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*Preamble**CAA Rules*

useful life. These standards are in accord with section 202(j), which specifies a standard of 10.0 g/mi for LDV, and standards of "comparable stringency" for LDTs.

C. Averaging

Summary of Proposal

In the NPRM, EPA indicated that if it retained the authority to permit averaging after the enactment of the 1990 CAAA, a supplemental notice proposing an averaging program would be issued before finalizing the cold CO rule. EPA recognized that if the then pending CAAA were passed, it could affect EPA's authority to allow averaging. Consequently, the NPRM did not propose an averaging program. Rather, it requested comments on whether manufacturers should be permitted to use averaging to meet cold CO emission standards and any appropriate restrictions, assuming the agency had the authority to allow averaging. The proposal also urged commenters to note legislative developments in their comments. (55 FR 38251.)

At the public hearing on the NPRM, EPA requested comments on whether the Amendments permitted averaging. The

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comment period closed after the enactment of the CAAA, and several comments addressed the Agency's authority to allow averaging.

Comments

State and local areas opposed the use of averaging to meet cold CO emission standards. In support of their position, they argued that the CAAA and accompanying legislative history preclude EPA from allowing manufacturers to use averaging to meet such emission standards. They also argued that a number of CO nonattainment areas had a higher than average proportion of larger engine vehicles. These vehicles are generally more difficult to control and have higher emissions. Therefore, under an averaging program, large engine vehicles would tend to continue to have higher emissions. Thus, if averaging were allowed, these nonattainment areas with high populations of large engine vehicles would not receive the full benefit of the emission reductions anticipated from the proposed cold CO standards. Further, they asserted that since the lower cold CO standards were not technology forcing and that the phase-in period provided manufacturers with sufficient time to comply with the new standards, no compelling need existed to provide the manufacturer with averaging flexibility.

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Conversely, several manufacturers supported the use of averaging. They asserted that EPA had the authority to permit averaging and that averaging helps provide the flexibility needed to produce vehicles in the most cost effective manner with no adverse air quality effects.

EPA Response

EPA acknowledges that some manufacturers might benefit from an averaging program. However, EPA has determined that, based on the language of the CAA and accompanying legislative history, it is precluded from allowing the use of averaging by manufacturers to meet cold CO emission standards. (A detailed discussion of the issue of averaging is contained in the Response to Comments for this rulemaking which has been placed in the public docket.)

D. Small Volume Manufacturer Exemption

In the NPRM, EPA proposed to allow small volume manufacturers an exemption of up to 10,000 vehicles until the last year of the phase-in schedule, which at that time was the 1995 model year.

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Response to Comments

3.3. Averaging

Statement of Proposal: At the time the NPRM was published, the CAAA had not been enacted. EPA recognized that this legislation could have an impact on its authority to allow averaging and, therefore, did not propose averaging. Rather, the NPRM asked for comment so that a supplemental notice proposing such a program could be issued should EPA retain the authority to allow averaging.

CAAA Language: The cold CO provision of the CAAA contains no specific language on averaging. However, this provision establishes a cold CO emission standard of 10.0 g/mi for LDVs and directs that a level comparable in stringency to LDVs be established for LDTs. Further, by 1996, 100 percent of each manufacturer's sales volume of LDVs and LDTs is required to be in compliance with these standards.

Summary of Comments: State and local areas opposed the use of averaging to meet cold CO emission standards. In support of their position, they argued that the CAAA and accompanying legislative history preclude EPA from allowing manufacturers to use averaging to meet such emission standards. They stated that the deletion of a provision authorizing averaging from the House bill shows that Congress intended to preclude averaging. In addition, they indicated that many nonattainment areas have a higher than average proportion of large size vehicles with high CO emissions. Allowing manufacturers to use averaging,

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thereby offsetting dirty vehicles with clean vehicles, would not adequately reduce emissions at lower temperatures and would lead to higher emissions in their geographic areas than would occur if averaging was not permitted. Further, they asserted that the lower cold CO standards were not technology forcing, and that the phase-in period provided manufacturers with sufficient time to comply with the new standards.

Conversely, several manufacturers, as well as the MVMA and NAM, supported the use of averaging. They asserted that EPA had the authority to permit averaging. This conclusion was based on the fact that Congress had eliminated language from the Senate bill which would have precluded the use of averaging. They argued that by eliminating this language, Congress was giving implicit approval of averaging.

In addition, manufacturers asserted that averaging helps provide the flexibility needed to produce vehicles in the most cost-effective manner with no adverse air quality effects. It also encourages the development and use of improved emission technologies and the development and sale of alternative-fueled vehicles. (Several manufacturers claimed that averaging would eliminate the problem of having to make a larger percentage of cars comply with the new standards since projected sales might not reach actual sales).

In response to state concerns, several manufacturers suggested that the

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Response to Comments

disproportionate effects of averaging in local areas with higher numbers of large size vehicles could be reduced by establishing a ceiling on averaging and precluding averaging between trucks and cars. However, they opposed basing a program on the concerns of a few areas and preferred being able to average between LDVs and LDTs.

Discussion of Comments: EPA believes that the language and legislative history of section 202(j) of the CAA precludes the use of averaging by LDVs and LDTs to meet cold CO emission standards. This belief is based on both the language and legislative history of that provision.

Section 202(j)(1) of the CAA, as amended, directs the Administrator to promulgate cold CO regulations which contain standards for LDVs of 10.0 gpm and for LDTs a level comparable in stringency to the standard applicable to LDVs. These standards are to be phased-in in accordance with a provision that "requires a percentage of each manufacturer's sales volume of LDVs and LDTs to comply with applicable standards," with the percentage being 40 percent in 1994, 80 percent in 1995, and 100 percent in 1996 and thereafter.

The natural reading of the statutory limit, in conjunction with the phase-in requirement, absent any express authorization for averaging, is that the limit must be met by the specified percentage of vehicles sold in the particular year. Thus, 40 percent of the vehicles sold in 1994 must meet the 10 gram limit, 80 percent in 1995, and 100 percent and thereafter. The legislative history

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Cold Temperature CO NPRM

confirms this analysis.

The House Committee report, in describing the cold CO phase-in requirements, stated that "[a]t least 40 percent of the 1993 MY vehicles produced by each manufacturer are required to meet the standards. The standards apply to 80 percent of the MY 1994 vehicles and 100 percent of the MY 1995 vehicles" (H.R. Rept. No. 101-490, Pt. 1, p. 302). Virtually identical statutory language [Section 202(g)] providing for a phase-in, based on a percentage of sales volume, applies to the Tier 1 tailpipe standards for light duty vehicles and trucks. In explaining the Tier 1 language, the Conference Report (H.R. Rept. No. 101-952, p. 337) states that the emission reductions are to apply "beginning with 40 percent of vehicles sold in 1994 and increasing to 100 percent of vehicles sold in 1998." This explanation in the Conference Report makes clear that the required reductions under this type of phase-in provision are to be met by the specific percentage on a per-vehicle basis, with the requirement applying ultimately to 100 percent of the vehicles. When 100 percent of the vehicles have to meet the standard, there is no basis for averaging in meeting the standard.

Other aspects of the legislative history of the cold CO provision indicate that Congress intended that the cold CO standards not be averaged. Most notably, the Administration (H.R. 3030, section 204, as Introduced July 27, 1989) originally proposed that the cold CO emission standard of 10.0 grams be

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met "on average." That language, however, was deleted by the House committee.

Also of note is the statement by the Senate conference managers that EPA cannot allow averaging in meeting the cold CO standard [Cong. Rec. S. 16936 (Oct. 27, 1990)].

The comments maintain that averaging is permissible because the law, as enacted, did not adopt the express prohibition on averaging found in the Senate report. It, therefore, authorizes averaging or leaves the agency with authority to allow averaging. However, these comments do not take into account the fact that Congress enacted a specific cold CO emission limit, to be met by 100 percent of the vehicles or other specified percentages during the phase-in. Moreover, as just discussed, the legislative history of the cold CO provision indicates disapproval of the use of averaging for that standard.

Precluding averaging will prevent higher cold CO emissions in areas with a disproportionate number of large size vehicles. The "compromise" restrictions suggested by the manufacturers would limit the degree of such an effect that would occur in these areas if averaging were permitted, but it cannot eliminate the effect to provide the same degree of assurance that is provided by not allowing averaging.

EPA Position: While EPA acknowledges that some manufacturers might benefit from an averaging program, EPA has determined that it is precluded

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from allowing the use of averaging to meet cold CO emission standards. As outlined in the preceding paragraphs, this conclusion is based on the language of the CAAA and accompanying legislative history.

Averaging

MOTOR VEHICLE MANUFACTURERS ASSOCIATION
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November 30, 1990

U.S. Environmental Protection Agency
Air Docket Room M-1500 (LE-131)
Waterside Mall
401 M Street, S.W.
Washington D.C. 20460

Gentlemen:

Attention: Docket No. A-89-01

The Motor Vehicle Manufacturers Association of the United States, Inc. (MVMA) is pleased to submit the enclosed written comments concerning the, "Notice of Proposed Rulemaking for Interim Regulations for Cold Temperature Carbon Monoxide Emissions from Light-Duty Vehicles and Light-Duty Trucks," (55 FR 32849) published Monday, September 17, 1990.

Sincerely,



Marcel L. Halberstadt
Director
Environmental Department

MLH/kv
Enclosure

cc: M. Sabourin

MEMBERS:

CHRYSLER CORPORATION • FORD MOTOR COMPANY • GENERAL MOTORS CORPORATION • HONDA OF AMERICA, INC.
NAVISTAR INTERNATIONAL TRANSPORTATION CORP. • PACCAR Inc • VOLVO NORTH AMERICA CORPORATION

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of many cold CO emission test fuels. For example, when engine development for the 1999 model year begins, the cold CO test fuel would have to be known. However, development for the 1996, 1997, and 1998 model years would likely still be underway. That could lead to having to handle up to four cold CO test fuels for vehicles yet to be marketed. That is overly burdensome for the auto makers. When a test fuel for the model year being produced at the time is included, another cold CO test fuel would be needed. Changing the cold CO test fuel as often as yearly is not acceptable. EPA should specify only one or two test fuels for cold CO. If vehicles are produced to be operated on greatly reformulated gasolines, that is, fuels which will not work properly in vehicles already on-the-road, then reformulated gasoline specifications for cold CO testing could be developed at that time.

EPA Legal Authority Under Clean Air Act Amendments of 1990

Following publication of EPA's NPRM, but only shortly before the November 1, 1990 public hearing on the proposed cold temperature CO standards, Congress adopted the Clean Air Act Amendments of 1990, which include provisions mandating the promulgation of regulations applicable to emissions of carbon monoxide from light-duty vehicles and light-duty trucks when operated at 20 degrees Fahrenheit. Accordingly, NVMA was asked by the Presiding Officer at the hearing to supplement its testimony, particularly with respect to the extent to which the Agency retains discretion on a number of matters in light of the recent amendments.

A. Averaging, Banking and Trading

With regard to the issue of meeting emissions standards by averaging different engine families or between classes of vehicles, such averaging is currently permitted by regulation and, in fact, has been upheld by the courts (see, Natural Resources Defense Council v. Thomas, 805 F.2d 410, D.C. Cir. 1986). In the NRDC case, the court noted that, lacking any clear congressional prohibition of averaging, the benefits of "more flexibility in cost allocation," while ensuring that the overall fleet "still meets the emissions reduction standards makes sense" (805 F.2d at 425).

The 1990 Amendments do not contradict this analysis. On the contrary, although Congress considered provisions explicitly limiting EPA's authority to adopt averaging programs with respect to standards established under section 202 of the Act (see, S.G. the Senate report accompanying S.1630, S.Rep. No. 228, 101st Cong., 1st Sess. 107, 1989), it rejected such restrictions in the 1990 Amendments. This rejection should be indicative of

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Congress' approval of innovative and cost-efficient regulatory control features such as emissions banking and trading.

B. Interim In-Use Standards

MVMA's November 1, 1990 testimony provided a number of practical reasons that would justify promulgation of interim in-use standards for the cold temperature CO regulations. The ranges proposed by MVMA parallel the interim in-use NMHC, CO and NOx standards for passenger cars and light-duty trucks explicitly set forth in section 210 of the 1990 Amendments. While the Amendments are silent with respect to such in-use requirements for purposes of the cold CO standards, MVMA does not believe that this would preclude EPA's tailoring of its initial recall enforcement program for the cold CO requirements along the lines of the interim 68°F-86°F standards set forth in the Amendments.

C. Intermediate Temperature Requirements

While specifying a 20°F temperature standard, the cold CO provisions of the 1990 Amendments did not authorize any requirements for CO emissions at other temperatures below the standard Federal Test Procedure. In seeking to assure that the benefits of vehicle compliance at 20°F are not lost at other temperatures (i.e., in providing for "proportional" emissions control), EPA may not impose any testing requirements at intermediate temperatures. MVMA has, therefore, recommended that an engineering evaluation procedure be instituted, which would be designed to determine, and prohibit, the existence of defeat devices that could cause emissions at intermediate temperatures to increase significantly. MVMA believes that development of such an evaluation approach would provide the most cost-effective mechanism for preventing unnecessary emission increases at non-test temperature operating conditions.

Answers to Concerns Expressed by EPA at the Public Hearing

A. EPA's Concern Related to Program Stringency

EPA had asked why manufacturers were requesting a more lenient cold CO program than that detailed in EPA's NPRM (no SEA, delay in altitude in-use requirements, etc.) as opposed to a more stringent program that might avoid Clean Air Act Phase II standards.

There are numerous reasons for the position taken by the manufacturers as detailed below:

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emissions requirements. MVMA believes such requests are especially important for the cold CO rulemaking because cold CO standards are a new requirement for which manufacturers have no experience. Furthermore, this requirement is being implemented at the same time that manufacturers are being required to meet numerous other regulations through the 1990 amendments to the CAA and new California requirements.

B. EPA's Concerns Related to Emissions Averaging

EPA asked that manufacturers respond to the concerns of representatives from the states of Alaska and Colorado regarding the emissions averaging program. The representatives indicated that the vehicle fleets in these states consist of a large number of 8-cylinder passenger cars and light-duty trucks. The concern is that under averaging, manufacturers might design these vehicles to meet CO emission levels significantly above the standards, hence causing higher CO emissions in those states and thus making it more difficult for these areas to reach attainment.

MVMA understands the concern on the part of the representatives from the states of Alaska and Colorado. We encourage a resolution because we believe that averaging (including banking and in some cases trading) helps provide manufacturers with the needed flexibility to meet standards in the most cost effective manner with no adverse air quality effects on average.

MVMA also believes that areas such as Denver, Anchorage and Fairbanks should be pleased that manufacturers are providing them with the type of vehicles that they wish to purchase. Such vehicles satisfy the needs of their citizens. In that regard, MVMA believes that a compromise position on this issue should be worked out.

In the past, EPA has established "ceilings" for family emissions limits (FELs). Under averaging, manufacturers' FELs could not exceed these ceilings. Such ceilings should help to alleviate the concerns of the representatives from Alaska and Colorado. MVMA recommends that EPA set the ceilings at levels that would be acceptable to all concerned. As mentioned previously, however, MVMA believes that the details of any averaging program should not be based only on the concerns of one or a few areas but rather should represent a fair approach to all areas and to the manufacturers.

MVMA prefers that EPA allow averaging across vehicle classes, i.e., that manufacturers be allowed to average cars with light-duty trucks. However, if the establishment of ceilings as described above does not alleviate the concerns of EPA, then MVMA

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would recommend that averaging be limited to within vehicle classes, i.e., no averaging of between cars and light-duty trucks.

MVMA also believes that an averaging program can work effectively in conjunction with interim in-use standards. Certification would be based on the FELs established for each engine family, whereas in-use compliance would be based on an emissions level equal to the FEL multiplied by some factor "x". The factor "x" is the same factor used to determine the interim in-use standards. For example, assume that EPA establishes an interim in-use standard for passenger cars of 1.5 times the 10 gpm standard, or 15.0 gpm. A manufacturer that chooses to average might establish an FEL of 9.0 gpm for one engine family. In-use compliance during the interim in-use standard phase-in period would be based on CO emissions of 13.5 gpm ($1.5 \times 9.0 = 13.5$).

Credits from banking are necessary if actual sales are used to determine compliance percentages during the phase-in period. MVMA believes that projected sales should be used for determining phase-in compliance. A slightly high or low estimation of sales will have little effect on air quality. If the use of actual sales is required for phase-in, a credit program would protect manufacturers from the jeopardy of losing their certificates through unforeseen market changes.

C. EPA's Concerns Relating to Dynamometer Specifications

EPA's rulemaking to control CO at low temperature will have great impact on engine design and calibration, and therefore, is of significance to the auto industry. Because of this impact and significance, we believe this rulemaking is not the place to specify new, basically unproven emission instrumentation. Thus, we believe EPA should stay with the current emission instrumentation, including the twin 8.65-inch roller dynamometer, except the current dynamometer should be changed from its hydrokinetic version to an electric configuration. An electric version would improve test repeatability both at 20°F and 75°F.

We believe that before the current dynamometer roller configuration is replaced, extensive testing with any new dynamometer with different roller configuration must be conducted. Such testing has not been done at this time with EPA's proposed new dynamometers. Hence, we believe EPA should withdraw its proposal to change to a twin 20-inch coupled roller dynamometer. Any new dynamometer should be thoroughly tested.

If EPA identifies a need to change dynamometer specifications, MVMA recommends the following:

p. 224 202(j)

CAA Rules

EPA's draft legislative rule is inconsistent with representations made in your September 11, 1990 letter to Senator Ford. The draft departs from your representations in the following respects:

1. EPA proposes a "pollution control" fix that is not consistent with your commitment and is presented in a manner that is not legally defensible. Specifically, the proposal would contemplate a "past actual-future potential test" if EPA found controls not to be "environmentally beneficial" and the draft interpretive rule indicates that such a conclusion could be based upon the "rebuttable presumption."^{1/}
2. EPA has imposed restrictions on the "actual to actual" tests that are inconsistent with your letter. All projects -- like kind and non-like kind replacements at existing sources -- would be subject to the "actual to actual" test according to your representations. EPA proposes to restrict use of "actual to actual" to "like-kind" replacements at existing utility units located in attainment (i.e., only PSD) areas. All non-like kind replacements and all "nonroutine" projects in non-attainment areas would be subject to the "past actual-future potential" test. (Note: DOE does not object to this test being applied to units that undertake changes that increase the design capacity of

^{1/} The Administration proposal would have implemented a "potential-to-potential" test for determining whether there is an emissions increase for NSR purposes, thus rejecting EPA's "rebuttable presumption" approach. While DOE is not asking EPA to incorporate the "potential-to-potential" test, any true "pollution control" fix will necessarily embrace the principle that utility pollution control projects are environmentally beneficial and should be excluded from NSR review.

a unit since we never viewed the Administration's proposal covering such changes.)

3. EPA imposes restrictions on the "causal link" relief promised in your letter to Senator Ford. Specifically, EPA establishes a burden of proof, not mentioned in your letter, whenever a utility project significantly improves efficiency. EPA also, in the preamble to the draft legislative rule, and in the draft interpretive rule, proposes to require a source to use its highest past utilization as its future utilization rate notwithstanding the fact that future projected utilizations is lower than past maximum levels.
4. EPA has, in the preamble, suggested that the 5 operating year baseline for NSPS emission calculations requires emissions tests, rather than the use of emission factors. This qualification is not consistent with current law which allows sources to elect between use of an emission factor or an emissions test in defining baseline. It is inconsistent with the Administration's proposal which refers to "achievable" levels, not levels actually achieved.

Numerous other problems exist with the EPA draft, not the least of which is the fact that EPA rationale makes the relief vulnerable to legal challenge. How EPA justifies the policy positions stated in any rule is no less important than what those positions are. A legally indefensible fix is of no use to anyone.

CAA Rules

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 51, 52 and 60

[AD-FRL-]

APPLICABILITY OF NEW SOURCE REVIEW AND NEW SOURCE
PERFORMANCE STANDARDS REQUIREMENTS

AGENCY: Environmental Protection Agency (EPA)

ACTION: Proposed Rules

SUMMARY: EPA is proposing a rule that clarifies the meaning of current new source review (NSR) regulations regarding "major modifications," and further defines the application of those regulations to electric utility generating units. The first of these proposals relates to pollution control projects. Traditionally, EPA has viewed such projects as an activity that would not be considered a modification for new source review purposes, unless the new control system is "less environmentally beneficial" than its predecessor system. Accordingly, the proposed rule would add pollution control projects to the list of exclusions in the NSR rules. The proposal also would provide specific guidance regarding the application of this exclusion to electric utility generating units.

The second proposal relates to the statutory requirement, embodied in the NSR "major modification" rules, that, for the purpose of calculating post-modification emissions, there, must

be a demonstrable causal link between a physical change and a projected future actual emissions increase. In the case of electric utility generating facilities, this means that any increase in their utilization, due either to economic or environmental changes in the loading order of units or to an increase in system-wide demand growth, must be excluded from the computation of future utilization levels utilized by the Agency in projecting future annual emissions. Today's proposal would add regulatory language that identifies, for electric utility generating units, load growth and loading order changes as factors that presumptively require EPA to adjust, projections of post-change emissions.

EPA is also proposing today to change its NSR rules to implement a settlement agreement in litigation involving EPA's 1980 NSR rules. This proposal reflects EPA's view that, in ascertaining the impact of a modification, a source owner should be allowed to make an election between either a comparison of "past potential emissions and future potential emissions" or a comparison of "past representative actual annual emissions and future representative actual annual emissions." EPA believes this change, which requires an appropriate mode of comparison of pre- and post-change emissions in all cases, is consistent with the NSR provisions of the Act. However, to preserve administrative continuity, the Agency intends, prior to taking final action on this proposal, that units which have not begun

normal operations will continue to be subject to the "past actual-future potential" test of current rules.

Finally, EPA is proposing to revise its New Source Performance Standards (NSPS) rules to establish, as the NSPS baseline, the maximum hourly emission rate achievable during the past five years of operation of an affected facility. This proposal will resolve uncertainties created by past interpretations of EPA's NSPS rules.

Prior to final promulgation of any of today's proposals, the current provisions of EPA's NSR and NSPS rules, as construed in the SUPPLEMENTARY INFORMATION section below, will continue to govern EPA's applicability determinations regarding NSPS and NSR modifications.

SUPPLEMENTARY INFORMATION:

I. Background

The Clean Air Act of 1970, as modified by the 1977 and 1990 amendments (the Act or CAA), contains a number of provisions that establish stringent pollution control requirements that must be met by "new" industrial facilities, which include existing facilities that undertake a "modification." The term "modification" is defined in § 111 of the Act. Specifically, section 111(a)(2) defines "modification" as:

any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.

The NSR provisions cover sources that commence construction after January 6, 1975, and construction "includes the modification (as defined in section 111(a)) of any source or facility." CAA § 169(2)(C).

Modification is a statutory term of art that has been given content by EPA through rules implementing § 111 and the NSR provisions of the Act. These rules carry out the congressional intent that existing facilities be grandfathered unless they are changed in a way that creates "new pollution" -- i.e., pollution that the unit was not capable of producing when it was built.^{1/} They were developed with the objective of establishing a modification rule "which minimizes . . . [the] impact [of new source requirements] on existing sources."^{2/}

A. EPA's Rules

In the early 1970s, EPA promulgated NSPS rules defining the term "modification." Under those rules, a "modified" facility is one that has been subjected to "any physical or operational change," which "results in an increase in the emission rate of

^{1/} National Asphalt Pavement Association v. Train, 539 F.2d 775, 783 (D.C. Cir. 1976) (§ 111 is "designed to prevent new pollution problems").

^{2/} ASARCO v. EPA, 578 F.2d 319, 327 n.24 (D.C. Cir. 1978).

any pollutant to which a standard applies."^{3/} Whether an increase occurs is determined by using the facility's emission rate (in kilograms per hour) at maximum production levels during periods of "representative performance."^{4/}

To clarify further the scope of this definition and to minimize its impact on existing sources undertaking projects that are consistent with maintaining normal operations, EPA provided examples of activities that do not constitute a "modification," including, inter alia, "routine" maintenance, repair or replacement, "increases" in production rate or hours of operation, and installation of a pollution control system, unless the system is "less environmentally beneficial" than the system it is replacing. In other words, these activities could result in an increase in emissions, but would not be considered a physical or operational change under the modification rule.^{5/}

Because the NSR program incorporates the NSPS definition of modification, EPA was required to use the NSPS approach to define modification in the NSR program. Thus, in 1978 and 1980, EPA defined a modification for NSR purposes as a "physical change" or

^{3/} 40 C.F.R. § 60.14 (1990); see 36 Fed. Reg. 24877, col. 2 (1971); 40 Fed. Reg. 58419, col. 1 (1975).

^{4/} 40 C.F.R. § 60.14(b) (1990); 40 Fed. Reg. 58419, col. 1 (1975).

^{5/} 40 C.F.R. § 60.14(e) (1990).

a "change in the method of operation" that "would result in" an "emissions increase."^{6/}

Similar to the NSPS modification rule, EPA provided that "a physical change or change in the method of operation" does not "include" activities that are not directed at creating "new pollution" such as "routine" maintenance, repair or replacement or "an increase in the hours of operation or in the production rate" (unless a federally enforceable permit limits hours of operation or production rate).^{7/} While EPA did not list pollution control projects among the examples of things that are not "physical or operational" changes, the language of the rule (i.e., "includes") indicates that the exclusions listed therein should be construed only as illustrative and the enumeration thereof is not meant to be exhaustive.

In the 1980 rules, EPA defined an "emissions increase" for NSR purposes in terms of total annual emissions (i.e., tons of a pollutant emitted per year), instead of in terms of kilograms per hour.^{8/} EPA's NSR rules currently require a comparison of past "actual" emissions with future "actual" emissions.^{9/} Past and future "actual" emissions can be based on "allowable" emissions

^{6/} Id. § 52.21(b)(2) (1990); see 45 Fed. Reg. 52735, col. 3 (1980).

^{7/} 40 C.F.R. § 52.21(b)(2)(iii)(a) and (f) (1990).

^{8/} Id. §§ 52.21(b)(3), 52.21(b)(21) (1990).

^{9/} See 40 C.F.R. § 52.21(b)(3) (1990).

of an existing unit,^{10/} or on past measured emissions and future projected emissions, or where a unit has not "begun normal operations," on the "potential to emit" (i.e., operations 365 days a year, 24 hours a day, at maximum capacity)^{11/} of that new emissions unit.^{12/}

While the NSR modification rules, adopted under the 1977 amendments, focus not on increases in hourly emission rate, but on increases in annual emissions, they, like the NSPS rules, authorize emissions increases resulting from activities that are not "physical or operational" changes. Thus, as noted above, under the NSR rules, an existing unit is authorized to increase its hours of operation and production rate, and thereby increase its annual emissions, without triggering NSR. As a result, for years, industrial facilities throughout the country have, been able to increase annual emissions through increases in utilization, without those increases ever being viewed as triggering NSR review.

Under the NSR rules, the kind of conduct that could trigger NSR review is (1) installation of new units; (2) enlargement of an existing unit that would allow greater production, and (3) a change that increases the emission rate of a unit above design levels (i.e., switching from gas to coal at a unit not capable of

^{10/} Id. at (b)(21)(iii).

^{11/} Id. at (b)(b) (definition of "potential to emit").

^{12/} Id. at (b)(21)(iv).

burning coal). In each of these cases, past actual annual emissions at a source are to be compared with future annual emissions based on the new unit's potential to emit.^{13/} This comparison always produces a projected increase in annual emissions because no unit operates at a maximum capacity, 365 days a year.

B. The CMA Settlement

Pursuant to a settlement agreement entered into on February 22, 1982, in Chemical Manufacturers Association v. EPA, No. 79-1113 (D.C. Cir. 1982), EPA obligated itself to propose a "potential-to-potential" system for calculating emissions increases under the NSR program. As described below, today's proposed rule provides for the implementation of that settlement agreement by allowing source owners the option of electing a comparison of "past potential emissions and future potential emissions."

C. The WEPCo NSR Interpretations

Wisconsin Electric Power Company (WEPCo), an owner of a power plant in Port Washington, Wisconsin, proposed certain repairs and replacements of equipment at its Port Washington units, the first of which began operation in 1938. The Port Washington project was characterized by WEPCo as a "life

^{13/} 40 C.F.R. § 52.21(b)(21)(iv).

extension" project and involved a "like-kind" replacement of equipment that physically constrained maximum unit operations in the case of two units and that required the shut-down of a third unit for safety reasons.^{14/}

In October 1988, EPA determined that this project would trigger NSR requirements. According to this determination, because the "life extension" replacements were not found to be "routine," EPA's NSR rules required a comparison between past actual emissions and future "potential" emissions. The determination was based on the assumption that, unless the project fell within an exception to "physical or operational change" enumerated in the rule, the "past actual - future potential" test was required.

EPA also found that NSPS was triggered by comparing deteriorated operations (and zero operations, in the case of the unit shut down for safety reasons) with full capacity hourly emissions after the repairs. While two of the units had constrained operations for several years and the third had been shut down for several years, EPA did not rely on these operations as being "representative," but ruled instead that its NSPS rules required comparison of constrained emissions immediately before a repair with emissions immediately after the repair removing the constraint.

^{14/} The youngest of these units began operation in 1950.

Subsequently, EPA, applying its WEPCo approach to NSR determinations, found that a conversion of an existing power plant from higher polluting oil to lower polluting natural gas would trigger NSR for nitrogen oxides (NOx) because non-routine changes were involved and, using EPA's "past actual-future potential" approach, annual emissions of NOx would be predicted to increase (While the NOx emissions rate of natural gas was substantially less than oil, in the past, the units had only operated at a very low capacity factor and, assuming 100 percent operations on natural gas, there would be an increase in annual NOx emissions.)^{15/}

EPA also found, subsequent to the WEPCo approach to NSR determinations that installation of pollution controls -- which clearly is not a "routine" repair or replacement -- would trigger the "past actual-future potential" comparison if annual utilization of the unit would increase in the future.^{16/} Since control equipment might only reduce emissions of one pollutant, this qualifier -- expressed as a "rebuttable presumption" that annual utilization would not increase -- meant that many sources would be subject to NSR review before installing control

^{15/} Letter from Don R. Clay, Acting Assistant Administrator, U.S. EPA, to Walter McCarthy, Jr., Detroit Edison Company (May 8, 1989); Letter from David Kee, Air and Radiation Division, U.S. EPA to Morton Sterling, Detroit Edison Company (Dec. 20, 1988).

^{16/} Letter from David Kee, EPA Region V, Air and Radiation Division, To Timothy Method, Indiana Department of Environmental Management (Jan. 30, 1990).

equipment, because electricity demand or other factors, including environmental dispatch to meet the new acid rain requirements, would increase annual utilization of the unit.^{17/}

Subsequent to the WEPCo decision, EPA determined that removal of temporary pollution control demonstration projects would not trigger NSPS, even though such removal would not be "routine" and even though emissions before removal would be less than emissions after removal. EPA indicated that the appropriate comparison would be between emissions before the temporary project with emissions after its removal. This determination clarified that the "representative performance" language in its rules allowed EPA, where emissions immediately before a change were clearly not representative of historical operations of the unit involved, to look back to a time before the occasion that the unit had temporarily reduced emissions.

D. Case Law

WEPCo challenged EPA's NSPS and NSR determinations in the Seventh Circuit. Wisconsin Electric Power Company v. Reilly, 893

^{17/} It should be noted that this interpretation, which required NSR of control projects whenever an increase in annual utilization increased annual emissions, was inconsistent with EPA's original interpretation of its NSR rules set forth in the 1983 Pedersen memorandum discussed below, which excludes pollution control projects without regard to whether annual emissions increase. Supra note 16. By this notice, EPA is returning to its original understanding of its NSR rules which recognizes that "environmentally beneficial" pollution control projects are excluded from the activities that could be considered a "modification." See supra, note 19.

F.2d 901 (7th Cir. 1990). The court affirmed EPA's NSPS determination, holding that the kind of nonroutine "like kind replacements" before the court were "physical changes" and EPA could, under the facts of the case, compare hourly emissions immediately before the replacement with hourly emissions after the changes. Id. at 913-15. The court, however, reversed EPA's NSR determination, holding that a "past actual-future potential" comparison was not authorized at an existing unit that had begun normal operations. The court also noted that EPA would have to revise its rules if it wanted to require such comparisons at operating units which, like WEPCo, undertook nonroutine "like-kind replacements." Id. at 915-18.

Prior to the Seventh Circuit WEPCo decision, the First Circuit decided a case involving the NSR modification rules. Puerto Rican Cement Co. v. EPA, 889 F.2d 292 (1st Cir. 1989). In that case, the court affirmed EPA's use of a "past actual-future potential" comparison at a facility that constructed "new [wet] kilns" that had much greater capacity than the "two older [dry] kilns" that had been in operation for some time. Id. at 293. Consistent with EPA's current rules, the court affirmed the use of this comparison for new emission units that had not begun normal operations.

II. Today's Action

Today EPA is proposing revisions to its NSR and NSPS rules to resolve uncertainties and questions raised by EPA's recent NSR approaches and the interplay of WEPCo and Puerto Rican Cement cases. The proposed NSR rules incorporate the NSPS exclusion for pollution control projects and identify, for electric utility generating units, pollution control projects that EPA views as presumptively "environmentally beneficial." The proposed NSR rules also identify, for electric utility generating units, factors that could result in a projected increase in annual emissions, but presumptively should not be considered to "result" from a physical or operational change. Today's proposal would specify that any projected increases due to such factors must be discounted in determining future projected annual emissions under EPA's NSR rules. Finally, the proposal incorporates new regulatory language in the NSPS rules which defines a 5-year baseline for determining past maximum hourly emissions.

EPA also is proposing today NSR rule changes to implement the CMA settlement agreement. This proposal would add an optional "potential to potential" test for determining "major modifications."

A. Pollution Control Projects

In implementing the statutory definition of "modification," EPA has, since 1974, explicitly excluded the addition or use of any pollution control system or device unless the new system or device was "less environmentally beneficial" than the system it

Pedersen.^{18/} In this memorandum, EPA stated that it "agree[d] with the rationale" that, "since the NSPS regulations provide an exemption from the modification provisions for replacement of control equipment, the NSR regulations must provide this exemption as well." Pedersen Memorandum at 2. This is because:

the Clean Air Act provides in Section 169(1)(c) that for NSR purposes the term modification shall be defined as that term is defined in Section 111(a) of the Act relating to NSPS. EPA has interpreted this to mean that for NSR purposes Congress intended the term modification to include all exemptions included in the NSPS regulations promulgated under Section 111 of the Act prior to the date of the enactment of Section 169. See 43 FR 26396. The control equipment exemption was promulgated prior to Section 169. Therefore, the term modification in the NSR regulations inherently encompasses the control equipment exemption. Id.^{19/}

Today's proposal would add to the list of exclusions in EPA's NSR rules language identical to the "pollution control" exclusion in EPA's NSPS rules. See 40 C.F.R.

^{18/} See Memorandum from Edward Reich, Director, Stationary Source Compliance Division and William F. Pedersen, Acting Associate General Counsel, Air, Noise and Radiation Division to Allyn M. Davis, Region IV (April 21, 1983)(hereinafter referred to as "Pedersen Memorandum").

^{19/} Three years later, the Director of the Office of Air Quality Planning and Standards disagreed with Mr. Pedersen's legal analysis and re-interpreted the NSR rules as requiring legislative rulemaking to incorporate a pollution control exception. See Memorandum from Gerald A. Emison, Director OAQPS, to Regional Division Directors (July 7, 1986). This re-interpretation of the NSR rules led to the WEPCo "pollution control" determination discussed above. Supra note 15. EPA is today announcing that it is returning to its original interpretation of the NSR provisions. See note 16 supra.

§ 60.14(e)(5)(1990). In addition, today's proposal would also establish a presumption that installation at an electric utility generating unit of the following pollution control systems are presumptively "environmentally beneficial," even though the utilization of the unit may well increase after the change, thereby giving rise to an increase in the annual emissions of certain pollutants, regardless of the units future utilization:

1. Flue gas desulfurization technology;
2. Low NOx burners or other NOx reduction technology determined by EPA or a state as Best Available Control Technology;
3. Sorbent or SO3 injection technology;
4. Electrostatic precipitators or fabric filters;
5. Use of an alternative fuel that will reduce one or more regulated pollutants, including physical or operational changes required to accommodate conversions to natural gas or co-firing natural gas and other fuels, or switches from higher sulfur to lower sulfur content coals;^{20/} and
6. Clean coal technologies approved by the Department of Energy.

EPA bases this presumption on its long-standing familiarity with these utility pollution control systems and the fact that changes to accommodate them will promote their more frequent usage. Since this approach will reduce emissions, it is therefore environmentally beneficial. EPA also believes that a rule establishing this presumption will avoid delay in utility decisions in implementing actions required to comply with the 1990 Amendments to the Act.

B. Projection of Future Annual Emissions at Existing Electric Utility Generating Units

^{20/} It should be noted that coal switching at existing units, that were capable of accommodating coal on January 5, 1975, would also fall within the exclusion in the NSR rules. See 40 C.F.R. § 52.21(b)(2)(iii)(3)(1).

By their express terms, both EPA's NSPS and NSR regulations require that, in order for there to be a "modification" (or, in the case of NSR, a "major modification"), the physical or operational change at issue must "result in" an increase in emissions. Compare 40 C.F.R. § 60.14(a) with 40 C.F.R. § 52.21(b)(2)(i). Accordingly, if a projected emissions increase is not triggered by the physical or operational change (e.g., are caused by economic, regulatory or market forces), new source review would not be triggered. Today's proposal adds regulatory language to the NSR rules addressing how this "casual link" requirement applies to electric utility generating units. The proposed revision provides that, in the case of electric utility generating facilities, an increased utilization due to economic or environmental changes in the loading order of units or an increased utilization due to an increase in system-wide demand growth, is to be excluded from the amount of future utilization utilized by the Agency in projecting future annual emissions.

As discussed below, EPA is proposing today to amend its NSR rules to allow a source owner the option of electing between a comparison of "past potential emissions and future potential emissions" or a comparison of "past representative actual annual emissions and future representative actual annual emissions." Until such a rule is adopted, however, the holdings of the First and Seventh Circuits in Puerto Rican Cement and WEPCo will continue to govern NSR applicability determinations. Thus, units

that have not begun normal operations will continue to be subject to the "past actual-future potential" comparison of the current rules.

For units that have begun normal operations, EPA's use of the "past actual-future potential" approach is inappropriate. Where like kind replacements (or other repairs) do not alter the original design capacity of an existing unit, EPA, pending final adoption of the revisions discussed below, will use the past actual-future actual comparison contemplated by current rules and the WEPCo decision.

C. Implementation of CMA Settlement

In today's action, EPA also proposes to modify its NSR rules to implement the settlement agreement reached in 1982 in Chemical Manufacturers Association v. EPA, No. 79-1113 (D.C. Cir. 1982). Under this proposal, a source owner would be allowed the option of electing between either a comparison of "past potential emissions and future potential emissions" or a comparison of "past representative actual annual emissions and future representative actual annual emissions."

EPA believes that the proposed change, which provides in all cases for an appropriate mode of comparison of pre- and post-change emissions, is consistent with the Act, which does not mandate the use of any particular test for determining annual

emission increases. The "potential-to-potential" approach will assure that, where hourly emission rates will not increase and therefore projected maximum potential annual emissions will not increase, NSR review will not be triggered. This approach is consistent with EPA's existing NSPS rules, which contemplate that a modification will not occur where there is no increase in hourly emission rates.^{21/} The alternative "actual-to-actual" test is consistent with the intent of the Act's NSR provisions that, where there is no actual increase in annual emissions, no major modification is involved.

D. Establishing Baseline for NSPS Calculations

Today, EPA proposes to modify its NSPS rules to establish, as the baseline for NSPS, the maximum hourly emission rate achievable during the past five years of operation of an affected facility.

In the WEPCo case, EPA compared the Port Washington unit's hourly emissions at its maximum capacity immediately before the proposed change (i.e., the unit's maximum capacity in its current deteriorated condition) with the unit's emissions at maximum capacity after the change. Since the WEPCo units had been operating under constrained conditions for several years, EPA

^{21/} As discussed earlier, the statutory provisions governing NSR review contemplate that the NSR modification rules be consistent with the NSPS definition.

rejected WEPCo's assertion that the Agency should have used the original design capacities of the units in setting the pre-change baseline.

Today's proposed rule would reaffirm EPA's position in WEPCo that EPA is not required to use a unit's original design capacity in determining emission increases. At the same time, EPA recognizes that the use of nonrepresentative emissions (e.g., rates reflecting recently deteriorated equipment or rates resulting from the use of temporary pollution control projects) is not an appropriate method of establishing the pre-change baseline. Accordingly, as was proposed by the Administration in draft legislation during deliberations over the Clean Air Act Amendments of 1990, EPA is proposing today that the maximum hourly rate achievable by the unit over its previous five years of operations be used in determining the NSPS baseline.

Today's proposal is consistent with the approach EPA has taken with respect to the removal of temporary controls at the conclusion of clean coal technology (CCT) demonstration projects. In a letter dated January 30, 1990, from David Roe, EPA Director, Air and Pollution Division, to Timothy J. Method, Assistant Commissioner, Office of Air Management, Indiana Department of Environmental Management (IDEM), EPA noted its agreement with IDEM's determination that NSPS standards were not intended to apply to Northern Indiana Public Service Company's CCT project at its Bailly power plant. Specifically, EPA confirmed that the Bailly plant "would not be subject to NSPS at the conclusion of

the project . . . as the result of an increase in emissions rates back up to the levels which existed before the changes were made to accommodate the temporary demonstration project." EPA recognized that the "removal of temporary controls will not result in a level of emissions higher than that experienced in the past." Accordingly, notwithstanding the NSPS baseline discussion in the WEPCo case, subsequent EPA determinations confirm that representative past performance is an essential consideration in properly determining the pre-change NSPS baseline.

Pending adoption of today's proposal, EPA will use the maximum hourly emission rate demonstrated immediately prior to the change, or, where operations immediately before the change do not reflect past representative operations, the maximum emission rate achievable during some prior period of operation. Consistent with this proposal, any period greater than five years will be presumed to be unrepresentative.

E. Additional Rulemakings

EPA will be providing, through a separate rulemaking, guidance on the meaning of "routine" maintenance, repair, and replacement activities at existing electric utility generating units, as those activities are exempted from EPA's regulatory definition of "modification." 40 C.F.R. §§ 52.21(b)(2); 60.14(e). Such guidance will follow the principle that "routine" maintenance, repair, and replacement includes those activities

that, in standard industry practice, are to be expected throughout the useful life of an emissions units. For electric utility units, such activities would include repairs and replacements typically required at a unit that will operate 55 to 65 years, the useful life for utility units that was assumed by EPA in all its analyses of the Clean Air Act legislative proposals.

Finally, in response to continuing concern over so-called "life extension" projects within the utility industry, EPA will also be evaluating the amount of repair and replacement activity undertaken at older utility units. EPA solicits comments on whether changes in its NSPS and NSR rules are required to prevent utilities from perpetuating the life of their units indefinitely, thereby avoiding the pollution control requirements that apply to new sources.

ENVIRONMENTAL PROTECTION AGENCY HEADQUARTERS
OFFICE OF SOLID WASTE & EMERGENCY RESPONSE

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Jeff Holmstead (Please share w/ Nancy -
their fax seems to be
out of commission!)

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Region/Lab/Company:

WH Counsel

FROM:

Marianne Lamont

Phone:

260-5714 or 4610

DATE:

12/17

of Pages (include cover sheet):

7

COMMENTS: Attached is a background paper on the "mixture" and "derived-from" rules, which were remanded in the DC Court of Appeals' decision in Shell Oil v EPA last week. It was not done in-house, so I'd appreciate your holding it close. I can bring a copy of the decision (lengthy) on Friday if you'd like. If the attached still seems impossibly jargon-filled, please let us know + we'll do a fast briefing for you guys.

Take care.

Arlene Nance

Mixture and Derived From Rules

Rationale for Original Rule

- . In 1980, EPA promulgated a final rule defining which wastes were hazardous under the RCRA Subtitle C hazardous waste system.
- . At the time, EPA identified two approaches for classifying waste as hazardous. The first approach was to identify broad characteristics such as ignitability, corrosivity, reactivity, and toxicity. The second approach listed specific waste streams of concern to human health and the environment. Since the characteristics were not broad enough to identify all wastes of potential concern, the listed waste streams might or might not also be considered characteristic hazardous wastes.
- . The reason the characteristics could not identify all wastes of concern was partially due to the fact that the agency could not fully define all possible health and environmental concerns which would warrant a characteristic. Moreover, the agency did not have sufficient data to determine which waste constituents and properties would cause the concerns that they did know about. Finally, the state of analytical methods was such that the agency did not have all of the necessary test methods available to measure whether the waste failed or passed the characteristic of concern.
- . Listing waste streams provided an additional advantage for the agency from an enforcement perspective. The agency did not need to obtain samples of the waste and perform detailed testing of it in order to determine whether or not it would be classified as hazardous. Rather, the agency only had to know the type of waste or the process producing the waste in order to know that the waste should be managed as hazardous.
- . EPA was legitimately concerned that waste generators not mix their hazardous wastes with non-hazardous wastes for the purpose of circumventing the management requirements of RCRA Subtitle C. This resulted in what is known as the "mixture rule". The mixture rule prevented generators from diluting their listed hazardous wastes with non-hazardous wastes to change their coverage under the original listing definition. If EPA had not plugged this loophole in some way, any waste generator could have mixed ~~has~~ hazardous waste with a non-hazardous waste substance and then claimed that the current waste did not meet the original listing definition. This would have been possible even if the new waste still contained very significant quantities of the original

constituents of concern. Thus, EPA would never be able to keep its listing program up to date because generators would create new types of streams as fast as EPA could list them.

. EPA took a different approach with characteristic wastes. For those wastes, waste mixtures remained as hazardous wastes only if the resulting mixture still failed the characteristic. While this may appear inconsistent, there were several plausible differences between the characteristic and listed wastes. First, for ignitable, reactive, and corrosive wastes, mixing was often able to mitigate the concern and was not a matter of dilution for the sole purpose of widely dispersing a problem into the environment. For characteristic wastes failing the toxicity characteristic (Extraction Procedure toxic wastes), wastes would only be allowed to be redefined as non-hazardous if the concentration of chemical constituents of concern was below a level which would lead to significant health and environmental problems. While EPA recognized that this could lead to some dilution, it would not be practical to dilute highly concentrated waste streams to levels that would pass the toxicity characteristic. Moreover, the largest majority of characteristic wastes by volume were not characteristic because of the toxicity characteristic. Finally, many of the more problematic waste streams that failed the toxicity characteristic were also identified directly as listed hazardous wastes.

. EPA recognized that the "mixture rule" would capture some waste streams as hazardous that legitimately could be managed as non-hazardous. However, the Agency believed that the delisting process would provide generators a way to allow these wastes to exit the hazardous waste system.

. EPA was also legitimately concerned that waste generators not perform sham treatment on listed waste streams for the purpose of circumventing the system. Again, since the listing definitions are reasonably specific, generators could argue that once they "treated" the waste, it was no longer the listed waste. To address this concern, EPA adopted the "derived from" rule. That rule states that any waste derived from the treatment, storage, or disposal of a listed waste is itself hazardous. It is important to note that the "derived from" rule not only captures the "treated" waste stream but it also captures any new waste streams created in the process of treatment, storage, or disposal. Since very little sophisticated treatment was being performed pre-1980, it seems fair to say that the extent of reach of the "derived from" rule was not fully appreciated. However, EPA again believed that the delisting process was available to address any wastes which were unnecessarily

caught in the hazardous waste system. Once again, characteristic wastes were not covered by the "derived from" rule because the characteristic was defined to apply to all waste streams, including waste streams generated from the treatment, storage, and disposal of characteristic wastes.

A corollary to the "mixture" and "derived from" rules is the "waste-code carry-through" principle which states that a derived from or mixed waste contains all of the same waste codes as the original waste. Thus, these wastes are often characterized with large numbers of waste codes which bear little chemical or physical resemblance to the original listing definitions.

Intervening Actions since 1980

A lot has happened with the status of hazardous waste regulations, solid waste regulations and environmental regulations in general since 1980. Some of these changes have the ability to profoundly affect the assumptions utilized by EPA when they promulgated the 1980 RCRA rules on the "mixture" and "derived from" rules. Thus, any short and long term responses to the court should consider these changed circumstances.

The 1984 RCRA amendments (HSWA) included very significant new provisions requiring the pre-treatment of all hazardous wastes before they could be disposed of in land based units. EPA has now completed the regulatory framework for implementing these requirements. In addition, all listed and characteristic hazardous wastes as of 1984 are covered by specific treatment standards. (This includes the large majority of listed hazardous wastes.) EPA's regulatory framework prohibits dilution of hazardous wastes for the purpose of avoiding the land disposal restrictions (LDRs). The framework also requires significant recordkeeping and reporting requirements for all hazardous wastes subject to the LDR rules.

The 1980 CERCLA and 1986 SARA laws have established joint and several liability for all generators of hazardous substances. The history of the last ten years has shown that the costs (both remediation costs and transaction costs) to large and small generators of inappropriately transporting, storing, or managing those wastes are extremely significant. The history of the last ten years has also established that compliance with existing regulations does not affect a generators ultimate responsibility to ensure his materials do not adversely affect health and the environment. The joint and several liability provisions of these laws and the extensive costs of remediation have also had major

affects on which materials waste treatment and disposal facilities can or will accept. For example, most states will not allow typical solid waste landfills to accept industrial waste. Also, most POTWs will not accept hazardous wastes.

- . EPA has promulgated Subtitle D rules which cover municipal landfills. These facilities can not accept liquids and these facilities must be in compliance with a broad set of design and operating requirements. Moreover, corrective action applies to municipal solid waste landfills.
- . The banking and insurance industries are much more knowledgeable about environmental risks and provide a separate set of check points for preventing poor waste management practices. This occurs through oversight on loans and property transfers as well as through the provision of financial assurance mechanisms.

- . In addition to these new actions, it is important to note that the delisting program has not worked as easily and smoothly as originally anticipated. It is resource intensive and slow partly because it requires a full rule-making process and partly because it considers worst case mismanagement of the delisted waste rather than a site specific review of the specific waste management alternative proposed by the generator for his specific waste stream.
- . Finally, it is important to note that at this time, the Agency does not have good data to indicate the volumes of waste captured in the subtitle C system by whether the waste is a listed waste, a mixture waste, a derived from waste, or a characteristic waste. It also follows that EPA does not have data which indicate the constituent concentrations by volume of those wastes currently classified as hazardous.

Unanticipated Consequences of the Mixture and Derived From Rules as they Currently Exist

- . Significant quantities of dilute treated wastes are still captured in the hazardous waste system and can take up treatment, storage, and disposal capacity which could be better used for more hazardous waste streams.
- . With the advent of much more waste treatment and many more sophisticated treatment technologies, the variety of treatment residuals has expanded. These residuals often bear no resemblance to the original listed waste stream. However, the derived from and mixture rules still classify these residuals with the same waste codes as the original listed waste streams. Thus, the LDR rules become extremely

complex and the required treatments for these treatment residuals may be overly specified.

- . The post-1980 boom in clean-up of past problems has pointed out the difficulties encountered with the classification of soil and debris mixtures and contaminated groundwater according to the mixture rule listed waste codes. This has resulted in the need to create massive exceptions to the LDR rules to keep from inappropriately slowing down important clean-up actions.
- . The lack of consistency between delisting and characteristic levels along with different assumptions and models has led the Agency to focus more of its attention on keeping what is in the system in, rather than on getting what should be in the system, but isn't, into the system.

Potential Consequences of the Court Action in Remanding the Rule

- . Given the existence of state promulgated rules for mixture and derived from wastes in all authorized states, the short term impact of the court action is likely to only impact those states in which EPA implements the subtitle C program. This is a very small number of states and even some of these states have state defined hazardous waste definitions which would include most mixture and derived from wastes.
- . Given the existence of the LDR rules, it is not likely that large volumes of hazardous waste will be able to exit the subtitle C system without meeting LDR treatment standards. However, the following changes would occur.
 - . The nature of EPA enforcement would change. Enforcement would need to focus on violations of the dilution prohibitions in the LDR rule rather than violations of the mixture rule.
 - . Wastes no longer defined as listed hazardous wastes could be defined as hazardous wastes due to the TCLP. However, the current testing and recordkeeping provisions for generators assessing their wastes against the characteristics are not as strong as would be desirable. A generator does not need to test his waste but can classify it based on his knowledge of the waste. This puts the burden on EPA to test a sample before beginning any enforcement action.
 - . Listed waste streams meeting the LDR standards would be exempt from subtitle C management unless they failed the TCLP test or unless EPA listed the specific treatment residuals.

- . New waste streams generated during the management of listed hazardous wastes would not be captured by the hazardous waste system unless they failed the TCLP or were specifically listed by EPA. (Examples are carbon filters, or tank bottoms from the transportation or storage of a listed hazardous waste.)
- . From an enforcement standpoint, EPA might need to rely more heavily on RCRA 7003 which encompasses hazardous and non-hazardous waste rather than just on RCRA 3008(a) which addresses hazardous waste.
- . Without the mixture and derived from rules or any substitute for these rules, the regulated industry would not have a good understanding of how EPA would utilize other RCRA authorities (and perhaps other non-RCRA EPA authorities) to address mixtures and treatment residuals. This could subject the regulated industry to tremendous uncertainty and result in significant case by case litigation until a series of precedents are set. Such litigation is expensive not only for the agency but for the affected industry. This could be avoided with promulgation of a rule which responds to the court or promulgation of a detailed guidance document.

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TOTAL # PAGES 13 (INCLUDING COVER PAGE)
TRANSMITTAL FROM: CHUCK KNAUSS & SHANNON BROOME (#170)
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ADDITIONAL MESSAGE:

Enclosed are two documents that you might find useful: (1) Status of Current Clean Air Rulemakings and (2) Results on Key Issues in the Operating Permit Rule. These documents are for your use only -- please do not distribute them to others. At next week's meeting, we can discuss § 112 issues and enhanced monitoring, which are the most pressing issues.

Now that the permit rule is done, Ann and I would like to have everyone (including spouses, etc.) over for barbecue to celebrate your excellent efforts and results. We have come up with the following possible dates -- Saturday July 18, Sunday July 19, Saturday July 25, Sunday July 26, and Saturday August 1. Please let me know which of these are good for you, and I will try to pick one that is convenient for everyone.

Chuck

PLEASE CALL IF THERE IS A PROBLEM WITH THIS TRANSMISSION:
CONTACT NAME: MAURCIA BROWN or TERRY BRICKERD
(202) 944-4665 -- (202) 944-4727

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M E M O R A N D U M

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TO: Teresa Gorman
Jeff Holmstead
David Rivkin

FROM: Chuck Knauss
Shannon Broome

DATE: July 10, 1992

RE: Status of Current EPA Clean Air Rulemakings

With the Permit Rule completed, we thought it might be useful to bring you up to date on the status of the other major Clean Air rulemakings EPA is currently developing. Listed below are the major Clean Air rulemakings along with the status of EPA's progress/thinking on the key issues and likely timing:

- **Section 112(g):** EPA has recently held two roundtable meetings with the Clean Air Act Advisory Committee Subgroup on § 112(g). These meetings and the issue papers distributed by EPA staff for the meetings indicate that the Agency's thinking has not progressed significantly from the meetings the Agency held in July 1991. The Agency is planning to release a draft rule for comment by interested parties in mid-September. There is clear disagreement between OPPE and OAQPS on a number of issues. We are planning to send by July 20, 1992, a letter to M. Shapiro requesting his intervention on a number of the key issues and plan to work with EPA to obtain improvements if possible in the upcoming draft.

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- **Enhanced Monitoring/Compliance Certification:** In August 1991, the Agency released a Public Information Document (PID) setting forth their intended approach to this rule, which § 114(a)(3) directs the Agency to issue by November 15, 1992. The PID reflected a "top down" approach to enhanced monitoring requirements. EPA staff (J. Seitz) purported to disavow a top down approach but that revised view has not been thoroughly reflected in their subsequent documents. Since the PID, EPA has developed: (1) a September 1991 Enhanced Monitoring Guideline document -- which did not undergo public review but EPA nevertheless distributed to the States and which reflected a presumption of CEMS for all sources; (2) a December 1991 Enhanced Monitoring Guideline -- which is slightly improved but still has not been through notice and comment; (3) a January Draft Rule and Preamble. We, and many others, have submitted comments on the EPA's documents. We are currently preparing for submittal next week detailed comments on the Draft Rule and Preamble. EPA is planning for workgroup closure in August 1992.
- **Top Down BACT:** We understand that OMB has sent its comments back to EPA on this rule and that J. Calcagni stated in an industry meeting on June 29, 1992 that he would not accept the changes the OMB wanted. We are concerned with the "affordability test" expressed in the rule because EPA has traditionally viewed a control technology affordable if it would not cause cancellation of the project or put the company out of business.
- **WEPCo:** We wonder where the rule is (it has not yet appeared in the Federal Register) and what changes have been made since it was signed by Administrator Reilly. We are developing a litigation and/or rulemaking petition strategy for our industrial clients.
- **Permits:** We are developing our litigation strategy and advocacy papers for companies to use with their States.
- **Section 112(d) and the General Provisions:** The source category list was issued last week and should be in the Federal Register soon. The General Provisions are currently at the Agency after being sent back by OMB. We saw a number of problems with the last General Provisions Draft and have been asked to develop comments for some clients to submit to EPA. We are not sure that a set of General Provisions is warranted for § 112 standards. These provisions create presumptions of recordkeeping requirements and other "plans" with which the source must comply. If we believed that we could win some issues in the General

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Provisions that would be difficult to obtain in a later substantive MACT determination, it might be worthwhile to move forward with them. Otherwise, they do not seem particularly helpful. From the Agency's standpoint, it does not make sense to set out detailed requirements in a general document when standards will be developed for particular source types. One useful approach for the General Provisions might be to develop a general approach for development of MACT standards -- e.g., how to determine the best 12%, how to account for LAER sources, how to deal with malfunctions and monitoring, etc.

- Section 112(l): EPA made a presentation regarding § 112(l) at the June 29, 1992 Clean Air Act Advisory Committee § 112(g) Subgroup meeting. It is clear that the 112(l) people and the 112(g) people are not coordinating with one another. Section 112(l) is likely to be a significant issue in the 112(g) rulemaking. In addition, we are concerned that with respect to § 112(d) delegation, the Agency may be taking an overly restrictive approach although we need to investigate this issue further.
- The HON: The concern here is creating adverse precedent for other § 112 issues. The HON needs to be scrubbed with an eye toward limiting such adverse precedent.
- Title I NO_x: The Title I preamble does not contain any NO_x provisions. This is causing States to move forward with restrictive NO_x requirements.
- Coke Oven Regulatory Negotiation: In progress.
- Enforcement: EPA is currently working on the field citation program, citizen suit, and bounty hunter regulations. We have concerns regarding the development of a discretionary field citation program in the first instance, the limited scope of the citizen suit regulations, and the Agency's decision to provide blanket confidentiality to informers seeking bounty awards.

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M E M O R A N D U M

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TO: Teresa Gorman
Jeff Holmstead
David Rivkin

FROM: Chuck Knauss
Shannon Broome

DATE: July 10, 1992

RE: Results on Key Issues in the Operating Permit Rule

The final version of EPA's Title V Operating Permit Rule was placed in the EPA Air Docket on June 30, 1992 and will appear in the Federal Register soon. As you may recall, the Operating Permit Rule was developed over an 18-month period, during which there was significant controversy over the permit modification provisions of the rule. This memorandum provides a quick recap of the resolution of important issues in the rule. In addition to the May 10, 1991 proposed rule, the Agency developed at least five drafts of the rule during the process. Several of these were pre-proposal drafts released as part of the roundtable process, while others were draft final rules made available to the public by the trade press. Significant improvements over prior drafts of the rule were made in the areas of: operational flexibility; permit fees; compliance plans; monitoring; exemption for insignificant emissions units; enforcement; permit revisions (minor permit modifications); and others. Some of the issues (e.g., using administrative permit amendments to incorporate NSR requirements into the permit and providing a broad permit shield) were not resolved favorably. Certain of the changes made in the final rule on these issues, however, were simply compelled by the statute. In addition, on some issues, the rule defers resolution to other rulemakings - e.g., incorporation of § 112(g) requirements into the permit and the § 114(a)(3) enhanced monitoring requirements.

While the rule provides a great deal of operational flexibility for sources, it also provides the States with discretion on a number of points in the development of their operating permit programs. Therefore, it is essential that companies participate in the development of permit programs in their States to ensure that the federal regulations are implemented appropriately.

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Even though the permit rule will likely be the subject of litigation during the next few years, States still must meet the November 15, 1993 deadline for submitting their operating permit programs for EPA approval. Many States have already begun the process of developing their programs and are expected to submit programs for approval ahead of the statutory deadline. EPA must approve or disapprove a State program within one year of submittal, and sources will then have up to one year to submit permit applications to the State. States may require applications to be submitted earlier, however, and it is expected that some States will require large industrial sources to submit applications prior to EPA approval of their State permit programs. Thus, some companies may be faced with a relatively short time frame for participating in the development of their State programs and for preparing and submitting permit applications.

* * * * *

We list below the major issues under the operating permit program and describe how they are treated in the final rule. Where appropriate, we indicate how the final rule compares to previous drafts. Note that the discussion below is based on the final "corrected" version of the rule. On June 24, 1992, EPA released a draft of the rule, but certain technical corrections were made after that date.

FIRST TIER ISSUES

1. Operational Flexibility (without permit revision) – The final rule provides significantly greater flexibility than any prior draft of the rule. Section 502(b)(10) of the Act requires State programs to allow certain changes at a facility without requiring a permit revision if the facility owner provides a minimum of 7 days' advance notice of the change to the permitting authority and EPA. It is important to realize that some of the provisions covered under the § 502(b)(10) provisions in the proposed rule are no longer found in that section. The purpose of this shift away from § 502(b)(10) was to limit the instances in which a 7-day notice would be required for a change. Under the final rule, therefore, sources can make most changes without advance notice. The effect of these provisions is to provide sources with a number of avenues to make changes without notice, to make other changes with contemporaneous notice, and to make any remaining changes below the emissions allowable under the permit on 7 days' notice to the permitting authority and EPA.

- **Alternative Operating Scenarios:** All prior drafts of the rule required a source to provide a 7-day notice for already permitted anticipated operating scenarios. Prior drafts of the rule also considered these scenarios to constitute the full scope of operational flexibility provided by the statute. The final rule alters this result to treat such scenarios as permit terms rather than changes and provides that the State must include alternate operating scenarios if requested by the source. Under the rule, the source does not need to provide notice to EPA or the permitting authority when it shifts among alternative scenarios, but the source must maintain a log indicating the currently applicable scenario for inspection purposes. The preemptive aspect of this provision is a major

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improvement over prior drafts especially because preemption is not strictly required by the statute.

- **Off-permit Changes:** Under the off-permit provision of the rule, changes that are not addressed or prohibited by the permit can be made if a source provides contemporaneous notice to the permitting authority and maintains a record of such notices. The off-permit provision was expanded from the most recent draft rules to provide for greater flexibility in that the prior drafts required a 7-day notice for off-permit changes. Although the rule allows States to prohibit off-permit changes, the rule states that such a prohibition is not federally-enforceable and cannot be the subject of citizen suits. In addition, depending on the specific permit terms, when off-permit changes are prohibited by a State, the general § 502(b)(10) provisions (which are preemptive) would operate to allow the changes on 7 days' notice. These are significant improvements over prior drafts of the rule. This is a key area for companies to work with the States to ensure that off-permit changes are allowed in the State program if they are to achieve at the State level the flexibility provided in the final rule.
- **Section § 502(b)(10) Changes:** The rule creates a category of changes called "Section 502(b)(10) changes," which are defined as changes that contravene a permit term. These changes can be made on 7-days' notice to EPA and the permitting authority, provided that the change is not a modification under Title I of the Act and does not exceed the "emissions allowable under the permit" -- a defined term. The final rule also identifies two variations from this general § 502(b)(10) rule.
 - **Federally-Enforceable Emissions Caps:** The federally-enforceable emissions cap can be useful for sources to avoid NSR or other applicable requirements of the Act. Under this provision, a source can limit the potential to emit of certain units or of an entire facility to avoid being classified as a major source or to avoid NSR requirements.
 - **Trading Provided for in the SIP:** In many of the prior drafts, EPA did not provide for trading that is generally authorized by a SIP to be made on 7-days' notice. Under the final rule, to the extent a SIP provision allows for trading, sources may make such trades under § 502(b)(10). Significantly, in the Preamble to the rule, EPA commits to approving SIP provisions that authorize trading -- approval the Agency has refused to give in the past.
- **Emissions Averaging Provided for in an Applicable Requirement:** In prior drafts, EPA either did not authorize trading provided in federal regulations or required a 7-day notice. Under the final rule, if a standard provides for emissions averaging (e.g., MACT bubble), the permitting authority must include such provisions in an operating permit if the source requests it. The notice requirement contained in the January draft rule has been deleted so that notice and recordkeeping requirements contained in the applicable standard will control.

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2. Permit Revisions – As in the proposal, the regulations give States the discretion to adopt permit revision procedures different from the procedures contained in the Title V regulations. The three types of permit revisions established by the final regulations – administrative permit amendments, minor permit modifications, and significant permit modifications are discussed below.

- **Administrative Permit Amendments:** Administrative permit amendments can be used to incorporate name changes, correct typographical errors, record changes in ownership, or incorporate requirements from NSR permits (in certain circumstances). The source can implement the change immediately upon submittal of a request for an administrative amendment. The rule provides the permitting authority 60 days from the date it receives a request to take final action and incorporate the change administratively into the permit. The final rule does create two potential problems with respect to administrative permit amendments that were not presented by the proposed rule.

First, the ability to incorporate the terms of NSR permits into the operating permit using the administrative amendment is limited by the final rule. The final rule requires that to incorporate NSR requirements into the operating permit using the administrative permit amendment process, the State's procedures for issuance of NSR permits must be substantially equivalent to significant permit modification procedures. While all delegated NSR programs currently meet the public notice and comment requirements, many do not provide for EPA and affected State review. Although this change to the rule was unfavorable in terms of flexibility, the rule does state that the EPA review of the permit in a delegated NSR State could not revisit the sufficiency of the BACT determination. This is an important policy statement because EPA review at the permit stage could threaten any improvements that might be seen in the upcoming Top Down BACT rule.

Second, the final rule could have a negative impact on § 112(g) case-by-case determinations in that it could be read to prohibit use of administrative permit amendments to incorporate such requirements into the permit. This effect is mitigated by statements in the Preamble clarifying that the § 112(g)/Title V issues will be resolved in the § 112(g) rulemaking.

- **Minor Permit Modifications:** The minor permit modification provision was the subject of great controversy within the Administration. Overall, the final rule imposes more procedural requirements for minor permit modifications than did the proposed rule but does not impose all of the elements requested by the professional environmental community (e.g., full public notice and comment for minor permit modifications). We provide a brief recap of the issues below:

– The professional environmental community sought public notice and comment, affected State and EPA review, removal of the permit shield, and emissions recapture if

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a source was incorrect in the belief that a change qualified for minor permit modification treatment.

- EPA's final rule does not require public notice and comment, allows sources to implement changes immediately if permitted by the State, provides a 45-day EPA veto period, and requires affected State review. The rule does not provide a permit shield for minor permit modifications, and importantly, there is no requirement for emissions recapture.
- Switching from one EPA-approved test method to another can be accomplished under minor permit modifications. This change is a major improvement over prior drafts which would have required a significant modification for any changes to the monitoring provisions of the permit.
- Like the proposed rule, a source cannot use the minor permit modification process if a change would constitute a Title I modification or would cause a violation of an applicable requirement of the Act. Language in prior draft rules and the Department of Justice opinion on the rule limiting minor permit modifications to Title I modification levels was not included in the final rule.
- The Clean Air Task Group decided early in the process that the most significant provisions of the rule were those providing flexibility below allowables. The significant flexibility accorded in the off-permit, alternative scenarios, and the § 502(b)(10) provisions diminishes substantially the likelihood that sources will need to use the minor permit modification process.
- **Significant Permit Modifications:** Like the proposed rule, the final rule requires essentially the same procedures for significant modifications as for initial permit issuance. The rule does recommend that States provide shorter processing times in appropriate circumstances. The scope of any reopening for a permit modification is limited to the scope of the proposed change. Note that for NSR programs not meeting the requirements for administrative amendments, Title I modifications would need to be processed under this provision. The processes would proceed on an "integrated" track, however, so that there would not be two separate public reviews. This result was based on the Department of Justice memorandum regarding the legality of the proposed rule.

3. Monitoring and Enforcement

- **Limited Independent Title V Monitoring Authority:** Most provisions in prior drafts that indicated that EPA had independent monitoring authority under Title V were deleted from the final rule. The independent authority remaining is confined to the circumstance where the federal standard (including a SIP standard) provides for no monitoring.

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- **Federal Enforceability:** In some prior drafts, the rule provided federal enforceability of all permit terms and conditions. Under the final rule, only applicable requirements of the Act (and other federally-enforceable terms of the permit, e.g., requirements to avoid NSR) are federally-enforceable. All permit terms and conditions must be designated as either State or Federal by citation to the statutory or regulatory basis in the permit. One limitation is the requirement for the source to challenge within 90 days any federally-enforceable designation with which the source disagrees.
- **Certification Requirements:** Certification requirements were somewhat pared back compared to post-proposal drafts. In addition, provisions that could be read as giving the Agency independent monitoring authority for certifications were removed from this section of the rule.
- **Effect of Reporting Requirements on Self-Audits:** A technical change made in the corrected version of the rule clarifies that sources need only report results of "required" monitoring. This prevents a claim that information obtained through self-audits must be reported under the permit rule.
- **False Material Statements:** With respect to criminal penalties for false statements in submitted documents, EPA consistently refused to include the term false material statement in the rule. The word "material" was added as a technical correction in the final version of the rule.

4. Compliance Plans and Schedules of Compliance

- **Changed to Enhance Defensibility in Litigation:** Several commenters raised concerns that the proposal's limitation of compliance plans to only noncomplying sources was illegal since the statute requires compliance plans and schedules of compliance for all sources. The final rule now requires compliance plans (which include schedules of compliance, where applicable) for all sources but severely limits the requirements for such plans.
- **Minimal Requirements and Preemption on Compliance Plan Content:** The final rule provides that a statement that the source will continue to comply with currently applicable requirements or will meet in a timely manner future effective requirements shall meet the compliance plan and schedule of compliance requirements. States cannot require more detailed compliance plans in these cases. For applicable requirements with which the source is not in compliance, a narrative description and detailed schedule of compliance is required. This is a major improvement over the post-proposal drafts of the rule on the compliance plan issue.
- **Deleted all Reference to Maintenance Plans:** All references to maintenance plans were deleted from the rule so that maintenance plans are not required.

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- **Compliance Plans not Included in the Permit:** Prior drafts had required inclusion of the compliance plan and the schedule of compliance in the permit – even though the statute only requires the schedule of compliance to be in the permit. The final rule now reflects the statutory requirements – compliance plans included in the application and schedules of compliance included in both the application and the permit.

5. Applications

- **Detail and Scope Limited:** Most of the burdensome requirements for permit applications were deleted from the rule – including much of the operational information required by prior drafts. Required information is now focused on applicable requirements of the Act and emissions-related information.
- **No Incorporation by Reference:** In addition, early drafts of the rule stated that EPA intends for applications to be incorporated by reference into the permit. EPA changed its position to indicate that applications should not be incorporated by reference, preventing information in the application from being enforced as part of the permit.

6. Exemption for Insignificant Emissions Units -- The proposed rule and some prior drafts did not provide exemptions for insignificant emissions units for purposes of fees or applications. In response to comments, such an exemption is included in the final rule. Importantly, the scope of the exemption will be defined by the individual State programs. Again, this is an area where working with the States will be critical to obtain the benefits of the result achieved in the federal regulations. Therefore, companies must work with their States to ensure that the States provide an exemption and that it is appropriately crafted. The exemption may apply to fees, permit applications, and permit content.

7. Permit Fees

- **Based on Actual Emissions:** Permit fees are based on actual emissions. EPA's original position was to use allowables.
- **Use of Fees:** EPA's proposal cited the Senate Report language as the basis for broad use of permit fees to support all air program activities, including SIP revisions. The final rule now recognizes that the Senate provision was cut back in the conference report and, therefore, limits use of fees to the direct and indirect costs of the permit program. Although this will be a difficult provision to enforce against the State, at least we are now arguing from a stronger position.

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8. § 112(g) – Although the rule does not provide explicit authority for using administrative permit amendments to incorporate § 112(g) requirements, the final rule states that the relationship of § 112(g) to the permit rule will be resolved in the § 112(g) rulemaking.

9. Research & Development Facilities – The final rule includes two paragraphs, which did not appear in prior drafts of the rule, regarding treatment of R&D facilities which are co-located with manufacturing operations. These two paragraphs provide the needed authority for States to consider the R&D operations separate from the manufacturing facility in determining major source status. If the potential to emit of the R&D operations does not rise to the major source threshold, the R&D operations would not be subject to Title V. This is true even though the R&D operations fall under the same SIC code as the manufacturing operations. To address the concern that an R&D facility's potential to emit might make it a major source under the rule, there are two provisions that allow a source to limit its potential to emit. First, the rule provides that a source can obtain a general permit solely for the purpose of limiting its potential to emit. The general permit may impose periodic recordkeeping to ensure that the source continues to remain below the major source threshold. EPA is developing a model general permit for this provision. Second, the manufacturing facility could accept a federally-enforceable emissions cap for the R&D operations located at the facility pursuant to the § 502(b)(10) provision regarding emissions caps.

Note that R&D operations are not defined in the rule but could be read to include QA/QC labs. In addition, the exemption for insignificant emissions units discussed below may also be useful in the laboratory setting.

SECOND TIER ISSUES

10. Time for Permit Renewal Applications – Prior drafts required submittal of permit renewal applications 18 months before expiration. The final rule provides that in most cases 6 months should be sufficient but continues to allow States to require renewal applications earlier.

11. Application Shield – Unlike the proposal, the final rule clearly provides an application shield for renewal applications if the permitting authority is late in issuing the renewal permit and the permit has expired.

12. Reopenings "For Cause" – The final rule limits significantly the reasons for reopening and requires the permitting authority to specify in the permit at issuance the reasons that the permit may be reopened. This is a major improvement over prior drafts.

13. Completeness Determinations – Completeness determinations for applications must be made within 60 days or the application will be deemed complete, and the source will be protected by the application shield. The proposal provided for a 30 day completeness

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determination while State commenters suggested 90 days or more. Apparently, this was a compromise position.

14. Permit Shield - The applicability of the permit shield has been narrowed in the final rule as compared with the broad shield provided in the proposed rule. It is important to note, however, that the permit shield could always be limited by the States, and that the shield continues to apply in a number of circumstances.

- Under the statute, the permit shield is discretionary with the States.
- Shield may apply in areas subject to a SIP call. EPA's early drafts eliminated the shield in these areas.
- Pre-proposal drafts of the rule prohibited application of the shield for all permit revisions and for changes made under § 502(b)(10). The final rule does not include a shield for minor permit modifications but does provide a shield under most of the operational flexibility provisions.
- There is no shield for "new requirements." This was not a major loss as the permit can always be reopened to impose these requirements.
- Prior drafts did not provide the shield in the case of an expired permit. The final rule provides that either the permit shield or the application shield will apply during this interim period.

15. Purpose and Implementing Principles of the Title V Operating Permit Program -- Prior drafts stated as the basic goal of Title V the principle of "ensuring environmental protection." No mention was made of enhancing the nation's productive capacity. The final rule includes this goal as an implementing principle of the Act. This is an important change because it establishes a legal basis for the operational flexibility and permit revision provisions. In addition, when State regulators are choosing among permissible interpretations of the regulations, this goal of Title V provides a basis for adopting more flexible interpretations and rejecting the "most environmentally protective" option.

16. Emergency Provision -- Prior drafts had no upset provision. The final rule contains an "emergency provision" as a mandatory permit element.

17. Use of NPDES Precedent to Presumptively Resolve Air Permit Issues -- The proposed rule stated that EPA would presumptively resolve air permit issues based on NPDES precedent. The final rule retracts the presumption.

18. Use of Independent Contractors for Inspections -- The rule is essentially silent on use of independent contractors. This is always a tough issue because EPA has traditionally favored the use of independent contractors for inspections.

19. Terminate, Modify, or Revoke Permit Based on Any Permit Non-Compliance -- Unfortunately, this provision was retained in the final rule.

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Subject: Economic Review of Regulations - EPA Docket No. FRL-4111-8
(Clean Air Act Rulemaking on Acrylic Acid)

ROUTE TO:

ACTION

DISPOSITION

Office/Agency (Staff Name)	Action Code	Tracking Date YY/MM/DD	Type of Response Code	Completion Date YY/MM/DD
<u>CUOFC</u>	ORIGINATOR	<u>92103123</u>	<u>WS</u>	<u>C 92104103</u>
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	Referral Note:		<u>See Comments</u>	
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Clean Air Act
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317035a

March 20, 1992

MAR 23 1992

Mr. Richard D. Morgenstern
Assistant Administrator for
Policy, Planning and Evaluation (PM-219)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Re: Economic Review of Regulations
EPA Docket No. FRL-4111-8
(Clean Air Act Rulemakings on Acrylic Acid)

Dear Mr. Morgenstern:

In accordance with the announcement in the March 3 Federal Register, Docket No. FRL-4111-8, the Basic Acrylic Monomer Manufacturers (BAMM) include the attached comment on the listing of acrylic acid as a "high-risk air pollutant" in the Early Reductions Rulemaking and in the upcoming "Lesser Quantities Emission Rates" Rulemaking, under the Clean Air Act.

As summarized in the enclosures, acrylic acid, which causes "very slight," fully reversible irritation in the nasal mucosa of mice, is being treated in the same way as very potent air toxics, such as butadiene, benzene, mercury and others. This result flows directly from the application of the IRIS data base methodology with a 50,000-fold safety factor to a clearly minor effect.

Should you have any questions or desire any further information, please contact me.

Sincerely,

Louise T. Noell

Louise T. Noell
Chair
Steering Committee, BAMM

cc: F. Henry Habicht II
EPA Deputy Administrator
William G. Rosenberg
EPA Assistant Administrator for Air and Radiation
C. Boyden Gray
President's Council on Competitiveness
James B. MacRae Jr.
OMB Office of Information and Regulatory Affairs

ECONOMIC REVIEW OF REGULATIONS:

EPA Dkt. FRL-4111-8

March 20, 1992

REGULATORY ACTION: Listing of Acrylic Acid as a "High-Risk Air Pollutant" in the Early Reductions Rulemaking and in the upcoming Lesser Quantities Emission Rates Rulemaking under the Clean Air Act.

INTRODUCTION: Based on incomplete and outdated toxicological data, the Agency is proposing to list acrylic acid as a "High-Risk Air Pollutant" and in the "Lesser Quantities Emission Rates" Rule. This result follows directly from the application through EPA's Integrated Risk Information System (IRIS) data base of a 50,000-fold safety factor to an observation of "very slight," fully reversible focal degeneration in the nasal mucosa of mice. This is a minor effect that does not lead to cancer. Acrylic acid is being treated identically to chemicals of much higher toxicological concern, such as butadiene, vinyl chloride, benzene, mercury and others. BMM provided full comments at the July 11 public hearing and in July 29, 1991 written comments in the Early Reductions Docket, No. A-90-47.

STATUTORY AUTHORITY: EPA has discretionary authority under the Act and need not list acrylic acid for special treatment as a "high-risk air pollutant" or in the "lesser quantities" rulemaking.

ECONOMIC SAVINGS: The economic savings associated with deleting acrylic acid from the "high-risk" list are unknown because we do not know how many facilities would have enrolled in the early reductions program if acrylic acid were not designated as "high-risk."

In contrast, millions of dollars could be saved by not including acrylic acid in the Lesser Quantities Emission Rates Rulemaking. The 1989 TRI data base lists approximately 20 companies reporting acrylic acid emissions between ten tons and one ton. It is estimated that eight facilities have one storage tank, six have two storage tanks, and the remaining six facilities each have three storage tanks. A very conservative estimate assumes that each of the eight facilities with one storage tank is a small customer having one rail or truck unloading facility, five pumps and no flare or incinerator. The costs for such a facility are estimated conservatively to be \$695,000 for capital and \$120,000 per year for operations.

For a small customer with two storage tanks, costs are conservatively estimated to be \$1,182,000 for capital and \$204,000 per year for operations; for a small customer with three storage tanks, the estimated costs are \$1,738,000 for capital and \$300,000 per year for operations. The total costs for the 20 companies is thus conservatively estimated to be \$23.1 million in

capital costs and \$4.0 million annually. See Acrylic Acid Emission Control Costs (Appendix A, attached).

ABSENCE OF ENVIRONMENTAL IMPACT: No adverse environmental or health impact will be caused by the deletion of acrylic acid from the "high-risk" and "lesser quantities" lists. Sources that emit more than ten tons of acrylic acid or 25 tons of combined hazardous air pollutants (HAPs), including all acrylic acid manufacturing facilities, will continue to be fully regulated under the Clean Air Act. The many facilities that fall within the category of acrylic acid emissions between ten tons and one ton will not result in any adverse impacts because of the low inhalation toxicity of acrylic acid.

Unlike virtually all of the other materials designated for special treatment (e.g., benzene, butadiene, vinyl chloride), the toxicity of acrylic acid is minimal. See data summary, Appendix B. Acrylic acid has been extensively tested and has not shown carcinogenic, developmental or reproductive effects of concern. Instead, acrylic acid has been put on these lists through the failure to consider all available data and the ultra-conservatism of safety factors employed by the IRIS data base and the subsequent EPA rulemaking proposals.

The "very slight," fully reversible focal degeneration seen in the mouse nasal mucosa at 5 ppm is a threshold effect requiring only a modest safety factor. Even at the next higher dose in mice, 25 ppm, the effect was "slight." In the rat, no effect on the nasal mucosa was seen at 25 ppm. These data and others cited in the attachment demonstrate that mammalian olfactory epithelia completely regenerate if the basal cell remains intact.

Additional data, also summarized in the attachment, on acrylate esters that transform to acrylic acid with a half-life of less than one second in the rodent nasal mucosa, provide added assurance that a modest safety factor will be adequate to protect against adverse effects. Clearly, application of the 50,000-fold safety factor employed through the IRIS data base and rulemaking methodology is excessive and unnecessary to protect human health.

The use of any safety factor less than 50,000 fold should result in the removal of acrylic acid from the "high-risk" air pollutant list and would result in significant economic savings. A fair evaluation of the toxicology data would allow a safety factor much lower than the proposed 50,000-fold factor.

SUBMITTER: Basic Acrylic Monomer Manufacturers (BAMM), affiliated with the Synthetic Organic Chemical Manufacturers Association (SOCMA). BAMM members: BASF Corporation, Dow Chemical USA, Hoechst Celanese Company, Rohm & Haas Company, and Union Carbide Chemicals and Plastics Company Inc.

Appendix A

ACRYLIC ACID EMISSION CONTROL COSTS

The cost estimates below are calculated initially for a typical small customer having one rail car or truck unloading facility, five pumps (one unloading, two storage and two process), no flare or incinerator in the vicinity and assuming one storage tank. Capital and operating costs are both estimated to be 1.7 times higher for customers with two storage tanks, and 2.5 times higher for customers with three storage tanks. Assumptions include availability of typical plant utilities.

<u>ITEM</u>	<u>COST K\$</u>
I. CUSTOMERS WITH ONE STORAGE TANK	
A. <u>CAPITAL COSTS (per facility)</u>	
1. Convert pumps to double mechanical seals or replace with sealless pumps. Includes necessary instrumentation.	150
2. One closed loop sampler.	20
3. Install one packed tower caustic scrubbing system with vent through activated charcoal. Includes one circulation pump and necessary piping and instrumentation.	400
4. 500 ft. of 2" SS traced line for acrylic acid vapors.	100
5. Tagging of valves, flanges, relief valves, etc. Includes purchasing portable monitoring instrument.	25
Total Capital Costs	695
B. <u>ANNUAL OPERATING COSTS (per facility)</u>	
1. Maintenance @ 4% of capital costs	30
2. Leak monitoring and repair charges (\$15,000 four times per year)	60
3. Utilities (caustic, charcoal, waste treatment, power, etc. for scrubbing system)	30
Total Annual Operating Costs	120

<u>ITEM</u>	<u>COST K\$</u>
II. CUSTOMERS WITH TWO STORAGE TANKS	
A. <u>CAPITAL COSTS (per facility)</u>	
Total Capital Costs = 1.7 x \$695K	1,182
B. <u>ANNUAL OPERATING COSTS (per facility)</u>	
Total Annual Operating Costs = 1.7 x \$120K	204
III. CUSTOMERS WITH THREE STORAGE TANKS	
A. <u>CAPITAL COSTS (per facility)</u>	
Total Capital Costs = 2.5 x \$695K	1,738
B. <u>ANNUAL OPERATING COSTS (per facility)</u>	
Total Annual Operating Costs = 2.5 x \$120K	300
IV. ESTIMATE OF INDUSTRY-WIDE COSTS	
A. <u>CAPITAL COSTS</u>	
1. 8 one-tank facilities @ \$695K	5,560
2. 6 two-tank facilities @ \$1182K	7,092
3. 6 three-tank facilities @ \$1738	10,428
TOTAL INDUSTRY-WIDE CAPITAL COSTS	23,080
B. <u>ANNUAL OPERATING COSTS</u>	
1. 8 one-tank facilities @ \$120K	960
2. 6 two-tank facilities @ \$204K	1,224
3. 6 three-tank facilities @ \$300	1,800
TOTAL INDUSTRY-WIDE ANNUAL OPERATING COSTS	3,984

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COMMENTS ON THE EPA
IRIS RfC AND RfD FOR ACRYLIC ACID
DOCKET NO. FRL-4111-8

=====

SUBMITTED BY THE
BASIC ACRYLIC MONOMER MANUFACTURERS

March 20, 1992

COMMENTS OF THE
BASIC ACRYLIC MONOMER MANUFACTURERS ASSOCIATION
ON THE EPA IRIS RfC AND RfD FOR ACRYLIC ACID

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**COMMENTS OF THE
BASIC ACRYLIC MONOMER MANUFACTURERS ASSOCIATION
ON THE IRIS RfC AND RfD FOR ACRYLIC ACID**

I. INTRODUCTION

BAMM is a trade association comprised of the domestic manufacturers of acrylic acid and the acrylate esters, whose members include: BASF Corporation, Dow Chemical USA, Hoechst Celanese Company, Rohm & Haas Company, and Union Carbide Chemicals and Plastics Company Inc. BAMM was formed to facilitate the collection, evaluation, and dissemination of health, safety and environmental information on basic acrylate monomers and acrylic acid. In recent years, BAMM has presented data on acrylic acid and the basic acrylate esters to the EPA, the Interagency Testing Committee (ITC), the National Toxicology Program (NTP), the Occupational Safety and Health Administration (OSHA), the National Institute of Occupational Safety and Health (NIOSH), and others. In particular, BAMM has worked closely with the EPA Office of Toxic Substances regarding these chemicals.

II. OVERVIEW AND COMMENTS

The basic toxicology of acrylic acid indicates that it is a mild irritant. However, in calculating the acrylic acid RfC, the Agency has applied an unreasonably high safety factor of 49,800, thus artificially inflating its estimation of the chemical's hazard potential. A recalculation of the RfC, using reasonable safety factors, results in a value well below the current RfC. The Agency has also introduced a significant rounding error into its RfC calculation, further adding unnecessary conservatism.

Finally, newer data, not currently available in the IRIS data base, support a significantly higher RfC value. Re-evaluation of the RfC based upon these recent studies is necessary.

A. Toxicologic Overview Of Acrylic Acid.

Acrylic acid is used to produce acrylic esters and polymers with applications in paint, coatings, plastics and a variety of other uses. It is a corrosive liquid at room temperature and has a vapor pressure of 3 mm Hg at 20° C. The substantially saturated vapor concentration at room temperature and pressure is approximately 2300 ppm.

Acrylic acid can be absorbed through the skin or lungs after dermal or inhalation exposure, respectively. Nevertheless, it is rapidly metabolized by normal oxidative catabolic pathways and is eliminated mainly as expired carbon dioxide. (Kutzman, et al., 1982; deBethizy, et al., 1987).

Toxicological data indicate that acrylic acid vapor is irritating. Direct application of liquid acrylic acid can cause eye burns resulting in permanent damage. Similarly, its toxicity by inhalation exposure is due primarily to the irritating nature of the acid, and most of the clinical observations following inhalation are attributable to direct or reflex responses to primary and/or sensory irritation to the eyes, the nose, and the upper and lower respiratory tracts.

Acrylic acid is not highly toxic if swallowed or if inhaled, even at saturated vapor concentrations (i.e., ~ 2300 ppm). The acute toxicology data are summarized in Table 1:

Table 1

Rat, oral LD ₅₀ :	340 - 2590 mg/kg
Rat, inhalation LC ₅₀ :	> 2352 ppm (1 hour)
Rabbit, dermal LD ₅₀ :	290 mg/kg

Repeated exposures to concentrations below the maximum tolerated dose (MTD) (i.e., exposures to air concentrations that do not cause frank damage to exposed tissues) do not shorten the life expectancy of experimental animals nor do they cause any apparent incapacitation or damage to internal organs (systemic toxicity). Although EPA has correctly focused on the irritation potential of acrylic acid as the appropriate end-point for establishing acceptable exposure levels, the overall toxicological profile of acrylic acid does not support its current RfC.

The IRIS RfC is based on a 90-day inhalation study in mice reporting a "very slight" focal degeneration of the nasal mucosa at an exposure concentration of 5 ppm (6 mg/m³). (Miller, et al., 1981). Even at the next higher concentration of 25 ppm (75 mg/m³), this effect was described by Miller, et al., as "slight," suggesting little if any pathological significance to the affected animals. Indeed, Cancalon (1982) and Graziadei and Graziadei (1979) have reported that mammalian olfactory epithelia completely regenerate if the basal cell layer remains intact.

Thus, the slight focal degeneration of the olfactory epithelium without basal cell damage which was observed by Miller et al., is a manifestation of irritation and is considered a reversible lesion since the basal cells are progenitor cells for olfactory neurons. This minimal damage is fully reversible following a suitable recovery period. Based on supporting data for other acrylate materials, this lesion is not preneoplastic (INBIFO, 1985a; Miller et al., 1985; INBIFO, 1985b).

B. EPA's Calculation Of The Acrylic Acid RfC.

EPA has defined the RfC as follows:

A Reference Concentration (RfC) is an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily exposure to the human population (including sensitive subgroups) that is likely to be **without an appreciable risk of deleterious effects during a lifetime**. The inhalation RfC is for **continuous inhalation exposures** and is appropriately expressed in units of mg/m^3 . It may be expressed as $\text{mg}/\text{kg}/\text{day}$, in order to compare with oral RfD units, utilizing specified conversion assumptions.

(EPA, 1990) (emphasis added).

The Agency calculates the RfC by applying dosimetric correction factors to the no-observable-adverse-effect level (NOAEL) or lowest-observable-adverse-effect level (LOAEL) in animals to obtain human equivalent concentrations (HECs). The Agency then applies uncertainty and other safety factors to the HEC to yield the RfC.

The LOAEL listed by IRIS for acrylic acid is 5 ppm or approximately $14.94 \text{ mg}/\text{m}^3$, a value obtained from a 13-week

inhalation study in mice by Miller, et al. (1981). Under the same conditions of exposure, 25 ppm (approximately 75 mg/m³) was the NOAEL and 75 ppm (approximately 225 mg/m³) a LOAEL in the rat. As discussed above on page 8, the effect which determined the LOAEL used in calculation of the RfC was a "very slight" focal degeneration of the olfactory epithelium in a localized region of the mouse upper respiratory tract. At the next higher concentration (25 ppm) in the mouse, this effect was described as "slight." (Miller, et al. 1981).

After identifying a LOAEL for acrylic acid, the Agency then applied the following uncertainty factors and dosimetric adjustments to calculate the RfC:

Table 2

<u>Factor</u>	<u>Basis</u>
10	sensitive human subpopulation
10	subchronic to chronic data
3*	animal to human extrapolation
3*	use of LOAEL for mild effect
5	adjustment for continuous dose
<u>9</u>	dosimetric adjustment factor - mouse to man
45000	Total Uncertainty Factor

$$\text{RfC} = 14.94 \text{ mg/m}^3 / 45000 = 0.00033 \sim 0.0003 \text{ mg/m}^3$$

* In the actual calculation the two factors of 3 were rounded up from 9 to become a factor of 10, both simplifying the calculation and adding additional conservatism.

Thus, in the case of acrylic acid, an RfC of 0.0003 mg/m^3 was calculated by applying an uncertainty factor of 49,800 ($14.94/49800 = 0.0003$) to the LOAEL for a "very slight," reversible effect seen in the most sensitive species, the mouse.

**C. Comments On EPA's Calculation Of
The RfC And RfD**

1. Rounding Errors

The actual RfC value for acrylic acid, as listed in IRIS, is $0.33 \text{ } \mu\text{g/m}^3$. The value $0.33 \text{ } \mu\text{g/m}^3$ was obtained by applying an uncertainty factor (UF) of 1000 to the LOAEL(HEC) of 0.33 mg/m^3 . The uncertainty factor in the IRIS document was increased from 900 to 1000, presumably for convenience of calculation. If, in fact, the correct uncertainty factor of 900 were used, the RfC would have been $0.37 \text{ } \mu\text{g/m}^3$.

Moreover, as noted, the adverse effect upon which the RfC is based is a very slight, localized, reversible sign of upper respiratory tract irritation. A threshold dependent effect such as this certainly does not warrant the excessive conservatism employed in this classification process.

**2. Additional Data Requires Modification Of
The RfC Value.**

In addition to the studies cited in the IRIS data base, BAMM and/or BAMM member companies have submitted toxicological data to various offices within the EPA. These data have not yet been included in the IRIS data base. They are now being submitted directly to IRIS, so that further regulatory efforts, based on

calculations from the IRIS data, will have the advantage of access to more complete and relevant information. As required by law, the Agency must now consider the additional available information.

When this additional toxicology information is considered, the excessive use of safety factors in calculating the acrylic acid RfC and RfD values cannot be justified.

**a. Because Of Rapid Hydrolysis, Data
On Acrylate Esters Should Be Used
To Modify The Acrylic Acid RfC.**

In addition to the Miller, et al. 90-day inhalation study used to calculate the EPA RfC value for acrylic acid, available chronic inhalation studies for methyl acrylate (MA), ethyl acrylate (EA), and butyl acrylate (BA) should be considered as supporting data. Data from these chronic inhalation studies of acrylate esters, when combined with uptake and hydrolysis data from the rat upper respiratory tract (Stott and McKenna, 1984; Frederick, et al., 1991), are directly applicable to the determination of potential effects from chronic inhalation of acrylic acid.

Frederick, et al. have demonstrated that simple acrylate esters hydrolyze extremely rapidly in the rodent upper respiratory tract to yield acrylic acid and the corresponding alcohol. The estimated half-life for ethyl acrylate in the respiratory epithelium of the rat is two-tenths (0.2) of a second, and for

the olfactory epithelium of the dorsal meatus, less than one-tenth (< 0.1) of a second. The high level of carboxylesterase activity of the olfactory mucosa has been confirmed for other simple organic esters (Bogdanffy, et al., 1987; Bogdanffy, et al., 1990). The olfactory epithelium of the dorsal-medial aspect of the nasal passages is the primary area affected by inhalation of both acrylic acid and the acrylate esters.

These data show that the multiple chronic inhalation studies of methyl, ethyl and butyl acrylate can serve as direct surrogates for chronic inhalation studies of acrylic acid. Chronic (24-month) inhalation studies of methyl acrylate and butyl acrylate have been completed in rats at vapor concentrations of 15, 45, and 135 ppm (INBIFO, 1985a; INBIFO, 1985b). In addition, rats and mice were exposed to ethyl acrylate concentrations of 5, 25, and 75 ppm for two years, and, to 225 ppm for six months, followed by a 21-month observation period (Miller, et al., 1985).

In these four chronic studies, the esters caused no injury to internal organs. With all three esters, the target organ was the nasal cavity where, at the high exposure concentration, evidence of irritation was consistently noted, including degenerative effects of the olfactory mucosa identical to that seen with inhalation to acrylic acid. No tumors developed in the nasal turbinates with any of these esters; thus, the lesions cannot be considered preneoplastic. Furthermore, there was no evidence of carcinogenic effect in any organ system or tissue.

In sum, the NOAEL in rats and mice for ethyl acrylate was 5 ppm, while the LOAEL for methyl and butyl acrylate in rats was 15 ppm (no studies in mice were conducted for these latter two esters). These values are comparable to the subchronic mouse acrylic acid LOAEL of 5 ppm. In all cases, the LOAELs were based on lesions in the nasal cavity.

Using these data in calculating the RfC for acrylic acid eliminates the need for the uncertainty factor of 10 for extrapolation from subchronic to chronic studies. Furthermore, these studies complement the studies already cited in the IRIS data base and should significantly increase the confidence in the inhalation data base from "MEDIUM" to "HIGH."

The recalculated RfC with appropriate safety factors applied as listed below would then be:

<u>Table 3*</u>	
10	sensitive human subpopulation
1	subchronic to chronic data
3	animal to human extrapolation
3	use of LOAEL for mild effect
5	adjustment for continuous dose
<u>9</u>	dosimetric adjustment factor - mouse to man
4050	Total Uncertainty Factor
$\text{RfC} = 14.94/4050 = .0037 \text{ mg/m}^3$	

* In suggesting this approach, BMM does not endorse the correctness of the individual factors. Instead, we have developed this approach to remain consistent with the Agency's general methodology. BMM prefers a calculation that starts with the ACGIH TLV® for acrylic acid of 2 ppm (6 mg/m³). See BMM Hearing Presentation (July 11, 1991).

Therefore, the actual safety factor conservatively adjusted to consider the acrylate ester studies should be, at most, about 4050.

Using this approach, the calculated value for the RfC equals $3.7 \mu\text{g}/\text{m}^3$.

b. Supporting Data Increase The Confidence In And Modify The Oral RfD.

Two long-term acrylic acid drinking water studies have been conducted in rats. In a 12-month study at dosage levels up to approximately 375 mg/kg/day (5000 ppm in drinking water) no systemic toxicity, including carcinogenicity, nor manifestations of preneoplastic lesions was observed. (BASF AG, 1988). Decrements in drinking water consumption and body weight gain were the only effects noted.

Similarly, in a two-year (i.e., 26 - 28 months) study in rats at drinking water concentrations of 0, 120, 400 and 1200 ppm acrylic acid (at the highest concentration the dosage level was approximately 88 mg/kg/day), no treatment related neoplastic lesions were identified, nor was target organ toxicity detected. The only adverse effects seen were decrements in drinking water consumption. (BASF AG, 1989).

When these studies are included in IRIS, the present oral RfD value of 80 mg/kg/day should be increased by a factor of 10 (800 mg/kg/day), since the extrapolation from subchronic to chronic studies will no longer be applicable. These studies

complement those already cited in IRIS and again should significantly increase confidence in the oral data base, from "LOW" to "HIGH."

3. Summary Of Comments.

By following the procedures described above, a safety factor of 49,800 was used by EPA to develop the RfC. Although we recognize the justification for a reasonably conservative approach for calculation of levels of contaminants to protect the public health, a safety factor of almost 50,000 is wholly unreasonable and plainly unnecessary to protect the public from a minor, reversible irritant effect. Excessive conservatism seriously detracts from the credibility of the IRIS RfC and RfD values.

Available supporting data negate the need for the use of the safety factor from subchronic to chronic extrapolation in calculating the inhalation RfC and the oral RfD for acrylic acid. Use of the best available data, therefore, significantly improves the quality of the data base and confidence in the data base, which in turn improves the validity of the RfC and RfD.

III. CONCLUSION

BAMM respectfully requests that the Agency change the RfC and RfD for acrylic acid. Consideration of all the available scientific data along with the data currently in the IRIS data base is required.

In developing the RfC for acrylic acid, the Agency must keep in mind that the toxicological end-point of concern for acrylic acid is a minor, reversible irritant effect in the upper respiratory tract of mice. Acrylic acid is not being categorized based on a concern for carcinogenicity, teratogenicity, neurotoxicity or other irreversible, and severe effects. Yet, the EPA RfC methodology has placed a safety factor of almost 50,000 to an observation of minor irritation in female mice.

The Agency added an extra and inappropriate layer of conservatism when it rounded two safety factors of three to one of ten instead of nine. A correction of this rounding error should also be made.

In addition, consideration of available data from four long-term inhalation studies of acrylate esters in conjunction with the metabolism work and chronic drinking water study on acrylic acid renders uncertainty factors for extrapolating from subchronic to chronic ambient exposures unnecessary. The very rapid hydrolysis of acrylic esters to acrylic acid in the rat nasal epithelium permits use of the acrylate ester studies to calculate the RfC used in the IRIS data base.

The present oral RfD value should be increased by a factor of 10, since the extrapolation from subchronic to chronic studies is no longer applicable.

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Tab

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Amoco Corporation

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Robert G. Slaughter
Senior Government Affairs Representative

April 29, 1992

Mr. Jeffrey R. Holmstead
Associate Counsel
Office of the Counsel
Old Executive Office Building, Room 112
Washington, D. C. 20500

Dear Mr. Holmstead:

Thank you for agreeing to meet with Dr. Allen Kozinski, Jerry Levine, Randy Davis and me this afternoon at 3:00 p.m. We hope to discuss several matters relating to the regulatory moratorium with you at that time. Enclosed are some attachments which we prepared for previous meetings on this topic, and, as you see the elements of greatest interest to Amoco at this time include: Benzene NESHA, the "mixture and derived from" rule, possible changes in the RFG rule to advantage ethanol usage, and the recently completed joint AMOCO-EPA Yorktown study. The latter study focused on possible improvements in the regulatory process including, but not limited to, alternative compliance strategies.

We look forward to discussing these matters with you. Please let me know if you need any additional information in advance of the meeting.

Sincerely,

ROBERT G. SLAUGHTER

/vp

Enclosures

Clean Air
Act - Rules



Amoco Oil Company

200 East Randolph Drive
Chicago, Illinois 60601-7125
312-856-6485

J. Christoph Klasing
General Manager, Environmental Affairs & Safety

April 7, 1992

The Honorable Theresa Gorman
Special Assistant to the President
for Policy Development
Room 227
Old Executive Office Building
Washington, DC 20500

Dear Theresa:

Thank you very much for taking the time to visit with us last week. I was very encouraged to hear your support for our concerns with the current regulatory system, and your willingness to work with us in seeking alternative compliance methods which would meet the environmental policy objectives we all share in more economically efficient ways.

To follow up on a couple of items, you asked for our thoughts on incorporating an averaging or bubbling mechanism within the Clean Air Operating Permit Rule. Amoco believes the viability of this type of provision hinges on the applicability of stationary source technology-based requirements. If controls such as RACT, BACT, LAER and MACT were established on an area-wide basis, sources could trade emission allowances and meet control requirements more cost-effectively.

Based upon our review, nothing in the Clean Air Act expressly prohibits area-wide bubbling or averaging. Relevant case law seems to only address bubbling individual sources within a contiguous facility. Amoco is researching the legal issues and will provide you with a brief when completed. Meanwhile, we encourage the Administration to pursue the incorporation of an air permit averaging provision.

Also, you asked for Amoco's position on the "Mixture" and "Derived from" rule under RCRA. Amoco has encountered several situations where the application of these rules have hindered beneficial reuse and recycling opportunities. In addition, these rules can needlessly increase the cost of site remediations where soils are contaminated with even small amounts of listed hazardous waste.

Amoco supports a self-implementing, concentration-based exemption mechanism as a replacement for the "Mixture/Derived-From" rules. The American Petroleum Institute (API) has suggested such a mechanism in their response to EPA's March 3, 1992 request for comments on these rules. For your information, we will forward a copy of API's and Amoco's comments under separate cover.

Amoco also suggests that EPA encourage site remediation by exempting environmental media from RCRA Subtitle C standards if the remediation is conducted in accordance with an approved state or federal remediation plan. The approved remediation plan would contain site-specific, risk-based remediation objectives as well as management standards for contaminated media that is managed on-site. This approach would also eliminate the delays inherent in the current RCRA corrective action process since a RCRA permit would not be needed to treat exempted environmental media on-site.

As I mentioned during our visit last week, Amoco is not seeking relief from any current regulatory requirements. However, we are interested in developing a long-term regulatory framework which accomplishes the valid public policy objectives of protecting human health and the environment, while giving the American public good value for its dollar spent.

As we discussed, one way to achieve this would be to establish a site-specific, risk-based, all-media "bubble" for a facility to define acceptable facility emissions limits. Design of technology to meet those limits, and certification that those limits are being met, would be the responsibility of the facility. We believe this would unleash the creative ingenuity of facility owners to apply technology to meet public policy objectives.

Thank you again for visiting with us. Please let me know if there is anything further we can do to help.


J. Christoph Klasing



Amoco Oil Company

200 East Randolph Drive
Chicago, Illinois 60601-7125
312-856-6485

J. Christoph Klasing
General Manager, Environmental Affairs & Safety

April 7, 1992

Mr. David Rivkin, Esq.
President's Council on Competitiveness
Old Executive Office Building
Washington, D. C. 20500

Dear David:

Thank you very much for taking the time to visit with us last week. I was very encouraged to hear your support for our concerns with the current regulatory system, and your willingness to work with us in seeking alternative compliance methods which would meet the environmental policy objectives we all share in more economically efficient ways.

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Thank you again for visiting with us. Please let me know if there is anything further we can do to help.


J. Christoph Klasing



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J. Christoph Klasing
General Manager, Environmental Affairs & Safety

April 7, 1992

Dr. Howard Gruenspect
Associate Deputy Undersecretary
for Planning and Program Analysis
United States Department of Energy (PE-6)
1000 Independence Avenue, SW
Washington, D. C. 20585

Dear Howard:

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As I mentioned during our visit last week, Amoco is not seeking relief from any current regulatory requirements. However, we are interested in developing a long-term regulatory framework which accomplishes the valid public policy objectives of protecting human health and the environment, while giving the American public good value for its dollar spent.

As we discussed, one way to achieve this would be to establish a site-specific, risk-based, all-media "bubble" for a facility to define acceptable facility emissions limits. Design of technology to meet those limits, and certification that those limits are being met, would be the responsibility of the facility. We believe this would unleash the creative ingenuity of facility owners to apply technology to meet public policy objectives.

Thank you again for visiting with us. Please let me know if there is anything further we can do to help.



J. Christoph Klasing

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EPA recognized this problem when the Agency deferred application of the toxicity characteristic (TC) for contaminated media from remediations at underground storage tank sites if such activities are being conducted under the provisions of RCRA Subtitle I. Recently, EPA deferred application of the TC rule until January 1993 for groundwater that may exhibit the TC but is being reinjected via an underground injection well as part of a free phase hydrocarbon recovery operation. The Agency recognized the potentially huge impact of these rules on the regulated community, combined with the likely adverse impacts on environmental remediations due to permitting constraints. The imposition of permitting and Subtitle C waste management requirements on hydrocarbon recovery operations would have resulted in the delay or cessation of environmental remediation.

At two Amoco Oil Company marketing facilities, remediation systems that were initially approved by the States prior to the TC rule, had been turned off until new systems could be installed. Both systems employed infiltration galleries. These systems do not meet the definition of a reinjection well, which EPA has deferred from the TC rule as described above. Since the TC rule became effective, there have been other petroleum marketing and pipeline facilities where remediation activities have been turned off until an NPDES permit could be issued (NPDES permitted systems are exempt from RCRA permitting requirements). There are situations where these remediation systems have been turned off for more than a year.

Sixteen states have petitioned EPA to defer RCRA hazardous waste management standards for environmental media contaminated by petroleum releases. For similar reasons, EPA granted the underground storage tank and groundwater reinjection deferrals. Remediation requirements already exist under other State authorities and the application of another layer of regulatory control would be administratively burdensome, and significantly increase remediation costs without commensurate increases in environmental protection.

Recommendations:

- Support an exemption from RCRA Subtitle C for environmental media which is contaminated by petroleum as long as these remediations are done pursuant to a Federal or State authority.
- Support a permanent exemption from RCRA for contaminated environmental media associated with underground storage tank cleanup activities as long as the cleanup is being done pursuant to RCRA Subtitle I.
- Do not apply the "mixture" and "derived from" rules to contaminated environmental media managed pursuant to a remediation under a Federal or State authority.

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The RCRA Corrective Action process is similar to Superfund investigations and remedial actions. Under the RCRA program, EPA first conducts a facility assessment to identify if a release has occurred. EPA may require the owner or operator to conduct a more detailed RCRA Facility Investigation which may lead to a Corrective Measures Study and, possibly, the implementation of corrective measures. Current EPA requirements for TSD facilities require that corrective action be taken to satisfy certain "health-based" groundwater protection standards at the edge of the solid waste management unit or area. Groundwater contaminant plumes from SWMUs are not to be allowed to migrate. EPA's proposed corrective action regulations also address releases from SWMUs to soil, surface water and air.

At an Amoco refinery, EPA's regional office has included corrective action requirements in the facility's draft Part B permit. The regional office has named the refinery sewers to a list of 45 SWMUs and 4 "areas of concern" to be investigated during the RCRA Facility Investigation (RFI) phase of the corrective action process.

As the permit is drafted, the refinery may be forced to investigate each SWMU and "area of concern" as individual potential sources of contamination. In the case of the refinery sewers alone, this investigation could require monitoring wells located at the downgradient edge of 7.7 miles of sewer as it meanders through the refinery. Such an investigation could require the installation of as many as 820 wells at a cost of about \$3 million. In addition, the refinery has an additional 44 SWMUs and 4 areas of concern where the regional office could also require individual investigations. Clearly, the most cost effective way to both assess and correct contamination at the refinery is not to individually investigate 49 areas, and develop individual remediation plans for each one. The refinery as a whole should be the subject of a coordinated investigation so that any remediation that may be required is conducted efficiently.

Recommendation:

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 - 4) Provides for integration of site-wide remediations conducted pursuant to State authorities.
 - 5) Allow a more streamlined approach to corrective action by allowing phased implementation of assessment and corrective measures.



Amoco Oil Company

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J. Christoph Klasing
General Manager, Environmental Affairs & Safety

April 7, 1992

Mr. David Gibbons
Deputy Associate Director
Natural Resources Division
Office of Management and Budget
New Executive Office Building
Washington, D. C. 20503

Dear David:

Thank you very much for taking the time to visit with us last week. I was very encouraged to hear your support for our concerns with the current regulatory system, and your willingness to work with us in seeking alternative compliance methods which would meet the environmental policy objectives we all share, in more economically efficient ways.

Also, you asked for Amoco's position on the "Mixture" and "Derived from" rule under RCRA. Amoco has encountered several situations where the application of these rules have hindered beneficial reuse and recycling opportunities. In addition, these rules can needlessly increase the cost of site remediations where soils are contaminated with even small amounts of listed hazardous waste.

Amoco supports a self-implementing, concentration-based exemption mechanism as a replacement for the "Mixture/Derived-From" rules. The American Petroleum Institute (API) has suggested such a mechanism in their response to EPA's March 3, 1992 request for comments on these rules. For your information, we will forward a copy of API's and Amoco's comments under separate cover.

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Amoco Oil Company

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J. Christoph Klasing
General Manager, Environmental Affairs & Safety

April 7, 1992

Mr. Robert S. Fairweather
Chief, Environment Branch
Office of Management and Budget
New Executive Office Building
Washington, D. C. 20503

Dear Rob:

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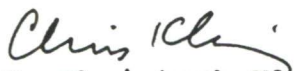
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 - 4) Provides for integration of site-wide remediations conducted pursuant to State authorities.
 - 5) Allow a more streamlined approach to corrective action by allowing phased implementation of assessment and corrective measures.

Better environmental results can be obtained at lower cost

Amoco and EPA recently completed a two year study of Amoco's Yorktown, Virginia refinery. The main objective of the joint project was to evaluate pollution prevention opportunities. A major component of the analysis involved conducting a comprehensive inventory of emissions to all environmental media. Following completion of Yorktown's emission inventory, a workshop was held to identify potential options for reducing these releases. Project recommendations spanned a number of different areas including energy conservation, control of volatile hydrocarbons, solid waste, groundwater and surface water streams. Twelve projects were ultimately selected by the workgroup for detailed analysis based on the following criteria:

- feasibility with current technology
- significant potential for release reductions
- manageable (or no) impact on worker safety
- amenable to quantitative analysis in time available
- address concerns in multiple environmental media (air, land, water)

Many of the projects selected will be required under existing or anticipated statutory or regulatory programs including the Benzene Waste Operations NESHAP, Resource Conservation and Recovery Act (RCRA) and the Clean Air Act ozone nonattainment and air toxics MACT standards. Projects were analyzed and ranked using several criteria: quantity of emissions reductions, relative risk or exposure reduction and associated capital and operating costs. They were subsequently grouped into four tiers: current and expected regulatory requirements, cost-effective quantity reductions, cost-effective risk reductions, and those best satisfying all of the selection criteria.

The eight projects classified as regulatory requirements would result in release reductions of nearly 7,300 tons per year at an average cost of \$2,400 per ton. This group includes projects required by the Benzene NESHAP to install above-grade, pressurized sewers, segregate storm water and process water systems and upgrade the process waste water treatment plant.

Using this as the benchmark, the workgroup chose a number of pollution prevention alternatives, independent of statutory or regulatory requirements, which could achieve the same results more cost-effectively. The six projects chosen resulted in emission reductions of more than 7,500 tons at an average cost of \$500 per ton. This group includes initiating a quarterly leak detection and repair program, secondary seals on gasoline storage tanks, vapor recovery on marine loading operations, and replacing the blowdown stack with a flare.

Surprisingly, neither the sewer project nor the waste water treatment plant upgrade required by the Benzene NESHAP made this list because of their high cost and relatively small emissions reductions. Of the initial list of twelve projects, these were ranked last in cost-effectiveness at \$53,000/ton and \$128,000/ton respectively.

Recommendations

- EPA could capitalize on the opportunity to produce better environmental results more cost-effectively if regulations were written as either risk-based or quantity performance standards. Facilities can develop strategies to meet environmental targets more effectively if unencumbered by command and control requirements which demand the use of specific technology.

Better data can improve environmental management decisions

Decisions about the scope of many environmental programs often revolves around the Agency's ability to enforce its provisions rather than on the regulation's practical effects. The result of this emphasis is that relatively insignificant emission sources are required to undertake substantive compliance plans and innovative solutions to emissions problems are often precluded.

An example of this phenomenon is the recently promulgated Benzene Waste Operations NESHAP. The Benzene NESHAP requires that refineries and chemical plants which handle more than a threshold amount (10 metric tons) of benzene in their waste water treatment systems, install controls on those waste streams containing more than a de minimus amount of benzene (10 ppm).

A major flaw with this approach is that material is characterized as "waste" without regard to or an understanding of the processes generating the material, the characteristics of the material other than its benzene content, and the economics of the material's use. This characterization subsequently defines the "point of waste generation", the first point at which the material stream must be controlled. The result is that manufacturing processes and waste streams become regulated regardless of their potential to emit benzene to the atmosphere.

The Yorktown study showed that the waste water systems, while handling significant quantities of benzene, were a relatively small source of benzene emissions--accounting for only 5 percent of the refinery's total benzene releases. Furthermore, controlling these emissions had virtually no impact on reducing the surrounding community's exposure to benzene (See Attachment). Nevertheless, the refinery is required to spend more than \$78,000/ton to control these releases despite the study's showing that more benzene could be reduced at lower cost by controlling other refinery sources.

Recommendations

- EPA should improve the technical basis of its rulemakings by developing better environmental data collection techniques, analyses and management practices and consider the need for additional research.
- Redefine "waste" to reflect the economics of a material's use. This is consistent with the concept of waste under RCRA which defines a material as waste when there is an intent to discard.
- Eliminate "point of generation" and replace it with "point of regulation" which is the first point where a waste stream is exposed to the atmosphere and has the potential to emit benzene.
- Providing a facility with an option to opt-out of the rule's requirements if it can demonstrate that equivalent benzene reductions can be obtained elsewhere and/or it can meet the benzene risk target.
- Incorporate reasonable waiver provisions to provide additional compliance time to those facilities undertaking coordinated, multi-media, pollution prevention plans.

Yorktown Exposure Assessment

In order to screen and rank potential pollution prevention projects, the workgroup initiated an air dispersion modeling study. The compiled facility sampling and monitoring results were used in conjunction with the various control options to estimate the concentrations of benzene at the facility and within surrounding area. The attached graphs present some of the modelling results.

Both graphs depict facility average annual benzene concentrations overlaid on a USGS topographic map of the Yorktown refinery area. Each curved line represents a line of constant benzene concentration, much as elevation lines are used on topographic maps. The red lines in each graph represent the initial benzene concentrations prior to control. The black lines show the relative change in benzene concentrations which would result from installing various controls.

The degree to which the line shifts indicates how effective a control option is at reducing benzene exposures.

This first figure shows the impact of adding sewer and API Separator emission controls to the refinery as required by the Benzene NESHAP. There is relatively little change in the population exposure beyond the fenceline, indicating this is an ineffective control strategy.

The second graph highlights the impact of installing several hydrocarbon emission control options - control of barge loading operations, improved seals on secondary storage tanks, and routing blowdown stack emissions to a flare. The black lines are nearly contained within the facility property area, indicating a much reduced level of exposure to the surrounding populations.

FIGURE 4-22. BENZENE ANNUAL AVERAGE CONCENTRATIONS ($\mu\text{g}/\text{m}^3$)
WITH SEWER PLUS API SEPARATOR CONTROL OPTION

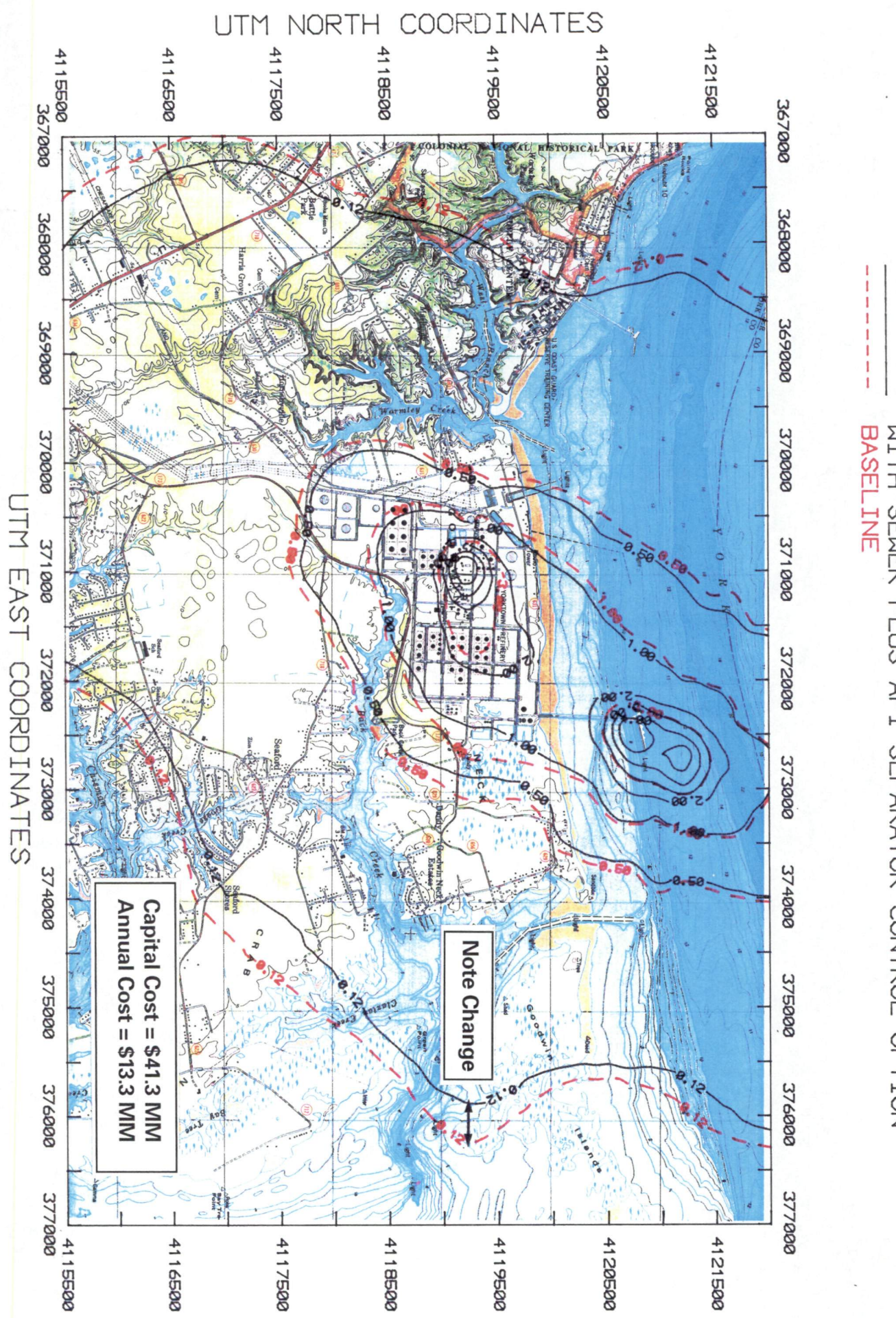
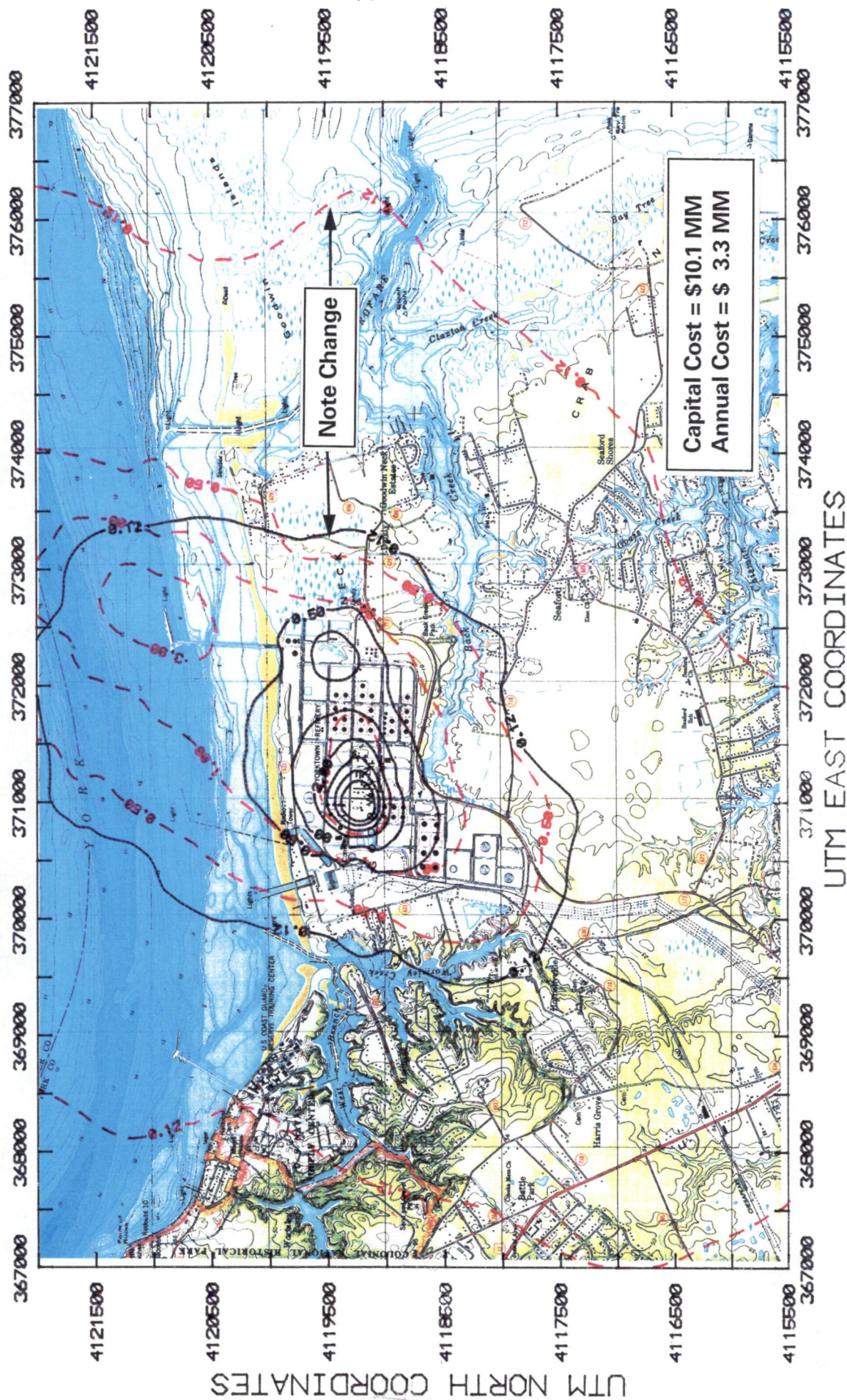


FIGURE 4-36. BENZENE ANNUAL AVERAGE CONCENTRATION ($\mu\text{g}/\text{m}^3$) WITH COMBINATION IV CONTROL OPTIONS:

- 1) DOUBLE SEALS ON ALL EXTERNAL FLOATING ROOF STORAGE TANKS"
- 2) BARGE LOADING CONTROL
- 3) BLOWDOWN STACKS TO FLARE

BASELINE



TRI Database does not adequately characterize refinery releases.

Title III of SARA, Emergency Planning and Community Right-to-Know Act, created the Toxic Release Inventory (TRI) in 1986. Title III requires regulated facilities to submit annual release data on more than 300 chemicals manufactured, produced or otherwise used in quantities exceeding certain threshold values.

The TRI database has become the de facto national release inventory and is used routinely in support of EPA rule development. However, the quality of data reported can vary significantly. As a result its usefulness as the foundation for environmental control requirements is limited. The Yorktown study highlighted several of these deficiencies:

- The TRI is based on estimates rather than measurements. Estimating accuracy varies widely. During the measurement portion of this project, several new sources were identified whose significance had been previously underestimated. Similarly, emissions estimates from one source were found to be overstated.
- The TRI focuses on specific chemicals which account for only a portion of total emissions. Most volatile organic compounds (VOC's) and all the criteria pollutants (CO, NO_x, SO₂, PM₁₀) are not reportable in the TRI. In Yorktown's case, the TRI report covers only 9 percent of the total hydrocarbons released and only 2.4 percent of the total releases (including criteria pollutants) to all media.
- Some activities and emissions are excluded by EPA from recordkeeping requirements, such as emissions from marine loading. Marine loading is one of the largest sources of emissions at Yorktown and had the greatest impact on exposure of nearby residences to refinery hydrocarbon releases.
- Site specific features uncovered during the facility-wide environmental assessment affect releases and release management options. TRI is not dynamic enough to reflect the unique geophysical and process characteristics present at many facilities and which may have a significant bearing on the development of workable control programs.

Recommendations

- A more flexible approach to rule development which allows the use of facility-wide site assessments would allow the EPA to better identify and prioritize environmental programs.
- Current legislative attempts to expand the list of TRI reportable chemicals should be resisted. Significant resources will be diverted toward detailed analytical chemistry studies instead of identifying meaningful solutions.
- More general information, such as source specific VOC emissions is adequate to identify most pollution prevention opportunities.
- Reporting groups of chemicals, rather than individual species, which have similar structural, physical and toxicological properties.
- Separately reporting other chemicals based on demonstrated human health or ecological impacts. For refineries, the chemicals butadiene, benzene and nickel may be good indicators of risk/release potential and management practices.

Mixture and Derived-From Rules discourage waste minimization and pollution prevention.

Under the Resource Conservation and Recovery Act (RCRA), listed hazardous wastes which are mixed with nonhazardous waste or residue from its treatment is itself considered a listed hazardous waste. Only through a lengthy and cumbersome delisting petition process can the material be removed from the burdensome hazardous waste regulatory program. Recyclers, reclaimers and treatment facility operators which handle nonhazardous waste are discouraged from accepting listed hazardous wastes which would otherwise be compatible with their operations. Acceptance of listed wastes would "taint" their entire waste stream, and any residues, as listed hazardous wastes themselves, and thus subject to RCRA hazardous waste management standards.

Amoco has a refinery that uses an incinerator to manage its wastes. The fly ash from the incinerator is captured with a venturi scrubber and dewatered, producing a cake which is 99% lime, fine sand and alumina. The ash contains no measurable hydrocarbons nor exhibits any hazardous waste characteristics. However, the material is considered a listed hazardous waste because it is "derived from" petroleum refinery listed wastes. As a result, this benign material is disposed of in a hazardous waste landfill at a cost of more than \$200,000 per year. If the fly ash was considered a non-hazardous waste, disposal costs would be an order of magnitude less.

The water stream from the incinerator scrubber, when clarified, does not exhibit a hazardous waste characteristic, but does contain low concentrations of heavy metals. Since the incinerator is adjacent to an on-site wastewater treatment plant, the scrubber water could be processed with the wastewater, effectively removing the heavy metals. The refinery, in its efforts to minimize water quality impacts and towards the goal of zero discharge, recycles much of its treated effluent just prior to the outfall into its cooling tower make-up and firewater make-up systems. EPA has notified the refinery that it could not recycle the scrubber water in this manner because the recycle streams, on the order of 8 million gallons per day, would be considered hazardous waste due to the mixture rule. To avoid having the cooling tower and firewater systems be deemed "hazardous wastes", the scrubber water is discharged, without treatment, via an NPDES-permitted outfall into the nearby lake.

Recommendations

- Once a waste is listed as hazardous by the EPA, there is no incentive to reduce the waste's inherent hazard or minimize its quantity via treatment or recycle/recovery due to the impediments provided by the mixture and derived-from rules. The EPA should establish "delisting" concentration levels for constituents, like incinerator ash and scrubber water, to help remove the regulatory impediments associated with the "mixture" and "derived-from" rules and foster reuse and recycle opportunities.
- Amoco also supports the RCRA and Superfund reform initiatives identified in the letter from Don Clay (EPA OSWER) to Administrator Reilly.

Texas City Mixing Zone

Amoco's refinery in Texas City, Texas currently discharges its effluent into a small, man-made "hurricane canal" which subsequently discharges into the Texas City ship canal. In 1987, the Clean Water Act was amended to better insure that existing water quality standards were being met and to protect a body of water's designated use. The effect of these changes was to require facilities to conduct toxicity testing of their effluent.

Due to the presence of marine life, the Texas Water Commission (TWC) designated the hurricane canal an aquatic life habitat. Because there was no appreciable water flow upstream of Amoco's discharge point, the refinery was required to meet the chronic biomonitoring requirement with 100 percent of its effluent. Toxicity tests could not be performed at the outfall of the hurricane canal into the ship canal where mixing and dilution would occur. Of the two required toxicity tests, preliminary results indicated that the refinery could not meet the chronic toxicity testing of mysid shrimp.

The refinery considered several options to address the findings of the TWC. These included relocating the refinery's discharge point to the Texas City Ship Canal to take advantage of dilution, legal intervention to change the hurricane canal's use designation, initiate a chronic Toxicity Reduction Evaluation (TRE) to reveal the cause of the effluent's toxicity and upgrade the refinery's waste water treatment plant based on the TRE findings.

A legal challenge of the use designation had little probability of success and an understanding of the cause of the effluent's toxicity was not likely because there was no known protocol acceptable for conducting a chronic TRE. Consequently, the expected \$100 million minimum price tag of a treatment plant upgrade was not expected to successfully resolve the toxicity problem. This left the \$10 million relocation of Texas City's discharge point as the most feasible option.

Since the refinery's discharge represents the only appreciable flow in the hurricane canal, diverting Amoco's discharge to the Ship Canal is likely to have an adverse impact on the very aquatic life the TWC is trying to protect. Furthermore, in terms of risk, the hurricane canal does not pose a problem to the surrounding community. Unfortunately, there is no mechanism for the TWC to consider either the life-sustaining effects of the effluent or incorporate an evaluation of risk when assigning use designations.

Recommendations

- The variance criteria within the Clean Water Act should be expanded to include an evaluation of all site specific information, particularly risk and exposure to the surrounding community. This information should form the basis for establishing permit limits.

Casper Air Stripper

The RCRA toxicity characteristic rule, which became effective in September 1990, classified the Casper refinery's wastewater as a hazardous waste because of the presence of benzene. An air stripper was installed to treat the wastewater by removing benzene and render it non-hazardous. The treated, non-hazardous wastewater could then be discharged to Soda Lake, Amoco's biological treatment system. Subsequently, EPA's primary sludge rule was adopted which listed all refinery wastewater treatment sludges and solids that settle in the sewers and treatment processes as hazardous wastes.

At this point, the Casper refinery applied to send its process wastewater to the City of Casper's sewage treatment plant. Amoco's research and experience has demonstrated that benzene is easily treated in an activated sludge plant, like the one operated by the City of Casper. In fact, refinery wastewaters are routinely sent to publicly owned treatment works (POTW's) across the country and treated very effectively.

Amoco successfully completed the treatability studies required by the Casper POTW. The POTW approved the refinery's application and discharge began in October, 1990. Once the refinery began discharging to the POTW, operation of the air stripper was no longer necessary or required. However, Casper agreed to operate the stripper when the POTW performed major sewer work. Although there was no evidence that emissions of volatile organic compounds (VOC's) from Amoco's discharges posed any worker safety problem, this commitment was made in light of the substantial number of POTW employees who would be working in the sewers during these periods.

Despite the results of the POTW's treatability studies on the refinery's effluent, in early 1991, the EPA claimed that continuous operation of the stripper was necessary to protect the environment. The refinery was issued an order by the EPA to operate the air stripper continuously until further notice. The City of Casper initiated a POTW capacity study and reconfirmed Amoco's position that the refinery's effluent was effectively treated by the POTW's activated sludge plant and that there was no need to operate the air stripper. EPA subsequently concurred with this evaluation but now claims that the stripper must be operated to protect POTW employees from VOC emissions.

Amoco's claim that its wastewater discharge posed no safety concerns was verified by personal and facility monitoring conducted by the POTW while the refinery was discharging unstripped wastewater. Furthermore, prudent procedures for confined space entry, such as venting and the use of fresh air respirators, provide for worker safety in the sewers. In fact, such procedures for confined space entry must be followed regardless due to discharges of domestic waste.

Amoco closed its Casper refinery in December of 1991, primarily because it could not economically support the burden posed by existing and future environmental programs. Now that the refinery is closed, the potential for worker exposure to VOC's is even lower. Nevertheless, EPA continues to require Amoco to operate the stripper.

Recommendation

- Operation of the air stripper costs approximately \$700,000 per year. This expense is difficult to justify given the above circumstances and the fact that this \$6,000,000 piece of equipment could be effectively redeployed elsewhere in Amoco's system where there is an environmental need. The technical foundation for EPA programs should be better established and should more accurately reflect the underlying economic impacts on facilities.

Operating Permits Rule

EPA's Clean Air Act Operating Permits proposal contravenes the intent of Congress by creating the potential for undue restrictions on the operating flexibility of industrial sources.

A permit issued pursuant to the proposed rule is to be a comprehensive statement of a source's obligations under the Clean Air Act. As such, it should merely codify and reiterate existing requirements, and not impose additional regulatory burdens.

The Clean Air Act Amendments specifically directed the EPA to provide facilities with operating flexibility, stating that permit authorities shall

...allow changes ... without requiring a permit revision, if the changes are not modifications under any provision of Title I and the changes do not exceed the emissions allowable under the permit ..., provided that the facility provides the Administrator and the permitting authority with written notification in advance of the proposed changes which shall be a minimum of 7 days ... [502(b)(10)].

The statute clearly establishes three criteria for bypassing the formal permit revision process: a change must not be a Title I modification, "allowable" emissions can not be exceeded, and written notification must be made a minimum of 7 days prior to making a change.

The EPA, states, environmental groups and industry have had twenty years of experience administering modifications under Title I, so this criterion should not be contentious. Similarly, the legislative language regarding the notification procedures is unequivocal.

However, the concept of "allowable" emissions appears to be the center of controversy. Under most interpretations, emissions "allowable under the permit" are those which are imposed by the state and federal regulations underlying the permit. These regulations include New Source Performance Standards (NSPS), National Emissions Standards for Hazardous Air Pollutants (NESHAP) and New Source Review/Prevention of Significant Deterioration (NSR/PSD) among others. In substance, if the emissions resulting from a facility change are permitted by the underlying regulation, then the post-change emissions do not exceed the allowable emissions under the permit. This is consistent with the understanding that the permit is not to impose new substantive requirements on a source.

Nevertheless, the Agency's proposed Permit rule ignores these arguments, essentially requiring a permit modification for any increase in emissions or any physical or operational change at a facility. Amoco believes EPA's interpretation is overly restrictive and undermines the competitiveness of industry by associating undue procedural burdens with otherwise permitted changes in operations.

Tailored corrective action program will expedite remediations

Site remediations currently operate under a variety of State and federal statutory and regulatory regimes, such as corrective action under Subtitle C of RCRA for hazardous waste treatment, storage and disposal (TSD) solid waste management units; Subtitle I of RCRA for leaking underground storage tanks; CERCLA/Superfund; and various State water, groundwater and waste authorities. If the environmental medium being remediated fails a hazardous waste characteristic, the site remediation may need a RCRA permit and the environmental medium managed as a hazardous waste, in addition to the requirements of other statutes and regulations.

EPA issued a proposed corrective action rule under Subtitle C of RCRA in July 1990. The proposal has been subject to scrutiny by the Office of Management and Budget (OMB) for its high cost impacts, as well as scrutiny by the environmental community for its perceived lack of stringency and prescriptiveness. EPA is expected to issue a final rule by the end of 1992, which may increase the number of site remediations by a factor of three.

Contaminated media failing a hazardous waste characteristic and that is associated with remediations of underground storage tanks under Subtitle I of RCRA has been temporarily deferred from having to comply with RCRA hazardous waste management standards. About sixteen States have requested EPA to expand the scope of these deferrals to all petroleum contaminated media regardless of its sources, and to make these deferral permanent. EPA is to publish a proposal for a three-year deferral for petroleum contaminated media by June 1992.

Recommendations

- Support an exemption from RCRA Subtitle C for environmental media contaminated by petroleum as long as these remediations are done pursuant to a federal or State authority.
- Support a streamlined final corrective action rule pursuant to RCRA 3004(u) that (i) recognizes cost and technical feasibility in remedy selection, (ii) allows regulatory relief from RCRA minimum technology requirements and land disposal restrictions, (iii) eliminates the need for RCRA permits for the use of proven remediation methods, (iv) allows a more streamlined and phased assessment and implementation period, and (v) allows integration with site-wide remediations done pursuant to State authorities.

Use of Emissions Trading For Compliance With RACT and LAER Obligations Under the Clean Air Act

1.0 INTRODUCTION

Since 1977, the Clean Air Act has imposed demanding requirements on the States to reduce atmospheric emissions from stationary and mobile sources in areas where air quality has not attained the purity levels specified by EPA's national ambient air quality standards. Existing stationary sources in such "nonattainment" areas have been required to install "reasonably available control technology" ("RACT") to reduce emissions of the offending pollutant(s). Major new and modified sources have been required to comply with even more stringent emission controls, equal to the "lowest achievable emissions rate" ("LAER"). The RACT and LAER requirements are part of a complex matrix of regulatory and planning obligations imposed by the nonattainment provisions of the Clean Air Act.¹ The fundamental objective of these provisions is the expeditious attainment of the national ambient air quality standards and "reasonable further progress" during the years leading up to attainment. Ozone, the most widespread of the nonattainment pollutants and the primary pollutant addressed by this memorandum, has been attacked by regulating emissions of volatile organic compounds ("VOC's"). The Clean Air Act Amendments of 1990 have added nitrogen oxides (NOx) as a second target compound in the war against ozone.

The 1990 Amendments substantially overhauled the nonattainment provisions of the Act. For example, the amended Act creates five categories of ozone nonattainment areas, from "marginal" to "extreme". Increasingly stringent requirements are imposed upon each type of area. However, the 1990 Amendments did not change the essential features and purposes of the RACT and LAER provisions. This memorandum addresses the following question:

Does the Clean Air Act, as amended in 1990, authorize EPA and the States to adopt regulations which allow air emissions sources in nonattainment areas to satisfy RACT and/or LAER obligations through emissions trading or other alternative means of compliance?

¹ Clean Air Act, 42 USC, Subchapter I, Part D.

2.0 EMISSIONS TRADING UNDER THE CLEAN AIR ACT

"Emissions trading" is a general term used to describe a variety of regulatory programs which either allow or require the owner/operator of an emissions source to avoid or comply with air pollution control requirements by relying upon emissions reductions that have occurred or will occur at a different source.²

For purposes of this memorandum, two types of emissions trading are relevant. With respect to RACT compliance, emissions trading would allow an existing source to avoid some or all of the retrofit expenses associated with installing RACT by arranging for another existing source of the nonattainment pollutant (in the same nonattainment area) to correspondingly reduce its actual emissions to levels that are lower than would otherwise be required under applicable regulations or permits. With respect to LAER compliance, an emissions trading program would allow a new or modified unit to install controls which were less stringent than the lowest achievable emission rate. However, the owner/operator of the proposed source would have to "offset" the shortfall with emissions reductions from existing sources of the same pollutant in the same nonattainment area. In either case, emissions trades involving ozone precursors *i.e.*, VOC and NO_x (pollutants which are regulated on an areawide basis), would have to satisfy the basic criteria which EPA establishes for such trades.³ Six of the criteria currently listed in EPA's Emissions Trading Policy Statement warrant special emphasis:

1. The reductions have to be "surplus" *i.e.*, not required by SIP regulations or permits; in nonattainment areas, credit is generally available only to the extent that emissions are reduced to levels which go beyond RACT.
2. The revised emissions limitations for both sources involved in the trade have to be made enforceable.

² A logical extension of the emissions trading concept is a system of marketable emissions permits. Under such a system, all major pollution sources would be required to have permits specifying their allowed amount of emissions. Firms which can reduce emissions below their permit levels can sell their surplus to other firms for which compliance is relatively costly. Once such a system is established, systematic reduction of permitted emissions would bring progress toward ambient goals. If strictly enforced, proponents argue that this approach could be substantially more efficient than uniform control strategies, both because its inherent flexibility takes advantage of differences in control costs (ranging, for example, from \$500/ton of emissions (fuel-volatility sources) to \$39,000/ton (methanol-conversion sources) and because it allows individual firms to decide where and how to make desired reductions. See Tietenberg, Tom H. "Transferable Discharge Permits and the Control of Stationary Source Air Pollution: A Survey and Synthesis." *Law Economics* 56(1980):391-416.

³ See EPA's Emissions Trading Policy Statement, 51 FR 43814, December 4, 1986, discussed *infra*.

3. Only permanent reductions in emissions may qualify for credit.
4. Emissions reductions have to be quantifiable.
5. With the exception of visibility impacts from NO_x, dispersion considerations will generally not affect trades involving VOC or NO_x since the relevant ambient impacts from these pollutants (*i.e.*, ozone formation) occur across broad geographic areas. For these pollutants, "pound for pound" trades are generally treated as equal in ambient effect if all sources involved in the trade are located in the same control strategy demonstration area, or where the state otherwise shows such sources to be sufficiently close that a "pound for pound" trade can be justified.
6. Trades may not result in an increase in emissions of a hazardous VOC listed under § 112 of the Act.

3.0 *Chevron v. NRDC*

The legal analysis set forth in this memorandum is grounded, in large part, upon the U.S. Supreme Court's decision in *Chevron U.S.A., Inc. v. NRDC*, 104 S.Ct. 2778 (1984). In *Chevron*, the court was asked to review the validity of EPA regulations promulgated under the same provisions of the Clean Air Act addressed herein. Specifically, the court was asked to rule on the validity of EPA's 1981 definition of the term "stationary source" for purposes of the nonattainment area new source review provisions of the Clean Air Act.⁴

The Court of Appeals for the DC Circuit had previously invalidated the EPA regulatory definition, finding that its authorization of a plantwide new source review "bubble" was inappropriate in nonattainment areas. The Supreme Court reversed, holding that Congress did not have a specific intention as to the applicability of the bubble concept in the context of nonattainment area new source review. Rather, the legislative history disclosed to the Court only that Congress was seeking to

⁴ The Clean Air Act Amendments of 1977 imposed certain requirements on States that had not achieved the national air quality standards established by EPA pursuant to earlier legislation, including the requirement that such "nonattainment" States establish a "new source review" program regulating "new or modified major stationary sources" of air pollution. Generally, a permit may not be issued for such sources unless stringent conditions are met, including the obligation to comply with the "lowest achievable emissions rate" (LAER) and to secure offsets for emissions discharged after the application of LAER. EPA regulations promulgated in 1981 to implement the new source review requirement allowed a State to adopt a plantwide definition of the term "stationary source." Under a plantwide approach, an existing plant that contained several pollution-emitting devices could install or modify one piece of equipment without having to undergo review if the alteration did not increase the total emissions from the plant, thus allowing a State to treat all of the pollution-emitting devices within the same industrial grouping as though they were encased within a single "bubble."

accommodate the conflict facing the States' in permitting capital improvements in nonattainment areas while continuing to improve air quality.

The basic legal error of the Court of Appeals, as articulated by the Supreme Court in *Chevron*, was its adoption of a static judicial definition of the term "stationary source" when that court had decided that Congress itself had not commanded such a definition. In reversing the Court of Appeals, the Supreme Court laid down a basic rule of administrative law for determining the validity of federal agency regulations:

When a court reviews an agency's construction of the statute which it administers, it is confronted with two questions. First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress. If, however, the court determines Congress has not directly addressed the precise question at issue, the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute.⁵ Further, the court need not conclude that the agency construction was the only one it permissibly could have adopted to uphold the construction, or even the reading the court would have reached if the question initially had arisen in a judicial proceeding.⁶

Hence, the question addressed by this memorandum is not whether EPA or the States are *obligated* to adopt an emissions trading program to implement RACT or LAER. Rather, the question is whether such programs would rest on a permissible construction of the statute. We believe the Clean Air Act authorizes an emissions trading compliance option for RACT and LAER, provided the emissions trades approved thereunder are required to satisfy rigorous criteria, including consistency with the "reasonable further progress" aspects of the State's implementation plan for the nonattainment area in question.

⁵ *Chevron*, 104 S.Ct. 2778, 2781 (1984).

⁶ *Chevron*, 104 S.Ct. 2778, 2782, note 11 (1984), citing additional authority.

4.0 REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT)

Since 1977, the Clean Air act has required the nonattainment provisions of all State Implementation Plans ("SIP's") to:

provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of *reasonably available control technology*).⁷

The fundamental goal of all nonattainment SIP's is timely attainment of the national primary ambient air quality standards. In the interim period between SIP adoption and the deadline for attainment, the plan must assure "reasonable further progress," i.e., such annual incremental reductions in emissions of the relevant air pollutant as are required by [the Act] or may reasonably be required by the [EPA] Administrator for the purpose of ensuring attainment of national ambient air quality standard by the applicable date."⁸

In practice, the RACT requirement has been targeted primarily at existing "major stationary sources" of volatile organic compounds (VOC) in ozone nonattainment areas. Under the 1977 amendments to the Clean Air Act, a "major source" was defined as one having potential emissions of 100 tons per year (TPY) or more of VOC. The 1990 Amendments lowered the "major source" thresholds to 50, 25 and 10 TPY respectively for serious, severe and extreme ozone nonattainment areas.

Although a determination of what emissions controls are required to satisfy RACT can be made on a case-by-case review of each individual facility, beginning in the late 1970's, EPA adopted the mechanism of issuing control techniques guidelines ("CTG's") to provide a generic definition of RACT for specified industrial categories. The procedure has provoked criticism since EPA has in effect required states to apply the CTG requirements as though they have regulatory effect, notwithstanding the fact that such guidelines are issued in the absence of formal rulemaking procedures. Nonetheless, EPA has issued more than 30 CTG's to date.

⁷ Prior to the 1990 Amendments, the RACT requirement was codified at sections 172(b)(2) and 172(b)(3) of the Clean Air Act. The 1990 amendments recodified this provision at §172(c)(1). (emphasis supplied).

⁸ Clean Air Act §§ 171(1), § 172(c)(2).

The Clean Air Act Amendments of 1990 direct EPA to accelerate its issuance of CTG's, particularly for VOC source categories. By November of 1993, EPA is required to issue new CTG's for 11 stationary VOC source categories and to update its previously issued VOC CTG's. CAA § 183(a) and (b). By the same date, EPA is required to issue technical documents which identify "alternative controls" for all categories of stationary sources of VOC's and nitrogen oxides (NOx).

The 1990 amendments call upon the states to revise their nonattainment plans to require the implementation of RACT for:

(A) Each category of VOC sources in the area covered by a CTG document issued by the Administrator between the date of the enactment of the Clean Air Act Amendments of 1990 and the date of attainment.

(B) All VOC sources in the area covered by any CTG issued before the date of the enactment of the Clean Air Act Amendments of 1990, and

(C) All other major stationary sources of VOC's that are located in the area.⁹

Each SIP revision described in subparagraph (A) is to be submitted within the period set forth by the Administrator in issuing the relevant CTG document. With respect to sources described in subparagraphs (B) and (C), the SIP revision must be submitted by November 15, 1992, and must provide for implementation of the required measures by no later than May 31, 1995.

Viewed in the context of this statutory framework, the specific issue addressed by this memorandum is whether the Clean Air Act precludes states from adopting ozone attainment strategies which allow the targeted VOC sources to achieve RACT-level VOC emissions reductions through an aggregate or areawide emissions trading or marketable permits strategy. Obviously, if such flexibility is precluded by the Act, all targeted VOC sources would have to install RACT -- regardless of the technical or economic circumstances facing any individual source and regardless of the possibility that alternative control strategies (e.g., emissions

⁹ See Clean Air Act, § 182(b)(2), the terms of which apply to moderate ozone nonattainment areas. This requirement also applies to serious, severe and extreme ozone nonattainment areas pursuant to the introductory paragraphs of CAA §§ 182(c), 182(d) and 182(e).

trading or marketable permits) could provide a more effective or economical means of achieving the required level of VOC emissions reduction.¹⁰

The Clear Air Act does not appear to mandate an inflexible across-the-board RACT control strategy for major VOC sources (or pre-Amendment CTG sources of VOC) in ozone nonattainment areas. The basis for this conclusion is fivefold:

First, as recognized by the U.S. Supreme Court nearly 17 years ago, the Clean Air Act vests each state with the primary responsibility for developing an implementation plan which includes that mix of emissions limitations from mobile and stationary sources needed to ensure attainment and maintenance of the national ambient air quality standards. *Train v. NRDC*, 95 S. Ct. 1470 (1975):

So long as the ultimate effect of a State's choice of emission limitations is compliance with the national standards for ambient air, the State is at liberty to adopt whatever mix of emission limitations it deems best suited to its particular situation. *Train* at p. 1482.

Although the Clean Air Act Amendments of 1977 and 1990 have added a great deal of specificity regarding the elements of state implementation plans, the fundamental federalist principles laid down in *Train* have never been abandoned or rejected by the Congress. At the very least, absent an express statutory abrogation of state SIP development authority by the federal Clean Air Act, the primary responsibility for devising strategies to attain the national ambient air quality standards should rest with the states.¹¹

¹⁰ There seems to be little doubt that an emissions trading compliance option is available to sources of NO_x and to non-major/non-CTG sources of VOC in ozone nonattainment areas. It seems equally clear that such flexibility is available to existing sources of particulate matter and sulfur dioxide in areas that are designated nonattainment for these pollutants. See CAA §§ 188-192. The availability of such flexibility for "major" VOC sources in moderate, serious, severe or extreme ozone nonattainment areas is somewhat less clear, however, because of the Act's use of the phrase "all VOC sources" in § 182(b)(2)(B) and the phrase "all other major stationary sources of VOC's" in § 182(b)(2)(C). The nonattainment provisions of the Act define a "major source" to include any stationary source or group of sources located within a contiguous area and under common control that emits, or has the potential to emit the requisite annual tonnage of VOC. It is perhaps noteworthy that § 182(b)(2)(A), which addresses sources covered by CTG's issued after November 15, 1990, directs the EPA to impose RACT on a "source category" basis. Here too, the flexibility afforded by an emissions trading program should clearly be available to the States.

¹¹ Congress has indeed imposed certain restraints on the States in their formulation of SIP strategies. For example, § 123 of the Act expressly prevents a state SIP from recognizing the air quality "improvement" associated with excessively tall smoke stacks or other dispersion techniques. No such prohibition has been laid down with respect to RACT or LAER.

Second, in passing the 1990 Amendments, Congress expressly recognized the need for flexibility in accomplishing the objectives of the nonattainment program. To that end, all future nonattainment SIPs must now include:

enforceable emission limitations, and such other control measures, means or techniques (*including* economic incentives such as fees, *marketable permits*, and auctions of emission rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to provide for attainment of such standard in such area by the applicable attainment date specified in this part. CAA § 172(c)(6). (emphasis added)

Furthermore, to address the need for flexibility in achieving compliance with federally-specified emissions controls, such as RACT, Congress expressly directed EPA in the 1990 Amendments to publish documents which identify "alternative controls" for *all* categories of sources which have the potential to emit 25 tons per year or more of VOC or NOx. CAA § 183(c).

Read together, these provisions provide statutory support for EPA approval of state SIPs which allow major sources of VOC's (regardless of the applicability of a CTG) to demonstrate RACT compliance through "alternative control" strategies such as emissions trading or marketable permit programs. So long as all major VOC sources within the designated nonattainment area are obligated to either (1) install RACT by the appropriate SIP deadline or (2) secure enforceable, verifiable and equivalent VOC emissions reductions (by the same deadline) through some alternative means, the basic objectives of the Clean Air Act are satisfied, without sacrificing the primary role of the State for SIP development and the administrative flexibility desired by Congress.

Third, the feasibility, effectiveness and cost of implementing RACT for all stationary sources which emit VOC and NOx in the nation's nonattainment areas would require literally thousands of case by case technical evaluations. In some cases, RACT may already be in place for a particular source and it may or may not be feasible for the state to require further emissions reductions. In other cases, the retrofitting of RACT-level controls may be prohibitively expensive. Furthermore, the practical ramifications of this issue must also be taken into account. There are thousands of VOC sources likely to qualify as "major stationary sources" under the lower annual tonnage thresholds established by the 1990 amendments. The large majority of such sources will probably not be covered by existing CTG's and will not be covered by CTG's due for publication in the foreseeable future. The administrative burden of requiring the states to formulate RACT requirements for all of these sources would be staggering -- particularly when one considers the unprecedented strain being experienced by state and local air pollution control agencies in having to implement Titles I, III and V of the 1990 Amendments. It seems doubtful that Congress intended such a result.

Fourth, the precedent for allowing RACT emissions trading has been firmly in place since 1986, even before such flexibility was mandated by Congress. In December of 1986, EPA published its Emissions Trading Policy Statement, announcing the agency's rules for approving emissions trades on a case by case basis under the "SIP revision" procedures of Section 110 of the Act. That policy statement also articulated the requirements for EPA-approvable *generic* state rules under which classes of emissions trades could be exempt from the general requirement for subsequent EPA approval as a case-by-case SIP revision. It is precisely this type of generic SIP rule which is envisioned by this memorandum for RACT and LAER compliance.

Under the EPA's 1986 emissions trading policy, emissions trades which would alter the otherwise applicable provisions of the SIP (and hence require an EPA approved SIP revision in the absence of the generic rule) may be approved under a generic rule if such trades are evaluated under state procedures which are "sufficiently replicable in operation to guarantee that emission limits produced under the rule will not interfere with timely ambient attainment and maintenance or jeopardize PSD increments or visibility." 51 FR 43850, December 4, 1986. The term "replicability" generally means a "high likelihood" that two decision-makers applying the rule to a given trade would reach the same conclusion. *Id.*

By approving generic state rules, EPA effectively approves in advance an array of acceptable SIP revisions for emissions trades which meet the terms of the state's approved rule. Instead of conducting time-consuming SIP revision proceedings, EPA reviews and comments on trades approved under the generic rule and checks the implementation of the rule as part of its routine audit of state air programs. *Id.*

EPA's emission trading policy allows VOC or NOx trades to be approved by states under generic rules based on a demonstration that no net increase in applicable baseline VOC or NOx emissions may occur. The ambient impacts of VOC and NOx emissions are areawide rather than source-specific. Hence, EPA views all such emissions within a broad area to be comparable, regardless of plume height, topography or related factors. 51 FR 43850. Thus, the ambient impact of trades involving emissions of VOC or NOx from different sources within such an area are by definition equivalent:

For VOC and NO_x, such pound-for pound trades may therefore be treated under generic rules as equal in ambient effect where all sources involved in the trade are located in the same control strategy demonstration area, or where replicable procedures have been approved by EPA as part of the generic rule for determining when sources outside the demonstration area are sufficiently close that a pound-for-pound trade can be justified.

51 FR 43850, December 4, 1986.¹²

Finally, the use of marketable permits as an RACT (or LAER) compliance option dovetails neatly with the new operating permit provisions of the Clean Air Act. Under Title V of the amended Act, virtually all sources subject to the RACT obligations of § 182 will be required to secure an operating permit which "codifies" the air pollution control requirements which apply to that source. Any permitted source which complies with its RACT obligations through acquisition of emissions reduction credits from a different source will have to document the trade and demonstrate (in its permit application) that the trade satisfies all applicable regulatory criteria. A corresponding provision would presumably be incorporated into the permit of the source which created the credits, obligating that source to document and maintain the reduction. Under 504(f) of the amended Act, compliance with an operating permit is deemed to constitute compliance with other applicable provisions of the Act (e.g., the RACT obligations of § 182) that relate to the permittee if:

- (1) the permit includes the applicable requirements of such provisions, or
- (2) the permitting authority in acting on the permit application makes a determination relating to the permittee that such other provisions (which shall be referred to in such determination) are not applicable and the permit includes the determination or a concise summary thereof. CAA § 504 (f).

¹² The Emissions Trading Policy was designed to ensure that emissions reduction "credit" would be recognized in nonattainment areas only for reductions which went beyond RACT. However, a state generic trading rule is allowed to specify "presumptive RACT" limits which acceptably define generic trading baselines where RACT has not otherwise been defined in the SIP. While RACT baselines different from this presumptive limit could still be used for specific trades, such trades need to be approved as case-by-case SIP revisions. Where there is no RACT in the SIP, but EPA has issued a CTG for sources of the type involved in the trade, the CTG is used as the presumptive RACT-component of the generic trading baseline. 51 FR 43852, December 4, 1986.

By specifically incorporating alternative control requirements in a Title V operating permit, the permitting authority can make the necessary determination that the otherwise applicable RACT regulation does not apply to the source receiving the emissions credit. EPA is currently considering this issue in the context of its Title V rulemaking package and its draft Title I General Preamble.¹³

The basic conclusion that can be drawn from the foregoing analysis is that the use of emissions trading and marketable permits as an RACT alternative compliance option could be consistent with the basic purposes of the Act's nonattainment provisions. The fundamental objective of all nonattainment SIPs is to attain and maintain the national ambient air quality standards by reducing emissions of the offending pollutant(s) and maintaining those reductions over time. The legislative history of the nonattainment title of the 1990 amendments reveals that Congress envisioned an 80% level of control, on average, being achieved through utilization of RACT.¹⁴ Clearly, one option available to the states is to uniformly mandate RACT controls for all major VOC sources and all CTG-covered sources in all nonattainment areas. However, if a state is able to devise an alternative control strategy which will bring about equal or greater VOC reductions, the Act should not bar such creativity. Such an inflexible result would greatly undermine the scope and potency of § 172(c)(6) -- the SIP requirement added by the 1990 amendments which specifically requires the states to include economic incentives such as marketable permits in their nonattainment plans.¹⁵

¹³ In the Title V rulemaking preamble, EPA stated that it would develop more flexible ways for sources to demonstrate compliance with RACT limits. See 56 FR 21758, May 10, 1991. One way is to use protocols defining equivalent means of compliance. For example, in 1980 EPA released the "Can Coating Policy," which allows cross-line averaging for can coating facilities and provides the calculation technique for doing so. EPA is undertaking a study to determine the extent to which multi-day and cross-line averaging can be used to provide specific industries more flexibility in meeting their VOC RACT requirements. *Id.*

In its recently released General Preamble for implementing the nonattainment provisions of the 1990 Amendments, the Agency clearly noted its expectation that the use of emissions trading and economic incentives (such as marketable permits or allowance trading) will increase as the nonattainment provisions are implemented. The draft General Preamble (at pp. 221-223, Draft Dated 6/7/91) indicates that the Agency intends to solicit comment on the use of an areawide VOC and NOx emissions trading strategy for RACT compliance in ozone nonattainment areas.

¹⁴ Senate Report No. 101-228, p. 32. U.S. Code Congressional and Administrative News, 1990, Vol. 6; 101st Congress, Second Session at p. 3418.

¹⁵ It is a well settled rule of statutory construction that a legislative enactment should be construed, if possible, so as to give full force and effect to all its provisions. *Allan Oil Co., Inc. v. C.I.R.*, 614 F.2d 336 (C.A. 2d 1980). If § 172(c)(6) is rendered inapplicable to RACT or LAER compliance, most of its potential applicability is eliminated.

5.0 SPECIAL CONSIDERATIONS RELATED TO THE USE OF EMISSIONS TRADING TO COMPLY WITH THE LOWEST ACHIEVABLE EMISSIONS RATE (LAER) REQUIREMENT

Section 173 of the Clean Air Act requires the issuance of permits to new and modified major stationary sources in nonattainment areas. Among the obligations imposed upon such proposed sources is the requirement to "comply with the 'lowest achievable emission rate'" (LAER). CAA § 173(a)(2). Most of the considerations which would support an emissions trading option for RACT compliance apply with equal force to LAER compliance.

LAER is defined as that rate of emissions which reflects --

(A) the most stringent emission limitation which is contained in the implementation plan of any State for such class or category of source, unless the owner or operator of the proposed source demonstrates that such limitations are not achievable, or

(B) the most stringent emission limitation which is achieved in practice by such class or category of source, whichever is more stringent.

In no event shall the application of this term permit a proposed new or modified source to emit any pollutant in excess of the amount allowable under applicable new source standards of performance.

The Act does not expressly define the options which may be employed to "comply" with LAER. However, the Act similarly does not prohibit the use of emissions reduction credits from existing sources to compensate for any emissions from the new/modified source that exceed LAER-based levels. It should be noted that EPA has historically disallowed the use of emissions reduction credits from existing sources to meet or avoid applicable NSPS, and that the Agency has similarly disallowed the use of such credits to meet applicable new source review requirements for best available control technology (BACT) in PSD areas, or lowest achievable emission rate control technology (LAER) in nonattainment areas. See 51 FR 43833, December 4, 1986. However, the Agency has not cited specific statutory constraints in connection with its decision to prevent emissions trading for LAER compliance. Although EPA may have valid policy and statutory grounds for continuing to bar emissions trading for LAER compliance, we do not believe that the statute compels such a decision.

The basic objective of the LAER requirement is to minimize *new* emissions in nonattainment areas since these areas are already overburdened by emissions from *existing* sources. However, since major new and modified sources located in nonattainment areas are *required* to secure offsets for their new emissions, companies have a strong economic incentive to reduce emissions from their new units. Hence, the basic goals of the nonattainment program would not be compromised by an emissions trading scheme which allowed states to relax LAER requirements in particular cases, so long as the owner of the proposed new or modified source was required to provide "extra" offsets in order to compensate for the marginally higher level of emissions from the new or modified unit.¹⁶

In the case of VOC and NOx emissions, the fact that the trading sources may be located in different parts of the general nonattainment area is considered inconsequential from an air quality perspective.¹⁷ So long as the state is able to demonstrate reasonable further progress and timely attainment of the national ambient standards, there is no logical basis for prohibiting the state from devising an LAER emissions trading program which might enhance the area's prospects for new capital projects. At a minimum, such a program represents a "reasonable accommodation of manifestly competing interests" and should be entitled to judicial deference. *Chevron* at p. 2780.

¹⁶ In case of statutory construction, task is to interpret words of statute in light of purposes Congress sought to serve. *Dickerson v. New Banner Institute, Inc.*, 103 S.Ct. 986, 460 U.S. 103, 74 L.Ed.2d 845 (1983). In serious, severe and extreme ozone nonattainment areas, the offset ratio now exceeds 1:1. Hence, new source growth is designed to actually improve air quality. CAA § 182.

¹⁷ See p.10 *supra*.

Under the EPOCH program, climatic impacts and climate-related hazards, climate processes and models, and seismic hazards have been identified as priority areas.

The programs are carried out in the form of coordinated research and development activities, cooperative studies and assessments, and shared-cost research contracts.

Sweden is expected to make the biggest contribution to the common funding (3.8 million ECU for both STEP and EPOCH), followed by Austria (1.8 million ECU), Finland (1.5 million ECU), and Norway (1.3 million).

The proposals will now go to the Council of Ministers for final approval. □

Endangered Species

EFFORT TO PRESERVE ENDANGERED SPECIES IN CENTRAL TEXAS ATTACKED BY FARM BUREAU

AUSTIN, Texas—(By a BNA Staff Correspondent)—State and federal efforts to draft a Central Texas habitat plan that would balance the interests of developers against the need to preserve endangered species has come under attack from the Texas Farm Bureau, which maintains that the biological studies that support the conservation plan are faulty.

Dan Byfield, the farm bureau's senior assistant director for state affairs, told BNA Jan. 15 that a report used to justify the acquisition of more than 65,000 acres of land to preserve habitat for the black-capped vireo, the golden-cheeked warbler, and several cave-dwelling invertebrates has no scientific basis. The bureau has put together a team of four scientists who are conducting a peer review of the report, he said, which is expected to be completed in two weeks.

Byfield accused the executive committee that will vote on the habitat plan in February of not paying attention to growing complaints about the plan. "They're not listening because they don't want to," he said. "We've got to stop them somehow." The committee is made up of representatives from the city, county, state, and federal government as well as environmentalists and developers.

Byfield said the plan amounts to a taking of property without compensation. He further complained that the U.S. Fish and Wildlife Service has become an advocate in the process for conservation in violation of the Endangered Species Act. "They're playing God in all this," he said.

National Model?

The plan, which is being watched as a possible national model that will be considered when the Endangered Species Act comes up for reauthorization this year, is going forward on two tracks. On one track, the Fish and Wildlife Service is in the process of negotiating to acquire some 41,000 acres of habitat land west of Austin to establish a national wildlife refuge. Congress has appropriated \$6 million for land acquisition and related expenses. It is anticipated that Congress ultimately will appropriate about \$30 million for land acquisition, according to committee summary of the plan.

On the other track, the executive committee is trying to finalize the Balcones Canyonlands Conservation Plan, which proposes creation of a separate 29,100 acres of habitat land to protect endangered species at a cost of \$119,000 to \$124,000 over 20 years. Land acquisition would be accomplished through bond financing or a combination of bond financing and owner financing.

The farm bureau is not the only group trying to thwart the plan. The Wildlife Habitat Trust, a nonprofit group based in San Antonio that is seeking to preserve wildlife through tax breaks for landowners, has notified the Interior Department and Fish and Wildlife Service of its intent to sue the agencies for violations of the Endangered Species Act.

The trust's attorney, Michael Kuehr, in a Jan. 13 letter to Interior Secretary Manuel Lujan and Fish and Wildlife Service Director John Turner giving 60-day notice of intent to sue, said that the Fish and Wildlife Service has failed in its charter set forth under the Endangered Species Act.

"Specifically, the Fish and Wildlife Service has taken a narrow-minded, short-sighted approach with respect to saving endangered species in the area concerned," he wrote. He said the service has failed to provide alternatives to land seizure and has ignored viable alternatives to preserve and proliferate wildlife by not working with landowners to establish habitat preserves.

Meanwhile, Garry Bales, who owns a San Antonio real estate appraisal, sales and management firm and heads up the trust, has submitted to the committee a 75-page report taking issue with the biological studies on which the habitat plan is based. He called the report used by the executive committee "sharply biased, deceptive and pointedly misleading," adding that the project is "one of the most flagrant abuses of the Endangered Species Act to have occurred anywhere."

At a Jan. 15 meeting, the executive committee agreed to meet Jan. 29 to continue trying to iron out problems with the plan. A final draft of the plan is expected to be ready for the committee's consideration on Feb. 7. □

Environmental Regulation

STUDY FINDS ENVIRONMENTAL RULES REVERSED 10-YEAR DECLINE IN U.S. REGULATORY COSTS

A ten-year decline in the costs of federal regulations in the United States ended in 1988 because of increasing environmental regulation, according to a study by a former official of White House Office of Management and Budget.

Regulatory costs will continue to increase in the 1990s, primarily as a result of regulations stemming from the Clean Air Act amendments of 1990, the study found. Total costs of all federal regulations were \$400 billion for 1990, or approximately \$4,000 per household, Thomas Hopkins, the study's author told BNA Jan. 15.

Hopkins, a former deputy director of OMB's Office of Information and Regulatory Affairs, conducted the study independently in his capacity as professor of economics at the Rochester Institute of Technology.

The study found environmental regulation to be the largest growing of five regulatory categories. Although the Environmental Protection Agency estimates indicated that its 1990 compliance expenditures amounted to \$99 billion, the agency also indicated that sharp increases lie ahead. Clean Air Act amendments may add an additional \$25 to 30 billion annually in regulatory costs, the study found.

Prior to 1990, the study found the largest environmental regulatory costs were in the water pollution area, under the Clean Water Act and the Safe Drinking Water Act. Water pollution control spending accounted for half of all federally mandated environmental compliance costs in 1990.

Air pollution control, including auto emissions and smokestack controls, was the second largest spending area, and land pollution control accounted for the rest of the environmental costs. But the study found that land pollution regulatory costs will be increasing in the 1990s, while relative size of water pollution spending will decline.

The study did not take into account additional spending for pollution control measures. "If voluntary spending by local governments and by businesses were added, the total reported cost for environmental protection would jump by nearly 25 percent," the author said.

Regulatory Costs Broken Down

As opposed to most studies of regulatory costs, which rely on economic costs versus social costs, Hopkins' study broke down federal regulation into five

parts: environmental regulations, social regulations, efficiency costs, transfer costs, and process regulation.

Social regulation includes workplace and product safety controls and other hazard reduction rules.

Efficiency costs include costs that one group claims but another cannot recover, such as costs of transportation, energy, and communications regulations. Transfer costs redistribute benefits from one group to another, such as milk regulation, which redistributes money in the form of artificially higher prices from consumers to producers. Process regulations include requirements associated with government paperwork burdens not directly linked to a social or economic regulatory objective.

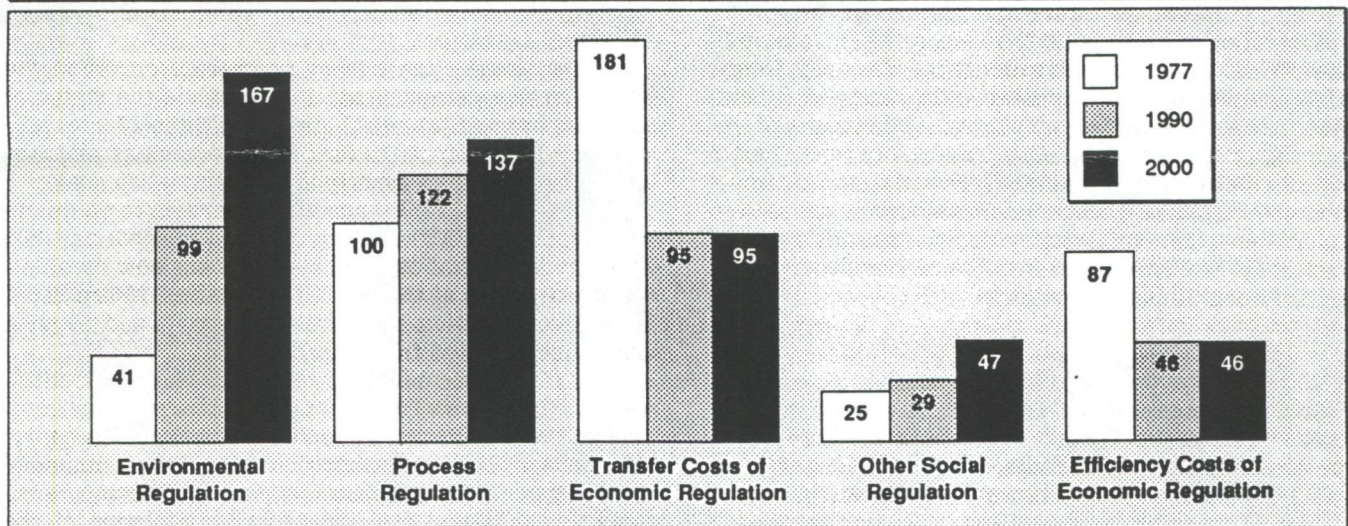
For 1990, the study found environmental regulations cost \$99 billion, social regulations cost \$29 billion, efficiency costs cost \$46 billion, transfer costs cost \$95 billion, and process regulations cost \$122 billion.

Although the study found steadily rising regulatory costs primarily from environmental regulations, Hopkins stressed that "many regulations generate substantial benefits for society, and these benefits must be assessed before a complete picture of regulation can be produced." Although this study addressed only costs, "regulations aimed at societal problems such as environmental pollution create benefits that may warrant the associated regulatory costs."

A draft of the study, *The Costs of Federal Regulation*, was presented at a seminar held by the National Chamber Foundation Jan. 13. It is available from BNA Plus, telephone (800) 452-7773; or 452-4323 in the Washington, D.C. area. □

Annual Costs of Federal Regulation

In Billions of 1988 Dollars



Source: "The Costs of Federal Regulation," Thomas D. Hopkins, Rochester Institute of Technology

A BNA Graphic



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

~~cc: Holmstead~~
CAA - Rules

JUL 16 1990

MEMORANDUM FOR JAMES B. MACRAE, JR.

FROM:

Art Fraas *AF*

SUBJECT:

Clean Air Act Rules

I have attached a composite schedule presenting the Clean Air Act statutory deadlines that the Environmental Protection Agency (EPA) must meet under the House and Senate bills. As the Table below indicates, the Clean Air Act is front-loaded with an enormous number of major rules scheduled in the first year.

	<u>Within 6 Mths.</u>	<u>Within 9 Mths.</u>	<u>Within 1 Year</u>	<u>Within 18 Mths.</u>	<u>Within 24 Mths.</u>
Final Rules	2	2	17	15	18
Proposed Rules	17	15	18	13	2+MACT
Attachment					

SCHEDULE FOR CLEAN AIR ACT RULES

COMING TO OMB FOR REVIEW

ACTIONS COMING TO OMB FOR REVIEW WITHIN 6 MONTHS

FINAL ACTIONS (2)

MOBILE SOURCES

- o REVISE DIESEL PARTICULATE STANDARD FOR MY91-94 URBAN BUSES
- o TAILPIPE EMISSION STANDARDS

PROPOSED ACTIONS (17)

MOBILE SOURCES

- o SPECIFICATIONS FOR REFORMULATED GASOLINE IN CONVENTIONAL VEHICLES FOR 9 CITIES
- o PROMULGATE REQUIREMENTS FOR OVERHAULED URBAN BUSES
- o PROMULGATE REQUIREMENTS FOR CLEAN FUEL URBAN BUSES
- o PROMULGATE DIESEL FUEL SULFUR STANDARD
- o PROMULGATE OXYGENATE BANKING AND TRADING CREDITS PROGRAM
- o BAN LEAD IN GASOLINE
- o ADD IDLE TEST TO FEDERAL TEST PROCEDURE
- o REVISE ASSEMBLY LINE AUDIT REGULATIONS
- o ADDITION OF SHORT TEST PROCEDURES TO I/M CERTIFICATION

AIR TOXICS

- o 90% VOLUNTARY REDUCTION ALTERNATIVE COMPLIANCE

ACID RAIN

- o CLEAN COAL TECHNOLOGY INTERPRETATIVE RULE
- o BASELINE DETERMINATION CALCULATION METHOD

PERMITS

- + o PERMIT PROGRAM
(VOC/CO, Acid Rain, etc.)

STRATOSPHERIC OZONE

- o ESTABLISH RESTRICTIONS AND PHASE-OUT FOR OZONE DEPLETING CHEMICALS
- o REGULATIONS FOR MOBILE AIR CONDITIONER RECYCLING
- o SET LABELING REQUIREMENTS FOR OZONE DEPLETING CHEMICALS
- o BAN NONESSENTIAL USES OF OZONE DEPLETING CHEMICALS

ACTIONS COMING TO OMB FOR REVIEW WITHIN 9 MONTHS

FINAL ACTIONS (2)

MOBILE SOURCES

- REVISE TAILPIPE STANDARDS FOR HDE, LDV AND LDT
- SET TOTAL IN-USE EMISSIONS STANDARDS FOR MY95-98 VEHICLES IN SEVERE AND EXTREME OZONE NONATTAINMENT AREAS

PROPOSED ACTIONS (15)

NONATTAINMENT

- ○ 3 PM10 CONTROL TECHNOLOGY GUIDANCE'S

MOBILE SOURCES

- +
- ESTABLISH CLEAN FUEL VEHICLE PROGRAM INCLUDING ESTABLISHING ANNUAL EMISSION REDUCTION REQUIREMENTS, DETERMINING FUEL AVAILABILITY AND ESTABLISHING 9 CITY PROGRAM.
 - REVISE TAILPIPE STANDARDS FOR HDE, LDV AND LDT
 - PROMULGATE REVISED EVAPORATIVE REQUIREMENTS FOR VEHICLES
 - PROMULGATE ONBOARD DIAGNOSTIC SYSTEMS REQUIREMENTS FOR VEHICLES
 - REVISE FEDERAL TEST PROCEDURE TO ACCOUNT FOR MORE REAL WORLD CONDITIONS
 - PROMULGATE COLD TEMPERATURE CARBON MONOXIDE STANDARDS FOR VEHICLES
 - PROMULGATE ONBOARD REFUELING REQUIREMENTS FOR VEHICLES

AIR TOXICS

- o NEGLIGIBLE RISK ALTERNATIVE COMPLIANCE

ACID RAIN

- o ESTABLISH ALLOWANCE SYSTEM INCLUDING CRITERIA FOR ELECTING INTO ALLOWANCE SYSTEM
- o ACID RAIN PERMIT PROGRAM INCLUDING EXCESS EMISSION FEE SYSTEM
- o ESTABLISH EMISSION MONITORING & TRACKING
- o SET LOW NOX BURNER EMISSION RATES

ACTIONS COMING TO OMB FOR REVIEW WITHIN 12 MONTHS

FINAL ACTIONS (17)

MOBILE SOURCES

- SPECIFICATIONS FOR REFORMULATED GASOLINE IN CONVENTIONAL VEHICLES FOR 9 CITIES
- PROMULGATE REQUIREMENTS FOR OVERHAULED URBAN BUSES
- PROMULGATE REQUIREMENTS FOR CLEAN FUEL URBAN BUSES
- PROMULGATE DIESEL FUEL SULFUR STANDARD
- PROMULGATE OXYGENATE BANKING AND TRADING CREDITS PROGRAM
- BAN LEAD IN GASOLINE
- ADD IDLE TEST TO FEDERAL TEST PROCEDURE
- REVISE ASSEMBLY LINE AUDIT REGULATIONS
- ADDITION OF SHORT TEST PROCEDURES TO I/M CERTIFICATION

AIR TOXICS

- 90% VOLUNTARY REDUCTION ALTERNATIVE COMPLIANCE

ACID RAIN

- CLEAN COAL TECHNOLOGY INTERPRETATIVE RULE
- BASELINE DETERMINATION CALCULATION METHOD

PERMITS

- PERMIT PROGRAM

STRATOSPHERIC OZONE

- o ESTABLISH RESTRICTIONS AND PHASE-OUT FOR OZONE DEPLETING CHEMICALS
- o REGULATIONS FOR MOBILE AIR CONDITIONER RECYCLING
- o SET LABELING REQUIREMENTS FOR OZONE DEPLETING CHEMICALS
- o BAN NONESSENTIAL USES OF OZONE DEPLETING CHEMICALS

PROPOSED ACTIONS (18)

MOBILE SOURCES

- o SET FORMULATION STANDARDS FOR CONVENTIONAL GASOLINE
- o PROMULGATE STANDARDS TO DETERMINE AVAILABILITY OF CLEAN FUELS AND VEHICLES
- o SET FEDERAL AND PRIVATE FLEET STANDARDS FOR CLEAN FUEL/VEHICLES

AIR TOXICS

- o FIRST 10 MACT STANDARDS
- o FIVE YEAR RACT, BACT, LAER - MACT EXTENSION

STRATOSPHERIC OZONE

- o REGULATIONS ESTABLISHING NATIONAL RECYCLING PROGRAM
- o ESTABLISH CERTIFICATION OF RECYCLING PERSONNEL AND EQUIPMENT
- o STANDARDS FOR SAFE SUBSTITUTES
- o BAN BULK AND PRODUCT IMPORTATION

ACTIONS COMING TO OMB FOR REVIEW WITHIN 18 MONTHS

FINAL ACTIONS (15)

NONATTAINMENT

- o 3 PM10 CONTROL TECHNOLOGY GUIDANCE'S

MOBILE SOURCES

- o ESTABLISH CLEAN FUEL VEHICLE PROGRAM INCLUDING ESTABLISHING ANNUAL EMISSION REDUCTION REQUIREMENTS, DETERMINING FUEL AVAILABILITY AND ESTABLISHING 9 CITY PROGRAM.
- o REVISE TAILPIPE STANDARDS FOR HDE, LDV AND LDT
- o PROMULGATE REVISED EVAPORATIVE REQUIREMENTS FOR VEHICLES
- o PROMULGATE ONBOARD DIAGNOSTIC SYSTEMS REQUIREMENTS FOR VEHICLES
- o REVISE FEDERAL TEST PROCEDURE TO ACCOUNT FOR MORE REAL WORLD CONDITIONS
- o PROMULGATE COLD TEMPERATURE CARBON MONOXIDE STANDARDS FOR VEHICLES
- o PROMULGATE ONBOARD REFUELING REQUIREMENTS FOR VEHICLES

AIR TOXICS

- o NEGLIGIBLE RISK ALTERNATIVE COMPLIANCE

ACID RAIN

- o ESTABLISH ALLOWANCE SYSTEM INCLUDING CRITERIA FOR ELECTING

INTO ALLOWANCE SYSTEM

- + o ACID RAIN PERMIT PROGRAM INCLUDING EXCESS EMISSION FEE SYSTEM
- o ESTABLISH EMISSION MONITORING & TRACKING
- o LOW NOX BURNER EMISSION RATES

PROPOSED ACTIONS (13)

NONATTAINMENT

- o 7 VOC CONTROL TECHNOLOGY GUIDANCE'S

MOBILE SOURCES

- o REVISE RECALL PROGRAM REGULATIONS
- o REVISE CERTIFICATION REGULATIONS FOR FLEETS
- o SET FUEL QUALITY SPECIFICATIONS TO MINIMIZE VEHICLE EMISSIONS
- o SET REGULATIONS AND CREDITS FOR CLEAN FUEL/VEHICLE FLEET PROGRAM
- o PROMULGATE REGULATIONS REDEFINING USEFUL LIFE FOR VEHICLES

ACID RAIN

- o CREATE ALLOWANCE AUCTION

ACTIONS COMING TO OMB FOR REVIEW WITHIN 24 MONTHS

FINAL ACTIONS (18)

MOBILE SOURCES

- o SET FORMULATION STANDARDS FOR CONVENTIONAL GASOLINE
- o PROMULGATE STANDARDS TO DETERMINE AVAILABILITY OF CLEAN FUELS AND VEHICLES
- o SET FEDERAL AND PRIVATE FLEET STANDARDS FOR CLEAN FUEL/VEHICLES

AIR TOXICS

- o FIRST 10 MACT STANDARDS
- o FIVE YEAR RACT, BACT, LAER - MACT EXTENSION

STRATOSPHERIC OZONE

- o REGULATIONS ESTABLISHING NATIONAL RECYCLING PROGRAM
- o ESTABLISH CERTIFICATION OF RECYCLING PERSONNEL AND EQUIPMENT
- o STANDARDS FOR SAFE SUBSTITUTES
- o BAN BULK AND PRODUCT IMPORTATION

PROPOSED ACTIONS (2 & MACT)

NONATTAINMENT

- o MARINE VESSEL REGULATION

MOBILE SOURCES

- o SET TOTAL IN-USE EMISSIONS STANDARDS FOR MY99 AND LATER FOR VEHICLES IN SEVERE AND EXTREME NONATTAINMENT AREAS

AIR TOXICS

- o MACT STANDARDS FOR 25% OF REMAINING 300+ SOURCE CATEGORIES

ACTIONS COMING TO OMB FOR REVIEW AFTER 24 MONTHS

FINAL ACTIONS (21 & MACT)

NONATTAINMENT

- o 7 VOC CONTROL TECHNOLOGY GUIDANCE'S (36 MONTHS)
- o MARINE VESSEL REGULATION (48 MONTHS)

MOBILE SOURCES

- o REVISE RECALL PROGRAM REGULATIONS (36 MONTHS)
- o REVISE CERTIFICATION REGULATIONS FOR FLEETS (36 MONTHS)
- o DETERMINE AVAILABLE CLEAN FUELS FOR MY99 AND LATER VEHICLES (60 MONTHS)
- o SET TOTAL IN-USE EMISSIONS STANDARDS FOR MY99 AND LATER VEHICLES IN SEVERE AND EXTREME NONATTAINMENT AREAS (48 MONTHS)
- o SET FUEL QUALITY SPECIFICATIONS TO MINIMIZE VEHICLE EMISSIONS (36 MONTHS)
- o SET REGULATIONS AND CREDITS FOR CLEAN FUEL/VEHICLE FLEET PROGRAM (36 MONTHS)
- o PROMULGATE REGULATIONS REDEFINING USEFUL LIFE FOR VEHICLES (36 MONTHS)

AIR TOXICS

- o MACT STANDARDS FOR REMAINING 300+ SOURCE CATEGORIES (4, 7, & 10 YEARS)

- o RESIDUAL RISK EVALUATION (60 OR 84 MONTHS)

ACID RAIN

- o CREATE ALLOWANCE AUCTION (36 MONTHS)
- o INFORMATION REQUIREMENTS FOR REPOWERING (JAN 1996)
- o RETROFIT NOX EMISSION RATES* (JAN. 1997)
- o REVISE NOX NSPS (JAN. 1994)
- o REVISE NSPS FOR FOSSIL FUEL STATIONARY SOURCE (36 MONTHS)

PROPOSED ACTIONS (5 & MACT)

MOBILE SOURCES

- o DETERMINE AVAILABLE CLEAN FUELS FOR MY99 AND LATER VEHICLES

AIR TOXICS

- o MACT STANDARDS FOR 75% OF REMAINING 300+ SOURCE CATEGORIES
- o RESIDUAL RISK EVALUATION

ACID RAIN

- o INFORMATION REQUIREMENTS FOR REPOWERING
- o RETROFIT NOX EMISSION RATES
- o REVISE NOX NSPS