

October 29, 1975

Questionnaire from the Lead Industries  
Association, Inc., Concerning Proposed  
OSHA Health Standards for Lead Exposure

In connection with its preparation of a response to OSHA's proposed standard with respect to occupational exposures to inorganic lead, the Lead Industries Association, Inc. ("LIA") has undertaken to collect information from its member companies. Please complete this form and return it as soon as possible (but no later than December 12, 1975) to Dr. Donald R. Lynam, 6th Floor, 292 Madison Avenue, New York, New York 10017

1. Name. Please state the name and address of your company and the name and position of the person responsible for completing this form:

St. Joe Minerals Corporation  
Herculaneum Lead Smelting Division  
Herculaneum, Missouri 63048

D. H. Beilstein - Chief Metallurgist

2. Studies

- a. Has your company undertaken, or does it have in its possession, any studies concerning the effects of occupational exposure to lead? Yes  No .
- b. If so, state with respect to each such study (i) the nature or subject matter of the study, (ii) the date on which the study was prepared, and (iii) the identity of the person(s) who prepared the study:

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- c. Is your company willing to make copies of such studies available to DIA? Yes \_\_\_ No \_\_\_ . Not Applicable

3. Environmental Monitoring

- a. Does your company conduct air-lead level monitoring with respect to any of its operations? Yes xx No \_\_\_ . If so, please answer questions "b" through "h" below.
- b. At what plants or operations is such monitoring conducted?

Herculeaneum Lead Smelting Division

- c. How frequently is such monitoring conducted?

Continuously

- d. How is such monitoring conducted (nature of equipment, placement of equipment, time of exposure, etc.)?

Low Volume Samplers - (GEW - see packet sent you previously for locations)

Personal Samplers - various individuals and jobs.

- e. What have the results of such monitoring been in terms of the range of air-lead concentrations?

100 - 2,000+

- f. What have the results of such monitoring been in terms of particle size?

No particle size data

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- g. What have the results of such monitoring been in terms of compound type and solubility?

No data, but primarily PbO

- h. Would your company make any of its environmental monitoring data available to LIA upon request?  
Yes xx No    .

4. Biological Monitoring

- a. Does your company conduct biological monitoring to determine the effects of occupational exposure to lead? Yes xx No    . If so, please answer questions "b" through "h" below.

- b. What type of biological monitoring (e.g., blood lead, ALA, ALA-D, urinary lead, urinary coproporphyrins) does your company conduct?

Pb(B)

- c. At what plants or operations is such monitoring conducted?

Herculaneum

- d. How frequently and with respect to how many employees is such monitoring conducted?

Every man, every 3 months.

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e. How long have such monitoring programs been in effect?

10 years approximately

f. What have the results of such monitoring been in terms of the range of blood-lead or urine-lead concentrations?

30 ug - 80 ug/100 ml

at 80 ug, we remove from exposure.

g. Has there been any employee or union resistance to biological monitoring? Yes xx No    . If so, specify the nature and extent of the resistance and the effect of such resistance on your company's current program.

Do not like being pricked, but minimal and by a group who don't like anything.

h. Would your company make any of its biological monitoring data available to LIA upon request? Yes xx No    .

##### 5. Exposure Levels

a. State the approximate number of persons employed by your company: 650. Of these, approximately how many are occupationally exposed to lead on a regular basis: 550.

b. To the extent possible, state the approximate number of workers employed by your company who during a material portion of each working day are exposed to air-lead level concentrations of:

i. less than 50 ug/m<sup>3</sup>: 50-100

ii. 50 ug/m<sup>3</sup> or more: 550-600

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iii. 100 ug/m<sup>3</sup> or more: 550-700

iv. 150 ug/m<sup>3</sup> or more: 250-400

c. To the extent possible, state the approximate number of workers employed by your company who are occupationally exposed to lead and who have blood-lead level concentrations of:

i. less than 60 ug/100g: 605 (363)

ii. 60 ug/100g or more: 245 (145)

iii. 70 ug/100g or more: 12 1/25 (74)

iv. 80 ug/100g or more: 3 1/25 (22)

6. Medical Data

a. How many of the persons employed by your company have suffered from or have claimed to have suffered from lead poisoning, lead intoxication or associated disabilities during each of the past 10 years?

1966 - 4	1970 - 1	1974 - 3
1967 - 18	1971 - 0	1975 - 2
1968 - 6	1972 - 3	
1969 - 3	1973 - 0	

b. With respect to each of the persons referred to in question "a" above, state briefly (i) the nature of the actual or claimed poisoning, intoxication or disability, (ii) the type of work performed by the person, and (iii) the month and year of the actual or claimed poisoning, intoxication or disability.

Not available, except at much time and expense

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c. How many employee sick-days, if any, has your company experienced in each of the past 10 years which were caused by or were claimed to have been caused by the health effects of occupational exposure to lead?

1966 - 30 days	1967 - 0 days	1972 - 2 days	1975 - 2 days to 12/1975
1967 - 14 days	1973 - 0 days	1973 - 2 days	
1968 - 7 days	1974 - 5 days	1974 - 51 days	

d. How many accidents or job injuries, if any, has your company experienced in each of the past 10 years which were caused by or were claimed to have been caused by the health effects of occupational exposure to lead?

None

e. Has your company undertaken or have in its possession any studies of or data concerning the correlation, if any, between air-lead level exposures and the frequency of accidents/injuries/sick leave? Yes No xx. If so, state with respect to each such study (i) the nature or subject matter of the study, (ii) the date on which the study was prepared, and (iii) the identity of the person(s) who prepared the study:

f. How many workmen's compensation claims, if any, have been made against your company in each of the past 10 years for lead poisoning, lead intoxication or associated disabilities? Of such claims, how many were dismissed? 0. What was the disposition of the others?

Claims filed	Disposition of Others
1966 - 4	4 cases tried, appealed in 1971 to Court of Appeals, no decision rendered as of 12-5-75 on 3.
1967 - 18	One found for plaintiff, all others still pending, none tried (apparently waiting disposition of cases above).
1968 - 6	
1969 - 3	
1970 - 1	
1971 - 0	

7. Compliance Proceedings

- a. Has your company been the subject of any OSHA compliance proceedings with respect to the existing health standards for occupational exposure to lead? Yes xx No    .
- b. If question "a" above has been answered in the affirmative, please state with respect to each such proceeding: (i) the date of the proceeding, (ii) the allegations of non-compliance, and (iii) the outcome or present status of the proceeding.
- I) Citation January 1974
- II) a) Allowed to consume food & drink in presence of lead.  
b) Eng. controls not determined & implemented, (Plaint) above 200.
- III) a) Have forbade eating in control room.  
b) Have until Sept. 1975 to determine & implement Eng. controls.
- c. Is your company willing to make copies of the OSHA citations available to LIA? Yes xx No    .

8. Proposed Participation in OSHA Proceedings

- a. Does your company intend to submit written comments in response to the proposed OSHA standard? Yes es  
No    .
- b. Does your company intend to request a public hearing or to request that it be permitted to participate if such a public hearing is held? Yes xx  
No    .
- c. Does your company intend to submit an economic impact statement concerning the effect of the proposed standard? Yes xx No    .
- d. Does your company expect to contact any of the following with respect to the proposed standard?
1. Small Business Administration? Yes      
No    .
11. Bureau of Mines? Yes xx No    .

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iii. Other administrative agencies or departments?  
Yes xx No \_\_\_\_\_. (If so, please specify which  
agencies or departments.)

Department of Commerce

iv. Congressional representatives? Yes xx  
No \_\_\_\_\_. (If so, please specify which repre-  
sentatives.)

U.S. Senator Eads (Missouri)

U.S. Senator Symington (Missouri)

U.S. Representative Ichard (Missouri)

U.S. Representative Symington (Missouri)

U.S. Representative Burlison (Missouri)

d. Can you suggest any doctors, biochemists, hygien-  
ists or other industrial consultants who might be  
willing to act as expert witnesses at a public  
hearing or in connection with the preparation of  
written comments concerning the proposed standard?  
Yes \_\_\_\_ No xx. If so, please state the name,  
address and telephone number of each such person  
and describe briefly his area of expertise.

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October 29, 1975

Questionnaire from the Lead Industries  
Association, Inc., Concerning Proposed  
OSHA Health Standards for Lead Exposure

In connection with its preparation of a response to OSHA's proposed standard with respect to occupational exposures to inorganic lead, the Lead Industries Association, Inc. ("LIA") has undertaken to collect information from its member companies. Please complete this form and return it as soon as possible (but no later than December 12, 1975) to Dr. Donald R. Lynam, 6th Floor, 292 Madison Avenue, New York, New York 10017

1. Name. Please state the name and address of your company and the name and position of the person responsible for completing this form:

St. Joe Minerals Corporation  
Zinc Smelting Division  
P. O. Box A  
Monaca, Pa. 15061

R. A. Kurey, Director of Environmental Control

2. Studies

- a. Has your company undertaken, or does it have in its possession, any studies concerning the effects of occupational exposure to lead? Yes  No .
- b. If so, state with respect to each such study (i) the nature or subject matter of the study, (ii) the date on which the study was prepared, and (iii) the identity of the person(s) who prepared the study:

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- c. Is your company willing to make copies of such studies available to LIA? Yes \_\_\_ No \_\_\_.

3. Environmental Monitoring

- a. Does your company conduct air-lead level monitoring with respect to any of its operations? Yes x to \_\_\_. If so, please answer questions "b" through "h" below.

- b. At what plants or operations is such monitoring conducted?

A. Hi Vol Sampling - Roaster Plant, Leach Plant, Sinter Plant, Sinter Plant ESP Bin Rooms, Dust Roaster, Furnace Plant (Bin Area), Secondary Materials Process

B. Personal Sampling - All of the above except the Secondary Materials Process

- c. How frequently is such monitoring conducted?

A. Hi Vol - Once every eight weeks

B. Personal - Program just initiated - only one set of samples in each area. Frequency of sampling will be twice annually.

- d. How is such monitoring conducted (nature of equipment, placement of equipment, time of exposure, etc.)?

A. Hi Vol - Sampling rate .42 cubic meters/min. for 1/2 hour. Sampling done in areas of highest expected exposure. A total of 50 sample locations throughout the plant.

B. Personal - Sampling rate 1.61/m - 8 hour TWA - Monitoring potentially exposed personnel in each of the above departments for a total of 185 samples.

- e. What have the results of such monitoring been in terms of the range of air-lead concentrations?

A. Hi Vol  
Combined Leach Plant, Sinter Plant ESP Bin Room and Dust Roaster 898 data points range none detected to 10 mg/m<sup>3</sup>, geometric mean .032 mg/m<sup>3</sup>, 95% prediction limits maximum .82 mg/m<sup>3</sup>, Roaster Plant 824 data points range - none detected - 26 mg/m<sup>3</sup>, geometric mean .058 mg/m<sup>3</sup>, 95% prediction limits max. 1.39 mg/m<sup>3</sup>. (continued on attached sheet)

- f. What have the results of such monitoring been in terms of particle size?

None

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- g. What have the results of such monitoring been in terms of compound type and solubility?

None

- h. Would your company make any of its environmental monitoring data available to LIA upon request?  
Yes  X  No     .

4. Biological Monitoring

- a. Does your company conduct biological monitoring to determine the effects of occupational exposure to lead? Yes  X  No     . If so, please answer questions "b" through "h" below.
- b. What type of biological monitoring (e.g., blood lead, ALA, ALA-D, urinary lead, urinary coproporphyrins) does your company conduct?  
Blood leads, urinary leads, hemoglobin, hematocrit  
We have post data on coproporphyrins. We discontinued coproporphyrin analysis in 1975.
- c. At what plants or operations is such monitoring conducted?  
Roaster Plant  
Sinter Plant Electrostatic Precipitator Bin Rooms  
Acid Plant (lead burners)  
Research Department (lead development group)
- d. How frequently and with respect to how many employees is such monitoring conducted?  
The following biological monitoring is performed for 130 employees classified as being in potential lead exposure areas.  
Blood tests-yearly  
Urinary blood checks - quarterly  
Hemoglobin, and hematocrit - quarterly

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- e. How long have such monitoring programs been in effect?

Data is available back to 1960. We have computerized the data from 1967 to the present.

- f. What have the results of such monitoring been in terms of the range of blood-lead or urine-lead concentrations?

Blood leads Dust Roaster, Sinter Plant ESP Bin Rooms - 154 tests average .038 mg/100 g, 95% confidence limits, minimum .014 mg/100 g, maximum .062 mg/100 g

Blood leads Roaster Plant - 417 tests, geometric mean .033 mg/100 g 95% confidence limits, minimum .018 mg/100 g, maximum .060 mg/100 g

- g. Has there been any employee or union resistance to biological monitoring? Yes \_\_\_ No x. If so, specify the nature and extent of the resistance and the effect of such resistance on your company's current program.

- h. Would your company make any of its biological monitoring data available to LIA upon request? Yes x No \_\_\_.

##### 5. Exposure Levels

- a. State the approximate number of persons employed by your company: 1600. Of these, approximately how many are occupationally exposed to lead on a regular basis: 130.
- b. To the extent possible, state the approximate number of workers employed by your company who during a material portion of each working day are exposed to air-lead level concentrations of:
1. less than 50  $\mu\text{g}/\text{m}^3$ : 1510
  11. 50  $\mu\text{g}/\text{m}^3$  or more: 90

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iii. 100 ug/m<sup>3</sup> or more: 60

iv. 150 ug/m<sup>3</sup> or more: 30

c. To the extent possible, state the approximate number of workers employed by your company who are occupationally exposed to lead and who have blood-lead level concentrations of:

i. less than 60 ug/100g: 122

ii. 60 ug/100g or more: 8\*

iii. 70 ug/100g or more: 3\*

iv. 80 ug/100g or more: 1\*

\* These numbers reflect employees who have at one or more time had blood lead levels in the indicated concentrations.

6. Medical Data

a. How many of the persons employed by your company have suffered from or have claimed to have suffered from lead poisoning, lead intoxication or associated disabilities during each of the past 10 years?

None

b. With respect to each of the persons referred to in question "a" above, state briefly (i) the nature of the actual or claimed poisoning, intoxication or disability, (ii) the type of work performed by the person, and (iii) the month and year of the actual or claimed poisoning, intoxication or disability.

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- c. How many employee sick-days, if any, has your company experienced in each of the past 10 years which were caused by or were claimed to have been caused by the health effects of occupational exposure to lead?

None

- d. How many accidents or job injuries, if any, has your company experienced in each of the past 10 years which were caused by or were claimed to have been caused by the health effects of occupational exposure to lead?

None

- e. Has your company undertaken or have in its possession any studies of or data concerning the correlation, if any, between air-lead level exposures and the frequency of accidents/injuries/sick leave? Yes  No . If so, state with respect to each such study (i) the nature or subject matter of the study, (ii) the date on which the study was prepared, and (iii) the identity of the person(s) who prepared the study:

- f. How many workmen's compensation claims, if any, have been made against your company in each of the past 10 years for lead poisoning, lead intoxication or associated disabilities? 0. Of such claims, how many were dismissed?         . What was the disposition of the others?

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7. Compliance Proceedings

- a. Has your company been the subject of any OSHA compliance proceedings with respect to the existing health standards for occupational exposure to lead? Yes \_\_\_ No X. See note
- b. If question "a" above has been answered in the affirmative, please state with respect to each such proceeding: (i) the date of the proceeding, (ii) the allegations of non-compliance, and (iii) the outcome or present status of the proceeding.

Note: The zinc smelter was inspected by OSHA Hygienist on one occasion. The inspection was limited to select areas of the smelter where OSHA conducted personal monitoring tests for heavy metal fume (Pb, Cd, Zn, As). No citations were issued as a result of this personal monitoring.

- c. Is your company willing to make copies of the OSHA citations available to LIA? Yes \_\_\_ No \_\_\_ N/A

8. Proposed Participation in OSHA Proceedings

- a. Does your company intend to submit written comments in response to the proposed OSHA standard? Yes X  
No \_\_\_.
- b. Does your company intend to request a public hearing or to request that it be permitted to participate if such a public hearing is held? Yes X  
No \_\_\_.
- c. Does your company intend to submit an economic impact statement concerning the effect of the proposed standard? Yes \_\_\_ No \_\_\_.
- d. Does your company expect to contact any of the following with respect to the proposed standard?
1. Small Business Administration? Yes \_\_\_  
No X.
- ii. Bureau of Mines? Yes \_\_\_ No X.

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iii. Other administrative agencies or departments?  
Yes \_\_\_ No x. (If so, please specify which  
agencies or departments.)

iv. Congressional representatives? Yes \_\_\_  
No \_\_\_. (If so, please specify which repre-  
sentatives.)

d. Can you suggest any doctors, biochemists, hygien-  
ists or other industrial consultants who might be  
willing to act as expert witnesses at a public  
hearing or in connection with the preparation of  
written comments concerning the proposed standard?  
Yes \_\_\_ No \_\_\_. If so, please state the name,  
address and telephone number of each such person  
and describe briefly his area of expertise.

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# Lead Industries Association, Inc.

292 Madison Avenue • New York, N. Y. 10017 • Telephone: (212) 532-2373

Environmental Health Department

September 7, 1979

Mr. Donald H. Beilstein  
St. Joe Lead Company  
Herculaneum, Missouri 63048

Dear Don:

Thank you for your prompt and helpful response to our survey of communications on occupational health. As you know, one of the objectives of this "inventory" is to establish a clearing house of information for LIA members. Because you have indicated that you use a wide range of communication media, we would be interested in seeing examples of those you employ.

We are especially interested in seeing films or slide shows you are using, if they are different from the material LIA provided you. Should it be inconvenient to duplicate your audiovisual material, we will return the sample (s) you send us within two weeks.

Your continued cooperation in this research activity is appreciated. I look forward to seeing your materials.

Sincerely,

Jerome F. Cole  
Director, Environmental Health

iko

cc: P. Dolan  
W. Lindenmann  
L. Moorman

CES 9/26

Charlie: This is in response to the questionnaire we jointly replied to LIA upon. I think the request pertains primarily to Personnel function, you would best be equipped to reply.

DB

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INTERNATIONAL LEAD ZINC RESEARCH ORGANIZATION, INC.

MINUTES  
of the  
LEAD PROGRAM REVIEW COMMITTEE  
1969 MEETING  
October 7-8, 1969

In accordance with notice of September 9, 1969, the Meeting of the Lead Program Review Committee of International Lead Zinc Research Organization, Inc., a New York Membership Corporation, was held at the Hotel Parco dei Principi, Rome, Italy starting at 9:30 a.m. on October 7, 1969 and continuing through October 8, 1969. The following committee members were present:

I. L. Barker	Cerro Sales Corporation
E. V. Frawley	American Metal Climax, Inc.
* A. Kurayama	Mitsui Mining & Smelting Co., Ltd.
** D. L. LaVelle	American Smelting & Refining Company
J. J. Lennon	Ametalco, Inc. (for Tsumeb)
V. Rodriguez Peña	Compagnie Royale Asturienne des Mines
H. Sakurai	Mitsubishi Metal Mining Co., Ltd.
G. Scacciati	Monteponi & Montevecchio
J. G. Sevick	St. Joseph Lead Company
*** J. S. Smart, Jr.	American Smelting & Refining Company
R. J. Testut	Société Minière et Metallurgique de Penarroya
**** W. C. Zeek	C. Tennant Sons & Company

representing 12 of the 17 lead member companies and constituting a quorum.

- 
- \* In place of Mr. K. Kuwahara
  - \*\* In place of Mr. A. A. Smith
  - \*\*\* Voting for Mount Isa Mines Ltd.
  - \*\*\*\* Representing the Broken Hill Associated Smelters Proprietary, Limited

Sched. E

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