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ANNISTON TECHNICAL SERVICES DEPARTMENT

ORIGINAL TO T.S.D. FILES
J.C. LANDWEHR
W.F. TAFFEE
H.L. WILLIAMS
G. JESSE
V.R. HAUPT
R.A. HAYDEL
W.B. BAKER
H.E. SCHULTE
JIM HOUSE
J.A. YEZEY

INITIATED BY R.V. CARLISLE	DATE 4-3-70
COMPLETED BY R.V. CARLISLE	DATE 4-3-70
DEPT. 826.08/M	PRODUCT AROCLOR
	JOB NO. 604-1058

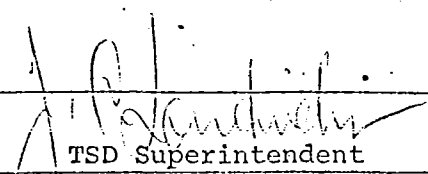
TITLE
NITROGEN PURGE TO CHLORINE FLOW TRANSMITTERS TO ALL CHLORINATORS IN AROCLOR DEPT.

STATEMENT OF PROBLEM AND OBJECTIVE (USE REVERSE SIDE IF NECESSARY)
THERE HAS BEEN AN EXTREMELY HIGH AMOUNT OF MAINTENANCE REQUIRED TO KEEP THE CHLORINE FLOW CONTROLLERS OPERATING IN THE AROCLOR DEPT. THE PRIMARY CAUSE OF THIS PROBLEM IS CORROSION OF THE THIN METAL DIAPHRAGM IN THE D P TRANSMITTERS CAUSED BY THE PRESENCE OF CHLORINE. CHLORINE CAN BE REMOVED FROM THE DIAPHRAGM CHAMBER BY PURGING IN NITROGEN.

ESTIMATED SAVING ON OTHER BENEFITS
SAVING \$3250/YR IN MAINTENANCE COST - SEE ATTACHED SHEET

SUGGESTED APPROACH, REFERENCES, ETC.
NITROGEN PURGE SYSTEM WILL BE INSTALLED ON EACH D P TRANSMITTER IN CHLORINE FEED LINES TO THE CHLORINATORS IN THE AROCLOR DEPT.

PRELIMINARY EVALUATION (To be completed by Technical Service Dept.)

MANPOWER REQUIREMENTS		NO. MEN	T.S.D. COST	ESTIMATED SAVINGS OR PROFITS	NEW FIXED CAPITAL
EVALUATION	24 MAN HOURS	2	672.00	3250/YR	
CH. E. DES.	MAN HOURS				
M. E. DES.	MAN HOURS				
E. E. DES.	MAN HOURS				
INSTR.	40 MAN HOURS				
DRAFTING	16 MAN HOURS				
START-UP	16 MAN HOURS				
TOTAL	96 MAN HOURS				
TOTAL	12 MAN DAYS				
COMMENTS					
Approval		 TSD Superintendent		ASSIGNED TO	

DSW 551974

MORE THAN 60 MRO'S WERE ISSUED FOR REPAIRS TO CHLORINE FLOW INSTRUMENTS IN 1969 AT A COST TO MAINTENANCE IN EXCESS OF \$4500. THE COST OF LOSS OF PRODUCTION BECAUSE OF DOWNTIME IS

DIFFICULT TO DETERMINE DUE TO THE PRACTICE OF OPERATING WITHOUT FLOW INDICATION WHILE FLOW METERS ARE OUT OF SERVICE. IN SOME CASES, CHLORINATORS HAVE BEEN OPERATED FOR MORE THAN A MONTH WITHOUT CHLORINE FLOW INDICATION; THIS COULD RESULT IN (1) OVER CHLORINATED BATCHES (2) FREE CHLORINE TO HCL (3) AROCLOR TO HCL (4) DAMAGE TO EQUIPMENT (5) AND UNSAFE OPERATING CONDITIONS.

A NITROGEN PURGE SYSTEM CAN BE INSTALLED FOR \$2500. THIS SYSTEM WOULD REDUCE MAINTENANCE COST BY 80% AND SHOULD KEEP THE CHLORINE FLOW CONTROLLED IN SERVICE ALMOST CONTINUOUSLY. THE NITROGEN TO PURGE THE TRANSMITTERS WOULD COST APPROX \$318 PER YR.

and WILL CONSUME APPROX. 22 CUBIC FT OF NITROGEN.

MAINT. COST IN 1969 \$4500

80% OF THIS COST 3600

LESS NITROGEN COST/YR 318 —

SAVING 1 YR \$3282

DSW 551975