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RADIOACTIVE LIQUID WASTE WASTE MINIMIZATION SURVEY REPORT FOR TRITIUM AND ACCELERATOR-PRODUCED ISOTOPES

REVISION 0

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ACRONYMS AND ABBREVIATIONS

AEA	Atomic Energy Act (42 U.S.C. 2011, et seq.)
CAA	Clean Air Act
CWA	Clean Water Act (33 U.S.C. 1251, et seq.)
DCG	Derived Concentration Guide
DOE	U.S. Department of Energy
EM-RLW	Environmental Management Division, Radioactive Liquid Waste Group
EPA	U.S. Environmental Protection Agency
ESH-17	Environmental Safety and Health Division, Air Quality Group
ESH-18	Environmental Safety and Health Division, Water Quality and Hydrology Group
ESH-19	Environmental Safety and Health Division, Hazardous and Solid Waste Group
FMU	Facility Management Unit
IDB	*Los Alamos National Laboratory RLWTF Conceptual Design Best Demonstrated Available Technology Evaluation Influent Design Basis* (LANL 1995b)
LANL	Los Alamos National Laboratory
LANL WAC	*LANL Waste Acceptance Criteria* (LANL 1998e)
LANSCE	Los Alamos Neutron Science Center
NMED	New Mexico Environment Department
NMAC	*New Mexico Administrative Code*
NMSA	*New Mexico Statutes Annotated*
NMWQCC	New Mexico Water Quality Control Commission
NPDES	National Pollutant Discharge Elimination System
P2/WMin	pollution prevention and waste minimization
PET	positron emission tomography
RAM	radioactive material (or radionuclide)
RCRA	Resource Conservation and Recovery Act
RLWCS	Radioactive Liquid Waste Collection System
RLWTF	Radioactive Liquid Waste Treatment Facility
TA	technical area
TSDF	treatment, storage, and disposal facility
TSFF	Tritium Science Fabrication Facility
TSTA	Tritium Systems Test Assembly
UMS	unmonitored point source
Usage Survey	*1997 Radioactive Materials Usage Survey for Point Sources* (LANL 1998a)
Zero Discharge Report	*Elimination of Liquid Discharge to the Environment from the TA-50 Radioactive Liquid Waste Treatment Facility* (LANL 1998c)

RADIOACTIVE LIQUID WASTE WASTE MINIMIZATION SURVEY REPORT FOR TRITIUM AND ACCELERATOR-PRODUCED ISOTOPES

1.0 INTRODUCTION

The Radioactive Liquid Waste Treatment Facility (RLWTF) located at Technical Area (TA)-50, Building 1 treats industrial and radioactive liquid waste received from Los Alamos National Laboratory (LANL) TAs. The treated effluent is discharged to Mortandad Canyon. The Clean Water Act (33 U.S.C. 1251, et seq.) (CWA) established the National Pollutant Discharge Elimination System (NPDES), which requires permitting point-source effluent discharges to the nation's waters. The RLWTF effluent is regulated by NPDES permit number NM0028355, outfall number 051, which establishes specific chemical, physical, radiological, and biological criteria that an effluent must meet before it is discharged. The University of California and U.S. Department of Energy (DOE) are co-permittees of this permit, which is administered by U.S. Environmental Protection Agency (EPA) Region 6 and certified by the New Mexico Environment Department (NMED) Surface Water Quality Bureau.

The CWA regulates the discharge of radioactive materials not covered by the Atomic Energy Act (42 U S C. 2011 et seq.) (AEA), including radium and accelerator-produced isotopes under 40 *Code of Federal Regulations*, Part 122.2. Man-made sources of tritium may be reactor- or accelerator-produced. The list of other accelerator-produced isotopes depends on the type of accelerator and target material used. The AEA regulates source, special nuclear, and by-product materials.

The New Mexico "Water Quality Act" (*New Mexico Statutes Annotated* [NMSA] 1978) establishes the New Mexico Water Quality Control Commission (NMWQCC) as the state's water pollution control agency. The NMWQCC regulates liquid discharges to both surface waters and discharges onto or below the ground surface in the state under the, "New Mexico Water Quality Control Commission Regulations" (20 *New Mexico Administrative Code* [NMAC] 6.2). "Water Quality Standards for Interstate and Intrastate Streams in New Mexico" (20 NMAC 6.1) establishes specific surface water standards. The NMWQCC has delegated authority for water pollution control to the NMED. Specific numerical and narrative surface water standards are developed by NMED and approved by EPA. Effluent limits that apply to the RLWTF NPDES permit are established in the permit by EPA and certified by NMED.

Concentrations of radionuclides in surface water samples may be compared to 20 NMAC 6.1 surface water standards, the "New Mexico Radiation Protection Regulations" (20 NMAC 3.1), and DOE Derived Concentration Guides (DCGs) established in DOE Order 5400.5, *Radiation Protection of the Public and the Environment*. The 20 NMAC 6.1 surface water standard for accelerator-produced tritium is 20,000 pCi/L. The 20 NMAC 3.1 radiation protection levels are generally two orders of magnitude greater than the DOE DCGs for public dose.

The DOE has requested that LANL voluntarily reduce its discharge of a number of radionuclides, including tritium and accelerator-produced isotopes. As stated in, *Environmental Surveillance at Los Alamos National Laboratory during 1997* (LANL 1998d), the RLWTF effluent included tritium, sodium-22, strontium-89, strontium-90, cesium-137, uranium-234, uranium-235, plutonium-238, plutonium-239, plutonium-240, and americium-241 during 1997.

DOE and LANL have determined that all tritium in the RLWTF effluent is reactor-produced for LANL programs with weapons missions. The *DMR Outfall Data Summary, August 1, 1994 to December 31, 1997* (LANL 1998b) reported a high concentration of 147,059 pCi/L for reactor-produced tritium from three analyses of the RLWTF effluent. *Elimination of Liquid Discharge to the Environment from the TA-50 Radioactive Liquid Waste Treatment Facility* (LANL 1998c) (Zero Discharge Report) reported an average tritium concentration of 78,612 pCi/L in RLWTF effluent during 1996.

Strontium-90, cesium-137, and americium-241 in the RLWTF effluent is by-product material (i e., reactor-produced) and is, therefore, regulated under the AEA and exempt from regulation under the CWA and NMWQCC regulations. Uranium in the RLWTF effluent may be subject to NMWQCC regulation if it is naturally occurring in the LANL source water supply; otherwise, it is source material and regulated under the AEA. Other isotopes in the RLWTF originate primarily from medical tracer and environmental monitoring research (LANL 1998f).

During 1998, a working group was established to study viable options for phased transition toward zero discharge of treated liquid waste from the RLWTF to Mortandad Canyon. The working group recommended several phases to accomplish its goal of zero discharge from the RLWTF and presented its recommendations in the Zero Discharge Report. Phase I upgrades to the RLWTF include installation of tubular ultrafiltration and reverse osmosis units. Phase II upgrades address nitrates with a biosystem to convert nitrates to nitrogen gas. The reduction of tritiated wastewaters; identification and minimization of other radioactive and hazardous constituents; and volume reduction were recommended for Phase III activities.

In support of the Zero Discharge Report Phase III recommendations, LANL's Environmental Safety and Health Division, Water Quality and Hydrology Group (ESH-18) and Environmental Management Division, Radioactive Liquid Waste Group (EM-RLW) sponsored a series of radioactive liquid waste minimization surveys of LANL facilities to identify generators and dischargers of tritium and accelerator-produced isotopes. This report presents the list of potential dischargers of tritium and accelerator-produced isotopes to the RLWTF either directly via the Radioactive Liquid Waste Collection System (RLWCS) or via collection and later transportation to the RLWTF.

2.0 GENERATORS OF TRITIUM AND ACCELERATOR-PRODUCED ISOTOPES

Several data sources were used to compile a list of generators that potentially discharge tritium and accelerator-produced isotopes to the RLWTF, including the following:

- Zero Discharge Report (LANL 1998c)
- *Los Alamos National Laboratory RLWTF Conceptual Design Best Demonstrated Available Technology Evaluation Influent Design Basis* (LANL 1995b) (IDB)
- *1997 Radioactive Materials Usage Survey for Point Sources* (LANL 1998a) (Usage Survey) database query
- Correspondence with LANL personnel (e.g., telephone calls, electronic mail, interviews)
- Office of Nuclear Energy, Science and Technology web page (http://www.ne.doe.gov)
- LANL web page
- Previous surveys performed by ESH-18 and EM-RLW
- NPDES Database

The Zero Discharge Report identified the following major dischargers of liquid waste to the RLWTF during 1993:

- TA-3-29 Chemistry and Metallurgy Research facility
- TA-3-66 Sigma Building
- TA-48 Radiochemistry Site
- TA-53 Los Alamos Neutron Science Center (LANSCE) (discharge to the RLWTF has since discontinued)
- TA-55 Plutonium Facility
- TA-21 facilities
- Waste management facilities

The Tritium Systems Test Assembly (TSTA) facility and Tritium Science Fabrication Facility (TSFF) at TA-21 were reported to discharge the most tritium-contaminated waste to the RLWTF (LANL 1998c). The TSTA develops, demonstrates, and integrates technologies related to the deuterium-tritium fuel cycle for large-scale fusion reactor systems. The TSFF provides support for tritium-related experiments. Tritium sources from the TSTA and TSFF are primary coolant loop flushing, component washing, hand washing, cooling tower blow-down, and custodial activities. The cooling tower at TA-21 has since been replaced.

TAs 3, 35, 48, 50, and 59 were also identified in the Zero Discharge Report as dischargers of tritium to the RLWTF via the RLWCS. TAs 2, 16, 18, 33, 41, and 54 were reported to have collected tritium-contaminated waste and later transported it to the RLWTF. However, the contribution of tritium from these sources was estimated at only one percent of the total tritium activity sent to the RLWTF (LANL 1998c).

For the IDB, a generator survey was conducted to define each generator's existing waste disposal practices and any projected future activities that would affect their discharge to the RLWTF. The IDB was reviewed for LANL facilities that discharge tritium and accelerator-produced isotopes to the RLWTF.

The Usage Survey provides results of the 1997 Environmental Safety and Health Division, Air Quality Group (ESH-17) effort to collect information pertaining to radioactive materials usage and processes performed at LANL facilities. The Usage Survey included unmonitored point sources (UMSs) with a potential dose equivalent of greater than or equal to 0.005 mrem/yr (1/20th of the monitoring limit of 0.1 mrem/yr); new UMSs that began operating during 1997; or previously unidentified UMSs. A data retrieval from the Usage Survey database was provided by Scott Miller, ESH-17. This retrieval included the name of person interviewed, operating group, Facility Management Unit (FMU), TA, building, room, facility status, facility description, and radioactive material (or radionuclide) (RAM) discharged.

Additional information was collected from the results of previous surveys conducted by ESH-18 in 1995 and EM-RLW in 1997. The ESH-18 survey (LANL 1995a) stated all but two tritium discharges to the RLWCS were reactor-produced. One discharge of "very minute amounts" of accelerator-produced tritium was a result of contaminated glassware cleaning and hand washing at TA-21. The other discharge was a result of experiments performed at TA-21 to measure the amount of tritium gas produced from the Los Alamos Meson Physics Facility (now LANSCE) accelerator beam operation at TA-53.

The EM-RLW survey (LANL 1997) stated that TA-50-1 discharges accelerator-produced tritium as a result of monthly analysis of samples collected from the LANSCE at TA-53. These samples had an average volume of 200–300 mL, with a maximum of 400 mL, and an average concentration of 20 μCi/L, with a maximum concentration of 120 μCi/L. TA-48 was also reported to discharge accelerator-produced isotopes. A future research project at TA-21-209 was projected to generate accelerator-produced tritium.

A database query was made on the NPDES database that is managed by Anne Soukup, ESH Division Office. Only TA-21-155, Rooms 5512 and 5513 were identified as dischargers of tritiated water in the NPDES database.

Correspondence with TA-59 personnel has indicated that tritium calibration standards may be discharged from TA-59 to the RLWTF at a rate of approximately 10 to 25 nCi/yr. Accelerator-produced isotopes generated from sample or calibration standards may be discharged from TA-59 at a rate of approximately 1 to 2 nCi/yr.

Information obtained from the sources identified above was compiled into an Excel spreadsheet, which is included as Attachment 1 to this report. The information in Attachment 1 is sorted by TA, building, room, radionuclide, and whether the radionuclide was accelerator-produced at LANL. Although many isotopes identified in the IDB and Usage Survey have the potential to be accelerator-produced, depending upon the type of accelerator and target materials used, only those isotopes that were actually identified as having been accelerator-produced at LANL are identified as such. Information pertaining to all isotopes, regardless of whether they are accelerator-produced, is presented in Attachment 1.

Screening the information in Attachment 1 to identify only those facilities with the potential to discharge tritium and accelerator-produced isotopes to the RLWCS resulted in a much smaller data set, which is presented as Attachment 2. Attachment 2 also identifies group leaders for the facilities for additional information requests.

The Usage Survey was conducted to collect information on air emission sources. Generators identified in the Usage Survey were initially assumed to be connected to the RLWCS and have the potential to discharge the radionuclides identified to the RLWTF Additional information was requested from the group leaders identified in Attachment 2 to determine whether those facilities do discharge to the RLWCS and whether the isotopes identified are indeed accelerator-produced. Only TA-59 provided additional information as discussed earlier.

Although LANSCE does not discharge to the RLWCS, samples are collected from LANSCE and are analyzed at other LANL facilities, including TAs 50, 48, and 59 that do discharge to the RLWTF. These samples may contain tritium and accelerator-produced isotopes. Some information regarding the potential accelerator-produced isotopes that are generated at LANSCE was obtained from the Office of Nuclear Energy, Science and Technology web page.

The DOE Office of Isotope Programs produces and sells stable and radioactive isotopes that are used by domestic and international customers for medicine, industry, and research. The LANSCE participates in this program by producing the isotopes shown in Table 2-1. The present Isotope Production Facility at LANL operates approximately 22 weeks per year. This facility produces radioisotopes using either the primary proton beam or neutrons from the beam stop of the LANSCE, a half-mile-long accelerator that delivers medium-energy protons. The unique characteristics of the LANSCE accelerator include a high-energy, high-beam current that allows production of higher quality radioisotopes as well as exotic radioisotopes that cannot be produced at other facilities.

The isotopes identified in Table 2-1 includes only those known to be generated for the isotope program and may not include all potential isotopes that are generated at LANSCE. Also note that only those isotopes that are known to be accelerator-produced and discharged to the RLWTF are presented as such in Attachment 1.

Due to LANSC facility modifications related to the primary laboratory mission, it will not be possible to produce these isotopes for research after Fiscal Year 1999, unless a new Los Alamos isotope production facility is built. Plans are under way to construct a new isotope production facility to allow continued and enhanced medical isotope production into the future. The new isotope production facility will permit eight months of isotope production annually and significantly reduce radioactive waste output. The DOE Office of Nuclear Energy, Science, and Technology web page also discussed construction of the Los Alamos target irradiation station; however, the physical location of the new facilities was not identified in the web page where this information was obtained. It is also unknown whether this facility plans to discharge to the RLWTF.

Table 2-1. LANSCE Accelerator-Produced Isotopes

Isotope[a,b,c]	Important Uses
Aluminum/Al-26	Research. Alzheimer's disease; acid rain
Americium/Am-241	Neutron source for oil well logging, smoke detectors (in LANSCE inventory)
Arsenic-72	Positron emitter with applications for medical imaging
Bismuth-207	Long-lived, photon-emitting isotope that is used as a tracer, as well as a source isotope
Cadmium/Cd-109	X-ray fluorescence instrument calibration; silver-109m generation (for short-term medical imaging)
Cobalt-55	Proposed to label monoclonal antibodies for positron emission tomography (PET)
Copper/Cu-67	Antibody labeling for cancer therapy and imaging
Germanium/Ge-68	Calibration source for PET scanners and equipment; antibody labeling
Iodine-124	Imaging agent
Palladium-103	Prostate cancer therapy
Silicon-32	Biological oceanography studies
Sodium/Na-22	Positron emitter used in various applications, neurologic research
Strontium/Sr-82 (parent of rubidium 82), Sr-85, and Sr-89	Cardiac PET imaging; diagnosis of bone lesions; hypoparathyroidism; bone cancer pain relief
Technetium-95m	Photon emitter that can be used in tracer studies of technetium migration in the environment and as a long-lived tracer for dosimetry and biodistribution studies
Technetium-99m (from molybdenum-99)	Diagnostic imaging

[a] Source: Office of Nuclear Energy, Science and Technology web page, http://www.ne.doe.gov
[b] LANSCE does not discharge to the RLWTF; however, other LANL facilities analyze samples collected from LANSCE that may contain the isotopes listed above.
[c] This list may not be all of the isotopes generated at LANSCE.

3.0 RECOMMENDED POLLUTION PREVENTION AND WASTE MINIMIZATION OPPORTUNITIES

Several pollution prevention and waste minimization (P2/WMin) opportunities were previously reported in the Zero Discharge Report, including the following:

- TSTA and TSFF liquid waste collection, storage, and later transfer to the radioactive wastewater lagoons located at TA-53 for evaporation until a planned treatment system is completed at TA-53
- TSTA and TSFF liquid waste collection, storage, and later transfer to a dedicated open-air evaporator for the TSTA and TSFF
- Other LANL facility (e.g., TA-16) liquid waste collection, storage, and later transfer to a dedicated open-air evaporator such as the TSTA and TSFF dedicated evaporator or to the TA-53 lagoons or solar evaporative unit
- Reuse of RLWTF effluent for industrial purposes, including plutonium processing at TA-55 and cooling towers

The Zero Discharge Report indicated that these P2/WMin opportunities would be viable provided waste analysis demonstrated compatibility of the constituents with the process and compliance with the *LANL Waste Acceptance Criteria* (LANL WAC) (LANL 1998e), Clean Air Act (CAA), Resource Conservation and Recovery Act (RCRA), and associated permits.

Based on the results of the present survey, the major identified sources of tritium and accelerator-produced isotope discharges to the RLWTF are from: 1) samples collected from LANSCE and other LANL facilities that are analyzed at TAs 48, 50, and 59; and 2) cleaning contaminated glassware and washing hands at TA-21 facilities. P2/WMin opportunities for these facilities include segregation and collection for discharge at the TA-53 treatment system or TA-54 treatment, storage, and disposal facilities (TSDFs). TA-59 personnel have indicated that unused samples from TA-53 are currently sent to TA-54 TSDFs for final disposition. Unused LANSCE samples that are analyzed at other LANL facilities should be handled in the same fashion.

Disposition at TA-53 or -54 must comply with LANL WAC, CAA, RCRA, and associated permit requirements, as applicable. Collection and storage of wastewater must be done in accordance with the requirements of *Hazardous and Mixed Waste Requirements for Storage* (LIR 404-00-03.0) to maintain compliance with RCRA requirements. Specifically, waste generators would need to coordinate with the facility waste management coordinator to register satellite accumulation areas and <90-day storage areas with the Environmental Safety and Health Hazardous and Solid Waste Group (ESH-19). Administrative and/or physical controls, volume and storage time, labeling, and secondary containment requirements must also be met, as applicable. In addition to the LIR 404-00-03.0 requirements, hazardous waste storage in areas not currently designated for such activities may require a review of the safety basis and/or authorization basis for the facility and possible unresolved safety question determinations, according to DOE Order 420.1, *Facility Safety*, prior to implementing storage.

4.0 REFERENCES

20 NMAC 3.1. *New Mexico Administrative Code*, "New Mexico Radiation Protection Regulations." Effective May 3, 1995. Santa Fe, New Mexico, Hazardous and Radioactive Materials Bureau Radiation Licensing and Registration Section, New Mexico Environment Department.

20 NMAC 6.1. *New Mexico Administrative Code*, "Water Quality Standards for Interstate and Intrastate Streams in New Mexico." As amended through January 23, 1995. Santa Fe, New Mexico, New Mexico Water Quality Control Commission.

20 NMAC 6.2 *New Mexico Administrative Code*, "New Mexico Water Quality Control Commission Regulations." Effective December 1, 1995. Santa Fe, New Mexico, New Mexico Water Quality Control Commission.

40 *Code of Federal Regulations*, Part 122. "EPA-Administered Permit Programs: The National Pollutant Discharge Elimination System."

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LANL. 1998e. LANL Waste Acceptance Criteria. PLAN-WASTEMGMT-002, R.2. August 1998. Los Alamos, New Mexico, Los Alamos National Laboratory.

LANL. 1998f. Letter from Steven Rae (ESH-18) to Phyllis Bustamante (NMED) regarding the Request for Additional Information, Ground Water Discharge Plan Application for the Radioactive Liquid Waste Treatment Facility, DP-1132. June 1, 1998. Los Alamos, New Mexico, Los Alamos National Laboratory.

LIR 404-00-03.0. *Hazardous and Mixed Waste Requirements for Generators*. Los Alamos National Laboratory, Environmental Management-Radioactive Liquid Waste Group, Los Alamos, New Mexico, Los Alamos National Laboratory.

NMSA. 1978. Chapter 74, Article 6. "Water Quality Act." *New Mexico Statutes Annotated*. Santa Fe, New Mexico, State of New Mexico.

33 U.S.C. 1251, et seq., as amended. *United States Code*, "Clean Water Act."

42 U.S.C. 2011 et seq., as amended. *United States Code*, "Atomic Energy Act."

U.S. Department of Energy Office of Nuclear Energy, Science and Technology web page (http://www.ne.doe.gov).

ATTACHMENT 1

Isotopes Generated at LANL

Attachment 1: Isotopes Generated at LANL

YMD	TA	Bldg	Room	Facility Description	Facility Status	RAM	Actual Prod?	Interviewee	Group	Comments	Info source
66	48	1	410	Research Laboratory	Active	Al-26	y	Dennis Phillips	CST-11	Process and recovery of samples irradiated at LANSCE	Usage Survey (air)
66	48	1	410	Research Laboratory	Active	Co-58	y	Dennis Phillips	CST-11	Process and recovery of samples irradiated at LANSCE	Usage Survey (air)
66	48	1	410	Research Laboratory	Active	Co-60	y	Dennis Phillips	CST-11	Process and recovery of samples irradiated at LANSCE	Usage Survey (air)
66	48	1	410	Research Laboratory	Active	Mn-54	y	Dennis Phillips	CST-11	Process and recovery of samples irradiated at LANSCE	Usage Survey (air)
66	48	1	410	Research Laboratory	Active	Na-22	y	Dennis Phillips	CST-11		Usage Survey (air)
66	48	1	410	Research Laboratory	Active	Si-32	y	Dennis Phillips	CST-11	Process and recovery of samples irradiated at LANSCE	Usage Survey (air)
71	59	1	116	Occupational Health Laboratory	Active	H-3	y	George Brecke	CST-9	Analysis of TA-53 samples	Usage Survey (air)
66	21	5		DP Site West		S-35	n				IDB (water)
66	21	5		DP Site West		U-238	n				IDB (water)
66	50	69		WCRRF	Active	Am-241	n				IDB (water)
66	50	69		WCRRF	Active	Pu-238	n				IDB (water)
66	50	69		WCRRF	Active	Rb-83	n				IDB (water)
76	55	2		Laboratory Facility	Active	H3	n				IDB (water)
76	55	2		Laboratory Facility	Active	Pu-238	n				IDB (water)
76	55	2		Laboratory Facility	Active	U-235	n				IDB (water)
76	55	2		Laboratory Facility	Active	U-238	n				IDB (water)
76	55	4		Plutonium Facility	Active	Am-241	n				IDB (water)
76	55	4		Plutonium Facility	Active	Pu-239	n				IDB (water)
76	55	4		Plutonium Facility	Active	Uranium	n				IDB (water)
73	03	66	B100	Sigma Building	Active	D-38	n	Philip Tubesing	MST-6		Usage Survey (air)
73	03	66	B100	Sigma Building	Active	D-38	n	Philip Tubesing	MST-6		Usage Survey (air)
73	03	66	B101	Sigma Building	Active	D-38	n	Philip Tubesing	MST-6		Usage Survey (air)
73	03	66	B3	Sigma Building	Active	D-38	n	Philip Tubesing	MST-6		Usage Survey (air)
73	03	66	B3	Sigma Building	Active	D-38	n	Philip Tubesing	MST-6		Usage Survey (air)
73	03	66	B3	Sigma Building	Active	D-38	n	Philip Tubesing	MST-6		Usage Survey (air)
73	03	66	N/A	Sigma Building	Active	D-38	n	Philip Tubesing	MST-6		Usage Survey (air)
73	03	66	B100	Sigma Building	Active	D-38	n	Dennis Sherman	MST-6		Usage Survey (air)
73	03	66	B100	Sigma Building	Active	D-38	n	Dennis Sherman	MST-6		Usage Survey (air)
	16	203		Weapons Engineering Tritium Facility (WETF)		H-3	n				IDB (water)
66	21	116	N/A	Laboratory	Safe Shut-Down	Ir-90	n	Christopher Palshamp	ESH-1	Laboratory facilities (soil and water samples)	Usage Survey (air)
66	21	116	N/A	Laboratory	Safe Shut-Down	Ir-90	n	Christopher Palshamp	ESH-1	Laboratory facilities (soil and water samples)	Usage Survey (air)
66	21	116	N/A	Laboratory	Safe Shut-Down	Am-241	n	Christopher Palshamp	ESH-1		Usage Survey (air)
66	21	116	N/A	Laboratory	Safe Shut-Down	Am-241	n	Christopher Palshamp	ESH-1		Usage Survey (air)
66	21	116	N/A	Laboratory	Safe Shut-Down	Cs-137	n	Christopher Palshamp	ESH-1		Usage Survey (air)
66	21	116	N/A	Laboratory	Safe Shut-Down	Cs-137	n	Christopher Palshamp	ESH-1		Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

PMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Asset Proof?	Interviewee	Group	Comments	Info source
	21	152		Tritium Sol Laboratory		Tritium oxide	n				IDB (water)
	21	155		Tritium Systems Test Assembly (TSTA)		H-3	n	Scott Willms		Fuel cycle fusion experiments, separation of tritium	IDB (water)
	21	155		Tritium Systems Test Assembly (TSTA)		Tritium oxide	n	Scott Willms		Fuel cycle fusion experiments, separation of tritium	IDB (water)
	21	209		Tritium Science and Fabrication Facility (TSFF)		H-3	n	Will Fox/Terry Burton			IDB (water)
	21	209		Tritium Science and Fabrication Facility (TSFF)		Tritium oxide	n	Will Fox/Terry Burton			IDB (water)
84	21	257	103	Red Liquid Waste Disposal Facility	Active	Am-241	n	David Moss	EM-RLW		Usage Survey (air)
84	21	257	103	Red Liquid Waste Disposal Facility	Active	Pu-238	n	David Moss	EM-RLW		Usage Survey (air)
84	21	257	103	Red Liquid Waste Disposal Facility	Active	Pu-239	n	David Moss	EM-RLW		Usage Survey (air)
84	21	257	103	Red Liquid Waste Disposal Facility	Active	U-234	n	David Moss	EM-RLW		Usage Survey (air)
84	21	257	103	Red Liquid Waste Disposal Facility	Active	U-235	n	David Moss	EM-RLW		Usage Survey (air)
66	21	28	213	Laboratory	Active	Am-241	n	John Elliot	ESH-1		Usage Survey (air)
66	21	28	213	Laboratory	Active	Pu-239	n	John Elliot	ESH-1		Usage Survey (air)
	21	3		DP Site West		Tc-99	n				IDB (water)
66	21	3	305	Laboratory Building	Safe Shut-Down	Sr-90	n	Christopher Fuhlkamp	ESH-1	Laboratory facilities (soil and water samples)	Usage Survey (air)
66	21	3	305	Laboratory Building	Safe Shut-Down	Sr-90	n	Christopher Fuhlkamp	ESH-1	Laboratory facilities (soil and water samples)	Usage Survey (air)
66	21	3	305	Laboratory Building	Safe Shut-Down	Am-241	n	Christopher Fuhlkamp	ESH-1		Usage Survey (air)
66	21	3	305	Laboratory Building	Safe Shut-Down	Am-241	n	Christopher Fuhlkamp	ESH-1		Usage Survey (air)
66	21	3	305	Laboratory Building	Safe Shut-Down	Co-137	n	Christopher Fuhlkamp	ESH-1		Usage Survey (air)
66	21	3	305	Laboratory Building	Safe Shut-Down	Co-137	n	Christopher Fuhlkamp	ESH-1		Usage Survey (air)
	3	16		Ion Beam Facility	Safe Shut-Down	H-3	n	Stephanie Archuleta		Reactor produced, not accelerator produced	S. Archuleta
	3	16		Ion Beam Facility	Safe Shut-Down	Rb-86	n	Stephanie Archuleta		Reactor produced, not accelerator produced	IDB (water)
	3	32		Center for Material Sciences		Co-57	n				IDB (water)
	3	32		Center for Material Sciences		Fe-55	n				IDB (water)
66	46	151	107	Laser Induced Chemistry Lab	Active	U-238	n	David Morris	CST-4		Usage Survey (air)
66	46	151	107	Laser Induced Chemistry Lab	Active	U-238	n	David Morris	CST-4		Usage Survey (air)
66	46	151	107	Laser Induced Chemistry Lab	Active	Th-232	n	David Morris	CST-4		Usage Survey (air)
66	46	151	107	Laser Induced Chemistry Lab	Active	Th-232	n	David Morris	CST-4		Usage Survey (air)
66	46	151	107	Laser Induced Chemistry Lab	Active	U-nat	n	David Morris	CST-4		Usage Survey (air)
66	48	1	19A	Research Laboratory	Active	H-3	n	Joseph Thompson	CST-7	Counting standard for liquid scintillation counter	Usage Survey (air)
66	48	1	19A	Research Laboratory	Active	Co-137	n	Joseph Thompson	CST-7		Usage Survey (air)
66	48	1	303	Research Laboratory	Active	Th-228	n	Malcolm Fowler	CST-11		Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

PMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Prod?	Interviewee	Group	Comments	Info source
66	48	1	304	Research Laboratory	Active	Be-7	n	Stephen Kung	CST-7	Geomaterial sorption experiments with RAMs	Usage Survey (air)
66	48	1	304	Research Laboratory	Active	Sr-85	n	Stephen Kung	CST-7	Geomaterial sorption experiments with RAMs	Usage Survey (air)
66	48	1	304	Research Laboratory	Active	Am-241	n	Stephen Kung	CST-7		Usage Survey (air)
66	48	1	304	Research Laboratory	Active	Cs-137	n	Stephen Kung	CST-7		Usage Survey (air)
66	48	1	304	Research Laboratory	Active	Np-237	n	Stephen Kung	CST-7		Usage Survey (air)
66	48	1	304	Research Laboratory	Active	Pu-239	n	Stephen Kung	CST-7		Usage Survey (air)
66	48	1	304	Research Laboratory	Active	Pu-239	n	Stephen Kung	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	Eu-152	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	Lu-175	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	Ni-63	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	Tb-157	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	Ce-141	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	Ce-144	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	D-3H	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	Np-237	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	Pu-239	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	Th-229	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	Th-232	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	305	Research Laboratory	Active	U-233	n	Wolfgang Runde	CST-7		Usage Survey (air)
66	48	1	306	Research Laboratory	Active	Eu-207	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	306	Research Laboratory	Active	Co-60	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	306	Research Laboratory	Active	Eu-152	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	306	Research Laboratory	Active	Sr-90	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	306	Research Laboratory	Active	Eu-153	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	306	Research Laboratory	Active	D-3H	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	306	Research Laboratory	Active	Ho-166m	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	306	Research Laboratory	Active	Ra-226	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	306	Research Laboratory	Active	U-238	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	306	Research Laboratory	Active	U-nat	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	307	Research Laboratory	Active	Co-60	n	Rebecca Chamberlin	CST-11		Usage Survey (air)
66	48	1	307	Research Laboratory	Active	Co-60	n	Rebecca Chamberlin	CST-11		Usage Survey (air)
66	48	1	307	Research Laboratory	Active	Mn-54	n	Rebecca Chamberlin	CST-11		Usage Survey (air)
66	48	1	307	Research Laboratory	Active	Na-22	n	Rebecca Chamberlin	CST-11	Tracer solution	Usage Survey (air)
66	48	1	307	Research Laboratory	Active	Sb-85	n	Rebecca Chamberlin	CST-11	Tracer solution	Usage Survey (air)
66	48	1	307	Research Laboratory	Active	Cs-137	n	Rebecca Chamberlin	CST-11		Usage Survey (air)
66	48	1	307	Research Laboratory	Active	Cs-137	n	Rebecca Chamberlin	CST-11		Usage Survey (air)
66	48	1	307	Research Laboratory	Active	Cs-137	n	Rebecca Chamberlin	CST-11		Usage Survey (air)
66	48	1	307	Research Laboratory	Active	Cs-137	n	Rebecca Chamberlin	CST-11		Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Annual Profit	Interviewee	Group	Comments	Info source
66	48	1	307	Research Laboratory	Active	Cs-137	n	Rebecca Chamberlin	CST-11		Usage Survey (air)
66	48	1	307	Research Laboratory	Active	Cs-137	n	Rebecca Chamberlin	CST-11		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Co-60	n	Doug Ware	CST-7	Environmental samples containing fission products at different activity levels	Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Eu-152	n	Doug Ware	CST-7	Environmental samples containing fission products at different activity levels	Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Eu-154	n	Doug Ware	CST-7	Environmental samples containing fission products at different activity levels	Usage Survey (air)
66	48	1	308	Research Laboratory	Active	H-3	n	Doug Ware	CST-7	Environmental samples containing fission products at different activity levels	Usage Survey (air)
66	48	1	308	Research Laboratory	Active	H-3	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Tc-99m	n	Doug Ware	CST-7	Tracers made from stock solutions	Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Tc-99	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Am-241	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Am-243	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Am-243	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Ba-133	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Cl-36	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Cs-137	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Cs-137	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Cs-137	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Cs-137	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Cs-137	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Cs-137	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Eu-155	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Np-237	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Np-237	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Np-237	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Pm-147	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Pu-239	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Pu-239	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Th-230	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	Th-232	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	U-233	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	U-233	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	U-233	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	308	Research Laboratory	Active	U-233	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	H-3	n	Doug Ware	CST-7		Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Fuel?	Interviewee	Group	Comments	Info source
66	48	1	309	Research Laboratory	Active	H-3	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Se-75	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Se-75	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Sr-85	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Sr-85	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Tc-99m	n	Doug Ware	CST-7	1mm solution at experimental levels	Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Am-241	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Am-243	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Ba-133	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Ba-133	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Cs-131	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Np-237	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Np-237	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Np-237	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	Pu-239	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	U-233	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	U-nat	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	U-nat	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	U-nat	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	U-nat	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	U-nat	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	309	Research Laboratory	Active	U-nat	n	Doug Ware	CST-7		Usage Survey (air)
66	48	1	310	Research Laboratory	Active	H-3	n	Betty Strutzkamm	CST-7	1mm solution	Usage Survey (air)
66	48	1	310	Research Laboratory	Active	H-3	n	Betty Strutzkamm	CST-7		Usage Survey (air)
66	48	1	310	Research Laboratory	Active	H-3	n	Betty Strutzkamm	CST-7		Usage Survey (air)
66	48	1	310	Research Laboratory	Active	Tc-99m	n	Betty Strutzkamm	CST-7	1mm stock solutions	Usage Survey (air)
66	48	1	310	Research Laboratory	Active	Np-237	n	Betty Strutzkamm	CST-7		Usage Survey (air)
66	48	1	310	Research Laboratory	Active	Np-237	n	Betty Strutzkamm	CST-7		Usage Survey (air)
66	48	1	310	Research Laboratory	Active	Pu-239	n	Betty Strutzkamm	CST-7		Usage Survey (air)
66	48	1	310	Research Laboratory	Active	Pu-239	n	Betty Strutzkamm	CST-7		Usage Survey (air)
66	48	1	310	Research Laboratory	Active	Pu-239	n	Betty Strutzkamm	CST-7		Usage Survey (air)
66	48	1	310	Research Laboratory	Active	Pu-239	n	Betty Strutzkamm	CST-7		Usage Survey (air)
66	48	1	310	Research Laboratory	Active	Pu-239	n	Betty Strutzkamm	CST-7		Usage Survey (air)
66	48	1	310	Research Laboratory	Active	Pu-239	n	Betty Strutzkamm	CST-7		Usage Survey (air)
66	48	1	310	Research Laboratory	Active	U-233	n	Betty Strutzkamm	CST-7		Usage Survey (air)
66	48	1	317/311A	Research Laboratory	Active	Bi-207	n	Malcolm Fowler	CST-13	Source preparation	Usage Survey (air)
66	48	1	317/311A	Research Laboratory	Active	Co-60	n	Malcolm Fowler	CST-13		Usage Survey (air)
66	48	1	317/311A	Research Laboratory	Active	Eu-152	n	Malcolm Fowler	CST-13	Source preparation	Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

FMSI	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Prod?	Interviewee	Group	Comments	Info source
66	48	1	311/311A	Research Laboratory	Active	Os-68	n	Malcolm Fowler	CST-11	Source preparation	Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	Na-22	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	V-49	n	Malcolm Fowler	CST-11	Source preparation	Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	Am-241	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	Cf-252	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	Cl-36	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	Cs-137	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	Cs-137	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	Mo-93	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	Pm-145	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	Te-125m	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	Th-228	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	U-232	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	311/311A	Research Laboratory	Active	U-232	n	Malcolm Fowler	CST-11		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Bi-207	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Cd-109	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Co-57	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Ni-63	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Sr-90	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Tc-44	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Tc-44	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Am-241	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Am-241	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Am-241	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Am-241	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Am-241	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Am-243	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Be-133	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Be-133	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Bi-210	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Cf-252	n	Betty Stratelmeier	CST-7		Usage Survey (air)
66	48	1	312	Research Laboratory	Active	Cf-252	n	Betty Stratelmeier	CST-7		Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

VMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Prod?	Interviewee	Group	Comments	Info source
66	48	1	312	Research Laboratory	Active	Cf-249	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Cf-252	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Cf-252	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Cf-252	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Cm-244	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Cm-250	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Co-137	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	D-3H	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Pb-210	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Pu-239	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Pu-239	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Pu-239	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Pu-239	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Pu-239	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Pu-239	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Pu-239	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Ra-224	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Th-229	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Th-229	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Th-232	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Th-232	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Th-232	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Th-232	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Th-232	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	U-235	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	U-238	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Uanat	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	312	Research Laboratory	Active	Uanat	n	Betty Strietelmeier	CST-7		Usage Survey (ou)
66	48	1	313	Research Laboratory	Active	Rb-87	n	David Vieira	CST-11	Mass separation to different isotopes	Usage Survey (ou)
66	48	1	313	Research Laboratory	Active	Rb-85	n	David Vieira	CST-11	Mass separation to different isotopes	Usage Survey (ou)
66	48	1	313	Research Laboratory	Active	Cs-135	n	David Vieira	CST-11		Usage Survey (ou)
66	48	1	313	Research Laboratory	Active	Cs-137	n	David Vieira	CST-11		Usage Survey (ou)
66	48	1	313	Research Laboratory	Active	Cs-131	n	David Vieira	CST-11		Usage Survey (ou)
66	48	1	313	Research Laboratory	Active	Rb-82	n	David Vieira	CST-11		Usage Survey (ou)
66	48	1	314	Research Laboratory	Active	Ge-68	n	Dick Horton	CST-11	Medical isotopes	Usage Survey (ou)
66	48	1	313	Research Laboratory	Active	Ge-68	n	Dick Horton	CST-11	Medical isotopes	Usage Survey (ou)
66	48	1	402	Research Laboratory	Active	Hg-197	n	Carol Burns	CST-18		Usage Survey (ou)
66	48	1	402	Research Laboratory	Active	Hg-197	n	Carol Burns	CST-18		Usage Survey (ou)
66	48	1	402	Research Laboratory	Active	Cl-36	n	Carol Burns	CST-18		Usage Survey (ou)

Attachment 1: Isotopes Generated at LANL

PMTI	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Prod?	Interviewee	Group	Comments	Info source
66	48	1	402	Research Laboratory	Active	D-38	n	Carol Burns	CST-18		Usage Survey (ne)
66	48	1	402	Research Laboratory	Active	D-38	n	Carol Burns	CST-18		Usage Survey (ne)
66	48	1	402	Research Laboratory	Active	D-38	n	Carol Burns	CST-18		Usage Survey (ne)
66	48	1	402	Research Laboratory	Active	D-38	n	Carol Burns	CST-18		Usage Survey (ne)
66	48	1	402	Research Laboratory	Active	D-38	n	Carol Burns	CST-18		Usage Survey (ne)
66	48	1	402	Research Laboratory	Active	D-38	n	Carol Burns	CST-18		Usage Survey (ne)
66	48	1	402	Research Laboratory	Active	D-38	n	Carol Burns	CST-18		Usage Survey (ne)
66	48	1	402	Research Laboratory	Active	I-129	n	Carol Burns	CST-18		Usage Survey (ne)
66	48	1	402	Research Laboratory	Active	Th-229	n	Carol Burns	CST-18		Usage Survey (nn)
66	48	1	402	Research Laboratory	Active	Th-230	n	Carol Burns	CST-18		Usage Survey (nn)
66	48	1	402	Research Laboratory	Active	Th-230	n	Carol Burns	CST-18		Usage Survey (nn)
66	48	1	402	Research Laboratory	Active	U-233	n	Carol Burns	CST-18		Usage Survey (nn)
66	48	1	402	Research Laboratory	Active	U-234	n	Carol Burns	CST-18		Usage Survey (nn)
66	48	1	402	Research Laboratory	Active	U-238	n	Carol Burns	CST-18		Usage Survey (nn)
66	48	1	402	Research Laboratory	Active	U-238	n	Carol Burns	CST-18		Usage Survey (nn)
66	48	1	402	Research Laboratory	Active	U-nat	n	Carol Burns	CST-18		Usage Survey (nn)
66	48	1	402	Research Laboratory	Active	U-nat	n	Carol Burns	CST-18		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Be-152	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Tc-99m	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Tc-99m	n	Norman Schroeder	CST-11	Tracers and spiking solutions	Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Tc-99	n	Norman Schroeder	CST-11	Tracers and spiking solutions	Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Tc-99	n	Norman Schroeder	CST-11	Tracers and spiking solutions	Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Tc-99	n	Norman Schroeder	CST-11	Tracers and spiking solutions	Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Tc-99	n	Norman Schroeder	CST-11	Tracers and spiking solutions	Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Am-241	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Ba-133	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Ca-45	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Ca-45	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Ce-141	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Ce-144	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Nb-66	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Ru-106	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Ru-106	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	Ru-106	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	U-233	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	407	Research Laboratory	Active	V-48	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	408	Research Laboratory	Active	Al-26	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	408	Research Laboratory	Active	Na-22	n	Norman Schroeder	CST-11		Usage Survey (nn)
66	48	1	408	Research Laboratory	Active	Tc-99m	n	Norman Schroeder	CST-11	Tracers and spiking solutions	Usage Survey (nn)

Attachment I: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Asset Prod?	Interviewee	Group	Comments	Info source
66	48	1	408	Research Laboratory	Active	Tc-99	n	Norman Schroeder	CST-11		Usage Survey (air)
66	48	1	408	Research Laboratory	Active	Tc-99	n	Norman Schroeder	CST-11		Usage Survey (air)
66	48	1	408	Research Laboratory	Active	Tc-99	n	Norman Schroeder	CST-11	Tracers and spiking solutions	Usage Survey (air)
66	48	1	408	Research Laboratory	Active	Tc-99	n	Norman Schroeder	CST-11		Usage Survey (air)
66	48	1	408	Research Laboratory	Active	Tc-99	n	Norman Schroeder	CST-11		Usage Survey (air)
66	48	1	408	Research Laboratory	Active	Co-141	n	Norman Schroeder	CST-11		Usage Survey (air)
66	48	1	408	Research Laboratory	Active	Pm-145	n	Norman Schroeder	CST-11		Usage Survey (air)
66	48	1	408	Research Laboratory	Active	Pm-147	n	Norman Schroeder	CST-11		Usage Survey (air)
66	48	1	409	Research Laboratory	Active	D-32	n	Mark McCloskey	CST-18		Usage Survey (air)
66	48	1	409	Research Laboratory	Active	D-32	n	Mark McCloskey	CST-18		Usage Survey (air)
66	48	1	410	Research Laboratory	Active	Tc-44	n	Dennis Phillips	CST-11		Usage Survey (air)
66	48	1	410	Research Laboratory	Active	P-32	n	Dennis Phillips	CST-11		Usage Survey (air)
66	48	1	410	Research Laboratory	Active	Pm-147	n	Dennis Phillips	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Co-60	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Tc-99	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	C-14	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Cs-137	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Cs-137	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Er-170	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Ho-166m	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Ho-166m	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Pt-193	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Pt-193	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Pu-239	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Sn-126	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Sn-126	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Sn-126	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Sn-126	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Tm-171	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Tm-171	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Uranium	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	411	Research Laboratory	Active	Yb-171	n	Geoff Miller	CST-11		Usage Survey (air)
66	48	1	412	Research Laboratory	Active	D-30	n	Brandy Dunn	CST-18		Usage Survey (air)
66	48	1	412	Research Laboratory	Active	Th-232	n	Brandy Dunn	CST-18		Usage Survey (air)
66	48	1	412	Research Laboratory	Active	U-238	n	Brandy Dunn	CST-18		Usage Survey (air)
66	48	1	412	Research Laboratory	Active	U-238	n	Brandy Dunn	CST-18		Usage Survey (air)
66	48	1	413	Research Laboratory	Active	Tc-93m	n	Benjamin Warner	CST-18		Usage Survey (air)
66	48	1	413	Research Laboratory	Active	Cl-36	n	Benjamin Warner	CST-18		Usage Survey (air)
66	48	1	413	Research Laboratory	Active	Cs-137	n	Benjamin Warner	CST-18		Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

PMD	TA	Bldg	Room	Facility Description	Facility Status	RAM	Asset Prod?	Interviewee	Group	Comments	Info source
66	48	1	414	Research Laboratory	Active	Br-207	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Br-207	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Co-58	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Co-58	n	Mike Cisneros	CST-11	Irradiated samples of nickel metal. Disposed as solid	Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Co-58	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Eu-152	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Gd-150	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Ni-63	n	Mike Cisneros	CST-11	Irradiated samples of nickel metal. Disposed as solid	Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Sr-90	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Sr-90	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Am-241	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Am-241	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Am-241	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Am-241	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Am-241	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Am-243	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Am-243	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Am-243	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Am-243	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Cf-249	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Cm-243	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Cm-244	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Cm-244	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Cm-244	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Cm-244	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Cm-248	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Cs-137	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Cs-137	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Cs-137	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Np-237	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Np-237	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Np-239	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pb-210	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pb-210	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pu-236	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pu-236	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pu-236	n	Mike Cisneros	CST-11		Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Prod?	Interviewee	Group	Comments	Info source
66	48	1	414	Research Laboratory	Active	Pu-238	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pu-239	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pu-239	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pu-239	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pu-239	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pu-239	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pu-239	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Pu-242	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Th-231	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Th-232	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Th-232	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	Tl-204	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	U-232	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	414	Research Laboratory	Active	U-nat	n	Mike Cisneros	CST-11		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	Am-241	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	Am-241	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	D-38	n	Brandy Duran	CST-18		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	Th-232	n	Brandy Duran	CST-18		Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

PMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Aerosol Proof?	Interviewee	Group	Comments	Info source
66	48	1	415	Research Laboratory	Active	Th-232	n	Brandy Dunn	CST-11		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	Th-232	n	Brandy Dunn	CST-10		Usage Survey (air)
66	48	1	415	Research Laboratory	Active	Th-232	n	Brandy Dunn	CST-10		Usage Survey (air)
66	48	1	416	Research Laboratory	Active	D-2H	n	Carol Dunn	CST-16		Usage Survey (air)
66	48	1	419	Research Laboratory	Active	Tc-97	n	Paul Dixon	CST-7		Usage Survey (air)
66	48	1	419	Research Laboratory	Active	Tc-99	n	Paul Dixon	CST-7		Usage Survey (air)
66	48	1	419	Research Laboratory	Active	Pu-239	n	Paul Dixon	CST-7		Usage Survey (air)
66	48	1	419	Research Laboratory	Active	Pu-242	n	Paul Dixon	CST-7		Usage Survey (air)
66	48	1	419	Research Laboratory	Active	U-nat	n	Paul Dixon	CST-7		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Am-241	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Am-243	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Cs-137	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Cs-137	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Np-237	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Np-237	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Pu-234	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Pu-238	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Pu-239	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Pu-239	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Pu-239/Pu-240	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Pu-242	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	Pu-244	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	U-232	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	U-233	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	U-234	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	U-236/U-233	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	U-238	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	U-238	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	U-nat	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	421	Research Laboratory	Active	U-nat	n	Wes Eliard	CST-11		Usage Survey (air)
66	48	1	423	Research Laboratory	Active	Si-90	n	Jacek Dziewinski	CST-7	Scrap metal dosers of lead augers and batteries; weapons tests	Usage Survey (air)
66	48	1	423	Research Laboratory	Active	Pu-238	n	Jacek Dziewinski	CST-7		Usage Survey (air)
66	48	1	423	Research Laboratory	Active	U-nat	n	Jacek Dziewinski	CST-7		Usage Survey (air)
66	48	1	423	Research Laboratory	Active	U-nat	n	Jacek Dziewinski	CST-7		Usage Survey (air)
66	48	1	426	Research Laboratory	Active	D-2H	n	Carol Dunn	CST-10		Usage Survey (air)
66	48	1	430	Research Laboratory	Active	Tc-99	n	Kent Abney	CST-11	Standard samples	Usage Survey (air)
66	48	1	430	Research Laboratory	Active	Am-241	n	Kent Abney	CST-11		Usage Survey (air)
66	48	1	430	Research Laboratory	Active	Cm-244	n	Kent Abney	CST-11		Usage Survey (air)
66	48	1	430	Research Laboratory	Active	Cs-137	n	Kent Abney	CST-11		Usage Survey (air)

Attachment I: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel. Prod?	Interviewee	Group	Comments	Info source
66	48	1	430	Research Laboratory	Active	D-38	n	Kent Abney	CST-11		Usage Survey (air)
66	48	1	430	Research Laboratory	Active	D-38	n	Kent Abney	CST-11		Usage Survey (air)
66	48	1	430	Research Laboratory	Active	D-38	n	Kent Abney	CST-11		Usage Survey (air)
66	48	1	430	Research Laboratory	Active	D-38	n	Kent Abney	CST-11		Usage Survey (air)
66	48	1	430	Research Laboratory	Active	He-164m	n	Kent Abney	CST-11		Usage Survey (air)
66	48	1	430	Research Laboratory	Active	Pa-239	n	Kent Abney	CST-11		Usage Survey (air)
66	48	1	430	Research Laboratory	Active	Sr-90	n	Kent Abney	CST-11		Usage Survey (air)
66	48	1	430	Research Laboratory	Active	U-239	n	Kent Abney	CST-11		Usage Survey (air)
66	48	1	4B	Research Laboratory	Active	Np-237	n	Wes Bland	CST-11		Usage Survey (air)
66	48	1	4B	Research Laboratory	Active	Pu-239	n	Wes Bland	CST-11		Usage Survey (air)
66	48	1	4B	Research Laboratory	Active	U-nat	n	Wes Bland	CST-11		Usage Survey (air)
	48	1		Radiochemistry Laboratory		Al-26	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		As-73	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		As-74	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Be-7	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Bi-207	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Co-56	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Co-57	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Co-58	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Co-60	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Mn-54	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Na-22	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Nb-95	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Rb-83	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Rb-84	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Rh-101	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Rh-102	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Se-75	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Sr-85	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Sr-90	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Tc-99	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Ti-44	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		V-48	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		V-49	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Zn-65	n	Richard Keaton			IDB (water)
	48	1		Radiochemistry Laboratory		Zr-95	n	Richard Keaton			IDB (water)
66	48	1		Research Laboratory	Active	Be-10	n				IDB (water)
66	48	1		Research Laboratory	Active	Nb-93	n				IDB (water)
66	48	1		Research Laboratory	Active	U-234	n				IDB (water)

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Anal Prod?	Interviewee	Group	Comments	Info source
66	48	45	E104A	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-242	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E104A	Clean Chemistry and Mass Spectrometry Lab	Active	U-233	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E104B	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-242	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E104B	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-242	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E105	Clean Chemistry and Mass Spectrometry Lab	Active	Pa-233	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	E105	Clean Chemistry and Mass Spectrometry Lab	Active	Ra-228	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	E105	Clean Chemistry and Mass Spectrometry Lab	Active	Th-229	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	E105	Clean Chemistry and Mass Spectrometry Lab	Active	U-233	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	E105	Clean Chemistry and Mass Spectrometry Lab	Active	U-236	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	E106A	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-242	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E106A	Clean Chemistry and Mass Spectrometry Lab	Active	U-233	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E106B	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-239	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E106B	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-242	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E106B	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-242	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E106B	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-242	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E106B	Clean Chemistry and Mass Spectrometry Lab	Active	U-233	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E106B	Clean Chemistry and Mass Spectrometry Lab	Active	U-233	n	Wes Eberd	CST-11		Usage Survey (air)
66	48	45	E107	Clean Chemistry and Mass Spectrometry Lab	Active	Tc-97	n	Jeff Roach	CST-7		Usage Survey (air)
66	48	45	E107	Clean Chemistry and Mass Spectrometry Lab	Active	Tc-98	n	Jeff Roach	CST-7		Usage Survey (air)
66	48	45	E107	Clean Chemistry and Mass Spectrometry Lab	Active	Tc-99	n	Jeff Roach	CST-7		Usage Survey (air)
66	48	45	E109	Clean Chemistry and Mass Spectrometry Lab	Active	Pa-233	n	Mike Murrell	CST 7		Usage Survey (air)
66	48	45	E109	Clean Chemistry and Mass Spectrometry Lab	Active	Ra-228	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	E109	Clean Chemistry and Mass Spectrometry Lab	Active	Th-229	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	E109	Clean Chemistry and Mass Spectrometry Lab	Active	U-233	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	E109	Clean Chemistry and Mass Spectrometry Lab	Active	U-236	n	Mike Murrell	CST-7		Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

PMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Asset Prof?	Interviewee	Group	Comments	Info source
66	48	45	B111	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-233	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B111	Clean Chemistry and Mass Spectrometry Lab	Active	Ra-228	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B111	Clean Chemistry and Mass Spectrometry Lab	Active	Th-229	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B111	Clean Chemistry and Mass Spectrometry Lab	Active	U-233	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B111	Clean Chemistry and Mass Spectrometry Lab	Active	U-236	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B115	Clean Chemistry and Mass Spectrometry Lab	Active	Tc-97	n	Jeff Beach	CST-7		Usage Survey (air)
66	48	45	B115	Clean Chemistry and Mass Spectrometry Lab	Active	Am-241	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B115	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-233	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B115	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-239	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B115	Clean Chemistry and Mass Spectrometry Lab	Active	Ra-228	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B115	Clean Chemistry and Mass Spectrometry Lab	Active	Th-229	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B115	Clean Chemistry and Mass Spectrometry Lab	Active	U-233	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B115	Clean Chemistry and Mass Spectrometry Lab	Active	U-236	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B115	Clean Chemistry and Mass Spectrometry Lab	Active	U-238	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	B115	Clean Chemistry and Mass Spectrometry Lab	Active	U-xx	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	N106	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-233	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	N106	Clean Chemistry and Mass Spectrometry Lab	Active	Ra-228	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	N106	Clean Chemistry and Mass Spectrometry Lab	Active	Th-229	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	N106	Clean Chemistry and Mass Spectrometry Lab	Active	U-233	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	N106	Clean Chemistry and Mass Spectrometry Lab	Active	U-234	n	Mike Murrell	CST-7		Usage Survey (air)
66	48	45	N106	Clean Chemistry and Mass Spectrometry Lab	Active	Am-241	n	Don Rokop	CST-7		Usage Survey (air)
66	48	45	N106	Clean Chemistry and Mass Spectrometry Lab	Active	Am-241	n	Don Rokop	CST-7		Usage Survey (air)
66	48	45	N106	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-239	n	Don Rokop	CST-7		Usage Survey (air)
66	48	45	N106	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-239	n	Don Rokop	CST-7		Usage Survey (air)
66	48	45	N106	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-242	n	Don Rokop	CST-7		Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Asset Prod?	Interviewee	Group	Comments	Info source
66	48	45	N108	Clean Chemistry and Mass Spectrometry Lab	Active	U-234	n	Don Rokop	CST-7		Usage Survey (ss)
66	48	45	N108	Clean Chemistry and Mass Spectrometry Lab	Active	U-234	n	Don Rokop	CST-7		Usage Survey (ss)
66	48	45	N108	Clean Chemistry and Mass Spectrometry Lab	Active	U-en	n	Don Rokop	CST-7		Usage Survey (air)
66	48	45	N108	Clean Chemistry and Mass Spectrometry Lab	Active	U-en	n	Don Rokop	CST-7		Usage Survey (ss)
66	48	45	N111	Clean Chemistry and Mass Spectrometry Lab	Active	Tc-97	n	Jeff Roach	CST-7		Usage Survey (ss)
66	48	45	N111	Clean Chemistry and Mass Spectrometry Lab	Active	Tc-98	n	Jeff Roach	CST-7		Usage Survey (ss)
66	48	45	N111	Clean Chemistry and Mass Spectrometry Lab	Active	Tc-99	n	Jeff Roach	CST-7		Usage Survey (ss)
66	48	45	N111	Clean Chemistry and Mass Spectrometry Lab	Active	Th-232	n	Don Rokop	CST-7		Usage Survey (air)
66	48	45	N111	Clean Chemistry and Mass Spectrometry Lab	Active	U-234	n	Don Rokop	CST-7		Usage Survey (ss)
66	48	45	N111	Clean Chemistry and Mass Spectrometry Lab	Active	W0-239	n	Don Rokop	CST-7		Usage Survey (air)
66	48	45	N115	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-233	n	Mike Monroll	CST-7		Usage Survey (ss)
66	48	45	N115	Clean Chemistry and Mass Spectrometry Lab	Active	Ra-228	n	Mike Monroll	CST-7		Usage Survey (ss)
66	48	45	N115	Clean Chemistry and Mass Spectrometry Lab	Active	Th-229	n	Mike Monroll	CST-7		Usage Survey (ss)
66	48	45	N115	Clean Chemistry and Mass Spectrometry Lab	Active	U-233	n	Mike Monroll	CST-7		Usage Survey (ss)
66	48	45	N115	Clean Chemistry and Mass Spectrometry Lab	Active	U-234	n	Mike Monroll	CST-7		Usage Survey (ss)
66	48	45	W106	Clean Chemistry and Mass Spectrometry Lab	Active	Cl-36	n	Anne Fabryka-Martin	CST-7		Usage Survey (ss)
66	48	45	W108	Clean Chemistry and Mass Spectrometry Lab	Active	Tc-97	n	Jeff Roach	CST-7		Usage Survey (air)
66	48	45	W108	Clean Chemistry and Mass Spectrometry Lab	Active	Tc-99	n	Jeff Roach	CST-7		Usage Survey (ss)
66	48	45	W108	Clean Chemistry and Mass Spectrometry Lab	Active	Ba-133	n	Mike Monroll	CST-7		Usage Survey (ss)
66	48	45	W108	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-233	n	Mike Monroll	CST-7		Usage Survey (air)
66	48	45	W110	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-242	n	Wes Eberd	CST-11		Usage Survey (ss)
66	48	45	W110	Clean Chemistry and Mass Spectrometry Lab	Active	Pu-242	n	Wes Eberd	CST-11		Usage Survey (ss)
84	50	1		RLWTF	Active	H3	n				IDB (water)
84	50	1		RLWTF	Active	Pu-238	n				IDB (water)
84	50	1		RLWTF	Active	Pu-239	n				IDB (water)
84	50	1		RLWTF	Active	U-235	n				IDB (water)
84	50	1		RLWTF	Active	U-238	n				IDB (water)

Attachment 1: Isotopes Generated at LANL

PMF#	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel. Prod?	Interviewee	Group	Comments	Info source
64	50	185	N/A	Lead Decontamination Trailer	Active	Sr-90	n	Myrna Romero	CST-7	Lead brick and shooting down	Usage Survey (air)
64	50	185	N/A	Lead Decontamination Trailer	Active	Sr-90	n	Myrna Romero	CST-7	Lead brick and shooting down	Usage Survey (air)
64	50	185	N/A	Lead Decontamination Trailer	Active	Am-241	n	Myrna Romero	CST-7		Usage Survey (air)
64	50	185	N/A	Lead Decontamination Trailer	Active	Am-241	n	Myrna Romero	CST-7		Usage Survey (air)
64	50	185	N/A	Lead Decontamination Trailer	Active	Cs-137	n	Myrna Romero	CST-7		Usage Survey (air)
64	50	185	N/A	Lead Decontamination Trailer	Active	Cs-137	n	Myrna Romero	CST-7		Usage Survey (air)
.	50	69		Rad Reduction Facility		Rb-83	n				Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Co-60	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	DOE (water)
64	54	215	N/A	Mixed Waste Storage Dome	Active	H-3	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	H-3	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Sr-90	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Sr-90	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Sr-90	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Sr-90	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Sr-90	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Sr-90	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Sr-90	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Tc-99	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Tc-99	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Tc-99	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Tc-99	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Tc-99	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Tc-99	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Tc-99	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Am-241	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Cs-137	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Cs-137	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Cs-137	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTF per S Gogel 12/98	Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Aerol Prod?	Interviewee	Group	Comments	Info source
64	54	215	N/A	Mixed Waste Storage Dome	Active	Cs-137	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Cs-137	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Cs-137	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Cs-137	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-238	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-238	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-238	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-238	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-238	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-238	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-239	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-239	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-239	n	Sandra Gogol	EM-SWO	Waste storage. No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-239	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-239	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-239	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-239	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-240	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-240	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-240	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-240	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-240	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-240	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-240	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Pu-241	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTF per S Gogol 12/98	Usage Survey (air)

Attachment I: Isotopes Generated at LANL

PMU	TA	Bldg	Room	Facility Description	Facility Status	SAM	Accel. Prod?	Interviewee	Group	Comments	Info source
64	54	215	N/A	Mixed Waste Storage Dome	Active	Zr-89	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Zr-89	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Zr-89	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Zr-89	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Zr-89	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Zr-89	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Zr-89	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-233	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-233	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-233	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-233	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-233	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-233	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-233	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-234	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-234	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-234	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-234	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-234	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-235	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-235	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-235	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-235	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Acct. Prod?	Interviewee	Group	Comments	Info source
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-235	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-235	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-235	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-238	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-238	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-238	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-238	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-238	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	U-238	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Y-90	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Y-90	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Y-90	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Y-90	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Y-90	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Y-90	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	215	N/A	Mixed Waste Storage Dome	Active	Y-90	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	226	N/A	Retrieval Dome	Active	Am-240	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	226	N/A	Retrieval Dome	Active	Am-241	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	226	N/A	Retrieval Dome	Active	Cm-243	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	226	N/A	Retrieval Dome	Active	Cm-244	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	226	N/A	Retrieval Dome	Active	Pu-238	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	226	N/A	Retrieval Dome	Active	Pu-239	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	226	N/A	Retrieval Dome	Active	Pu-240	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)
64	54	226	N/A	Retrieval Dome	Active	Pu-241	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (ss)

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Prod?	Interviewee	Group	Comments	Info source
64	54	226	N/A	Retrieval Dome	Active	Pu-242	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	226	N/A	Retrieval Dome	Active	Pu-244	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	226	N/A	Retrieval Dome	Active	Th-232	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	226	N/A	Retrieval Dome	Active	U-233	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	226	N/A	Retrieval Dome	Active	U-234	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	226	N/A	Retrieval Dome	Active	U-235	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	226	N/A	Retrieval Dome	Active	U-238	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Be-7	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Co-56	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Co-57	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Co-60	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	H-3	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Mn-54	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Na-22	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Sr-90	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Am-241	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Cs-137	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Pu-238	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Pu-239	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Pu-240	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Pu-241	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Pu-242	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Th-232	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	U-234	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	U-235	n	Sandra Gogol	EM-SWO	Waste storage No discharge to RLWTP per S. Gogol 12/98	Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Prod?	Interviewee	Group	Comments	Info source
64	54	281	N/A	Low Level Waste Compactor	Active	U-238	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	281	N/A	Low Level Waste Compactor	Active	Y-88	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Am-240	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Am-241	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Am-41	n	Sandra Gogel	EM-SWO	Probably Am-244 Waste storage No discharge to RLWTP per S Gogel 12/98	
64	54	33	N/A	Drum Vent System	Active	Cm-243	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Cm-243	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Cm-244	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Cs-137	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	D-36	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-238	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-238	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-238	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-239	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-239	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-239	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-239	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-239	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-239	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-240	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-241	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Pu-242	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	Th-232	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	U-235	n	Sandra Gogel	EM-SWO	Waste storage No discharge to RLWTP per S Gogel 12/98	Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Aerol Prod?	Interviewee	Group	Comments	Info source
64	54	33	N/A	Drum Vent System	Active	U-238	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	U-an	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	U-an	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	U-an	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	U-nat	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	U-nat	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	U-nat	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	33	N/A	Drum Vent System	Active	U-nat	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	H-3	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	Sr-90	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	Tc-99	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	Am-241	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	Cs-137	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	Np-237	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	Pu-238	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	Pu-239	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	Pu-240	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	Th-232	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	Th-234	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	U-234	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	U-235	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
64	54	36	N/A	Drum Characterization	Active	U-238	n	Sandra Gogel	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogel 12/98	Usage Survey (air)
71	59	1	102	Occupational Health Laboratory	Active	Pu-242	n	Claudine Armenta	CST-9	Sample spike	
71	59	1	102	Occupational Health Laboratory	Active	U-nat	n	Edward Gonzalez	CST-9	Sample preparation	
71	59	1	102	Occupational Health Laboratory	Active	U-nat	n	Edward Gonzalez	CST-9	Sample preparation	
71	59	1	103	Occupational Health Laboratory	Active	Am-241	n	Claudine Armenta	CST-9		
71	59	1	103	Occupational Health Laboratory	Active	Am-241	n	Claudine Armenta	CST-9		

Attachment 1: Isotopes Generated at LANL

FMU	YA	Bldg	Room	Facility Description	Facility Status	SAM	Arrd. Prod?	Interviewee	Group	Comments	Info source
71	59	1	103	Occupational Health Laboratory	Active	Am-241	n	Claudine Armenta	CST-9	Spikes in reagent solutions	
71	59	1	103	Occupational Health Laboratory	Active	Am-243	n	Claudine Armenta	CST-9	Isotope spikes	
71	59	1	103	Occupational Health Laboratory	Active	Am-243	n	Claudine Armenta	CST-9	Isotope spikes	
71	59	1	103	Occupational Health Laboratory	Active	Am-243	n	Claudine Armenta	CST-9		
71	59	1	103	Occupational Health Laboratory	Active	Pu-238	n	Claudine Armenta	CST-9	Spikes in reagent solutions	
71	59	1	103	Occupational Health Laboratory	Active	Pu-242	n	Claudine Armenta	CST-9	Isotope spikes	
71	59	1	103	Occupational Health Laboratory	Active	Pu-242	n	Claudine Armenta	CST-9	Isotope spikes	
71	59	1	103	Occupational Health Laboratory	Active	Th-229	n	Claudine Armenta	CST-9		
71	59	1	103	Occupational Health Laboratory	Active	Th-229	n	Claudine Armenta	CST-9		
71	59	1	103	Occupational Health Laboratory	Active	Th-230	n	Claudine Armenta	CST-9		
71	59	1	103	Occupational Health Laboratory	Active	U-232	n	Claudine Armenta	CST-9	Isotope spikes	
71	59	1	103	Occupational Health Laboratory	Active	U-236	n	Claudine Armenta	CST-9		
71	59	1	103	Occupational Health Laboratory	Active	U-236	n	Claudine Armenta	CST-9		
71	59	1	103	Occupational Health Laboratory	Active	U-236	n	Claudine Armenta	CST-9		
71	59	1	103	Occupational Health Laboratory	Active	Uent	n	Claudine Armenta	CST-9	Isotope spikes	
71	59	1	104	Occupational Health Laboratory	Active	Am-243	n	Nancy Lujan	CST-9		
71	59	1	104	Occupational Health Laboratory	Active	Am-243	n	Nancy Lujan	CST-9	Trace	
71	59	1	104	Occupational Health Laboratory	Active	U-232	n	Nancy Lujan	CST-9	Trace	
71	59	1	104	Occupational Health Laboratory	Active	U-234	n	Nancy Lujan	CST-9		
71	59	1	104	Occupational Health Laboratory	Active	Uranium	n	Nancy Lujan	CST-9		
71	59	1	104	Occupational Health Laboratory	Active	Sr-85	n	Edward Gonzales	CST-9	Added to environmental samples	Usage Survey (ss)
71	59	1	104	Occupational Health Laboratory	Active	Sr-90	n	Edward Gonzales	CST-9	Added to environmental samples	Usage Survey (ss)
71	59	1	106	Occupational Health Laboratory	Active	Am-241	n	Edward Gonzales	CST-9		
71	59	1	106	Occupational Health Laboratory	Active	Am-243	n	Edward Gonzales	CST-9		
71	59	1	106	Occupational Health Laboratory	Active	Pu-238	n	Edward Gonzales	CST-9		
71	59	1	106	Occupational Health Laboratory	Active	Pu-239	n	Edward Gonzales	CST-9		
71	59	1	106	Occupational Health Laboratory	Active	Ra-228	n	Edward Gonzales	CST-9		
71	59	1	106	Occupational Health Laboratory	Active	Th-230	n	Edward Gonzales	CST-9		
71	59	1	106	Occupational Health Laboratory	Active	Th-232	n	Edward Gonzales	CST-9		
71	59	1	106	Occupational Health Laboratory	Active	U-232	n	Edward Gonzales	CST-9		
71	59	1	106	Occupational Health Laboratory	Active	U-233	n	Edward Gonzales	CST-9		
71	59	1	106	Occupational Health Laboratory	Active	U-236	n	Edward Gonzales	CST-9		
71	59	1	106	Occupational Health Laboratory	Active	U-238	n	Edward Gonzales	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Ag-110	n	George Brooks	CST-9		Usage Survey (air)
71	59	1	107	Occupational Health Laboratory	Active	Co-60	n	George Brooks	CST-9		Usage Survey (ss)
71	59	1	107	Occupational Health Laboratory	Active	Ho-152	n	George Brooks	CST-9		Usage Survey (ss)
71	59	1	107	Occupational Health Laboratory	Active	H-3	n	George Brooks	CST-9	Isotope spike	Usage Survey (ss)
71	59	1	107	Occupational Health Laboratory	Active	H-3	n	George Brooks	CST-9		Usage Survey (ss)
71	59	1	107	Occupational Health Laboratory	Active	H-3	n	George Brooks	CST-9	Isotope spike	Usage Survey (air)

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel. Prod?	Interviewee	Group	Comments	Info source
71	59	1	107	Occupational Health Laboratory	Active	Be-90	n	George Brooks	CST-9	Isotope spike	Usage Survey (ss)
71	59	1	107	Occupational Health Laboratory	Active	Be-90	n	George Brooks	CST-9		Usage Survey (ss)
71	59	1	107	Occupational Health Laboratory	Active	Be-90	n	George Brooks	CST-9		Usage Survey (ss)
71	59	1	107	Occupational Health Laboratory	Active	Be-90	n	George Brooks	CST-9	Isotope spike	Usage Survey (ss)
71	59	1	107	Occupational Health Laboratory	Active	Be-90	n	George Brooks	CST-9		Usage Survey (ss)
71	59	1	107	Occupational Health Laboratory	Active	Am-241	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Am-241	n	George Brooks	CST-9	Isotope spike	
71	59	1	107	Occupational Health Laboratory	Active	Am-241	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Am-241	n	George Brooks	CST-9		
71	59	1	101	Occupational Health Laboratory	Active	Am-241	n	George Brooks	CST-9		
71	59	1	101	Occupational Health Laboratory	Active	C-14	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	C-14	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	C-14	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Cl-36	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Co-134	n	George Brooks	CST-9		
71	59	1	101	Occupational Health Laboratory	Active	Co-137	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Co-137	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Co-137	n	George Brooks	CST-9		
71	59	1	101	Occupational Health Laboratory	Active	Co-137	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Co-137	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Co-137	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Co-137	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Co-137	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Co-137	n	George Brooks	CST-9	Isotope spike	
71	59	1	107	Occupational Health Laboratory	Active	I-131	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	I-131	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Pu-238	n	George Brooks	CST-9	Isotope spike	
71	59	1	107	Occupational Health Laboratory	Active	Pu-238	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Pu-239	n	George Brooks	CST-9	Isotope spike	
71	59	1	107	Occupational Health Laboratory	Active	Pu-239	n	George Brooks	CST-9	Isotope spike	
71	59	1	107	Occupational Health Laboratory	Active	Pu-239	n	George Brooks	CST-9	Isotope spike	
71	59	1	107	Occupational Health Laboratory	Active	Pu-239	n	George Brooks	CST-9	Isotope spike	
71	59	1	107	Occupational Health Laboratory	Active	Pu-239	n	George Brooks	CST-9	Isotope spike	
71	59	1	107	Occupational Health Laboratory	Active	Pu-239	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Pu-242	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Ra-226	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Sr-89	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Th-230	n	George Brooks	CST-9		

Attachment 1: Isotopes Generated at LANL

WMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Prod?	Interviewee	Group	Comments	Info source
71	59	1	107	Occupational Health Laboratory	Active	U-238	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	U-239	n	George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	Uranium	n	George Brooks	CST-9		
71	59	1	114	Occupational Health Laboratory	Active	Be-85	n	Jeff Hedas	CST-9	Isotope spike	Usage Survey (air)
71	59	1	114	Occupational Health Laboratory	Active	Am-243	n	Jeff Hedas	CST-9		
71	59	1	114	Occupational Health Laboratory	Active	Pu-242	n	Jeff Hedas	CST-9		
71	59	1	114	Occupational Health Laboratory	Active	U-232	n	Jeff Hedas	CST-9		
71	59	1	114	Occupational Health Laboratory	Active	U-232	n	Jeff Hedas	CST-9		
71	59	1	116	Occupational Health Laboratory	Active	Pu-238	n	George Brooks	CST-9		
71	59	1	116	Occupational Health Laboratory	Active	Pu-239	n	George Brooks	CST-9		
71	59	1	118	Occupational Health Laboratory	Active	Co-57	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Co-57	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Co-60	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Co-60	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	H-3	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	H-3	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	H-3	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	H-3	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	H-3	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	H-3	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	H-3	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	H-3	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Mn-54	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Mn-54	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Na-22	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Na-22	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Sr-90	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Sr-90	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Sr-90	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Sr-90	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Sr-90	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Sr-90	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Sr-90	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Sr-90	n	Nancy Koski	CST-3	Standards to prepare QC samples	Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Sr-90	n	Nancy Koski	CST-3		Usage Survey (air)
71	59	1	118	Occupational Health Laboratory	Active	Am-241	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Am-241	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Am-241	n	Nancy Koski	CST-3		

Attachment 1: Isotopes Generated at LANL

PMU	YA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Prod?	Interviewee	Group	Comments	Info source
71	59	1	118	Occupational Health Laboratory	Active	Am-241	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Am-241	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Am-241	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Am-241	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Am-241	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Am-241	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Am-241	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Am-243	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Am-243	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Cr-134	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Cr-134	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Cs-137	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Cs-137	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Cs-137	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	D-50	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	I-131	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pb-210	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pb-210	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-238	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-238	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-238	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-238	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-238	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-238	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-238	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-239	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-239	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-239	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-239	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-239	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-239	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-239	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-239	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-240	n	Nancy Kaski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-242	n	Nancy Kaski	CST-3		

Attachment 1: Isotopes Generated at LANL

PMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Areal Proff	Interviewee	Group	Comments	Info source
71	59	1	118	Occupational Health Laboratory	Active	Pu-242	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-242	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Pu-242	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Ra-226	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Ra-226	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Ra-226	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Ra-228	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Ra-228	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Th-229	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Th-229	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	Th-230	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	U-234	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	U-235	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	U-238	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	U-nat	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	U-nat	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	U-nat	n	Nancy Koski	CST-3		
71	59	1	118	Occupational Health Laboratory	Active	U-nat	n	Nancy Koski	CST-3		
71	59	1	150	Occupational Health Laboratory	Active	Kr-85	n	Ronald Sasiprash	ESH-3		
71	59	1	180	Occupational Health Laboratory	Active	Pu-242	n	Richard Peters	CST-9		
71	59	1	182	Occupational Health Laboratory	Active	Pu-242	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Am-241	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Am-241	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Am-241	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Am-241	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Am-241	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Am-243	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Am-243	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Am-243	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Am-243	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Am-243	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	D-2H	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	D-2H	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Pu-238	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Pu-238	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Pu-239	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Pu-239	n	Richard Peters	CST-9		

Attachment 1: Isotopes Generated at LANL

FMU	TA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Prod?	Interviewee	Group	Comments	Info source
71	59	1	184	Occupational Health Laboratory	Active	Pu-242	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Pu-242	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Pu-242	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Pu-242	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Pu-242	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Pu-242	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Pu-242	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Pu-242	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Ra-226	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Ra-226	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Th-230	n	Richard Peters	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Th-232	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Th-232	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Th-232	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	Th-232	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	U-232	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	U-232	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	U-232	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	U-232	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	U-234	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	U-235	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	U-236	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	U-238	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	U-238	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	U-nat	n	Steve Goldstein	CST-9		
71	59	1	184	Occupational Health Laboratory	Active	U-nat	n	Steve Goldstein	CST-9		
71	59	1	DEK	Occupational Health Laboratory	Active	H-3	n	Richard Robinson	CST-9	Tracer spiking solution	Usage Survey (air)
71	59	1	DEK	Occupational Health Laboratory	Active	H-3	n	Richard Robinson	CST-9	Tracer spiking solution	Usage Survey (air)
71	59	1	DEM	Occupational Health Laboratory	Active	Th-230	n	Richard Robinson	CST-9		
	59	1		Occupational Health Laboratory		Co-60	n				IDB (water)
	59	1		Occupational Health Laboratory		Sr-90	n				IDB (water)
66	48	1	19A	Research Laboratory	Active	Various		Joseph Thompson	CST-1		
66	48	1	121/121A	Research Laboratory	Active	Various		Malcolm Fowler	CST-11		
66	48	1	402	Research Laboratory	Active	Be/Cl		Carol Burns	CST-18		
66	48	43	W108	Clean Chemistry and Mass Spectrometry Lab	Active	Various		Jeff Roach	CST-1		
	53			Los Alamos Neutron Science Center (LANSCE)						No discharge to RLWTF	
64	54	215	N/A	Mixed Waste Storage Dome	Active	Various		Sandra Gogol	EM-SWO	Waste storage. No discharge to RLWTF per S. Gogol 12/98	

Attachment 1: Isotopes Generated at LANL

PMU	YA	Bldg	Room	Facility Description	Facility Status	RAM	Accel Prod?	Interviewee	Group	Comments	Info source
64	54	226	N/A	Retrieval Dome	Active	LOW		Sandra Gogel	RM-SWD	Waste storage. No discharge to RLWTF per S. Gogel 12/98	
71	59	1	107	Occupational Health Laboratory	Active	Gamma		George Brooks	CST-9		
71	59	1	107	Occupational Health Laboratory	Active	U-Trealloy		George Brooks	CST-9		
71	59	1	109	Occupational Health Laboratory	Active	Various		Anthony Sanchez	CST-9		
71	59	1	110	Occupational Health Laboratory	Active	Various		Edward Gonzales	CST-9		
71	59	1	118	Occupational Health Laboratory	Active	Gamma		Nancy Kadri	CST-8		
71	59	1	118	Occupational Health Laboratory	Active	Gamma		Nancy Kadri	CST-8		
71	59	1	118	Occupational Health Laboratory	Active	Gamma		Nancy Kadri	CST-8		
71	59	1	189	Occupational Health Laboratory	Active	Various		Richard Robinson	CST-8		
71	59	1	190	Occupational Health Laboratory	Active	Various		Dawna Decker	CST-8		
71	59	1	B-4	Occupational Health Laboratory	Active	Various		Nancy Kadri	CST-8		
71	59	1	BED	Occupational Health Laboratory	Active	Various		Sammy Garcia	CST-9		
				Accelerator Operations and Technology Division							
				Accelerator Driven Transmutation Technologies							
				Advanced Free Electron Laser Accelerator							
				Accelerator Production of Tritium							

ATTACHMENT 2

Tritium and Accelerator-Produced Isotopes

Attachment 2. Tritium and Accelerator-Produced Isotopes

FMU	TA	Bldg	Room	Group	Group Leader	email	Phone	Facility Description	RAM	Accel Prod?	Interviewee	Comments	Info source
66	48	1	410	CST-11	Kimberly Thomas	kwthomas@lanl.gov	7-4379	Research Laboratory	Al-26	y	Dennis Phillips	Process and recovery of samples irradiated at LANSCE	Usage Survey (air)
66	48	1	410	CST-11	Kimberly Thomas	kwthomas@lanl.gov	7-4379	Research Laboratory	Co-58	y	Dennis Phillips	Process and recovery of samples irradiated at LANSCE	Usage Survey (air)
66	48	1	410	CST-11	Kimberly Thomas	kwthomas@lanl.gov	7-4379	Research Laboratory	Co-60	y	Dennis Phillips	Process and recovery of samples irradiated at LANSCE	Usage Survey (air)
66	48	1	410	CST-11	Kimberly Thomas	kwthomas@lanl.gov	7-4379	Research Laboratory	Mn-54	y	Dennis Phillips	Process and recovery of samples irradiated at LANSCE	Usage Survey (air)
66	48	1	410	CST-11	Kimberly Thomas	kwthomas@lanl.gov	7-4379	Research Laboratory	Na-22	y	Dennis Phillips		Usage Survey (air)
66	48	1	410	CST-11	Kimberly Thomas	kwthomas@lanl.gov	7-4379	Research Laboratory	Sc-22	y	Dennis Phillips	Process and recovery of samples irradiated at LANSCE	Usage Survey (air)
71	59	1	116	CST-9	Jose Olivares	olivares@lanl.gov	5-5190	Occupational Health Laboratory	H-3	y	George Brooks	Analysis of TA-53 samples	Usage Survey (air)
	3	16						Ion Beam Facility	H-3	n	Stephanie Archuleta	Lasers produced, not accelerator produced	E Archuleta
	16	205		ESA-TSM	Lawrence Baker	lbaker@lanl.gov	7-4434	Weapons Engineering Tritium Facility (WETF)	H-3	n			IDB (water)
	21	155		ESA-TSM	Lawrence Baker	lbaker@lanl.gov	7-4434	Tritium Systems Test Assembly (TSTA)	H-3	n	Scott Willms	Fuel cycle fusion experiments, separation of tritium	IDB (water)
	21	209		ESA-TSM	Lawrence Baker	lbaker@lanl.gov	7-4434	Tritium Science and Fabrication Facility (TSFF)	H-3	n	WBI Foo?Tony Dunbar		IDB (water)
66	48	1	19A	CST-7	Isaac Trujillo	itruj@lanl.gov	5-1755	Research Laboratory	H-3	n	Joseph Thompson	Counting standard for liquid scintillation counter	Usage Survey (air)
66	48	1	308	CST-7	Isaac Trujillo	itruj@lanl.gov	5-1755	Research Laboratory	H-3	n	Doug Ware	Environmental samples containing fission products at various activity levels	Usage Survey (air)
66	48	1	308	CST-7	Isaac Trujillo	itruj@lanl.gov	5-1755	Research Laboratory	H-3	n	Doug Ware		Usage Survey (air)
66	48	1	309	CST-7	Isaac Trujillo	itruj@lanl.gov	5-1755	Research Laboratory	H-3	n	Doug Ware		Usage Survey (air)
66	48	1	309	CST-7	Isaac Trujillo	itruj@lanl.gov	5-1755	Research Laboratory	H-3	n	Doug Ware		Usage Survey (air)
66	48	1	310	CST-7	Isaac Trujillo	itruj@lanl.gov	5-1755	Research Laboratory	H-3	n	Betty Strutzkamm	Tracer solution	Usage Survey (air)
66	48	1	310	CST-7	Isaac Trujillo	itruj@lanl.gov	5-1755	Research Laboratory	H-3	n	Betty Strutzkamm		Usage Survey (air)
66	48	1	310	CST-7	Isaac Trujillo	itruj@lanl.gov	5-1755	Research Laboratory	H-3	n	Betty Strutzkamm		Usage Survey (air)
54	50	1						RLWTF	H-3	n			IDB (water)
76	53	2						Laboratory Facility	H-3	n			IDB (water)
71	59	1	107	CST-9	Jose Olivares	olivares@lanl.gov	5-5190	Occupational Health Laboratory	H-3	n	George Brooks	Isotope spike	Usage Survey (air)
71	59	1	107	CST-9	Jose Olivares	olivares@lanl.gov	5-5190	Occupational Health Laboratory	H-3	n	George Brooks		Usage Survey (air)
71	59	1	107	CST-9	Jose Olivares	olivares@lanl.gov	5-5190	Occupational Health Laboratory	H-3	n	George Brooks	Isotope spike	Usage Survey (air)