STATEMENT OF

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BEFORE THE

SUBCOMMITTEE ON HEALTH AND THE ENVIRONMENT

COMMITTEE ON ENERGY AND COMMERCE

UNITED STATES HOUSE OF REPRESENTATIVES

ON

H.R. 4 AND H.R. 2585

PROPOSED AMENDMENTS TO THE CLEAN AIR ACT

ON NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

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I. INTRODUCTION

Good morning Mr. Chairman. My name is Terry F. Yosie and I am Vice President of Health and Environment at the American Petroleum Institute. API is a national trade association representing over 200 companies and 5,000 individual members. I am pleased to have this opportunity to address proposed amendments to the Clean Air Act (CAA) on hazardous air pollutants. I will present API's views on reducing emissions of toxic air pollutants and will comment specifically on two bills recently introduced, HR-4 and HR-2585.

API shares the goal of the Congress, the Administration, and the American people to reduce concentrations of hazardous air pollutants. API plans to actively participate in the debate over the nature of additional legislation that fulfills this goal, keeping in mind other goals that the American people desire - such as the expansion of economic growth and opportunity. We believe that the legislation proposed thus far must be refined in order to achieve all of these goals simultaneously. Improvement can be made by adopting provisions in the legislation for reasonable technology based controls for those sources found to be significant emitters of toxic air pollutants, and by targeting residual risk control requirements for any remaining facilities that pose an unreasonable risk after implementation of technology

control requirements. The criteria used to select and rank source categories for regulation should include substance toxicity, population exposure, quantity of emissions, geographic location of facilities, and current degree of emissions controls. Before commenting on specific legislative proposals I would like to discuss the magnitude of the air toxics problem in the United States, and the principles API believes should apply in developing legislation to reduce the problem.

II. THE MAGNITUDE OF THE AIR TOXICS PROBLEM

Recent data collected under SARA Section 313 indicate that large volumes of chemicals are released to the atmosphere from manufacturing facilities nationwide. While this information raises legitimate concern about toxic releases, the data do not indicate the degree of exposure that these emissions contribute to overall population or environmental risks. For example, benzene is listed in the toxic air pollutant inventory as one of the top 25 chemicals released. Total Exposure Assessment Methodology (TEAM) data from EPA indicate that industry emissions account for about 14 percent of the total releases of benzene to the atmosphere. The TEAM data further emphasize that industry emissions account for only about three percent of total human exposures to atmospheric benzene. The EPA TEAM data therefore underscore the conclusion that emission data do not provide a direct measure of human exposure.

It should also be recognized that controls established under existing law have led to significant progress in reducing toxic emissions. The current National Ambient Air Quality Standards (NAAQS) control several criteria pollutants with technologies that also reduce toxic air emissions. For example, measures to reduce volatile organic compounds (VOC's) for control of ozone also control many of the hazardous VOC's to be addressed in the proposed legislation for air toxics. Particulates are controlled in the NAAQS program with technologies that reduce emissions of hazardous metal compounds. We believe that while air toxics is an issue that requires continuing effort, toxic air emissions do not pose a nationwide public health crisis. Air toxics legislation should be directed towards achieving reasonable progress in reducing overall emissions, with emphasis on those facilities where exposures are significant.

III. PRINCIPLES AND SPECIFIC COMMENTS ON PROPOSED LEGISLATION

API believes that two overriding principles should govern the development of air toxics legislation in making reasonable progress to reducing emissions. First, legislation should integrate technology requirements with risk determinations, and then focus initial action on those source categories that pose the most significant risk, followed by a step to assess the remaining risk to determine whether subsequent controls are needed. Second, API recommends that the legislation provide a

mechanism to assess the magnitude and sources of actual area exposures to toxic air pollutants, especially in urban areas, so that the most cost effective control decisions can be made to reduce exposures.

Our specific comments on HR-4 and HR-2585 address seven important issues that are vital to developing amendments.

(1) A technology based approach in the amendments can be made workable if realistic control requirements are mandated and if at least 10 years of usable life is provided for pollution control equipment. Technology based control requirements should be based on commercially available equipment for the source category of concern with consideration of the marginal cost of installation compared to the incremental benefit of reduced emissions. Consideration should be given to equipment already in place to control volatile organic compounds.

(2) Provision should also be made for a source category ranking system that (a) leads to priority regulation of the most significant sources first, and (b) allows for control technology to be specified at the process unit level based on performance standards. We believe that both HR-4 and HR-2585 provide such a framework. However, at least three years should be provided, as in HR-4, for facilities to

comply with regulatory requirements.

(3) Air toxics legislation should also provide for exclusion of sources from technology control requirements that (a) pose an insignificant risk to public health (such as those located in remote locations), and (b) represent de minimis emission levels. Based on these two criteria, the majority of oil and gas production facilities in the country should be exempted from technology based controls except where an unreasonable risk to health from individual sources is demonstrated.

(4) Area sources should be addressed separately in the legislation, such as in HR-2585, but with controls mandated only upon demonstration of unreasonable risk. Area source exposure studies should be initiated in urban areas around the country to assess the magnitude and sources of exposure. In this way, the most cost effective solutions to reduce exposures can be achieved. Mobile source controls should be addressed under Title II of the Clean Air Act, not additionally in air toxics legislation. The contribution of indoor sources of exposure should be factored into the evaluation of the benefits of controlling outdoor sources.

(5) Air toxics legislation should avoid specifying numerical residual risk limits, and allow EPA discretion in

determining unreasonable risk levels for each source category regulated. This is necessary so that EPA can gauge important factors in making risk based decisions such as (a) the quality of risk data, (b) the degree of toxicity and exposure for all chemicals released, (c) important measures of risk, including population incidence, that could have bearing on the assessment, and (d) special considerations such as life expectancy of the plants operating. The residual risk test should be based on "most plausible" estimates of exposure and potency.

(6) Legislation should avoid a burdensome permitting process. Only re-permitting for those modifications that are substantial and that lead to net increases in air toxics emissions should be required. We recommend provision for reasonable permitting requirements that, to the extent possible, use existing permit systems, avoid unnecessary delays and minimize impediments to pollution control implementation. We believe that this can best be achieved by a legislative provision for general permits or permit by rule.

(7) Catastrophic releases should not be separately addressed in air toxics legislation, but rather addressed in SARA Title III or through process hazard management provisions in OSHA.

In short, API believes that in current legislative proposals to amend Section 112 with a "technology based" approach can be made workable with the refinements noted above.

In addition, API is concerned that the "residual risk test" as specified in HR-2585 has the potential to cause severe planning and economic disruption with no real benefit to public health. Our strong concern over the residual risk provision is based on: (1) the exclusive use of ultra-conservative risk assessment methodologies when other methods are scientifically sound or, in some cases, scientifically superior, and (2) the quasi-zero risk target of one-in-a-million to a hypothetical maximally exposed individual, without consideration of cost. The combined effect of ultra-conservative risk methodologies and a quasi-zero risk target could result in unattainable emission limits for numerous facilities to attain part per trillion exposure levels in surrounding communities.

IV. SPECIFIC ISSUES OF CONCERN

This section of our testimony addresses specific issues with regard to air toxics legislative proposals. In addition, we offer a number of recommendations we believe would result in more workable and effective amendments.

A. Control Technology Requirements

API believes that the initial technology driven control requirements should be based on commercially available control equipment. This is necessary for a number of reasons:

Commercially demonstrated technology for each source category will likely achieve most of the emission reductions necessary to protect health and the environment. In all likelihood, stringent technology requirements based on "Lowest Achievable Emission Rates" (LAER), or other similar requirements, would not achieve appreciatively greater incremental health benefits, and would increase marginal costs significantly.

In the event non-commercially available technology is deemed necessary for a source category, the Administrator should have the authority to consider the impacts due to lack of equipment and engineering availability to meet regulatory requirements and the flexibility to consider modifications of emissions standards.

If unproven technology is required prematurely and fails to perform as necessary to continue facility operations or achieve emissions reductions, economic waste is guaranteed and public health is not protected.

Any unreasonable health risks remaining after commercially

available controls are installed would be addressed subsequent to a residual risk determination.

Control technology requirements should be established with consideration of the marginal cost incurred for each increment in emission reduction. For example, if two technologies are commercially available to control a specific process, with technology `A' providing 99 percent control at a cost of one million dollars, and technology `B' providing 99.9 percent control for 5 million dollars, the incremental benefit of technology `B' is very small compared to the additional cost over technology A. In this hypothetical case, technology A would be preferred as a technology solution.

If, in the above example, technology B is absolutely necessary in certain high exposure instances posing unreasonable health risks, the second phase residual risk determination would provide a mechanism to decide whether additional controls are necessary. In this way, the extreme costs of most stringent controls are reserved for those cases in which the extra emission reductions to protect surrounding communities are needed.

To our knowledge, none of the proposed bills adequately addresses the concept of marginal cost and incremental benefit of additional controls in establishing technology requirements for source categories. Although HR-4 and HR-2585 endorse a general

concept of cost consideration in developing technology requirements, we believe the legislation should be explicit in directing EPA to evaluate the marginal costs of a more stringent requirement compared to the incremental benefit received in terms of reduced emissions. As such, legislation should not arbitrarily require a priori that new or existing facilities employ the most stringent available technology unless deemed necessary and cost-beneficial in terms of emission reductions.

B. Source Categories for Regulation

The provisions included in proposed legislation for technology based standards generally call for technology requirements to be established for a hierarchy of source categories. API believes that the general concept of a technology determination of control requirements in each source category, with the most significant source categories addressed first, is a workable approach if properly conceived in the legislation. Air toxics legislation should provide a mechanism for EPA to focus attention on reducing emissions in those facilities identified as posing significant exposure levels. The following recommendations are made to improve the source category provisions proposed in HR-4 and HR-2585.

(1) A multi-step rulemaking process should be specified in the legislation for selecting and ranking source categories and

subcategories for technology based controls. Included in the process should be provision for EPA to develop criteria for defining, listing and ranking source categories and subcategories to be considered for regulation. The criteria should include substance toxicity, population exposure, quantity of emissions, geographic remoteness of emission sources, and the present degree of emission controls. If sources beyond SIC Codes 20 to 39 (manufacturing facilities that submit SARA Section 313 data) the legislation needs to define how data will be developed to estimate emissions of covered toxic pollutants.

(2) Source categories should be defined at the unit specific, or process specific level.

(3) Subcategories of sources should be designated based on: unit/process size, remoteness of location, and differences in population exposure potential.

(4) Facilities should be provided with at least three years to comply with technology requirements, as is specified in HR-4. The two year period specified in HR-2585 would be insufficient, especially if inventories of control equipment are lacking to meet demand.

(5) Source categories and/or subcategories posing minimal

population exposure potential due to remoteness of facilities or de minimis emission levels should be eligible for exemption from technology control requirements (i.e. delisted from the ranking scheme). Oil and gas facilities should be exempt from controls except where a demonstration of unreasonable risk to the public is found for individual emission sources.

Of the proposed legislative bills, API believes that only HR-4 approaches the flexibility needed in designating which categories warrant regulation. Provisions in HR-2585 mandate EPA to regulate all source categories regardless of the insignificance of emissions. API believes that regulation of all hazardous pollutant source categories currently contemplated by EPA, including, for example, minor sources such as remote oil production wells, dental preparations and sawmill operations, would be a waste of resources and would not lead to additional public health protection.

C. Exclusion of Inconsequential Sources

An important provision that should be included in any technology based air toxics legislation is the allowance for facilities to avoid costly control requirements when their emissions are inconsequential to public health. Two mechanisms to prevent unnecessary controls include an insignificant risk exclusion for

individual facilities, and a de minimis emission rate for very small facilities.

Without provision in legislation for inconsequential sources to be exempted from expensive control requirements, thousands of facilities would be required to install control technology at great cost with little to no likely public health benefit. The economic repercussions of such a requirement could have societal impacts that overshadow the benefits of the entire air toxics program.

API believes that the insignificant risk determination should rest with either the facility or state and local governments since the number of assessments likely to be performed would overwhelm the capabilities of federal agencies. Federal guidelines should be followed in conducting the assessments, and Agency review, either independently or as part of the permit process, should be implemented.

The insignificant risk provisions contained in HR-4 paragraph (h) on Variances and Extensions provides an adequate mechanism for owners or operators to demonstrate that facility emissions pose an insignificant risk to human health. API believes that the rules and guidance for insignificant risk variances should be established by EPA following, as time allows, the recommendations noted below concerning risk assessment guidelines.

For each source category, the de minimis emission rate for individual sources should be established by EPA. If facilities have emission rates below de minimis levels, no further control requirements would be deemed necessary. API believes that a de minimis waiver should be established based on an EPA appraisal of the pollutants emitted, and the quality of potency and emissions data available. The de minimis waiver should not be explicitly tied to an insignificant risk level such as one-in-ten-million as is currently proposed in HR-2585.

D. Area Sources

Legislation to amend Section 112 should make special provision for area sources. API believes that the emphasis on area source controls should be in those areas of the country where hazardous pollutant concentrations merit area wide controls based on a demonstrated risk. In this regard, area sources should be considered separately, and have a control program based on analysis of the area wide emissions in a locality of concern. The separate provision in HR-2585 that established source categories, ranking, monitoring studies, and compliance schedules is a step in the right direction.

API further recommends that mandated area source studies and emissions reduction planning be completed before area sources are required to install pollution control technology. In this way

the most cost effective and needed requirements can be implemented without wasting resources.

E. Residual Risk Determination

Residual risk requirements could result in continued controversy and regulatory stalemate if provisions for risk assessment are not properly conceived in the legislation. API has several concerns and recommendations in this regard:

- The legislation should avoid a residual risk determination that allows the imposition of additional control requirements before previously required equipment has enjoyed a useful life. API recommends that installation modifications resulting from residual risk determinations not occur before previously required technology controls have at least a ten year minimum usable life. To this end, a residual risk determination should be specified in the legislation seven years after the implementation of technology controls (as in HR-4), and allow at least three years to install additional controls as required to meet any subsequent the residual risk requirements.

- Additional controls to address residual risk should only be mandated to the extent feasible with consideration of cost factors.

- The methodology specified to conduct a residual risk determination should be based on scientifically sound methodology employing "most plausible" estimates when data are available, not upper bound estimates of risk. This is consistent with EPA's current risk assessment guidelines and the views of the scientific community.

- A residual risk target should not be specified in the legislation. EPA discretion should be allowed to determine acceptable risk levels for each source category, with consideration of the quality and uncertainty of the potency information and exposure analysis available for the chemicals emitted, and with consideration of all risk measures including population incidence and risk distribution estimates.

- Risk models used should be periodically reviewed by an independent scientific panel, formed in a non-regulatory agency such as National Academy of Sciences, National Science Foundation, National Institutes of Health, and/or the Society for Risk Analysis. We applaud the provisions in HR-4 and HR-2585 to improve risk assessment guidelines.

- The residual risk determination should employ site specific data. Calculations of risk should not be based on hypothetical worst case assumptions such as a maximally exposed individual (MEI) continuously located at a facility

fenceline, 365 days per year for 70 years. Instead, more realistic site specific exposure scenarios should be used such as: (a) exposure levels at the residential location with the maximally calculated exposure from the source; and (b) exposure duration calculations based on population statistics of geographical mobility and daily activity patterns.

With regard to these recommendations, API believes that HR-2585 places extreme emphasis on unrealistic risk goals. API and the public have several reasons to be concerned with the rigid one-in-a-million risk targets specified in HR-2585 for the maximally exposed individual including:

- Unknown impact - The number of plant shutdowns and economically crippled industrial operations could be large. EPA has estimated in a recently proposed NESHAP for benzene that a one-in-a-million risk target for benzene could virtually shut down all chemical plants in the U.S. that handle benzene, based on the conservative risk assessment methodologies currently employed by the Agency.[1]

- Risk uncertainty - Keying regulatory decisions to a

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[1] EPA proposed rule for benzene NESHAP, 40 CFR Part 61, 53 F.R. 28496 - 28592 (July 28, 1988). On Summary Table I-3 (pg. 28501), EPA estimates that for the proposed one-in-a-million risk limit option (Approach D) all 131 plants considered in the benzene fugitive emission/equipment leak source category would be closed with a loss of roughly 35,000 jobs directly associated with plant operations.

one-in-a-million risk target for the MEI is the most uncertain risk criterion to use. Risk assessments for low concentrations of pollutants (part per trillion exposure levels) to a hypothetical maximally exposed individual involve extended extrapolations of high dose toxicological data that are highly uncertain. Typically, a one-in-a-million risk determination for hazardous air pollutants has uncertainty bounds of two orders of magnitude or more. In addition, coupling risks from multiple pollutants, as proposed in some provisions of HR-2585, would further compound the uncertainty in estimating risk. We believe that flexibility is needed in the legislation for EPA to gauge the quality of the risk data used in setting regulatory requirements.

- Other risk estimates - The proposals in HR-2585 ignore other risk estimates that are important in regulatory decision making. Included for consideration should be estimates of population incidence (cancer cases estimated in the entire population) and risk distribution (how much a regulatory decision reduces the risk in the entire population, not just for one hypothetical individual). Both population incidence and risk distribution estimates are more certain estimates of risk compared to estimates of maximum individual risk specified in the HR-2585. API believes that a flexible approach in assessing risk information is needed to make the best regulatory decisions, utilizing information on all

measures of risk and incorporating judgement on the quality of data available to make risk determinations. Hard line individual risk targets such as one-in-a-million based solely on a hypothetical MEI using conservative risk methodologies should be avoided in air toxics legislation.

F. Permitting System and Compliance Schedule

Provision should be made in the legislation for EPA, states and regulated sources to have an adequate time period of at least three years to develop and implement requirements, consistent with the availability of technology, engineering, and construction resources, and consistent with legislative goals. To the extent feasible, existing permitting systems should be retained to avoid unnecessary permitting delays and impediments. Adequate provision should be made for netting and bubbling. This would insure that the most cost effective controls can be made to achieve emission reductions. General permits or permit by rule should be utilized for repetitive class permits. Adequate time for compliance, taking into account permit process needs, should be provided in the legislation.

API strongly recommends that the permit program specified in HR-2585 be modified. Numerous delays and potential for disruption of facility operations exist as proposed. API recommends that, at the very least, if permit by rule or general

permits are not adopted, that the permit period be extended to seven years to match our timing recommendation for the residual risk requirement. A fee structure paid by the permittees should also be avoided.

G. Omission of Catastrophic Release Requirements

Air toxics legislation under Section 112 of the Clean Air Act should consider only routine or continuous toxic air pollutant releases. Consideration for catastrophic releases, including process design criteria, should be made separately under SARA Title III or under process hazard management provisions of OSHA.

SARA Sections 301 to 305 currently address catastrophic emergency release reporting, planning and prevention programs. Emergency planning and response jurisdiction currently falls in SARA Title III to Local Emergency Planning Committees, State Emergency Response Commissions, and the National Response Center. Provision for catastrophic release prevention under CAA Section 112, as proposed in HR-2585, would overlap these efforts, leading to administrative and jurisdictional disputes, duplicative regulation and compliance requirements on facilities, and wasteful allocation of limited government resources.

V. COST IMPLICATIONS OF THE PROPOSED LEGISLATION

API has begun to address the potential cost of proposed air toxics legislation on the petroleum industry. The API study addresses the cost of controls on the four major petroleum sectors including refining, production, marketing, and transportation. Our preliminary estimates suggest that the costs of proposed legislation will be higher than any estimates we have reviewed so far for any industry. Total capital costs to the petroleum industry are estimated to range from $17.308 billion to $54.406 billion.

The costs anticipated for each sector in the petroleum industry are included in Table 1. These costs do not include operating and maintenance costs for control equipment installed. Only capital costs for pollution equipment, and some inspection/maintenance costs related to controlling fugitive emissions are included. At the low end of the cost range (Case I), the estimates reflect air toxic control measures equivalent to controls required now in California for ozone nonattainment. At the high end of the cost range (Case II), the estimates reflect additional costs beyond Case I where MACT is interpreted to require technologies which are currently experimental or not otherwise in significant commercial use. Although these estimates are preliminary, and will be revised as better data become available over the next several months, we believe the figures represent a reasonable estimate of the ranges of the likely costs of the proposed bills.

The preliminary cost analysis does not include two other important costs potentially associated with proposed air toxics legislation. First of all, no attempt has been made as yet to determine the number of marginally operating facilities that could shut down under the two cost scenarios addressed above. For example, preliminary estimates suggest that as many as 230,000 domestic small production "stripper wells" of two barrel per day or less output could shut down if required to install extensive controls. Secondly, no attempt has yet been made to assess the cost of a residual risk determination after initial technology based controls are in place.

Table 1

SUMMARY OF AIR TOXICS EMISSIONS CONTROL COSTS

(Million $)

SECTOR	CASE I	CASE II
Production	8,946	27,866
Transportation	945	3,017
Refining	1,420	14,337
Marketing	5,997	9,186
Total	17,308	54,406

VI. CONCLUSION

In conclusion, API emphasizes the importance of developing air toxics legislation that regulates significant sources of hazardous air pollutants, with reasonable technology based control requirements, implementation deadlines, and permitting procedures. HR-4 and HR-2585 represent a first step towards

developing approaches to reducing the nation's remaining air toxics emissions. The following concepts in legislation will further these goals:

- Reasonable technology based controls should be mandated that allow for 10 years of usable life for pollution control equipment.

- Source categories that pose the greatest potential risk should be regulated first, with the criteria for prioritizing based on toxicity, population exposure, quantity of emissions, geographic remoteness of emission sources, and the present degree of controls.

- Exclusion provisions should be included so that facilities that have emissions inconsequential to public health can be exempt from technology based controls.

- Area sources should be considered separately from major sources in air toxics legislation, with area source controls based on a demonstration on unreasonable risk in the localities of concern.

- Provision for residual risk requirements should be geared to individual facilities, and allow EPA discretion in determining unreasonable risk levels within each source category.

- Permitting systems be based where possible on permit by rule or by general permits.

- Catastrophic release provisions should not be included in air toxics amendments, but rather considered under either SARA Title III or in process hazard management provisions of OSHA.

Thank you for your time and consideration.