DEPARTMENT 790, AROCLOR INCINERATION, 1975 OPERATIONS REPORT

Johnson

INCINERATION (1974: 3,375M lbs; 44.4% OST; 69.5% OSR)

MONTH	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT.	OCT.	NOV.	DEC.
POUNDS BURNED	454,117	29,444	1,732	290,087	165,217	245,253	596,070	621,151	623,942*	585,598	441,570	491,728
BURNED YTD	454,117	483,561	485,293	775,368	940,585	1,185,838	1,781,908	2,403,059	3,027,001	3,612,599	4,054,547	4,546,27
PERCENT OST	62.5	5.4	2.7	52.5	29.8	60.7	88.4	92.2	71.4	89.1	65.6	80.4
% OST, YTD	62.5	35.4	23.3	30.6	30.4	35.5	43.2	49.5	51.9	55.7	56.6	58.6
OSR % OF DE.	78.7	65.4	69.3	61.4	59.5	48.9	72.5	72.4	69.4	70.7	74.8	65.8
OSR % YTD	78.2	77.2	77.5	70.6	68.2	61.6	64.9	66.7	71.3	71.2	71.5	70.9

* Sept. includes YTD correction Little Mo of 177,952 lbs.

8.2%
3,360 M or 560/mo

INVENTORY, POUNDS

BULK REC.	75,560	269,414	120,000	39,822	123,134	-0-	-0-	184,723	192,788	26,258	24,764	158,635
BULK MO. END	3,114,740	3,464,202	3,427,481	3,351,050	3,490,130	3,389,212	3,056,035	2,812,641	2,595,574	2,199,205	1,891,985	1,463,29
DRUMS REC.	41,013	75,352	69,011	179,439	131,165	144,335	133,694	145,733	190,587	162,971	109,586	34,198
DRUMS MO. END	19,140	--	9,000	50,000	0	-0-	12,000	23,500	-0-	-0-	-0-	-0-
DRUMS EMPTIED	21,873	94,492	60,011	138,439	181,165	144,335	121,694	134,233	214,087	162,971	109,586	34,198

PERSONNEL -- PERCENT REGULAR HOURS (Includes Phenol Handling) (1974 Ave: E.H. 6.9%; O.T. 13.2%; ABS 4.4%)

EXTRA HOURS	9.1	16.3	2.2	0.0	0.0	0.0	0	0	0	0	0	10.1
E.H. YTD	9.1		9.2	7.2	5.8	4.2	4.0	3.8	3.4	3.0	2.7	3.5
OVERTIME	15.3	10.1	2.5	10.3	22.7	33.2	28.1	12.4	20.3	10.9	10.4	7.8
OT HRS. YTD	15.3	12.7	9.2	10.1	12.4	15.2	16.8	16.2	16.7	16.1	15.5	14.7
ABS. HRS.	23.9	28.5	26.4	32.1	27.3	29.2	30.1	27.1	29.6	25.0	27.5	23.2
ABS. HRS. YTD	23.9	26.8	26.3	28.0	27.8	27.9	28.1	28.0	28.1	27.8	27.8	27.3
S.T.ABS.HRS YTD	0.0	0.0	0.0	0.6	0.5	0.4	0.3	0.4	0.4	0.6	0.7	0.6

SAFETY (1974: 3 Minor, 0 Serious Injuries)

MINOR INJ.	0	0	0	0	0	1	0	0	0	0	0	0
SERIOUS INJ.	0	0	0	0	0	0	0	0	0	0	0	0

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JANUARY

Despite two shutdowns during January, the incinerator had the best month in terms of pounds burned since February, 1974. Lengthy repairs are underway at months end, however.

The incinerator shutdown 1/6 to repair a hold in the bottom of the quench pot and epoxy coat paint numerous regions of the floor and ceiling where the original glass-flake lining was failing. Waste was back on 1/14. A power failure shut the incinerator down 1/28. Upon heating back up 1/29, a hot spot on the plenum wall necessitated a complete shutdown. The plenum required an entire relining and a new burner tile. The 7-10 day cure of the new plastic is expected to last until mid-February.

FEBRUARY

Relining of the plenum and cure cycle were completed 2/14. Waste was on only 36 hours before a "hot spot" on the plenum necessitated a shutdown for patch repairs the week of 2/17. Neither this patch, nor a subsequent one the week of 2/24, eliminated the "hot spots." At months end, the incinerator is down for a complete plenum relining, installation of new quench column/weir ring assembly, and modification and relining of the quench pot. Repairs are expected to last most of March.

MARCH

Repairs continued throughout the month. The plenum steel "shell" was increased 8" diameter per Gillespie/Powers recommendation and back-up insulating brick and new RAM plastic installed. The quench pot roof/nozzle were repaired and reflake lined, then new abrasion brick installed on the walls and floor. The "bullseye" was reworked with "hot top", and a new weir ring/quench column assembly installed. Modifications were completed to permit an improved sewer flow measurement from the department. At month's end, the incinerator is in the first days of an 8-10 day refractory cure cycle.

APRIL

Waste feed began the morning of April 11 and the incinerator operated well for 13 days. Beginning April 24, a decrease was seen in the feed rates due to solids build-up in the Venturi section. After this was cleaned out 4/28 normal rates were again attained, however, a hot spot developed on the plenum near the ignitor 4/28 necessitating a shutdown. Initial repairs by Gillespie/Powers 5/2 to a large crack in the plenum plastic failed to resolve the hot spot. The incinerator remains down for further repairs/modifications going into early May.

MAY A reoccurring hot spot at the ignitor on the plenum necessitated a shutdown on 5/12 without having put waste on. The choke ring section of the plenum was removed and patch repairs completed 5/16. Although experiencing slight hot spots while heating up on natural gas, fuel oil was successfully burned in the modified unit 5/19, and waste was put on 5/20. Initially, a distorted flame pattern, "flame outs", and an inability to maintain a constant temperature were experienced on waste, but after replacement of the Ray-o-tube and adjustments to the atomization system, waste was successfully burned starting 5/22. A 30° (included angle) waste tip was tested 5/23, but the flame pattern was even more distorted. The incinerator was intentionally shut-down 6/5 to perform a visual inspection and evaluation of the modified plenum and oxidizer. Some attack of the burner tile was noted and a small buildup had occurred above the contact tube, but solids buildup in the plenum was slight and easily removable and no detrimental affects had occurred to the oxidizer chamber. Patch repairs to the rear wall of the plenum and a crack in the quenchpot lining were accomplished and waste was back on 6/16.

Plant personnel visited a John Zink DBY incinerator at Reichold Chemical, Morris, Illinois on 5/29. Their Zink unit had also been modified such that it no longer incorporated many of the original design features. A trip to Trane Thermal Company, Philadelphia, is scheduled for mid-June to discuss their LV Burner/Incinerator units.

JUNE The incinerator continued to run well through the end of June and into July, although the on-stream-rate was low at about half of design. The Venturi section was cleaned 6/25, resulting in a reduction of back pressure and slight rate improvement. Waste was off the incinerator for 41 hours 7/2 - 7/4 to comply with the Illinois pollution "yellow alert".

A visit by plant personnel to Trane Thermal 6/17 for review of their LV burner proved most beneficial. Their design, which is quite similar to our present "modified" plenum, has been in use for over 15 years with very few problems. A visit to one of their customer's location for further evaluation is being scheduled for mid-July.

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JULY

The incinerator enjoyed its best on-stream-time and monthly burn figure since December, 1973. This was accomplished despite over 5% downtime due to an Illinois EPA "yellow alert" shutdown 7/2 - 7/4.

No detrimental effects due to removal of the choke ring have been encountered yet, although, the Venturi section continues to plug and require cleaning about every two weeks. A 16-24 hour shutdown is being scheduled for mid-August to accomplish numerous minor repairs. The trip to observe a Trane Thermal incinerator has been delayed until late August or early September.

AUGUST

The incinerator improved upon July's showing with a 600M+ lbs month and 92.2% OST in August. A 'turnaround' was accomplished in 8 hours on 8/12, which included thermocouple repairs, cleaning of the Venturi duct, and replacement of the demister pad. The incinerator shutdown 8/31 due to numerous flame failures resulting from the build-up in the plenum. The unit is expected to be down the first week of September to remove the rubble, perform an inspection, and patch repair the plenum.

The trip to PPG at Lake Charles, La. to observe a Trane Thermal incinerator in operation was made 8/28. Their unit operates quite well, although their application for waste off-gases, incineration, as well as waste liquids is slightly dissimilar from ours. An evaluation will be forthcoming in September.

SEPTEMBER

Repairs to the plenum were completed 9/5, and waste was back on 9/8. The rubble in the plenum was easily removed, and the Scoria on the oxidizer walls was swept off. RAM 90 TR was used to repair and resurface the plenum and build-up the partially damaged burner tile. The unit continued to run good for the remainder of the month.

A year-to-date correction of 177,952 lbs. to the "Little Mo" storage tank inventory was made this month. The monthly on-stream rate calculation does not reflect the correction, although the YTD rate does.

OCTOBER

The incinerator was down 38 hours 10/19-10/21 to "clean" the plenum. The burner block was removed and a significant amount of the buildup was shoveled into the oxidizer using a long handled ash shovel. This was the first time this technique was used and worked quite successfully.

Waste on hand at month's end is the lowest since February, 1974.

NOVEMBER

The incinerator shutdown 11/12 to externally shovel a build-up of plenum rubble into the oxidizer. Waste was back on 11/14, however, build-up problems continued until 11/26, when the incinerator was shut down for an internal clean-out and inspection. Build-up in the plenum was substantial, although it was easily removed. A significant amount of rubble had been previosuly shoveled from the plenum into the oxidizer, permitting a much longer operating period between internal clean-outs. The "bulls-eye" between the oxidizer and the quench column had become approximately one-third closed due to a scoria accumulation similar to what was found on the oxidizer walls. This was also easily removed. The plenum was patch repaired, and the unit heating up

MONS 045859

NOVEMBER (Continued)

as of 12/3.

ONA residue is scheduled for incineration during early December. Project 6437, to replace the existing plenum with an experimental assembly, was cancelled in light of the past 6 months experience. The plant is considering fabrication of the waste gun tips, spuds, etc., due to reduced quality, delivery, and cost of the John Zink's.

DECEMBER Waste was back on 12/6 after a two day delay due to a steam curtailment. The incinerator ran well all month, with a slight accumulation in the plenum noticed at month's end.

ONA residue was burned starting mid-month without difficulty. "Little Mo" inventory at year's end is 1.1 M lbs. Incinerator on-stream-time since July has been 81%, with an average monthly burn figure of 560M lbs. Annual inventory and receipt figures were developed to furnish the EPA. Under the WGK reorganization, the incinerator becomes the responsibility of E. R. Billen in 1976.