DOE F 1325.8
(2-84)

BOB

United States Government

Department of Energy

memorandum

DATE: April 3, 1989

REPLY TO ATTN OF: ER-54

SUBJECT: Activity on Cold Fusion Reported to Office of Fusion Energy

TO: N. Anne Davies, ER-50 AD

Beginning on Wednesday, 3/22/89, the Office of Fusion Energy has received numerous telephone calls regarding the cold fusion announcements from the University of Utah. Callers have included scientists, reporters, staff of the Energy Subcommittee of HSS&T, the West German embassy, and leaders of the European magnetic fusion community. Most callers have been referred to Jeff Sherwood (DOE press office) or to Ryszard Gajewski (program manager for Advanced Energy Projects in BES), but discussions have been held with numerous fusion researchers. It is clear that scientific review of the cold fusion reports is appropriate and we have not discouraged the extensive interest of fusion researchers that has been apparent.

A preprint of M. Fleischmann and S. Pons, "Electrochemically Induced Nuclear Fusion of Deuterium" (submitted to the Journal of Electrochemical Chemistry) was supplied to us by field researchers. In addition, preprints of the related work by S. E. Jones, et al, "Observations on Cold Nuclear Fusion in Condensed Matter" and by J. Rafelski, et al, "Limits on Cold Fusion in Condensed Matter: A Parametric Study" (submitted to Nature from Brigham Young University and University of Arizona, respectively) have been available to us through Dr. Gajewski.

We estimate that nearly all research laboratories that carry out fusion research are conducting some kind of investigation of the reports on cold fusion. It is reported that seminars by Pons at Utah and by Jones at Columbia on 3/31/89, were overwhelmed by attendance. All fusion researchers are perplexed over the low level of radiation (neutrons, gammas, and tritium betas) in the experiments since these appear to be at least a billion times too low for D+D fusion to be the source of heat reported in the experiments of Pons and Fleischmann. Their paper, cited above, states "The most surprising feature of our results however, is that D+D reactions are only a small part of the overall reaction scheme and that the bulk energy release must be due to a hitherto unknown nuclear process or processes." Most fusion researchers are skeptical as to whether nuclear processes supply the energy but all find these reports interesting. As of now (1:00 p.m. on 4/1/89), we know of no confirmations of macroscopic nuclear energy release in these kinds of systems. Additional reports from the numerous ongoing investigations are likely to be occurring this week.

Rulon Linford is coordinator for cold fusion interests at LANL, and he has had contact with the University of Utah group including a visit to that campus on 3/31.

Ronald H. McKnight for

David H. Crandall, Director
Division of Applied Plasma Physics
Office of Fusion Energy
Office of Energy Research

NOTE TO BOB HUNTER

According to both Milt Johnson and Harold Furth, PPPL has not conducted any cold fusion experiments nor held any press conferences on the subject. They did accommodate a request from a small local electrochemical plating company, Electron Transfer Technologies, who wanted to bring their apparatus to PPPL to use lab equipment to detect any neutrons. None were observed. To Milt and Harold's knowledge, the company issued no press release, and they have not seen anything about it in the local press. I have not been able to track down the news item you mentioned.

N. Anne Davies

cc:

Jim Decker, ER-2