



Interoffice Communication

To R.E. Lehmkuhl
From G.C. Bottoms
Date April 3, 1981
Subject REGULATION OF VOLATILE ORGANIC CHEMICAL FUGITIVE EMISSIONS

On March 30, 1981 representatives from the VCM plant, Chemicals Environmental Control and Project Development groups (attendees denoted by asterisks on the distribution) met to discuss the potential impact of the proposed New Source Performance Standard (NSPS) regulating fugitive emissions of Volatile Organic Compounds (VOC).

In brief, the proposed regulations are characterized by the following stipulations:

1. The regulations apply to any new plant or modification for which construction has not started by January 5, 1981, and which produces one of the chemicals on the SOCM (Synthetic Organic Chemical Manufacturing Industry) list.

Brad Raffle (Legal Department) has promised an opinion by April 8 on their applicability to the Newark Expansion. He will subsequently evaluate the VCM Expansion. It is almost a certainty that the VCM project will be covered under the proposed regulations. Even though the NPS is still in the proposal stage, the expanded VCM plant could not legally operate until it complied with the standard, once it becomes final.

2. Fugitive emissions must be controlled by application of double mechanical seals, vented to the incinerator, on all rotating equipment. Rupture disks must be installed upstream of all relief valves. Sampling systems must be closed loop.
3. Valves are an "uncontrollable" source for VOC fugitive emissions. Emission reductions are only possible by removing a valve from service (removed and replaced with a spool piece, etc.).
4. An extensive valve monitoring and record keeping requirement is imposed. Although not mandated by the proposed regulations, this effectively requires that valves be made readily accessible.
5. The regulations provide that an effected facility will not be subject to the above provided there is no net increase in overall VOC fugitive emissions due to the modification. That is, offsetting of fugitive emissions with like fugitive emissions is allowed.

Although the above points reflect our best understanding of the proposed regulations, it should be understood there are a great many areas that are subject to different interpretation. The regulations, until finalized, are also subject to change or even cancellation.

VVC 000013086

VEV-266341

Based on the above stipulations, their effect on the VCM Expansion Project was analyzed. The estimates contained below are only engineering judgments and are not definitive in nature. They do, however, clearly indicate the magnitude of the problem we face.

CAPITAL REVISIONS

EXISTING PLANT

. MODIFICATION OF EQUIPMENT	\$1,000 M
. MAKE ALL VOC VALVES ACCESSIBLE	2,500 M

EXPANSION

. MODIFICATION OF EQUIPMENT	NEGLIGIBLE
. MAKE ALL VOC VALVES ACCESSIBLE	<u>1,500 M</u>
	\$5,000 M

VVC 000013087

OPERATING REQUIREMENTS

. MONITORING PROGRAM (10 ADDITIONAL PERSONNEL)	\$240 M/YR
. ADDITIONAL VALVE MAINTENANCE	<u>640 M/YR</u>

VEV-266342

TOTAL OPERATING COST \$880 M/YR

If we are to proceed, engineering definition and design must start immediately on the above if we hope to maintain our current schedule to startup the expanded facility in the second quarter of 1983. Our analysis indicated it is highly unlikely that adequate offsets can be obtained (in our case this would require removal from service of about 500 valves). However, even this can not be finally determined until a good deal of engineering is completed. The engineering program to accomplish the above would be time consuming and require total coordination between the expansion design and any modifications made to the existing plant.

Our choices range anywhere from "doing nothing" at this time up to redefining our expansion scope to modify all equipment and design of existing and new piping to make valves easily accessible. Should we proceed with the project anything less than compliance could subject Conoco to possible litigation, fines, and eventual redesign of the facility at a later date. Even cancelling the expansion doesn't eliminate the possibility that the

existing plant would require identical modifications be made in the future. Joe Ledvina has stated that this would be likely by 1984.

If we proceed along the path of compliance, including our requirement to make valves easily accessible, and the regulations at final promulgation (estimated to be in early 1982) are substantially less stringent, some of the costs could be "recaptured", however, most would undoubtedly already be committed.

In summary, to minimize cost and schedule impact a prompt decision must be made regarding the execution of the VCM Expansion:

1. We can proceed with compliance and piping modifications. This, in effect, is insurance, at a cost of about \$5,000 M, that the project can proceed approximately as scheduled. If we choose this route, and the regulations are promulgated as proposed, the continuing monitoring program is estimated to cost about \$880 M/year. These costs will reduce the DCF from 22.6% as shown in the budget economics to 21.1%. If the continuing monitoring program is not required, the DCF will improve to 21.7%.
2. We can delay design for compliance with the regulations until they are finalized. If we proceed with engineering and construction as currently planned and the regulations are promulgated essentially as proposed, the capital cost of compliance at that time would probably double and startup of the facility would be delayed at least one year and more likely 2 or more.
3. A plan to design for compliance, but not include piping modifications for valve accessibility, (i.e., modify equipment to include double mechanical seals, etc.) could be followed. The cost for this would be about \$700 M, eliminating the much more costly modifications for valve accessibility. However, if such modifications are required at a later date, their costs would double and the plant startup would be substantially delayed.
4. The strategy of delaying the project until the regulations are finalized is also not appealing. The project cost would undoubtedly escalate 8 to 10 million dollars, the efforts to date would be lost, and again the startup would be delayed by at least one year, and likely longer.

In any event, a strong, concerted program should be initiated to oppose passage of this law. It appears onerous with minimum or no impact on overall reduction of emission to the atmosphere.

/bp

cc: *Dick Davis	Joe Ledvina
*Gary Foshee	Brad Raffle
*Virgil Fisher	David Huber
*Pat Fetizanan	Gerry Inbody
*Mike Hays	Debs Gamblin
*Jim Hall	Jim DeBernardi
	Harry Garrison

VVC 000013088

VEU-266343