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August 11, 1981

Mr. Darrell G. Eisenhut
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



Dear Mr. Eisenhut:

Docket No. 50-6 Facility License R-4
Retired Facility (BRR) Battelle Research Reactor

This report is a summary of radiological matters pertinent to the status of the retired facility for the calendar year 1980. This report is submitted in compliance with the Technical Specifications.

Retired Facility Site Representative (RFSR)

On April 22, 1980, D. A. McKown was appointed Retired Facility Site Representative to replace J. F. Dettorre. Mr. McKown is a Certified Health Physicist and BCL Radiological Safety Officer.

Facility Status

The retired facility continues to be controlled by the Technical Specifications of the R-4 license. The use of the facility is within the purview of the RFSR and Radioactive Materials Subcommittee of the BCL Radiological Safety Committee. Uses of the facility involving nominal radiological impact are approved by the RFSR. Uses of the facility involving substantial radiological impact are reviewed by the subcommittee and if acceptable are approved by the BCL director.

Security and Surveillance

The facility remains within the confines of the protected Nuclear Sciences area. A staff of Security Inspectors maintain surveillance and area access control 24 hours-a-day. Unescorted access to the area is limited to those persons on an approved access list. All others are escorted.

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Environmental Survey

An off-site environmental monitoring program according to DOE and NRC requirements is maintained in the vicinity of the Nuclear Sciences area. A report of the accumulated data is compiled and submitted annually. A copy for the calendar year 1980 is attached for your information.

Retired Facility Surveys

Quarterly surveys for removable contamination and exposure rates in the facility were made at selected locations. Smears were taken at 80 locations and exposure rates were recorded at the 10 highest locations. The data for removable Beta activity did not exceed 100 dpm/100 cm² and exposure rates were 2 mR/hr or less at all unrestricted locations. One small position in the G.E. pool reads 15 mR/hr. from sources temporarily stored in the area. This is a restricted area and is posted as such.

Water Monitor

All water from the old hot drain system is collected in a sump with no outlet except a sump pump. The pump is controlled by a monitor and float switch in series. All water from the pump passes through the monitor chamber. If the monitor reading exceeds the set point the monitor alarms and shuts down the pump. The monitor response is checked weekly by an internal electronic check and by a built-in source. The monitor is being calibrated approximately annually at 3 points in its range with solutions of ¹³⁷Cs at 3 different concentrations. During the year no activity exceeded the 10 CFR 20 limits.

Facility Uses

- I. Drop tests which have been on-going in past years have been temporarily halted. It is anticipated these may be resumed at a later date.
- II. A previously approved research program with small quantities of ¹³¹I continues at intervals.

III. Currently approved uses of space.

1. Submitted April 10, 1980, a request to re-assign some of the rooms on the first floor to provide more convenient locations for emergency team equipment storage. The reassignments are listed as follows:

<u>Room No.</u>	<u>Assignment</u>
3210	Janitorial Services
3211	HP Office (Environmental)
3212	HP Office (Environmental)
3213	I-Lab (Supervisor, PESU Leader)
3214	Environmental Storage
3214W	Environmental Storage
3215	HP-Environmental Team Assembly Room (Rad. Emergency Team)
3218	ESU-Team Assembly (Rad. Emergency Team)
3219	First-Aid Treatment and Assembly
3220	HP-QA Archives
3221	PESU Team Assembly Room
3222	PESU Team Assembly Room
3223	ECG Control Room
3205	Hot Lab Storage Area (Security Fenced)

Approved April 17, 1980.

2. Submitted October 3, 1980; a request to store two unirradiated NS Savannah fuel assemblies, in individual shipping/storage containers, in a wire cage on the third level of the building. Approved October 14, 1980.
3. Submitted October 6, 1980; a request to store a small quantity of lumber and construct wooden shipping bins on the third level. Two fire hose are accessible in the area. Approved October 16, 1980.
4. Submitted October 6, 1980; a request to remodel the G.E. pool for storage of unirradiated plutonium waste packaged in 55-gallon drums. The request was abandoned.
5. Submitted October 30, 1980; a request for storage of three glove boxes removed from the Plutonium Laboratory. The boxes had been cleaned, all openings sealed, and the boxes sealed in a plywood crate. A constant air monitor was arranged to monitor the air inside the crate exterior to the boxes.
Approved October 31, 1980.

No elevated airborne concentrations have been detected in the crate.

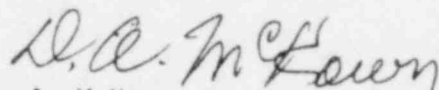
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6. Submitted November 19, 1980; a request for a small space in the basement level for a shop area to be enclosed by wire mesh. Approved November 19, 1980.

There were no reportable occurrences during 1980.

If you have any questions regarding the facility or this report, please contact Mr. D. A. McKown, RFSR (614) 424-5915 or Mr. H. L. Toy, Site Manager, (614) 879-5228.

Sincerely,



D. A. McKown, Assistant Group Manager
Security, Safety, and Plant
Protection Department

DAM:bm

Attachment