TEXAS ENGINEERING EXPERIMENT STATION

TEXAS A&M UNIVERSITY

3575 TAMU
COLLEGE STATION, TEXAS 77843-3575

NUCLEAR SCIENCE CENTER
979/845-7551
FAX 979/862-2667

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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Docket No 50-128

To Whom This May Concern:

Enclosed is a copy of the TAMU Nuclear Science Center 2001 Annual Report. Please feel free to call me if you have any questions at 979-845-7551.

Sincerely,

Michael Spellman
Assistant Director

Enclosure

MS/jlg

xc: 2.11/Central File

Texas A&M University

Nuclear Science Center

2001 Annual Report

Nuclear Science Center

Texas Engineering Experiment Station

Engineering Program

Texas A&M University System

College Station, Texas

Texas A&M University System
Texas Engineering Experiment Station

Nuclear Science Center

2001 Annual Report

Facility Operating License R-83

1095 Nuclear Science Road
College Station, Texas 77843-3575

April 2002

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1. Introduction

The Texas A&M University Nuclear Science Center (NSC) is a multi-disciplinary research and education center supporting basic and applied research in nuclear related fields of science and technology as well as providing educational opportunities for students in these fields as a service to the Texas A&M University System and the state of Texas. The NSC also provides services to commercial ventures requiring radiation or isotope production services.

The NSC reactor, a 1-MW, pool-type TRIGA reactor, is at the heart of the NSC facilities which includes: a 2-MW micro-beam accelerator, a ^{60}Co gamma calibration range, a real-time neutron radiography facility, a large-object irradiation cell, hot cells and manipulators, radiation measurement laboratories, radiochemical laboratories, five HPGe gamma spectroscopy systems, and a variety of instruments for radiation detection and measurement.

The NSC reactor design allows for easy load/unload of various types of samples. The NSC actively produces various kinds of radioisotopes for industry, hospitals, and academic users. The NSC provides nationally recognized neutron activation analysis (NAA) services to many research and academic institutions in the United States. The NSC reactor also actively supports the Nuclear Engineering Department on campus, one of the largest nuclear engineering programs in the United States. The NSC is one of the major attractions on campus. Last year alone, the NSC hosted 2,910 visitors including: elementary, middle, high school, and college students, faculty members, clients, and national laboratory and industrial scientists and engineers. Through these tours, the NSC teaches people with widely varying backgrounds what nuclear power is, and what radiation is and a little about nuclear science.

With the strong support from the University, the NSC is continuously increasing the diversity of its facilities and services. Currently, the NSC is developing a new Fast Flux Irradiation Device (FFID), which will have a cooling system to remove the heat generated in the device, a new topaz irradiation device for quality irradiation of gemstones, an ^{125}I recovery system and long-wire irradiation device. The NSC recently has completed development of the second generation Xe-124 irradiation system for ^{125}I production.

This annual report has been prepared to satisfy the reporting requirements of Technical Specification 6.6.1 of the facility operating license R-83 and of the Department of Energy University Reactor Fuel Assistance Program subcontract No C87-101594 (DE-AC07-76ER02426). The facility license currently extends to March 2003.

1.1 Nuclear Science Center Staff

The staff at the Nuclear Science Center consists of into five groups including: Reactor Operations, Reactor Maintenance, Health Physics, Technical Coordination, and Administrative Service (see Figure 1). Personnel directly involved with the operation and maintenance of the reactor are NRC-licensed operators. The NSC is committed to its educational responsibilities and many members of the staff are part or full-time students at Texas A&M University.

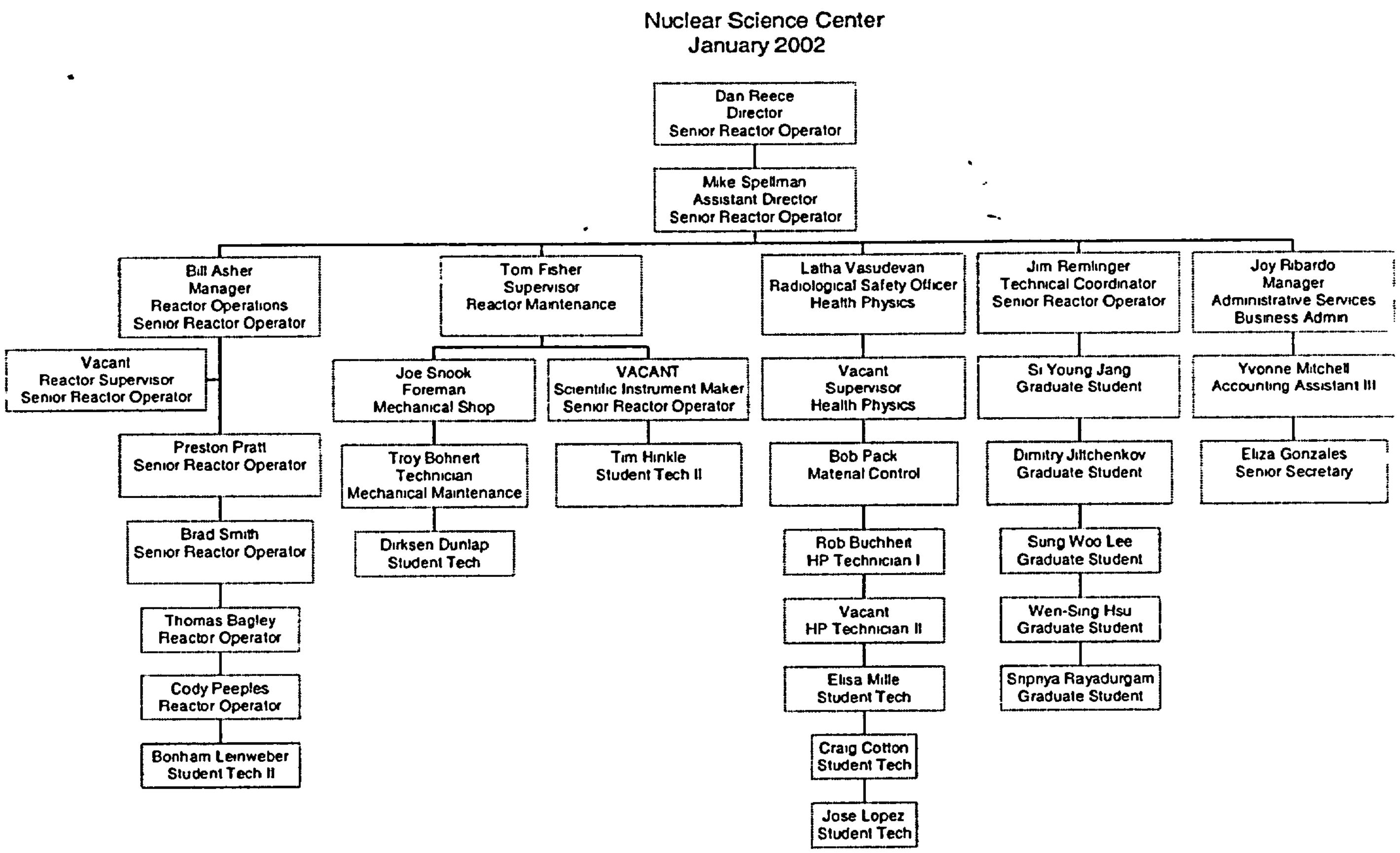

Figure 1-1. NSC Organization Chart

The Texas Engineering Experiment Station (TEES) of the Texas A&M University System operates the Nuclear Science Center (NSC). The Director of the Nuclear Science Center (NSC) is responsible to the Deputy Director of the TEES for the administration and the proper and safe operation of the facility. In addition to the internal structure, the Reactor Safety Board (RSB) advises the Deputy Director of the TEES and the Director of the NSC on issues or policy pertaining to reactor safety. The Texas A&M University Environmental Health and Safety Department (EHSD) provides assistance when it is required for emergencies and for special operations as agreed.

2. Reactor Utilization for 2000

The Nuclear Science Center (NSC) reactor has been in operation since 1962. The reactor is a 1-MW, MTR-converted TRIGA reactor. The reactor uses highly enriched uranium fuel (70%), but will use a 20% enriched fuel core when DOE funds become available. Core VIII-A is the current core configuration and has been in use since March 1986. The NSC reactor is pulse operational and is pulsed up to powers of approximately 1,100 MW for nuclear engineering laboratories, staff training, and public tours.

The NSC reactor operated for 1935.1 hours in 2001 with a total integrated power of 81.1MW-days. There were 624 irradiations and services performed at the NSC during the reporting period. The NSC provided services to TAMUS departments, other universities, research centers and secondary schools in and outside the state of Texas. Many departments at TAMU and other universities used the reactor regularly in the past year. The NSC reactor had about 90% of availability in 2000.

Table 2-1. Reactor Utilization Summary in 2001

Days of Reactor Operation	233
Integrated Power (MW-days)	81.1
Number of Hours at Steady-State	1935.1
Number of Pulses	65
Number of Reactor Irradiations (RFS)	625
Beam Port/Thermal Column Experiment Hours	968
Hours Irradiation Cell Use	587
Number of Visitors	1919
Unscheduled Shutdowns	4

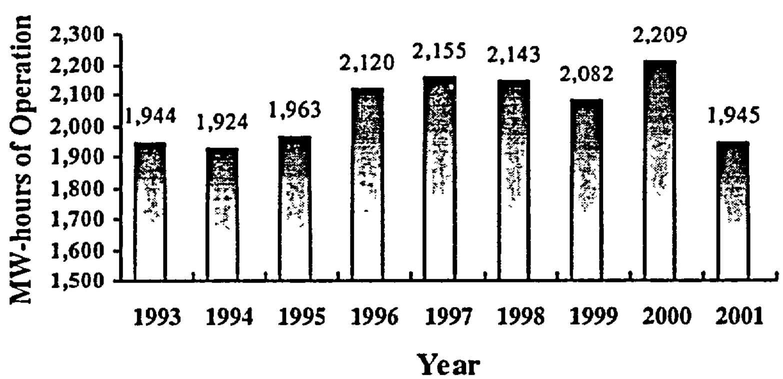

Figure 2-1. Annual Reactor Utilization

2.1 Research Enhancement Program (REP)

The 70th Texas Legislature established the Research Enhancement Program (REP) in 1987 to "encourage and provide for research conducted by faculty members." The REP replaced the former "Organized Research" program. The TAMU Office of the Vice President for Research administers the REP funds and generally allocates these funds to the NSC early in the fiscal year. TAMUS faculty members who desire to use the irradiation services at the NSC reactor must apply at the NSC to receive local funding for each individual project. This proposal method is flexible and does not hinder a project's start-up time.

2.2 TAMU Academic Support Program

Texas A&M University (TAMU) provides funding for the reactor for such academic activities as nuclear engineering laboratories, neutron activation analysis demonstrations and laboratories, graduate student thesis and dissertation research, and undergraduate research projects. The program has been very successful and is crucial for many graduate students who use the NSC reactor for research and have not received research grants. The wide range of academic users from the university reflects in the NSC's reputation as a multi-disciplinary institution.

2.3 DOE University Reactor Sharing Program

The DOE University Reactor Sharing Program provides funds for reactor experimentation to those institutions that do not normally have access to a research reactor. The Nuclear Science Center (NSC) has participated in the program since 1980. During the 2000-2001-contract year, nine research institutions utilized the NSC with the support of the Reactor Sharing Program. Additionally, the funding provided reactor tours and "hands-on" projects to many secondary schools. The research projects supported by the program include items such as dating geological material and producing high current super conducting magnets. The funding gave several small colleges and universities the opportunity to use the NSC facilities for teaching courses in nuclear processes, specifically neutron activation analysis and gamma spectroscopy. The Reactor Sharing Program supported the use of the Fast Flux Irradiation Device for multiple users at New Mexico Institute of Mining and Technology and the University of Nevada at Las Vegas. This device has near optimum neutron fluxes for $^{39}Ar/^{40}Ar$ dating.

2.4 Commercial Activity and External Research

The NSC provides services to a variety of users who provide their own funding. The majority of commercial activities relate producing radioactive tracers for the Texas petroleum and chemical industries. Another commercial activity uses the converted Thermal Column area to produce micropore filters used in ultra-pure water systems in the semiconductor industry. Outside research grants fund a significant amount of the NSC's research. The NSC has many years of experience producing radioisotopes and has developed several customer-specific methods for radioactive sample production and handling. The production of radioisotopes generally involves handling radioactive material with high activities. The NSC staff takes precautions to minimize their exposures during the transfer of radioactive materials to shipping shields.

3. Facility and Procedure Changes

3.1 Facility Modifications

The following are facility modifications and maintenance items authorized and implemented in accordance with 10 CFR 50.59. NSC staff meeting minutes or RSB meeting minutes document the approval for these items as appropriate.

Safety Channel and Scram Circuit Replacement. (May 24,2001)

NSC staff built and installed a new safety power-measuring channel. The new instrument is functionally identical to the old instrument. The new drawer's test device is adjustable whereas the previous design was not. Individual continuous-monitoring magnet-power current meters replaced the selector switch with one meter. A NIM module houses and powers the new system. The NSC staff and the Reactor Safety Board reviewed the new design through modification authorization (MA) #54.

Modification of Overlap Circuit For Wide-Range Monitor

NSC Electronics staff replaced two resistors in the wide range monitor (Log Drawer). These resistors control the overlap between the pulse counting and current measuring circuits. Subsequent testing verified the improvement. The NSC staff reviewed the replacement and calculated the replacement would not affect any function of the safety system.

3.2 Experiment Authorizations and Modifications

Second Revision to Experiment Authorization to Produce I-25 (June 1, 2001)

The latest change is for the modified xenon irradiation device- the modified device positions the target xenon gas in a higher flex for improved I-125 yield. The new device also provides improved indications. Functionally, the device is unchanged. The Reactor Safety Board and the NSC staff reviewed the modifications per 10CFR50.59.

4. Reactor Maintenance and Surveillance

4.1 Scheduled Maintenance

NSC personnel performed regular maintenance on the Fuel Element Temperature Channel, Area Radiation Monitors and the Linear, Log, and Safety Power Channels as required by the Technical Specifications. They also performed all surveillances required by the reactor license. Control rod worth and scram time measurements performed in September 2001 gave the following results. The total rod worth is $16.35. The most reactive control rod is Shim Safety #4 with a worth of $4.32. The shutdown margin was $4.87 and core excess was $5.23. Scram times on all rods were less than 1.2 seconds. In addition, operators performed calorimetric calibration following each maintenance period, and fuel inspections with no abnormalities noted (as required by the Technical Specification). The cold critical reactivity worth, performed for each reactor experiment, shows the most reactive fixed experiment is the Fast Flux Pneumatic Receiver (-$1.35) with leveling high boron loading the negative worth.

4.2 Unscheduled Maintenance

01-04-01	Replaced diodes in the thermal column Continuous Air Monitor. This fault caused failure during regular maintenance
03-19-01	Replaced overhead crane controller.
04-30-01	Repaired and tested Rod-drive 'C' Engaged switch. Fault presented indication from resetting.
06-12-01	Replaced secondary pump adjustment bolts. Fault caused excessive seal leakage.
07-09-01	Replaced and repaired Irradiation Cell duct work.
07-25-01	Replaced overhead crane controllers. Operators dropped and broke the controller.
07-26-01	Replaced relays and other components on the Irradiation Cell man-lift.
07-31-02	Replaced, aligned and tested Transient Rod "Rod Down" switch. Failure prevented indication from returning to zero on insertion.
10-16-01	Replaced "Rod Down" switch on and made repair to control rod drive mechanism 'B'. Rod Down indication failed.
09-24-01	Cleaned and inspected solenoid valve that silences the Evacuation Horn from The Reception Room. Silence function failed during regular maintenance.

11-06-01 Replaced all cables for the Facility Air Monitor equipment.

4.3 Emergency Planning and Review

The NSC staff and Reactor Safety Board reviewed the NSC Security Plan on May 3, 2001 and December 6, 2001 respectively, Reactor Safety Board members completed all required external audits for the Emergency and Security plans during the reporting period.

4.4 Unscheduled Shutdowns

There were 12 unscheduled reactor shutdowns occurred during 2000. Four shutdowns resulted from a loss of facility electrical power. The remaining causes are detailed below:

1-19-01 The Reactor Operator trainee repositioned the Safety-Power monitor test switch to the test position.

1-29-01
4-9-01
10-4-01
10-9-01
10-9-01

When approaching 1MW with the reactor positioned against the thermal couple device, Safety Power Monitor #2 sees a high flux. The circuit over-responds during a transient. The over-response sometimes causes high-power scrams below 1MW. This happened five times.

6-11-01 Safety-Power monitor channel 1 caused a scram with the reactor at 1MW, steady state. NSC staff realigned the drawer.

11-13-01 Reactor scrammed when operators opened the Irradiation Cell door with the cell door scram interlock activated. The reactor was operating in the stall.

5.0 Health Physics Surveillance

The purpose of Health Physics surveillance is to ensure safe use of radioactive materials in Nuclear Science Center's (NSC) research and service activities and to fulfill the regulatory requirements of U.S. Nuclear Regulatory Commission and State agencies. The NSC maintains a Health Physics group as an integral part of the organization. They are responsible for chemical and physical safety concerns as well as radiological. The TAMU Environmental Health and Safety Department provides additional support to the NSC Health Physics group upon request.

5.1 Radioactive Shipments

The Health Physics monitoring and technical support that was provided in 2001 assured minimal exposure during sample handling, shipment of radioactive material, and normal reactor operation. The radiation exposures were maintained ALARA. During 2001, about 401 radioactive samples were handled of which 366 were sent to various research facilities including Texas A&M University campus and the rest retained at the Nuclear Science Center facility. A total of 279 curies were handled in 2001.

5.2 Personnel Monitoring

Personnel Monitoring was provided to approximately 55 personnel. All measured doses to personnel were below the limits set forth in 10 CFR 20. One individual received whole body dose greater than 10% of the annual limit in10 CFR 20. The dose recorded was 690-mrem deep dose equivalent for the year. Airborne monitoring during sample handling continued to show no significant airborne activity. Therefore, total effective dose equivalent will equal deep dose equivalent for 2001. A total of 3.83 manrem was recorded for all of 2001. When total manrem/curie was determined for 2001, the dose per curie equaled 0.0137.

During 2001, 1919 visitors toured the Nuclear Science Center. Minimal exposures were measured with pocket ion chambers worn by these visitors and the pocket ion chamber readings of their respective tour guides.

NSC employees who were likely to exceed 10% of their total annual dose wore TLDs/film badges and extremity dosimeters that were provided by Landauer, a NVLAP accredited supplier. Landauer also provided the analysis reports of the doses received.

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 are 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. The following table summarizes the annual accumulated dose equivalent (mrem) recorded on the area monitors for 2001.

Table 1. Total Dose Equivalent (mrem) Recorded on Area Monitors

Monitor ID	Location	Accumulated Dose Equivalent (mrem)
BLDG MNTR 1	Upper Research Level Mezzanine	780
BLDG MNTR 2	Lower Research Level Mezzanine	180
BLDG MNTR 3	Lower Research Level	150
AREA	Control Room	90
AREA	Upper Research Level	620
AREA	Hand and Foot Monitor Room	1110

5.4 Particulate Effluent Monitoring

Radioactive particulates were monitored at the base of the central exhaust stack and summarized on a monthly basis. The annual average release concentration was 1.19E-11 µCi/cc. Total activity released for 2001 was 7.23E-04 Ci. The following table summarizes monthly particulate effluent releases during 2001.

Table 2. Monthly Particulate Effluent Releases

Quarter	Month	Average Release Conc. (µCi/cc)	Diluted Concentration (µCi/cc)	Exhaust Volume (cc)	Total Release (Ci)
I	January	1.93E-11	9.65E-14	6.32E+12	1.22 E-04
	February	1.53E-11	7.63E-14	5.71E+12	8.72E-05
	March	<MDA	<MDA	6.32E+12	<MDA
	Average:	1.73E-11	8.64E-14	6.12E+12	1.05E-04
			TOTAL	1.82E+13	2.09E-04
II	April	1.15 E-12	5.74E-15	6.12E+12	7.02E-06
	May	<MDA	<MDA	6.32E+12	<MDA

	June	1.51E-11	7.53 E14	6.12E+12	9.21E-05
	Average:	8.1E-12	4.05E-14	6.19E+12	4.96E-05
			TOTAL	1.86E+13	9.92E-05
III	July	1.87E-11	9.37E-14	6.32 E+12	1.19E-04
	August	7.55E-12	3.78E-14	6.32 E+12	4.78E-05
	September	7.86E-12	3.93E-14	6.12 E+12	4.81E-05
	Average:	1.14E-11	5.69E-14	6.25 E+12	7.15E-05
			TOTAL	1.88 E+13	2.14E-04
IV	October	2.31E-12	1.16E-14	6.32E+12	1.46E-05
	November	2.71E-11	1.35E-13	6.12E+12	1.66E-04
	December	3.21E-12	1.60E-14	6.32E+12	2.03E-05
	Average:	1.09E-11	5.44E-14	6.25E+12	6.69E-05
			Total:	1.88E+13	2.01E-04
Annual Summary	**Average:**	1.79E-11	8.94E-14 **Total:**	6.20E+12 7.43E+13	7.31E-05 7.23E-04

- Minimum Detectable Activity (MDA) 4.5 E-14 µCi/cc

5.2 Gaseous Effluents Monitoring

Argon-41 is the major gaseous effluent produced and released at the Nuclear Science Center. This effluent is monitored at the central exhaust stack. Total Argon-41 released during 2001 was 5.203 Ci with an annual average release concentration of 6.96 E-8 µCi/cc and with a diluted concentration of 3.48 E-10 µCi/cc.

The following table summarizes monthly gaseous effluent releases during 2001.

Table 3. Monthly Gaseous Effluent Releases

Quarter	Month	Average Release Conc. (µCi/cc)	Diluted Concentration (µCi/cc)	Exhaust Volume (cc)	Total Release (Ci)
I	January	6.74E-08	3.37E-10	6.32E+12	4.26E-01
	February	5.89E-08	2.95E-10	5.71E+12	3.36E-01
	March	9.33E-08	4.67E-10	6.32E+12	5.90E-01
	Average:	7.32E-08	3.66E-10	6.12E+12	4.51E-01
				1.82E+13	1.35E+00
II	April	1.62E-08	8.10E-11	6.12E+12	9.91E-02

	May	8.62E-08	4.31E-10	6.32E+12	5.45E-01
	June	1.16E-07	5.80E-10	6.12E+12	7.09E-01
	Average:	7.28E-08	3.64E-10	6.19E+12	4.51E-01
				1.86E+13	1.35E+00
III	July	3.73E-09	1.86E-11	6.32E+12	2.35E-02
	August	1.01E-07	5.05E-10	6.32E+12	6.38E-01
	September	5.78E-08	2.89E-10	6.12E+12	3.53E-01
	Average:	5.42E-08	2.71E-10	6.25E+12	3.39E-01
				1.88E+13	1.01E+00
IV	October	5.34E-08	2.67E-10	6.32E+12	3.37E-01
	November	1.56E-08	7.79E-11	6.12E+12	9.53E-02
	December	1.66E-07	8.29E-10	6.32E+12	1.04E+00
	Average:	7.82E-08	3.91E-10	6.32E+12	4.94E-01
				1.88E+13	1.48E+00
Annual Summary	Average:	6.96E-08	3.48E-10	6.22E+12	4.34E-01
				7.43E+13	5.20E+00

* Minimum Detectable Activity (MDA) 6.2 E-10 μCi/cc

5.6 Liquid Effluents 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. There were 21 releases in 2001, totaling 9.35E+5 gallons including dilution. The total radioactivity released was 7.16E-04 Ci with an annual average concentration of 2.02E-07 μCi/cc. Summaries of the release data are presented in the table below. 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 are Na^{24}, Sc^{46}, Sb^{124} and Co^{60}.

Table 4. Monthly Liquid Effluent Releases

Quarter	Month	Number of Releases	Volume Released (cc)	Total Radioactivity (Ci)	Average Concentration (μCi/cc)
I	January	1	2.17E+08	1.78 E-05	8.19E-08
	February	3	6.79 E+08	4.36 E-05	6.42 E-08
	March	1	1.12 E+08	7.01 E-05	6.27 E-07
	Quarter Total:	5	1.01 E+09	1.31 E-04	
II	April	1	8.66 E+07	4.41 E-06	5.09 E-08

	May	2	2.77 E+08	1.23 E-04	4.44 E-07
	June	2	2.79 E+08	1.01 E-05	3.60 E-08
	Quarter Total:	5	6.43 E+08	1.37 E-04	
III	July	1	2.65 E+08	9.78 E-06	3.70 E-08
	August	1	1.08 E+08	5.31 E-06	4.91 E-08
	September	3	6.43 E+08	1.26 E-04	1.97 E-07
	Quarter Total:	5	1.02 E+09	1.41 E-04	
IV	October	3	5.11 E+08	1.34 E-04	2.61 E-07
	November	*	*	*	*
	December	3	3.61 E+08	1.72 E-04	4.77 E-07
	Quarter Total:	5	8.71 E+08	3.06 E-04	
Annual Summary	**Total:**	21	3.54 E+09	7.16 E-04	2.02 E-07

* No releases

6.0 Environmental Monitoring

In conjunction with representatives from the Texas Department of Health, Bureau of Radiation Control, a quarterly environmental survey program is conducted to insure compliance with federal regulations. This program consists of TLD monitors located at various locations on the NSC site and two background monitors one located at 3.84 miles NW of facility and the other at 0.25 miles SE of facility. The collection, analysis, and evaluation of NSC creek sediment, and milk samples from the dairy downwind of the facility are also included in the program.

6.1 Environmental Survey Samples

The environmental samples were collected in accordance with the schedules of the cooperative surveillance program between the Texas Department of Health and the Texas A&M University. NSC creek sediment and milk samples from the dairy were analyzed using an intrinsic germanium detection system for isotopic identification at the NSC. A second set of sediment and milk samples were analyzed by the Texas Department of Health for comparison.

The concentrations of environmental samples determined for each quarter are listed below.

Table 5. Environmental Sample Analysis MILK		
2001 Quarter	Sample Location	Concentration (μCi/mL)-TDH
1st	TAMU Dairy	< 3.9 E-09
2nd	TAMU Dairy	< 4.1 E-09
3rd	TAMU Dairy	< 4.6 E-09
4th	TAMU Dairy	< 3.1 E-09
	SEDIMENT	(μCi/g)-NSC
1st	NSC creek	9.0 E-06
2nd	NSC creek	1.4 E-05
3rd	NSC creek	1.1 E-06
4th	NSC creek	7.2 E-06

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 μrem/h are also made at each of the TLD locations. The dosimeters are provided and processed by Texas Department of Health (TDH), Bureau of Radiation Control, Division of Environmental Programs Total TLD dose is multiplied by the occupancy factor (1/16) to determine total deep dose to the general public.

To determine internal exposure to individuals outside the site area the EPA's approved code *COMPLY* was used. The exposure calculated via *COMPLY* was 0.093 mrem/yr. This exposure is added to the calculated total deep dose. This total is the dose received by the general public.

Table 6. Site Boundary Dose Rates

Site #	Location	Quarterly Exposure Rate (mrem/91 days)				TLD Dose	Deep Dose (mrem)	Internal Dose (mrem)	Total Dose (mrem)
2	300 ft. W of reactor building, near fence corner	5.2	4.6	4.2	3.8	17.8	1.11	0.093	1.203
3	250 ft W-SW of reactor building, on SW chain link fence	3.1	2.8	2.1	1.9	9.9	0.618	0.093	0.711
4	200 ft NW of reactor building, on chain link fence, near butane tank.	9.3	8.4	6.3	7.6	31.6	1.975	0.093	2.068
5	225 ft NE of reactor building, on fence N of driveway	3.1	2.8	2.1	1.9	9.9	0.618	0.093	0.711
10	190 ft SE of reactor building, near fence corner	5.2	2.8	2.1	1.9	12	0.75	0.093	0.843
11	300 ft NE of reactor building, near fence corner	2.1	0.9	1.0	1.9	5.9	0.368	0.093	0.461
18	375 ft NE of reactor building	6.2	4.6	4.2	3.8	18.8	1.175	0.093	1.268

19	320 ft NE of reactor building	4.1	3.7	2.1	2.8	12.7	0.793	0.093	0.886
14	3.84 miles NW of facility	0.0	1.9	0.0	1.0	1.9	0.118	0.093	0.211
23	0.25 miles SE of facility	0.0	0.0	0.0	0.0	0.0	0.0	0.093	0.093

7.0 Radioactive Waste Shipments

During the year 2001 there was no solid waste released from the NSC for disposal offsite.

8.0 Reactor Safety Board

The Reactor Safety Board is responsible for providing an independent review and audit of the safety aspects of the NSCR. The RSB meets at least once a year to review audit reports, security and emergency plans, new experiments and modifications to the facility.

Membership (2001)

Chairman/Licensee:

Dr. Glen Williams/Dr. B. Don Russell
Texas Engineering Experiment Station

Members:

Dr. Marvin Adams, Associate Professor
Nuclear Engineering Department

Dr. William Dennis James, Research Chemist
Chemistry Department

Dr. Robert Kenefick, Professor
Physics Department

Dr. Earl Morris, Professor
Veterinary Medicine-Large Animal Medicine

Ex-Officio Members:

Dr. Warren Reece, Director
Nuclear Science Center

Latha Vasudevan, Ph. D, Radiological Safety Officer
Nuclear Science Center

Mr. John Salsman, Assistant Director, Radiological Safety
Environmental Health and Safety Department

Dr. Alan Waltar, Professor and Head
Nuclear Engineering Department

Mr. Robert Berry, Reactor Supervisor
AGN201, Nuclear Engineering Department