

LEAD INDUSTRIES ASSOCIATION

66 EAST 42ND STREET

NEW YORK 17, N. Y.

March 11, 1960

TO: All Members of the Electrochemical Subcommittee,
the Pigments Technical Committee, the Ceramic
Technical Committee and the Chemical Subcommittee
of the Lead Industries Association

Gentlemen:

Attached is a copy of a letter we have received from Professor Roy, Pennsylvania State University concerning his interest in high pressure work on the oxides of lead. He has produced several polymorphs of Pb-O by hydrothermal and high pressure methods and is studying the thermodynamics of the oxides. He mentions specifically the possible interest in these polymorphs from the electrochemical standpoint, but I believe that interest may also lie elsewhere and so have circulated his correspondence more generally.

I would very much appreciate your comments on these materials. If this subject appears to be of considerable interest to our industry, we will request further details from Professor Roy.

Sincerely yours,

Samuel E. Bok

SEB:mp



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THE PENNSYLVANIA STATE UNIVERSITY

University Park, Pennsylvania

College of Mineral Industries
Department of Geophysics and Geochemistry

2 February 1960

Mr. R. L. Ziegfeld
Lead Industries Association
60 East 42nd Street
New York 17, New York

Gentlemen:

During the last year and a half incidental to our high pressure work we happened to do a substantial amount of work on the oxides of lead. The introduction of the high pressure techniques to this field enabled us to prepare, identify and describe new high pressure polymorphs of the oxides. This was reported at the Annual American Ceramic Society Meeting in 1959, and we had subsequently a surprising amount of interest in these results - largely from the battery people. While the LIA was mentioned as a source for support for further work, we did not feel our interest would continue in this area.

However, more recently we have obtained results of even more general interest. By our hydrothermal and high pressure methods we have prepared reproducibly well-crystallized pure phases of the intermediate lead oxides (e.g. Pb_2O_3 , Pb_3O_5). In addition, we have started to study the EPR of the storage batteries as a function of pressure which promises to be a source of new thermodynamic data in this field.

I am interested in knowing how we may apply for the establishment of a LIA fellowship in this department, to pursue our study of the system Pb-O. This type of research is, of course, our specialty.

Yours sincerely,

/s/ Rustum Roy
Professor of Geochemistry