

AKTON INTERNATIONAL CORPORATION

20 DEC 1994

Dr. Walter Polansky
Department of Energy
ER-16; F-240
Washington, DC 20585

Dear Dr. Polansky,

Last Friday Bob Smith and I visited Los Alamos. We had a good meeting with Tom Claytor, Thurman Talley, Ronald McFee, Ed Storms, and a couple of other physicists. We exchanged information on our cold fusion work and interests. It became clear to me that a collaborative program vested in Los Alamos was both workable and in the national interest. The projects that Ed Storms and I have independently submitted to you could be administered by LANL and could be part of the larger effort.

To my view, from a national security point of view it is important to maintain a significant level of hands-on research activity at Los Alamos in anticipation of a possible future need to respond to a breakdown in the present relatively peaceful order. I don't believe that the defense-critical Los Alamos skills can live in isolation. The addition of a cold fusion program could be a helpful addition to the program for developing and transferring new technology to industry as a means of increasing national economic strength. This is especially important in view of the national aversion to use of increasing amounts of fission power.

LANL could undertake the cold fusion lead responsibility in a low key manner. The program could be developed around two areas of interest: lattice effects studies, which have been mainly concentrated on tritium production, but have also included heat measurements; and the Los Alamos materials specialties, which could be crucial in the development of engineered materials suitable for cold fusion electrodes. The program could be a common effort including the interests of Tom Claytor, Ed Storms, and myself, and include both plasma and electrolytic methods for creating and maintaining high D concentrations in metals. The micro-cracking and materials selection problems could be specifically addressed. Production of composite material electrodes containing low strain crystals in a deuterium-wicking medium should be part of the effort. The band state ion diffusion barrier problem should also be studied, namely Priorities 5 and 6 of our White Paper. There could also be a separate lattice effects theory program, priority 1 in our White Paper. A broad-based investigation would also include cavitation studies and studies of other processes that seem to have produced excess heat.

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During my New Mexico trip I made presentations to several other New Mexico groups: the Phillips Lab (Drs. Michael Schuller, Michael Degman and Tom Hussey), the New Mexico Engineering Research Institute (Drs. Delmar Calhoun and Glen Schmidt), and the Institute for Space and Nuclear Power Studies (Dr. Mohamed El Genk). I believe that my explanations of the ion band state theory of cold fusion were generally well received. There would seem to be a possibility of building a fruitful collaboration among these New Mexico groups, tapping non-DOE funds, if we could get something started at LANL.

I'm enclosing a sketch, which I found helpful in explaining what is meant by an ion band state and in explaining why a passivation barrier is needed in electrochemical studies using Pd. Also, we need to talk and get things moving.

Sincerely,



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