



Intor Office

10-19-81
Advanced Vehicle Engineering
and Technology

October 8, 1981

To: S. Gratch N. W. Ressler
A. Iaconelli V. H. Sussman
D. J. McChesney C. F. Talbot
P. E. Toth

PLAINTIFF'S EXHIBIT

FD-1638

cc: A. B. M. Houston T. A. Loch*

Subject: Draft Report - 1982 Advanced Budget for Toxic Substances

Attached is a draft Toxic Substances Project Report for the 1982 Advanced Budget. The project rankings in Exhibit 1 are the consensus reached by you, the Toxic/Hazardous Advisory Group.

Since our original transmittal, the suggestion was made to add Research project #R7660, "Toxic Substances" to the list because it was prioritized by the group last year. It was noted that the technical approach description on the 5183 form includes diesel exhaust particulate investigations. Based on this information, and unless you object, it is proposed that the project be included in Priority II. The 5183 form is attached for your review.

Please send your comments, if any, concerning the draft report, to Frank Carson, X-23759, by October 16, 1981. This will allow enough time to incorporate changes into the report prior to presentation at the October 23, 1981 Advanced Review Committee meeting.

MA Wheeler
for G. F. Bolling

FC/kah

Attachments

*Mr. Loch is representing Mr. McChesney.

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DRAFT - ADVANCED REVIEW COMMITTEE - DRAFT
TOXIC SUBSTANCES PROJECT REPORT
OCTOBER, 1981

The toxic substance projects of the 1982 Advanced Budget have been separately highlighted from the Components/Methodology Subcommittee. An examination was conducted by an AD HOC Toxic Substance Committee.^{1/} This paper presents the resulting prioritization.

Background

Since the 1978 Advanced Budget, toxic substance projects have been reviewed by the AD HOC Toxic Substance Committee to assure that the Company's needs in this area were recognized and met. The Committee has acted as a catalyst in surfacing issues and recommending resolutions in areas such as freon detection, asbestos, the Company's response mechanism to fluorocarbons regulatory pressures and plastic filler development to replace lead solder.

Assessment

The same procedure developed in past years was used again. The AD HOC Committee was made up from Company areas informed about and concerned with toxic substances. This approach has resulted in the following project totals for the 1982 proposed budget:

Summary of Rankings
(At incurred economics)

<u>Priority</u>	<u>1979</u> <u>Approved</u> <u>\$ (000)</u>	<u>1980</u> <u>Approved</u> <u>\$ (000)</u>	<u>1981</u> <u>Approved</u> <u>\$ (000)</u>	<u>1982</u> <u>Proposed</u> <u>\$ (000)</u>
I	\$ 572.6	\$ 493.3	\$ 478.2	\$ 278.8
II	701.7	764.2	621.9	568.5
III	<u>482.6</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>
TOTAL	\$1756.9	\$1257.5	\$1100.1	\$ 847.3

The proposed 1982 Toxic Substances Advanced Budget is down 23% from 1981 approved levels at 1981 economics. Individual projects are listed in Exhibit 1. This level is considered minimum to support projected Corporate needs in the critical toxic substances areas of asbestos elimination, freon detection, fluorocarbon regulations and lead solder replacement.

Recommendation

The AD HOC Committee recommends approval of all listed projects. It should be noted that none of this year's projects were rated less than "highly desirable".

^{1/} Members: G. F. Bolling; A. Iaconelli; D. J. McChesney; S. Gratch;
N. W. Ressler; V. H. Sussman; C. F. Talbot; P. E. Toth.

October, 1981

PRIORITY RANKING
1982 PROPOSED TOXIC SUBSTANCE PROJECTS

<u>Project Title</u>	<u>Project No.</u>	<u>Location Code</u>	<u>Proposed Budget</u> <u>\$(000)</u>
<u>Priority I</u>			
Friction Materials and Systems	R6120	Res	\$ 278.8
TOTAL Priority I			\$ 278.8
<u>Priority II</u>			
Asbestos Free Brakes Linings	CZA214	PPE-C	\$ 100.0
Alternate Fluorocarbons	FAF09	CCD	99.0
Lead Solder Replacement	BRO40	BEPE	100.0
M-12 Reduced Leakage/Change	FAF06	CCD	118.0
Toxic Substances a/	R7660	Res	151.5
TOTAL Priority II			\$ 568.5
TOTAL Priority III			-0-
Toxic Substances Total			<u>\$ 847.3</u>
MEMO: Proposed 1981 Total			\$1267.1

a/ Not included in 1982 telephone vote, certain activities have requested this project be included and prioritized in the same position as last year.

October, 1981

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- For Advanced programs, instructions for completing this form are attached.
- For Long Range programs, fill in boxes 1, 2, 3, 4B, & 11

~~SEE INCREMENTAL PROGRAM~~

TECHNICAL INFORMATION SYSTEM

Project No. Level to 6 spaces R7660		Location Code RES		Project Name (Limit to 40 spaces) TOXIC SUBSTANCES ***				E2 Econ		Labor		Budget (SCOD) /		%			
Item Code M9-051		Priority A		V8D		V8		HP		C.D. Project TY R7660		E1 Econ		141.8		9.7 / 0.0 ***	
Department Address/Phone Weinstock/34040				Chief Engineer/Location/Phone S. Gratch/30978				Location Planner/Phone M. A. Roberts/75506				1st Out		1st Economics /			
Other Offices Involved None				Facing Project Required By None				Prior Year(s) Expense 112.1		Future Year(s) Forecast		2nd Out		/			
Suppliers				Senior Buyer				Man Months		3rd Out		/					
Target Model Year 1982		Target Vehicle/Plant		Weight lbs		Design Cost \$		Fuel Economy Effect		Retrofit Rate %		Investment \$		4th Out		/	

PROJECT OBJECTIVES

Investigate mutagenicity of nonregulated emissions (R7337). Investigate methods for characterizing manufacturing wastewater for toxicity, biodegradability and compatibility with municipal wastewater treatment systems.

TECHNICAL APPROACH (Use extra sheets if necessary)

Identify mutagens in organic solvent extracts of diesel exhaust particulates; investigate recent modifications of Ames assay and the Thilly assay for characterizing diesel particulate extracts; provide Ames assays as needed for characterizing ambient air and engine exhaust particles (in support of R7337). Use laboratory scale activated sludge reactor to characterize selected manufacturing wastewaters.

1982 PLANS

Collaborate with Analytical Sciences in quantitative fractionation of diesel particulate extracts by HPLC and mutagenicity studies of fractions; analyze fractions by mass spectrometry (Analytical Sciences) and carry out Ames assays on identified compounds (requires budgetary support from R7337). Provide Ames assays as needed for Allegheny tunnel experiments and for vehicle characterizations. Establish new Ames assay bacterial strains and protocol for Thilly assay and use these for diesel particulate characterization. Use laboratory scale bench top reactor to investigate biodegradability of water soluble cutting fluids.

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