REED COLLEGE *Portland, Oregon 97202*

REACTOR FACILITY

October 22, 2007

Document Control Desk
US Nuclear Regulatory Commission
Washington, DC 20555

Docket 50-288

Enclosed is Reed College Reactor's Annual Report. Also enclosed is last year's report in case you didn't receive it.

Please feel free to contact me for additional information.

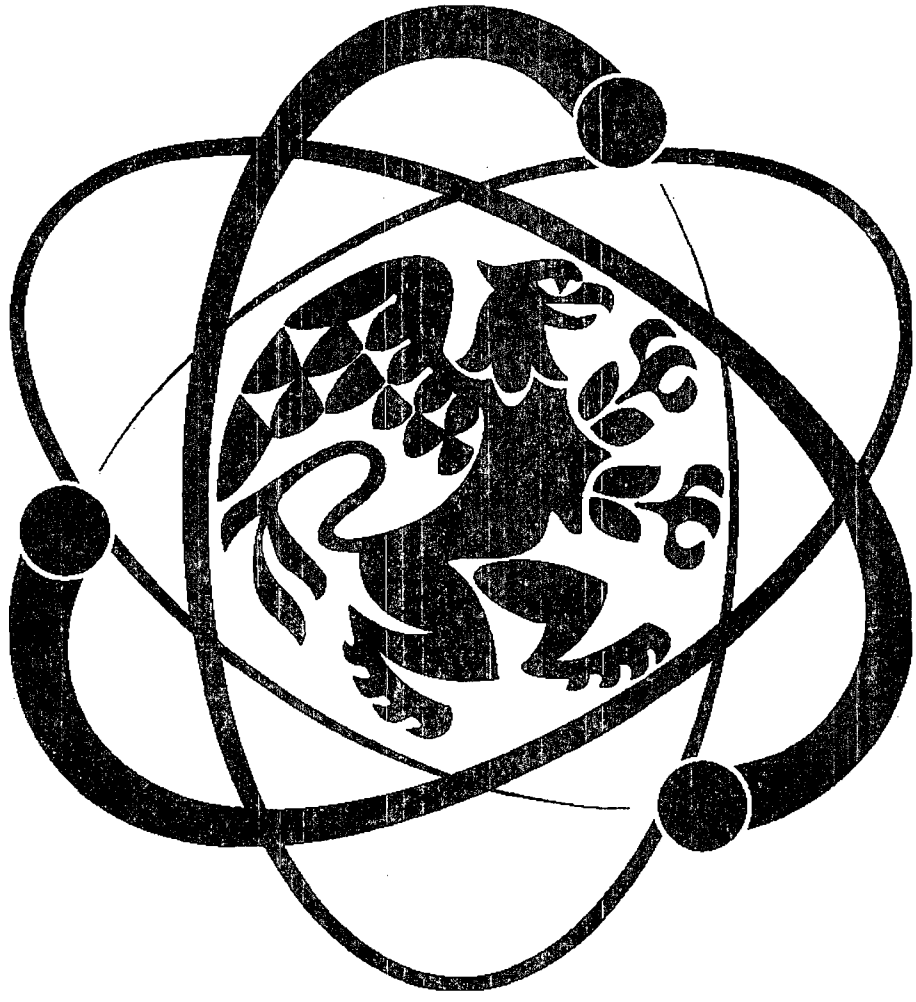
Regards,

Stephen G. Frantz
Director, Reed College Reactor

A020
NRR

3203 SE Woodstock Blvd., Portland, OR 97202-8199 *503-777-7222 Fax: 503-777-7274 reactor@reed.edu*

REED RESEARCH REACTOR
ANNUAL REPORT



September 1, 2006 -- August 31, 2007

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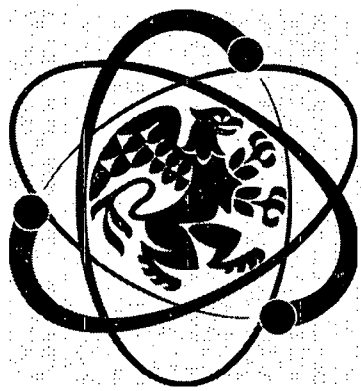
REED RESEARCH REACTOR ANNUAL REPORT



September 1, 2006 -- August 31, 2007

3203 Southeast Woodstock Blvd.
Portland, Oregon 97202-8199
503-777-7222
Fax: 503-777-7274
http://reactor.reed.edu
reactor@reed.edu

Stephen G. Frantz
Director, Reed Research Reactor
Program Director, Nuclear Science
Consortium of the Willamette Valley

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OVERVIEW

This report covers the period from September 1, 2006 to August 31, 2007, and is intended to fulfill the reporting requirements of the U.S. Nuclear Regulatory Commission, the U.S. Department of Energy, and the Oregon Department of Energy including:

- U. S. NRC, License No. R-112, Docket 50-288
- Oregon Office of Energy Rule No. 345-030-010
- U. S. DOE Reactor Sharing Grant No. DE-FG07-02ID14387
- U. S. DOE Reactor Instrumentation Grant No. DE-FG07-04ID14573

We specifically wish to thank other funding sources including:
Portland General Electric
Concordia University

Reed College operates a TRIGA® Mark I reactor with zirconium hydride/uranium fuel elements in a circular grid array at the bottom of a 25-foot-deep tank of water and are surrounded by a graphite reflector. The fuel is enriched to 19.9% in uranium-235.

The Reed College Research Reactor has been a resource for research and educational projects in the Portland area since 1968. The main uses of the Reed Research Reactor are instruction and research, especially in the field of trace-element analysis. In addition to providing student research opportunities, the reactor staff works to educate the surrounding community on the principles of nuclear energy and radiation safety.

There were 2272 individual visits to the Reactor Facility during the year. Most were students in classes at Reed College or area universities, colleges, and high schools. Including tours and research conducted at the facility, the Reed Research Reactor contributed to the educational programs of 9 colleges and universities in addition to 15 pre-college groups. The reactor was operated 297 times on 119 days. The thermal energy produced was 38 megawatt-hours.

The reactor staff consists of a Director, an Associate Director, a Health Physicist, and Reed College undergraduate students who are licensed by the Nuclear Regulatory Commission as reactor operators or senior reactor operators. As this report is being written the licensed operating staff consists of 19 women and 23 men. During the reporting period, all 12 reactor operator candidates passed their NRC exams and all 9 senior reactor operator candidates passed their NRC exams.

There were no radiation exposures to individuals in excess of one percent of the limit during the year. There were no releases of liquid radioactive material from the facility and airborne releases were well within regulatory limits. There was one shipment of radioactive waste.

The Nuclear Regulatory Commission conducted their annual inspection during January 2007. There were no violations or concerns. There were no follow up items.

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PEOPLE

Facility Staff

During the period September 1, 2006 to August 31, 2007, the facility staff consisted of:

Reactor Director:	Stephen Frantz (4/94 – Present)
Associate Director:	Vanessa Holfeltz (7/07 – Present Susan Beaver (7/06 – 6/07)
Reactor Supervisor:	Robin Bjorkquist (8/07 – Present) Craig Wagner (8/06 – 6/07)
Training Supervisor:	Tiffany Cook (8/07 – Present) Juliana Arrighi (8/06 – 6/07)
Requalification Supervisor:	Griffen Thoma (8/07 – Present)
Radiation Safety Officer:	Kathleen Fisher (1/03 – Present)
Health Physicist:	Becky Day (4/07 – Present) Marshall Parrott (8/91 – 10/06)

Senior Reactor Operators (SRO):

Juliana Arrighi	Susan Beaver	Robin Bjorkquist
Rachel Bond	Steven Case	Michael Chaffin
Thomas Chartrand	Tiffany Cook	Benjamin Fischer
Stephen Frantz	Hilary Gray	Vanessa Holfeltz
Cindy Joe	Sarah Kemp	Molly King
Kristen Lavavej	Grant Meadors	Tracy Mehoke
Marianna Mullens	Elliot Naidus	Derek Oldridge
Joseph Parmalee	Alton Sartor	Rebecca Schoenberg-Jones
Julia Schornack	Kayce Spear	Griffen Thoma
Craig Wagner	Gillian Woodruff	

Reactor Operators (RO):

Constance Bailey	Quincy Cardinale	Fluffy Cass
Asher Davidson	Allison Edgar	Michael Flashman
Rachel Fordyce	Angela Frey	Ryan Gersovitz
Edward Griffith	Alex Gurfinkel	Jeremy Harper
Kimberly Hartfield	Casey Hurstell	Matthew Jemielita
Matthew King	Jordan Kohn	Reuven Lazarus
Judith Levine	Christine Lewis	Eric Lindsey
Anna McGee	Alex Ragus	Carl Rodriguez
Will Rosenbaum	Jacob Schwartzman	Emma Seward
Jonah Simpson	Erin Smith	Sarah Spiegel
Daniel Wall	Trevor Young	

The list of operators includes everyone who held a license at any time during the reporting period. ROs who upgrade their licenses to SRO during the reporting period are listed under SRO. All staff members are Reed College undergraduate students except Mr. Frantz, Ms. Holfeltz, Ms. Beaver, Ms. Fisher, Ms. Day, and Dr. Parrott.

It is with sadness we note the passing of Dr. Marshall Parrott, who worked at the reactor for 16 years, and is greatly missed by all of us.

As this report is being written there are 9 women and 14 men with Reactor Operator licenses and 10 women and 9 men with Senior Reactor Operator licenses.

Reactor Review Committee

The Reed Research Reactor has two oversight committees: the Radiation Safety Committee and the Reactor Operations Committee. Together they comprise the Reactor Review Committee. The Radiation Safety Committee is concerned with emergency preparedness, health physics, radiation safety, physical security, environmental impact, and the interface between the Reed Research Reactor, Reed College, and the surrounding community. The Reactor Operations Committee deals with the day-to-day operations of the reactor, reactor maintenance, reactor safety, operator training, and operator requalification. The membership of the committees during the reporting period is shown below:

Radiation Safety Committee

Tom Meek - Chair *(Radiation Protection Manager, Trojan Nuclear Power Plant)*
Norm Dyer *(Neighborhood Resident)*
Wayne Lei *(Environmental Director, Portland General Electric)*
Kathleen Fisher *(Director, Reed Environmental Health and Safety)*

Reactor Operations Committee

Steve Reese - Chair *(Radiation Center Director, Oregon State University)*
Johnny Powell *(Physics Faculty, Reed College)*
Daniel Gerrity *(Chemistry Faculty, Reed College)*
Juliet Brosing *(Physics Faculty, Pacific University)*

Ex Officio (without vote) on Both Committees:

Peter Steinberger *(Dean of the Faculty, Reed College)*
Stephen Frantz *(Director, Reed Research Reactor)*
Susan Beaver *(Associate Director, Reed Research Reactor)*
Craig Wagner *(Reactor Supervisor)*
Juliana Arrighi *(Reactor Training Supervisor)*

FACILITIES

Reactor Facility

In addition to the reactor, the Reed College has a radiochemistry lab. The equipment available at the reactor facility includes high purity germanium gamma spectrometers, alpha spectrometers, a whole body counter, gas flow proportional counters, ion chambers, beta counters, Geiger-Muller tubes, neutron detectors, alpha detectors, and thermo luminescent dosimeter readers. These instruments are used for experiments and training in nuclear science and radiation detection. Two hand and shoe monitors are in the control room. A liquid scintillation detector serves the campus radioisotope committee. The reactor facility has several systems for performing irradiations, described below.

Rotating Specimen Rack Facility

The rotating specimen rack ("lazy susan") is located in a well on top of the graphite reflector surrounding the core. The rack consists of a circular array of 40 tubular receptacles, each of which can accommodate two irradiation tubes. Vials holding up to 17 ml (four drams) are used in this system. Samples are loaded in the specimen rack prior to the start-up of the reactor. The rack automatically rotates during irradiation to ensure each sample receives the same neutron flux. Typically, researchers use the rotating rack when long irradiation times (generally greater than five minutes) are required. The approximate thermal neutron flux in a rotating rack position at full power is 1.7×10^{12} n/cm^{2}s with a cadmium ratio of 6. The specimen rack can be used for gamma irradiations (approximately 8 Rad/min) when the reactor is shutdown.

Pneumatic Transfer System

The pneumatic transfer system ("rabbit") consists of an irradiation chamber in the outer F-ring of the core and its associated pump and piping. This allows samples to be transferred in and out of the reactor core very rapidly while the reactor is at power.

Routine use of the pneumatic transfer system involves placing samples into vials, which in turn are placed in special capsules known as "rabbits." The capsule is loaded into the system in the laboratory next to the reactor and is then transferred pneumatically into the core-irradiation position. At the end of a predetermined time the sample is transferred back to the receiving terminal, where it is removed for measurement. The transfer time from the core to the terminal is about seven seconds, making this method of irradiating samples particularly useful for experiments involving radioisotopes with short half-lives. The flux in the core terminal is approximately 5×10^{12} n/cm^{2}s when the reactor is at full power.

In-Core Facilities

The central thimble is a water-filled irradiation chamber about 3 cm in diameter. It provides the highest available neutron flux, about $1x10^{13}$ n/cm^{2}s. Special sample holders are used in the central thimble to provide maximum flexibility in experiment design.

A fuel replacement source holder assembly can also be used as an irradiation facility. The chamber fits into a fuel-element position within the core itself. It holds only one specially positioned irradiation container 7.5 cm in length and 2.5 cm in diameter.

Foil-insertion holes, 0.8 cm in diameter, are drilled at various positions through the grid plates. These holes allow inserting special holders containing flux wires into the core, to obtain neutron flux maps of the core.

In-Pool Facilities

Near core, in-pool irradiation facilities can be arranged for larger samples. Neutron fluxes will be lower than in the lazy susan and will depend on the sample location.

An iridium gamma irradiator is also in the reactor pool for gamma only irradiations.

Beam Facilities

The central thimble can be evacuated with gas, producing a vertical neutron beam. This beam can be used to generate directional neutron flux, or for limited irradiations above the tank. Prompt gamma analysis and neutron radiography can be done. The flux above the beam exit is approximately $1x10^6$ n/cm^{2}s when the reactor is at full power.

Reactor Visitors

A total of 2272 individuals visited the Reed Research Reactor during the year, as derived from the visitor log - Entry List B. Individuals who visited more than once are counted for each visit. Visitors include all individuals who are not listed as facility staff. The visitors included 597 who were in programs funded in part by the U.S. DOE Reactor Sharing program. A large percentage of these were students in classes at area colleges and schools as discussed below. A graph of the history of visitor attendance is shown in figure 1, and a list for the current year is included as Appendix A.

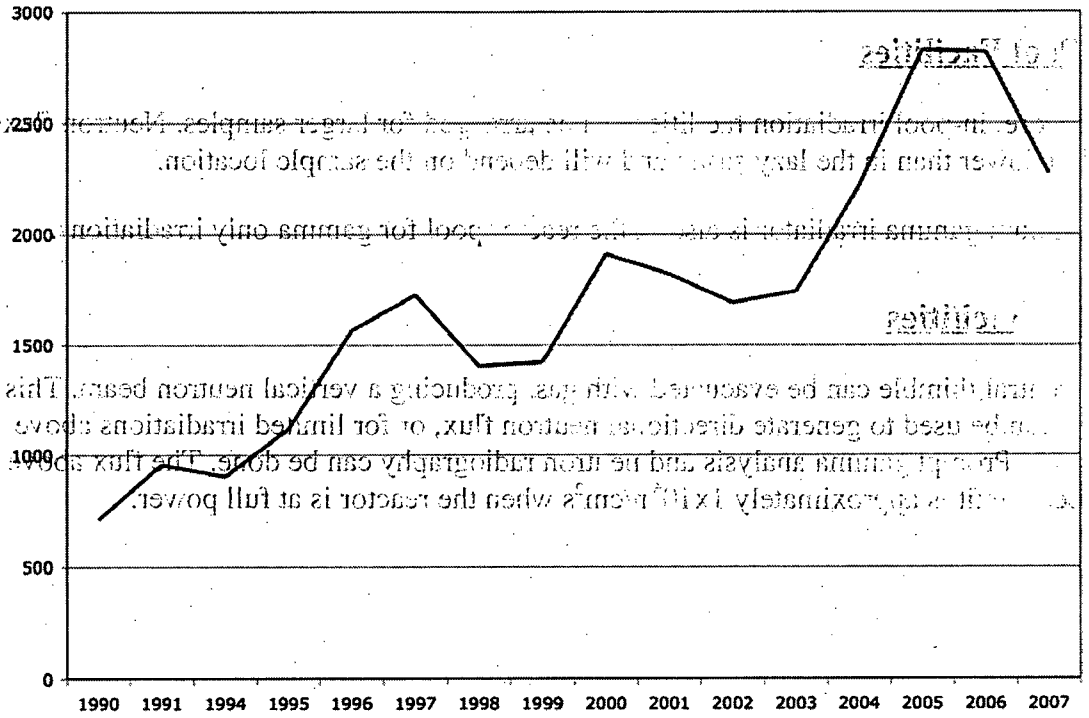


Figure 1 Reed Research Reactor Visitors

Reactor Operations Seminar

The Reed Research Reactor conducts an annual seminar series for students from Reed and other area educational institutions. This non-credit course serves as an introduction to nuclear reactor theory, health physics, and reactor operation. Some of the students continue with in-depth reactor operator training and subsequently apply for a reactor operator license. If successful, the individual may be hired to operate the reactor. In addition, existing reactor operators may take the NRC senior reactor operator exam to upgrade their licenses.

During the reporting period, 12 out of 12 reactor operator candidates passed their NRC exams and 9 out of 9 senior reactor operator candidates passed their NRC exams. This year, for the first time, we put a limit on the number of reactor operator candidates.

Historically students who fail the NRC exam only fail one section and they are allowed to retake that section later. Figure 2 is a graph of the number of license application each year showing how many new RO and SRO licenses were awarded at Reed and how many failed to obtain a license. Following the large class in 2005 we began limiting the number of license candidates.

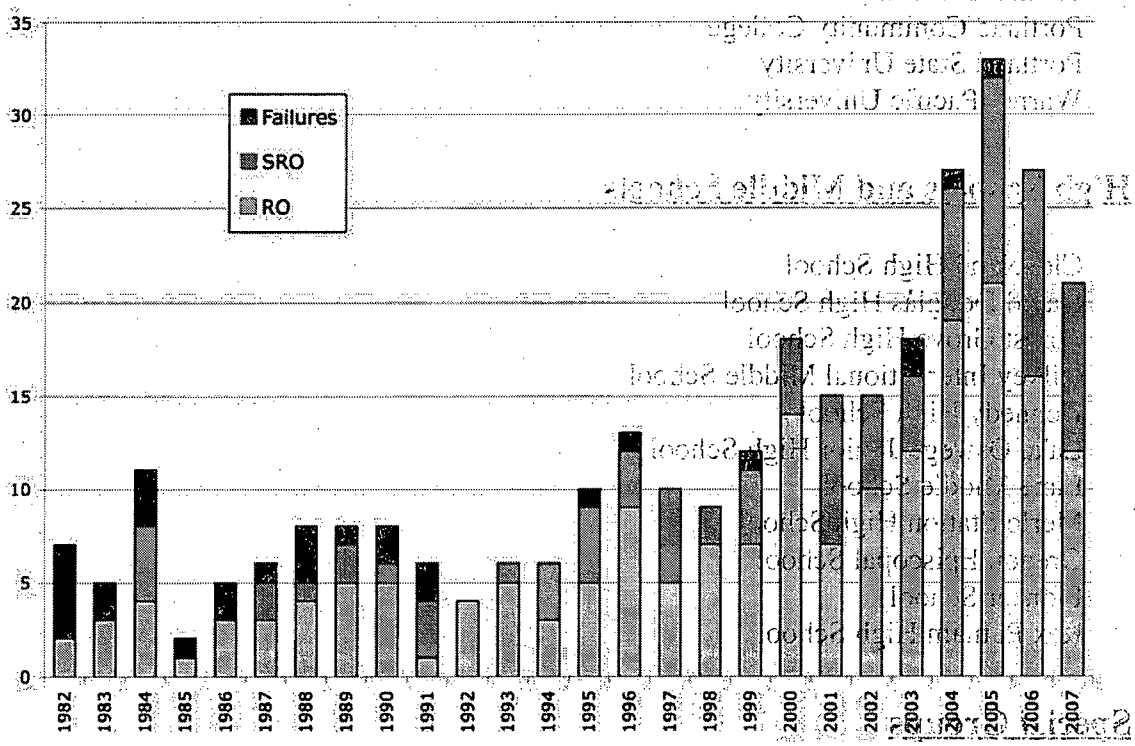


Figure 2 Reed Research Reactor License Exam Results

Nuclear Science Consortium

In order to better use the resources of the Reed Research Reactor, several area colleges and universities established the Nuclear Science Consortium of the Willamette Valley in 1970. Funding for the Consortium has been derived from Reactor Use Sharing Grants of the U.S. Department of Energy. This made the facility available without charge to classroom groups and unfunded research projects for consortium members.

The following institutions have participated in facility tours, experiments, and research projects in the reporting period.

Colleges and Universities

Concordia University
Lewis and Clark College
Linfield College
Mt. Hood Community College
Oregon Institute of Technology
Pacific University
Portland Community College
Portland State University
Warner Pacific University

High Schools and Middle Schools

Cleveland High School
David Douglas High School
Forest Grove High School
Gilkey International Middle School
Kennedy High School
Lake Oswego Junior High School
Lane Middle School
Merlo Station High School
Oregon Episcopal School
Pioneer School
Rex Putnam High School

Special Groups

Advocates for Women in Science, Engineering, and Math
Apprenticeships in Science and Engineering
Marquie at Hope Village
Saturday Academy
Successful School Transition

Figure 3 is a graph showing the history of visiting groups.

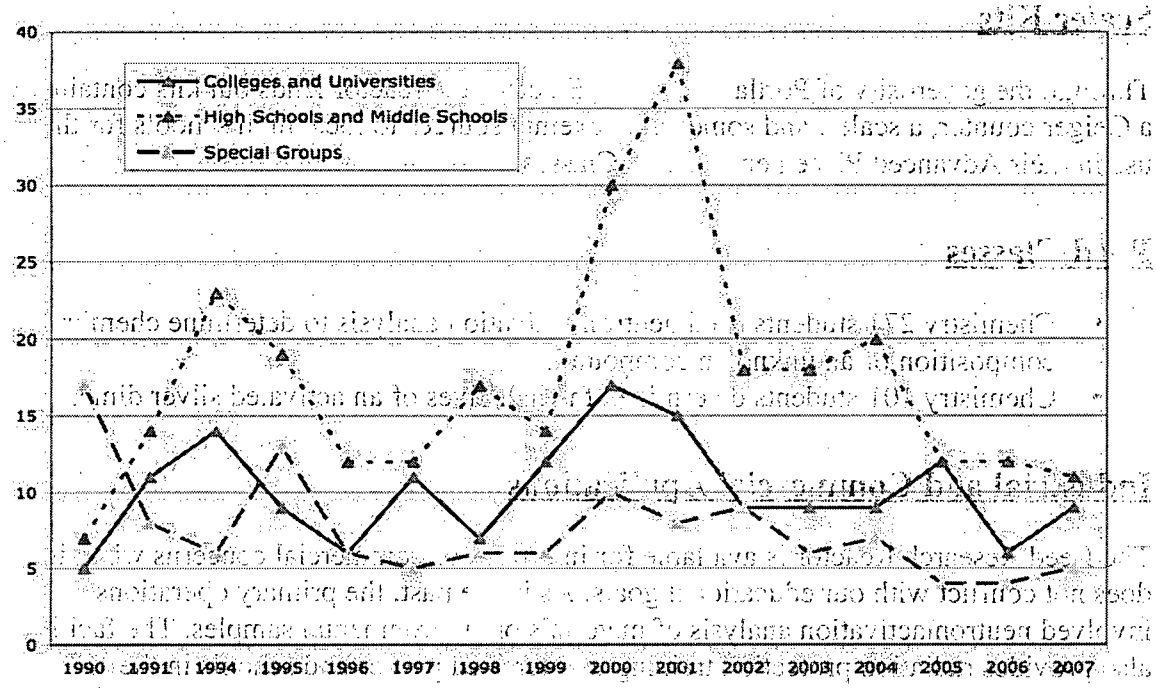


Figure 3 Visiting Groups

Many reactor tours include hands-on use of facility equipment to conduct experiments in radiation science, health physics, and nuclear physics. A typical lab involves determining the background of a Geiger Muller scalar system and then determining the half-life of a sample of radioactive material. College classes are generally more closely tailored to the individual interests and needs of the Consortium faculty member involved. Experiments include more direct use of the reactor itself by the students, more detailed analysis of materials, and emphasize the incorporation of other classroom activities as much as possible.

Several special programs for gifted children use the reactor for projects. These are designed to enrich their educational program and prepare them for college. Some of the groups who use the reactor target minority and disadvantaged youth who are historically under-represented in science professions.

High School Student Projects

The Reed Research Reactor continues to be used in independent science projects initiated by students from several Oregon and Washington State high schools.

Concordia University

The reactor provides training and experiments involving radiation, radioactive material, environmental sampling, and trace element analysis for the Environmental Remediation & Hazardous Material Management Program (ERHMM) and General Chemistry at Concordia University

Scaler Kits

Through the generosity of Portland General Electric, the reactor lends out kits containing a Geiger counter, a scaler, and some small exempt sources to local high schools for their use in their Advanced Placement Physics Classes.

Reed Classes

- Chemistry 271 students used neutron activation analysis to determine chemical composition of an unknown compound.
- Chemistry 101 students determined the half-lives of an activated silver dime.

Industrial and Commercial Applications

The Reed Research Reactor is available for industrial or commercial concerns when it does not conflict with our educational goals. As in the past, the primary operations involved neutron activation analysis of materials or environmental samples. The facility also provides radiation protection training to interested parties and schools in the area.

REACTOR OPERATIONS

Operations

During the year the reactor was taken critical 297 times on 119 days. The total energy produced was approximately 38 megawatt-hours. Operating history by month appears in table 1. A history of the data is shown in figure 4.

	Times Critical	Days Operated	MW-hours
September	21	6	0.71
October	58	15	5.72
November	35	17	3.96
December	12	5	1.94
January	11	9	3.55
February	24	10	1.83
March	25	11	6.37
April	50	15	4.93
May	28	12	2.31
June	8	4	0.62
July	13	8	4.79
August	12	7	1.38
Total	297	119	38.11

Table 1 Operating History

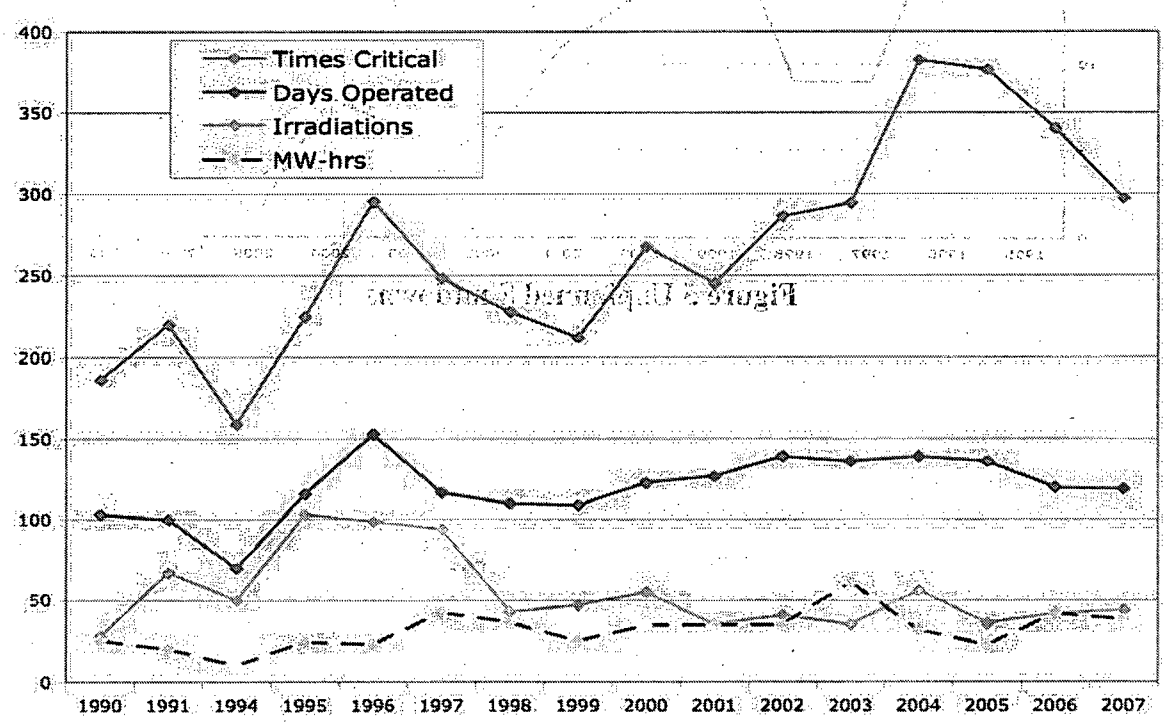


Figure 4 Operations

Unplanned Reactor Shutdowns

There were six inadvertent reactor shutdowns (scrams) as shown in table 2; they were all explained. The number of unplanned reactor shutdowns is consistent with the past as shown in figure 5.

Date	Scram Type	Cause Of Scram
9/19/06	Linear and Percent Power	Operator inattention
1/15/07	Linear	Manual adjustment of linear channel
2/22/07	Linear and Percent Power	Faulty lab instructions
3/29/07	Percent Power	Loss of facility power
3/29/07	Linear	Operator inattention
7/26/07	Linear	Accidentally pressed inappropriate range on Linear channel

Table 2 Unplanned Reactor Shutdowns

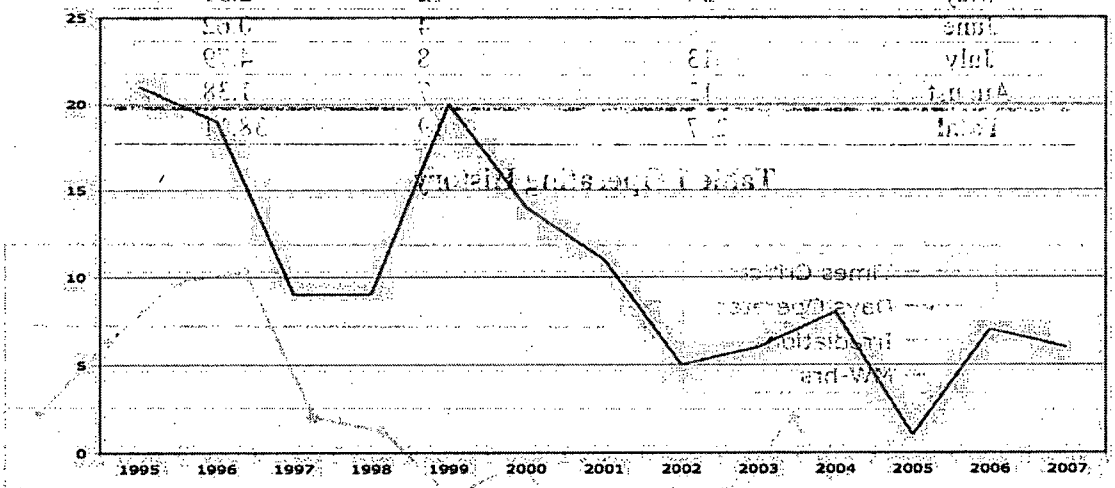


Figure 5 Unplanned Shutdowns

REACTOR MAINTENANCE

Significant Maintenance

Routine equipment checks are conducted by reactor staff members on a daily, weekly, bimonthly, semiannual (January and July) and annual (January) basis as required by facility procedures. Reed College maintenance personnel assist with routine preventative maintenance to auxiliary equipment. Significant maintenance operations that were not part of a regular schedule are listed in table 3.

Date	Maintenance
9/8/06	Changed primary filter
9/25/06	Replaced APM display
10/12/06	CAM taken out of service due to min flow fail
10/16/06	Put APM and GSM on new blower in loft
10/18/06	Replaced CAM flow sensor
10/20/06	Changed primary filter
12/20/06	Changed primary filter
12/20/06	Added carbon filter to primary make up water line
1/10/07	Fuel element dropped and retrieved
1/19/07	Changed demineralizer resin
1/29/07	Changed primary filter
2/1/07	Replaced shim rod motor
3/16/07	Replaced bottom part of console power on button
3/30/07	Installed Reactor On light
4/4/07	Changed primary filter
4/25/07	APM replaced with spare APM, due to punctured detector window
5/4/07	Original APM reinstalled with replaced detector from spare APM
7/23/07	Changed primary filter

Table 3 Significant Maintenance Operations

Safety Reviews Approved by Reactor Review Committee

Title: **Adding Antimony-Beryllium Source**

Date: November 1, 2006

Summary of Proposed Change:

This experiment will add an antimony-beryllium (SbBe) neutron source to the core as a special experiment. Although Routine Experiment #1 allows irradiation of both antimony and beryllium, when they are mixed they produce neutrons so a special experiment was deemed necessary. Ultimately this will replace the americium-beryllium (AmBe) neutron source currently used.

The AmBe source is 40 years old and generates helium gas during its operation. Internal pressure could, someday, cause it to leak. It would be good to replace it.

The SbBe source does not generate helium gas. The antimony is activated by the neutrons in the reactor, and generates a high-energy gamma when it decays. This gamma has enough energy to cause the beryllium to emit a neutron. This is a regenerative neutron source. The antimony becomes radioactive at power and then emits gammas by decay (60.2 day half-life) even after the reactor is shutdown. The decay of the antimony with the beryllium produces source neutrons in the shutdown reactor. Here are the reactions:

$$^{123}Sb + n \rightarrow {}^{124}Sb$$

$$^{124}Sb \rightarrow {}^{124}Te + \gamma$$

$$^{9}Be + \gamma \rightarrow {}^{8}Be + n$$

As it turns out, we decided not to do this experiment, even though it was approved.

RADIATION PROTECTION

Personnel Dosimetry

During the period July 1, 2006 to June 30, 2007 personnel dosimeters were issued to 52 Reed students and staff, and to two contractors. Since dosimeters are changed on a calendar quarter schedule, this period is the closest to the reporting period. Individuals were issued beta-gamma sensitive ring badges and whole-body badges. The Director and Associate Director were issued beta-gamma-neutron sensitive dosimetry.

During the year the largest annual whole body dose was 20 mrem deep dose equivalent. The largest annual extremity dose was 110 mrem shallow dose equivalent. Both of these were staff members (not students). No one exceeded one percent of the federal limits.

Fixed Area Dosimetry

Radiation levels are continually monitored to provide an indication of the average radiation levels in the reactor bay and dose outside the facility. This year areas dosimeters were also placed in the sample counting room and the control room. All dosimeters monitor beta and gamma radiation. Two locations also measure neutron dose.

The deep dose equivalent radiation measured by fixed dosimeters during the period July 1, 2006 to June 30, 2007 are shown in table 4. Since dosimeters are changed on a calendar quarter schedule, this period is the closest to the reporting period.

Location	Height (m)	Radiation Detected	Jul 1 - Sep 30	Oct 1 - Dec 31	Jan 1 - Mar 31	Apr 1 - Jun 30	Total
East Wall	1.5	β, γ, n	19	20	15	11	65
North Wall	1.6	β, γ	27	21	14	4	66
West Wall	1.0	β, γ n	7	15	17	19	58
South Wall	1.6	β, γ	20	33	29	17	99
North Wall	2.3	β, γ	14	16	22	17	69
North Outside	2.8	β, γ	8	15	19	22	64
Roof Outside	0.4	β, γ	0	2	0	0	2
East Outside	1.5	β, γ	0	0	0	0	0
South Outside	0.4	β, γ	0	0	0	0	0
Counting Room	1.5	β, γ	0	0	63	32	95
Control Room	1.5	β, γ	24	28	38	22	112

Table 4 Area Radiation Dosimeters
(doses are in mrem per calendar quarter)

Gaseous Releases

The only routine release of gaseous radioactivity is from ^{41}Ar (1.83-hour half-life) and ^{16}N (7.13-second half-life). These come from activation of pool water and air in the pool water and in the irradiation facilities. For calendar year 2006, the average gaseous activity at the site boundary was 1.04 x 10^{-10} μCi/ml, which would deliver a dose to a member of the public of approximately 0.52 mrem, well below regulatory guidelines and constraints. Figure 6 shows the gaseous releases for each year.

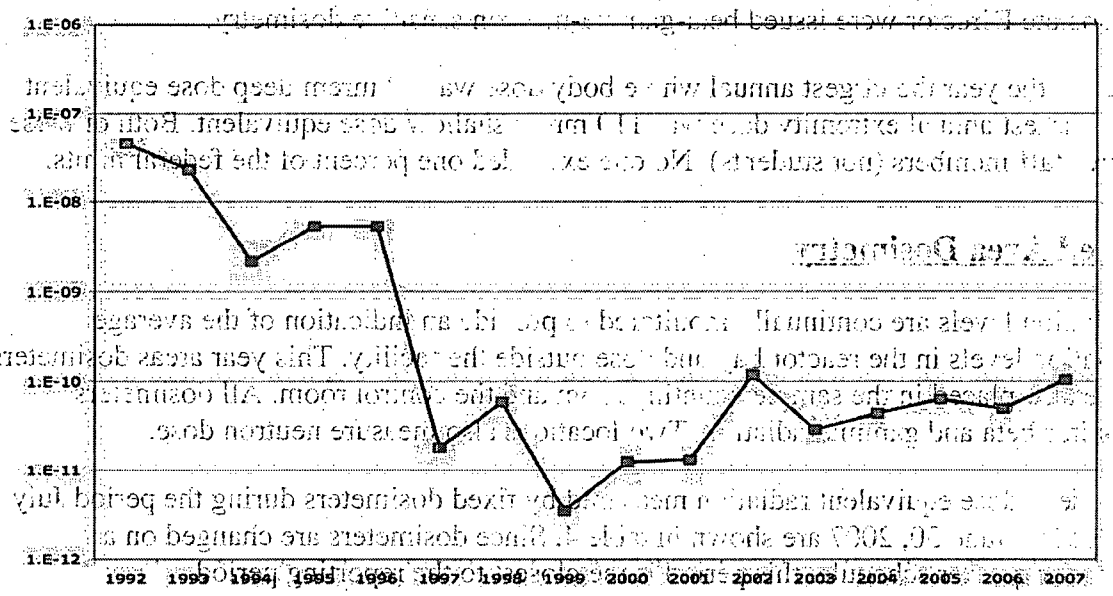


Figure 6 Gaseous Releases Activity (μCi/ml) at Site Boundary

Liquid Waste Releases

No liquid radioactive waste was released from the Reed Research Reactor during this report period.

Solid Waste Disposal

There were no shipments of radioactive waste from the facility during this reporting period.

Environmental Sampling

Soil samples taken from the area surrounding the facility showed no activity above background. Water samples taken from the facility's secondary cooling system showed no activity above background. The nearby canyon was sampled for activation products and tritium, but showed no activity above normal background.

APPENDIX A – VISITORS

Date	Institution	Purpose	#	Funding
09/06/06	Reed	Maintenance	1	Reed
09/08/06	De La Salle	Maintenance	1	Reed
09/08/06	Reed	Maintenance	1	Reed
09/08/06	Reed	Maintenance	1	Reed
09/08/06	Reed	Maintenance	3	Reed
09/11/06	Reed	Operations	1	Reed
09/11/06	Reed	Operations	1	Reed
09/11/06	Reed	Seminar Tour	32	Reed
09/18/06	Reed	Chem 101 Tour	23	Reed
09/18/06	United Fire	Maintenance	1	Reed
09/18/06	Reed	Operations	1	Reed
09/18/06	Reed	Operations	1	Reed
09/19/06	Reed	Chem 101 Tour	53	Reed
09/20/06	Reed	Chem 101 Tour	27	Reed
09/20/06	United Fire	Maintenance	1	Reed
09/20/06	Reed	Operations	1	Reed
09/21/06	Reed	Chem 101 Tour	36	Reed
09/21/06	Reed	Operations	1	Reed
09/22/06	Reed	Chem 101 Tour	24	Reed
09/22/06	Reed	Operations	1	Reed
09/22/06	Reed	Wipes	1	Reed
09/25/06	Reed	Maintenance	1	Reed
09/27/06	Reed	Training	14	Reed
09/27/06	Reed	Weekly	2	Reed
09/28/06	Reed	Inspection	1	Reed
09/28/06	Reed	Training	18	Reed
09/29/06	Reed	Bimonthly	2	Reed
09/30/06	Reed	Bimonthly	5	Reed
10/05/06	Portland State University	Training	1	US DOE
10/05/06	Reed	Training	15	Reed
10/05/06	Reed	Weekly	1	Reed
10/06/06	Reed	Training	16	Reed
10/11/06	Reed	Operations	3	Reed
10/11/06	Reed	Operations	1	Reed
10/11/06	Cleveland High School	Tour	22	US DOE
10/12/06	Reed	Operations	3	Reed
10/12/06	Reed	Training	15	Reed
10/12/06	Reed	Weekly	1	Reed
10/13/06	Portland State University	Training	1	US DOE
10/13/06	Reed	Training	8	Reed
10/14/06	Reed	Operations	1	Reed
10/14/06	Reed	Tour	3	Reed
10/15/06	Reed	Operations	1	Reed
10/17/06	Reed	Maintenance	2	Reed
10/17/06	United Fire	Maintenance	1	Reed
10/17/06	Reed	Operations	1	Reed
10/17/06	Reed	Training	1	Reed
10/19/06	Reed	Maintenance	1	Reed

Date	Institution	Purpose	#	Funding
10/19/06	Reed	Weekly/Wipes	3	Reed
10/21/06	Reed	Maintenance	2	Reed
10/23/06	US General Accounting Office	Audit	3	Reed
10/23/06	Portland HazMat Team	Training	1	reed
10/23/06	Reed Community Safety	Training	1	Reed
10/24/06	Reed	Operations	1	Reed
10/24/06	Reed	Weekly	2	Reed
10/25/06	Reed	Operations	1	Reed
10/25/06	Reed	Training	3	Reed
10/26/06	Reed	Operations	4	Reed
10/26/06	Reed	Training	3	Reed
10/27/06	Reed	Operations	1	Reed
10/27/06	Public	Tour	1	US DOE
10/27/06	Reed	Training	6	Reed
10/28/06	Reed	Operations	3	Reed
10/28/06	Public	Tour	2	US DOE
10/28/06	Reed	Training	2	Reed
10/29/06	Reed	Training	5	Reed
10/30/06	United Fire	Maintenance	1	Reed
10/30/06	Reed	Operations	4	Reed
10/30/06	Reed	Operations	1	Reed
11/01/06	Reed	Training	5	Reed
11/02/06	Reed	Training	3	Reed
11/03/06	Reed	Tour	98	Reed
11/03/06	Reed	Training	3	Reed
11/03/06	Reed	Training	1	Reed
11/04/06	Reed	Operations	2	Reed
11/04/06	Reed	Tour	36	Reed
11/04/06	Reed	Training	3	Reed
11/04/06	Reed	Training	3	Reed
11/05/06	Reed	Training	14	Reed
11/07/06	Reed	Maintenance	1	Reed
11/08/06	Reed	Inspection	1	Reed
11/08/06	Reed	Operations	1	Reed
11/08/06	Reed	Training	1	Reed
11/09/06	Reed	Operations	2	Reed
11/10/06	Reed	Operations	2	Reed
11/10/06	Reed	Operations	1	Reed
11/10/06	Reed	Tour	52	Reed
11/11/06	Reed	Operations	1	Reed
11/11/06	Reed	Tour	2	Reed
11/13/06	Portland Fire Bureau	Training	6	Reed
11/14/06	Reed	Operations	1	Reed
11/14/06	Portland Fire Bureau	Training	4	Reed
11/14/06	Reed	Training	1	Reed
11/15/06	Reed Physical Plant	Inspection	2	Reed
11/15/06	Reed	Job Interview	1	Reed
11/15/06	Reed	Operations	2	Reed
11/15/06	Reed	Operations	2	Reed
11/15/06	Portland Fire Bureau	Training	6	Reed
11/15/06	Reed	Weekly	4	Reed
11/16/06	Reed	Training	12	Reed

Date	Institution	Purpose	#	Funding
11/16/06	Reed	Training	15	Reed
11/16/06	Reed	Training	4	Reed
11/17/06	Reed	Experiment	1	Reed
11/17/06	United Fire	Maintenance	1	Reed
11/17/06	Rex Putnam High School	Tour	16	US DOE
11/17/06	Reed	Training	6	Reed
11/19/06	Reed	Bimonthly	1	Reed
11/19/06	Reed	Training	3	Reed
11/20/06	Reed	Bimonthly	1	Reed
11/20/06	Reed	Maintenance	1	Reed
11/21/06	Reed	Operations	2	Reed
11/21/06	Portland Community College	Tour	11	US DOE
11/22/06	Reed	Tour	1	Reed
11/23/06	Reed	Weekly	1	Reed
11/25/06	Reed	Operations	1	Reed
11/25/06	Reed	Training	5	Reed
11/26/06	Reed Physical Plant	Maintenance	1	Reed
11/26/06	Reed	Operations	1	Reed
11/26/06	Reed	Operations	1	Reed
11/26/06	Reed	Training	1	Reed
11/29/06	United Fire	Maintenance	1	Reed
11/29/06	Reed	Training	5	Reed
11/29/06	Reed	Weekly/Wipes	3	Reed
11/30/06	Reed	Operations	1	Reed
11/30/06	Mt. Hood Community College	Tour	1	US DOE
11/30/06	Oregon Episcopal School	Tour	35	US DOE
11/30/06	Portland Community College	Tour	21	US DOE
11/30/06	Reed	Tour	2	Reed
11/30/06	Reed	Training	5	Reed
12/01/06	Reed	Training	1	Reed
12/03/06	Reed	Training	10	Reed
12/05/06	Portland Fire Bureau	Inspection	1	Reed
12/05/06	Reed	Tour	2	Reed
12/06/06	Reed	Training	7	Reed
12/06/06	Reed	Weekly	2	Reed
12/07/06	Reed	Training	7	Reed
12/08/06	Reed	Operations	1	Reed
12/08/06	Reed	Operations	1	Reed
12/08/06	Reed	Tour	1	Reed
12/09/06	Reed	Training	9	Reed
12/11/06	United Fire	Maintenance	1	Reed
12/11/06	Reed	Operations	1	Reed
12/11/06	Reed	Operations	1	Reed
12/11/06	Portland Police Bureau	Training	4	US DOE
12/11/06	Reed	Training	2	Reed
12/12/06	Reed	Operations	2	Reed
12/12/06	Reed	Tour	1	Reed
12/12/06	Portland Police Bureau	Training	7	US DOE
12/12/06	Reed	Training	1	Reed
12/12/06	Reed	Weekly	1	Reed
12/13/06	Portland Police Bureau	Training	5	US DOE
12/13/06	Reed	Training	3	Reed

Date	Institution	Purpose	#	Funding
12/14/06	Reed	Tour	2	Reed
12/15/06	United Fire	Maintenance	1	Reed
12/20/06	Reed Physical Plant	Maintenance	6	Reed
01/02/07	Reed	Training	4	Reed
01/03/07	Reed	Tour	3	Reed
01/08/07	US NRC	Inspection	2	Reed
01/08/07	Portland General Electric	Inspection	1	Reed
01/08/07	Reed	Training	10	Reed
01/09/07	US NRC	Inspection	1	Reed
01/09/07	Reed	Maintenance	9	Reed
01/09/07	Reed Physical Plant	Maintenance	2	Reed
01/09/07	Reed	Operations	5	Reed
01/09/07	Reed	Training	4	Reed
01/09/07	Reed	Training	1	Reed
01/10/07	Reed	Experiment	7	Reed
01/10/07	US NRC	Inspection	1	Reed
01/10/07	Reed	Maintenance	1	Reed
01/10/07	Reed	Maintenance	2	Reed
01/10/07	Reed	Training	6	Reed
01/10/07	Reed	Weekly	3	Reed
01/11/07	Reed	Training	3	Reed
01/12/07	Reed	Maintenance	3	Reed
01/12/07	Reed	Operations	5	Reed
01/12/07	Reed	Operations	7	Reed
01/12/07	Reed	Operations	5	Reed
01/15/07	Reed	Training	3	Reed
01/15/07	Reed	Operations	2	Reed
01/15/07	Reed	Training	14	Reed
01/18/07	Reed	Maintenance	4	Reed
01/18/07	Reed	Tour	13	Reed
01/18/07	Reed	Weekly	3	Reed
01/19/07	Reed	Training	2	Reed
01/24/07	Reed	Training	4	Reed
01/25/07	Reed	Operations	3	Reed
01/25/07	Reed	Training	11	Reed
01/26/07	Reed	Operations	4	Reed
01/29/07	Reed	Maintenance	1	Reed
02/01/07	Gilkey International Middle School	Tour	35	US DOE
02/01/07	Reed	Tour	3	Reed
02/01/07	Reed	Weekly	2	Reed
02/05/07	Reed	Training	1	Reed
02/06/07	Reed	Training	3	Reed
02/07/07	Reed	Training	1	Reed
02/07/07	Reed	Training	7	Reed
02/09/07	Reed	Training	3	Reed
02/12/07	Reed	Operations	1	Reed
02/12/07	Warner Pacific University	Tour	5	US DOE
02/13/07	United Fire	Maintenance	2	Reed
02/13/07	Reed	Training	1	Reed
02/14/07	Radiation Safety Committee	Inspection	1	Reed
02/14/07	Canberra Instruments	Maintenance	1	Reed
02/14/07	Reed	Maintenance	1	Reed

Date	Institution	Purpose	#	Funding
02/14/07	Reed	Training	2	Reed
02/14/07	Reed	Weekly	2	Reed
02/15/07	Reed	Maintenance	5	Reed
02/16/07	Reed	Training	1	Reed
02/17/07	Reed	Training	4	Reed
02/21/07	Reed	Maintenance	5	Reed
02/21/07	Reed	Operations	2	Reed
02/21/07	Saturday Academy	Tour	11	US DOE
02/21/07	Reed	Training	2	Reed
02/23/07	Reed Computer Information Services	Inspection	1	Reed
02/23/07	State of Oregon	Inspection	3	Reed
02/23/07	Reed	Operations	2	Reed
02/23/07	Reed	Operations	1	Reed
02/23/07	Reed	Operations	1	Reed
02/23/07	102nd CST	Training	3	Reed
02/23/07	Portland Explosive Disposal Unit	Training	1	Reed
02/26/07	Reed	Training	1	Reed
02/27/07	Reed	Training	7	Reed
02/28/07	Reed	Operations	1	Reed
02/28/07	Reed	Training	2	Reed
02/28/07	Reed	Weekly	1	Reed
03/01/07	Reed	Operations	1	Reed
03/01/07	Reed	Operations	1	Reed
03/01/07	Reed	Operations	1	Reed
03/01/07	Gilkey International Middle School	Tour	3	US DOE
03/01/07	Reed	Wipes	2	Reed
03/02/07	Reed	Training	8	Reed
03/04/07	Reed	Operations	5	Reed
03/04/07	Reed	Tour	4	Reed
03/05/07	Reed	Operations	1	Reed
03/05/07	Pacific University	Tour	18	US DOE
03/05/07	Reed	Training	2	Reed
03/06/07	Reed	Operations	3	Reed
03/07/07	Reed	Operations	2	Reed
03/07/07	Reed	Training	4	Reed
03/07/07	Reed	Weekly	3	Reed
03/08/07	Reed	Operations	3	Reed
03/08/07	Pacific University	Tour	11	US DOE
03/08/07	Portland Community College	Tour	16	US DOE
03/08/07	Reed	Training	4	Reed
03/14/07	Reed	Weekly	3	Reed
03/15/07	United Fire	Maintenance	1	Reed
03/15/07	Reed	Operations	1	Reed
03/15/07	Reed	Training	4	Reed
03/15/07	Reed	Wipes	1	Reed
03/16/07	Reed	Maintenance	1	Reed
03/16/07	Community Hospital	Tour	1	US DOE
03/16/07	Kadlec Medical Center	Tour	1	US DOE
03/16/07	Merlo Station High School	Tour	8	US DOE
03/16/07	Oregon Institute of Technology	Tour	6	US DOE
03/16/07	Successful School Transition	Tour	12	US DOE
03/16/07	Providence Hospital	Training	6	US DOE

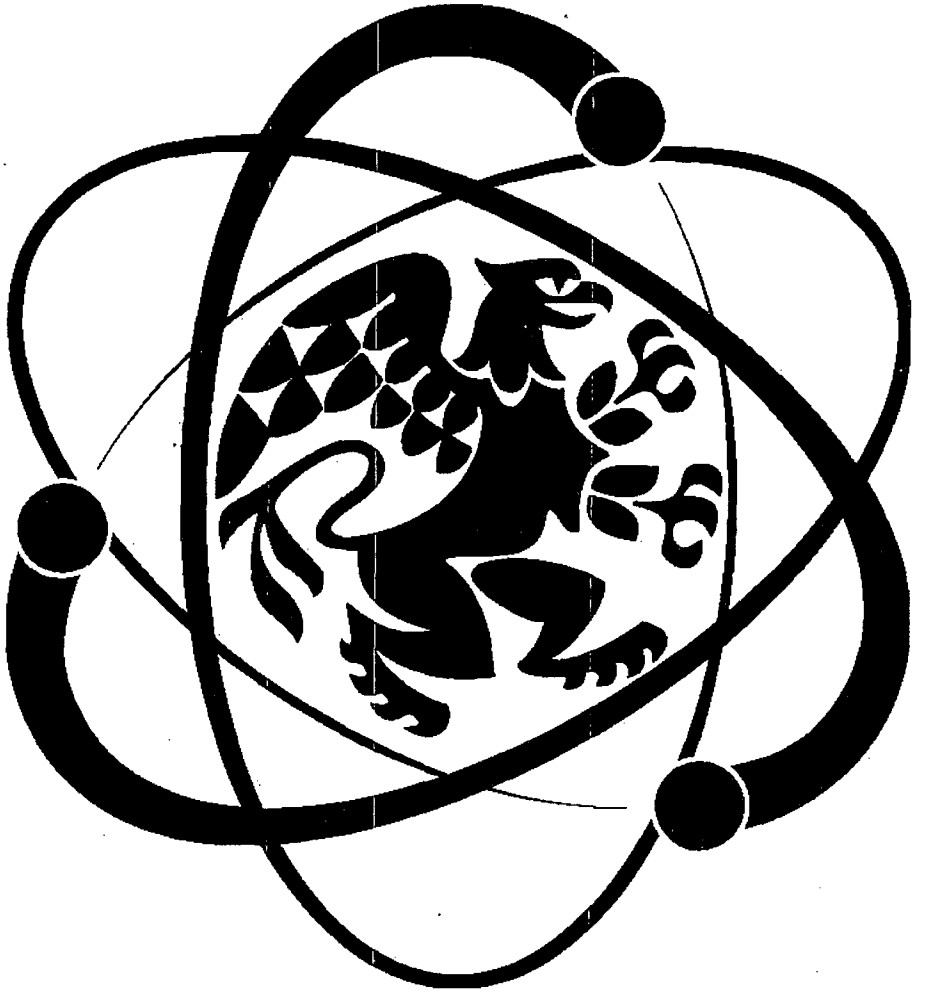
Date	Institution	Purpose	#	Funding
03/16/07	Reed	Training	2	Reed
03/20/07	Reed	Maintenance	3	Reed
03/20/07	Reed	Operations	2	Reed
03/21/07	Reed	Operations	2	Reed
03/21/07	Reed	Operations	1	Reed
03/21/07	David Douglas High School	Tour	45	US DOE
03/21/07	Reed	Weekly	1	Reed
03/22/07	Reed Community Safety	Inspection	1	Reed
03/22/07	Reed	Maintenance	3	Reed
03/22/07	Reed	Wipes	1	Reed
03/23/07	Reed	Operations	1	Reed
03/23/07	Reed	Operations	1	Reed
03/23/07	Reed	Tour	4	Reed
03/26/07	Reed	Training	2	Reed
03/26/07	Reed	Training	2	Reed
03/27/07	Reed	Training	3	Reed
03/27/07	Reed	Weekly	1	Reed
03/28/07	Reed	Maintenance	1	Reed
03/28/07	Reed	Operations	2	Reed
03/28/07	Reed	Operations	2	Reed
03/28/07	Reed	Training	2	Reed
03/29/07	Reed	Bimonthly	1	Reed
03/29/07	Reed	Training	2	Reed
03/30/07	Reed	Maintenance	2	Reed
03/30/07	Reed	Training	4	Reed
03/30/07	Reed	Training	4	Reed
04/03/07	Reed	Training	1	Reed
04/04/07	Reed	Training	9	Reed
04/05/07	Reed	Operations	2	Reed
04/05/07	Reed	Training	2	Reed
04/06/07	Reed	Training	3	Reed
04/09/07	Reed	Operations	1	Reed
04/09/07	Reed	Training	2	Reed
04/10/07	United Fire	Maintenance	1	Reed
04/10/07	Reed	Operations	1	Reed
04/10/07	Concordia University	Tour	11	US DOE
04/10/07	Reed	Training	2	Reed
04/10/07	Reed	Training	2	Reed
04/10/07	Reed	Training	1	Reed
04/11/07	Reed	Maintenance	6	Reed
04/11/07	Reed	Maintenance	1	Reed
04/11/07	Reed	Training	2	Reed
04/12/07	Reed	RAD Tour	21	Reed
04/12/07	Reed	Training	4	Reed
04/13/07	Reed	RAD Tour	26	Reed
04/13/07	Reed	Operations	2	Reed
04/13/07	Reed	Operations	1	Reed
04/13/07	Lane Middle School	Tour	6	US DOE
04/13/07	Reed	Training	3	Reed
04/15/07	Reed	RAD Tour	21	Reed
04/17/07	Reed	Maintenance	2	Reed
04/18/07	Reed	RAD Tour	20	Reed

Date	Institution	Purpose	#	Funding
04/18/07	Reed	Maintenance	1	Reed
04/18/07	Reed	Training	4	Reed
04/19/07	Reed	Training	4	Reed
04/20/07	Reed	Training	2	Reed
04/22/07	Reed	Training	1	Reed
04/23/07	Reed	Tour	3	Reed
04/23/07	Reed	Training	3	Reed
04/24/07	Reed	Training	5	Reed
04/25/07	Reed	Training	13	Reed
04/26/07	Reed	Tour	10	Reed
04/26/07	Reed	Training	7	Reed
04/27/07	Reed	Operations	1	Reed
04/27/07	Reed	Tour	25	Reed
04/30/07	US NRC	Exam	1	Reed
05/01/07	US NRC	Exam	4	Reed
05/01/07	Reed	Exam	4	Reed
05/02/07	US NRC	Exam	3	Reed
05/02/07	Reed	Exam	3	Reed
05/02/07	Reed	Weekly	1	Reed
05/03/07	US NRC	Exam	4	Reed
05/03/07	Reed	Exam	2	Reed
05/04/07	Reed	Operations	1	Reed
05/07/07	US NRC	Exam	4	Reed
05/07/07	Reed	Exam	1	Reed
05/08/07	US NRC	Exam	3	Reed
05/08/07	Reed	Exam	3	Reed
05/08/07	United Fire	Inspection	1	Reed
05/08/07	Reed	Operations	1	Reed
05/09/07	Forest Grove High School	Tour	11	US DOE
05/11/07	Reed	Tour	2	Reed
05/13/07	Reed	Tour	17	Reed
05/17/07	Reed	Training	2	Reed
05/17/07	Kennedy High School	Tour	15	US DOE
05/18/07	United Fire	Maintenance	1	Reed
05/18/07	Successful School Transition	Tour	20	US DOE
05/18/07	Reed	Tour	2	Reed
05/23/07	Lake Oswego Junior High School	Tour	19	US DOE
05/23/07	Reed	Tour	2	Reed
05/24/07	Reed	Wipes	2	Reed
05/29/07	Matheson	Maintenance	1	Reed
05/29/07	Polar Cryogenics	Maintenance	1	Reed
05/29/07	Reed	Maintenance	1	Reed
05/29/07	Reed	Tour	1	Reed
05/30/07	Reed	Maintenance	1	Reed
05/30/07	Reed	Maintenance	1	Reed
05/30/07	Reed	Tour	2	Reed
05/30/07	Portland Fire Bureau	Training	11	Reed
06/02/07	Reed	Alumni Tour	26	Reed
06/02/07	Reed	Operations	1	Reed
06/06/07	Reed	Weekly	1	Reed
06/07/07	Reed	Wipes	1	Reed
06/19/07	Reed	Maintenance	3	Reed

Date	Institution	Purpose	#	Funding
06/19/07	United Fire	Maintenance	1	Reed
06/19/07	Reed	RSO Class	1	Reed
06/19/07	Reed	RSO Class	11	Reed
06/19/07	Reed	RSO Class	14	Reed
06/20/07	Reed	Maintenance	2	Reed
06/20/07	Apprenticeships Science and Engineering	Training	2	US DOE
06/21/07	Reed	RSO Class Training	8	Reed
06/27/07	Apprenticeships Science and Engineering	Training	4	US DOE
06/27/07	Reed	Weekly	2	Reed
06/28/07	Reed	Operations	1	Reed
06/28/07	Reed	Tour	4	Reed
06/28/07	Apprenticeships Science and Engineering	Training	2	US DOE
07/02/07	Reed	Alumni Tour	2	Reed
07/02/07	Portland Packaging	Maintenance	1	Reed
07/03/07	Apprenticeships Science and Engineering	Training	4	US DOE
07/05/07	Reed	Maintenance	1	Reed
07/05/07	Reed	Operations	1	Reed
07/05/07	Apprenticeships Science and Engineering	Training	6	US DOE
07/05/07	Apprenticeships Science and Engineering	Training	1	US DOE
07/06/07	Apprenticeships Science and Engineering	Training	1	US DOE
07/09/07	Reed	Maintenance	6	Reed
07/09/07	Reed	Operations	1	Reed
07/09/07	Apprenticeships Science and Engineering	Training	5	US DOE
07/10/07	Reed	Operations	2	Reed
07/10/07	Health Physics Society	Tour	34	US DOE
07/10/07	Apprenticeships Science and Engineering	Training	1	US DOE
07/11/07	Portland Packaging	Maintenance	2	Reed
07/11/07	Reed	Maintenance	2	Reed
07/11/07	Apprenticeships Science and Engineering	Training	2	US DOE
07/11/07	Apprenticeships Science and Engineering	Training	2	US DOE
07/12/07	Reed	Operations	1	Reed
07/12/07	Reed	Tour	1	Reed
07/12/07	Saturday Academy	Tour	21	US DOE
07/12/07	Apprenticeships Science and Engineering	Training	1	US DOE
07/16/07	Apprenticeships Science and Engineering	Training	1	US DOE
07/17/07	United Fire	Maintenance	1	Reed
07/17/07	Apprenticeships Science and Engineering	Training	1	US DOE
07/18/07	Apprenticeships Science and Engineering	Training	1	US DOE
07/19/07	Apprenticeships Science and Engineering	Training	5	US DOE
07/20/07	RRSAS	Research	1	Reed
07/20/07	Apprenticeships Science and Engineering	Training	3	US DOE
07/23/07	Portland Water Bureau	Inspection	3	Reed
07/23/07	Reed	Maintenance	2	Reed
07/23/07	Reed	Operations	1	Reed
07/23/07	Apprenticeships Science and Engineering	Training	3	US DOE
07/24/07	Reed	Operations	1	Reed
07/24/07	Pioneer School	Tour	13	US DOE
07/24/07	Apprenticeships Science and Engineering	Training	4	US DOE
07/25/07	Reed	Operations	1	Reed
07/25/07	Apprenticeships Science and Engineering	Training	6	US DOE
07/26/07	Apprenticeships Science and Engineering	Training	4	US DOE
07/27/07	Reed	Operations	1	Reed

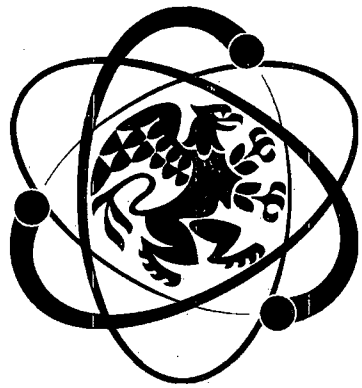
Date	Institution	Purpose	#	Funding
07/27/07	Apprenticeships Science and Engineering	Training	5	US DOE
07/30/07	Reed	Operations	1	Reed
07/30/07	Apprenticeships Science and Engineering	Training	3	US DOE
07/31/07	Reed	Operations	1	Reed
07/31/07	Reed	Operations	1	Reed
07/31/07	Oregon Institute of Technology	Tour	8	US DOE
07/31/07	Apprenticeships Science and Engineering	Training	2	US DOE
07/31/07	Apprenticeships Science and Engineering	Training	1	US DOE
08/01/07	Apprenticeships Science and Engineering	Training	5	US DOE
08/02/07	US Crane	Maintenance	1	Reed
08/02/07	Reed	Operations	1	Reed
08/02/07	Apprenticeships Science and Engineering	Training	1	US DOE
08/03/07	Reed	Operations	1	Reed
08/03/07	Apprenticeships Science and Engineering	Training	1	US DOE
08/04/07	Reed	Operations	1	Reed
08/06/07	Reed	Operations	1	Reed
08/06/07	Reed	Operations	2	Reed
08/06/07	Saturday Academy	Tour	14	US DOE
08/06/07	Apprenticeships Science and Engineering	Training	7	US DOE
08/07/07	Dynalectric	Maintenance	1	Reed
08/07/07	Reed	Maintenance	1	Reed
08/07/07	Reed	Operations	1	Reed
08/07/07	Apprenticeships Science and Engineering	Training	1	US DOE
08/08/07	Reed	Operations	1	Reed
08/08/07	Apprenticeships Science and Engineering	Training	4	US DOE
08/09/07	Saturday Academy	Tour	9	US DOE
08/09/07	Apprenticeships Science and Engineering	Training	4	US DOE
08/10/07	Reed	Operations	2	Reed
08/10/07	Apprenticeships Science and Engineering	Training	1	US DOE
08/13/07	Reed	Operations	2	Reed
08/13/07	Apprenticeships Science and Engineering	Training	2	US DOE
08/14/07	Dynalectric	Maintenance	5	Reed
08/14/07	Reed	Maintenance	1	Reed
08/14/07	Marquie at Hope Village	Tour	10	US DOE
08/14/07	Apprenticeships Science and Engineering	Training	3	US DOE
08/15/07	Dynalectric	Maintenance	3	Reed
08/15/07	Apprenticeships Science and Engineering	Training	1	US DOE
08/15/07	Reed	Weekly	1	Reed
08/16/07	Apprenticeships Science and Engineering	Training	1	US DOE
08/20/07	United Fire	Maintenance	1	Reed
08/21/07	Reed	Maintenance	1	Reed
08/22/07	Reed	Tour	58	Reed
08/23/07	United Fire	Maintenance	2	Reed
08/23/07	Reed	Operations	2	Reed
08/23/07	Reed	Tour	53	Reed
08/24/07	Reed	Operations	2	Reed
08/24/07	Reed	Tour	13	Reed
08/29/07	Reed	Weekly	3	Reed
08/30/07	Reed	Wipes	2	Reed

REED RESEARCH REACTOR ANNUAL REPORT



September 1, 2005 -- August 31, 2006

REED RESEARCH REACTOR ANNUAL REPORT



September 1, 2005 -- August 31, 2006

3203 Southeast Woodstock Blvd.
Portland, Oregon 97202-8199
503-777-7222
Fax: 503-777-7274
http://reactor.reed.edu
reactor@reed.edu

Stephen G. Frantz
Director, Reed Research Reactor
Program Director, Nuclear Science
Consortium of the Willamette Valley

TABLE OF CONTENTS

OVERVIEW

This report covers the period from September 1, 2005 to August 31, 2006, and is intended to fulfill the reporting requirements of the U.S. Nuclear Regulatory Commission, the U.S. Department of Energy, and the Oregon Department of Energy including:

- U. S. Nuclear Regulatory Commission, License No. R-112 (Docket 50-288)
- Oregon Office of Energy Rule No. 345-030-010
- U. S. Department of Energy Reactor Sharing Grant No. DE-FG07-02ID14387
- U. S. Department of Energy Reactor Instrumentation Grant No. DE-FG07-04ID14573

We specifically wish to thank other funding sources including:

Portland General Electric

Concordia University

Reed College operates a Triga Mark I reactor with zirconium hydride/uranium fuel elements. The fuel elements are in a circular grid array at the bottom of a 25-foot-deep tank of water and are surrounded by a graphite reflector. The fuel is enriched to 19.9% in uranium-235.

The Reed College Research Reactor has been a resource for research and educational projects in the Portland area since its establishment in 1968. The main uses of the Reed Research Reactor are instruction and research, especially in the field of trace-element analysis. In addition to providing student research opportunities, the reactor staff works to educate the surrounding community on the principles of nuclear energy and radiation safety.

There were 2818 individual visits to the Reactor Facility during the year. Most were students in classes at Reed College or area universities, colleges, and high schools. Including tours and research conducted at the facility, the Reed Research Reactor contributed to the educational programs of 6 colleges and universities in addition to 12

pre-college groups. The reactor was operated 340 times on 120 days. The thermal energy produced was 42 megawatt-hours.

The reactor staff consists of a Director, an Associate Director, a contract Health Physicist, and Reed College undergraduate students who are licensed by the Nuclear Regulatory Commission as reactor operators or senior reactor operators. As this report is being written the licensed operating staff consists of 21 women and 29 men. During the reporting period, all 16 reactor operator candidates passed their NRC exams and all 11 senior reactor operator candidates passed their NRC exams.

There were no radiation exposures to individuals in excess of one percent of the limit during the year. There were no releases of liquid radioactive material from the facility and airborne releases were well within regulatory limits. There was one shipment of radioactive waste.

The Nuclear Regulatory Commission conducted their annual inspection during November 2005. There were no violations or concerns. There were no follow up items.

PEOPLE

Facility Staff

During the period September 1, 2005 to August 31, 2006, the facility staff consisted of:

Reactor Director:	Stephen Frantz (4/94 – Present)
Associate Director:	Susan Beaver (7/06 – Present)
	Rachel Barnett (5/03 – 6/06)
Reactor Supervisor:	Craig Wagner (8/06 – Present)
	Elliot Naidus (8/05 – 6/06)
Training Supervisor:	Juliana Arrighi (6/06- Present)
	Jessica Griffith (5/04- 6/06)
Radiation Safety Officer:	Kathleen Fisher (1/03 – Present)
Contract Health Physicist:	Marshall Parrott (8/91 – Present)

Senior Reactor Operators (SRO):

Carl	Anderson
Juliana	Arrighi
Drew	Atwater
Andre	Bach
Rachel	Barnett
Susan	Beaver
Rachel	Bond
Quincy	Cardinale
David	de Regt
Stephen	Frantz
Hilary	Gray
Ben	Greenspan
Jessica	Griffith
Jesse	Hallett
Vanessa	Holfeltz
Cindy	Joe
Beverly	Lau
Kristen	Lavavej
Grant	Meadors
Tracy	Mehoke
Marianna	Mullens
Elliot	Naidus
Derek	Oldridge
Alton	Sartor
Rebecca	Schoenberg-Jones
Julia	Schornack
Zach	Schultz
Craig	Wagner
Gillian	Woodruff

Reactor Operators (RO):

Robin	Bjorkquist
Steven	Case
Michael	Chaffin
Tom	Chartrand
Tiffany	Cook
Asher	Davidson
William	Draper
Allison	Edgar
Ben	Fischer
Michael	Flashman
Ryan	Gersovitz
Edward	Griffith
Alex	Gurfinkel
Jeremy	Harper
Matthew	Jemielita
Sarah	Kemp
Molly	King
Matthew	King
Jordan	Kohn
Judith	Levine
Christine	Lewis
Eric	Lindsey
Anna	McKee
Joseph	Parmalee
Alex	Ragus
Zoe	Rem
Will	Rosenbaum
Jacob	Schwartzman
Emma	Seward
Griffen	Thoma
David	Williams
Trevor	Young

The list of operators includes everyone who held a license at any time during the reporting period. ROs who upgrade their licenses to SRO during the reporting period are listed under SRO. All staff members are Reed College undergraduate students except Mr. Frantz, Ms. Beaver, Ms. Barnett, Ms. Fisher, and Dr. Parrott.

As this report is being written there are 9 women and 20 men with Reactor Operator licenses and 12 women and 9 men with Senior Reactor Operator licenses.

Reactor Review Committee

The Reed Research Reactor has two oversight committees: the Radiation Safety Committee and the Reactor Operations Committee. Together they comprise the Reactor Review Committee. The Radiation Safety Committee is concerned with emergency preparedness, health physics, radiation safety, physical security, environmental impact, and the interface between the Reed Research Reactor, Reed College, and the surrounding community. The Reactor Operations Committee deals with the day-to-day operations of the reactor, reactor maintenance, reactor safety, operator training, and operator requalification. The membership of the committees during the reporting period is shown below:

Radiation Safety Committee

Tom Meek - Chair *(Radiation Protection Manager, Trojan Nuclear Power Plant)*
Martha Dibble *(Neighborhood Resident)*
Wayne Lei *(Environmental Director, Portland General Electric)*
Kathleen Fisher *(Director, Reed Environmental Health and Safety)*

Reactor Operations Committee

Steve Reese - Chair *(Radiation Center Director, Oregon State University)*
Johnny Powell *(Physics Faculty, Reed College)*
Daniel Gerrity *(Chemistry Faculty, Reed College)*
Juliet Brosing *(Physics Faculty, Pacific University)*
Lily Cool *(Reed Alum)*

Ex Officio (without vote) on Both Committees:

Peter Steinberger *(Dean of the Faculty, Reed College)*
Stephen Frantz *(Director, Reed Research Reactor)*
Rachel Barnett *(Associate Director, Reed Research Reactor)*
Marshall Parrott *(Contract Health Physicist)*
Elliot Naidus *(Reactor Supervisor)*
Jessica Griffith *(Reactor Training Supervisor)*

FACILITIES

Reactor Facility

In addition to the reactor, the Reed College has a radiochemistry lab. The equipment available at the reactor facility includes high purity germanium gamma spectrometers, alpha spectrometers, a whole body counter, gas flow proportional counters, ion chambers, beta counters, Geiger Muller tubes, neutron detectors, alpha detectors, and thermo luminescent dosimeter readers. These instruments are used for experiments and training in nuclear science and radiation detection. Two hand and shoe monitors are in the control room. A liquid scintillation detector serves the campus radioisotope committee. The reactor facility has several systems for performing irradiations, described below.

Rotating Specimen Rack Facility

The rotating specimen rack ("lazy susan") is located in a well on top of the graphite reflector surrounding the core. The rack consists of a circular array of 40 tubular receptacles, each of which can accommodate two irradiation tubes. Vials holding up to 17 ml (four drams) are used in this system. Samples are loaded in the specimen rack prior to the start-up of the reactor. The rack automatically rotates during irradiation to ensure each sample receives the same neutron flux. Typically, researchers use the rotating rack when long irradiation times (generally greater than five minutes) are required. The approximate thermal neutron flux in a rotating rack position at full power is 1.7×10^{12} n/cm^{2}s with a cadmium ratio of 6. The specimen rack can be used for gamma irradiations (approximately 8 Rad/min) when the reactor is shutdown.

Pneumatic Transfer System

The pneumatic transfer system ("rabbit") consists of an irradiation chamber in the outer F-ring of the core and its associated pump and piping. This allows samples to be transferred in and out of the reactor core very rapidly while the reactor is at power.

Routine use of the pneumatic transfer system involves placing samples into vials, which in turn are placed in special capsules known as "rabbits." The capsule is loaded into the system in the laboratory next to the reactor and is then transferred pneumatically into the core-irradiation position. At the end of a predetermined time the sample is transferred back to the receiving terminal, where it is removed for measurement. The transfer time from the core to the terminal is about seven seconds, making this method of irradiating samples particularly useful for experiments involving radioisotopes with short half-lives. The flux in the core terminal is approximately 5×10^{12} n/cm^{2}s when the reactor is at full power.

In-Core Facilities

The central thimble is a water-filled irradiation chamber about 3 cm in diameter. It provides the highest available neutron flux, about $1x10^{13}$ n/cm^{2}s. Special sample holders are used in the central thimble to provide maximum flexibility in experiment design.

A fuel replacement source holder assembly can also be used as an irradiation facility. The chamber fits into a fuel-element position within the core itself. It holds only one specially positioned irradiation container 7.5 cm in length and 2.5 cm in diameter.

Foil-insertion holes, 0.8 cm in diameter, are drilled at various positions through the grid plates. These holes allow inserting special holders containing flux wires into the core, to obtain neutron flux maps of the core.

In-Pool Facilities

Near core, in-pool irradiation facilities can be arranged for larger samples. Neutron fluxes will be lower than in the lazy susan and will depend on the sample location.

An iridium gamma irradiator is also in the reactor pool for gamma only irradiations.

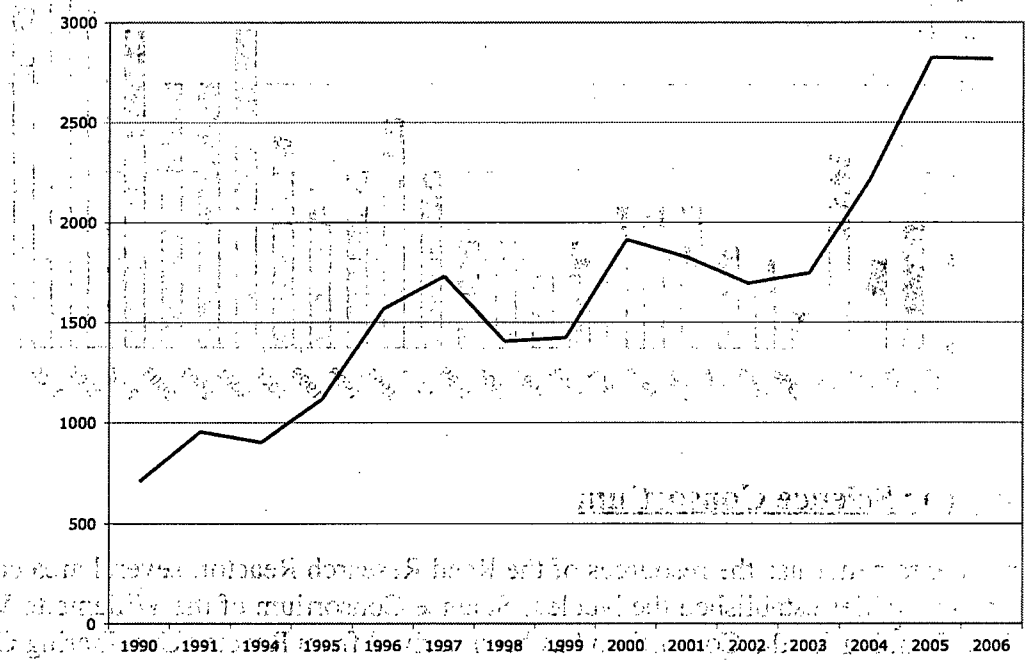
Beam Facilities

The central thimble can be evacuated with gas, producing a vertical neutron beam. This beam can be used to generate directional neutron flux, or for limited irradiations above the tank. Prompt gamma analysis and neutron radiography can be done. The flux above the beam exit is approximately $1x10^6$ n/cm^{2}s when the reactor is at full power.

Reactor Visitors

A total of 2818 individuals visited the Reed Research Reactor during the year, as derived from the visitor log - Entry List B. Individuals who visited more than once are counted for each visit. Visitors include all individuals who are not listed as facility staff. The visitors included 643 who were in programs funded in part by the U.S. DOE Reactor Sharing program. A large percentage of these were students in classes at area colleges and schools as discussed below. A graph of the history of visitor attendance is shown in Figure 1, and a list for the current year is included as Appendix A.

Figure 1 - Reed Research Reactor Visitors



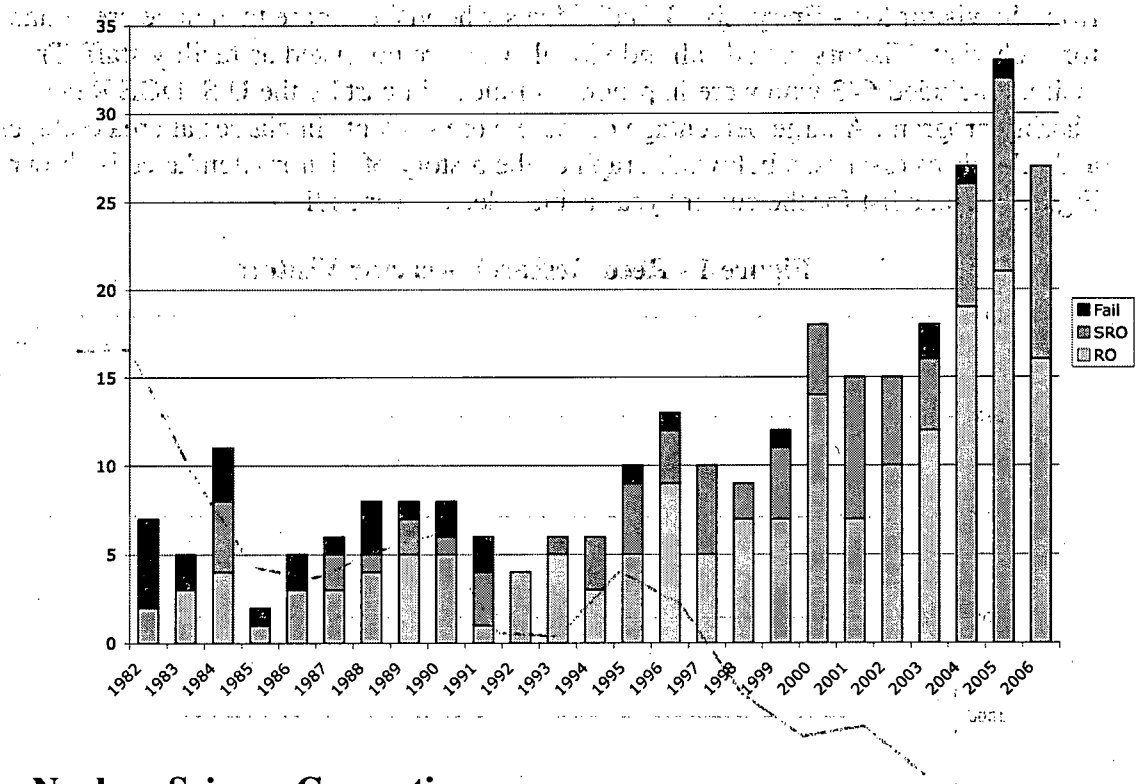
Reactor Operations Seminar

The Reed Research Reactor conducts an annual seminar series for students from Reed and other area educational institutions. This non-credit course serves as an introduction to nuclear reactor theory, health physics, and reactor operation. Some of the students continue with in-depth reactor operator training and subsequently apply for a reactor operator license. If successful, the individual may be hired to operate the reactor. In addition, existing reactor operators may take the NRC senior reactor operator exam to upgrade their licenses.

During the reporting period, 16 out of 16 reactor operator candidates passed their NRC exams and 11 out of 11 senior reactor operator candidates passed their NRC exams. This year, for the first time, we put a limit on the number of reactor operator candidates.

Historically students who fail the NRC exam only fail one section and they are allowed to retake that section later. Figure 2 is a graph of the number of license application each year showing how many new RO and SRO licenses were awarded at Reed and how many failed to obtain a license.

Figure 2 - Reed Research Reactor License Exam Results



Nuclear Science Consortium

In order to better use the resources of the Reed Research Reactor, several area colleges and universities established the Nuclear Science Consortium of the Willamette Valley in 1970. Funding for the Consortium has been derived from Reactor Use Sharing Grants of the U.S. Department of Energy. This made the facility available without charge to classroom groups and unfunded research projects for consortium members.

The following institutions have participated in facility tours, experiments, and research projects in the reporting period.

COLLEGE TOURS/USERS

- Concordia University
- Lewis and Clark College
- Linfield College
- Pacific University
- Portland Community College
- Warner Pacific College

PRE-COLLEGE TOURS/USERS

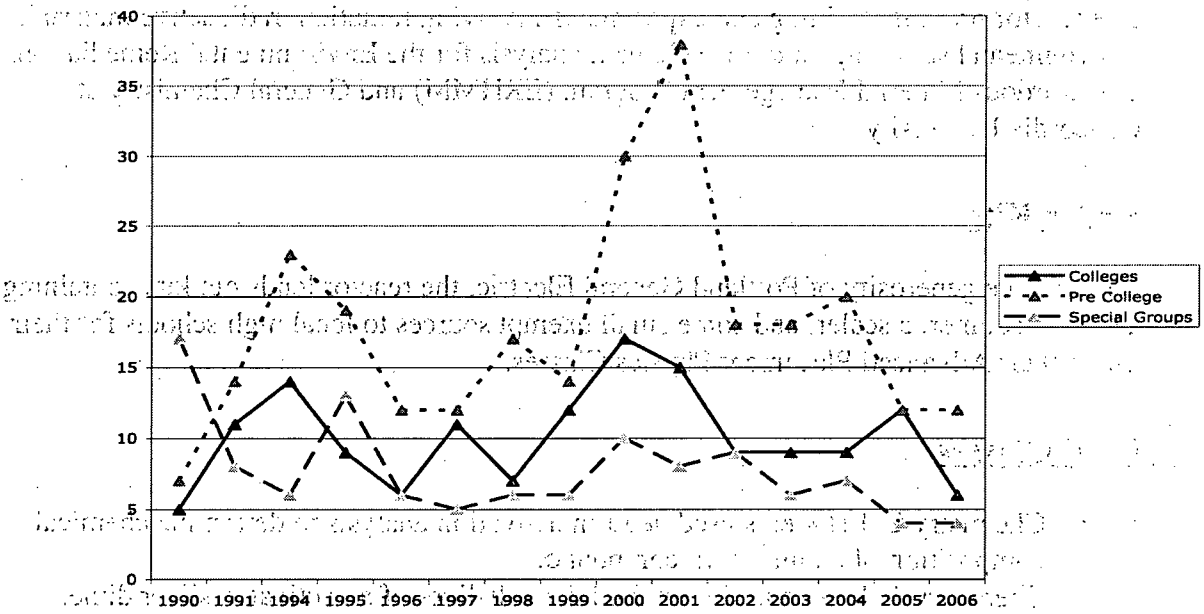
- Cleveland High School
- David Douglas High School
- Lincoln High School
- New Urban High School
- Oregon Episcopal School
- Rex Putnam High School
- Waldorf High School
- West Linn High School

SPECIAL GROUPS

- American Chemical Society
- Advocates for Women in Science, Engineering, and Math
- Saturday Academy

Figure 3 is a graph showing the history of colleges, pre-college groups, and special groups.

Figure 3 – Colleges, Pre-College Groups, and Special Groups



Many reactor tours include hands-on use of facility equipment to conduct experiments in radiation science, health physics, and nuclear physics. A typical lab involves determining the background of a Geiger Muller scalar system and then determining the half-life of a sample of radioactive material. College classes are generally more closely tailored to the individual interests and needs of the Consortium faculty member involved. Experiments include more direct use of the reactor itself by the students, more detailed analysis of materials, and emphasize the incorporation of other classroom activities as much as possible.

Several special programs for gifted children use the reactor for projects. These are designed to enrich their educational program and prepare them for college. Some of the groups who use the reactor target minority and disadvantaged youth who are historically under-represented in science professions.

High School Student Projects

The Reed Research Reactor continues to be used in independent science projects initiated by students from several Oregon and Washington State high schools.

Pacific University Modern Physics Lab

Each year the Modern Physics Lab at Pacific University spends lab sessions at the reactor. The students do several labs including basic health physics, sub-critical multiplication, and neutron activation analysis.

Concordia University

The reactor provides training and experiments involving radiation, radioactive material, environmental sampling, and trace element analysis for the Environmental Remediation & Hazardous Material Management Program (ERHMM) and General Chemistry at Concordia University

Scaler Kits

Through the generosity of Portland General Electric, the reactor lends out kits containing a Geiger counter, a scaler, and some small exempt sources to local high schools for their use in their Advanced Placement Physics Classes.

Reed Classes

- Chemistry 271 students used neutron activation analysis to determine chemical composition of an unknown compound.
- Chemistry 101 students determined the half-lives of an activated silver dime.
- Two Reed students used the reactor as part of their thesis.

Industrial and Commercial Applications

The Reed Research Reactor is available for industrial or commercial concerns when it does not conflict with our educational goals. As in the past, the primary operations involved neutron activation analysis of materials or environmental samples. The facility also provides radiation protection training to interested parties and schools in the area.

REACTOR OPERATIONS

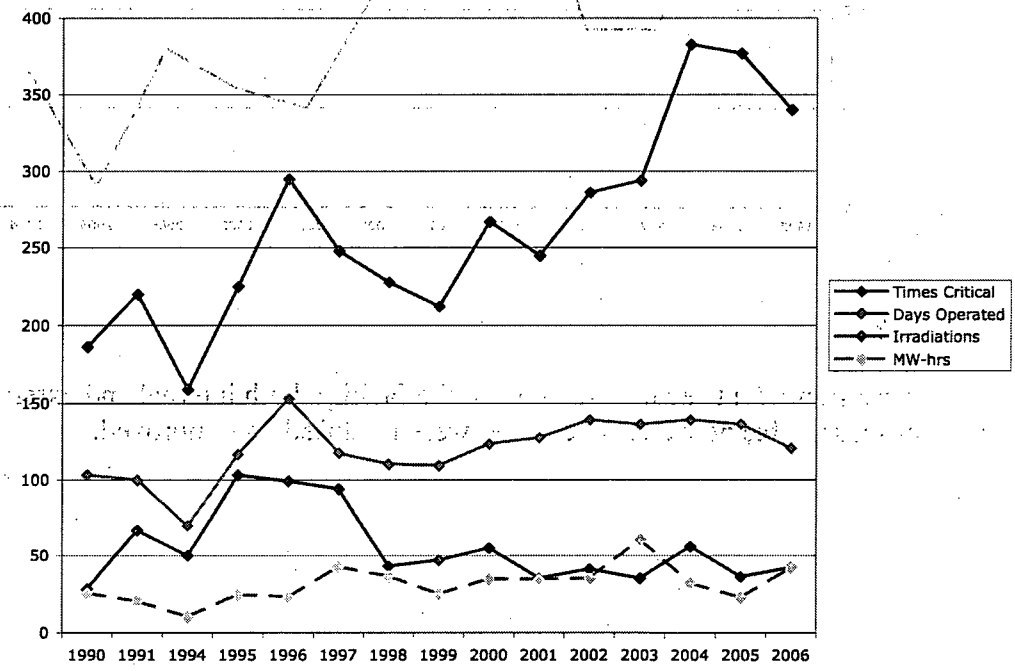
Operations

During the year the reactor was taken critical 340 times on 120 days. The total energy produced was approximately 42 megawatt-hours. Operating history by month appears in Table A. A history of the data is shown in Figure 4.

Table A - Operating History

	Times Critical	Days Operated	MW-hrs
Sep.	39	10	1.92
Oct.	49	14	1.38
Nov.	28	11	6.86
Dec.	23	8	3.91
Jan.	23	13	2.33
Feb.	26	11	4.62
Mar.	33	9	3.60
Apr.	46	14	7.68
May	31	10	4.22
Jun.	5	4	0.46
Jul.	18	8	2.94
Aug.	19	8	1.84
Total	340	120	41.76

Figure 4 – Operations



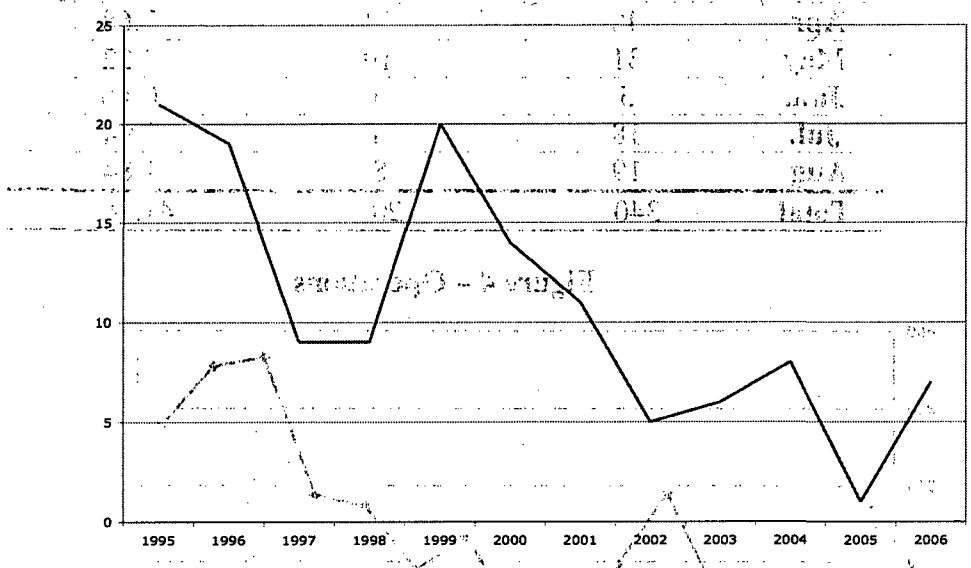
Unplanned Reactor Shutdowns

There were seven inadvertent reactor shutdowns (scrams) as shown in Table B; they were all explained. The number of unplanned reactor shutdowns is consistent with the past as shown in Figure 5.

Table B - Unplanned Reactor Shutdowns

Date	Scram Type	Cause Of Scram
11/21/05	Loss of AC	Electrical power was lost to campus
11/921/05	Linear	Operator inattention
2/16/06	Linear	Linear channel was left in manual ranging
2/28/06	Percent Power	Accidentally pressed the Test button on the Percent Power
3/15/06	Linear	Operator inattention
5/06/06	Linear and Percent Power	Operator inattention
5/06/06	Linear	Operator inattention

Figure 5 – Unplanned Shutdowns



Security

There were significant security reviews of the facility, both internal and external. The physical security barriers and procedures were modified and improved.

REACTOR MAINTENANCE

Significant Maintenance

Routine equipment checks are conducted by reactor staff members on a daily, weekly, bimonthly, semiannual (January and July) and annual (January) basis as required by facility procedures. Reed College maintenance personnel assist with routine preventative maintenance to auxiliary equipment. Significant maintenance operations that were not part of a regular schedule are listed in Table D.

Table D - Significant Maintenance Operations

Date	Maintenance
8/22/05	Installed Automatic Rod Control
9/8/05	Changed primary filter
9/26/05	Changed primary filter
9/30/05	Placed iridium gamma source in the core
10/21/05	Changed primary filter
10/25/05	Moved APM and GSM from the loft to the hallway
10/31/05	Changed primary filter
10/31/05	Installed new grounding wires in the console
11/7/05	Adjusted Log Channel test circuit to enable testing of source interlock
11/9/05	Changed primary filter
1/6/06	Cleaned the Lazy Susan with mineral spirits
1/16/06	Changed the primary demineralizer tanks resin
1/22/06	Changed primary filter
2/27/06	Changed primary filter
4/10/06	Replaced the air hoses on the pneumatic transfer system
4/30/06	Changed primary filter
7/7/06	Changed primary filter
7/26/06	Installed new digital RAMs and relocated the old ones
8/7/06	Changed primary filter
8/9/06	Replaced primary conductivity meter with a digital one
8/15/06	Replaced secondary water meter and computer

Safety Reviews Approved by Reactor Review Committee

Title: **New Emergency Implementation Procedures**

Date: October 24, 2005

Summary of Proposed Change:

The Emergency Implementation Procedures (EIPs) will be changed from a two-column format to a tabbed format.

The new format places all the steps on one sheet for the Emergency Coordinator (EC) to see at once. The information that used to be in the right hand column will be moved to a tab that has more details and pictures for any step that applies.

Advantages of the new format:

1. All the steps are visible at once. No page turning is required until a condition is met.
2. Multiple copies of the flow sheet may be made for others to follow along.
3. Each action step is a separate tab that can be removed for implementation.
4. Since the actions steps don't have to fit in the right hand column, more details and photographs can be included.

Disadvantages of the new format:

1. Significant retraining will be required.
2. When a condition applies, the EC must open that tab rather than just go to the right hand column. The EC may go to the wrong tab. The tabs are lettered and color coordinated to minimize this.
3. The EC may loose his/her place going back and forth between tabs. Check off boxes have been provided to the flow sheet to minimize this.

Title: **Move the APM and GSM to the exit corridor**

Date: October 24, 2005

Summary of Proposed Change:

The proposed procedure change will move the Air Particulate Monitor (APM) and Gaseous Stack Monitor (GSM) from the loft to the exit corridor. The purpose is to put them in a more controlled environment and to facilitate access.

We have had problems with the APM since installation, and now the GSM seems to be having problems. We have sent them back to Eberline repeated times, and they work perfectly there. We have installed power conditioners and replaced the cables. The only remaining suggestion is that the temperature environment in the loft may not be suitable for the detectors. Moving them to the exit corridor (the hallway) will alleviate this.

Also, having the APM and GSM in the hallway will allow operator to perform the weekly and bimonthly checklists without having to enter the loft. They no longer have keys to the loft so this has become a problem.

The APM and GSM will be in the hallway rather than the reactor room to minimize background radiation and to allow access if the reactor room cannot be entered.

The increased sampling line run will not be an issue due to the isokinetic sampling probe that was installed.

The APM and GSM will be mounted on the drywall in the hallway, with plastic tubing running up into the loft. This is the same as the old manner of mounting so no difficulties are anticipated. The reactor staff will perform the changes.

Title: **Lazy Susan Cleaning**

Date: November 28, 2005

Summary of Proposed Change:

The proposed procedure will clean the lazy susan (LS) with the solvent mineral spirits (paint thinner).

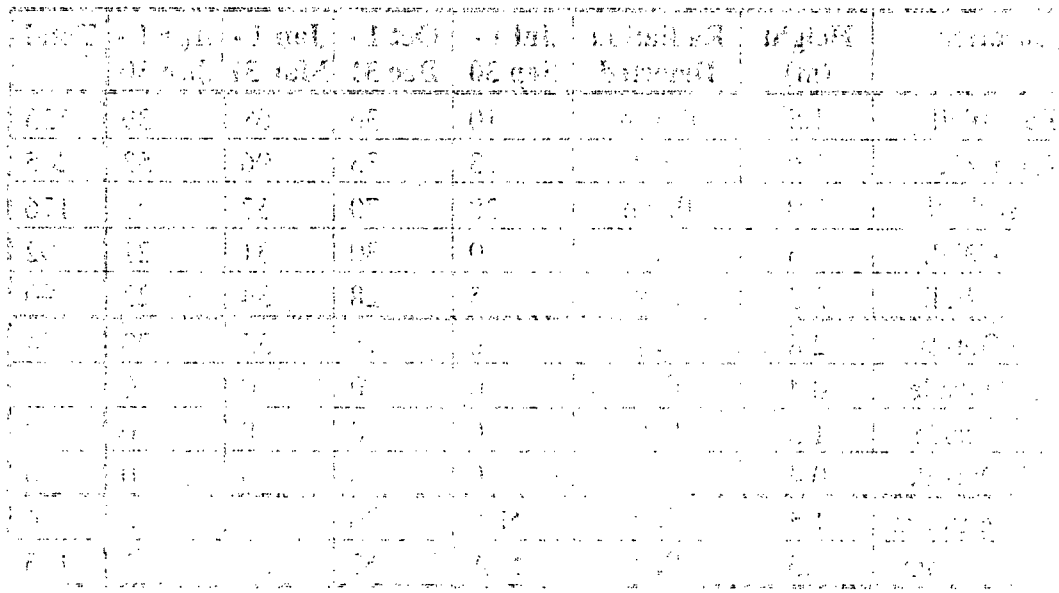
Three gallons of the solvent will be poured into the lazy susan. The LS will be rotating overnight to dissolve the oil. Then the contaminated solvent will be pumped into a shielded container. The waste will be handled as described below. The procedure is attached.

The LS is an air filled rack assembly that is isolated from the pool water, so there is no possible interaction between the solvent and the reactor water. Mineral spirits is compatible with metals, plastics, and the pool water if any were to get into the pool. The only significant activation product is sodium (15 hour half-life), although the LS oil will have long-lived cobalt and selenium isotopes. This method was used successfully at the Kansas State University Reactor in 2003.

The pump and tubing will be on absorbent paper and will be checked frequently for leaks. Radiation monitors will check for air contamination and for high radiation fields. Lab coats, gloves, shoe covers, and goggles will be worn when transferring the solvent. Personal dosimetry is always worn in the reactor room. The container will be shielded and will not be positioned over the reactor pool. When Kansas State performed the procedure, the highest measured dose rate was 10 mR/hour.

The used solvent will be filtered to remove the radioactive particles. The solvent will then be stored for use in cleaning the LS in the future.

This procedure will be added to SOP-83 with lessons learned when completed.



RADIATION PROTECTION

Personnel Dosimetry

During the period July 1, 2005 to June 30, 2006 personnel dosimeters were issued to 54 Reed students and staff, and to one contractor. Since dosimeters are changed on a calendar quarter schedule, this period is the closest to the reporting period. Individuals were issued beta-gamma sensitive ring badges and whole-body badges. The Director and Associate Director were issued beta-gamma-neutron sensitive dosimetry.

During the year the largest annual whole body dose was 13 mrem deep dose equivalent. The largest annual extremity dose was 120 mrem shallow dose equivalent. Both of these were staff members (not students). No one exceeded one percent of the federal limits.

Fixed Area Dosimetry

Radiation levels are continually monitored to provide an indication of the average radiation levels in the reactor bay and dose outside the facility. This year areas dosimeters were also placed in the sample counting room and the control room. All dosimeters monitor beta and gamma radiation. Two locations also measure neutron dose.

The deep dose equivalent radiation measured by fixed dosimeters during the period July 1, 2005 to June 30, 2006 are shown in Table E. Since dosimeters are changed on a calendar quarter schedule, this period is the closest to the reporting period.

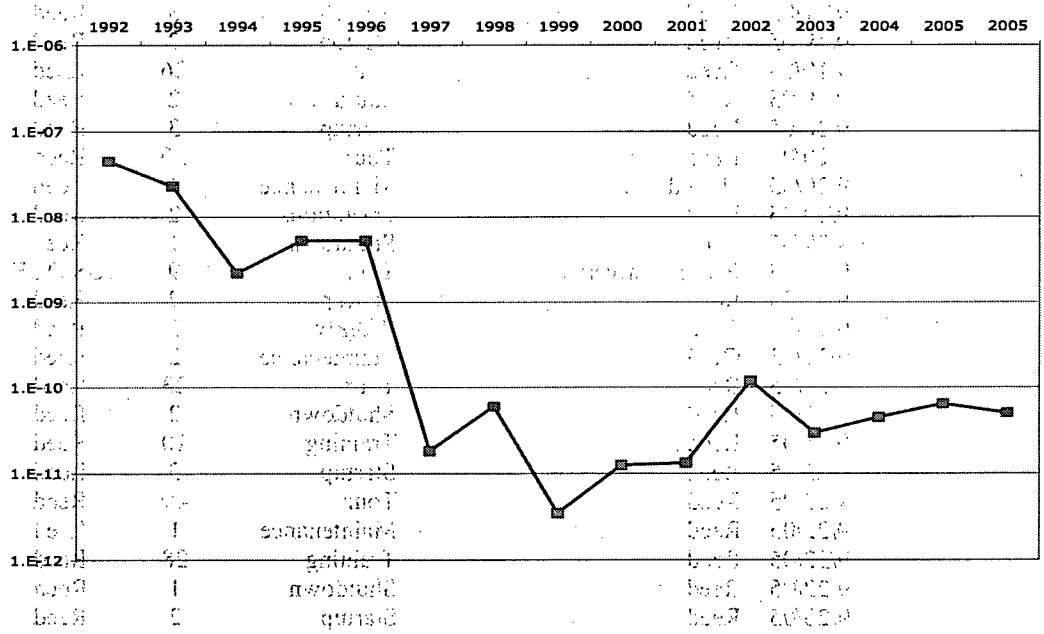
Table E - Area Radiation Dosimeters
(doses are in mrem per calendar quarter)

Location	Height (m)	Radiation Detected	Jul 1 - Sep 30	Oct 1 - Dec 31	Jan 1 - Mar 31	Apr 1 - Jun 30	Total
East Wall	1.5	β, γ, n	10	36	68	39	153
North Wall	1.6	β, γ	23	33	96	53	205
West Wall	1.0	β, γ n	28	70	57	21	176
South Wall	1.6	β, γ	10	30	31	21	92
North Wall	2.3	β, γ	5	28	34	23	90
North Outside	2.8	β, γ	0	16	35	23	74
Roof Outside	0.4	β, γ	0	0	0	0	0
East Outside	1.5	β, γ	0	0	0	0	0
South Outside	0.4	β, γ	0	0	0	0	0
Counting Room	1.5	β, γ	N/A	26	0	0	26
Control Room	1.5	β, γ	N/A	62	56	47	165

Gaseous Releases

The only routine release of gaseous radioactivity is from ^{41}Ar (1.83-hour half-life) and ^{16}N (7.13-second half-life). These come from activation of pool water and air in the pool water and in the irradiation facilities. For calendar year 2005, the average gaseous activity at the site boundary was 4.94×10^{-11} μCi/ml, which would deliver a dose to a member of the public of approximately 0.25 mrem, well below regulatory guidelines and constraints. Figure 6 shows the gaseous releases for each year.

Figure 6 – Gaseous Releases Activity (μCi/ml) at Site Boundary



Liquid Waste Releases

No liquid radioactive waste was released from the Reed Research Reactor during this report period.

Solid Waste Disposal

There was one shipment of radioactive waste from the facility during this reporting period. Two drums were shipped to US Ecology in Richland, WA. The activity was 0.13 mCi and the volume was 18.45 ft^3.

Environmental Sampling

Soil samples taken from the area surrounding the facility showed no activity above background. Water samples taken from the facility's secondary cooling system showed no activity above background. The nearby canyon was sampled for activation products and tritium, but showed no activity above normal background.

APPENDIX A – VISITORS

Date	Institution	Purpose	Number	Funding
9/2/05	Reed	Startup	1	Reed
9/2/05	Reed	Shutdown	2	Reed
9/7/05	Reed	Startup	1	Reed
9/7/05	Reed	Weekly	2	Reed
9/7/05	Reed	Tour	26	Reed
9/7/05	Reed	Shutdown	2	Reed
9/8/05	Reed	Maintenance	2	Reed
9/9/05	Reed	Weekly	3	Reed
9/11/05	Reed	Weekly	3	Reed
9/19/05	Reed	Startup	2	Reed
9/19/05	Reed	Tour	26	Reed
9/19/05	Reed	Shutdown	2	Reed
9/20/05	Reed	Startup	3	Reed
9/20/05	Reed	Tour	50	Reed
9/20/05	United Fire	Maintenance	1	Reed
9/20/05	Reed	Operations	2	Reed
9/20/05	Reed	Shutdown	1	Reed
9/20/05	Pacific University	Tour	9	US DOE
9/21/05	Reed	Startup	2	Reed
9/21/05	Reed	Weekly	3	Reed
9/21/05	OEG	Maintenance	2	Reed
9/21/05	Reed	Tour	23	Reed
9/21/05	Reed	Shutdown	2	Reed
9/21/05	Reed	Training	10	Reed
9/22/05	Reed	Startup	3	Reed
9/22/05	Reed	Tour	49	Reed
9/22/05	Reed	Maintenance	1	Reed
9/22/05	Reed	Training	28	Reed
9/22/05	Reed	Shutdown	1	Reed
9/23/05	Reed	Startup	2	Reed
9/23/05	OEG	Maintenance	4	Reed
9/23/05	Reed	Maintenance	1	Reed
9/23/05	Reed	Tour	28	Reed
9/23/05	Reed	Training	1	Reed
9/23/05	Reed	Shutdown	1	Reed
9/26/05	Reed	Maintenance	3	Reed
9/26/06	OEG	Maintenance	1	Reed
9/26/05	Reed	Tour	1	Reed
9/26/05	Reed	Bimonthly	4	Reed
9/27/05	OEG	Maintenance	2	Reed
9/27/05	Reed	Maintenance	3	Reed
9/27/05	Reed	Weekly	5	Reed
9/27/05	Reed	Startup	2	Reed
9/27/05	Reed	Training	14	Reed
9/29/06	United Fire	Maintenance	1	Reed
9/29/05	Reed	Training	22	Reed
9/29/05	Reed	Shutdown	1	Reed
9/30/05	Reed	Startup	1	Reed
9/30/05	Reed	Tour	19	Reed
9/30/05	Reed	Maintenance	3	Reed
9/30/05	Reed	Training	3	Reed
10/3/05	Reed	Startup	2	Reed
10/3/05	Reed	Shutdown	3	Reed
10/4/05	Reed	Startup	2	Reed
10/4/05	Reed	Maintenance	1	Reed

Date	Institution	Purpose	Number	Funding
10/4/05	Reed	Shutdown	2	Reed
10/5/05	Reed	Startup	2	Reed
10/5/05	Reed	Weekly	4	Reed
10/5/05	Reed	Shutdown	5	Reed
10/6/05	Reed	Startup	2	Reed
10/6/05	Reed	Training	2	Reed
10/6/05	Reed	Shutdown	2	Reed
10/7/05	Reed	Startup	2	Reed
10/7/05	Reed	Maintenance	1	Reed
10/7/05	Reed	Training	1	Reed
10/7/05	Reed	Shutdown	2	Reed
10/10/05	US Crane and Hoist	Maintenance	1	Reed
10/10/05	Reed	Startup	1	Reed
10/10/05	United Fire	Maintenance	1	Reed
10/10/05	Reed	Shutdown	1	Reed
10/11/05	Reed	Startup	3	Reed
10/11/05	Lewis and Clark	Tour	3	US DOE
10/11/05	Pacific University	Tour	9	US DOE
10/11/05	Reed	Shutdown	3	Reed
10/12/05	Reed	Startup	2	Reed
10/12/05	Reed	Weekly	2	Reed
10/12/05	FBI	Tour	8	US DOE
10/12/05	Reed	Training	14	Reed
10/13/05	Reed	Startup	1	Reed
10/13/05	Reed	Training	15	Reed
10/13/05	American Chemical Society	Tour	24	US DOE
10/14/05	Reed	Startup	1	Reed
10/14/05	Reed	Training	4	Reed
10/14/05	Reed	Shutdown	2	Reed
10/17/05	Reed	Startup	1	Reed
10/17/05	Cleveland High School	Tour	35	US DOE
10/17/05	Reed	Tour	1	Reed
10/17/05	Reed	Maintenance	1	Reed
10/17/05	NRC	Inspection	2	Reed
10/17/05	Reed	Shutdown	2	Reed
10/18/05	NRC	Inspection	2	Reed
10/18/05	Reed	Startup	2	Reed
10/18/05	Cleveland High School	Tour	34	US DOE
10/18/05	Reed	Shutdown	2	Reed
10/19/05	Reed	Weekly	2	Reed
10/19/05	NRC	Inspection	2	Reed
10/19/05	Reed	Weekly	1	Reed
10/19/05	Reed	Shutdown	1	Reed
10/21/05	Reed	Training	2	Reed
10/21/05	Reed	Tour	7	Reed
10/21/05	Reed	Maintenance	3	Reed
10/25/05	Reed	Training	5	Reed
10/26/05	Reed	Maintenance	15	Reed
10/26/05	Reed	Weekly	2	Reed
10/26/05	United Fire	Maintenance	1	Reed
10/28/05	Reed	Maintenance	4	Reed
10/31/05	Reed	Maintenance	2	Reed
11/1/05	Reed	Startup	3	Reed
11/2/05	Reed	Tour	2	Reed
11/2/05	CSLA	Tour	14	US DOE
11/2/05	Reed	Shutdown	1	Reed
11/2/05	Reed	Weekly	3	Reed
11/2/05	Reed	Operations	2	Reed

Date	Institution	Purpose	Number	Funding
11/2/05	Reed	Training	12	Reed
11/3/05	Reed	Training	17	Reed
11/4/05	Reed	Tour	63	Reed
11/4/05	Reed	Shutdown	1	Reed
11/5/05	Reed	Startup	2	Reed
11/5/00	Reed	Tour	20	Reed
11/5/05	Reed	Shutdown	2	Reed
11/8/05	Reed	Maintenance	1	Reed
11/8/05	United Fire	Maintenance	1	Reed
11/8/05	ECI Camera	Maintenance	1	Reed
11/9/05	Reed	Weekly	3	Reed
11/9/05	Reed	Maintenance	3	Reed
11/10/05	Reed	Startup	2	Reed
11/10/05	Reed	Operations	1	Reed
11/10/05	Reed	Shutdown	1	Reed
11/11/05	Reed	Operations	2	Reed
11/11/05	Reed	Startup	1	Reed
11/11/05	PNW	Tour	40	US DOE
11/11/05	Reed	Tour	5	Reed
11/11/05	Reed	Operations	1	Reed
11/11/05	Reed	Shutdown	3	Reed
11/14/05	Reed	Startup	2	Reed
11/14/05	Reed	Operations	4	Reed
11/14/05	Reed	Shutdown	2	Reed
11/14/05	Reed	Tour	4	Reed
11/15/05	Reed	Startup	2	Reed
11/15/05	Reed	Operations	1	Reed
11/15/05	Reed	Shutdown	2	Reed
11/16/05	Reed	Operations	3	Reed
11/16/05	Reed	Bimonthly	7	Reed
11/16/05	Reed	Weekly	2	Reed
11/16/05	Reed	Training	1	Reed
11/17/05	Reed	Maintenance	6	Reed
11/17/05	Reed	Training	1	Reed
11/18/05	Reed	Maintenance	5	Reed
11/21/05	Reed	Startup	1	Reed
11/21/05	Reed	Training	1	Reed
11/21/05	Reed	Operations	2	Reed
11/21/05	Reed	Shutdown	2	Reed
11/22/05	Reed	Maintenance	2	Reed
11/23/05	Reed	Startup	2	Reed
11/23/05	Reed	Tour	5	Reed
11/23/05	Reed	Weekly	4	Reed
11/23/05	Reed	Training	2	Reed
11/23/05	Reed	Shutdown	1	Reed
11/30/05	Reed	Weekly	2	Reed
11/30/05	IB N/W	Maintenance	1	Reed
11/30/05	Reed	Training	13	Reed
12/1/05	Reed	Startup	2	Reed
12/1/05	Reed	Tour	4	Reed
12/1/05	United Fire	Maintenance	1	Reed
12/1/05	Reed	Operations	2	Reed
12/1/05	Reed	Training	11	Reed
12/1/05	Reed	Shutdown	3	Reed
12/2/05	PFB	Maintenance	4	Reed
12/2/05	Reed	Training	4	Reed
12/3/05	Reed	Training	18	Reed
12/5/05	Reed	Operations	1	Reed

Date	Institution	Purpose	Number	Funding
12/5/05	Reed	Shutdown	2	Reed
12/6/05	Reed	Operations	5	Reed
12/6/05	Reed	Startup	1	Reed
12/6/05	United Fire	Maintenance	1	Reed
12/6/05	Reed	Shutdown	1	Reed
12/7/05	Reed	Operations	2	Reed
12/7/05	Reed	Weekly	4	Reed
12/7/05	Reed	Training	13	Reed
12/8/05	Reed	Training	13	Reed
12/8/05	Reed	Operations	2	Reed
12/9/05	Reed	Maintenance	6	Reed
12/9/05	Reed	Training	4	Reed
12/10/05	Reed	Startup	2	Reed
12/10/05	Reed	Training	4	Reed
12/10/05	Reed	Tour	10	Reed
12/10/05	Reed	Shutdown	4	Reed
12/13/05	Reed	Maintenance	2	Reed
12/13/05	Reed	Training	1	Reed
12/13/05	Reed	Shutdown	1	Reed
12/14/05	Reed	Training	6	Reed
12/15/05	PFB	Tour	14	US DOE
12/15/05	Reed	Training	4	Reed
12/15/05	Reed	Operations	1	Reed
12/16/05	Reed	Startup	1	Reed
12/16/05	United Fire	Maintenance	1	Reed
12/18/05	PFB	Training	4	Reed
12/18/05	Reed	Operations	1	Reed
1/3/06	West Linn High School	Tour	2	US DOE
1/3/06	Reed	Maintenance	3	Reed
1/4/06	Reed	Maintenance	5	Reed
1/4/06	Reed	Tour	1	Reed
1/5/06	Reed	Maintenance	5	Reed
1/6/06	Reed	Maintenance	4	Reed
1/9/06	Reed	Maintenance	24	Reed
1/9/06	Reed	Operations	23	Reed
1/10/06	Reed	Maintenance	9	Reed
1/10/06	Reed	Operations	31	Reed
1/10/06	Reed	Training	11	Reed
1/10/06	Reed	Shutdown	1	Reed
1/11/06	Reed	Training	19	Reed
1/11/06	Reed	Operations	22	Reed
1/11/06	Reed	Weekly	4	Reed
1/11/06	Reed	Shutdown	1	Reed
1/12/06	Reed	Maintenance	9	Reed
1/12/06	Reed	Operations	23	Reed
1/12/06	Reed	Shutdown	1	Reed
1/12/06	Reed	Training	5	Reed
1/13/06	Reed	Startup	3	Reed
1/13/06	Reed	Maintenance	20	Reed
1/13/06	Reed	Operations	7	Reed
1/13/06	Reed	Training	3	Reed
1/13/06	Reed	Shutdown	1	Reed
1/16/06	Reed	Startup	3	Reed
1/16/06	Reed	Maintenance	14	Reed
1/16/06	Reed	Operations	12	Reed
1/16/06	Reed	Training	2	Reed
1/16/06	Reed	Shutdown	1	Reed
1/17/06	Reed	Training	22	Reed

Date	Institution	Purpose	Number	Funding
1/18/06	United Fire	Maintenance	1	Reed
1/18/06	Reed	Training	10	Reed
1/18/06	Reed	Maintenance	14	Reed
1/18/06	Reed	Startup	5	Reed
1/18/06	Reed	Weekly	6	Reed
1/18/06	Reed	Shutdown	2	Reed
19-Jan	Reed	Training	36	Reed
1/20/06	Reed	Startup	6	Reed
1/20/06	Reed	Maintenance	5	Reed
1/20/06	Reed	Training	1	Reed
1/20/06	Reed	Shutdown	2	Reed
1/22/06	Reed	Startup	3	Reed
1/22/06	Reed	Maintenance	2	Reed
1/22/06	Reed	Training	9	Reed
1/22/06	Reed	Shutdown	1	Reed
1/24/06	Reed	Maintenance	1	Reed
1/25/06	Reed	Maintenance	1	Reed
1/25/06	Reed	Startup	1	Reed
1/25/06	Reed	Training	19	Reed
1/25/06	Reed	Shutdown	2	Reed
1/25/06	Reed	Weekly	4	Reed
1/26/06	Reed	Maintenance	15	Reed
1/26/06	Reed	Tour	4	Reed
1/26/06	Reed	Training	4	Reed
1/27/06	Reed	Maintenance	1	Reed
1/27/06	Reed	Startup	1	Reed
1/27/06	Portland Waldorf High School	Tour	15	US DOE
1/27/06	Reed	Tour	1	Reed
1/30/06	United Fire	Maintenance	2	Reed
1/30/06	Portland Fire	Training	4	Reed
1/30/06	Pinnacle Invest	Training	2	Reed
1/31/06	Reed	Training	1	Reed
1/31/06	Reed	Maintenance	3	Reed
1/31/06	Reed	Startup	1	Reed
2/1/06	Reed	Maintenance	1	Reed
2/1/06	Reed	Weekly	1	Reed
2/1/06	Reed	Startup	1	Reed
2/2/06	Reed	Startup	4	Reed
2/2/06	Reed	Shutdown	3	Reed
2/6/06	Reed	Training	1	Reed
2/8/06	Reed	Training	4	Reed
2/8/06	Reed	Startup	1	Reed
2/8/06	Reed	Shutdown	1	Reed
2/9/06	Reed	Maintenance	1	Reed
2/9/06	Reed	Training	4	Reed
2/9/06	Reed	Startup	3	Reed
2/9/06	Reed	Shutdown	3	Reed
2/10/06	Reed	Training	3	Reed
2/10/06	Reed	Tour	11	Reed
2/10/06	Reed	Shutdown	2	Reed
2/11/06	Reed	Training	8	Reed
2/11/06	Reed	Startup	4	Reed
2/13/06	Reed	Training	2	Reed
2/14/06	United Fire	Maintenance	1	Reed
2/14/06	Reed	Training	2	Reed
2/15/06	Reed	Training	3	Reed
2/15/06	Reed	Maintenance	4	Reed
2/15/06	Reed	Startup	1	Reed

Date	Institution	Purpose	Number	Funding
2/15/06	Reed	Shutdown	1	Reed
2/16/06	Reed	Startup	1	Reed
2/16/06	Warner Pacific College	Tour	16	US DOE
2/16/06	Reed	Shutdown	1	Reed
2/17/06	Reed	Training	2	Reed
2/20/06	Reed	Training	3	Reed
2/20/06	Reed	Shutdown	1	Reed
2/21/06	Reed	Startup	3	Reed
2/21/06	Rex Putnam High School	Tour	33	US DOE
2/21/06	Reed	Training	3	Reed
2/21/06	Reed	Shutdown	2	Reed
2/22/06	Reed	Startup	1	Reed
2/22/06	Reed	Weekly	3	Reed
2/22/06	Reed	Maintenance	1	Reed
2/22/06	Saturday Academy	Tour	19	US DOE
2/22/06	Reed	Tour	3	Reed
2/22/06	Reed	Shutdown	1	Reed
2/22/06	Reed	Training	3	Reed
2/24/06	Reed	Training	4	Reed
2/27/06	Reed	Maintenance	2	Reed
2/27/06	Reed	Training	4	Reed
2/28/06	Reed	Startup	1	Reed
2/28/06	United Fire	Maintenance	1	Reed
2/28/06	Reed	Training	2	Reed
2/28/06	Reed	Shutdown	2	Reed
3/1/06	Reed	Tour	3	Reed
3/1/06	Reed	Maintenance	2	Reed
3/1/06	Reed	Weekly	3	Reed
3/1/06	Reed	Training	3	Reed
3/2/06	Reed	Training	4	Reed
3/3/06	Reed	Maintenance	2	Reed
3/3/06	Reed	Training	1	Reed
3/4/06	Reed	Startup	4	Reed
3/4/06	Reed	Training	4	Reed
3/6/06	Reed	Training	1	Reed
3/6/06	Reed	Operations	3	Reed
3/7/06	Reed	Startup	2	Reed
3/7/06	Reed	Training	4	Reed
3/7/06	Reed	Maintenance	4	Reed
3/8/06	Reed	Weekly	2	Reed
3/8/06	Reed	Training	1	Reed
3/8/06	Reed	Operations	2	Reed
3/9/06	Reed	Training	6	Reed
3/10/06	Reed	Training	5	Reed
3/11/06	Reed	Tour	2	Reed
3/11/06	Reed	Training	2	Reed
3/13/06	Reed	Training	1	Reed
3/14/06	United Fire	Maintenance	1	Reed
3/15/06	Reed	Startup	2	Reed
3/15/06	Reed	Bimonthly	3	Reed
3/15/06	Reed	Weekly	1	Reed
3/15/06	Reed	Operations	2	Reed
3/17/06	Reed	Maintenance	3	Reed
3/19/06	Reed	Training	6	Reed
3/19/06	Reed	Startup	1	Reed
3/21/06	Reed	Startup	1	Reed
3/21/06	Reed	Training	3	Reed
3/21/06	New Urban High School	Tour	26	US DOE

Date	Institution	Purpose	Number	Funding
3/21/06	Reed	Shutdown	1	Reed
3/22/06	State of Oregon	Inspection	2	Reed
3/22/06	Portland Police Bureau	Inspection	1	Reed
3/22/06	Reed	Inspection	2	Reed
3/22/06	Saturday Academy	Tour	7	US DOE
3/23/06	Reed	Startup	1	Reed
3/23/06	Reed	Training	3	Reed
3/23/06	Reed	Tour	8	Reed
3/24/06	Reed	Training	1	Reed
3/24/06	Reed	Tour	7	Reed
3/25/06	Reed	Training	5	Reed
3/27/06	Reed	Training	1	Reed
3/28/06	Reed	Training	3	Reed
3/28/06	United Fire	Maintenance	2	Reed
3/28/06	Canberra	Maintenance	2	Reed
3/29/06	Reed	Weekly	3	Reed
3/29/06	Reed	Startup	2	Reed
3/29/06	Reed	Training	4	Reed
3/29/06	Reed	Shutdown	1	Reed
3/30/06	Reed	Startup	2	Reed
3/30/06	Reed	Training	5	Reed
3/30/06	Reed	Tour	11	Reed
3/30/06	Reed	Shutdown	1	Reed
3/31/06	Reed	Training	5	Reed
3/31/06	Reed	Tour	10	Reed
3/31/06	Reed	Shutdown	1	Reed
3/31/06	Reed	Operations	2	Reed
4/3/06	Reed	Operations	1	Reed
4/4/06	Reed	Training	2	Reed
4/5/06	Reed	Weekly	2	Reed
4/5/06	Reed	Startup	3	Reed
4/5/06	Reed	Maintenance	2	Reed
4/5/06	Reed	Shutdown	1	Reed
4/6/06	Reed	Training	3	Reed
4/6/06	Reed	Bimonthly	1	Reed
4/6/06	Reed	Maintenance	1	Reed
4/7/06	Reed	Training	2	Reed
4/7/06	Reed	Shutdown	1	Reed
4/10/06	Pacific University	Tour	20	US DOE
4/10/06	Reed	Shutdown	1	Reed
4/10/06	Reed	Training	4	Reed
4/11/06	United Fire	Maintenance	1	Reed
4/11/06	Concordia University	Tour	20	US DOE
4/12/06	Reed	Startup	2	Reed
4/12/06	Reed	Training	1	Reed
4/12/06	Reed	Weekly	4	Reed
4/13/06	Reed	Startup	2	Reed
4/13/06	Reed	Training	6	Reed
4/13/06	RAD	Tour	22	US DOE
4/13/06	Reed	Maintenance	2	Reed
4/13/06	Reed	Shutdown	1	Reed
4/14/06	Reed	Startup	1	Reed
4/14/06	Reed	Operations	1	Reed
4/14/06	RAD	Tour	22	US DOE
4/14/06	Reed	Maintenance	4	Reed
4/14/06	Reed	Training	5	Reed
4/14/06	Reed	Bimonthly	1	Reed
4/14/06	Reed	Tour	1	Reed

Date	Institution	Purpose	Number	Funding
4/15/06	Reed	Training	5	Reed
4/15/06	Reed	Operations	2	Reed
4/15/06	Reed	Maintenance	1	Reed
4/17/06	Reed	Startup	1	Reed
4/17/06	Reed	Tour	14	Reed
4/17/06	Reed	Training	3	Reed
4/17/06	Reed	Shutdown	1	Reed
4/18/06	Reed	Tour	2	Reed
4/18/06	Reed	Training	3	Reed
4/19/06	PFB	Training	1	Reed
4/19/06	Reed	Startup	1	Reed
4/20/06	Reed	Training	3	Reed
4/20/06	United Fire	Maintenance	1	Reed
4/20/06	Reed	Maintenance	3	Reed
4/21/06	Concordia University	Tour	18	US DOE
4/21/06	Reed	Maintenance	3	Reed
4/21/06	Reed	Tour	1	Reed
4/21/06	Reed	Shutdown	1	Reed
4/24/06	David Douglas High School	Tour	32	US DOE
4/24/06	Reed	Training	2	Reed
4/25/06	Reed	Training	4	Reed
4/26/06	Reed	Startup	1	Reed
4/26/06	American Nuclear Insurers	Inspection	1	Reed
4/26/06	David Douglas High School	Tour	25	US DOE
4/26/06	Reed	Training	3	Reed
4/26/06	Linfield College	Tour	8	US DOE
5/1/06	Reed	Tour	1	Reed
5/2/06	Reed	Startup	1	Reed
5/2/06	NRC	Examinations	4	Reed
5/2/06	Reed	Examinations	3	Reed
5/2/06	PFB	Training	21	Reed
5/2/06	Reed	Training	2	Reed
5/3/06	NRC	Examinations	4	Reed
5/3/06	Reed	Examinations	4	Reed
5/3/06	United Fire	Maintenance	1	Reed
5/4/06	Reed	Startup	1	Reed
5/4/06	Reed	Examinations	5	Reed
5/4/06	NRC	Examinations	4	Reed
5/5/06	Reed	Examinations	1	Reed
5/5/06	NRC	Examinations	2	Reed
5/5/06	Reed	Startup	2	Reed
5/5/06	Reed	Operations	1	Reed
5/6/06	Reed	Operations	2	Reed
5/6/06	Reed	Training	1	Reed
5/7/06	Reed	Operations	2	Reed
5/9/06	NRC	Examinations	6	Reed
5/10/06	NRC	Examinations	3	Reed
5/10/06	Reed	Examinations	1	Reed
5/10/06	Reed	Startup	1	Reed
5/11/06	Reed	Weekly	1	Reed
5/11/06	Reed	Maintenance	3	Reed
5/12/06	Reed	Maintenance	1	Reed
5/16/06	Lincoln High School	Tour	21	US DOE
5/17/06	Reed	Weekly	1	Reed
5/19/06	Reed	Tour	3	Reed
5/23/06	Reed	Tour	6	Reed
5/26/06	United Fire	Maintenance	1	Reed
5/30/06	Portland Community College	Tour	12	US DOE

Date	Institution	Purpose	Number	Funding
5/31/06	HVAC-RJ	Maintenance	1	Reed
6/1/06	Portland Community College	Tour	12	US DOE
6/1/06	Reed	Tour	3	Reed
6/2/06	Reed	Tour	1	Reed
6/5/06	United Fire	Maintenance	1	Reed
6/5/06	Reed	Tour	2	Reed
6/5/06	Reed	Weekly	2	Reed
6/20/06	RSO	Tour	14	US DOE
6/20/06	Reed	Maintenance	1	Reed
6/20/06	Reed	Weekly	3	Reed
6/22/06	RSO	Training	12	Reed
6/26/06	Reed	Training	5	Reed
6/27/06	Reed	Training	7	Reed
6/28/06	DeTemple	Maintenance	2	Reed
6/28/06	Reed	Maintenance	4	Reed
6/28/06	Reed	Startup	3	Reed
6/28/06	OCH	Tour	18	US DOE
6/28/06	Reed	Training	2	Reed
7/7/06	DeTemple	Maintenance	2	Reed
7/7/06	Reed	Maintenance	2	Reed
7/8/06	Reed	Weekly	1	Reed
7/11/06	Reed	Startup	2	Reed
7/11/06	United Fire	Maintenance	1	Reed
7/11/06	Reed	Maintenance	3	Reed
7/12/06	Reed	Weekly	5	Reed
7/12/06	Reed	Startup	3	Reed
7/12/06	Cascade Presbyterian	Tour	19	US DOE
7/12/06	LJCDS	Tour	1	US DOE
7/13/06	Reed	Startup	2	Reed
7/13/06	Saturday Academy	Tour	23	US DOE
7/13/06	Reed	Operations	2	Reed
7/13/06	Cascade Presbyterian	Tour	8	US DOE
7/17/06	Reed	Bimonthly	2	Reed
7/18/06	Reed	Bimonthly	6	Reed
7/19/06	Reed	Weekly	2	Reed
7/19/06	Reed	Maintenance	2	Reed
7/20/06	Reed	Startup	2	Reed
7/20/06	Reed	Maintenance	1	Reed
7/20/06	Reed	Shutdown	1	Reed
7/24/06	Reed	Tour	1	Reed
7/24/06	Reed	Maintenance	2	Reed
7/26/06	Reed	Startup	3	Reed
7/26/06	Reed	Maintenance	3	Reed
7/27/06	Reed	Startup	4	Reed
7/27/06	Reed	Operations	2	Reed
7/27/06	AWSEM	Tour	21	US DOE
7/28/06	Reed	Startup	3	Reed
7/28/06	Reed	Tour	2	Reed
7/28/06	United Fire	Maintenance	1	Reed
31-Jul	Reed	Maintenance	2	Reed
7/31/06	Reed	Startup	2	Reed
8/1/06	Reed	Maintenance	8	Reed
8/2/06	Reed	Maintenance	2	Reed
8/3/06	Reed	Startup	2	Reed
8/3/06	Portland Community College	Tour	19	US DOE
8/3/06	Reed	Operations	2	Reed
8/4/06	Reed	Maintenance	1	Reed
8/7/06	Reed	Maintenance	2	Reed

Date	Institution	Purpose	Number	Funding
8/7/06	Reed	Startup	1	Reed
8/7/06	Reed	Tour	11	Reed
8/7/06	Reed	Shutdown	1	Reed
8/8/06	Reed	Startup	3	Reed
8/8/06	Reed	Maintenance	2	Reed
8/8/06	Reed	Tour	4	Reed
8/8/06	Reed	Shutdown	1	Reed
8/9/06	Reed	Weekly	2	Reed
8/9/06	Reed	Maintenance	1	Reed
8/9/06	Reed	Tour	2	Reed
8/10/06	Reed	Maintenance	2	Reed
8/10/06	DeTemple	Maintenance	2	Reed
8/10/06	Reed	Startup	1	Reed
8/10/06	Dynalectric	Maintenance	3	Reed
8/10/06	Reed	Maintenance	2	Reed
8/11/06	Reed	Tour	2	Reed
8/14/06	Reed	Maintenance	3	Reed
8/15/06	DeTemple	Maintenance	1	Reed
8/15/06	Dynalectric	Maintenance	2	Reed
8/15/06	Reed	Maintenance	1	Reed
8/15/06	United Fire	Maintenance	1	Reed
8/16/06	Reed	Weekly	1	Reed
8/17/06	DeTemple	Maintenance	1	Reed
8/17/06	Reed	Startup	1	Reed
8/17/06	Reed	Tour	9	Reed
8/17/06	Reed	Maintenance	1	Reed
8/21/06	Reed	Tour	5	Reed
8/23/06	Reed	Startup	1	Reed
8/23/06	Reed	Tour	69	Reed
8/24/06	Reed	Tour	24	Reed
8/24/06	Reed	Shutdown	1	Reed
8/24/06	Reed	Maintenance	1	Reed
8/25/06	Reed	Startup	1	Reed
8/25/06	Reed	Tour	35	Reed
8/25/06	Reed	Shutdown	1	Reed
8/29/06	DeTemple	Maintenance	2	Reed
8/30/06	DeTemple	Maintenance	3	Reed
8/25/06	Reed	Maintenance	1	Reed