase of the project will purge the facility of empty or broken aerosol paint cans which are widespread throughout the facility. The house cleaning activity may initially increase the volume of liquid paint waste generated. Overall reductions of hazardous waste generated from aerosol paint is expected to be 80 percent. Because spray paint aerosols contributes only to 15 percent of the total volume of waste paint containers, the 1993 reported quantity of hazardous waste at FPP will be reduced by approximately 1.5 percent or 0.11 tons.

Incremental Costs and revenues:	\$ Per Year
Operating Costs/Revenue Item	
Operating Costs:	
Decrease (or Increase) in Disposal:	459.55
Decrease (or Increase) in Raw materials:	180.67
Decrease (or Increase) in Utility:	N/A
Decrease (or Increase) in Quality:	
Decrease (or Increase) in Labor:	722.50
Decrease (or Increase) in Supplies:	1745.00
Decrease (or Increase) in Insurance:	
Decrease (or Increase) in Overhead:	310.68
 Total Decrease (Increase) in Operating Costs:	 \$3,417.85
Incremental Revenue:	
Revenue from Increased (Decreased) productivity:	
Revenue from Marketable By-products: scrap metal	\$13.75
Total Incremental Revenue:	13.75
 TOTALS:	 \$3,431.60