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April 3, 1981

Central Docket Section (A-130)
Attention Docket No. A-79-32
U.S. EPA
401 M Street, S.W.
Washington, DC 20460

Dear Ladies and Gentlemen:

Conoco Chemicals is providing comments on the January 5, 1981 proposed regulation for control of SOCM I VOC Fugitive emissions. In general we seriously question the benefit to the environment of devoting substantial private and public resources to control less than 1% of stationary source VOCs emitted to the air nationwide. Fugitive emissions are often already controlled because of considerations such as safety, worker exposure, energy conservation, production efficiency, NESHAPS, or as a result of state programs. Only a very small percentage of the new plants being built are likely to escape some form of fugitive emission control, leaving minimal emission reduction potential for the NSPS.

1. Applicability

- A. Conoco Chemicals is unfairly impacted by the January 5, 1981 proposal date. The proposed NSPS should be recinded until E.O. 12291 can be fully implemented and the implications of the recent Radian report on fugitive emission control in the chemical industry can be evaluated. To leave the proposal date January 5, 1981 would be unfair to those sources starting construction in the near future since the standard could change significantly if it is ever promulgated.
- B. Vinyl chloride should be removed from the SOCM I list since it is heavily regulated under OSHA and NESHAPS. On page 1138 of the January 5, 1981 Federal Register, the preamble states that specific VOC which the Administrator lists as hazardous air pollutants would be regulated under Section 112 of the Clean Air Act rather than under this (NSPS) regulation. However, nowhere does this statement appear in the proposed standard.

We expect to begin construction on a vinyl chloride plant expansion in the second quarter of 1981. Because the proposed standard does not expressly exempt NESHAPS regulated plants, we are uncertain as

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to whether our design should be changed now and how long we can wait before deciding. Conoco is extremely concerned about this uncertainty and believes EPA should take immediate action to rescind the January 5, 1981 proposal date.

- C. For affected facilities which are being modified, any source of VOCs within the affected facility should be allowed to offset new fugitive emissions so as to avoid NSPS applicability, i.e., point sources could offset fugitives.
- D. We recommend that facilities which have established monitoring programs, or will be required to establish monitoring under an applicable NESHAPS standard, should be allowed to expand the program to those areas within the source to which to VOC NSPS would apply. This would eliminate the costs associated with having two separate redundant programs in effect for the source. The monitoring and recordkeeping program under the NESHAPS affords a greater level of control but is less burdensome.

2. Vapor Pressure - 0.3KPa

We object to the level at which the vapor pressure was established. We also question EPA's use of a term which is both obscure and unnecessary. Setting a vapor pressure limitation of 0.0435 psia is completely arbitrary. Should EPA feel that emission sources of less than 1.5 psia represent significant fugitive sources, the basis should be demonstrated. Nothing in the proposed regulations demonstrates the benefit this more stringent control would achieve. Our recommendation is that the vapor pressure cutoff remain at the standard 1.5 psia level. Any efforts to lower this should be explained and justified.

3. Compliance

Compliance with these regulations would mean significant changeout of pieces of process equipment. In many cases this is practical only during complete process shutdowns. We recommend, in an effort to minimize economic impact due to unscheduled downtime, that initial compliance with the equipment standards occur with the first scheduled shutdown or turnaround of the process unit, on the basis of a compliance schedule which would consider equipment delivery lead times.

4. Emission Control Devices

EPA should include process flares as acceptable combustion devices for control of fugitive emissions. Flares are common to most SOCOMI processes and their use as control devices should be allowed until the current EPA evaluation of flare efficiency is completed. Otherwise, the energy impact and capital costs of incineration devices must be factored into the total cost summary by EPA to give an accurate reflection of the cost of these regulations. The total energy costs of the additional incinerators on an industry-wide basis must be considered.

5. Monitoring Program Alternatives

We recommend that an alternative approach to monitoring be allowed for facilities to which the New Source Performance Standard would apply. Specifically, we recommend as an alternative, the program, as defined under the vinyl chloride NESHAPS, standard, under 40 CFR § 61.65(b)(8). We feel that alternative monitoring systems which are equivalent to the NESHAPS for vinyl chloride should give reduction equivalent to the reductions under the NSPS monitoring program. This alternative should be available to non-NESHAPS affected facilities and should be an alternative included in the final regulations.

6. We feel the basis for the monitoring program presented in the proposed regulations is questionable and would result in a program which is overly stringent as well as labor and equipment-intensive. We feel that prior to promulgation of the monitoring requirements in final form, the proposed regulations should be closely reevaluated with each of the following points considered:

- A. Use of the Radian Report as a basis for manpower or time requirements should be reevaluated, as their results are highly questionable when applied to total facility monitoring requirements. Utilization of selected sampling points and emissions sources has apparently resulted in unrealistic time estimates.

We estimate 95 man-hours per month to be far short of the actual time that would be required to sample 2,800 valves. Our most conservative estimate to monitor a facility containing 2,800 valves would take 417 man-hours per month, or slightly less than 10 minutes per valve. This is considering all valves to be readily accessible. Considering historical chemicals industry worker productivity of 50%, and using 417 man-hours per month, a typical plant would require a minimum team of 5 to 6 persons to complete only the valve monitoring requirements. This manpower requirement would have to be adjusted according to the number of inaccessible valves which would require the use of harnesses, cranes or scaffolding to access the sampling point. Such accessibility problems will extend the sampling time well beyond the ten-minute time estimate. This manpower estimate does not include the remainder of the monitoring requirements for equipment other than valves nor does it include time needed to comply with the monitoring team recordkeeping requirements.

- B. The monitoring requirements for valves should be reduced to quarterly monitoring for the first year. Those valves which are not found to be leaking would be monitored once annually after that time. This scheme would allow a two-man fulltime monitoring team to complete the first-year monitoring requirement. In subsequent years this would free the team to perform other tasks in other areas in the interest of productivity.

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- C. Monitoring of safety/relief valves presents a number of problems. We recommend proposed control of these sources be waived or eliminated from the final regulations until such time as reasonable methods of control are determined.
- 1) Approximately 90% of all safety/relief valves are inaccessible for sampling purposes and would require scaffolding to be constructed. This represents an enormous capital cost consideration.
 - 2) Requiring monitoring personnel to access safety/relief valve areas on a regular basis makes monitoring unnecessarily hazardous work. We do not feel that the low level of emission control achieved justifies the hazards inherent to monitoring. This requirement should be removed.
 - 3) An option to eliminate fugitive emissions from safety/relief valves, as noted in the preamble, is the recommended use of rupture discs. A serious problem with this approach is that, due to corrosion or fatigue, rupture discs often fail prematurely. This will ultimately cause problems with downtime and associated costs, as well as the increase in VOC emissions due to the otherwise unnecessary opening of the vessel to replace the rupture discs.
 - 4) Venting of emergency releases from rupture discs and emergency relief valves on larger tanks and vessels, to incineration devices will create operational hazards due to design limitations. The surge in organics to the incineration process will also limit the process destruction efficiency.
 - 5) Based on the above mentioned considerations our recommendation for the control of VOC from safety/relief valves would be service of all safety/relief mechanisms during scheduled turn-around or downtime to minimize those emissions.
- D. Further considerations in operating costs and manpower must be made in the EPA determination of costs and impacts prior to finalizing a monitoring regimen.
- 1) For a facility with 2,800 valves, manpower to establish the monitoring program would be 15 to 20 man-days of engineering time and 250 to 300 man-days of drafting time. Periodic minor revisions in the plant will have to be shown on monitoring schematics requiring drafting time.
 - 2) Recordkeeping for monitoring, maintenance, and reporting will include maintaining records submitted by the monitoring team; writing work orders and/or scheduling maintenance of valves; following up on maintenance activities, including the repair records; compiling quarterly reports, and writing justifications for continued operation of leaking equipment. For the

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base case facility of 2,800 valves, considering work efficiency we estimate this will consume a minimum of 196 man-hours per month; i.e., another full time employee.

7. Prior to institution and finalization of the maintenance program as outlined in conjunction with the monitoring program, the following considerations should be addressed.

- A. The EPA estimate of 16 man-hours per month to fulfill maintenance requirements is far too low. As a breakdown of time requirements was not given, an evaluation could not be made of the time estimated to service both readily accessible and inaccessible valves, an estimate of the number of valves and seals which would require service, or replacement per month. Replacement of a single large valve could alone consume in excess of the allotted 16 hours.

Our recommendation is that the maintenance requirement be given further consideration (with the monitoring requirements). During the interim period, the program should, at minimum, allow the first attempt at repair in the first fifteen days, and the second attempt at repair in the first thirty days.

- B. Tightening the padding on certain types of valves may make emissions worse. Overtightening will frequently cut or shear the packing. This point was mentioned in the preamble. It is our feeling that overtightening will frequently result in increases in emissions, shorten valve life, and will be counter-productive to the intent of the regulation.

8. Capital Costs

Considering the capital costs of compliance with the proposed regulation for a modified or expanded facility, the \$300,000 average per facility is short of the amount that would be required. As in the other areas covered, we feel the estimated capital cost, based on the average cost per facility given by EPA, is short of the requirements. We recommend that these regulations be postponed until the capital cost consideration be addressed, to be certain the capital is effectively expended.

9. Based on comments 1-8 we feel insufficient development and study has gone into the regulatory package as proposed. We feel that it is questionable whether the regulation present form will provide any significant environmental benefit. Certainly, increases in emissions will result from:

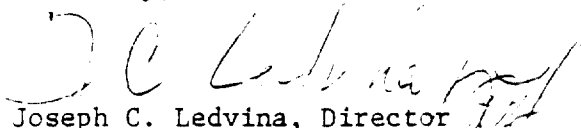
- A. Purging of lines so that a valve may be accessed. (It is physically impossible to purge all lines to a combustion device). Replacement of valves during a non-turnaround period will cause emissions which are likely to exceed any benefit achieved.

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- B. Closed sampling systems will require at least four valves to operate in most instances. The emissions from these valves will exceed the emissions from the sampling system, according to the emission factors.
- C. Damage to valves will occur due to overtightening, shearing, or otherwise destroying the packing. In a typical chemical facility, if replacement of the valve would mean a process shutdown and the leakage from the valve does not present a hazard, the valve would be allowed to remain in operation, thereby increasing emissions. Several "unrepairable" valves could conceivably negate any benefit the proposed regulation could have had.

We feel that it would be better to promulgate these regulations after further consideration of the factors noted above. We recommend these regulations be withdrawn for further consideration and repropose at a later date.

Sincerely,


Joseph C. Ledvina, Director
Environmental Activities

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