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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JAN 28 2009

OFFICE OF  
AIR AND RADIATION

David Moody, Ph.D.  
Manager, Carlsbad Field Office  
U.S. Department of Energy  
P.O. Box 3090  
Carlsbad, NM 88221-3090

Dear Dr. Moody:

I am writing in response to your January 8, 2009, request for the U.S. Environmental Protection Agency (EPA) to approve the U.S. Department of Energy's (DOE's) Low Background Radiation Experiment (LBRE) in the Waste Isolation Pilot Plant (WIPP). We have completed our review and approve your request.

Your submission notes that your whole body counting experiment consists of an outer radio bioassay chamber used for increased shielding and an interior radio bioassay system used to take the measurements that will be placed in the northern experimental room located in the WIPP underground. The experiment will be led by New Mexico State University and supported by the Carlsbad Environmental Monitoring and Research Center (CEMRC). The goal of this experiment is to determine the possibility of more accurately measuring small quantities of radioactive exposures to individuals. This experiment will also investigate the Hormesis model and assessing overall radiation risk. Presently, it is difficult to make the measurements planned for this experiment outside of a special environment because of interference from naturally occurring radioactivity; WIPP's low background radiation and natural shielding of 2000 feet of rock make it an appropriate location to perform this experiment.

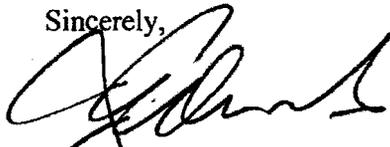
After completing our review, it appears that this experiment's impact on waste handling and disposal operations is minimal and that few new materials will be introduced that would cause safety concerns related to WIPP operations. EPA believes that the information gained from these measurements may be very useful as the Agency reviews and considers human dose and risk estimates. Therefore, EPA requests a copy of any reports related to these experiments when they are available.

As we have stated in previous approval letters, our consideration or approval of emplacement of any experiments is based solely on technical grounds in accordance with our WIPP Compliance Criteria (40 CFR Part 194). Please be advised that any consideration or EPA approval does not in any way constitute a determination that DOE has actual statutory authority under the WIPP Land Withdrawal Act to conduct such activities, nor is this letter intended to indicate in any manner the Agency's opinion on this matter.

See list on the back  
2/4/09  
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If you have any questions, please contact Tom Peake at (202) 343-9765.

Sincerely,



Jonathan Edwards, Acting Director  
Radiation Protection Division

cc: Russ Patterson, DOE/CBFO  
George Basabilvaso, DOE/WIPP  
Alton Harris, DOE/HQ  
Steve Zappe, NMED  
Tom Kesterson, NMED Carlsbad  
Nick Stone, EPA Region 6  
EPA WIPP Team  
Jerry Puskin, EPA

**Cooper, Andrea**

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**From:** Lee.Raymond@epamail.epa.gov  
**Sent:** Tuesday, February 03, 2009 2:44 PM  
**To:** Moody, Dave C. - DOE; Marcinowski, Frank; Harris, Alton; Patterson, Russ - DOE; Basabilvazo, George - DOE; Zappe, Steve; ThomasL.Kesterson@state.nm.us  
**Cc:** Edwards.Jonathan@epamail.epa.gov; Peake.Tom@epamail.epa.gov; Byrum.Charles@epamail.epa.gov; Eagle.Mike@epamail.epa.gov; Joglekar, Rajani; Feltcorn, Ed; Bender.Lindsey@epamail.epa.gov; Ghose.Shankar@epamail.epa.gov; Stone, Nick; Puskin.Jerome@epamail.epa.gov  
**Subject:** Low-Background Radiation Experiment Correspondence  
**Attachments:** LBRE Letter 12809.pdf



LBRE Letter  
809.pdf (39 K)

Hello,

Attached you will find a letter transmitting EPA's approval for DOE's January 8, 2009, LBRE-WIPP request. Should you have any problems opening the .pdf, please let me know.

Sincerely,

Ray Lee  
Radiation Protection Division  
Center for Radiation Information & Outreach  
(202) 343-9463

(See attached file: LBRE Letter 12809.pdf)

MAIL ROOM COPY

## Cooper, Andrea

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**From:** Cooper, Andrea on behalf of Moody, Dave C. - DOE  
**Sent:** Tuesday, February 03, 2009 4:54 PM  
**To:** Daub, Vernon - DOE; Nelson, Roger - DOE; Gadbury, Casey - DOE; Galbraith, Don - DOE; Welton, Art; Holland, Ava; Scott, Gary - DOE  
**Subject:** FW: Low-Background Radiation Experiment Correspondence  
**Attachments:** LBRE Letter 12809.pdf



LBRE Letter  
809.pdf (39 K)

-----Original Message-----

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