February 9, 1999

Mr. John I. Sackett
[ ]
Argonne National Laboratory-West
P.O. Box 2528
Idaho Falls, Idaho 83403-6000

Subject: Enforcement Letter (NTS-CH-AA-ANLW-ANLW-1998-0001)

Dear Mr. Sackett:

This letter refers to the Department of Energy's (DOE) evaluation of the facts and circumstances concerning two incidents occurring in June and August 1998 at Argonne National Laboratory – West's (ANLW) Fuel Conditioning Facility (FCF): dropping a fuel basket assembly containing chopped fuel elements and repair of a manipulator seal tube. During November 2-3, 1998, DOE conducted an investigation to determine what, if any, noncompliances with applicable nuclear safety regulations may have been associated with these incidents. A copy of the investigation summary report is enclosed.

The first incident involved an evolution during which a full, spent fuel container was dropped across a [nuclear safety] zone boundary. At least [specific amount] of spent fuel was spilled, the location of the fuel was unknown for eleven days, and the operators involved failed to report the event. Furthermore, the fuel element chopping process was allowed to continue, even though [specific amount] of spent fuel was unaccounted for. Management reasoned that even though the amount of missing material [ ] was greater than that allowed by procedure [ ], it was probable that the missing material could be accounted for by errors in assumptions used in the mathematical model used to calculate the [specified] margin.

Even though management's decision to continue the chopping operation was not in accordance with the facility's conduct of operations guidance, the nuclear safety consequence of this incident was determined to be low because the spent fuel was contained within an inert atmosphere hot cell. However, the DOE investigation identified a number of areas associated with the inadequate implementation of your Quality Assurance Plan as required by 10 CFR 830.120, and your Conduct of Operations procedure at FCF. These areas include (1) inadequate nuclear-related work control; (2) inadequate implementation of Conduct of Operations requirements while performing work; and (3) an inadequate Quality Improvement Process that failed to

detect and prevent these problems. No adverse safety consequence was determined to result directly from these conditions. However, these conditions represent a concern to DOE regarding the adequacy of your ongoing nuclear activities because the deficient actions directly impacted the [nuclear safety] hazards control program taken credit for in the FCF Facility Safety Analysis Report.

DOE is particularly concerned that your evaluation of the dropped spent fuel occurrence did not demonstrate a thorough understanding of the scope and applicability of the Quality Assurance Rule. The Rule includes numerous areas applicable to the event, however the investigation established that FCF management viewed the event as simply a Conduct of Operations issue. There were, in fact, numerous violations of the requirements of FCF-OI-1301, "Conduct of Operations." However, regulatory violations related to procedures, worker qualification and of your Quality Improvement Process clearly occurred. In addition, 10 CFR 820.11, "Information Requirements," mandates that "[a]ny information pertaining to a nuclear activity…maintained by any person for inspection by DOE shall be complete and accurate in all material respects." FCF management should have evaluated the incomplete account in the operator's logbook for possible Price Anderson Amendments Act implications. In summary, DOE is concerned that your threshold for evaluation of potential violations of nuclear safety requirements is inconsistent with the guidance provided in the June 1998 edition of "Identifying, Reporting, and Tracking Nuclear Safety Noncompliances under Price-Anderson Amendments Act of 1988."

DOE also identified potential violations by your radiation protection program with regard to the manipulator seal tube repair. These potential violations included (1) inadequate job planning with respect to pre-job briefings and selection of appropriate monitoring equipment, (2) job conduct with respect to area posting and contamination surveys, and (3) quality assurance processes involving nonradiological activities. The combination of these deficiencies led to uptakes, albeit minor, of radioactive material by several employees involved in the seal tube repair at FCF. Furthermore, during this event's investigation, your radiation safety-training program was found to not exhibit the rigor and discipline typically found in a comprehensive radiation protection program. For example, the FCF's chief health physics technician did not demonstrate an understanding of why a fixed continuous air monitor approximately 20 feet away from the seal tube repair area was inadequate in providing a timely warning to the workers of the presence of airborne radioactive material in the vicinity of the repair.

DOE concluded violations of 10 CFR 830, "Nuclear Safety Management," and 10 CFR 835, "Occupational Radiation Protection," did occur. While DOE identified a number of regulatory violations associated with these events, the safety significance of these violations did not appear to meet the threshold requiring an enforcement action. Therefore, I have decided to defer enforcement action at this time.

DOE is aware of the recent implementation of your September 1998 Quality Assurance Program Plan. As a result, DOE plans to perform an onsite evaluation of your progress and results sometime this year. Our evaluation will address the completeness and

effectiveness of your overall Program, and determine whether the problems identified by recent events are recurring. In taking this action, DOE is providing you an opportunity to demonstrate your commitment to correct ANL-W's QA and radiation safety problems, and to prevent recurrence of similar regulatory violations.

Please contact Mr. Richard Trevillian or Mr. Steven Zobel of my staff at (301) 903-0100 should you want to discuss these matters further.

Sincerely,

R. Keith Christopher
Director
Office of Enforcement and Investigation

Enclosure:

Investigation Summary Report

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