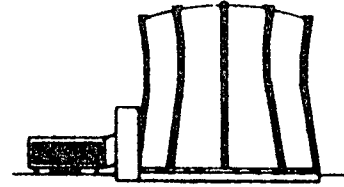


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2009-0012

April 27, 2009

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C 20555

Subject: 2008 Annual Report (NRC Facility License R-83) correction

To Whom It may Concern:

Enclosed please find the minor corrections made to the 2008 Annual Report that was submitted to the NRC in March 2009. All the corrections are italicized and highlighted.

1. Section 5.3 Facility Monitoring-typo
2. Section 5.6 Liquid Effluent Monitoring-typo
3. Section 6.2 Site Boundary Dose Rate-added the 4th quarter TLD results that were pending at the time of report.
4. Appendix B Reactor Safety Board Membership – RSB member title change

If you have any questions regarding this, please feel free to call me or Ms. Latha Vasudevan at (979) 845-7551.

Sincerely,

W. D. Reece, Director

Enclosure

LV/jlg

Xc: 211/Central File
Annual Report File
Craig Bassett, NRC

A020
A001
NRR

5.3 Facility Monitoring

Surveys of the Nuclear Science Center facilities were performed to assess radiological hazards to NSC workers. Radiation levels and sources of radioactive contamination were routinely monitored. Approximately 350 smear samples were collected and evaluated each month. All accessible areas at the NSC *were* surveyed for radiation and contamination levels monthly. Areas where contamination is expected, access/egress controls are in place and are evaluated on shorter intervals. Area monitors were placed at strategic locations in the reactor facility, this provides dose equivalent (mrem) on a monthly basis. Table 5-3 summarizes the annual accumulated dose equivalent (mrem) recorded on the area monitors for 2008.

5.6 Liquid Effluent Monitoring

Radioactive Liquid effluents are maintained in collection tanks before release from the confines of the Nuclear Science Center. Sample activity concentrations and isotope identifications were determined before each release. The concentration values for each isotope were compared with the effluent concentrations in water (10 CFR 20) and were determined to be in compliance. On September 2008, a new sewer system was tied into the Texas A&M waste treatment plant for release of liquid waste and NSC started releasing liquid waste through the sewer system effective September 2008. Sample activity concentrations were then compared with Sewer line concentrations (10 CFR 20) and were determined to be in compliance. There were 20 releases in 2008, totaling 5.57×10^5 gallons including dilution. The total radioactivity released was 2.68 mCi with an annual average concentration of 1.27×10^{-6} $\mu\text{Ci/cc}$. *The annual dose to the public calculated from liquid effluents is about 10 mrem.* Summary of the release data are presented in the following Table 5-6. Radioactivity concentrations for each isotope found were below the Effluent Concentration limits specified in 10 CFR 20, Appendix B. Some of the major radionuclides identified in the waste stream were Na-24, Sc-46, Cr-51, Mn-54, Co-58, Co-60, Zn-65, Sb-122, Sb-124, Cs-137, etc.

6.2 Site Boundary Dose Rate

The environmental survey program measures the integrated radiation exposures at the exclusion area boundaries. These measurements are made for periods of approximately 91 days using TLDs. Monthly measurements of direct gamma exposure rate in $\mu\text{R/h}$ are also made at each of the TLD locations. The dosimeters were provided and processed by Texas Department of State Health Services (TDSHS), Environmental Monitoring, Division of Regulatory Services, Austin, Texas.

Total TLD dose is multiplied by the occupancy factor (1/16) to determine the deep dose. To determine the dose to the member of the public outside the site area from air effluents, the EPA approved COMPLY code was used. The annual dose calculated via COMPLY was 1.2×10^{-4} mrem. This is added to the deep dose to determine the total dose to the general public and the maximum dose calculated was 0.7 mrem. Table 6-2 summarizes the site boundary dose rates.

Table 6-2: Site Boundary Dose Rates

TLD Station No.	Location	Quarterly Exposure rates (mrem/91 days)				TLD Dose	Deep Dose	Internal Dose (mrem)	Total Dose (mrem)
2	300 ft. W of reactor building, near fence corner	3.3	3.1	3.2	**3.7	9.6	0.60	0.00012	0.60
3	250 ft WSW of reactor building, on SW chain link fence	1.1	0	0.8	**0.9	1.9	0.12	0.00012	0.12
4	200 ft NW of reactor building, on chain link fence, near butane tank	4.4	3.1	4	**2.8	11.5	0.72	0.00012	0.72
5	225 ft NE of reactor building, on fence N of driveway	0	1	1.6	**1.8	2.6	0.16	0.00012	0.16
10	190 ft SE of reactor building, near fence corner	0	1	2.4	**0	3.4	0.21	0.00012	0.21
11	300 ft NE of reactor building, near fence corner	1.1	0	1.6	*0	2.7	0.17	0.00012	0.17

*14	3 miles NW of facility	2.2	0	0	**0	2.2	0.14	0.00012	0.14
18	375 ft NE of reactor building	2.2	3.1	2.4	**2.8	7.7	0.48	0.00012	0.48
19	320 ft NE of reactor building	0	0	0.8	**0	0.8	0.05	0.00012	0.05
20	<i>E wall of accelerator bldg</i>	0	0	0.8	**0	0.8	0.05	0.00012	0.05
21	<i>W wall of accelerator bldg</i>	0	0	0	**0	0.0	0.00	0.00012	0.00
22	<i>S wall of accelerator bldg</i>	0	0	0	**0	0.0	0.00	0.00012	0.00
*23	0.25 miles SE of facility	0	0	0	**0	0.0	0.00	0.00012	0.00

* 14 and 23 are background TLD's

** 4th quarter TLD processing delayed due to problems with TLD reader at TDSHS, Austin. Extended period between exchange and reading.

APPENDIX B

Reactor Safety Board Membership (2008)

Chairman/Licensee:

Dr. Ken Hall, Deputy Director
Texas Engineering Experiment Station

Members:

Dr. John Ford, *Associate Professor*
Nuclear Engineering Department

Dr. Marvin Adams, Associate Professor
Nuclear Engineering Department

Dr. Bill Charlton, Associate Professor
Nuclear Engineering Department

Dr. William Dennis James, Research Chemist
Chemistry Department

Dr. John Hardy, Professor
Physics Department

Dr. Teruki Kamon, Professor
Physics Department

Dr. Sean McDeavitt, Assistant Professor
Nuclear Engineering Department

Dr. Karen Vierow, Associate Professor
Nuclear Engineering Department

Ex-Officio Members:

Dr. Warren Reece, Director
Nuclear Science Center

Dr. Latha Vasudevan, NSC RSO
Nuclear Science Center

Mr. Jim Remlinger, Associate Director
Nuclear Science Center

Dr. Raymond Juzaitis, Professor and Head
Nuclear Engineering Department

Mr. Daniel Menchaca, RSO
Environmental Health and Safety Department