REYNOLDS CORPORATION

100 OAKVIEW DRIVE TRUMBULL CONNECTICUT 06611 (203) 371-0101

July 5, 1983

Dr. Hilton C. Lewinsohn
Union Carbide Corporation
Old Ridgebury Road
Danbury, CT 06817

Dear Hilton:

Enclosed are copies of Task Order No. 3 and Task Order No. 7 issued by OSHA in connection with the proposed revision of the Asbestos Standard and a copy of a petition from the IAM requesting an ETS of 0.1 for asbestos.

Attached to the IAM petition is a report by Dr. Mancuso. Note the misleading reference to the Manheim plant on page 509.

Sincerely,

John H. Marsh

Enclosures
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TASK ORDER NO.3

HEALTH EFFECTS RISK ASSESSMENT FOR EXPOSURE TO ASBESTOS

Contract #J-9-F-2-0074

Energy Resources Co. Inc.
One Alewife Place
Cambridge, MA 02140

HEALTH EFFECTS RISK ASSESSMENT
FOR EXPOSURE TO ASBESTOS

I. INTRODUCTION

OSHA is required by law to estimate the extent of expected benefits that an OSHA standard will produce. The Agency must determine that a significant risk exists and that a standard is reasonably necessary or appropriate to provide safe and healthful employment.

Risks associated with exposure to carcinogens are expressed in terms of years of foregone life expectancy or of material impairment. To produce these estimates, OSHA requires data and assumptions about probable dose/response, latency after initial exposure, adverse affects of cumulative exposure, effects of high exposure levels of brief duration, and a number of other factors which may significantly influence health outcomes.

Although it is obvious that precise scientific knowledge about the effects of many of these factors is not currently available, the Agency has a burden of proof to demonstrate that further regulation is reasonably necessary and appropriate. Accordingly, it is requested that data, reasonable assumptions and expert opinion be used to complete the following tasks.

II. PERFORMANCE MEASUREMENT CRITERIA

The contractor will provide professional services and technical assistance in developing and completing this study. Contract performance will be measured against the requirements in this statement of work and in detailed work plan to be submitted by the contractor. Due to the nature of work inherent in this type of study, OSHA will not provide exact instructions concerning how the contractor will accomplish the task. The contractor's response will be critical in satisfactory performance of the task. In addition, the quality of work will be judged upon the completeness of the collected data, the validity of the data sources used, the assumptions and model used, and the general management of resources within established time and budget constraints.

III. SCOPE OF WORK

Environmental Sciences Laboratory of Mount Sinai School of Medicine shall provide general assistance to OSHA regarding analysis of health data pertaining to asbestos. These efforts are for the purpose of helping OSHA to develop a revised regulation for asbestiform fibers. Tasks 1, 2, 3a, 3b, and 6 necessitate preparation of brief reports, Task 3c necessitates preparation of an outline for a scientific paper, and Task 4 and 5 necessitate provision of written comments. The expiration date for this particular contract shall be May 25, 1983. The due dates for tasks as listed below, are May 9, 20, and 25, except for the requirement that Task 5 be completed within 5 days of receipt of materials from OSHA. Specific tasks include, but are not limited to, the following:

1. (a) Critical analysis and discussion of current dose-extrapolation models for prediction of excess mortality from pleural and peritoneal mesothelioma; selection of most reasonable model(s) for prediction of mesothelioma risk, with accompanying discussion of basis for selection; generation of estimates of excess mortality from mesothelioma from exposures of:

0.1 f/ml - years
0.2 f/ml - years
0.5 f/ml - years
2.0 f/ml - years

4.5 f/ml - years
9.0 f/ml - years
22.5 f/ml - years
90 f/ml - years

(Note: All estimates shall be accompanied by documentation, including potency coefficients, such that OSHA can reproduce the estimates).

Due Date: May 20, 1983

(b) Critical analysis and discussion of current dose-extrapolation models for prediction of excess mortality from lung cancer and other asbestos-related malignancies; selection of most reasonable model(s) for prediction of lung cancer risk and risk of other asbestos-related malignancies, with accompanying discussion of basis for selection; generation of estimates of excess mortality from lung cancer and from other asbestos-related malignancies from exposures of same cumulative exposures as listed above.

(Note: All estimates shall be accompanied by documentation, including potency coefficients, such that OSHA can reproduce the estimates).

Due Date: May 20, 1983

2. Critical analysis and discussion of current dose-extrapolation models for prediction of excess mortality from asbestosis; selection of most reasonable model(s) for prediction of mortality from asbestosis, with accompanying discussion of basis for selection; generation of estimates of excess mortality from asbestosis from exposures of:

0.1 f/ml - years
0.2 f/ml - years
0.5 f/ml - years
2.0 f/ml - years

4.5 f/ml - years
9.0 f/ml - years
22.5 f/ml - years
90 f/ml - years

(Note: All estimates shall be accompanied by documentation, including potency coefficients, such that OSHA can reproduce the estimates).

Due Date: May 20, 1983

3. Critical analysis and discussion of risk of asbestos-induced diseases from short-term and intermittent exposures to asbestos, including the following tasks:

(a) Selection of most reasonable dose-extrapolation model(s) for prediction of excess mortality from asbestos-induced diseases due to short-term and intermittent exposures, with accompanying discussion of basis for selection.

(Note: OSHA understands that predicting morbidity is considerably more complicated than predicting mortality, such that selection of a model for morbidity and generating estimates for excess morbidity may not be possible by the expiration date of this contract).

Due Date: May 25, 1983

(b) Generation of estimates of excess mortality from asbestos-induced diseases due to short-term and intermittent exposures, such as those experienced in the construction industry and automotive aftermarket.

(Note: All estimates shall be accompanied by documentation, including potency coefficients, such that OSHA can reproduce the estimates.)

Due Date: May 25, 1983

(c) Prepare outline for article, suitable for publication in a scientific journal, consisting of a review of the evidence for the production of early asbestosis, asbestosis, and cancers by short-term and intermittent exposures to asbestos. This article would also review cases of asbestos diseases induced by short-term and intermittent exposures that are presently in the files of Mt. Sinai, as well as pertinent epidemiologic studies contained therein.

(Note: OSHA does not expect this paper to be completed by the expiration date of this contract).

Due Date: May 25, 1983

4. Providing critical comments on the draft preamble section on health effects prepared by OSHA for a Notice of Proposed Rulemaking on asbestos; reviewing the preamble for completeness and accuracy of the health information and risk analyses.

Due Date: Within 5 days of receipt of draft section(s) from OSHA.

5. In the evaluation of illnesses that may be averted if an OSHA standard on asbestos which lowere the PEL from 2 f/cc to 0.5 f/cc or 0.1 f/cc (ceiling from 10 f/cc to 5 f/cc) is promulgated, OSHA must determine the appropriate values for several key parameters:

- age at first exposure
- latency associated with asbestosis, mesothelioma, lung cancers, and other cancers
- smoking rates for the affected population.

(a) At this time, OSHA expected to set the parameter for the age at first exposure at 25 years. Do you perceive any problems with this assumption given the context in which it will be used? If so, what are those problems and what is the appropriate setting for this parameter? (Please provide documentation for any proposed changes).

Due Date: May 9, 1983

(b) The latency periods for the illnesses associated with asbestos exposure must also be determined. At this time, the latency associated with lung cancer ranges from 20-40 years, with a peak at 30-35 years. Do you perceive any prolems with these assumed latencies? If so, what are those problems and what is the appropriate setting for these parameters? (Please provide documentation for any proposed changes).

(c) At this time, OSHA intends to assume that the smoking rates for the affected population mirror the rates for the general working population. Do you perceive any problems with this assumption given the context in which it will be used? If so, what are those problems and what is the appropriate assumption? (Please provide documentation for any proposed changes).

Due Date: May 9, 1983

6. Critical analysis and discussion of mineralogy of talc, including talcs which contain asbestos and talcs which don't contain asbestos; discussion of issues and mineralogy/industrial hygiene studies regarding asbestos contained in talc; drawing conclusions on most reasonable position to take on issues of talc mineralogy relating to asbestos regulation.

Due Date: May 20, 1983

IV. CONFIDENTIALITY

The contractor agrees not to release to the public the draft proposed standard or any analysis conducted or data collected during the performance of the Task Order unless directed to do so by OSHA. It is understood, however, that it will be necessary for the contractor to discuss the contents of the proposed standard in sufficient detail to develop cost estimates. Such discussions will be approved by the COTR prior to any disclosure. All data used in the development of the economic impact studies will be made available to OSHA on request. No promise of confidentiality shall be made by the contractor to its data sources. The sources for all factual information will be referenced in the report. A bibliography will be provided.

V. LABOR & ESTIMATED COST FOR TASKS #1, 2, 3a & b

NAME	CATEGORY	RATE	HOURS	AMOUNT
Dr. Nicholson	Project Director	$54.23	130	$ 7,049.00
Dr. Selikoff	Sr. Tech. Specialist	48.85	60	2,931.00
Mr. Henneberger	Analyst	28.36	30	850.80
Ms. Tarr	Jr. Analyst	23.72	50	1,185.00
	Clerical	21.10	120	2,532.00
		TOTAL ESTIMATED COST		$14,549.70

LABOR & ESTIMATED COST FOR TASKS 3c, 4 & 5

NAME	CATEGORY	RATE	HOURS	AMOUNT
Dr. Selikoff	Project Director	$54.23	30	$ 1,626.90
Dr. Nicholson	Sr. Tech Specialist	48.85	25	1,221.25
Dr. Lilis	Sr. Tech Specialist	48.85	20	977.00
Dr. Langer	Sr. Tech Specialist	48.85	10	488.50
Mr. Henneberger	Analyst	28.36	10	283.60
	Clerical	21.10	60	1,266.00
		TOTAL ESTIMATED COST		$ 5,863.25

LABOR & ESTIMATED COST FOR TASK 6

NAME	CATEGORY	RATE	HOURS	AMOUNT
Dr. Langer	Project Director	$54.23	20	$ 1,084.60
Dr. Selikoff	Sr. Tech Specialist	48.85	5	244.25
	Clerical	21.10	20	422.00
		TOTAL ESTIMATED COST		$ 1,750.85

TOTAL ESTIMATED LABOR & COST SUMMARY

	RATE	HOURS	AMOUNT
Project Director	$54.23	180	$ 9,761.40
Sr. Tech Specialist	48.85	120	5,862.00
Analyst	28.36	40	1,134.40
Jr. Analyst	23.72	50	1,186.00
Clerical	21.10	200	4,220.00

TOTAL ESTIMATED COST FOR TASKS #1, 2, 3, (a,b, c), 4 & 5 $22,163.80