LEAD INDUSTRIES ASSOCIATION, INC.
292 MADISON AVENUE
NEW YORK, N. Y. 10017
TELEPHONE – AREA CODE 212
OR 9-0580

July 18,1966

To: All members of the Lead Health and Safety Committee

Re: Lead Test Criteria Analysis Survey

Attached you will find the results of a survey we conducted in September,1964 of individuals in state,city and regional government occupational health administration on criteria for evaluating industrial exposure to lead.

As you know, the analysis of biological fluids for lead, usually blood and urine, as an aid in evaluating industrial exposure is almost universal. However, the wide variety of tests used, as well as the wide range of criteria used for judging the results, has caused a certain amount of confusion when attempts are made to compare diagnostic efforts in one jurisdiction with those made in another. Accordingly, this survey was made in an attempt to provide a better comparison for judging by assembling such information as the types of tests and some of the criteria, or standards,that public agencies are presently employing in their evaluation of lead exposures in industry. The following questions are suggestive of the type of information that was intended to be secured by means of the survey:

- What test (or tests) do you use in the evaluation of industrial exposure to lead?
- What judgment criterion, or standard, do you apply in evaluating the results of these tests?
- Are these test results used in legal (compensation) situations?

A table showing the detailed information received from those responding to this survey is attached,together with a separate general summary of the total response. For your information, the spaces in the table under the heading titled "Tests and Standards Used" that are marked only with an "X" indicate that the respondents reported conducting such tests.

Look Ahead with Lead

We have not received permission to publish the information contained in the attached table and will, therefore, appreciate your treating this matter as confidential.

Very truly yours,

J C Roumas

James C. Roumas
Assistant Director
Health and Safety

JCR/jv

STATE ORGANIZATIONS	TESTS AND STANDARDS USED						USE IN LEGAL (COMPENSATION) CASES			REMARKS:
	Blood µg/100gms	Urine µg/liter	Urinary porphyrins	Basophilic stippling	Air mg/m^3	Other	None	Determines whether or not compensation paid	Not intended; May be used	
Alaska Dept.of Health & Welfare										No tests or standards adopted
California Dept.of Industrial Relations, Div.of Industrial Safety	80	150*	X*		0.15		X			*Sometimes required as check on environmental controls and for persons exposed to high concentrations for short periods.
California Dept.of Public Health, Bureau of Occupational Health	80	180			0.2				X	
Colorado Dept.of Public Health	100	100			0.15			X*		*Consultation to State Compensation Department.
Connecticut State Dept.of Health	70	200*						X**		*On specimens submitted by physicians only **When incorporated in medical reports. Workmen's compensation claims extremely rare.
Florida State Board of Health	60	100						X*		*Results have been used to confirm compensable lead poisoning claims.
Georgia State Dept.of Public Health	70	150					X			

STATE ORGANIZATIONS (Continued)	TESTS AND STANDARDS USED						USE IN LEGAL (COMPENSATION) CASES			(2) REMARKS:
	Blood ug/100gms	Urine ug/liter	Urinary porphyrins	Basophilic stippling	Air mg/m^3	Other	None	Determines whether or not compensation paid	Not intended; May be used	
Hawaii State Health Dept.										No testing except on very rare occasions.
Idaho Dept. of Health										No tests or standards adopted.
Illinois Dept. of Labor (Industrial Hygiene Unit)										No tests or standards adopted.
Indiana State Board of Health	80	200						X*		*Workmen's compensation should be received when there are two consecutive blood leads of 80 or greater. No legal status; recommendation only.
Kansas State Dept. of Health (Industrial Radiation & Air Hygiene)	X*	X*							X	*No tests or standards adopted. Recommend use of USPHS standards.
Kentucky State Health Dept.	50	80			0.2		X			
Maine Dept. of Health & Welfare	X*	X*			X*		X			*No standards adopted. Evaluation of possible lead exposure in industry based on field sampling of worker's environment. Use threshold limits as guidelines.

STATE ORGANIZATIONS (Continued)	TESTS AND STANDARDS USED						USE IN LEGAL (COMPENSATION) CASES			(3)
	Blood ug/100gms	Urine ug/liter	Urinary porphyrins	Baso-philic stippling	Air mg/m^3	Other	None	Determines whether or not compensation paid	Not intended; May be used	REMARKS:
Maryland Dept. of Health	X*	X*								*Used as guides, not as standards.
Massachusetts Dept. of Labor & Industries	70-80*	200**							X	*Blood analyses occasionally; principally urinalyses of spot samples. **Over 150 indicates attention.
Michigan Dept. of Health	70-80	150-200			0.15				X	
Minnesota Dept. of Health	60	80					X			
Mississippi State Board of Health	50				X		X			
Missouri Dept. of Public Health & Welfare	80	80							X	
New Hampshire Dept. of Health & Welfare	80	200	X						X	
New Jersey State Health Dept.	80	100							X	

STATE ORGANIZATIONS (Continued)	TESTS AND STANDARDS USED						USE IN LEGAL (COMPENSATION) CASES			(4)
	Blood μg/100gms	Urine μg/liter	Urinary porphyrins	Baso-phillic stippling	Air mg/m^3	Other	None	Determines whether or not compensation paid	Not intended; May be used	REMARKS:
New Mexico Dept. of Public Health		200*							X	*No standard adopted. Use 200 μg/liter as action point.
New York State Dept. of Labor, Div. of Industrial Hygiene	70-80	150-200	X	X	0.2				X	
North Carolina State Board of Health	50*	200*					X			*Not by State Board of Health. Expect employer to use clinical facilities.
Ohio Industrial Commission	60-80	100	X*					X		*Used as adjunct.
Oklahoma State Dept. of Health										No tests or standards adopted.
Oregon State Board of Health	60-80*	180*			0.2*				X	*Used as guide, not as standard. These values based on multiple samples rather than single analysis in any specific employee.

STATE ORGANIZATIONS (Continued)	TESTS AND STANDARDS USED						USE IN LEGAL (COMPENSATION) CASES			(5)
	Blood µg/100gms	Urine µg/liter	Urinary porphyrins	Baso-phillic stippling	Air mg/m^3	Other	None	Determines whether or not compensation paid	Not intended; May be used	REMARKS:
Pennsylvania Dept.of Health	100*	150*							X	*Blood lead is determined if urine standard is exceeded If blood standard is exceeded, employee is removed from exposure.
Rhode Island Dept.of Health	50*	150*					X			*Serve as guides to requesting physicians.
South Dakota State Dept.of Health										No industrial health lab facilities.
Tennessee Dept. of Public Health	80	150			X		X			
Utah State Dept. of Health	80*	200*						X**		*Used as guides, not as standards. **Used as contributory evidence along with other clinical data.
Vermont Dept. of Health		150			0.2		X			
Virginia State Dept.of Health	70*	100*					X			*Used as guides, not as standards.

STATE ORGANIZATIONS (Continued)	TESTS AND STANDARDS USED						USE IN LEGAL (COMPENSATION) CASES			(6)
	Blood ug/100gms	Urine ug/liter	Urinary porphyrins	Baso-phillic stipp-ling	Air mg/m^3	Other	None	Determines whether or not compen-sation paid	Not intended; May be used	REMARKS:
Washington State Dept.of Labor and Industries, Industrial Hygiene Section		X			0.2					
West Virginia Dept.of Health	X	X			0.2			X*		*Used with medical findings.
Wisconsin State Board of Health		150			0.2					
Wyoming Dept. of Public Health										Not required to evaluate as no industrial exposures to lead in past 15 years.
COUNTY AND CITY ORGANIZATIONS										
Albuquerque (N.M.) Health Dept.		100					X			
Allegheny County Health Dept., Div.of Occupational Health (Pa.)										Industrial Hygiene and health services are responsibility of State Health Department

COUNTY AND CITY ORGANIZATIONS (CONTINUED)	TESTS AND STANDARDS USED						USE IN LEGAL (COMPENSATION) CASES			(7)
	Blood μg/100gms	Urine μg/liter	Urinary porphyrins	Basophilic stippling	Air mg/m^3	Other	None	Determines whether or not compensation paid	Not intended; May be used	REMARKS:
Chicago Board of Health (Ill.)	X	X	X	X			X			
Cincinnati Health Dept. (Ohio)	70	150					X			
Cleveland Bureau of Industrial Hygiene (Ohio)	80*	200*	>2+**		X		X			*Occasionally. **Routinely; 150 μg in urine means repeat sample monthly.
Denver Dept. of Health & Hospitals, Div. of Public Health & Preventive Medicine (Colorado)	80*	10-120**		**	**					*Guides, not standards. **By local physicians.
Detroit Dept. of Health Bureau of Industrial Hygiene (Michigan)	80*	150					X			*90 blood level requires mandatory 30-day removal from exposure.
Fulton County Health Dept. (Atlanta, Georgia)	80	150						X*		*Confirms and strengthens physician's statements.
Houston Health Dept. (Texas)					0.2		X			All urine and blood determinations made by medical labs

COUNTY AND CITY ORGANIZATIONS (CONTINUED)	TESTS AND STANDARDS USED						USE IN LEGAL (COMPENSATION) CASES			(8)
	Blood µg/100gms	Urine µg/liter	Urinary porphyrins	Baso-philic stipp-ling	Air mg/m^3	Other	None	Determines whether or not compen-sation paid	Not intended; May be used	REMARKS:
Los Angeles County Health Dept. (California)		120-150	X						X	
Milwaukee Health Dept. (Wisconsin)					0.2	X*	X			*Lead in paint 1 %
Minneapolis Health Dept. (Minnesota)	60*	130**			0.2			X***		*Thru State Health Dept. **Own lab-3 weekly samples. ***Results used in Ind. Compensation hearing.
St. Louis Health Division (Missouri)	70	150					X			
Wichita-Sedgwick County Health Dept. (Kansas)										No analyses. Depend on State Health Dept.
TERRITORY										
Puerto Rico Dept. of Health	0.08	0.20		over 10,000				X		

Lead Test Criteria Analysis Survey

Questionnaire mailed to 61 individuals in state, city and regional government occupational health administration. Respondents totaled 54, including: 39 from state organizations; 3 from county organizations; 11 from city organizations; and one from Puerto Rico.

Thirty-seven respondents reported utilizing blood testing, a majority adhering to the standard of 80 µg of lead per 100 grams of blood.

Forty-two reported using urine testing, a majority adhering to a standard ranging between 150 µg and 200 µg of lead per liter of urine.

Respondents indicating use of neither blood nor urine consisted almost totally of those depending on other associated departments or labs to supply or carry out such testing or who indicated no need for lead testing (e.g. Wyoming, Idaho). While other test criteria are employed, no respondents indicated their use to the exclusion of blood, urine, or both. Such other criteria include: urinary porphyrins - 7 respondents, basophilic stippling - 4 respondents.

Respondents parenthetically indicating use of air samplings to determine lead content numbered 19. Only one reported that it analyzed paint for lead content.

Seventeen respondents indicated that no use is made of their findings in compensation cases. Ten respondents indicated that their findings are used, though they are not necessarily binding, and may be used in a supporting basis in relation to other medical evidence. Twelve respondents reported that their findings are not intended for use in compensation cases, but may be used under certain circumstances.

6/29/66