

ETHYL CORPORATION

INTER-OFFICE



To Mr. J. C. Klock ADDRESS

FROM B. J. Lentz ADDRESS

SUBJECT Air, Water and Solids Pollution DATE February 28, 1979
Abatement Programs

A status review of active Air, Water and Solids Pollution Abatement Programs was held on February 20, 1979. The following persons attended all or part of the meeting:

Mr. N. E. Garland
Mr. J. H. Huguet
Mr. R. H. Jones
Mr. M. A. Lea
Mr. B. J. Lentz
Mr. D. E. Park

Mr. P. M. Randall
Mr. J. W. Street
Mr. W. M. Street
Mr. D. R. Todd
Mr. S. E. Williamson

1. Reduction of Chlorinated Hydrocarbons in Waste Water

During January the monthly daily average discharge of chlorinated hydrocarbons in the general plant effluent was 394 lbs per day, which was barely under the 400 lb per day allowable average discharge limit. For February month-to-date the discharge is averaging 515 lbs per day. Recent actions seem to have been successful in reducing the discharge level.

During most of February the spill sewer collection system and the shell dam outlet have run excessively high in chlorinated hydrocarbons. The fume scrubber discharge to the shell dam also has been running excessively high. Since the meeting all safety relief valves that discharge to the fume scrubber have been checked and bypass valves checked and no detectable leaks were found. However, the discharge has significantly decreased during the last few days.

The waste water strippers 501 and 502 performed very poorly most of the month. Problems with the level control on 501 stripper were found and recently corrected. In addition, the height of the seal loop has been increased to allow an increased boilup rate. Performance of stripper 501 has been quite good during the last few days. Stripper 502 was found

to have all of the polypropylene packing melted down in the bottom of the stripper. The packing was replaced with the same type packing but packing made of Kynar has been placed on order with a delivery of approximately two weeks. The Kynar is expected to withstand higher temperatures that may be caused by upset column operation. Recent performance of stripper 502 also has been satisfactory.

The discharge from the spill collection system also has run excessively high for quite some time. On Wednesday, February 21, manhole covers in the spill collection sewer system were removed and the sumps pumped out. Organics were found in some of the sumps. The in-plant sumps have been pumped several times during the last two weeks and are believed to be reasonably clean. Technical Services personnel are continuing to check the VCI Plant spill sumps about twice a day and reporting findings to Operations for corrective measures.

Sludge removed from D-19B and placed in the spill collection pits has now been transferred from the collection pit to the East Pond area. This sludge will be combined with the sludge removed from the North Lagoon and eventually removed from the plant. It primarily consists of iron.

A sump to catch spilled chlorinated hydrocarbons was dug in the north-south ditch just before the entrance to the West Pond. The sump was about the width of the ditch and 15 or 20 feet long and about 2 feet deep. Periodically the sump is to be checked for organics which are to be removed as necessary.

Analytical data on in-plant streams will be reported to Operations as soon as possible each day to allow for corrective actions or additional samples as may be required. A new composite sampler has been put out to sample the Diversion Canal. A second composite sampler has been set out to sample the inlet to the trace lead facility.

Current plans are to proceed with a project for less than \$25 M to obtain a continuous hydrocarbon in water analyzer. The analyzer would be installed in a key plant stream to provide early detections of spilled organics.

A project request for a VCI Plant fixed tank collection system to remove organics from the in-plant sumps is being circulated. The project request is for \$50 M.

Final progress report on studies to further reduce chlorinated hydrocarbon discharges in our plant effluent has been prepared and will be mailed to EPA prior to March 1, 1979. Our current NPDES permit expires October 30, 1979. An application for renewal must be submitted 180 days prior to the expiration date. The Environmental Design Group has prepared a draft of a new application to be submitted before April 30, 1979.

2. Trace Lead Removal Facilities

Lead discharged in the plant effluent currently is averaging about 55 lbs per day compared with the allowable average of 53.7 lbs per day. Performance of the trace lead treatment facility has been very good during the month and it is expected that we will be within the allowable permit limit by the end of the month. The discharge from Lake Mannheim currently is averaging approximately .7 ppm of lead. During the latter part of February sludge lines have remained within C pit and the discharge has been at an acceptable level except during periods with a heavy rain. It appears that most of the TML rich sludge has been processed in the furnace at this time.

The flash mix agitator at the trace lead treating facility was modified to increase its speed from 84 to 100 rpm. This probably has helped obtain the good performance of the trace lead facility.

Sodium borohydride is effective in reducing Tri leads but not tetra leads. The analytical procedure has been developed for field use to allow the operator to check for Tri leads. The addition of sodium borohydride will be adjusted accordingly, based on these analyses.

The East Lamella is continuing to handle scrubber solids. Solids are discharged to the reservoir. The discharge line will be relocated to a point further away from the reservoir overflow. The West Lamella clarifier is being operated only as a spot to adjust pH. The underflow and overflow currently are going to the trace lead settling basin (SB-1). Consideration should be given to whether this underflow could be returned to sludge pits. The question on the effect of this material in causing disc ruptures is unresolved at this time.

Construction has been advised to proceed with installation of new pumps and a spare tank in the Lamella clarifier area to provide a backup HCl acid system.

3. pH Control of Waste Effluent Water

On failure of the pH control probe the pens currently drive down to zero scale. The electronic cards and switch required to prevent this from happening have been received and are to be installed as soon as possible.

Acid water is again being neutralized at the dam using limestone instead of clam shells.

4. Long Term Solids Management Plans

Lake Mannheim was dredged to the No. 3 Sand Bed beginning about mid-January. The trace lead settling basin (SB-1) is also being dredged to the No. 3 Sand Bed. If necessary, the SB-1 will be dredged to the No. 1 Sand Bed. However, if sufficient solids can be removed to the No. 3 Sand Bed, the No. 1 Sand Bed will be retained for dredgings from the North Lagoon. The No. 2 Sand Bed is full of solids dredged from the North Lagoon and is drying.

Engineering reviewed earlier studies of possible off-plant land-fill sites. They still favor the Wilton Helvita site but indicate we could consider a site north of Baton Rouge.

5. Miscellaneous

Further discussions with Operations and during this meeting led to the conclusion that our present method of handling asbestos from the Caustic-Chlorine plant was actually easier and safer. Currently the asbestos exits with waste water from the Caustic-Chlorine and settles out with all the other solids in the North Lagoon where it is greatly diluted and kept under water. It is diluted to probably less than 1% in the total weight of solids in the North Lagoon. Dusting from the dried solids is not a problem. If and when future regulations require us to handle the material differently, we can proceed very rapidly since all technical work required has been completed.

Max Lea reported that oil spill adsorbent material was in Stores in a sufficient quantity to handle an oil spill of 10 or 12 barrels. He also indicated that additional material was available in Baton Rouge if it should be needed. In addition, there are clean-up crews readily available from the New Orleans area.

The disposal well was dialogued on January 31. Based on this plans are to rework the well about the end of March or the

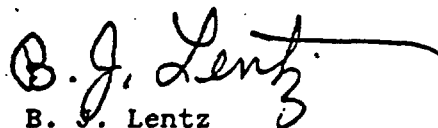
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first of April. Plans are to go to a smaller diameter pipe since the pipe string is easier to pull and faster to rework. Smaller rework rigs can be used and can result in significant savings. The only disadvantage is a possible pluggage but this is not thought to be a major problem.

The sump and pump required to prevent surface runoff water from crossing Solvay property is nearly complete. Some electrical work remains to be done. On completion, approximately 200 gallons of water will be removed from the stream to the trace lead facility.

The next meeting of the group will be on Tuesday, March 20, at 1:30 p.m. in the Staff Conference Room.


B. J. Lentz

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