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Robert N. Bannon - Wm. G. Krummrich Plant

October 5, 1977

DISPOSAL OF W GK ALKALI  
INSOLUBLES STREAM

F. Basile  
D. Metherd  
G. Watson  
H. Yapp

B. W. Eley - A2SC  
M. A. Pierle - ELSA

Please review the attached proposal for disposal of alkali insoluble waste. This proposal has been reviewed and is supported by appropriate W GK plant personnel.

In addition to the reasons cited in the proposal for selecting landfilling as the best route of disposal, the uncertain future of Pentachlorophenol manufacture from which these by-products are formed, should be weighed heavily. I suggest that we look at this plan as an interim solution which should be reviewed in one year should we still be in the Penta business.

Timing for this project is rather tight. I am targeting 10/12/77 for submitting this AR to the Manufacturing Manager. Your comment prior to that date are essential for a smooth flowing project.

Thank you in advance for your help in this matter. I am looking forward to meeting you both and working with you now and in the future.

*Robert N. Bannon*

Robert N. Bannon

/lr  
attachment

Confidential Subject  
Protective Order

BL 10-10-77

H. G. Yapp - Wm. G. Krummrich Plant

October 3, 1977

MINUTES MEETING TO DISCUSS  
DISPOSAL ALKALI INSOLUBLES  
- DEPT. 227

R. N. Bannon  
G. R. Davis  
P. E. Heisler  
D. J. Metherd  
W. E. Scruggs  
W. L. Smull

Those Present:

|                 |                |
|-----------------|----------------|
| E. J. Basile    | J. Wolfsberger |
| G. R. Davis     | H. Yapp        |
| J. A. Labanosky |                |

A meeting was held September 13, 1977 at 2:00 p.m. TR #3 Bldg. 5K to discuss plans for disposing of the alkali insolubles, which have been accumulating in the cone bottom separator (Item 401, Dept. 227). Based on experience, the cone bottom part of the settler fills up in about six months. This amounts to 187 ft<sup>3</sup> of solids or about 1400 gals (i.e. approx. a drum per week of solids, dry basis).

It has been the practice to dispose of these solids by opening a 3" gate valve on the bottom of the cone, probing down through the solids with a steam sparger until an opening is made through to the bottom outlet, and using a water hose (sometimes a high pressure hose) the solids are washed out the bottom outlet and on to the sewer.

It has been determined that these solids contain dioxins. An analysis of this mud gave the following results:

Octachlorodioxin 12%, heptachlorodioxin 1.8%, hexachlorodioxin <352 ppm pentachlorodioxin <177 ppm, tetrachlorodioxin <13 ppm. These lower chlorinated dioxins, if actually present are quite toxic. The higher chlorinated ones are non-biodegradable. For these reasons the above described method of disposal is no longer acceptable.

PROPOSED DISPOSAL METHOD

As a result of the discussions and subsequent investigations, the following method is recommended for the removal of the solids that are present accumulated in the settler. The procedure for drumming the solids preparatory to landfilling is outlined below in a stepwise manner

1. Install a 3" air cylinder operated sliding gate valve on the bottom of the present 3" gate valve that is on the bottom of the settler. Connect instrument air to the cylinder actuator so that the valve can be opened and closed from the approx. 4 ft. high platform located on the west side of the settler.

2. Pipe up the 1" side nozzle which presently tees into the side of the 3" bottom nozzle so that either 80 psig steam or water can be blown or washed up into the bottom of the settler from the platform.
3. When the tank is ready for draining and using a 2 wheel barrel dolly, place an open top 55 gal. barrel (# DOT 5B, Code No. 93223) under the bottom outlet and withdraw the dolly. There will be approx. 6" of clearance between the top of the barrel and the valve on the bottom of the tank.
4. With the air cylinder actuated sliding gate valve closed open the manual gate valve from the platform (10 to 12 ft. away). Open the automated sliding gate valve and observe if the material flows into the drum. When the drum is full, close the valve, clamp the cover on the drum and replace it with an empty one. When the material does not flow out, close the valve and blow back up into the tank with steam or wash up into it with water. If necessary to work from the top of the tank with the bottom valve open, a second man should be stationed on the platform to close the valve when the drum is full.

Continue with the steam sparging, washing/slurring and draining into the drums until the tank is empty. Opening and closing the bottom valve and/or blowing with steam and washing with water at the bottom should be done from the platform at a distance of 10 to 12 ft. Use as little water as possible. Filled drums can be stored on pallets until they can be shipped.

#### ALTERNATE DISPOSAL METHODS

Other proposals for handling this material were considered. Briefly these involved drumming the material and holding for incineration. The drumming to be accomplished either by slurring up the mud like solids and pumping into drums, or washing and dropping the sludge through the bottom nozzle into a fabricated box designed for dewatering and then shoveling the solids into drums.

It was felt that both of these methods increased the potential for exposure, either in the shoveling operation, or in the possibility of having to unplug, plugged pipe lines.

It was not considered advisable to store for incineration in the new incinerator to be built by 1980, unless absolutely necessary. The new incinerator will no doubt be running at capacity for some time burning other accumulated wastes. In any event a burning test will be necessary to determine, requirements for eventually incinerating these wastes.

Confidential  
Protected Area

Minutes of Meeting to Discuss  
Disposal Alkali Insolubles  
Dept. 227

-3-

9/30/77

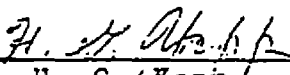
TIMING

Frank J. Basile is obtaining clearance for landfilling this material. Approval is expected by October 31, 1977.

R. C. Pfieffe is obtaining Department of Transportation clearance for shipping this material (rated as a Class B poison) in DOT approved drums.

Review with MIC Energy and Environmental and with Medical and Environmental Health for their concurrence by October 7, 1977.

Delivery on the air cylinder operated sliding gate valve is 2-3 weeks. Completion of the overall installation by mid November, 1977 will require overtime. Total cost \$5,000.

  
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H. G. Hupp

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