



## Interoffice Communication

To R. E. Lehmkuhl - Houston  
From J. A. DeBernardi  
Date August 7, 1979  
Subject Standby Vent Gas Incinerator Operation

Per your request a study has been made related to the costs we are incurring as a result of operating the standby vent gas incinerator in a hot condition such that it is ready to use immediately should problems develop in the primary train. The major costs identified are in the utilities area and amount to approximately \$100M per year (based on 1979 budget costs). The largest of these utility costs is for natural gas burned to maintain the fire-box in a ready-to-use condition.

In order to comply with the EPA-VCM Emission Standard to the best of our ability, the decision was made to install two essentially identical incineration trains at the VCM Plant. In so doing it was our intent to ensure our ability to produce maximum VCM without the threat of non-compliance should mechanical or operating problems in one train necessitate it being shut down. The penalties accessible under the EPA Standard for non-compliance can be both civil and criminal. Interpretive rulings related to these penalties indicate that knowing and willing violations of the standard will be subject to criminal penalties. Non-compliance reporting to the EPA is required on a semi-annual basis; i.e., March 15 and September 15 of each year.

Compliance experience with the two incinerator concept has been very good since the standby unit was started up in March, 1979. However, individually we have experienced a number of mechanical problems with both unit fire-boxes which would have lead to a number of lengthy non-compliance situations had the standby unit concept not been employed in the area's design. These problems have required complete train outages for repair and relate to castable failures, water quench gun failures, fire-box shell internal corrosion problems, and expansion joint replacements. Prior to the standby unit being ready for operation, the primary unit was out of service for one 5-hour period for water quench gun nozzle leakage repair.

Although the savings of \$100M per year of utilities usage at the VCM Plant is certainly an objective we should pursue, I believe we are premature in proceeding toward this objective without more operating experience especially in the fire-box and water quench area of the incineration units. We also have minimal operating experience using liquids in the system as supplemental fuel. If we were to save the utilities cost it would mean adopting an operating philosophy which would leave the standby unit in a cold fire-box condition and all downstream equipment in the unit in the shutdown mode. To bring the standby unit

CCR 000066503

R. E. Lehmkuhl  
Page 2  
August 7, 1979

to operating fire-box temperature from a cold condition without the potential of brick damage would require a minimum of 25 hours. With the type of failures we have experienced thus far in our operating learning curve, this would mean a minimum of 25 hours of non-compliance unless the entire plant was secured until the incinerator was up to temperature. In addition, frequent cooldown and heat-up of the fire-box brickwork is directionally wrong related to maximum brick life.

The reaction of the EPA to frequent situations involving long non-compliance periods is also a consideration. As I recall, the question of standby unit start-up period related to non-compliance was directed to the EPA many times during the comment period and at meetings on the standard. EPA's response to this question consistently indicated these periods to be in non-compliance and subject to appropriate penalties.

It is my recommendation that we continue with our hot operating philosophy on the standby unit at this time. The plant will continue its program of solving the recurring equipment problems that have caused equipment downtime in the units to this point in our learning curve. When overall incinerator reliability is improved substantially from its present level, we can again consider the option of holding the standby unit in a cold condition. In the interim, perhaps the EPA's position related to incinerator start-up non-compliance will be clearer through possible actions they may take as a result of semi-annual reports indicating non-compliance for this reason.



J. A. DeBernardi

is  
CC:  
RDG-HDG

CCR 000066504