Hydrogen — the Balloon Gas

[redacted] 25X1

CONFIDENTIAL

February 13, 1958

Mr. S. S. Sherriff
Gas Laboratories, Building 361
ERDL, Fort Belvoir, Virginia

Dear Mr. Sherriff:

This letter is in reference to the use of the type MB-1 compressor for hydrogen induction.

After a careful study of this particular problem by our engineers [redacted] we feel that Hydrogen induction would not be feasible with the use of this compressor. Due to the many problems which are involved, and the lack of available engineering man hours, our engineers do not advise converting the present unit for the use of hydrogen. 25X1

As you know, gas would be induced into the second stage piston, thereby bypassing the first stage cylinder, and the hydrogen could very easily slip past the 2nd stage piston and enter the crankcase where it would be drawn into the intake of the first stage cylinder and then discharged directly to atmosphere. (since the link between #1 & 2 gt must be closed for this type operation.

Our engineers have not computed the amount of leakage but they do not feel that hydrogen leaking into the atmosphere of the test room would be tolerated as a safety measure. There is also the possibility of hydrogen leaking into the crankcase and forming a highly combustible gas and causing an explosion.

We trust that this is the information you desire, and if you would care to discuss it further, please contact this office.

Very truly yours,

[redacted] 25X1

Office Manager

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This is response to an inquiry as to whether the compressor could be used as a 'booster'. That is, taking in Hydrogen at about 500PSI and boosting it to 2100 PSI.

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