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*Chemical Exposure
Assessment Program***Interoffice Communication**

To : R. E. Lehmkuhl
From : C. L. Miller
Date : February 26, 1979
Subject : CHEMICAL EXPOSURE - ABERDEEN

In reference to your letter of February 16, 1979 the Aberdeen Plant currently has four regulated areas for VCM exposure. These are:

1. VCM tank farm compressor shed
2. Old Reactor Module
3. New Reactor Module
4. Top of 501 and 407 blend tanks

With the large amount of rotating equipment control valves, flanges and piping in the reactor areas there will always be a potential for exposure in these areas. Therefore we do not plan to deregulate the old and new reactor modules, but do plan to continue to reduce the potential for exposure.

The VCM tank farm compressor shed has always been a problem due to the design of the Corken compressors. Alternatives were requested by the plant for the current expansion design, but we have been advised that the Corken is the best compressor available for this application. Therefore our future efforts will center around better ventilation of the area and continued experimentation with modifications to the Corkens. My best estimate of deregulating this area is June, 1980.

All of the small blend tanks have been ducted to a common ventilation system and no detectable level of VCM is found at the top of the tanks. The large blend tanks, however, do not have this system and with normal aeration VCM levels on top of the tanks are above the PEL. Vents from these tanks will be ducted to an existing blower or a new blower will be installed in 1979 for deregulation by March, 1980.

The lead standard does not require regulated areas but signs are required and they have been installed at entrances to areas using lead (Line III, Color Weigh Room, Line I and the Laboratory).

The Aberdeen Plant regularly samples for VCM and lead. For VCM the REAL minimonitor gas badge is used. A Bendix BDX 44 pump with a Gelman cellulose filter is used for lead.

R. E. Lehmkuhl
Chemical Exposure - Aberdeen
February 26, 1979
Page 2

About 60 - 70 personal samples are collected per month for VCM monitoring. This is done daily on all shifts so the average is 2 to 3 samples per day. The guard issues the badge and it is returned to him with information as to whether or not a respirator was worn during the shift. If the employee was overexposed, he is notified in writing and asked to help pinpoint the source of the overexposure.

With lead exposure we are still in the initial determination phase and are sampling all potentially exposed personnel with a frequency to be determined later. We do not currently have the capability at Aberdeen to analyze lead dosimetry samples, as it requires an atomic absorption spectrophotometer, so these samples are forwarded to Ponca City R & D for analysis.

Four Honeywell continuous monitoring units scan 40 points (total) in the plant for VCM within a 10 minute cycle time. The units operate continuous and are located as follows:

1. Laboratory - This unit monitors air in various parts of the laboratory, warehouse, compound and dry blend areas. (10 points)
2. Vinyl Control Room - Three units monitor the reactor areas, the vinyl tank farm area, the V-11 dryer building, breathing air prior to the carbon filter and the control room pressurization air. One point monitors the incinerator stack. (30 points)

The maximum VCM PEL at Aberdeen is 1 ppm over an 8 hour period or 5 ppm over a 15 minute period. Alarms are activated in the control room when these levels are exceeded and the operator is supposed to notify people in the area by radio. This notification system hasn't been too reliable as all people do not have radios. We are considering converting to a system that will activate a warning light in each area if 1 ppm is exceeded. If two successive readings over 5 ppm are recorded the leak detection program specifies a leak check will be made.

OSHA has established the action level for VCM at 0.5 ppm.

The current PEL established OSHA for lead is 200 Ug/m^3 with a requirement of 50 Ug/m^3 by July 21, 1979. We have developed a lead standard compliance program to meet all aspects of the standard that become effective February 24, 1979. Capital requirements will be defined as we gather more monitoring data and develop improved methods and work practices for handling lead.

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c: AHS, ELK, CRM, RBM

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