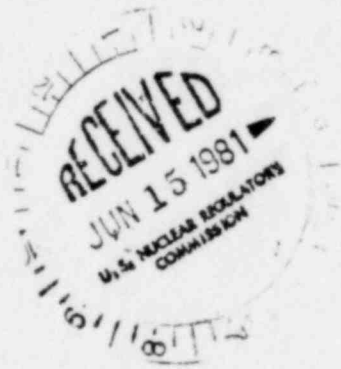
B06

DMB

Battelle
Columbus Laboratories
505 King Avenue
Columbus, Ohio 43201
Telephone (614) 424-6424
Telex 24-5454

May 21, 1981



Mr. James G. Keppler, Director
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

Part I

In accord with the requirements set forth in 10CFR20.405, reports of over-exposures and excessive levels and concentrations, the following report is submitted giving notification of the exposure of one Battelle-Columbus Division employee in excess of the limits specified in 10CFR20.101 for a dose to the hands in a calendar quarter.

Our failure to report this overexposure within the 30-day period as required by 20.405(a)(1) is addressed in our response to Inspection Report 70-008/81-01 and 30-5728/81-01, dated May 21, 1981.

During the second personnel monitoring quarter 4/14-7/06/80 one employee received a dose to the right hand of 22.840 rems. It was determined from review of operations conducted by the employee that 20.560 rems of the above dose of 22.840 rems was received on 7/02/80 during an operation involving the collection of scrapings from the interior wall of a spent fuel cask. The personnel dosimetry device used for the hand monitoring was a finger ring TLD.

Employee	Hand Dose	Period of Exposure
S.	22.840 rems	4/14-7/06/80

The greater than anticipated hand dose resulted from a deviation from the preplanned operation. The facility health physics technician in association with the facility supervisor and the employee who performed the tasks discussed the operation prior to commencement. The operation essentially involved two tasks: (1) the collection of the sample and (2) the manipulation of a plastic shroud attached between the cask lid and cask as the lid was lowered onto the top of the cask. The shroud was used to minimize the migration of airborne particulate radioactive material from the cask interior.

IE07
S
1/0
ADD:
DOE/BATTELLE E-201

8106160565

MAY 26 1981

A small opening was made in the plastic shroud and a scoop attached to the end of a 3-foot rod was inserted through the opening to collect the sample. The sample was then removed and transferred to a container held by the employee in the right hand.

To preclude a reoccurrence the following actions have been implemented:

1. Increased health-physics coverage at the Hot Cell Laboratory. BCL Management has reaffirmed the assignment of the professional health-physicist who serves as Supervisor of Health-Physics Services. The Supervisor's time schedule has been prioritized to provide for daily supervision of the Hot Cell health physics programs. Management also reaffirmed the Supervisor's responsibility and authority for designing, directing, and supervising all health physics and radiological safety activities.

2. The mandatory use of Radiological Work Permits (RWP's) for all operations involving the potential for exposure to radiation. Historically, RWP's have been an integral part of the BCL radiological safety program, however, due to the large number of entries into the high bay area during the intensive decontamination activities a sign-in log was used during this period.

3. The RWP has been revised to include greater detail regarding:

   o preoperational dose estimates (ALARA) and

   o flagging points to determine need for dry-runs and mandatory use of supplementary dosimetry devices where predetermined dose estimates dictate a need.

4. Use of dry-runs for operations suspect to produce radiation exposure where time/dose constraints are considered to be of significant importance.

These items were discussed in greater detail during the Enforcement Meeting with members of your staff on April 9, 1981.

Very truly yours,

Harley L. Toy/L.C.K.

Harley L. Toy
NRC Licensing Coordinator

HLT:lk

cc: Mr. Victor Stello, Jr., Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Registered Mail