JAN 2002

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Date: January 28, 2002
In Reply Refer To: ESH-18/WQ&H:02-027
Mail Stop: K497
Telephone: (505) 665-1859

General NPDES

RECEIVED
JAN 30 2002
DOE OVERSIGHT BUREAU

Ms. Waudelle Strickley
U.S. Environmental Protection Agency, Region 6
Compliance Assurance and Enforcement Division
Water Enforcement Branch (6EN-W)
1445 Ross Avenue
Dallas, Texas 75202-2733

SUBJECT: DISCHARGE MONITORING REPORTS (DMRs) FOR YEARLY WATER QUALITY STANDARDS (WQS), NPDES PERMIT NO. NM0028355

Dear Ms. Strickley:

Enclosed are Los Alamos National Laboratory's DMRs for the yearly Water Quality Standards (WQS) parameters for the period February 1, 2001, through December 31, 2001, as required under the above referenced NPDES Permit. We have also included a table summarizing WQS sampling. Samples were collected at 17 outfalls that were actively discharging during the monitoring period. There was one WQS effluent limitation exceedance out of the 236 analyses conducted on industrial and sanitary outfall samples. The exceedance was at Outfall 03A185 and occurred on September 17, 2001. The 5-day notification was submitted to EPA on October 29, 2001. Please see attached noncompliance report for more information.

The Laboratory's new NPDES Permit became effective on February 1, 2001, and new effluent limitations and sampling frequencies are now in effect. Please note that in accordance with EPA's approval on the letter dated November 15, 2001, we have started using the Laboratory's computer generated DMR forms in lieu of EPA's pre-printed DMR forms.

Please note that the Laboratory's NPDES Permit requires reporting of "accelerator-produced" tritium for each outfall in the yearly WQS DMRs. Tritium has been reported for each outfall although the source, "accelerator-produced" or "reactor-produced", has not been confirmed. The exception is Outfall 051 at the TA-50 Radioactive Liquid Waste Treatment Plant where a survey indicated tritium entering the plant to be primarily "reactor-produced" with potential minor sources of "accelerator-produced" tritium. Enclosed for your review is the *"Tritium and Strontium-90 Waste Stream Survey for the Los Alamos National Laboratory Radioactive Liquid Waste Treatment Facility (RLWTF)"* dated May 9, 2001. The results for tritium of 4,268 pCi/L at Outfall 051 were not included in the DMR as "accelerator-produced" tritium based upon this survey. All tritium results for the Laboratory's outfalls including Outfall 051 meet the current NPDES Permit effluent limit of 20,000 pCi/L for "accelerator-produced" tritium.

13597

Please contact Carla Jacquez at (505) 665-0450 or Mike Saladen at (505) 665-6085 if you have any questions concerning these DMRs.

Sincerely,

Steven R. Rae
Group Leader, ESH-18
Water Quality and Hydrology Group

SR:CJ/am

Enclosures: a/s

Cy: J. Davis, NMED/SWQB, Santa Fe, New Mexico, w/enc.
J. Parker, NMED/DOE/OB, Santa Fe, New Mexico, w/enc.
C. Soden, DOE/AL, Albuquerque, New Mexico, w/enc.
J. Vozella, DOE/OLASO, w/enc., MS A316
G. Turner, DOE/OLASO, w/enc., MS A316
J. Holt, ADO, w/enc., MS A104
L. McAtee, ESH-DO, w/enc., MS K491
P. Thullen, ESH-DO, w/enc., MS K491
D. Stavert, ESH-DO, w/enc., MS K491
B. Ramsey, FWO-DO, w/enc., MS K492
WQ&H File, w/enc., MS K497
IM-5, w/enc., MS A150

Water Quality Standard Sampling
Los Alamos National Laboratory
NPDES Permit # NM0028355
Permit Year 2/1/01 through 12/31/01

Outfall#	TA/Bldg	Sample Collected	Comments
001	3-22	yes	7/18/01
02A129	21-357	yes	9/20/01
03A021	3-29	yes	5/22/01
03A022	3-127	yes	8/20/01
03A024	3-187	no	No discharge during monitoring period
03A027	3-285	yes	8/7/01
03A028	15-202	yes	6/18/01
03A047	53-60	no	No discharge during monitoring period
03A048	53-62	yes	8/21/01
03A049	53-64	yes	2/28/01
03A113	53-293,365,952,1032	yes	8/29/01
03A130	11-30	yes	6/5/01
03A158	21-209	yes	9/17/01
03A160	35-124	yes	3/7/01
03A181	55-6	yes	9/26/01
03A185	15-312	yes	9/17/01 & 10/30/01
03A199	3-1498*	No	No discharge during monitoring period
05A055	16-401,406	yes	3/9/01
05A097	11-52	no	No discharge during monitoring period
051051	50-1	yes	2/5/01 & 11/15/01
SSS13S	TA46 SWSC Plant	yes	10/4/01 & 11/7/01

*Not constructed yet

University of California
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

SUBJECT: NONCOMPLIANCE WITH EFFLUENT LIMITATION IN NPDES PERMIT NM0028355

1. Location of noncompliant discharge

Outfall 03A185 TA-15-312

2. Description of noncompliant discharge

Total Selenium was measured at 0.008 mg/L during a discharge on 9-17-01. This exceeds the daily maximum limit of 0.005 mg/L in NPDES Permit NM0028355. **ADDITIONAL INFORMATION:** An additional sample was collected on 10/30/01 with a result of Non Detect for Total Selenium, and therefore the outfall was back in compliance with the NPDES permit on this date. The remainder of the original sample was sent to a separate analytical laboratory (Lab 2) for analysis with holding time being met and a level 4 data package returned with results. A complete level 4 data package was requested from Lab 1 and was received 1-8-02. Validation of both sets of level 4 data indicated the following: Both labs reported low levels of Se (Lab 1: 8.0ppb, Lab 2: 2.3ppb "B"). In both cases, this value is between minimum detection limit (MDL) and practical quantification level (PQL). Any result at this low level is considered to be estimated. Lab 2 properly applied the "B" qualifier to indicate that the result is >MDL and <PQL. Lab 1 applied no such qualifier. In both cases, no qualification was applied to the data by the validator. Lab 2 performed a CRI analysis at 1.0ppb, which met recovery acceptance criteria.

3. Impact upon the receiving waters

Outfall 03A185 discharges into a tributary to Water Canyon, an ephemeral tributary to the Rio Grande. No adverse impacts were observed.

4. Cause of noncompliance

The investigation of this noncompliance is complete. Validation of compliance sample results has occurred, operational samples have been collected with results demonstrating that selenium is present in the water treatment chemicals.

5. Anticipated time of condition if applicable

The condition was discovered during compliance monitoring at Outfall 03A185 (DARHT Facility cooling tower) on September 17, 2001. Validated results were received October 24, 2001.

6. Duration of condition if uncorrected

Results from operational samples have not been received to determine current levels of Total Selenium in this cooling tower.

7. Steps taken to reduce and eliminate condition

The Laboratory's Water Quality and Hydrology Group (ESH-18) notified the operating group (DX-FM) and the Laboratory's Occurrence Reporting Group (ESH-7) upon receipt of the validated Total Selenium analytical data (October 24, 2001). DX-FM personnel immediately initiated an investigation into the occurrence. An occurrence investigation meeting was scheduled for October 30, 2001 for ESH-7, ESH-18, and DX-FM personnel to discuss the findings of the investigations and to initiate corrective actions. **ADDITIONAL INFORMATION**: On 10-24-01, the use of a new treatment chemical was suspended and discharge to the environment stopped in this cooling tower pending investigation. A sample of concentrated (full strength) treatment chemical was submitted of analysis and showed 0.48 mg/L Total Selenium. When used at the recommended concentration of 40ppm, the Total Selenium result should be well below the limit of 0.005 mg/L, but the operating group decided to permanently suspend the use of this chemical. An additional sample was collected on 10/30/01 with a result of Non Detect for Total Selenium, and therefore the outfall was back in compliance with the NPDES permit on this date.

8. Steps taken to prevent a recurrence of the condition

Corrective actions will be initiated when a cause for the noncompliance has been determined. **ADDITIONAL INFORMATION**: The new treatment chemical in use at the time the sample was collected on 9-17-01 will no longer be used. Also, a new analytical laboratory is being used to supply the proper level 4 data packages in a more timely manner.

9. Steps taken to minimize any adverse impact to navigable water

No adverse impact to navigable waters is anticipated as the discharge did not cross the Laboratory boundary or reach the Rio Grande.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

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LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	001 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 001

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0.000	0.000	(19)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.296 MO AVG	0.296 DAILY MX	MG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.1	0.1	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.36 MO AVG	4.36 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.02 MO AVG	1.02 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.38 MO AVG	0.38 DAILY MX	MG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453		02	01	28
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	001 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 001

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.36	0.36	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	56.25 MO AVG	56.25 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.1	0.1	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	2	2	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	210	210	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	Steven Rae SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	129 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 129

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

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PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	362 MO AVG	362 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.85 MO AVG	4.85 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.02	0.02	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.39 MO AVG	1.39 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	513 MO AVG	513 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
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DISCHARGE MONITORING REPORT (DMR)

NM0028355	129 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 129

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

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		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	81.0 MO AVG	81.0 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	98	98	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

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ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	024 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 024

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE X ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	296 MO AVG	296 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.36 MO AVG	4.36 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.02 MO AVG	1.02 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	380 MO AVG	380 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

NO DISCHARGE DURING MONITORING PERIOD.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

NM0028355	024 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 024

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE X ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	56.25 MO AVG	56.25 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****			(17)	0	00/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****			(17)	0	00/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

NO DISCHARGE DURING MONITORING PERIOD.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	130 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 130

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	296 MO AVG	296 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.02	0.02	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.36 MO AVG	4.36 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.05	0.05	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.02 MO AVG	1.02 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	380 MO AVG	380 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	130 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 130

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.08	0.08	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	56.25 MO AVG	56.25 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	2	2	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	120	120	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	158 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 158

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	296 MO AVG	296 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.36 MO AVG	4.36 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.02 MO AVG	1.02 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	380 MO AVG	380 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

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FACILITY LOCATION UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	158 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 158

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	56.25 MO AVG	56.25 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	2	2	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	7552	7552	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	027 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 027

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	316 MO AVG	316 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.000	0.000	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.527 MO AVG	4.527 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.063	0.063	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.123 MO AVG	1.123 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	6	6	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	421 MO AVG	421 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453		02	01	28
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

NM0028355	027 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
01	02	01	TO	01	12	31

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 027

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	1.03	1.03	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	63.47 MO AVG	63.47 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.8	0.8	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	210	210	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

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LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

NM0028355	028 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 028

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	316 MO AVG	316 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.017	0.017	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.527 MO AVG	4.527 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.010	0.010	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.123 MO AVG	1.123 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	421 MO AVG	421 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.		TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

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ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	028 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 028

*** NO DISCHARGE _____ ***

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	60	60	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	63.47 MO AVG	63.47 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	5.0	5.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	30	30	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

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LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	021 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 021

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	340 MO AVG	340 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.7 MO AVG	4.7 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.03	0.03	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.25 MO AVG	1.25 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	469 MO AVG	469 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453		02	01	28
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

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ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	021 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 021

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.24	0.24	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	72.37 MO AVG	72.37 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.2	0.2	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	2	2	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	150	150	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	Steven Rae SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	022 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 022

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	340 MO AVG	340 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.7 MO AVG	4.7 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.25 MO AVG	1.25 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	469 MO AVG	469 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	022 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 022

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	72.37 MO AVG	72.37 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	2	2	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	71	71	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

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LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	049 Y
PERMIT NUMBER	DISCHARGE NUMBER

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 049

*** NO DISCHARGE _____ ***

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	40	40	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	316 MO AVG	316 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	11	11	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.016	0.016	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.527 MO AVG	4.527 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.023	0.023	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.123 MO AVG	1.123 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	421 MO AVG	421 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	049 Y
PERMIT NUMBER	DISCHARGE NUMBER

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 049

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.03	0.03	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	63.47 MO AVG	63.47 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.2	0.2	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	4	4	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

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LOS ALAMOS NATIONAL LABORATORY

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LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	113 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 113

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	340 MO AVG	340 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.7 MO AVG	4.7 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.25 MO AVG	1.25 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	469 MO AVG	469 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453		02	01	28
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

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FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355
PERMIT NUMBER

113 Y
DISCHARGE NUMBER

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 113

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	72.37 MO AVG	72.37 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	0	1	(17)	0	02/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	199	199	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	047 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 047

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE X ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	356 MO AVG	356 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.81 MO AVG	4.81 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.329 MO AVG	1.329 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	501 MO AVG	501 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.		TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER		Steven Rae	505 665-0453	02	01	28
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

NO DISCHARGE DURING MONITORING PERIOD.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	047 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 047

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE X ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	78.5 MO AVG	78.5 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****			(17)	0	00/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****			(17)	0	00/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

NO DISCHARGE DURING MONITORING PERIOD.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ÀLAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

NM0028355	048 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 048

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	316 MO AVG	316 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.011	0.011	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.527 MO AVG	4.527 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	421 MO AVG	421 DAILY MX	UG/L		ANNUAL	GRAB
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	Steven Rae SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	048 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 048

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	63.47 MO AVG	63.47 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	5	5	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	69	69	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

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LOS ALAMOS NATIONAL LABORATORY

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LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355
PERMIT NUMBER

055 Y
DISCHARGE NUMBER

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 055

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	15	15	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	356 MO AVG	356 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.81 MO AVG	4.81 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.000	0.000	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.329 MO AVG	1.329 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	501 MO AVG	501 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

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AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	055 Y
PERMIT NUMBER	DISCHARGE NUMBER

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 055

*** NO DISCHARGE _____ ***

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	78.5 MO AVG	78.5 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.2	0.2	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
PERCHLORATE (CLO4)	SAMPLE MEASUREMENT	*****	*****		*****	3950	3950	(19)	0	01/YR	GRAB
61209 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	REPORT MO AVG	REPORT DAILY MX	MG/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	055 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 055

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	630	630	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	097 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 097

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE X ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	340 MO AVG	340 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.7 MO AVG	4.7 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.25 MO AVG	1.25 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	469 MO AVG	469 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

NO DISCHARGE DURING MONITORING PERIOD.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	097 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 097

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE X ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	72.37 MO AVG	72.37 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****			(17)	0	00/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
PERCHLORATE (CLO4)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
61209 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	REPORT MO AVG	REPORT DAILY MX	MG/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	Steven Rae SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

NO DISCHARGE DURING MONITORING PERIOD.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	097 Y
PERMIT NUMBER	DISCHARGE NUMBER

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 097

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE X ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****			(17)	0	00/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

NO DISCHARGE DURING MONITORING PERIOD.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	160 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 160

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	444 MO AVG	444 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.000	0.000	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.278 MO AVG	5.278 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.000	0.000	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.775 MO AVG	1.775 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	658 MO AVG	658 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

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LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	160 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 160

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	20	20	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	113 MO AVG	113 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.2	0.2	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	4	4	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	180	180	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	181 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 181

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	296 MO AVG	296 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.3	0.3	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	1	1	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.01	0.01	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.36 MO AVG	4.36 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.02 MO AVG	1.02 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	380 MO AVG	380 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

NM0028355	181 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 181

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	56.25 MO AVG	56.25 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	3	3	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.20	0.20	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	334	334	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453	02	01	28
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY LOCATION UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355
PERMIT NUMBER

185 Y
DISCHARGE NUMBER

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 185

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	56.25 MO AVG	56.25 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	4.0	8.0	(28)	1	02/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	7	7	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	119	119	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

Please see attached Noncompliance Report for Selenium (T).

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	185 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 185

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	296 MO AVG	296 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.36 MO AVG	4.36 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.02	0.02	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.02 MO AVG	1.02 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	380 MO AVG	380 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

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LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

NM0028355	199 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 199

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE X ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	296 MO AVG	296 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.36 MO AVG	4.36 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.02 MO AVG	1.02 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	380 MO AVG	380 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

TYPED OR PRINTED

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMIT MODIFICATION DATED 2/26/01 - REPORTING DATE CHANGED TO BE DUE 28TH OF MONTH. TRITIUM - WHEN ACCELERATOR PRODUCED

NO DISCHARGE DURING MONITORING PERIOD.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME UNIVERSITY OF CALIFORNIA
LOS ALAMOS NATIONAL LABORATORY

ADDRESS PO BOX 1663; MAIL STOP K497
LOS ALAMOS, NM 87545

FACILITY UNIVERSITY OF CALIFORNIA
LOCATION LOS ALAMOS, NM 87545
ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	199 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 199

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

*** NO DISCHARGE X ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	56.25 MO AVG	56.25 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****			(19)	0	00/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****			(17)	0	00/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****			(28)	0	00/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****			(17)	0	00/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

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505 665-0453		02	01	28
AREA CODE	NUMBER	YEAR	MO	DAY

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NO DISCHARGE DURING MONITORING PERIOD.

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	051 Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 051

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
FROM 01	02	01	TO	01	12	31

*** NO DISCHARGE _____ ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	368 MO AVG	368 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB

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Steven R. Rae ESH-18 GROUP LEADER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	505 665-0453		02	01	28
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DISCHARGE MONITORING REPORT (DMR)

NM0028355	051 Y
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MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 051

*** NO DISCHARGE _____ ***

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PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
PERCHLORATE (CLO4)	SAMPLE MEASUREMENT	*****	*****		*****	29900	29900	(19)	0	01/YR	GRAB
61209 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	REPORT MO AVG	REPORT DAILY MX	MG/L		ANNUAL	GRAB
TRITIUM, TOTAL *	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(17)	0	01/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

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*PLEASE SEE TRANSMITTAL LETTER DATED JANUARY 28, 2001, REGARDING TRITIUM REPORTING, PER EPA INSTRUCTIONS.

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ATTN: STEVEN RAE, DIR-QUAL, ENV.SAF&H

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NM0028355	13S Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 13S

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

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PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
ARSENIC, TOTAL (AS AS)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01002 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	329 MO AVG	329 DAILY MX	UG/L		ANNUAL	GRAB
BORON, TOTAL (AS B)	SAMPLE MEASUREMENT	*****	*****		*****	0.1	0.1	(19)	0	01/YR	GRAB
01022 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
CADMIUM, TOTAL (AS CD)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01027 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	50 MO AVG	50 DAILY MX	UG/L		ANNUAL	GRAB
CHROMIUM, TOTAL (AS CR)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(19)	0	01/YR	GRAB
01034 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	4.63 MO AVG	4.63 DAILY MX	MG/L		ANNUAL	GRAB
COBALT, TOTAL (AS CO)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(19)	0	01/YR	GRAB
01037 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.0 MO AVG	1.0 DAILY MX	MG/L		ANNUAL	GRAB
COPPER, TOTAL (AS CU)	SAMPLE MEASUREMENT	*****	*****		*****	0.01	0.01	(19)	0	01/YR	GRAB
01042 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	1.19 MO AVG	1.19 DAILY MX	MG/L		ANNUAL	GRAB
LEAD, TOTAL (AS PB)	SAMPLE MEASUREMENT	*****	*****		*****	10	10	(28)	0	01/YR	GRAB
01051 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	449 MO AVG	449 DAILY MX	UG/L		ANNUAL	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Steven R. Rae
ESH-18 GROUP LEADER

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NM0028355	13S Y
PERMIT NUMBER	**DISCHARGE NUMBER**

MAJOR

F - FINAL
YEARLY REPORTING - OUTFALL 13S

*** NO DISCHARGE _____ ***

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	01	02	01	TO	01	12	31

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PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
VANADIUM, TOTAL (AS V)	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(28)	0	01/YR	GRAB
01087 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	100 MO AVG	100 DAILY MX	UG/L		ANNUAL	GRAB
ZINC, TOTAL (AS ZN)	SAMPLE MEASUREMENT	*****	*****		*****	0.12	0.12	(19)	0	01/YR	GRAB
01092 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	68.45 MO AVG	68.45 DAILY MX	MG/L		ANNUAL	GRAB
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	*****	*****		*****	0.2	0.2	(19)	0	01/YR	GRAB
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	MG/L		ANNUAL	GRAB
SELENIUM, TOTAL (AS SE)	SAMPLE MEASUREMENT	*****	*****		*****	0.0	0.0	(28)	0	01/YR	GRAB
01147 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	5.0 MO AVG	5.0 DAILY MX	UG/L		ANNUAL	GRAB
RADIUM 226 + RADIUM 228, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	0	0	(17)	0	01/YR	GRAB
11503 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	30 MO AVG	30 DAILY MX	PCI/L		ANNUAL	GRAB
MERCURY, TOTAL (AS HG)	SAMPLE MEASUREMENT	*****	*****		*****	0.00	0.00	(28)	0	01/YR	GRAB
71900 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	0.77 MO AVG	0.77 DAILY MX	UG/L		ANNUAL	GRAB
TRITIUM, TOTAL	SAMPLE MEASUREMENT	*****	*****		*****	61	68	(17)	0	03/YR	GRAB
82126 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***** *****	*****	20000 MO AVG	20000 DAILY MX	PCI/L		ANNUAL	GRAB

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TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

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TRITIUM AND STRONTIUM-90 WASTE STREAM SURVEY FOR THE LOS ALAMOS NATIONAL LABORATORY RADIOACTIVE LIQUID WASTE TREATMENT FACILITY (RLWTF)

Revision 3

May 9, 2001

Project No. 5061.37.0010

Prepared by:

Eberline Services
4501 Indian School Road NE, Suite 105
Albuquerque, New Mexico 87110

Prepared for:

Los Alamos National Laboratory
P.O. Box 1663
Los Alamos, New Mexico 87545

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ACRONYMS

Ci/L	Curies per Liter
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ESH	Environmental, Safety, and Health Division
FMU	Facility Management Unit
FWO	Facility and Waste Operations
FWO-SWO	Solid Waste Operations
FWO-WFM/RLW	Waste Facility Management/Radioactive Liquid Waste
FY	Fiscal Year
H-3	tritium
LANL	Los Alamos National Laboratory
LANSCE	Los Alamos Neutron Science Center
NMT	Nuclear Materials Technology
NPDES	National Pollutant Discharge Elimination System
RLWTF	Radioactive Liquid Waste Treatment Facility
RLWTP	Radioactive Liquid Waste Treatment Plant, TA-53
^{90}Sr or Sr-90	strontium-90
SOP	Standard Operating Procedure
SWO	Solid Waste Operations
TA	Technical Area
TSFF	Tritium Science Fabrication Facility (TSFF)
TSTA	Tritium Systems Test Assembly Facility
WAC	Waste Acceptance Criteria
WETF	Weapons Engineering Tritium Facility
WPF	Waste Profile Form
WMC	Waste Management Coordinator

1.0 INTRODUCTION

The Los Alamos National Laboratory (LANL) Radioactive Liquid Waste Treatment Facility (RLWTF) treats industrial and radioactive liquid waste generated by operations at LANL technical areas. The RLWTF is regulated by and operated under a National Pollutant Discharge Elimination System (NPDES) permit, which establishes specific criteria that the facility's treated effluent must meet before it is discharged. In addition to the NPDES requirements, LANL and the U.S. Department of Energy (DOE) have established specific guidelines and performance measures for the protection of water resources, including a Water Resource Protection Protocol and Groundwater Discharge Plan, which impact the operations of the RLWTF. Driven by these measures, the RLWTF is planning to reduce discharges of tritium (H-3) and strontium-90 (Sr-90) and they have initiated efforts to identify LANL facilities that discharge these waste streams to the RLWTF. With that information, the RLWTF can take appropriate steps to ensure that the effluent discharge requirements and water resource protection goals can be met.

In Fiscal Year 2001 (FY01), the RLWTF tasked Benchmark Environmental Corporation (Benchmark) to survey LANL operations to determine major sources (generators) of tritium and strontium-90 waste streams that discharge to the RLWTF. The specific objectives of the survey were:

- Identify the major waste generators of tritium- and strontium-90-bearing waste streams discharging to the RLWTF via the waste collection system or transported by tanker truck, and

- Identify specific generators that would be adversely affected if discharges to the RLWTF were limited to 2.0E-8 curie per liter (Ci/L) for reactor produced tritium, zero for accelerator produced tritium, or 8.0 E-12 Ci/L for Sr-90.

This report summarizes the results of the survey identifying waste generators, source locations, and quantities of waste containing tritium and strontium-90 discharged to the RLWTF.

1.1 Background

The RLWTF is located at Technical Area (TA)-50, Building 1 and treats industrial waste received from LANL technical areas. The treated effluent is regulated under an NPDES permit for point-source effluents (NPDES permit number NM0028355, outfall number 051). The permit establishes specific chemical, physical, and biological criteria that the RLWTF treated effluent must meet. The University of California and DOE are listed as co-owners of this permit, which is administered by U.S. Environmental Protection

Agency (EPA) Region 6 and certified by the New Mexico Environment Department Surface Water Quality Bureau.

In addition to the NPDES requirements, LANL and the RLWTF must comply with water resource protection requirements established in the site-specific Water Resource Protection Protocol, documented in Appendix F of the LANL contract with DOE; and the LANL Groundwater Discharge Plan, which is a binding agreement between LANL and DOE. In October 2000, the LANL Water Resource Protection Protocol established a goal of protecting water resources by reducing the discharges of tritium and strontium-90. The protocol further requires LANL to take specific action to "complete survey to determine major sources (generators) of tritium, strontium-90, and perchlorate that release to the TA 50 RLWTF." (LANL 2000a). Further impacting RLWTF discharges, DOE guidelines for water resource protection may require compliance with drinking water standards for strontium-90 in the treated effluent.

The RLWTF is planning for a reduction in their allowable discharge limits for tritium and strontium-90 and, consequently, waste discharges from LANL generators to the RLWTF may be restricted to 2.0E-8 Ci/L for reactor produced tritium and 8.0 E-12 Ci/L for strontium-90. Currently, the maximum allowable concentrations that LANL facilities may discharge to the RLWTF, under the LANL Waste Acceptance Criteria (WAC) are: 2.0 E-8 Ci/L for reactor produced tritium, 1.0 E -7 Ci/L for strontium-90, and Zero for accelerator produced tritium. (LANL 2000b). A reduction in the Sr-90 discharge limit is being considered in anticipation of future EPA regulation that may limit the RLWTF permitted effluent of strontium-90 to that level.

Waste streams containing accelerator-produced tritium may not be discharged to the TA-50 RLWTF. However, accelerator-produced tritium waste streams can be discharged to the TA-53 Radiological Liquid Waste Treatment Plant (RLWTP), which is an auxiliary wastewater treatment system located at TA-53 and used for the treatment of accelerator-produced tritium. The TA-53 RLWTP is operated by the Facility and Waste Operations Division, Waste Facility Management/Radioactive Liquid Waste group (FWO-WFM/RLW), which also operates the TA 50 RLWTF, but there are no physical connections between the two treatment facilities, waste collection pipelines or discharge lines. Waste from the TA 53 RLWTP is not and has never been transferred to the TA 50 facilities; furthermore, their physical locations are separated by deep canyons making any past connections between the two waste pipelines or collection systems improbable.

Typically, LANL uses tritium for research on fusion energy, nuclear weapons, and assuring the safety and reliability of the nuclear weapons stockpile. Tritium is a radioactive material with a relatively short half-

life of 12.3 years. It emits low-energy beta radioactivity, so that even a sheet of paper can shield a person from exposure. Tritium's commercial applications include use as medical diagnostic tracers and for radio-therapeutic treatments. The most common use of tritium is in the self-illuminating exit signs found in most buildings. Tritium can be present in the form of water, water vapor or as an elemental gas. Strontium-90 is a radioactive material with a moderately long half-life of 29.1 years. It is produced by nuclear fission, it is considered highly mobile and has a relatively high yield in the fission process. At LANL strontium-90 waste is created as a result of research on nuclear weapons.

1.2 Study Approach

In FY 2001, the RLWTF initiated a survey of LANL operations to identify the major waste generators of tritium- and strontium-90-bearing waste streams discharging to the RLWTF and to identify generators that would be adversely affected if discharges to the RLWTF were limited to 2.0E-8 curie per liter (Ci/L) for reactor produced tritium, zero for accelerator produced tritium, or 8.0 E-12 Ci/L for Sr-90.

The survey began first by conducting historical data reviews followed by performing telephone and electronic mail interviews, site surveys and walk-throughs of generator locations, and compilation of current waste stream data. A list of the LANL facilities that were surveyed for tritium and strontium-90 waste generation during this study is presented in Appendix A.

Based on historical data, a target list of potential generator locations (specific to tritium and strontium-90) was developed (see Appendix A). The historical data used to develop the target list include the following:

- Air emission data collected by LANL Environmental, Safety, and Health Division (ESH)-17 as published in the LANL Site Wide Environmental Impact Statement (LANL 2000b). This data was used to identify specific facilities where tritium and strontium-90 have been used. Those operations that use tritium and strontium-90 may or may not have liquid effluents, but they were chosen as target locations that would need further data collection.

- Past LANL surveys and reports on tritium and other isotopes, including

  — "Radioactive Liquid Waste Minimization Survey Report for Tritium and Other Accelerator-Produced Isotopes" (Benchmark 1999)

  — Accelerator Produced Tritium Survey for the TA-50 Radioactive Liquid Waste Treatment Facility (LANL 1995)

— Accelerator Produced Isotopes. Environmental Management, Radioactive Liquid Waste Group (EM-RLW). Los Alamos National Laboratory, Los Alamos, New Mexico. (LANL 1997)

- RLWTF influent sampling data and operating information from TA-50. (Benchmark. 2001a1)

- Waste profiles from the Solid Waste Operations (FWO-SWO) Chemical and Low Level Waste Database. Several data queries were conducted to recover current or expired Waste Profile Forms (WPF) that characterize tritium or strontium-90-bearing waste streams. The queries identified liquid waste streams profiled and approved for discharge to the RLWTF. (Benchmark 2001b). In addition, waste profiles were collected for solid wastes containing tritium or strontium-90 that were disposed via FWO-SWO at TA-54. Those locations were considered for their potential for liquid tritium and strontium-90 discharges. A summary of waste profile information collected from the data queries is presented in Appendix B.

- Facility specific wastewater characterization reports written by LANL were also referenced to identify drain locations and potential discharge points in the various facilities (LANL 1994a,b,c).

During the study, facility managers and waste management coordinators (WMC) were contacted for the facilities listed on the target list to identify those that currently use or discharge tritium or strontium-90 wastes. Interviews and site-surveys were conducted at those facilities and information was obtained about the processes that generate tritium and strontium-90 discharges. (Benchmark 2001a). In addition, generators were asked if they would be adversely impacted by the RLWTF waste acceptance criteria of 2.0E-8 Ci/L for reactor-produced tritium and 8 E-12 Ci/L for strontium-90. Follow up with generators and WMCs continued after the site surveys to complete data collection.

2.0 TRITIUM AND STRONTIUM-90 WASTE GENERATORS

Generator locations of the tritium waste streams and strontium-90 waste streams are summarized in Tables 2-1 and 2-2, respectively. The survey identified nine tritium generator/waste streams and seven strontium-90 waste streams currently (or soon to be) discharging to the RLWTF. (The nine tritium waste generator locations include eight identified waste streams plus TA-55 as one generator location with an unknown number of individual waste streams). All (100%) of the tritium-bearing waste streams discharging to the RLWTF were reported to be reactor produced. In addition, 12 tritium waste streams were identified that discharge to the TA-53 RLWTP but do not enter the TA-50 RLWTF. Of these 12 waste streams discharging to the RLWTP, 10 are accelerator produced; none of the RLWTP accelerator produced waste streams enter the TA-50 RLWTF

More detailed information on the generators and waste streams was compiled into a database format, as presented in Table 2-3. (The information in Table 2-3 is also provided in an Excel Database, provided under separate cover). Overviews of the generator locations are provided in Section 2.1 for tritium waste streams and Section 2.2 for strontium-90 waste streams. Waste profiles are discussed in Section 2.3 and Section 2.4 lists generators that would be affected by reduced discharge limits.

Table 2-1. Tritium Waste Generators Discharging to TA 50 RLWTF and the TA 53 RLWTP (FY 2001)

Generator Location	Estimated Load to RLWTF[1]	Accelerator or Reactor Produced	Waste Profile Status and Process Information (see Table 2-3 for details)
TA-21-155 & TA-21-209 Tritium Systems Test Assembly (TSTA) & Tritium Science Fabrication Facility (TSFF)	0.14 Ci/year	Reactor	1 Waste Stream; Active WPF # 26183 Cooling tower blow down, mop water, decontamination water.
TA-21- 152	4.5E-04 Ci/yr.	Reactor	1 Waste Stream; Active WPF # 32927 Routine maintenance mop water.
TA-35-213; Target Fabrication	2.4E-02 Ci/yr.	Reactor	1 Waste Stream; WPF pending. Wet polishing and grinding operations.
TA-55	3.1E-03 Ci/yr.	Reactor	Tritium known to be in Acid, Caustic and Industrial waste lines but number of contributing waste streams is unknown . Characterization for tritium in individual waste streams is in progress. One classified waste stream is known source.
TA-48-1	1.0 E-05 to 5.0 Ci/yr.	Reactor	1 Waste Stream; Active WPF # 30317 Tritiated groundwater samples.
ER Sites at TA-21	3.0 E-05 Ci/yr.	Other	4 Waste Streams; Active WPFs # 31219, 32772, 32227, 32302 Environmental restoration, purge water
Wastes Discharged to TA 53 RLWTP			
TA-16-205: Weapons Engineering Tritium Facility (WETF)		Reactor	1 Waste Stream; Active WPF # 20420 Routine maintenance mopwater.
TA-33-86		Reactor	1 Waste Stream; Active WPF #30118 Mopwater from maintenance.
TA-53 (Bldg. 3: 4 waste streams; MPF-7: 3 streams; Bldg. 141, 368, and MPF-3 @1)		Accelerator	10 Waste Streams; Active WPFs # 32903, 32373, 31937, 31939, 32316, 31935, 31932, 31933, 31938, 31943

Table 2-2 – Strontium-90 Generators Discharging to TA-50 RLWTF (FY 2001)		
Generator Location	**Number of Waste Streams** **Waste Profile Status** (see Table 2-3 for details)	**Comment**
TA-59-1: Occupational Health	1 Waste Stream; Active WPF # 31433	Environmental Samples Estimated load to RLWTF < 1.3E-07 Ci/yr. [ii]
TA-54 Decontamination Operations	1 Waste Stream; Active WPF # 33145	Decontamination activities Estimated load to RLWTF < 6.1E-05 Ci/yr.
TA-48-1	1 Waste Stream; Active WPF # 30317	Tritiated groundwater samples Estimated load to RLWTF < 5.0E-06 Ci/yr.
TA-21 ER Site	4 Waste Streams; Active WPFs # 31219, 32772, 32302, 32561	Groundwater purge water Estimated load to RLWTF < 1.3E-06 Ci/yr.

[i] See Table 2-3 for details. Estimate is calculated based on maximum concentrations and flow volumes provided by waste profiles or waste generator information.
[ii] See Table 2-3 for details. Estimate is calculated based on maximum concentrations and flow volumes provided by the waste profile or generator information.

Table 2-3. Information Database on LANL Tritium and Strontium-90 Waste Generators Discharging to RLWTF (FY 2001)
(From EXCEL database file Table2-3REV3.xls 5/9/01)

FM	TA	Bld	Rm	FACILITY NAME	GENERATOR	WMC	Process Description	Process Status	H-3 or Sr-90	Accel or Reactor Produced	Rad Concentration (Ci/L)	Disposal Path	Avg daily volume[1] gall day	Estimated discharge Day/yr	Annual Volume Disposed gal/yr	WPF #	WPF Status	Meet new WAC[8]	Load to TA 50 (Ci/yr)[a] H-3	Load to TA 50 (Ci/yr)[a] Sr-90	NOTES
61	53	3	A6	LANSCE	Dick Werbeck	J. Pieniazek	A6 Helium Loop Water System Before Decontamination Wastewater	Active	H-3	Accelerator	H-3 @ 5.96E-4 to 6.07E-4	TA 53 RLWTP	70	1	70	32093	Active	NA	NA	NA	Waste does not go to TA 50 RLWTF
61	53	3	A6	LANSCE	Dick Werbeck	J. Pieniazek	A6 Helium Loop Cooling System After Decontamination Wastewater	Active	H-3	Accelerator	H-3@5.97E-4 to 6.07E-4	TA 53 RLWTP	70	1	70	32373	Active	NA	NA	NA	Waste does not go to TA 50 RLWTF
61	53	3	NA	LANSCE	Bill Boedeker	J. Pieniazek	W02 and P02 Cooling Water System Wastewater	Active	H-3	Accelerator	H3@ 3.9E-8 to 6.6E-8	TA 53 RLWTP	250	1	250	31937	Active	NA	NA	NA	Waste does not go to TA 50 RLWTF
61	53	3		LANSCE	Bill Boedeker	J. Pieniazek	X04/X06 Cooling Water System Wastewater	Active	H-3	Accelerator	H-3@ 7.33E-8 to 7.67E-8	TA 53 RLWTP	15	1	15	31939	Active	NA	NA	NA	Waste does not go to TA 50 RLWTF
61	53	144, 145	NA	LANSCE	Jim Fraser	J. Pieniazek	WNR Decay Tanks and WNR Drain Flushing Wastewater	Active	H-3	Accelerator	H-3 @2.1E-6 to 1.8E-5	TA 53 RLWTP	4000-8000	10	30,000	32316	Active	NA	NA	NA	Waste does not go to TA 50 RLWTF
61	53	368, 369	NA	LANSCE	Bruce Takala	J. Pieniazek	Target 4 Area Wastewater	Active	H-3	Accelerator	H-3 @5.24E-5 to 7.86E-5	TA 53 RLWTP	50	2	100	31935	Active	NA	NA	NA	Waste does not go to TA 50 RLWTF
61	53	MPF -3S	NA	LANSCE	Dick Werbeck	J. Pieniazek	X02 Cooling Water System Wastewater	Active	H-3	Accelerator	H-3 @3.53E-4 to 4.59E-4	TA 53 RLWTP	750	1	750	31932	Active	NA	NA	NA	Waste does not go to TA 50 RLWTF
61	53	MPF -7		LANSCE	Dick Werbeck	J. Pieniazek	1L Moderator Cooling Water System Wastewater	Active	H-3	Accelerator	H-3 @2.1E-5	TA 53 RLWTP	90	3	270	31933	Active	NA	NA	NA	Waste does not go to TA 50 RLWTF
61	53	MPF -7		LANSCE	Dick Werbeck	J. Pieniazek	1L Reflector Cooling Water System Wastewater	Active	H-3	Accelerator	H-3@ 1.29E-5 to 1.31E-5	TA 53 RLWTP	70	6	420	31938	Active	NA	NA	NA	Waste does not go to TA 50 RLWTF
61	53	MPF -7		LANSCE	Dick Werbeck	J. Pieniazek	1L Target Cooling Water System Wastewater	Active	H-3	Accelerator	H-3@ 3.27E-5 to 3.30E-5	Trucked to TA 53 RLWTP	70	12	840	31943	Active	NA	NA	NA	Waste does not go to TA 50 RLWTF

Table 2-3. Information Database on LANL Tritium and Strontium-90 Waste Generators Discharging to RLWTF (FY 2001)
(From EXCEL database file Table2-3REV3.xls 5/9/01)

FM	TA	Bld	Rm	FACILITY NAME	GENERATOR	WMC	Process Description	Process Status	H-3 or Sr-90	Accel or Reactor Produced	Rad Concentration (Ci/L)	Disposal Path	Avg daily volume gall/day	Estimated discharge Day/yr	Annual Volume Disposed gal/yr	WPF #	WPF Status	Meet new WAC	Load to TA 50 (Ci/yr) H-3	Load to TA 50 (Ci/yr) Sr-90	NOTES
70	16	205	114, 116	WETF	Ward Rupprecht	A. Stadelmaier	Routine Maintenance mop water and wastewater tank effluent sent to on site waste tank	Active	H-3	Reactor	H-3@ 0 to 5 E-4 (recent sample for H-3 = 1.3 E-7 to 5.4 E-7)	TA 53 RLWTP	5 gal batches to tank, 1500 gall (max) discharged from tank	Ongoing discharge to tank; pumped 2-3 /yr	3600-4000 gallons	20420	Active	NA	NA	--	Waste now goes to TA 50 RLWTF Reactor produced H-3 is from Savannah River source. CY 99 volume was 3900 gallons
70	21	155		Tritium Systems Test Assembly (TSTA)	Dick Carlson	A. Stadelmaier	Mopwater, decon of tools and equipment, Cooling Tower Blowdown.	Active	H-3	Reactor	H-3 @ 6.27 E-7	TA 50	40	260	60,000	26183	Active	Yes	0.14	--	The total amount of tritium produced by TA-21 is about 1 Ci/year
70	21	209		Tritium Science and Fabrication (TSFF)			Included above				Included above		Included above					Included above		--	See above
70	21	152	5225		Katherin Elsberry	A. Stadelmaier	Water collected in Sump from maintenance activities, e.g. mop water	Active	H-3	Reactor	H-3@ < 6 E-8	Trucked to TA 50	2000	1	2000	32927	Active	Yes	4.54 E-04	--	
70	33	86	11		H. Lewis Horak	A. Stadelmaier	Mopwater	Active	H-3	Reactor	H3@ 2.E-08 to 3.8E-07 Ci/L	Trucked to TA 53 RLWTP	150 to 165	2	330	30118	Active	NA	NA	--	Discharged to TA 53. Most recent shipment had 55gal @ 477 E-6 Ci/l + 55 gal @585 E-06 Ci/l Previously WPF # 27179
71	59	1	106	Occupational Health	Ed Gonzales	L. Gallegos	Environmental Samples testing for Sr-90; Sr-90 extraction; residual acids discharged to drains.	Active	Sr-90	Other	Sr-90 @ < 1E-09	TA 50	0.25	130	35	31433	Active	No		1.3 E-07	

Table 2-3. Information Database on LANL Tritium and Strontium-90 Waste Generators Discharging to RLWTF (FY 2001)
(From EXCEL database file Table2-3REV3.xls 5/9/01)

FM	TA	Bld	Rm	FACILITY NAME	GENERATOR	WMC	Process Description	Process Status	H-3 or Sr-90	Accel or Reactor Produced	Rad Concentration (Ci/L)	Disposal Path	Avg daily volume gall/day	Estimated discharge Day/yr	Annual Volume Disposed gal/yr	WPF #	WPF Status	Meet new WAC	Load to TA 50 (Ci/yr) H-3	Load to TA 50 (Ci/yr) Sr-90	NOTES
73	35	213	F-11:B 3	Target Fabrication		D. Garcia	Target Assemply Fabrication of small targets containing tritium. No liquid discharge.	Start-up	No liquid discharge	NA	NA	No discharge	0	0	0	NA	NA	NA	0	--	No liquid discharge planned. Process is not near any drains that discharge to the RLWTF.
73	35	213	F-11	Target Fabrication	Robert Reiswig	D. Garcia	Metalography Laboratory - Wet grinding and mechanical polishing of graphite samples with tritium. Previous tritium operations included polishing of stainless steel samples.	Start-up planned for May 2001.	H-3	Reactor	3.6 E-5 Ci/L Based on past processes. Characterization for current process is in progress	TA 50	5	36	180	In progress	In progress	Yes	2.4 E-02		D. Garcia has WPF from new graphite process in progress. Past process was profiled as WPF # 28110 for stainless steel samples.
76	55			NMT Plutonium Facilities		E. McCormick C. Gerth	TA 55 Acid Line (all discharges)		H-3	Reactor	H-3@ 44 E-09 C/L	TA 50	All waste streams are in process of characterizing for H-3. Active waste streams include WPF # 29307, 29047, 29046 totaling 13,500 gall/yr. H-3 content currently not listed on WPF				In progress	Yes	2.20 E-03		H3 is reactor produced, per NMT memo 3.01. Concentrations are from TA 50 Sampling data
76	55			NMT Plutonium Facilities		E. McCormick C. Gerth	Caustic Line (all discharges)		H-3	Reactor	H-3 @ 1200 E-09 C/L	TA 50	All waste streams are in process of characterizing for H-3. Active waste streams include WPF # 27535, 28443, 27623, 29308, 29309, totaling 200 gall/yr. H-3 content currently not listed on WPF				In progress	Yes	9.10 E-04		See above
76	55			NMT Plutonium Facilities		E. McCormick C. Gerth	Industrial Line (all discharges)		H-3	Reactor	H-3@ 1E-09 C/L	TA 50	All waste streams are in process of characterizing for H-3. Active waste streams include WPF 28876 with 1 gall/yr. H-3 content currently not listed on WPF				In progress	Yes	4.0 E-09		See above
76	55			NMT Plutonium Facilities	Wendell Brown	E. McCormick C. Gerth	Special Recovery Line - Classified Waste Stream NO INFO AVAILABLE	Active	H-3	Reactor									TBD		No information available, due to classified nature of process.
76	55			NMT Plutonium Facilities			Tritiated water on mole sieves; generates solid waste discharged to TA 54	Active	H-3	Reactor	NA	TA 54 (Solid Waste)							NA		No disposal to RLW
76	55			NMT Plutonium Facilities			Possible H-3 residue may be leached in aqueous chloride and nitrate discharges.	Active	H-3	Reactor	TBD	TA 50	All waste streams are in process of characterizing for H-3						TBD		Characterization to be completed by NMT
64	54	1009	103	FWO-SWO Decon Facility	Myrna Romero		Water from respirator decon	Active	Sr-90	Other *	Sr-90 @ < 1E-09	TA 50	2000 gall discharge	18 per year (1 discharge per 45 days)	16000	33145	Active	Yes	--	6.1 E-05	Same as WPF 26018. The location of the work has changed from TA 50-185

Table 2-3. Information Database on LANL Tritium and Strontium-90 Waste Generators Discharging to RLWTF (FY 2001)
(From EXCEL database file Table2-3REV3 xls 5/9/01)

FM	TA	Bld	Rm	FACILITY NAME	GENERATOR	WMC	Process Description	Process Status	H-3 or Sr-90	Accel or Reactor Produced	Rad Concentration (Ci/L)	Disposal Path	Avg daily volume gall day	Estimated discharge Day/yr	Annual Volume Disposed gal/yr	WPF #	WPF Status	Meet new WAC	Load to TA 50 (Ci/yr) H-3	Load to TA 50 (Ci/yr) Sr 90	NOTES
66	48	RC-1	(308 E. 19A)	Research Laboratory	B. Martinez, D. Finnegan	R. Petersen	Tritiated Groundwater samples from NTS Groundwater tests	Active	H-3, Sr-90	Not accelerator produced; Reactor Produced "	H3@ 2.0E-8 to 1.0 E-3; Sr-90 < 1 E-9	Trucked to TA-50	5-6 @ 55 gall drums per discharge (275 - 330 gall per discharge)	3-4 times yr	1320 gall	30317	Active	Yes	1.0 E-05 to 5.0	< 5.0 E-06	Volumes range from 5-6 @55 gallon drums per shipment, 4X per year. For FY 00, 3 discharges totaling 1.41 m3 of water. WPF reports H-3 concentration ranges - 2E-8 to 1E-3 for H-3; recent discharge showed H-2:@ 2E-5 to 8.3E-5.9 (330 gall). Past H-3 and Sr-90 user at TA 48 (B Strieelmeier) no longer using isotopes
66	50	185		WCCR Decon Facility	Myrna Romero	L. Abercrombie	Decon water. Included SR-90 waste in the past. Location has moved to TA 54	Moved location								NA					Moved Location, See TA 54
85 ER	21		DP Canyon	ER Site	Roy Bohn	M. J. Winch	ER – Purge Water from Well Development at TA 21	Complete	H-3, Sr-90	Other "	H-3@ 1.3E-10 Sr-90@ 1.0 E-10	TA- 50 (via drain line)	30	1	30 gall	31219	Active	NA	1.5 E-08	1.1 E-8	Concentrations reported Individual activity completed. Future ER activities may be source and may have concerns with WAC
85 ER	21		NA	ER Site	Deba Daymon	M. J. Winch	Decon water from demobilization at ISV	Complete	H-3, Sr-90	Other "	H-3@ 2.0 E-8; Sr-90 @ < 1E-09	TA 50 (trucked)	170	1	170	32772	Active	NA	1.3 E-05	6.4E-07	Individual activity completed. Future ER activities may be source and may have concerns with WAC

Table 2-3. Information Database on LANL Tritium and Strontium-90 Waste Generators Discharging to RLWTF (FY 2001)
(From EXCEL database file Table2-3REV3.xls 5/9/01)

FM	TA	Bld	Rm	FACILITY NAME	GENERATOR	WMC	Process Description	Process Status	H-3 or Sr-90	Accel or Reactor Produced	Rad Concentration (Ci/L)	Disposal Path	Avg daily volume gal/day	Estimated discharge Day/yr	Annual Volume Disposed gal/yr	WPF #	WPF Status	Meet new WAC	Load to TA 50 (Ci/yr) H-3	Load to TA 50 (Ci/yr) Sr-90	NOTES
85 ER	21		Outside	ER Site	Deba Daymon	M. J. Winch	Decon waters from MDA U. No reactor/accelerator produced wastes	Complete	H-3	Other [ix]	H-3 @ < 2.0 E-8	TA 50 (trucked)	50	[v] 1	50	32227	Active	NA	3.8 E-06	--	Individual activity completed. Future ER activities may be source and may have concerns with WAC
85 ER	21		Outside	ER Site	Deba Daymon	M. J. Winch	Decon waters from ER activities at NTISV site	Complete	H-3, Sr-90	Other [x]	H-3 @ < 2.0 E-8; Sr-90 @ < 1E-09	TA 50 (trucked)	10	1	10	32302	Active	NA	7.6 E-07	< 3.8E-08	Individual activity completed. Future ER activities may be source and may have concerns with WAC
85 ER	21		Outside	ER Site	Deba Daymon	M. J. Winch	Sodium silicate, graphite water mixture used during NTISV hot test	Complete	Sr-90	Other [xi]	Sr-90 @ < 1E-09	TA 50 (trucked)	160	1	160	32561	Active	NA	1.2 E-05	< 6.1E-07	Individual activity completed. Future ER activities may be source and may have concerns with WAC

[i] Volume when discharge occurs
[ii] Indicates YES or NO if the process will have a problem meeting the proposed /possible new discharge limits
[iii] Calculated, using maximum concentration and maximum flow rate, based on WPF or Generator information.

[v] WPF does not identify the waste as Accelerator or Reactor produced. Attachment #2 on the WPF lists as "Other" because the waste is from Decontamination operations.
[vi] Attachment #3 on WPF identifies waste as "Other" (not accelerator and not reactor). Conversations with the generator confirmed that the waste was not Accelerator produced; the NTS tritium source for the groundwater waste stream was reported to be reactor produced
[vii] "Other" is identified because the waste is purge or decon water resulting from restoration activities
[viii] Other" is identified because the waste is purge or decon water resulting from restoration activities
[ix] WPF process description specifically notes that the waste does NOT include Accelerator or Reactor produced waste. The waste resulted from restoration activities.
[x] "Other" is identified because the waste is purge or decon water resulting from restoration activities
[xi] "Other" is identified because the waste is purge or decon water resulting from restoration activities

The database in Table 2-3 identifies the tritium and strontium-90 waste streams discharged to the RLWTF based on the current operations and information available during the time of this study. The database includes the following information.

- Location – Identifies the facility management unit (FMU), technical area, building, and room of the process/source. When appropriate, a facility name is provided.
- Generator and WMC – Identifies the generator and the waste coordinator that are responsible for the operation and the waste management.
- Process Information – Including a general description of the process and operational status (e.g., active, planned, future).
- Waste Information, including:
  - — Radionuclides (H-3 or Sr-90) in the waste stream
  - — Identification of the tritium as accelerator or reactor produced
  - — Concentration of H-3 or Sr-90 in the waste stream
  - — Disposal pathway to RLWTF (assumed to be piped to the RLWTF, unless otherwise noted).
  - — Flow and volume
  - — Calculation of the estimated annual load (Ci/year) of the tritium or strontium-90 discharged to the RLWTF from this waste stream. The value shown is a worst case value calculated from the maximum reported flow volume and concentration.
- Information on the waste profile for the waste stream.

2.1 Tritium Waste Generators

2.1.1 TA-21 and TA-16

The Tritium Science and Engineering group of the Engineering Sciences and Applications Division (ESA-TSE) operates the LANL tritium facilities at DP-Site (TA-21), S Site (TA-16) and (TA-3). These facilities conduct tritium research and engineering programs for national security and fusion energy applications.

TA-21 houses the Tritium Systems Test Assembly (TSTA) facility and Tritium Science Fabrication Facility (TSFF) at TA-21. 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.

Tritiated water from TSTA (TA-21-155) and TSFF (TA21-209) are pumped to the TA-21 Waste Treatment Facility (TA-21-257) and subsequently transferred to the TA-50 RLWTF through a cross-country line. The TA 21-257 treatment facility is operated by FWO-WFM/RLW. Based on current survey results, the average tritium levels from TSTA and TSFF facilities are 6.27 E-7 Ci/L with an estimated 0.14 Ci per year discharged to RLWTF. One active WPF is in place for this waste stream. (Benchmark 2001a2).

Historically, TSTA and TSFF were the largest generators of tritium-contaminated waste to the RLWTF (LANL 1998c). The majority of the flow was from cooling tower blowdown that was tritium contaminated. Recent improvements in the cooling towers have eliminated the contamination of the cooling tower water; however the towers are currently still connected to the RLWTF. Plans are to remove the towers from the RLWTF discharge, significantly reducing TA-21's discharge rates.

The TA-21-152 building (also managed by ESA-TSE, FMU 70) generates tritium-contaminated wastewater from routine maintenance (mopwater) in the facility. The facility is not connected to the RLWTF but wastewater is collected in an underground tank that is pumped and trucked to the RLWTF for treatment. Typical tritium concentrations in the wastewater are <6.0E-8 Ci/L. (Benchmark 2000a2)

The TA-21-5 facilities have been transferred to the ER Facility Management Unit (FMU 85). There are no current waste streams discharged to RLWTF, however, future decommissioning efforts will most likely be a future source of tritium to the RLWTF.

The TA-16-205 Weapons Engineering Tritium Facility (WETF) generates tritium contaminated wastewater from mopwater and handwashing processes in the facility. The facility is not connected to the RLWTF; tritium contaminated wastewater is collected in an underground tank that is pumped 2-3 times per year and trucked/transported to the RLWTP at TA 53 for treatment. Previously, the wastewater from the collection tank was transported to the TA 50 RLWTF for treatment; however the waste stream is currently treated at the TA 53 facility. (Benchmark 2000a2). Recent sampling results showed tritium concentrations in the wastewater at 5.4E-7 Ci/L with annual generation of 3600-4000 gallons (Benchmark 2001a3). Operations are expected to increase as TA-21 operations relocate to TA-16-205

and another collection tank may be installed. The tritium operations in the facility are reported as reactor produced.

The TA-3-16 Vandegraph Facility currently has no operations and it is slated for decommissioning. Tritium sources previously used in this facility were moved to the WETF at TA-16-205. Strontium-90 and tritium wastes have been generated as part of decontamination and surveillance activities in the past. As the facility moves into decommissioning, it can be expected to generate Strontium-90 and tritium wastes.

TA-41 houses the former, non-functioning Tritium facility, which is no longer operating. No current or planned waste discharges were identified for this facility.

2.1.2 TA-33-86

TA-33-86, the High Pressure Tritium Facility, is part of FMU 70. There are no ongoing tritium operations in this facility, however, contaminated mop water is routinely generated from cleaning areas that previously handled tritium. The facility is not connected to the RLWTF, and the wastewater is trucked to the TA-53 RLWTP for treatment. One active WPF is in place for this waste stream.

2.1.3 TA-55

The LANL Nuclear Materials Technology division (NMT) operates the TA-55 facilities. TA-55 houses the plutonium complex, which performs plutonium stabilization, manufactures and disassembles weapons components, and performs actinide research. As part of this research, pits are processed through tritium separation processes and tritium wastewater is discharged to the RLWTF.

The TA-55 is connected to the RLWTF by three waste lines: an acid waste line, caustic waste line, and industrial waste line. The industrial waste line feeds directly into the main plant at TA-50, while the acid and caustic waste lines feed to a pretreatment unit in Room 60 of the RLWTF that then leads into the evaporator. There is also a special recovery line from the disassembly of pits that discharges into the RLWTF lines.

In the past, TA-55 was not identified as discharging tritium or strontium-90 to the RLWTF. TA-55 has nine different waste profiles for liquid waste discharge to RLWTF, none of which characterize tritium or strontium 90 in the waste stream. However, tritium has been detected in recent sampling of the TA-55 effluent to RLWTF at concentrations of 44.0 E-09 Ci/L in the acid line, 1200 E-09 Ci/L in the caustic line

and 1E-09 Ci/L in the industrial line. The TA-55 special recovery line is one known source of tritium waste; however, the processes feeding this line are classified and no additional information is available.

In March of 2001, NMT documented to TA-50 that all tritium generated by TA-55 operations is reactor produced. Specific sources/processes contributing to the tritium levels in the acid, caustic, and industrial waste streams are not currently profiled and could not be readily identified. To resolve this problem, TA-55 is in the process of recharacterizing their waste streams and updating their waste profiles to include tritium levels where appropriate. (Benchmark 2001a4).

2.1.4 TA-35-213

The Target Fabrication facility at TA-35-213 is operated by the Materials Science and Technology Division performing precision machining of targets and specialized components for laser and physics tests. The facility is connected to the RLWTF and it is planning (May 2001) to generate one tritium waste stream, reactor produced, for discharge to the RLWTF.

Tritium contaminated wastewater will be generated from the wet grinding and mechanical polishing of graphite samples that contain tritium. The operation is slated to begin in May of 2001. Characterization data for the new process has been collected and a waste profile form is in progress. Previously, stainless steel samples were polished in a similar process that generated tritiated waste at concentrations of 3.6 E-5 Ci/L. (Benchmark. 2001a5)

Target assembly operations in the facility also use tritium. However, the targets are not handled near drains that discharge to the RLWTF and there is no tritium wastewater planned for discharge.

2.1.5 TA-48

The TA-48, Radiochemistry, includes two radiochemistry facilities, TA 48-RC 1 and TA-48 RC 45. Both house laboratories used for assay of biological samples and research activities in materials processing, development, and characterization. The facility is connected to the RLWTF.

Groundwater samples contaminated with H-3 and Sr-90 are generated by TA-48 RC-1 for discharge to the RLWTF. The groundwater samples are collected from the Nevada Test Site and other test sites where groundwater has been tritiated as a result of underground testing. Groundwater monitoring samples are collected each month and returned to TA-48 for sampling and analysis. One drum (55 gallons) is sampled and analyzed and trucked to the RLWTF for disposal. A second 55-gallon drum of groundwater is stored/archived at TA-48 RC-1 (basement). The tritiated wastewater is not accelerator-produced (it is

reactor-produced.) There is one active WPF is in place for the waste stream, with a range of tritium from 2.0E-08 to 1.0E-03. (Benchmark 2000a6,7)

Past surveys showed that TA 48 RC-1 researchers previously generated other tritium waste streams in addition to the waste stream discussed above. These researchers were interviewed for this survey and reported no current or planned use of the material. (Benchmark 2001a8). TA-48 RC 45 is in the process of decontamination and decommissioning, and no current R&D operations are ongoing. (Benchmark 2000a9)

2.1.6 TA-59-1

TA-59, the Occupational Health Laboratory, house laboratories used for assay of biological and environmental samples. The facility is a current generator of Sr-90, but does not currently generate tritium. Strontium-90 is generated from the testing and filtration of environmental samples; the samples are tested for Strontium-90 and then the Strontium is extracted by filtration. Residual acids and liquids are discharged to RLWTF. There is one active WPF for this waste stream.

No generation of tritium was identified. In the past, TA-59 personnel discharged tritium waste calibration standards to the RLWTF at a rate of approximately 10 to 25 E-9 Ci/yr. Accelerator-produced isotopes generated from sample or calibration standards were also discharged from TA-59 at a rate of approximately 1 to 2 E-9 Ci/yr. (LANL 1997). This work is no longer done in-house. (Benchmark 2001a10) Scintillation liquids that are generated at TA-59 are adsorbed and disposed through TA-54.

2.1.7 TA-53

TA-53 facilities include the Los Alamos Neutron Science Center (LANSCE) Division, which operates an accelerator, and the TA-53 RLWTP which is an auxiliary wastewater treatment system used for the treatment of accelerator-produced tritium.

TA-53 operations generate accelerator produced tritiated water from a variety of cooling water systems surrounding the accelerator. These wastewater are all directed to the TA-53 RLWTP where it is treated. Average tritium levels range from 3.9E-8 Ci/L to 6.1E-4 Ci/L. There are 10 active WPFs for these waste streams. None of these waste streams are directed to the TA 50 RLWTF.

The TA-53 RLWTP is operated by the FWO-WFM/RLW and consists of three 30,000-gal storage tanks, two evaporation basins, and the associated transfer pumps, piping, and instrumentation. Wastewater is collected from drains throughout TA-53 and the Lujan Center/WNR facility. In addition, waste may be

transported to the RLWTP by tanker truck or container from other Laboratory facilities. Limits on radioactivity for discharge to TA-53 are set by the LANL WAC, TA-53 Radioactive Liquid Waste Treatment Plant Criteria. The current limit for tritium at TA-53 is 3.5E-3 Ci/L.

The TA 53 operations have always had their own treatment facility for accelerator produced wastes and the waste streams treated at the TA 53 RLWTP are not and have never been directed to the TA-50 RLWTF. There are no physical connections between the two treatment facilities, waste collection pipelines or discharge lines and the physical separation and topography of the area make any past connections between the two waste pipelines or collection systems improbable.

2.1.8 Environmental Restoration and Decommissioning Sites

Liquid wastes from Environmental Restoration (ER) and decommissioning sites are a current source of both H-3 and Sr-90 for the RLWTF from decontamination operations, wash down, and purge water from ground water wells where tritium is known to exist. Wastes from these sources are properly characterized on WPFs on a case by case basis. Currently, there are 4 active waste profiles for tritium contaminated wastewater discharging to the RLWTF.

2.2 Strontium-90 Waste Generators

The strontium-90 generators are the Occupational Health Laboratory at TA-59, TA-21 environmental restoration sites, TA-48 Radiochemistry Facilities, and TA-54 lead decontamination operations.

2.2.1 TA-59-1

The Occupational Health Laboratory at TA-59 generates strontium-90 from the testing and filtration of environmental samples. Samples are tested for Strontium-90 and then the Strontium is extracted by filtration. Residual acids and liquids are discharged to RLWTF. There is one active WPF for this waste stream. The strontium-90 is profiled at < 1E-9 Ci/L, with less than 1 liter per day (35 gall/yr.) discharged. Benchmark 2001a10).

2.2.2 TA-48

The TA-48 groundwater samples discussed in section 2.1.3 (containing H-3) are also contaminated with strontium-90 in concentrations less than 1E-9 Ci/L. The Sr-90 waste is characterized on an active WPF. No strontium-90 work is ongoing or is planned in the TA-48- RC-45 facility that is undergoing decontamination.

2.2.3 TA-54- Decontamination Operations

Decontamination operations conducted at TA-54 (the size reduction and lead decontamination facilities) generate strontium-90 discharges. One active WPF is in place for this waste stream, which currently generates less than 1E-9 Ci/L strontium-90. (The process was previously located at TA-50-185). (Benchmark 2001a11)

2.2.4 Environmental Restoration and Decommissioning Sites

Liquid wastes from ER sites (at TA-21) are a source of strontium-90 for the RLWTF. Sources include purge water and decontamination activities. There are 4 current WPFs for these processes showing strontium-90, with concentrations at less than 1E-9 Ci/L for each.

2.3 Waste Profiles

LANL policy and the RLWTF WAC mandates waste streams discharged to the RLWTF must be identified and characterized on a WPF. The WPF, prepared by the generator and the facility's WMC, must adequately describe the chemical and radiological characteristics of the waste stream and be approved by Solid Waste Operations (FWO-SWO) and FWO-WFM/RLW.

The status of waste profiles for the primary tritium waste generators (identified by this study) are listed in Table 2-3. Copies of all active WPFs for waste streams containing tritium or strontium-90 are provided under separate cover. Profiles that are not currently in place and are needed for tritium waste streams include:

- TA-55 – Contact is Andy Montoya. The current TA-55 waste profiles did not identify tritium as a contaminant. WPFs for all waste streams discharging to the RLWTF from TA-55 are being updated to include characterization for tritium, where appropriate.

- TA-35-213: Contact is Daryl Garcia. Characterization information was collected early in 2001 for these waste streams. Profiles are in process of being completed for submittal to RLWTF.

2.4 Generators Affected by Reduced Discharge Limits for Tritium and Strontium-90

As part of the survey, the waste generators were asked if they would be adversely impacted if the RLWTF waste acceptance criteria limited their tritium discharge to 2.0E-8 Ci/L for reactor produced tritium.

- Waste generators at TA-21 (TSTA[TA-21-155] and TSFF[TA-21-209]) will have difficulty achieving the tritium discharge limit because their mop water is heavily concentrated with tritium from cleaning the facility.

- Waste generators at TA-16-205 (WETF) will also have will have difficulty achieving the tritium discharge limit due to highly contaminated mop water.

- TA-35-213 (Target Fabrication) will have difficulty achieving the tritium discharge limit.

- TA-55 operations still need to identify and characterize the tritium levels in their waste streams. Current sampling information shows that operations discharging into the acid, caustic, and industrial waste lines will not meet the 2.0E-8 Ci/L limit.

- TA-53 generators of accelerator-produced tritium are unaffected because their wastes are treated at the TA-53 RLWTP, which does not have the 2.0E-8 Ci/L limit on tritium. Mopwater from TA-33 is also routed to the RLWTP, so its generators are not affected.

While the seven identified strontium-90 waste streams are below the current allowable discharge level established by the LANL WAC (1E-07 Ci/L), none could quantify if they would have difficulty meeting a reduced discharge level of 8 E-12 Ci/L. This is because the Sr-90 waste streams were characterized at concentrations of at equal to or less than 1E-9 Ci/L, which is the current concentration level of concern identified on the Waste Profile Forms. Once the strontium-90 levels are measured with more precision, some of the Sr-90 generators may be able to comply with the limit. One profile for purge water (WPF # 31219) reported actual sampling results showing strontium-90 at 1 E-10 Ci/L, indicating that purge water discharges may be above the future discharge limit.

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APPENDIX A - TARGET LIST OF LANL FACILITIES SURVEYED

Sites Surveyed

TA-3-16
TA-3-29
TA-3-34
TA-3-66
TA-3-141
TA-3-1698
TA-9-30
TA-16
TA-21-5
TA-21-152
TA-21-155
TA-21-209
TA-33-86
TA-35-2
TA-41
TA-48
TA-50-1
TA-51-73
TA-55
TA-59

Target List of Potential Tritium and Sr-90 Generators

FMU	LOCATION			PROPOSED CONTACT	PRELIMINARY INFO FROM DATA SOURCES (reviewed to identify potential generators)					YR 2000-2001 STUDY FINDINGS		
	TA	Bldg	Facility		ESH-17 Air Data	SWEIS - 1999 (LANL 2000)	WPF, WDR Searchs (Benchmark 2001*)	Comments	TA 50 Data	Contact	Generator (Y/N)	Status
	3	16	VadeGraph facilaity			IBF Survey/Vandergraph	SR-90 (Solid Waste WPF 27637))	1998 Survey shows Sr-90 generation			No	Tritium sources previously used in this facility moved to the WETF at TA 16-205 Sr-90 H-3 generated as part of decon activities
65	3	29	CMR	WMC:Rick Starowski, Joe Gonzales		Tritiated water and gas as negilgable	LIQUID WPF # 31085, Oil with 3H	Several SOLID WPFs# from D&D activities		Rick Starowski	No	Data Collected, tour completd 3/20/01
73	3	66	Sigma	WMC: Daryl Garcia	D-38 = RAM					Daryl Garcia	No	Tour/meeting completed 1/17/2001, NFA
73	3	141	MSL - Annex	WMC: Daryl Garcia						Daryl Garcia	No	Tour/meeting completed 1/17/2001, NFA
73	3	1698	MSL	WMC: Daryl Garcia						Daryl Garcia	No	Tour/meeting completed 1/17/2001, NFA
73	35	213	T Fab	WMC: Daryl Garcia				1998-99 Surveys showed no information		Daryl Garcia	YES	3H Generator Tour/meeting completed 1/17/2001, 2 waste streams identified WPF info being collected, WPF in preparation
77	3	216	Weapons Test Support	MC Al Stadelmeir				1998-99 Survey showed 3H generation		Al Stadelmeir		Tour 4/2/01
75	35	2	P-Division (P-24)	FM P Bousilini J Jennings WMC Marc Gallegos						G Linzey	No	Per P24 (G Linzey) no P24 3H discharges
	9	30	TA 9 - 30	Joe Richardson (new contact pending)			H3 - Solid Waste #32324	Contaminated Equipment			no	Not connected to RLW, no WPFs, no targe info, NFA
70	16	205	Weapons Engineering Test Facility (WETF)	WMC Albert Stadelmaier				1998-99 Survey showed 3H generation		Al Stadelmeir	YES	3H GENERATOR Tour completed 4/3/01 WPF data collection ongoing
70	21	155	TSTA	WMC Albert Stadelmaier	H3= 82Ci (1998), 17 ci/yr SWEIS		Solid WPF # 31435, 28421, 31442, 31441, 26317	1998-99 Survey showed 3H generation	YES - gallons in storage	Al Stadelmeir	YES	3H GENERATOR Tour completed 4/3/01 WPF data collection ongoing
70	21	209	TSFF	WMC Albert Stadelmaier	H3=380 Ci (1998), 92 ci/yr SWIS		Solid Waste - 26241, 26872, 28378,29252, 29253, 30847, 31868	R&D to determine 3H levels in targets in Accelerator Production of Tritium	Yes	Al Stadelmeir	YES	3H GENERATOR Tour completed 4/3/01 WPF data collection ongoing
&D)	21	257	Treatment Plant	FM M Salazar (ER/D&D), Contacted Al Stadelmaier				Possible SR-90 from Decon?		Al Stadelmeir	YES	as part of TA 21 facilities
&D)	21	5, 116	Lab	FM= M Salazar ER/D	Sr-90 (1997)		Sr Solid #27268, H3 Liquid (Sump water) # 32927, ER Water WPF #31219, 32227, 32302, 32561, 32772,	1998-99 Survey showed Sr-90 generation				NFA, In safe shut down modes past Sr-90 from soil/water samples

Target List of Potential Tritium and Sr-90 Generators

FMU	LOCATION			PROPOSED CONTACT	PRELIMINARY INFO FROM DATA SOURCES (reviewed to identify potential generators)					YR 2000-2001 STUDY FINDINGS		
	TA	Bldg	Facility		ESH-17 Air Data	SWEIS - 1999 (LANL 2000)	WPF, WDR Searchs (Benchmark 2001*)	Comments	TA 50 Data	Contact	Generator (Y/N)	Status
70	41	4	Old Tritium Facility	WMC Albert Stadelmaier	H3=36Ci (1998)		Solid Waste WPF; Some liquid WPF (old/expired)	Sr-90 Contaminated Trash		Al Stadelmeir		Facility no longer operating possible ER generator site NFA Met with WMC 4/3/2001
70	33	86	TA 33-86	H Lewis Horak (WMC= Al Stadelmaier)	H3=65Ci (1998)		Liquid WPF, # 30018 (active) 27179 (1998)	Tritiated MopWater		Al Stadelmeir	YES	3H Generator Tour Completed 4/3/2001 , WPF collected.
66	48	1	Research Lab	WMC Robyn Peterson	H3, Sr-90		H3 Liquid WPF # 30317, 22921,20060, 21426	Tritiated Water from Condenced water from Hot Cells , Adsorbed solids. Past survey showed 3H and Sr-90 isotope use		Robyn Peterson, Loren Abercrombie	YES	3H Generator Reactor produced Tour Completed 12/19/2000. WPF collected.
66	48	45	Research Lab	WMC: Robyn Peterson			Sr-90 Liquid WPF # 20014 from hot cells			Robyn Peterson; Loren Abercrombie	No	12/19/2000 Met with R Steimer and L Abercrombe, No 3H or Sr-90 use Nor future use planned Decommisioning ongoing NFA
64	50	1	RLW Treatment Facility								No	
66	50	185	Former Location of WCCR - Deon Facility	L. Abercrombe/M. Romero	Sr-90 (Bldg 185, 1997)	Accel Survy = Tr @ 20 nCi/l		Sr from Decon Trailer		Loren Abercrombie	No	Data collected, tour completed 1/05/2001 , NFA
64	50	37	RamRod	L. Abercrombe/G. Peters				RCT reported no Sr or 3H		Loren Abercrombie	No	Data collected tour completed 1/05/2001 , NFA
61	53		LANCE		H3= 3.5 Ci (1998)		Solid WPF					Tour completed 3/20/2001. WPF being collected
64	54		Decontaminatio n/Waste Operations		H3, Sr-90			From Decon Trailer		Myrna Romero	(Intermittent)	Data collected, M Romero 3/2000 NFA
76	55		NMT Plutonium	WMC Connie Gerth	H3=12 Ci (1998), .31 Ci/yr SWEIS	Yes	None shown		Sampling data shows 3H	Connie Gerth, Andy Montoya	Yes	[illegible]ERERATOR Tour/meeting [illegible]001 Data in process of collection, characterization of current WPFs to include 3H planned
79	59	1	Occupational Health Lab	WMC L Gallegos	H3, Sr-90		Solid Waste	Tritiated Water in past Accelerated Prodcued ; analytis of TA 53 samples (usage survey)		Lucas Gallegos	Nc	Data collected, tour completed NFA
	51	73					Liquid Waste WPF # 28592	Tritium in Toluen			No	WPF Expired/ no further discharges/NFA

APPENDIX B – WASTE PROFILE FORM DETAILS

Refer to Excel Spreadsheet titled AppendixB.xls.

Summary of WPF Information for Profiled Wastewaters Discharging to TA 50 Containing Sr-90 or 3H
(For last 5 years)

TA	Bldg	Room	Generator Name	WMC	WPF #	WPF Status	Expiration Date	Process Description	Concentration H-3 (Ci/L) (ref: WPF unless noted)	Concentration Sr-90 (Ci/L) (Ref WPF unless noted)	Other Isotopes	Accelerator or Reactor Produced	TA 55 Info (Acid,Caustic,Indus Line)	Avg Daily Flow (gal/day)	Max Daily Flow	# days	Total Vol per Year (gal)	Comment
21	Outside (a)	n/a	Debra Daymon	Mary Jane Winch	32227	Active	Feb-01	Decon waste from MDA U produced waste. No reactor accelerator waste	H-3@ <2.0 E-8		Ac-74, Be-7, Ce-141, Cs-134, Cs137, Co56, Co-57, Co-58, Co-60, Eu-152, I-133, Mn-52, Mn-54, Ra-226 + 228, Rb-83	ER other	none	50 gallons/day	50 gallons/day	1	50 gallons	
21	Outside (a)	n/a	Debra Daymon	Mary Jane Winch	32302	Active	Mar-01	Decon water form NTISV use	H-3@ <2.0 E-8	Sr-90@<1.0 E-9	Ac-74, Be-7, Ce-141, Cs-134, Cs-137, Co-56, Co-57, Co-58, Co-60, Eu-152, I-133, Mn-52, Mn-54, Ra-226 + 228, Rb-83, Rb-84, Sc-46, Sc-48, Se-75, Na-22, Sr-85, Sr-89, Sr-90, Sn-113, V-48, Y-88, Zn-65, Am-241, Pu-238, Pu-239, U-234	ER other	none	10 gallons/day	10 gallons/day	1	10 gallons	
21	Outside (a)	n/a	Debra Daymon	Mary Jane Winch	32561	Active	May-01	Water mixture used during NTISV hot test		Sr-90@<1.0 E-9	Pu-239, U-235, U-238Sr-85 Sr-90, Y-88, U-234	ER other	none	160 gallons/day	160 gallons/day	1	160 gallons	
21	Outside (a)	n/a	Debra Daymon	Mary Jane Winch	32772	Active	Jul-01	Decon water from demob operations at ISV	H-3@ <2.0 E-8	Sr-90@<1.0 E-9	AM-241, Pu-238, Pu-239, U-234, U-238	ER other	none	170 gallons/day	170 gallons/day	1	170 gallons	
21	152	5225	Katheryn Elsberry	Albert Stadelmaier	32927	Active	Sep-01	Water collected in sump	H-3@ <6 E-8		H-3	Reactor Produced	none	2000 gallons/day	2000 gallons/day	1	2000 gallons	
21	155-299	n/a	Dick Carlson	Al Stadelmaier	26183	Active	May-01	Mopwater, decon of tools and equipment, cooling tower blowdown	H-3@ 6.27E-7		H-3	Reactor produced	none	40 gallons/day	200 gallons/day	260	60,000 gallons	
54	1699	103	Myrna Romero	Loren O Abercrombie	33145	Active	Oct-01	Waste water from the decontamination of respirators		Sr-90@<1.0 E-9	Cs-137, Co-60, Sr-90, Am-241, Pu-238, Pu-239	other	none	44 gallons/day	2000 gallons/day	8	16000 gallons	
[illegible]	205-248	114, 116, 116a, 120, 122, 124, 126	Ward H Rupprecht	Al Stadelmaier	20420	Active	Apr-01	Routine Maintenance mop water and wastewater tank effluent	0 to 5 E-4 on WPF (recent sample results 1.3E-7 to 5.4 E-7)		H-3	Reactor produced	none	5 gallon batches sent to tank	1500 gallons/day	2 to 3	3600 to 4000 gallons	
33	[illegible]	11	Henry Hornik	Albert Stadelmaier	30118	Active	Jan-02	Mopwater effluent	low 2.0 E-8 H-3 high 3.8 E-7			Reactor	none	150 gallons/day	165 gallons/day	2	330 gallons	Per Generator, recent shipment had 55gal @ 477 E-6 Ci/L + 55 gal @ 585 E-06 Ci/L. Previously WPF # 27179
2	[illegible]	[illegible]	Roy Bohn	Roy Bohn	31219	Active	Oct-01	Purge water from wells	H-3@ <2.0 E-8		Cs-137	other	Industrial Waste Line	30 gallons/day	30 gallons/day	1	30 gallons	

Summary of WPF Information for Profiled Wastewaters Discharging to TA 50 Containing Sr-90 or 3H
(For last 5 years)

TA	Bldg	Room	Generator Name	WMC	WPF #	WPF Status	Expiration Date	Process Description	Concentration H-3 (Ci/L) (ref. WPF unless noted)	Concentration Sr-90 (Ci/L) (Ref WPF unless noted)	Other Isotopes	Accelerator or Reactor Produced	TA 55 Info (Acid,Caustic,Indus Line)	Avg Daily Flow (gal/day)	Max Daily Flow	# days	Total Vol per Year (gal)	Comment
48	RC-1	308 east 19A	Bennie Martinez	Robyn Petersen	30317	Active	Apr-01	Tritiated Groundwater	2E-8 to 1E-3 (per WPF) (2E-5 to 8 3E-5 reported in Y2000 discharge)	Sr-90@<1 0 E-9	As-74, Be-7, Ce-141, Cs-134, Cs-137, Co-56, Co-57, Co-58, Co-60, Eu-152, I-133, Mn-52, Mn-54, Ra-226 + 228, Rb-83, Rb-84, Sc-46, Sc-48, Se-75, Na-22, Sr-85, Sr-89, Sr-90, Sn-113, V-48, Y-88, Zn-65, Am-241, Pu-238, Pu-239, Pu-240, U-234, Eu-154, Eu-155, Sb-125	other	none	55 gallons/day	62 gallons/day	3 to 4 discharge per yr	744 gal/yr per WPF, 1320 gal/yr per Generator	Per Generator for current information Volume is 330 gallons @ 4 times per year 1320 gal/yr
55	PF-4	208	Dennis Padilla	E McCormack	29308	Active	Aug-01	Caustic water discharge from experiments	None listed (update in process)		Am, Pu	other	Caustic Line	1 Liter/day	1 Liter/day	200	200 Liters	
55	PF-4	429 and 42	Timothy Hayes	E McCormack	29309	Expired	Aug-99	Caustic filtration from precipitate	None listed (update in process)		Am, Pu	other	Caustic Line	50 Liters/day	200 Liters/day	100	5000 liters	
55	PF-4	401	Timothy Hayes	E McCormack	29307	Active		Acid distillates from evaporator	None listed (update in process)		Am, Pu	other	Acid Line	500 Liters/day	1000 Liters/day	100	50,000 liters	
55	PF-4	124	John Garg	Lorenzo Trujillo	27535	Active		decon of stainless steel	None listed (update in process)		Am, Pu	other	Caustic Line	3 Liters/day	3 Liters/day	1	3 Liters	
55	3	159	Mary Ann Abeyta	Susan S Ramsey	29047	Active		Unused Plasma standard	None listed (update in process)		U	other	Acid Line	15 gallons/day	15 gallons/day	1	15 gallons	
55	3	159	Mary Ann Abeyta	Susan S Ramsey	29046	Active		Unused Plasma standard	None listed (update in process)		Th	other	Acid Line	15 gallons/day	15 gallons/day	1	15 gallons	
55	PF-4	206	John Brown	Susan S Ramsey	28876	Active		Spent Electrolyte from equipment	None listed (update in process)		Pu	other	Industrial	0 5 liters/day	0 5 liters/day	1	0 5 liters	
55	PF-4	208	Dennis Padilla	Susan S Ramsey	28443	Active	Apr-01	Process waste	None listed (update in process)		Pu, U	other	Caustic Line	16 liter/day	16 liters/day	3	50 liters	
55	PF-4	124	John Berg	Lorenzo Trujillo	27623	Active		decon of stainless steel	None listed (update in process)		Am, Pu	other	Caustic Line	2 0 liters/day	2 0 liters/day	1	2 liters	
48	1	Hotcells	R Heaton	M Roybal	22921	Expired	Feb-99	Medical Isotope Production Once through condenser water, distillates, and wash down water from Hot Cells (SOP # CST-SOP-015	0 to 3E-06 C 1		Yes							INFORMATION From 1997 Accel Survey
48	4	all	Paul Dixon	M Roybal	20114	Expired	Feb-97	Process samples from Geologic sample for actinide and fission purification and analysis Rad spikes uses		0 to 1 E-06 C/L								INFORMATION From 1997 Accel Survey
48	1	various	S King	M Roybal	20060	Expired	Feb-97	Rad sorption and soil wasting experiments Rad nuclends include Sr		0 to 2 E-06 C/L								INFORMATION From 1997 Accel Survey
48		312	[illegible] Cotter	M Roybal	21426	Expired	Jun-97	Solutions from R&D from chelating and scintilators	0 to 3 E-06 C/L	0 to [illegible] C/L								INFORMATION From 1997 Accel Survey

Summary of WPF Information for Profiled Wastewaters Discharging to TA 50 Containing Sr-90 or 3H.
(For last 5 years)

TA	Bldg	Room	Generator Name	WMC	WPF #	WPF Status	Expiration Date	Process Description	Concentration H-3 (Ci/L) (ref: WPF unless noted)	Concentration Sr-90 (Ci/L) (Ref WPF unless noted)	Other Isotopes	Accelerator or Reactor Produced	TA 55 Info (Acid,Caustic,Indus Liner)	Avg Daily Flow (gal/day)	Max Daily Flow	# days	Total Vol per Year (gal)	Comment
46	1	19A	D Finnegan	R Petersen	31102 (solid waste WPF)	Active		H-3 Scintillation counting LIQUID WASTE ADSORBED, DISPOSED AS SOLID	H-3									No discharge to RLWTF Solid waste only
48	1	308	D Ware	R Petersen	solid waste WPF	Active		H-3 Injection tracer for groundwater samples LIQUID WASTE ADSORBED, DISPOSED AS SOLID	H-3									No discharge to RLWTF Solid waste only
21	116		P Lafrate	P Terp	26164	Expired	May-98	Spent liquid scintillation cocktail	3 1E-08 to 4 7 E-08 C/L	2 2 E-08 to 3 5 E-08 C/L				5 gal	5 gal	8		INFORMATION From 1997 Accel Survey
21	116		C Polskamp			Expired		Safe Shut down, soil and water samples		Sr-90			NA	NA			0	INFORMATION From 1997 Accel Survey No further discharges
3	16					Expired		Ion Beam, Safe Shutdown	H-3			Reactor	NA				0	INFORMATION From 1997 Accel Survey No further discharges
51	73				28592	Expired		Tritium in toluene	H-3				NA				0 2 gal	Information from CWDR search, No further discharges
59	1			L Gallegos	31433			Scintillation cocktail Sr-90 removed by filtration Goes to TA 54		Sr-90								

VOLUME 2

WASTE PROFILE FORMS FOR TRITIUM AND STRONTIUM-90 WASTE STREAMS (PROVIDED UNDER SEPARATE COVER)