

INTEROFFICE COMMUNICATION

Westlake, Louisiana
March 10, 1970

TO: Mr. K. R. Gerhart - Saddle Brook

SUBJECT: ENVIRONMENTAL HEALTH REPORT
CONTINENTAL VCM PLANT, FEBRUARY 1970

Following is a list of the environmental health activities of the Vinyl Chloride Monomer Plant during February 1970.

Status of Active Budgeted Items

1. Revision to plant effluent system.

C-500 vent stack extension. Tie-in of the new C-500 scrubber and the wood piping is scheduled to be completed during the plant turnaround scheduled in early April.

Water Waste Disposal System. The new steam stripper was set in place. The concrete cover for the T-252 pit was poured. Piping and electrical contracts were let. Plans are to take the existing T-500 clam shell pit out of service in early March in order to modify this pit and to uprate the clam shell capacity. During this period, when T-500 is out of service, flow shall be diverted to the new T-1 and T-2 brick-lined pits. Neutralization shall be provided by the flake caustic vacuumed out of the new caustic driers on the vinyl loading system.

2. Tank car vent recovery system. The compressor for recovering vinyl chloride from the storage tanks should be delivered in early March. At that time, the compressor and piping will be installed.

3. Low Pressure Condensate Recovery System.

Mechanical piping design layout is 75% completed. The pump and heat exchanger have been delivered and the drum is expected to be shipped by the end of March.

4. Chlorine Vent System.

Mechanical piping design layout has been completed. Piping installation is approximately 20% complete.

CCR 000060453

5. Secondary Waste Treatment Facilities.

The preliminary secondary waste treatment process design package was prepared and issued to Central Engineering. Lagoon construction is scheduled to start during mid-summer.

Current Developments

Laboratory tests were successfully performed with soda ash to remove chlorine gas. This was done to simulate the revision to the C-500 vent gas scrubbing system. A preliminary design has been prepared. A weak caustic solution will be injected to the new T-1 brick-lined pit. The caustic will react with carbon dioxide in the vent gas to form soda ash. The soda ash will then react with HCl and chlorine to form salt and hypochlorites. The hypochlorites in turn will be broken down with urea and sodium sulfite. The process design should be completed by the end of March.

An ICR was prepared for the Patent and Licensing Division pertaining to the use of clam shells in a bio-oxidation pond.

Mr. P. R. Samsel, Director of Environmental Conservation, and Mr. H. E. Sudbury visited the plant and discussed current and future pollution abatement projects.

Air and water samples continue to be analyzed.

P. M. Winegar
P. M. Winegar
Process Engineer

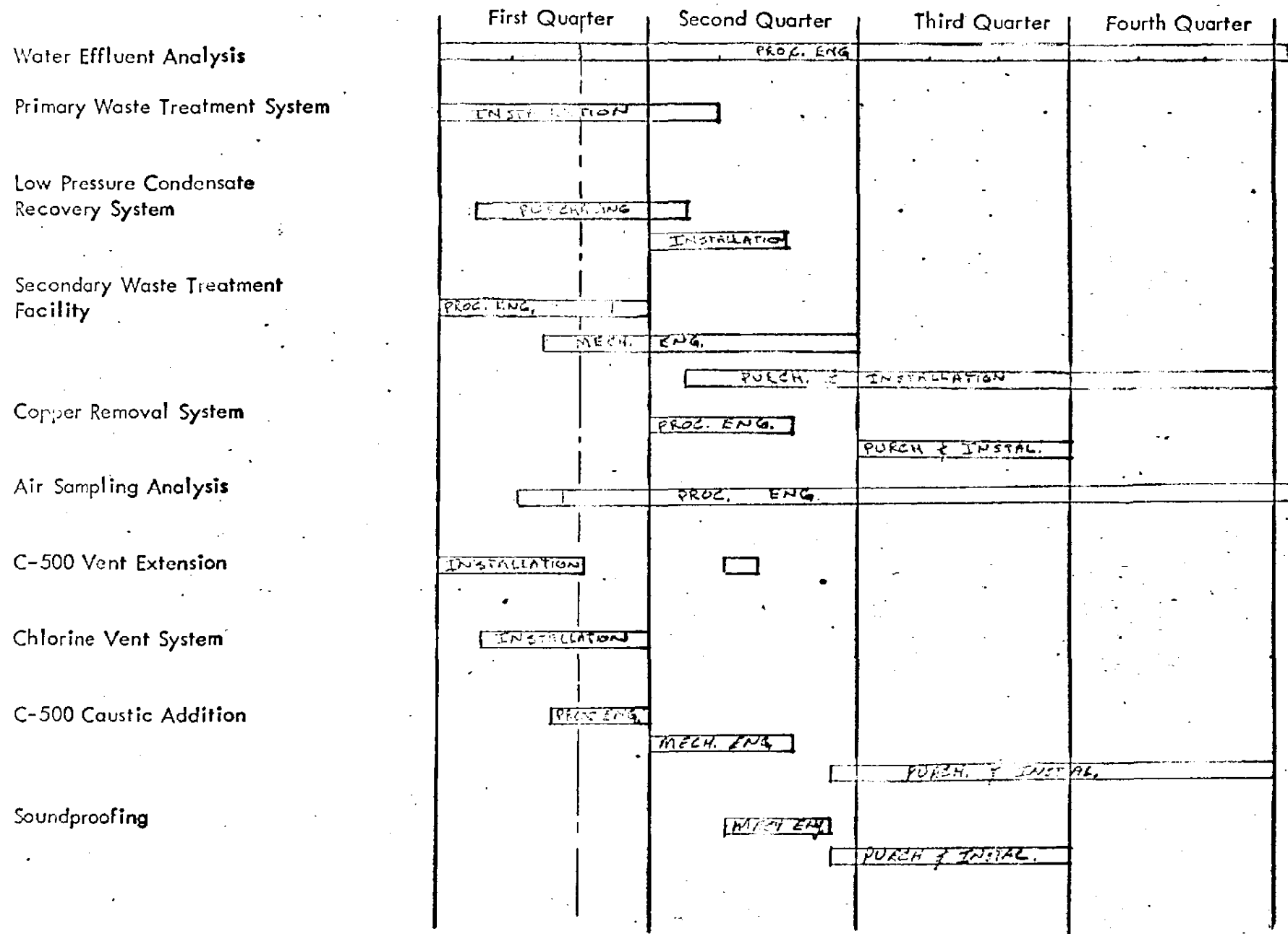
PMW-MC

cc: LNV
DKP
RHG
JDM ✓
ELL

Each w/attachments

CCR 000060454

Environmental Health Activities--VCM Plant
January 1 - December 31, 1970



CCR 000060455

Westlake, Louisiana
February 3, 1970

Mr. E. A. Garhart - Saddle Brook

Environmental Health Report
Continental VCM Plant, January 1970

Following is a list of the environmental health activities of the Vinyl Chloride monomer Plant during January 1970.
Status of Active Budgeted Items

1. Revision to Plant Effluent System.

C-500 Vent Stack Extension. Piping has been completed from the outlet of the new C-500 scrubber. This construction effort is now complete except for the tie-in of the new C-500 scrubber which will be accomplished during the next plant turnaround.

Water Waste Disposal System. Problems were encountered with the monolithic liner which was placed on the new trenches. Due to difference in thermal expansion between the liner and concrete, the liner pulled away from the wall. A solution has been found to repair this liner and additional trench lining is being installed using material supplied by a different vendor. The new steam stripper base has been poured and the stripper should be set during February. Re-bricking of T-252 pit has begun, and is approximately 20% complete.

2. Tank Car Vent Recovery System.

The tank car vent recovery system has been operational since mid-November, 1969. The recovered vinyl chloride has been used for purging out railroad tank cars and for unloading vinyl from the tank cars. A compressor along with corresponding piping is being added to the tank car vent recovery system to recover vinyl chloride from any one of the six (6) storage and batch tanks, prior to clearing the tanks for entry. The piping modification is 50% complete and the compressor is expected to be delivered in February.

CCR 000060456

3. Low Pressure Condensate Recovery System.

Material has been ordered and mechanical piping design layout effort should begin by mid-February.

4. Chlorine Vent System.

The pump and blowdown tank have been set. The piping layout design effort is 50% complete with actual piping installation to begin by March.

5. Secondary Waste Treatment Facilities.

The process design package is being prepared and is expected to be released to Central Engineering before March.

6. Soundproofing.

Mr. J. A. Holcomb has been assigned the responsibility of engineering the noise level reduction within the confines of the plant. The sound level survey for the VCM Plant indicates that the dry vent system and the cooling water turbines are the greatest sources of noise.

Current Developments

Approximately 35 gallons per minute of EDC-saturated water have been deleted from the plant effluent as the result of flowing the EDC to a large storage tank, T-453, prior to entry to the light ends column. This reduction in water capacity will reduce the load on the new stripping system being installed by 22 percent.

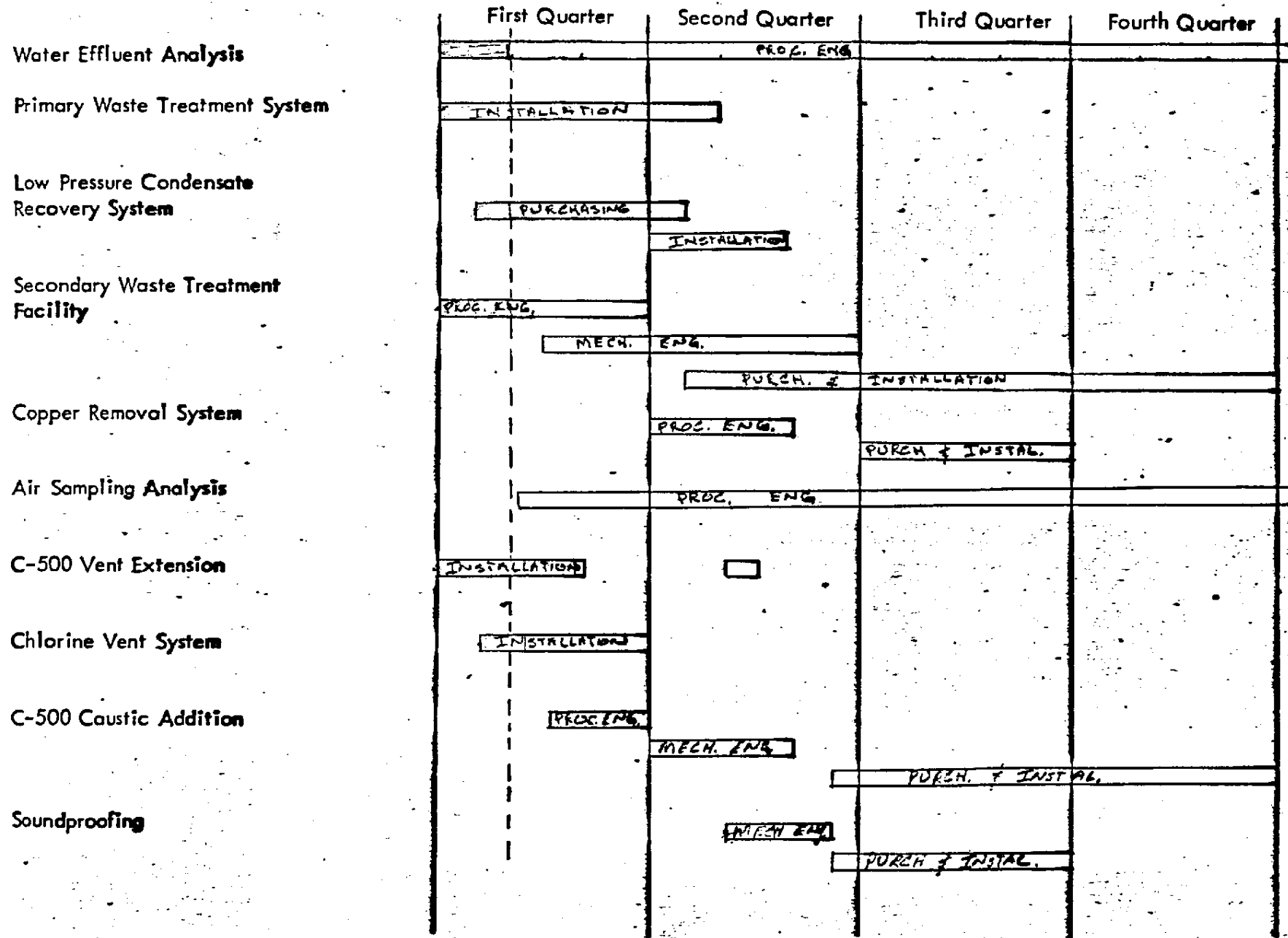
The vinyl chloride vent recovery system at the dock was placed in service during January and operated successfully.

The Monsanto Biodine Company proposal for a secondary treating facility was reviewed. Their proposed system was discarded for the following reasons.

1. Monsanto Biodine exchanged a water pollution problem for air pollution.
2. The cost of their system is approximately 25% higher.
3. Their system has more inherent operating problems.

Environmental Health Activities--VCM Plant

January 1 - December 31, 1970



CCR 000060459

Westlake, Louisiana
February 3, 1970

Mr. J. H. Gerlach

Water Effluent Analysis
November 1969 Through January 1970

Enclosed are the results of chemical analysis for the
VCM Plant effluent from November 1969 through January 1970. The average
plant effluent flow rate was 558 gpm, and the average temperature
was 95 degrees F. The average EDC concentration of 1807 corresponds
to 12,094 lbs/day of ethylene dichloride in the plant effluent.

P. M. Winagar

PMW-MC

Enclosure

cc: LHV

JDM

EAP

DKP

EDG

Each w/attachment

CCR 000060460

PLANT EFFLUENT ANALYSIS
10-28-69 through 1-26-70

<u>Date</u>	<u>EDC</u>	<u>Total Solids</u>	<u>Suspended Solids</u>	<u>TDS</u>	<u>Cr as CrO4</u>	<u>Total Phosphate</u>	<u>Total In-organic Cl⁻</u>	<u>Total Fe</u>	<u>Cu</u>	<u>Al</u>	<u>Color Filtered</u>	<u>COD</u>	<u>pH</u>	<u>Temp. °F</u>	<u>Flow, GPM</u>
10-28-69	1291	10960	860	10100	1.0	6	5980	6.0	1.35	1.0	15	(4000)	2.9	102	435
11-26-69	1337	12448	1012	11436	3.1	3	7340	10.4	2.6	.09	15	3640 3280	2.8	-	-
12-2-69	1373	15030	170	14860	Tr.	5	8300	12.8	-	-	15	3660 3320	3.0	91	512
12-9-69	3296	9472	44	9448	21.0	3	4500	5.0	-	-	15	(4000)	6.4	86	840
12-23-69	1188	15320	1168	14152	14.0	3	6980	16.0	-	-	45	3260 3320	7.5	105	290
12-30-69	2184	2310	446	1864	12.0	1	3700	0.45	-	-	50	2840 1680	11.3	105.7	310
1-6-70	-	10653	1947	8706	3.1	1	528	0.7	1.2	.05	35	3280 2560	8.1	-	330
1-13-70	1982	18000	2280	15720	8.0	1	7980	1.6	-	-	45	3900 3800	6.0	80	630
Average	1807	11774	990	10786	7.8	2.9	5663	6.6	1.7	0.38	-	3635 3840	6.0	95	558

EDC LOSS = 12,094 lb/day.