

1991 PROPOSED
HEALTH AND ENVIRONMENTAL
BUDGET

HEALTH AND PRODUCT SAFETY PROGRAM

This program provides the focus for health related components of legislative and regulatory issues. It is also responsible for all benzene activity and legislative and regulatory issues pertaining to SARA Title III, Hazard Communication, Worker Protection, TSCA, and CERCLA spill reporting. The program serves as an initial screen or scoping body to evaluate health-related issues that serve as the foundation for regulatory decisions and standards. Finally, it performs independent review of government issued health assessments of petroleum related products (e.g. ATSDR, IARC, etc. documents).

The base case budget of \$1,200K is a lower level of funding than that for 1990 (\$1,425K.) At the base case & 30% level (\$1,700K), additional needed research for toxicity testing of chemicals, SARA Title III, and worker protection issues is included.

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HEALTH AND PRODUCT SAFETY PROGRAMS

1991 BUDGET SUMMARY

<u>TOPIC</u>	(OPT. 1) <u>BASE-CASE</u>	\$K (OPT. 3) <u>BASE CASE +30%</u>	<u>UNCONSTRAINED*</u>
HEALTH/TOXIC ISSUES/ TEST RULES	150	375	700
SARA TITLE III EMISSIONS	275	375	915
WORKER EXPOSURE + HEALTH	75	250	520
BENZENE	700	700	1050
DIOXIN	0	0	0
TOTAL	1,200	1,700	3,185

* TOTAL REQUESTED BY PROGRAM GROUP.

NEEDED RESEARCH
NOT INCLUDED IN BASE CASE

(Descending Priority)

	\$K
1. Toxicity Testing of Chemicals	225
2. Emission Factors - Waste Water Streams	100
3. Compile Workplace Exposure Data	50
4. Response to Occupational Medicine Issues	25
5 Spill Exposure Monitoring & Protective Equipment	*100
TOTAL	<u>500</u>

* PROPOSED DELETION TO MEET OPT. 2 LEVEL.

1991 BUDGET MATRIX - HEALTH/TOXIC ISSUES, RULES

<u>PROJECTS</u>	(\$K) <u>REQUESTED</u> <u>BUDGET</u>	<u>DEPT.</u>
<u>BASE CASE REQUEST</u>		
1. REGULATORY RESPONSE FOR HEALTH EFFECTS. Consultants will be retained to assist in reviewing selected toxicological profiles and other health and environmental effects matters and for preparing advocacy comments to respond to regulatory initiatives.	75	HEAD
2. TOXICITY TESTING OF CHEMICALS. Testing will be conducted on individual compounds and mixtures of importance to the petroleum industry to provide data input to government development of health based standards. Considerations will be given to innovative testing/research approaches.	75	HESD
TOTAL BASE CASE	<u>\$150</u>	
<u>OTHER PROJECTS NEEDED TO ACHIEVE OBJECTIVES</u>		
1. ADDITIONAL TOXICITY TESTING OF CHEMICALS. Continuation of 2 above.	225	HESD
TOTAL BASE CASE + 30%	<u>\$375</u>	

1991 BUDGET MATRIX - SARA TITLE III EMISSIONS

<u>PROJECTS</u>	(\$K) <u>REQUESTED</u> <u>BUDGET</u>	<u>DEPT.</u>
<u>BASE CASE REQUEST</u>		
1. LEGISLATIVE/REGULATORY RESPONSE FOR SARA TITLE III ISSUES. Provides funding for consultants to assist in analyzing regulations/legislation and in preparation of position papers.	75	HEAD
2. SARA TITLE III EMISSIONS (BAGGING DATA). Further refine emission factor data obtained in Phases I and II of the fugitive emissions factor project by obtaining actual mass emission data (component bagging.) Incorporate data into revised emission factor equations.	200	HESD
TOTAL BASE CASE	<u>\$275</u>	
<u>OTHER PROJECTS NEEDED TO ACHIEVE OBJECTIVES</u>		
1. EMISSION FACTORS - WASTEWATER STREAMS. Develop factors for air emissions from wastewater streams applicable for Title III reporting.	100	HESD
TOTAL BASE CASE + 30%	<u>\$375</u>	

1991 BUDGET MATRIX - WORKER EXPOSURE AND HEALTH

<u>PROJECTS</u>	<u>(\$K) REQUESTED BUDGET</u>	<u>DEPT.</u>
<u>BASE CASE REQUEST</u>		
1. RESPONSE TO WORKER PROTECTION ISSUES. Analyze and respond to OSHA initiatives and legislative developments re occupational safety and health including respiratory protection standard, exposure monitoring, medical surveillance etc.	75	HEAD
TOTAL BASE CASE	<u>\$75</u>	
<u>OTHER PROJECTS NEEDED TO ACHIEVE OBJECTIVES</u>		
1. WORKPLACE EXPOSURE DATA. Gather all existing available data from member companies on workplace monitoring and exposure to benzene and other chemical substances. Perform a comprehensive summary and analysis of data.	50	HEAD
2. RESPONSE TO OCCUPATIONAL MEDICINE ISSUES. Items include literature reviews, workshops, and/or consultant support to address issues such as biomarkers, neurotoxicity, immune disorders, employee assistance etc.	25	HESD
3. SPILLS EXPOSURE MONITORING AND PROTECTIVE EQUIPMENT. Develop air monitoring methods for evaluating worker exposure during oil spill cleanup. Identify personnel protective equipment having permeation data and prepare reference manual.	*100	HESD
TOTAL BASE CASE + 30%	<u>\$250</u>	
* PROPOSED DELETION TO MEET OPT. 2 LEVEL.		

April 6, 1990

1991 BUDGET MATRIX - BENZENE

<u>PROJECTS</u>	(\$K) <u>REQUESTED</u> <u>BUDGET</u>	<u>DEPT.</u>
<u>BASE CASE REQUEST</u>		
1. Biologically Based Benzene Risk Assessment. (Cox Associates) Develop a biologically based benzene risk assessment to reflect results of ongoing research and changes in risk policy.	100	HEAD
2. Regulatory and Legislative Response. Additional reports and studies for regulatory and litigation responses. Conferences to present research findings.	100	HEAD
3. Cellular Toxicity of Benzene (Dr. Richard Irons, University of Colorado) Multi-year program to determine the cellular toxicity of benzene and its metabolites and the relationship of the toxicity to benzenes leukemogenic effects.	250	HESD
4. Metabolism of benzene (CIIT) A multi-year program to identify metabolites of benzene in animal models, the pharmacokinetics of benzene metabolites, and mechanism of metabolite toxicity.	250	HESD
TOTAL BASE CASE	<u>\$700</u>	
TOTAL BASE CASE + 30%	<u>\$700</u>	

TOPIC: HEALTH/TOXIC ISSUES, RULES (M/M)**ISSUE/IMPACT**

The increasing pressure to reduce health and environmental risks associated with petroleum industry products, processes, releases, and disposal methods cannot be overstated. Recently proposed Drinking Water Standards, Corrective Action (RCRA 3004(U)) requirements, and RCRA Toxicity Characteristics (OTC) activities underscore the fact that the Federal Government will attempt to maximize public health protection by minimizing petroleum contaminant levels.

The key to determining the allowable level in the air, land, or water is the health effects caused or suspected to be caused by the compound.

EPA and other entities conduct health effects reviews on many compounds. The health effect review results in a judgment of the potential hazards associated with the chemical which then guides the extent of action to reduce exposure. Thus, the industry's ability to affect the process of determining clean-up levels is heavily dependent on our ability to participate in the compound's health review.

Activities to address the toxicity of chemicals and products include:

- o EPA health effects reviews compiled in IRIS (Integrated Risk Information System), an on-line catalogue of EPA risk assessment and reference dose (RfD) information.
- o The International Agency for Research on Cancer (IARC) classifies compounds with respect to carcinogenic hazard.
- o EPA's Office of Drinking Water sets Maximum Contaminant Levels (MCLs) for many chemicals in drinking water which are used as clean up standards for RCRA and CERCLA programs.
- o The Agency for Toxic Substances Disease Registry (ATSDR) compiles data on compounds. These compilations form the basis of recommended research needs. ATSDR also conducts health assessments on all the National Priority List (NPL) sites and other sites.

Impact on the industry could take several forms. The most significant problem is that health based standards are used to justify more stringent clean-up requirements, and as a consequence, raise the cost to the industry. The industry must also bear the expense of follow-up groundwater monitoring and other related technical requirements.

The increasing number and availability of compound specific activities could also influence the number of toxic tort cases and their potential outcome.

STRATEGY OUTLINE

I. REGULATORY

Objective - To monitor and critique information provided by others on the potential health effects of petroleum products and related chemicals and to develop new information as necessary.

A. Research

1. Publish API research in peer reviewed journals.
2. Conduct toxicology studies on products and processes important to the industry to influence the development of health based standards.

B. Response

1. Review and critique ATSDR tox profiles for chemicals of interest and respond to generic issues such as procedures for health assessments, health studies.
2. Examine available alternative methods for estimating human health risk assessment for direct application in the standard setting process.
2. Respond to efforts to revise cancer guidelines and/or OSHA and state agency use of carcinogen classification schemes.
 - a. Respond to emerging issues such as chemical hypersensitivity syndrome, use of biomarkers etc, by conducting literature reviews, workshops and consultant critiques.

C. Networking

Maintain liaison with EPA, AICHE, CMA and others on the above issues and conduct cooperative efforts as appropriate.

TOPIC: SARA TITLE III (M/M)**ISSUE/IMPACT**

In 1991 the availability of three years of data from the Toxic Release Inventory (TRI) will likely fuel legislative and regulatory initiatives under Title III of SARA. If trend analyses show little in the way of reductions, the scheduled reauthorization of SARA may focus on prescribed remedies to attenuate emissions. In this case, the data may also be used to justify additional air toxics legislation such as those proposed by Congressman Waxman.

On the regulatory front, the continued reporting of unrealistically high values could provide the impetus for rulemakings to increase the number of chemicals reported, reduce the triggers for reporting or expand the industrial sectors subject to the rule, or impose unnecessarily stringent control technology (e.g., maximum available control technology or "MACT"). Additional pressure for change is being generated by state and local agencies deluged with Sections 311/312 information, which the EPA does not assist them in evaluating.

Any of these legislative or regulatory initiatives will increase compliance costs for the industry. Moreover, perceptions that the industry has not already exerted a major effort to reduce emissions can sustain the public impression that the industry is a major part of the environmental problem and not a party working for its solution.

STRATEGY OUTLINE**I. REGULATORY**

To ensure the information reported under Title III of SARA is valid, reliable, and in a useful format;; to foster appreciation of the limitations of some of the TRI information vis-a-vis assessing needs for emission controls; to assist emergency response agencies in using existing right-to-know and emergency planning information to meet their response planning needs.

A. Research

1. Continue development/refinement of emission factors for calculating emissions from fixed and fugitive sources. This involves collecting leak rate bagging data from member companies to use in further refining fugitive emission factors (Phase III). Additionally, ascertain if it is possible to develop better emission factors for fugitives from waste water processing.
2. Conduct a comprehensive measurement and monitoring study that measures both refinery emissions and actual upwind/downwind concentrations at the fenceline.

3. Conduct a thorough study regarding how Title III data is used, and what is being done by both member companies, as well as chemical companies to reduce emissions reportable under Title III.
4. Examine exhaustively the state and local actions which have arisen regarding Title III and potential modifications these entities might advocate during SARA Reauthorization.
5. Prepare materials (e.g., video tape) which will serve to inform EPA regional, state and local Title III entities about API's unique approach to reporting under Sections 311 and 312 for production operations; these materials will discourage additional regulatory requirements by demonstrating safety and environmental controls already in place.
6. Conduct a study or studies of member companies to determine each industry sector's cost of compliance with all major provisions of Title III, particularly Sections 311, 312, and 313.

B. Response

1. Monitor and analyze developments in legislation to reauthorize SARA or use Section 313 data for other uses, or expand collection of Section 313 data beyond manufacturing.
2. Continue to support existing reporting alternatives, options and exceptions particularly those that pertain to expansion in reporting requirements (substances, trigger levels or parties subject to reporting).

C. Networking

1. Work cooperatively with CMA, PMAA, IPAA, SIGMA and regional oil & gas associations to identify areas of common concern, as well as those issues that are unique to the petroleum industry.

II. PUBLIC OPINION

Oil industry facilities are incorrectly perceived as one of the major contributors to air pollution and global warming. Our products are used in combustion processes which do contribute to these concerns. The industry needs to realistically assess these concerns.

TOPIC: WORKER EXPOSURE AND HEALTH (M/M)**ISSUE/IMPACT**

In an effort to accelerate the regulatory process, OSHA is expected to promulgate a series of generic rulemakings, including medical surveillance, exposure monitoring and methods of compliance regulation. Concurrently, it is likely that the Agency will continue to pursue the refinement of the permissible exposure limits (PELs) contained in the revised Z-Tables for individual and classes of substances. In particular, further refinement of petroleum products, including stoddard solvent and petroleum distillates, is possible.

Additionally, Congress is considering two types of innovative legislation: (1) notification of employees of occupational disease risks and medical monitoring privileges; and (2) enactment of "Whistleblower protection" to prevent discrimination for reporting unsafe or unhealthy work conditions. Such legislation could deny employers Fifth Amendment due process rights and provide workers the "right to refuse to work."

STRATEGY OUTLINE**I. REGULATORY**

The industry will proactively attempt to shape the course of OSHA's generic rulemakings by developing model medical surveillance and monitoring programs and technology transfer or substitute mechanisms. This action will result from: (1) the extreme difficulty of reversing the anticipated regulatory course; (2) the negative associations that will stem from attempting to delay or stonewall these proceedings; and (3) the secondary gains that can accrue from attempting to take a leading role in promoting worker health screening methods.

A. Research

1. Collect and analyze existing company data on total hydrocarbon and benzene employee exposure for use in responding to legislative/regulatory developments.
2. Sponsor a workshop for addressing employee personal protective equipment and monitoring concerns for petroleum spills and OSHA's Hazardous Waste Operations and Emergency Response regulation.

B. Response

1. Respond to proposed rulemakings on medical surveillance and employee exposure monitoring;
2. Analyze final rules on respiratory protection and point of compliance; if appropriate, plan and conduct seminars to increase member company understanding of new requirements;

3. Monitor and analyze developments in legislation pertaining to reauthorization of the OSH Act, employee notification and Whistleblower protection.

C. Networking

1. Keep lines of communication open with ORC, CMA and NAM, particularly if API decides to take an active role in shaping acceptable approaches to medical surveillance and exposure monitoring;

II. LITIGATION

If decisions are made for the petroleum industry to become the role model, any new litigation must be carefully evaluated for consistency with the proactive position taken on medical surveillance and employee exposure monitoring.

III. PUBLIC OPINION

If the industry adopts the active stance advocated above and attempts to set the standard for the new worker protection initiatives, this could have positive public relations ramifications. Satisfied employees could serve as emissaries to the community, fostering a more positive view of the industry.

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TOPIC: BENZENE (H/H)**ISSUE/IMPACT**

Benzene is the chemical in petroleum products that is driving new health and environmental regulatory actions. These include Federal air and occupational regulations, groundwater clean up standards under CERCLA and RCRA, and waste management practices under RCRA. Benzene is the primary justification for the removal of aromatics from gasoline. These actions have multi-billion dollar impacts associated with them.

The petroleum industry needs to develop a sound scientific basis for assessing the risks from benzene. Current information is sufficient to establish the nature, but not the extent, of the hazards from benzene exposure. In the absence of information on the extent of the hazards, governmental bodies make conservative assumptions which overestimate the risk and result in needless regulations. The overall goal of this program is to gain a fundamental understanding of the health effects of benzene and the extent of human exposure to benzene to adequately protect workers, customers, and the general public. Further, this information must be developed in a fashion which will be acceptable to regulatory bodies.

STRATEGY OUTLINE**I. REGULATORY**

The Benzene Task Force will sponsor research which will ensure that the methods used by EPA and state regulatory bodies to establish safe levels of exposure to benzene are technically valid and cost effective. The Task Force will seek to insure that the regulating bodies utilize reasonable policy interpretations of environmental statutes in setting environmental control requirements by the following efforts:

A. Research

1. Develop an accurate, scientifically supportable model for benzene leukemogenic effects.
2. Define a threshold benzene level that would establish safe exposure levels in the workplace, ambient air, and water.
3. Develop a more realistic approach to assessing individual and population exposure to benzene, broadly applicable for regulating toxic air contaminants.

B. Response

1. Develop of alternative estimates of leukemogenic potency for defining safe levels of exposure to benzene in regulatory actions under the CCA, CWA, and RCRA.
2. Redefine maximum exposure to revise current policies of worst case exposure analysis.
3. Work to develop a consistent approach for regulation of benzene under all statutes.

C. Networking

1. Work cooperatively with CMA, WSPA, and others to conduct benzene research and convey the result to the appropriate agencies.

II. LITIGATION

To continue the development of a record supporting the industry's contention that current benzene exposures, both in the workplace and in the community, do not pose a significant health risk by:

Providing material generated under the research program and regulatory response to the Office of General Council for use in appropriate litigation activities.

III. PUBLIC OPINION

To provide perspective on benzene risks in ambient air and water for communicating toxic release information to the public by:

Preparing public advocacy documents for company use in communicating "right-to-know" information on benzene emissions to communities.

Develop better information on the levels of benzene in the environment and the sources of benzene exposure, including the relatively minor role industrial air emissions play in human benzene exposure.

Develop clearer understanding of benzene risks in the scientific community by publishing the results of API research on the toxicity benzene and the potential for human exposure.