PROGRESS REPORT

TECHNICAL SERVICES DEPT. - W. C. KRUMMRICH PLANT

JOB NO.	REPORT NO.	DATE
91370:4119	(4)	12,15,70

W.C. KRUMMRICH PLANT			GENERAL OFFICE	OTHERS
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• ☒	☒	☒		* ☒

• TO RECEIVE DETAIL SECTION

TITLE: WATER POLLUTION - AROCLOR CONTROL

PERSONNEL: W. A. Krull (W. C. Engman) B. L. Bigge (T. M. Morrow)

PROBLEM: Reduce Aroclor water pollution at Department 246.

SUMMARY

As a continuation to the Aroclor pollution reduction program, the losses from Dept. 246 were measured at the beginning of 1970 to be in excess of 300 pounds/day with intermittent large spills of 2 - 4000 pounds. These losses occurred at the scrubber and through leaks and spills to the trench sewers.

To reduce the loss at these points, six projects were installed at an estimated cost of $49,400 of which $30,000 was new capital. These projects reduced the Aroclor losses to about one pound per day from the two points.

One additional $40,000 ($37,500 capital) project is approved to install concrete pads and curbing around the tank farm and loading docks. A settling basin will intercept the sewers from these areas. This will reduce losses from water run-off and spills.

Monitoring will continue on the effluent streams from the department.

W. A. Krull
Technical Services Dept.

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BACKGROUND

This report deals primarily with steps taken within Dept. 246 to reduce Aroclor losses to the sewer. At present, two sewer streams leave Dept. 246. These are the combined trench sewers and the scrubber sewer line.

Trench Sewer Measurement and Modifications

At first, losses here could not be accurately measured but Aroclor was visible in the bottom of the trenches. Two projects were installed which have reduced the loss at this point to 0.5#/day and improved accuracy of measurement.

Project Title	Capital Estimate	Expense Estimate	Approximate Installed Date	Benefits
Sewer Basin 1795 (Bigge)	$7000	$7000	7/1/70	Intercepts Aroclor from large spills and leaks which flow into the trench sewers. Reduced loss to about 0.5 #/day.
Absorber Relief Recycle 1512 (Krull)	$4500	$1500	7/1/70	Recycled relief lines from four absorbers. Prevented large losse to sewer basin from absorbers.

Scrubber Sewer Measurement and Modification

Losses from the scrubber were estimated at about 300 #/day. This breaks down into about 250 #/day liquid and 50 #/day mist which flowed to the scrubber on a routine basis. Non-routine losses occurred due to level controller malfunctions on the continuous blow tank, and lack of piping to enable demisting of off-gas before sewering in Dept. 246. Four projects were installed which reduced the loss at this point to about 0.5 #/day.

Project Name	Capital Cost	Expense Cost	Date Completed	Benefits
Blow Tank Repiping 1493 (Bigge)		$5400	4/1/70	Used intermediate stor age tank to intercept blow tank overflow. Malfunctions of level controller no longer causes loss to sewer. Prevented 2 large spills from going to sewer.

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Scrubber Sewer Measurement and Modification (continued)

Project Name	Capital Cost	Expense Cost	Date Completed	Benefits
Liquid Trap Minor (Production)			2/1/70	Trapped liquid going to scrubber. Reduced loss by 250 #/day.
Off-Gas Piping 1948 (Krull)	$1500		5/14/70	Piping installed to allow off-gas to be demisted before sewering in Dept. 246.
Blow Tank Demister 2031 (Krull)	$17,000	$5500	10/19/70	Installed Brink Mist Eliminator to intercept blow tank gas flowing to scrubber. Reduced loss to 0.5#/day. The reduced air flow increase scrubber capacity to drown HCl. By reworking condensate, about $2,000 per year yield savings will be realized.

Department Losses Summary

Department losses to the sewer through the scrubber and trench sewers have been reduced from more than 300 #/day to about 1 #/day. Provisions to intercept 800 gal. spills have been installed.

Future Work

The losses from the department will be monitored to insure the levels remain at existing low levels. An additional project (#2422) by B. Bigge is approved to install concrete paving and curbing around the tank farm and loading areas. The sewers from these areas will have an intercepting basin (3500 gal.) to catch Aroclor run off from spills and leaks. (EDC design 1/1/71).

Wayne A. Krull

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