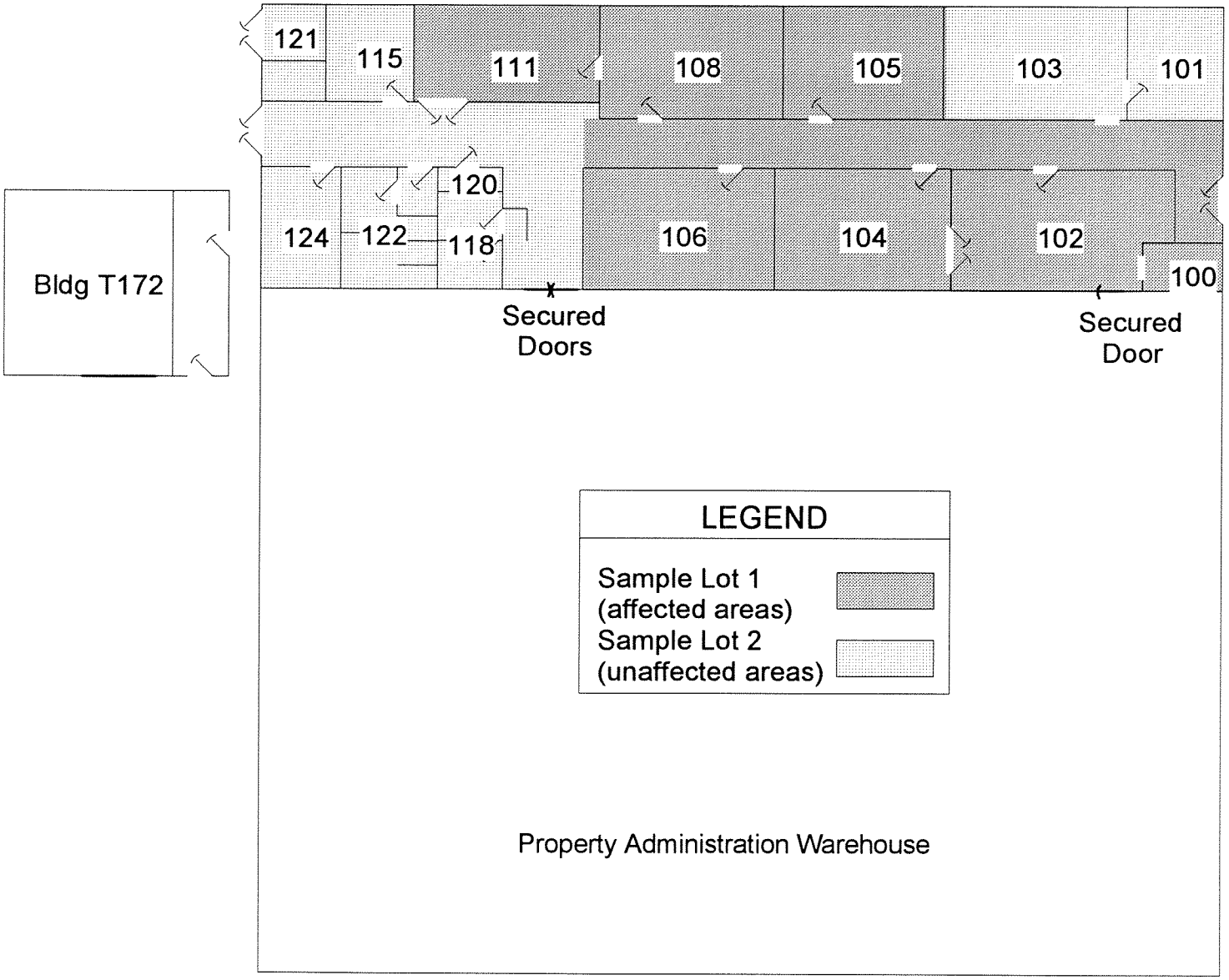
FINAL RADIOLOGICAL SURVEY DATA PACKAGE

for

Building 011
Santa Susana Field Laboratory

28 July 1998

Compiled by James G. Barnes


121
115
111
108
105
103
101
120
124
122
118
106
104
102
100
Bldg T172
Secured Doors
Secured Door
LEGEND
Sample Lot 1 (affected areas)
Sample Lot 2 (unaffected areas)
Property Administration Warehouse

BUILDING 11 SURVEY DATA

DATA PACKAGE #1

QUALITATIVE SURVEY OF BUILDING SURFACES PRIOR TO DEMOLITION

Survey data in this package consists of the results of the final qualitative survey of Building 11 surfaces prior to demolition. The qualitative survey consists of beta / alpha frisk (using a portable countrate meter) of 100 % of the surface area of the affected areas in Building 11.

The surveys were performed using the following field response criteria for countrate meters:

Fixed:	Beta:	Less than 5,000 dpm/100 cm^2
	Alpha:	Less than 5,000 dpm/100 cm^2
Removable:	Beta:	Less than 100 dpm/100 cm^2
	Alpha:	Less than 20 dpm/100 cm^2

These surveys demonstrate that the Building was in compliance with Rocketdyne release limits prior to the demolition of the interior.

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 101

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α / Direct 1000	dpm/100cm2 β / Direct 1000		
n/a	12-2-96	12-2-96	100% of north, south, east , west walls and 100% of floor		NDA	NDA*		
n/a	12-11-96	12-11-96	100% of ceiling and 100% of structural surfaces		NDA	NDA*		

APPROVED
BY: [signature] DATE 2/20/98

COMMENTS: ** NDA β = lowest bkg. + 100 cpm
***NDA α = 2 times bkg.

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	381729	354927		
CALIBRATION DUE	1-24-97	1-24-97		
BACKGROUND	0-2 cpm***	60-80 cpm**		
EFFICIENCY	13.7%	13.5%		
COUNT TIME	n/a	n/a		

SAMPLED BY: Richard Dechamps / Richard Harcombe
ANALYZED BY: Richard Deschamps [signature]

FORM 732-A REV 1-91

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Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 106

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α Direct 1000	dpm/100cm2 β Direct 1000		
n/a	12-12-96	12-12-96	100% of north,south, east, west walls		NDA	NDA *		
n/a	12-13-96	12-13-96	100% of ceiling and floor and 100% of structurial surfaces *		NDA	NDA *		

REVIEWED 2/20/98

COMMENTS: ** NDA β = lowest bkg + 100 cpm
*** NDA α = 2 times bkg
Rm106 filter found in ceiling sample taken 12-11-96
sent for isotopic I.D. * includes inside of Telephone closet
Richard Deschamps *

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	381729	354927		
CALIBRATION DUE	1-24-97	1-24-97		
BACKGROUND	0-2 cpm ***	60-80 cpm **		
EFFICIENCY	.13.7 %	13.5 %		
COUNT TIME	n/a	n/a		

SAMPLED BY: Richard Harcombe
ANALYZED BY: Richard Deschamps

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Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 104

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α Direct 1000	dpm/100cm2 β Direct 1000		
n/a	12-14-96	12-14-96	100% of north,south, east, west walls		NDA	NDA *		
n/a	12-16-96	12-16-96	100% of ceiling and floor and 100% of structurial surfaces		NDA	NDA *		

2/20/98

COMMENTS: ** NDA β = lowest bkg + 100 cpm
*** NDA α = 2 times bkg

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	381729	354927		
CALIBRATION DUE	1-24-97	1-24-97		
BACKGROUND	0-2 cpm ***	60-80 cpm **		
EFFICIENCY	.13.7 %	13.5 %		
COUNT TIME	n/a	n/a		

Richard Deschamps *

SAMPLED BY: Richard Harcombe ANALYZED BY: Richard Deschamps

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Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 102

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α Direct 1000	dpm/100cm2 β Direct 1000		
n/a	12-16-96	12-16-96	100% of north,south, east, west walls		NDA	NDA *		
n/a	12-17-96	12-17-96	100% of ceiling and floor and 100% of structurial surfaces		NDA	NDA *		

2/20/98

COMMENTS: ** NDA β = lowest bkg + 100 cpm
*** NDA α = 2 times bkg

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	381729	354927		
CALIBRATION DUE	1-24-97	1-24-97		
BACKGROUND	0-2 cpm ***	60-80 cpm **		
EFFICIENCY	.13.7 %	13.5 %		
COUNT TIME	n/a	n/a		

Richard Deschamps *

SAMPLED BY: Richard Harcombe ANALYZED BY: Richard Deschamps

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Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 100

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α Direct 1000	dpm/100cm2 β Direct 1000		
n/a	12-17-96	12-17-96	100% of north,south, east, west walls		NDA	NDA *		
n/a	12-17-96	12-17-96	100% of ceiling and floor and 100% of structurial surfaces		NDA	NDA *		

REVIEWED BY: [illegible] DATE 2/20/98

COMMENTS: ** NDA β = lowest bkg + 100 cpm
*** NDA α = 2 times bkg

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	381729	354927		
CALIBRATION DUE	1-24-97	1-24-97		
BACKGROUND	0-2 cpm ***	60-80 cpm **		
EFFICIENCY	.13.7 %	13.5 %		
COUNT TIME	n/a	n/a		

Richard Deschamps *

SAMPLED BY: Richard Harcombe ANALYZED BY: Richard Deschamps

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Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM Hallway (EAST) 6PM

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α Direct 1000	dpm/100cm2 β Direct 1000		
n/a	12-18-96	12-18-96	100% of north,south, east, west walls		NDA	NDA *		
n/a	12-19-96	12-19-96	100% of ceiling and floor and 100% of structurial surfaces		NDA	NDA *		

4/20/98

COMMENTS: ** NDA β = lowest bkg + 100 cpm
*** NDA α = 2 times bkg
Hallway samples of ducting and samples of dust sent for isotopic. 12-19-96

Richard Deschamps *

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	381729	354927		
CALIBRATION DUE	1-24-97	1-24-97		
BACKGROUND	0-2 cpm ***	60-80 cpm **		
EFFICIENCY	.13.7 %	13.5 %		
COUNT TIME	n/a	n/a		

SAMPLED BY: Richard Harcombe ANALYZED BY: Richard Deschamps

FORM 732-A REV 1-91

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 103

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α Direct 1000	dpm/100cm2 β Direct 1000		
n/a	11-25-96	11-25-96	100% of north, south, east , west walls and 100% of floor		NDA	NDA*		
n/a	11-25-96	11-25-96	100% of ceiling and 100% of structural surfaces		NDA	NDA*		

REVIEWED 2/20/98

COMMENTS: ** NDA β = lowest bkg. + 100 cpm
***NDA α = 2 times bkg.

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	381729	354927		
CALIBRATION DUE	1-24-97	1-24-97		
BACKGROUND	0-2 cpm***	60-80 cpm**		
EFFICIENCY	13.7%	13.5%		
COUNT TIME	n/a	n/a		

SAMPLED BY: Richard Dechamps Richard Harcombe
ANALYZED BY: Richard Deschamps

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Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 105

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α / Direct 1000	dpm/100cm2 β / Direct 1000		
n/a	11-20-96	11-20-96	100% of north,south, east, west walls		NDA	NDA *		
n/a	11-20-96	11-20-96	100% of ceiling and floor and 100% of structurial surfaces		NDA	NDA *		

REVIEWED BY [illegible] DATE 2/24/98

COMMENTS: ** NDA β = lowest bkg + 100 cpm
*** NDA α = 2 times bkg

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	381729	354927		
CALIBRATION DUE	1-24-97	1-24-97		
BACKGROUND	0-2 cpm ***	60-80 cpm **		
EFFICIENCY	.13.7 %	13.5 %		
COUNT TIME	n/a	n/a		

Richard Deschamps *

SAMPLED BY: Richard Harcombe ANALYZED BY: Richard Deschamps

FORM 732-A REV 1-91

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 108

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α Direct 1000	dpm/100cm2 β Direct 1000		
n/a	11-14-96	11-14-96	100% of west wall and 100% of east walll		NDA	NDA*		
n/a	11-15-96	11-15-96	100% of north wall and 100% of east wall		NDA	NDA*		
n/a	11-18-96	11-18-96	50% of floor and 100% of structural surfaces		NDA	NDA*		
n/a	11-19-96	11-19-96	50% of floor and 100% of ceiling		NDA	NDA*		

2/20/98

COMMENTS: ** NDA β = lowest bkg. + 100 cpm
***NDA α = 2 times bkg.

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	381729	354927		
CALIBRATION DUE	1-24-97	1-24-97		
BACKGROUND	0-2 cpm***	60-80 cpm**		
EFFICIENCY	13.7%	13.5%		
COUNT TIME	n/a	n/a		

SAMPLED BY: Richard Dechamps / Richard Harcombe
ANALYZED BY: Richard Deschamps

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Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 111

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α Direct 1000	dpm/100cm2 β Direct 1000		
n/a	11-5-96	11-5-96	100% of west wall and 67% of south wall		NDA	NDA*		
n/a	11-6-96	11-6-96	100% of north wall		NDA	NDA*		
n/a	11-7-96	11-7-96	50% of east wall and 33% of south wall		NDA	NDA*		
n/a	11-8-96	11-8-96	50% of east wall and 33% of floor		NDA	NDA*		
n/a	11-11-96	11-11-96	67% of floor and 100% of ceiling and structural surfaces		NDA	NDA*		

COMMENTS: ** NDA β = lowest bkg. + 100 cpm
***NDA α = 2 times bkg.

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	381729	354927		
CALIBRATION DUE	1-24-97	1-24-97		
BACKGROUND	0-2 cpm***	60-80 cpm**		
EFFICIENCY	13.7%	13.5%		
COUNT TIME	n/a	n/a		

SAMPLED BY: Richard Harcombe
ANALYZED BY: Richard Deschamps

FORM 732-A REV 1-91

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Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM West Hallway

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α / Direct 1000	dpm/100cm2 β / Direct 1000		
n/a	10-9-96	10-9-96	10% of walls, floor, ceiling, light fixtures, horizontal surfaces,		NDA	NDA		
			and other structural surfaces					

2/20/98

COMMENTS:				
	INSTRUMENT	Ludlum 12 α	Ludlum 12 β	
	IDENTIFICATION	355661	354927	
	CALIBRATION DUE	10/20/96	~~9/27/96~~ GRM 10-20-96	
	BACKGROUND	2 cpm	80 cpm	
	EFFICIENCY	7.5 dpm/cpm	7.4 dpm/cpm	
SAMPLED BY: G. Bell ANALYZED BY: G Bell	COUNT TIME	n/a	n/a	

FORM 732-A REV 1-91

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 119

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α / Direct 1000	dpm/100cm2 β / Direct 1000		
n/a	10-9-96	10-9-96	10% of walls, floor, ceiling, light fixtures, horizontal surfaces,		NDA	NDA		
			and other structural surfaces					

2/20/98

COMMENTS:

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	355661	354927		
CALIBRATION DUE	10/20/96	~~9/27/96~~ GRM	10-20-96	
BACKGROUND	2 cpm	80 cpm		
EFFICIENCY	7.5 dpm/cpm	7.4 dpm/cpm		
COUNT TIME	n/a	n/a		

SAMPLED BY: G. Bell ANALYZED BY: G Bell

FORM 732-A REV 1-91

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 121

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α / Direct 1000	dpm/100cm2 β / Direct 1000		
n/a	10-9-96	10-9-96	10% of walls, floor, ceiling, light fixtures, horizontal surfaces,		NDA	NDA		
			and other structural surfaces					

2/20/98

COMMENTS:					
	INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
	IDENTIFICATION	355661	354927		
	CALIBRATION DUE	10/20/96	~~9/27/96~~ 10-26-96		
	BACKGROUND	2 cpm	80 cpm		
	EFFICIENCY	7.5 dpm/cpm	7.4 dpm/cpm		
SAMPLED BY: G. Bell ANALYZED BY: G Bell	COUNT TIME	n/a	n/a		

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Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 115

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α / Direct 1000	dpm/100cm2 β / Direct 1000		
n/a	10-9-96	10-9-96	10% of walls, floor, ceiling, light fixtures, horizontal surfaces, and other structural surfaces		NDA	NDA		

2/24/98

COMMENTS:

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	355661	354927		
CALIBRATION DUE	10/20/96	~~9/27/96~~ 9AM	10-20-96	
BACKGROUND	2 cpm	80 cpm		
EFFICIENCY	7.5 dpm/cpm	7.4 dpm/cpm		
COUNT TIME	n/a	n/a		

SAMPLED BY: G. Bell ANALYZED BY: G Bell

FORM 732-A REV 1-91

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 124

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α / Direct 1000	dpm/100cm2 β / Direct 1000		
n/a	10-8-96	10-8-96	10% of walls, floor, ceiling, light fixtures, horizontal surfaces, and other structural surfaces		NDA	NDA		

2/20/98

COMMENTS:

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	355661	354927		
CALIBRATION DUE	10/20/96	~~9/27/96~~ GBM	10-20-96	
BACKGROUND	2 cpm	80 cpm		
EFFICIENCY	7.5 dpm/cpm	7.4 dpm/cpm		
COUNT TIME	n/a	n/a		

SAMPLED BY: G. Bell ANALYZED BY: G Bell

FORM 732-A REV 1-91

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 120

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α / Direct 1000	dpm/100cm2 β / Direct 1000		
n/a	10-8-96	10-8-96	10% of walls, floor, ceiling, light fixtures, horizontal surfaces, and other structural surfaces		NDA	NDA		

2/20/98

COMMENTS:	INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
	IDENTIFICATION	355661	354927		
	CALIBRATION DUE	10/20/96	~~9/27/96~~ GRM	10-20-96	
	BACKGROUND	2 cpm	80 cpm		
	EFFICIENCY	7.5 dpm/cpm	7.4 dpm/cpm		
SAMPLED BY: G. Bell ANALYZED BY: G Bell	COUNT TIME	n/a	n/a		

FORM 732-A REV 1-91

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 122

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α / Direct 1000	dpm/100cm2 β / Direct 1000		
n/a	10-8-96	10-8-96	10% of walls, floor, ceiling, light fixtures, horizontal surfaces,		NDA	NDA		
			and other structural surfaces					

COMMENTS:	INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
	IDENTIFICATION	355661	354927		
	CALIBRATION DUE	10/20/96	~~9/27/96~~ EFM	10-20-96	
	BACKGROUND	2 cpm	80 cpm		
	EFFICIENCY	7.5 dpm/cpm	7.4 dpm/cpm		
SAMPLED BY: G. Bell ANALYZED BY: G Bell	COUNT TIME	n/a	n/a		

FORM 732-A REV 1-91

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 118

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α / Direct 1000	dpm/100cm2 β / Direct 1000		
n/a	10-8-96	10-8-96	10% of walls, floor, ceiling, light fixtures, horizontal surfaces,		NDA	NDA		
			and other structural surfaces					

2/20/98

COMMENTS:	INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
	IDENTIFICATION	355661	354927		
	CALIBRATION DUE	10/20/96	~~9/27/96~~ EPN	10-20-96	
	BACKGROUND	2 cpm	80 cpm		
	EFFICIENCY	7.5 dpm/cpm	7.4 dpm/cpm		
SAMPLED BY: G. Bell ANALYZED BY: G Bell	COUNT TIME	n/a	n/a		

FORM 732-A REV 1-91

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 101

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α / Direct 1000	dpm/100cm2 β / Direct 1000		
n/a	10-5-96	10-5-96	10% of walls, floor, ceiling, light fixtures, horizontal surfaces,		NDA	NDA		
			and other structural surfaces					

2/20/98

COMMENTS:

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	355661	354927		
CALIBRATION DUE	10/20/96	~~9/27/96~~ GRH	10-20-96	
BACKGROUND	2 cpm	80 cpm		
EFFICIENCY	7.5 dpm/cpm	7.4 dpm/cpm		
COUNT TIME	n/a	n/a		

SAMPLED BY: G. Bell ANALYZED BY: G Bell

FORM 732-A REV 1-91

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T011
ROOM 103

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey Procedure / DESCRIPTION AND LOCATION	UNITS / LIMIT	dpm/100cm2 α Direct 1000	dpm/100cm2 β Direct 1000		
n/a	10-5-96	10-5-96	10% of walls, floor, ceiling, light fixtures, horizontal surfaces, and other structural surfaces		NDA	NDA		

2/20/98

COMMENTS:

INSTRUMENT	Ludlum 12 α	Ludlum 12 β		
IDENTIFICATION	355661	354927		
CALIBRATION DUE	10/20/96	~~9/27/96~~	10-20-96	
BACKGROUND	2 cpm	80 cpm		
EFFICIENCY	7.5 dpm/cpm	7.4 dpm/cpm		
COUNT TIME	n/a	n/a		

SAMPLED BY: G. Bell ANALYZED BY: G Bell

FORM 732-A REV 1-91

Rockwell International
Rocketdyne Division

RADIATION SURVEY REPORT

BUILDING/AREA T-011
ROOM 101, 103, 105, 108, 111

PURPOSE: Free Release

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	DESCRIPTION AND LOCATION	UNITS	α dpm/100cm²	β/γ dpm/100cm²	CPM	
				LIMIT	20	100	NDA	
1	5-10-96		Window blinds from room 101		<20	<100	NDA	
2/4			103					
5/6			105					
7/8			108					
9/10			111					

REVIEWED BY [illegible] DATE 7/22/98

COMMENTS:

Acceptable for non-radioactive disposal

INSTRUMENT	Tennelec	Ludlum 2221
IDENTIFICATION	842489	EX053928
CALIBRATION DUE	daily	7-19-96
BACKGROUND	see control chart	80 cpm
EFFICIENCY		
COUNT TIME	1.0 Minute	N/A

SAMPLED BY: GBell ANALYZED BY: GBell

FORM 732-A REV 1-91

DATA PACKAGE #2

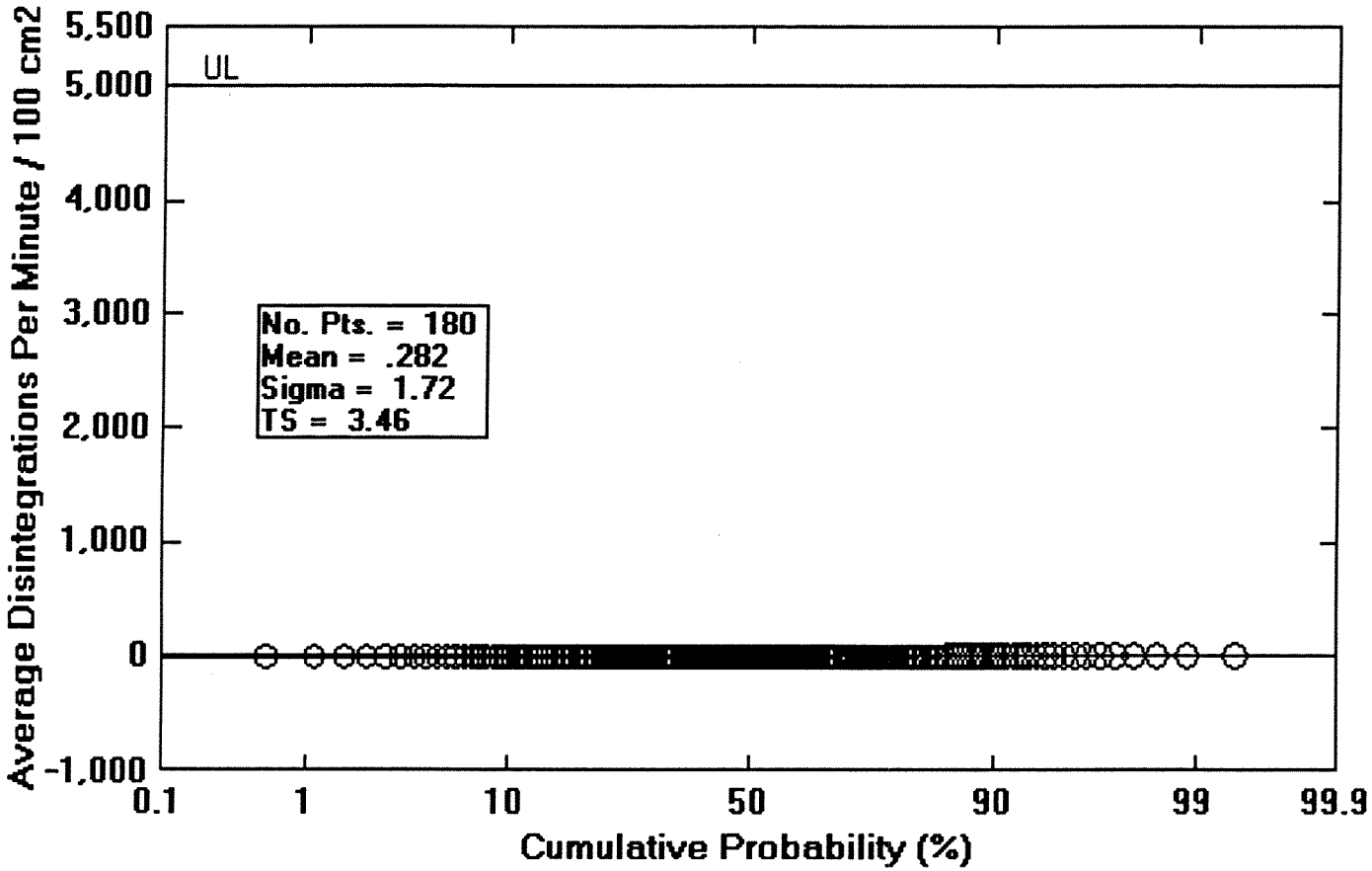
QUANITATIVE SURVEY OF BUILDING SURFACES PRIOR TO DEMOLITION

This survey consisted of a 5 minute scan survey of 1 square meter of randomly selected building surfaces. The results indicate that no radioactivity above the Rocketdyne release limits was present in the building prior to demolition of the interior.

A cumulative probability graph of these quantitative results is provided. The plot demonstrates that the area is in compliance with Rocketdyne release limits.

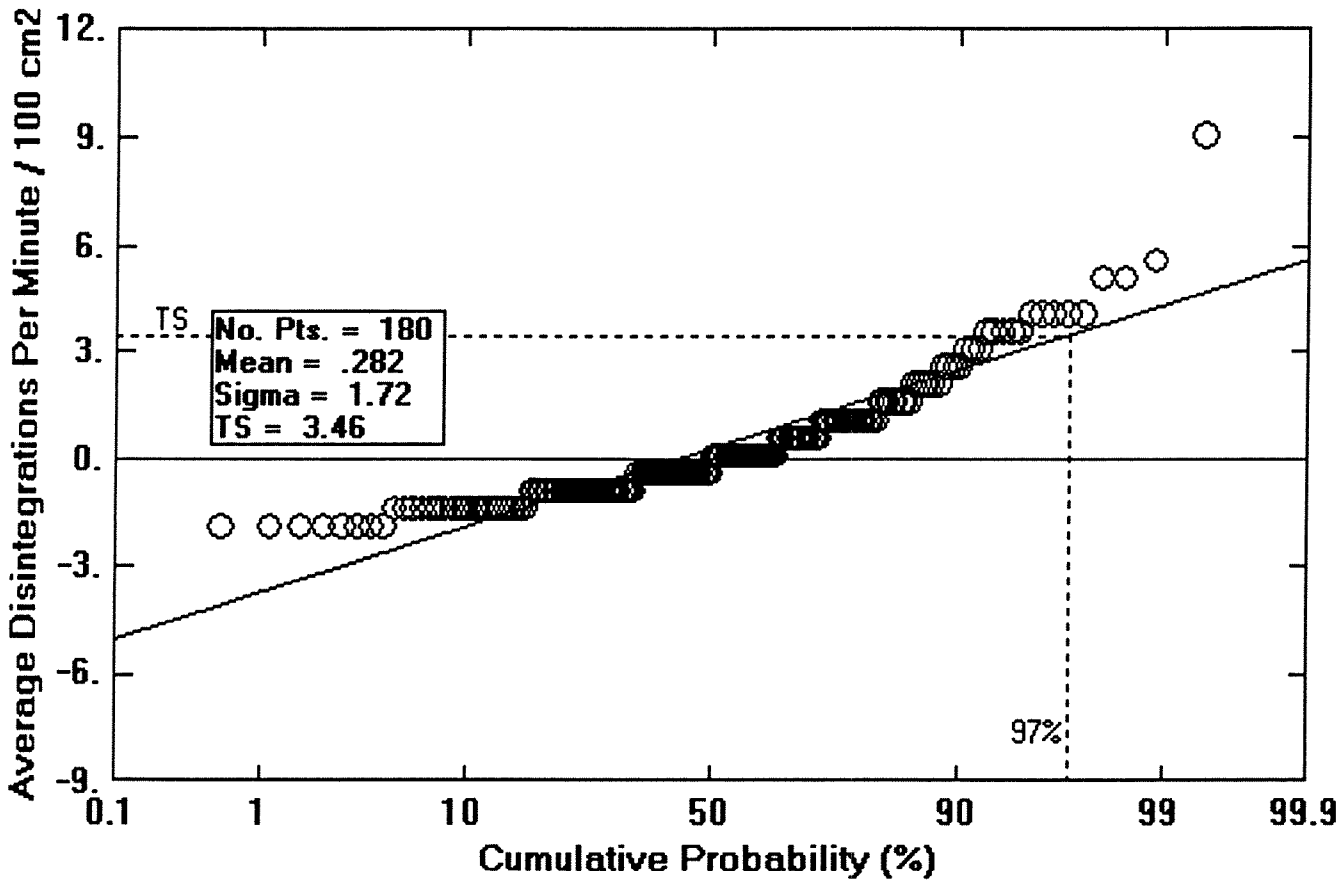
NOTE: References to "Page 3" in the phrases "Page *X* of 3" marked on the survey documents refer to calibration data kept in the Rocketdyne records of the survey. This material is maintained as a convenience to Rocketdyne survey personnel, and is not critical to the data reported in these records. Consequently, these pages are not included in the data package.

Alpha Scans of 1 Square Meter Areas



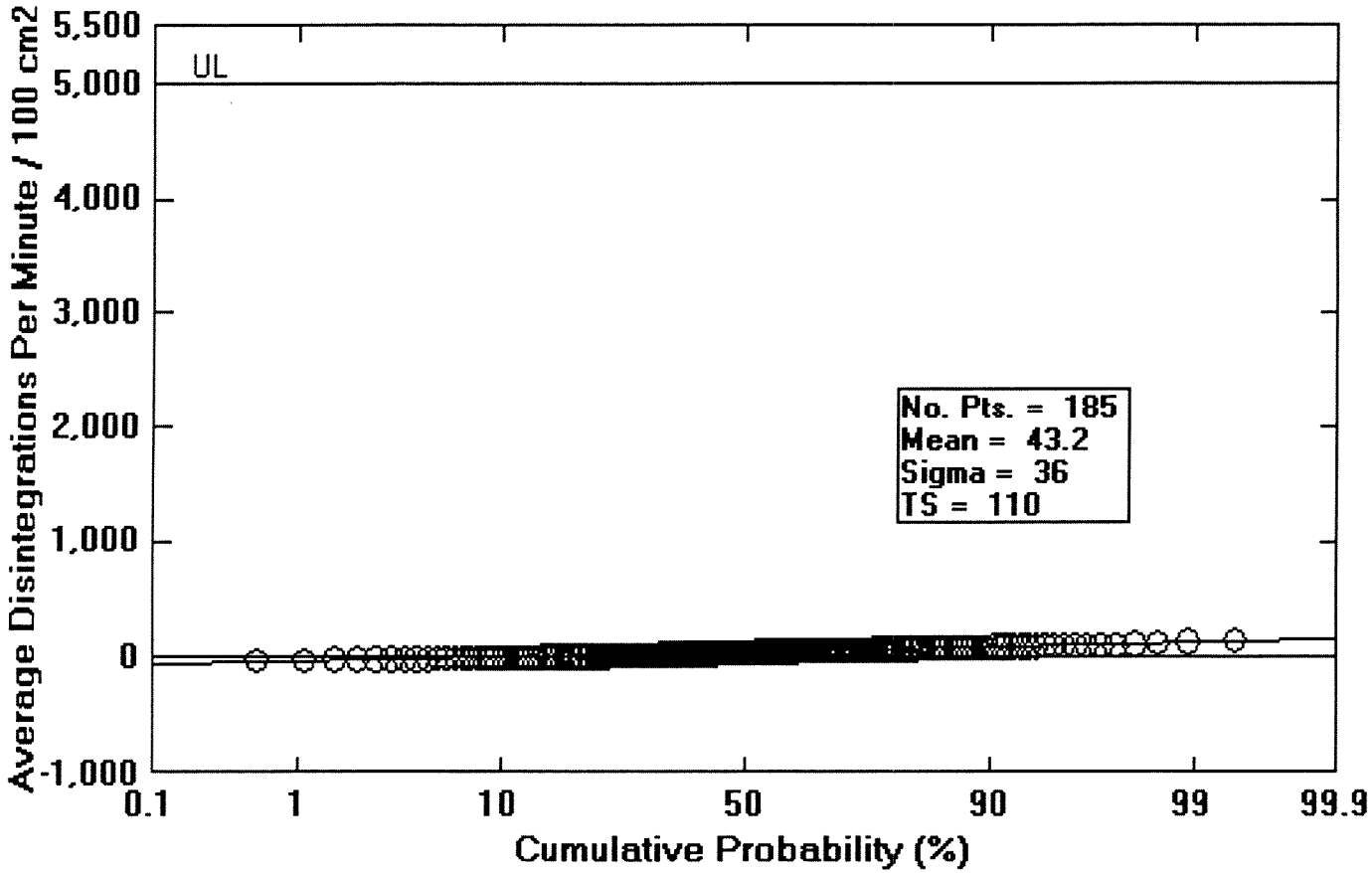
D:\FILES\T011RE~1\T011ALPA.CMP 08-03-98

Alpha Scans of 1 Square Meter Areas

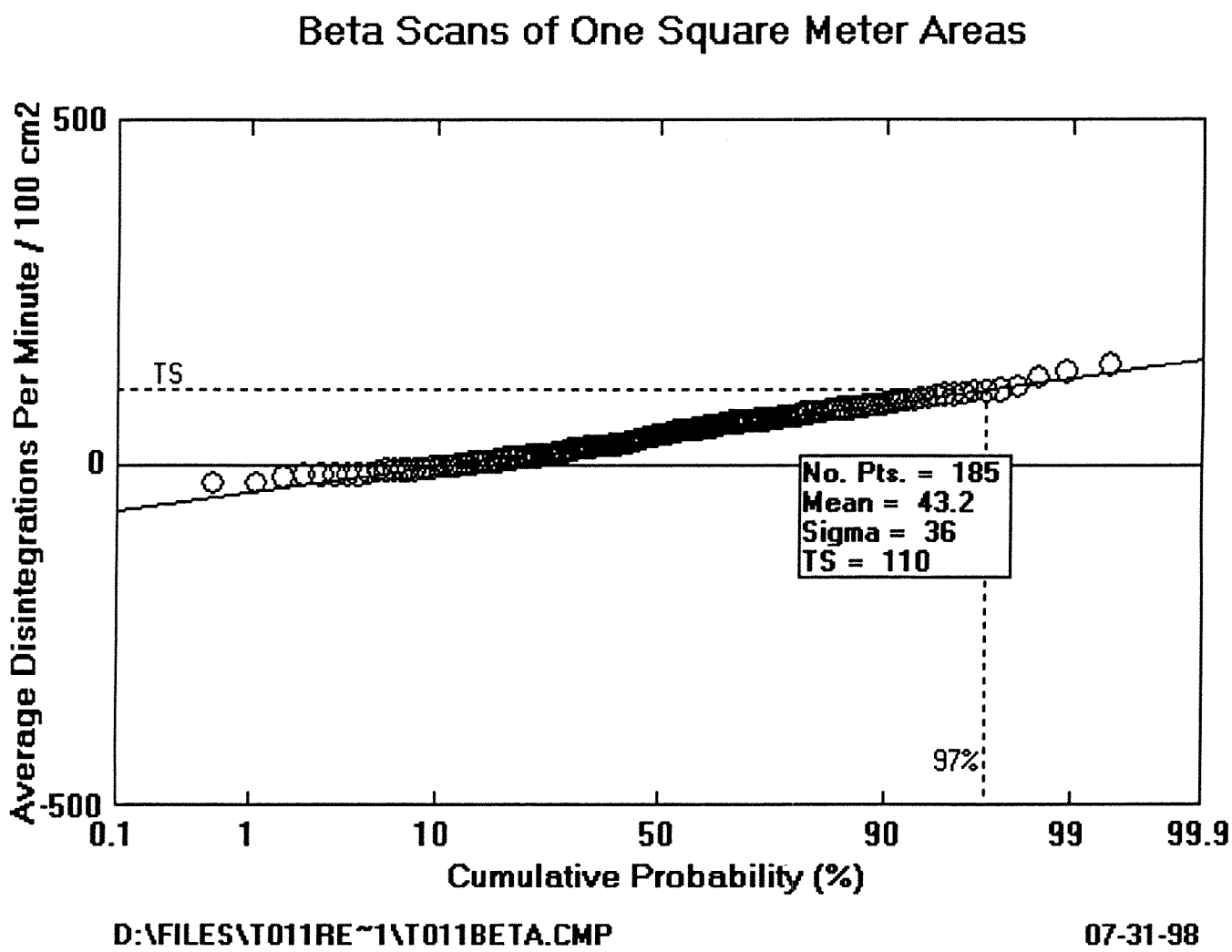


D:\FILES\T011RE~1\T011ALPA.CMP 07-31-98

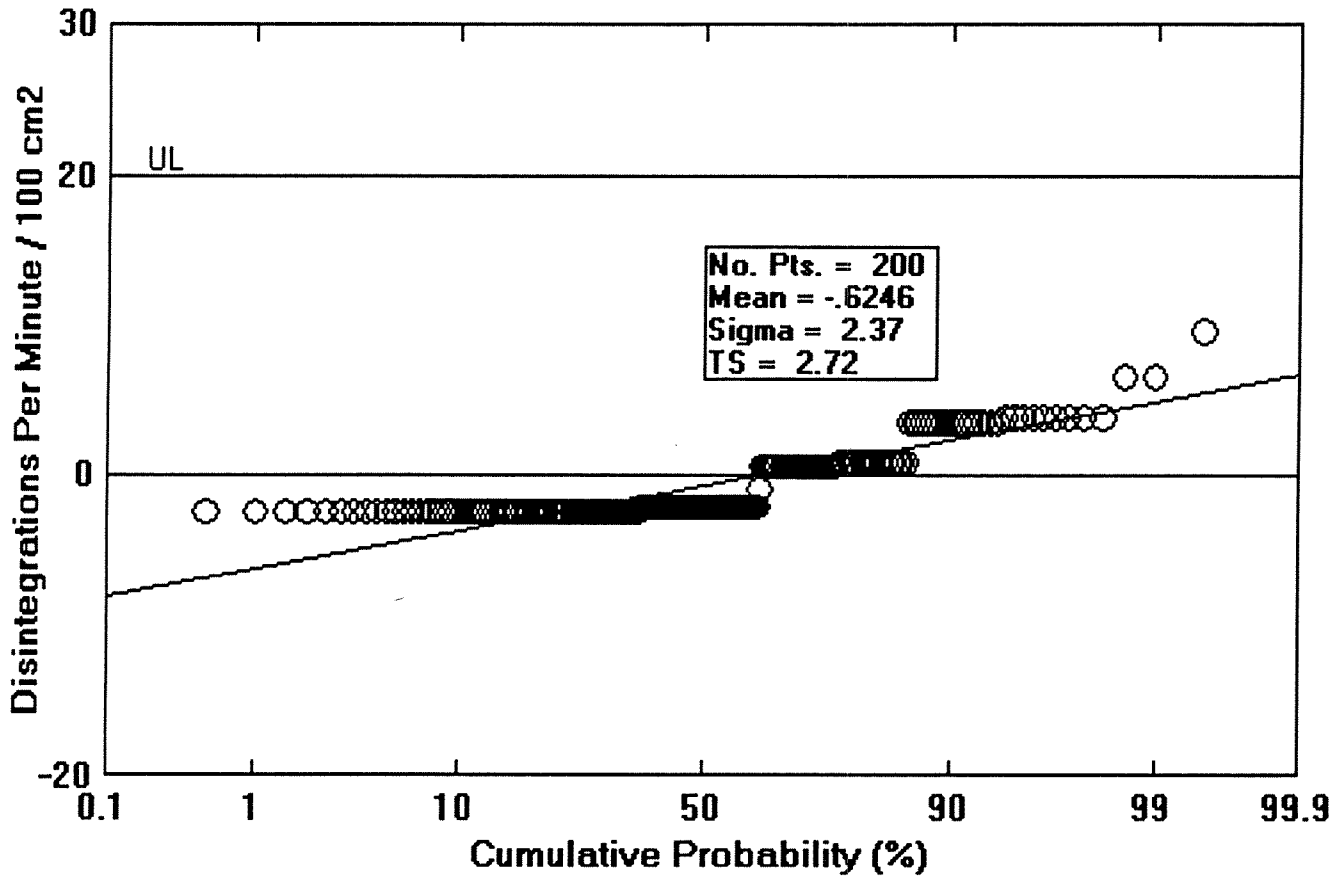
Beta Scans of One Square Meter Areas



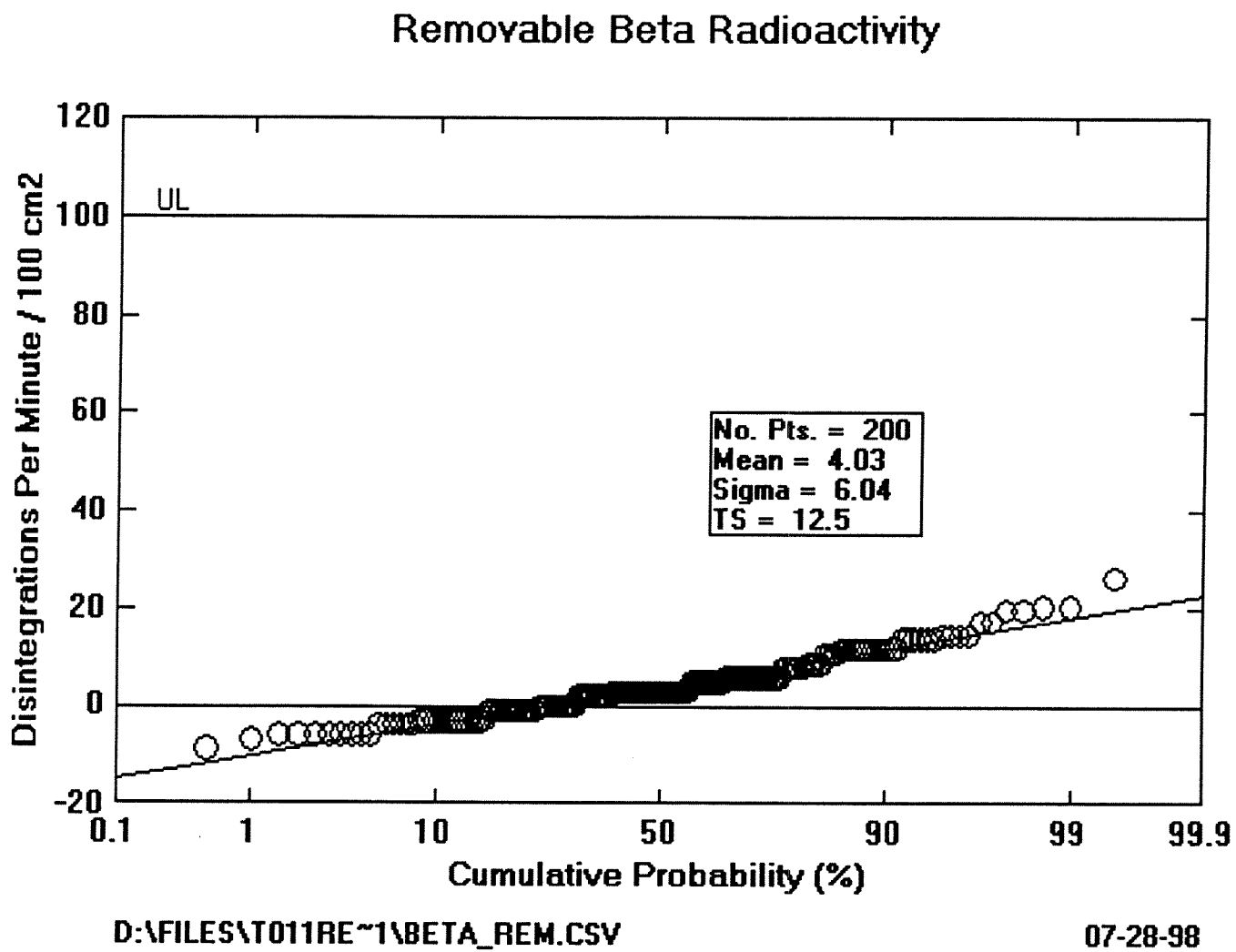
D:\FILES\T011RE~1\T011BETA.CMP 08-03-98


Beta Scans of One Square Meter Areas
Average Disintegrations Per Minute / 100 cm2
500
0
-500
TS
No. Pts. = 185
Mean = 43.2
Sigma = 36
TS = 110
97%
0.1
1
10
50
90
99
99.9
Cumulative Probability (%)
D:\FILES\T011RE~1\T011BETA.CMP
07-31-98

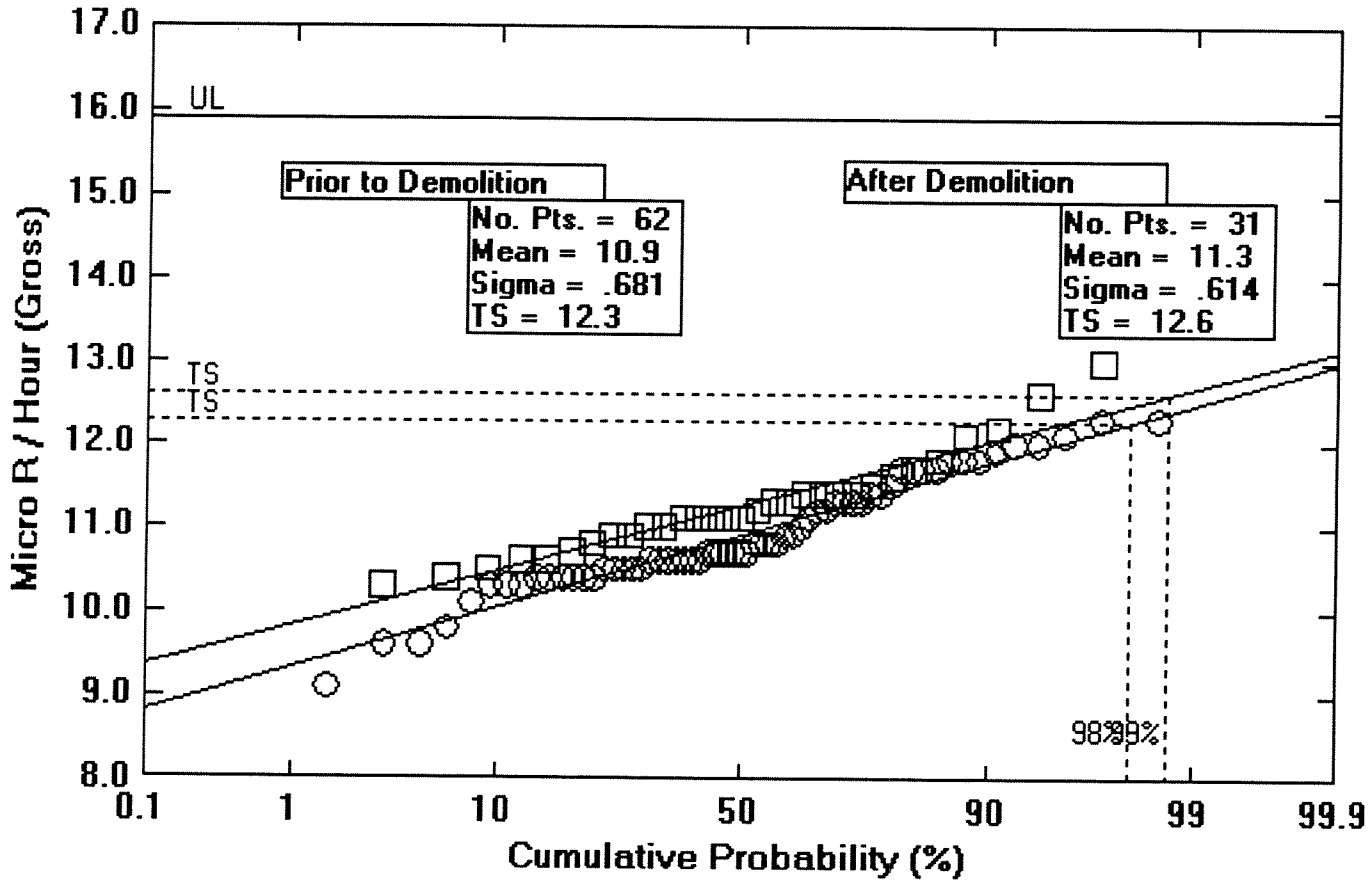
Removable Alpha Radioactivity



D:\FILES\T011RE~1\ALPA_REM.CSV 07-28-98


Removable Beta Radioactivity
120
100
80
60
40
20
0
-20
UL
No. Pts. = 200
Mean = 4.03
Sigma = 6.04
TS = 12.5
Disintegrations Per Minute / 100 cm2
0.1
1
10
50
90
99
99.9
Cumulative Probability (%)
D:\FILES\T011RE~1\BETA_REM.CSV
07-28-98

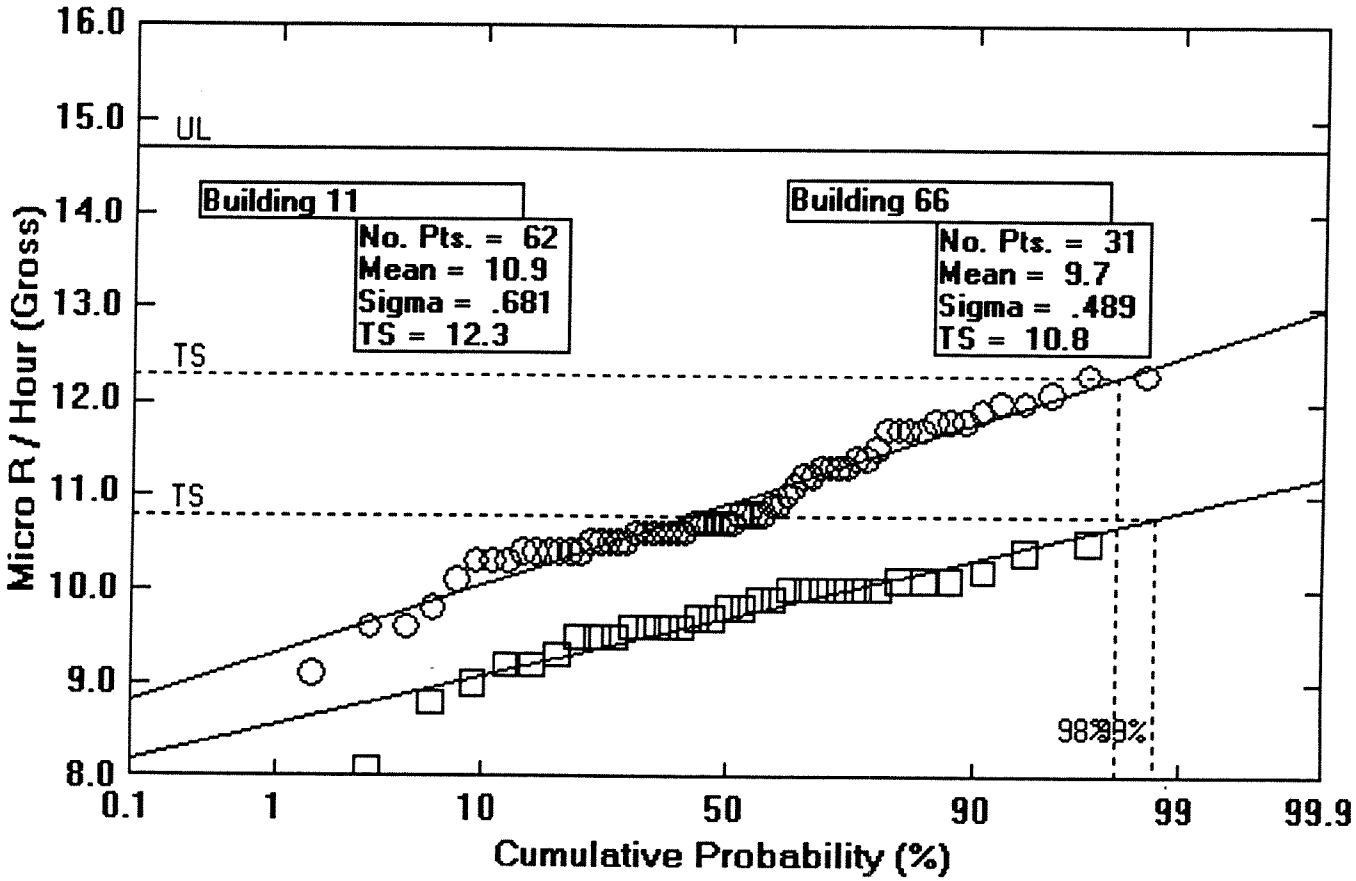
Ambient Gamma Survey (Prior to and After Demolition)



D:\FILES\T011RE~1\11_TO_11.CMP

08-03-98

Ambient Gamma Survey (Compared to Bldg. 66)



D:\FILES\T011RE~1\11_TO_66.CMP

07-31-98

FINAL SURVEY DATA SHEET

DATE: 3/3/98 PAGE: 1 of 3

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: East Hallway - Floor & Ceiling

			GROSS COUNTS IN 5 MINUTES						GROSS COUNTS IN 1 MIN			COUNTS IN 1 MIN	
	SAMPLE GRID	GRID	ALPHA			BETA			REMOVABLE			GAMMA	
	LOCATION	NO.	CS DATE	TOTAL	MAX	CS DATE	TOTAL	MAX	CS DATE	Alpha	Beta	CS DATE	TOTAL
1	FLOOR	F144	2/28/98	5	NA	2/28/98	319	NA	2/12/98	0	6	3/3/98	2466
2	FLOOR	F150	2/28/98	12	NA	2/28/98	260	NA	2/12/98	0	4	3/3/98	2362
3	FLOOR	F163	2/28/98	10	NA	2/28/98	371	NA	2/12/98	0	1	3/3/98	2207
4	FLOOR	F174	2/28/98	2	NA	2/28/98	284	NA	2/12/98	2	7	3/3/98	2268
5	FLOOR	F184	2/28/98	4	NA	2/28/98	285	NA	2/12/98	1	4	3/3/98	2304
6	FLOOR	F185	2/28/98	3	NA	2/28/98	286	NA	2/12/98	2	4	3/3/98	2230
7	CEILING	C191	2/28/98	3	NA	2/28/98	294	NA	2/12/98	2	6	NA	NA
8	CEILING	C197	2/28/98	2	NA	2/28/98	313	NA	2/12/98	0	5	NA	NA
9	CEILING	C210	2/28/98	5	NA	2/28/98	303	NA	2/12/98	2	5	NA	NA
10	CEILING	C221	2/28/98	0	NA	2/28/98	308	NA	2/12/98	0	5	NA	NA
11	CEILING	C231	2/28/98	3	NA	2/28/98	287	NA	2/12/98	0	5	NA	NA
12	CEILING	C232	2/28/98	1	NA	2/28/98	292	NA	2/12/98	0	6	NA	NA
13													
14													
15													
16													
17													
18													
19													
20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: Date: 3/3/98

Reviewed By: Date: 7/9/98

THU FEB 12, 1998
GROUP A BLDG. T011 EAST HALLWAY - FLOOR & CEILING

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	6	-0.80	3.00	-2.4031241	8.7924971	11:06:47
2		1.00	0	4	-0.80	1.00	-2.4031241	2.9308324	11:07:59
3		1.00	0	1	-0.80	-2.00	-2.4031241	-5.8616647	11:09:11
4		1.00	2	7	1.20	4.00	3.6046861	11.723329	11:10:23
5		1.00	1	4	0.20	1.00	.60078102	2.9308324	11:11:35
6		1.00	2	4	1.20	1.00	3.6046861	2.9308324	11:12:47
7		1.00	2	6	1.20	3.00	3.6046861	8.7924971	11:13:59
8		1.00	0	5	-0.80	2.00	-2.4031241	5.8616647	11:15:11
9		1.00	2	5	1.20	2.00	3.6046861	5.8616647	11:16:23
10		1.00	0	5	-0.80	2.00	-2.4031241	5.8616647	11:17:35
11		1.00	0	5	-0.80	2.00	-2.4031241	5.8616647	11:18:47
12		1.00	0	6	-0.80	3.00	-2.4031241	8.7924971	11:19:59

OPERATION COMPLETE

FINAL SURVEY DATA SHEET

DATE: 2/28/98 PAGE: 1 of 3

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: East Hallway - Walls

	SAMPLE GRID LOCATION	GRID NO.	GROSS COUNTS IN 5 MINUTES ALPHA CS DATE	ALPHA TOTAL	ALPHA MAX	BETA CS DATE	BETA TOTAL	BETA MAX	GROSS COUNTS IN 1 MIN REMOVABLE CS DATE	Alpha	Beta	COUNTS IN 1 MIN GAMMA CS DATE	TOTAL
1	WEST NORTH WALL	8	2/24/98	6	NA	2/24/98	236	NA	2/12/98	0	7	NA	NA
2	WEST NORTH WALL	11	2/24/98	2	NA	2/24/98	296	NA	2/12/98	1	4	NA	NA
3	WEST NORTH WALL	22	2/24/98	2	NA	2/24/98	328	NA	2/12/98	2	4	NA	NA
4	WEST NORTH WALL	38	2/28/98	9	NA	2/28/98	253	NA	2/12/98	1	2	NA	NA
5	EAST NORTH WALL	41	2/28/98	7	NA	2/28/98	235	NA	2/12/98	2	7	NA	NA
6	NORTH EAST WALL	52	2/28/98	14	NA	2/28/98	246	NA	2/12/98	0	8	NA	NA
7	SOUTH EAST WALL	62	2/28/98	11	NA	2/28/98	275	NA	2/12/98	0	4	NA	NA
8	EAST SOUTH WALL	65	2/28/98	7	NA	2/28/98	256	NA	2/12/98	0	3	NA	NA
9	SOUTH WEST WALL	74	2/28/98	11	NA	2/28/98	240	NA	2/12/98	1	4	NA	NA
10	WEST SOUTH WALL	83	2/28/98	12	NA	2/28/98	237	NA	2/12/98	2	4	NA	NA
11	WEST SOUTH WALL	91	2/28/98	7	NA	2/28/98	264	NA	2/12/98	0	2	NA	NA
12	WEST SOUTH WALL	111	2/28/98	11	NA	2/28/98	234	NA	2/12/98	1	5	NA	NA
13	WEST SOUTH WALL	119	2/28/98	8	NA	2/28/98	248	NA	2/12/98	0	4	NA	NA
14	WEST SOUTH WALL	125	2/28/98	8	NA	2/28/98	248	NA	2/12/98	0	2	NA	NA
15	WEST SOUTH WALL	133	2/28/98	7	NA	2/28/98	251	NA	2/12/98	0	4	NA	NA
16	NORTH WEST WALL	140	2/28/98	6	NA	2/28/98	244	NA	2/12/98	1	7	NA	NA
17													
18													
19													
20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: [illegible] Date: 2/28/98

Reviewed By: [illegible] Date: 7/9/98

THU FEB 12, 1998
GROUP A BLDG. T011 EAST HALLWAY - WALLS

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	7	-0.80	4.00	-2.4031241	11.723329	10:38:12
2		1.00	1	4	0.20	1.00	.60078102	2.9308324	10:39:24
3		1.00	2	4	1.20	1.00	3.6046861	2.9308324	10:40:36
4		1.00	1	2	0.20	-1.00	.60078102	-2.9308324	10:41:48
5		1.00	2	7	1.20	4.00	3.6046861	11.723329	10:43:00
6		1.00	0	8	-0.80	5.00	-2.4031241	14.654162	10:44:12
7		1.00	0	4	-0.80	1.00	-2.4031241	2.9308324	10:45:24
8		1.00	0	3	-0.80	0	-2.4031241	0	10:46:36
9		1.00	1	4	0.20	1.00	.60078102	2.9308324	10:47:48
10		1.00	2	4	1.20	1.00	3.6046861	2.9308324	10:49:00
11		1.00	0	2	-0.80	-1.00	-2.4031241	-2.9308324	10:50:12
12		1.00	1	5	0.20	2.00	.60078102	5.8616647	10:51:24
13		1.00	0	4	-0.80	1.00	-2.4031241	2.9308324	10:52:35
14		1.00	0	2	-0.80	-1.00	-2.4031241	-2.9308324	10:53:47
15		1.00	0	4	-0.80	1.00	-2.4031241	2.9308324	10:54:59
16		1.00	1	7	0.20	4.00	.60078102	11.723329	10:56:11

OPERATION COMPLETE

February 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency %	β Counter Efficiency %
1										
2	8	2	38	29	0.5	3.4	2797.3	3229.9	33.35	33.93
3	9	8	19	38	0.9	2.9	2886.0	3215.4	34.41	33.78
4	3	6	26	38	0.5	3.2	2773.8	3245.7	33.08	34.10
5	5	7	32	41	0.6	3.7	2771.9	3223.8	33.05	33.86
6	2	7	20	31	0.5	2.6	2809.4	3234.3	33.50	33.98
7										
8										
9	12	3	24	33	0.8	2.9	2775.8	3240.3	33.10	34.04
10	8	6	60	27	0.7	4.4	2786.4	3243.9	33.22	34.06
11	6	8	38	27	0.7	3.3	2762.3	3210.7	32.94	33.73
12	4	12	27	33	0.8	3.0	2792.2	3247.9	33.29	34.12
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

FINAL SURVEY DATA SHEET

DATE: 3/3/98 PAGE: 1 of 3

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: West Hallway

	SAMPLE GRID LOCATION	GRID NO.	GROSS COUNTS IN 5 MINUTES						GROSS COUNTS IN 1 MIN			COUNTS IN 1 MIN	
			ALPHA			BETA			REMOVABLE			GAMMA	
			CS DATE	TOTAL	MAX	CS DATE	TOTAL	MAX	CS DATE	Alpha	Beta	CS DATE	TOTAL
1	NORTH WALL	15	2/24/98	4	NA	2/24/98	216	NA	2/12/98	0	0	NA	NA
2	NORTH WALL	32	2/24/98	4	NA	2/24/98	267	NA	2/12/98	1	3	NA	NA
3	EAST WALL	42	2/24/98	3	NA	2/24/98	239	NA	2/12/98	0	5	NA	NA
4	SOUTH WEST WALL	70	2/24/98	1	NA	2/24/98	275	NA	2/12/98	0	9	NA	NA
5	WEST SOUTH WALL	91	2/24/98	5	NA	2/24/98	253	NA	2/12/98	2	4	NA	NA
6	NORTH WEST WALL	99	2/24/98	10	NA	2/24/98	295	NA	2/12/98	0	2	NA	NA
7	FLOOR	F103	2/24/98	4	NA	2/24/98	323	NA	2/12/98	0	5	3/3/98	2251
8	FLOOR	F129	2/24/98	8	NA	2/24/98	324	NA	2/12/98	0	2	3/3/98	2307
9	FLOOR	F142	2/24/98	3	NA	2/24/98	312	NA	2/12/98	2	4	3/3/98	2257
10	CEILING	C143	2/24/98	3	NA	2/24/98	344	NA	2/12/98	0	3	NA	NA
11	CEILING	C169	2/24/98	5	NA	2/24/98	325	NA	2/12/98	1	2	NA	NA
12	CEILING	C182	2/24/98	1	NA	2/24/98	313	NA	2/12/98	0	3	NA	NA
13	FLOOR	F108	NA	NA	NA	NA	NA	NA	NA	NA	NA	3/3/98	2443
14	FLOOR	F117	NA	NA	NA	NA	NA	NA	NA	NA	NA	3/3/98	2434
15	FLOOR	F123	NA	NA	NA	NA	NA	NA	NA	NA	NA	3/3/98	2421
16													
17													
18													
19													
20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: [signature] Date: 3/3/98

Reviewed By: [signature] Date: 7/9/98

OPERATION COMPLETE

THU FEB 12. 1998
GROUP A BLDG. T011 WEST HALL

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	0	-0.80	-3.00	-2.4031241	-8.7924971	10:16:30
2		1.00	1	3	0.20	0	.60078102	0	10:17:42
3		1.00	0	5	-0.80	2.00	-2.4031241	5.8616647	10:18:54
4		1.00	0	9	-0.80	6.00	-2.4031241	17.584994	10:20:06
5		1.00	2	4	1.20	1.00	3.6046861	2.9308324	10:21:18
6		1.00	0	2	-0.80	-1.00	-2.4031241	-2.9308324	10:22:30
7		1.00	0	5	-0.80	2.00	-2.4031241	5.8616647	10:23:42
8		1.00	0	2	-0.80	-1.00	-2.4031241	-2.9308324	10:24:54
9		1.00	2	4	1.20	1.00	3.6046861	2.9308324	10:26:06
10		1.00	0	3	-0.80	0	-2.4031241	0	10:27:18
11		1.00	1	2	0.20	-1.00	.60078102	-2.9308324	10:28:30
12		1.00	0	3	-0.80	0	-2.4031241	0	10:29:42

OPERATION COMPLETE

February 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency %	β Counter Efficiency %
1										
2	8	2	38	29	0.5	3.4	2797.3	3229.9	33.35	33.93
3	9	8	19	38	0.9	2.9	2886.0	3215.4	34.41	33.78
4	3	6	26	38	0.5	3.2	2773.8	3245.7	33.08	34.10
5	5	7	32	41	0.6	3.7	2771.9	3223.8	33.05	33.86
6	2	7	20	31	0.5	2.6	2809.4	3234.3	33.50	33.98
7										
8										
9	12	3	24	33	0.8	2.9	2775.8	3240.3	33.10	34.04
10	8	6	60	27	0.7	4.4	2786.4	3243.9	33.22	34.06
11	6	8	38	27	0.7	3.3	2762.3	3210.7	32.94	33.73
12	4	12	27	33	0.8	3.0	2792.2	3247.9	33.29	34.12
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

FINAL SURVEY DATA SHEET

DATE: 3/3/98 PAGE: 1 of 3

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: Room 124

	SAMPLE GRID LOCATION	GRID NO.	GROSS COUNTS IN 5 MINUTES						GROSS COUNTS IN 1 MIN			COUNTS IN 1 MIN	
			ALPHA			BETA			REMOVABLE			GAMMA	
			CS DATE	TOTAL	MAX	CS DATE	TOTAL	MAX	CS DATE	Alpha	Beta	CS DATE	TOTAL
1	NORTH WALL	4	2/24/98	2	NA	2/24/98	269	NA	2/12/98	0	3	NA	NA
2	EAST WALL	16	2/24/98	1	NA	2/24/98	257	NA	2/12/98	0	7	NA	NA
3	SOUTH WALL	22	2/24/98	2	NA	2/24/98	241	NA	2/12/98	2	2	NA	NA
4	WEST WALL	41	2/24/98	6	NA	2/24/98	305	NA	2/12/98	0	4	NA	NA
5	FLOOR	F43	2/24/98	1	NA	2/24/98	346	NA	2/12/98	0	10	3/3/98	2536
6	CEILING	C57	2/24/98	6	NA	2/24/98	305	NA	2/12/98	2	7	NA	NA
7	FLOOR	F49	NA	NA	NA	NA	NA	NA	NA	NA	NA	3/3/98	2509
8	FLOOR	F53	NA	NA	NA	NA	NA	NA	NA	NA	NA	3/3/98	2318
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: [signature] Date: 3/3/98

Reviewed By: [signature] Date: 7/9/98

THU FEB 12, 1998
GROUP A BLDG. T011 ROOM 124

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	3	-0.80	0	-2.4031241	0	10:02:07
2		1.00	0	7	-0.80	4.00	-2.4031241	11.723329	10:03:19
3		1.00	2	2	1.20	-1.00	3.6046861	-2.9308324	10:04:31
4		1.00	0	4	-0.80	1.00	-2.4031241	2.9308324	10:05:43
5		1.00	0	10	-0.80	7.00	-2.4031241	20.515826	10:06:55
6		1.00	2	7	1.20	4.00	3.6046861	11.723329	10:08:07

OPERATION COMPLETE

WED FEB 11. 1998
GROUP A BLDG. T011 ROOM 101

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	11:08:20
2		1.00	1	4	0.30	0.70	.91074681	2.0753039	11:09:32
3		1.00	2	2	1.30	-1.30	3.9465695	-3.8541358	11:10:44
4		1.00	1	7	0.30	3.70	.91074681	10.969463	11:11:56
5		1.00	1	5	0.30	1.70	.91074681	5.0400237	11:13:08
6		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	11:14:20
7		1.00	0	2	-0.70	-1.30	-2.1250759	-3.8541358	11:15:32
8		1.00	1	5	0.30	1.70	.91074681	5.0400237	11:16:44
9		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	11:17:56

OPERATION COMPLETE

February 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency %	β Counter Efficiency %
1										
2	8	2	38	29	0.5	3.4	2797.3	3229.9	33.35	33.93
3	9	8	19	38	0.9	2.9	2886.0	3215.4	34.41	33.78
4	3	6	26	38	0.5	3.2	2773.8	3245.7	33.08	34.10
5	5	7	32	41	0.6	3.7	2771.9	3223.8	33.05	33.86
6	2	7	20	31	0.5	2.6	2809.4	3234.3	33.50	33.98
7										
8										
9	12	3	24	33	0.8	2.9	2775.8	3240.3	33.10	34.04
10	8	6	60	27	0.7	4.4	2786.4	3243.9	33.22	34.06
11	6	8	38	27	0.7	3.3	2762.3	3210.7	32.94	33.73
12					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

PAGE 3 OF 3

FINAL SURVEY DATA SHEET

DATE: 3/3/98 PAGE: 1 of 3

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: Room 102

	SAMPLE GRID LOCATION	GRID NO.	GROSS COUNTS IN 5 MINUTES						GROSS COUNTS IN 1 MIN			COUNTS IN 1 MIN	
			ALPHA			BETA			REMOVABLE			GAMMA	
			CS DATE	TOTAL	MAX	CS DATE	TOTAL	MAX	CS DATE	Alpha	Beta	CS DATE	TOTAL
1	NORTH WALL	4	2/18/98	7	NA	2/18/98	251	NA	2/11/98	0	4	NA	NA
2	NORTH WALL	21	2/18/98	4	NA	2/18/98	298	NA	2/11/98	1	5	NA	NA
3	NORTH EAST WALL	30	2/18/98	4	NA	2/18/98	319	NA	2/11/98	0	5	NA	NA
4	EAST SOUTH WALL	33	2/18/98	1	NA	2/18/98	266	NA	2/11/98	0	2	NA	NA
5	SOUTH EAST WALL	37	2/18/98	0	NA	2/18/98	251	NA	2/11/98	1	7	NA	NA
6	WEST SOUTH WALL	42	2/18/98	4	NA	2/18/98	243	NA	2/11/98	0	4	NA	NA
7	WEST SOUTH WALL	54	2/18/98	15	NA	2/18/98	271	NA	2/11/98	2	5	NA	NA
8	WEST WALL	66	2/18/98	6	NA	2/18/98	270	NA	2/11/98	0	3	NA	NA
9	FLOOR	F75	2/18/98	5	NA	2/18/98	325	NA	2/11/98	0	5	3/3/98	2228
10	FLOOR	F79	2/18/98	6	NA	2/18/98	321	NA	2/11/98	0	2	3/3/98	2345
11	FLOOR	F81	2/18/98	4	NA	2/18/98	324	NA	2/11/98	0	10	3/3/98	2433
12	FLOOR	F101	2/18/98	6	NA	2/18/98	345	NA	2/11/98	0	6	3/3/98	2394
13	FLOOR	F105	2/18/98	1	NA	2/18/98	331	NA	2/11/98	2	6	3/3/98	2329
14	CEILING	C116	2/18/98	11	NA	2/18/98	331	NA	2/11/98	2	8	NA	NA
15	CEILING	C120	2/18/98	3	NA	2/18/98	350	NA	2/11/98	0	3	NA	NA
16	CEILING	C122	2/18/98	6	NA	2/18/98	310	NA	2/11/98	1	5	NA	NA
17	CEILING	C142	2/18/98	12	NA	2/18/98	340	NA	2/11/98	0	6	NA	NA
18	CEILING	C145	2/18/98	6	NA	2/18/98	331	NA	2/11/98	0	4	NA	NA
19													
20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: [signature] Date: 3/3/98

Reviewed By: [signature] Date: 7/9/98

WED FEB 11. 1998
GROUP A BLDG. T011 ROOM 102

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	11:47:05
2		1.00	1	5	0.30	1.70	.91074681	5.0400237	11:48:17
3		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	11:49:29
4		1.00	0	2	-0.70	-1.30	-2.1250759	-3.8541358	11:50:41
5		1.00	1	7	0.30	3.70	.91074681	10.969463	11:51:53
6		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	11:53:05
7		1.00	2	5	1.30	1.70	3.9465695	5.0400237	11:54:17
8		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	11:55:29
9		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	11:56:41
10		1.00	0	2	-0.70	-1.30	-2.1250759	-3.8541358	11:57:53
11		1.00	0	10	-0.70	6.70	-2.1250759	19.863623	11:59:05
12		1.00	0	6	-0.70	2.70	-2.1250759	8.0047436	12:00:17
13		1.00	2	6	1.30	2.70	3.9465695	8.0047436	12:01:29
14		1.00	2	8	1.30	4.70	3.9465695	13.934183	12:02:41
15		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	12:03:53
16		1.00	1	5	0.30	1.70	.91074681	5.0400237	12:05:05
17		1.00	0	6	-0.70	2.70	-2.1250759	8.0047436	12:06:17
18		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	12:07:29

OPERATION COMPLETE

OPERATION COMPLETE

February 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency %	β Counter Efficiency %
1										
2	8	2	38	29	0.5	3.4	2797.3	3229.9	33.35	33.93
3	9	8	19	38	0.9	2.9	2886.0	3215.4	34.41	33.78
4	3	6	26	38	0.5	3.2	2773.8	3245.7	33.08	34.10
5	5	7	32	41	0.6	3.7	2771.9	3223.8	33.05	33.86
6	2	7	20	31	0.5	2.6	2809.4	3234.3	33.50	33.98
7										
8										
9	12	3	24	33	0.8	2.9	2775.8	3240.3	33.10	34.04
10	8	6	60	27	0.7	4.4	2786.4	3243.9	33.22	34.06
11	6	8	38	27	0.7	3.3	2762.3	3210.7	32.94	33.73
12					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

FINAL SURVEY DATA SHEET

DATE: 3/3/98 PAGE: 1 of 3

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: Room 103

	SAMPLE GRID LOCATION	GRID NO.	GROSS COUNTS IN 5 MINUTES						GROSS COUNTS IN 1 MIN			COUNTS IN 1 MIN	
			ALPHA			BETA			REMOVABLE			GAMMA	
			CS DATE	TOTAL	MAX	CS DATE	TOTAL	MAX	CS DATE	Alpha	Beta	CS DATE	TOTAL
1	NORTH WALL	9	2/18/98	1	NA	2/18/98	272	NA	2/11/98	0	4		
2	NORTH WALL	18	2/18/98	7	NA	2/18/98	245	NA	2/11/98	1	3	NA	NA
3	EAST WALL	22	2/18/98	1	NA	2/18/98	227	NA	2/11/98	0	7	NA	NA
4	SOUTH WALL	36	2/18/98	4	NA	2/18/98	262	NA	2/11/98	0	5	NA	NA
5	SOUTH WALL	37	2/18/98	6	NA	2/18/98	293	NA	2/11/98	1	8	NA	NA
6	WEST WALL	48	2/18/98	1	NA	2/18/98	234	NA	2/11/98	0	1	NA	NA
7	FLOOR	F56	2/18/98	3	NA	2/18/98	290	NA	2/11/98	0	6	3/3/98	2068
8	FLOOR	F59	2/18/98	5	NA	2/18/98	310	NA	2/11/98	1	6	3/3/98	2327
9	FLOOR	F61	2/18/98	2	NA	2/18/98	309	NA	2/11/98	1	6	3/3/98	2101
10	FLOOR	F73	2/18/98	5	NA	2/18/98	321	NA	2/11/98	1	4	3/3/98	2243
11	CEILING	C87	2/18/98	4	NA	2/18/98	352	NA	2/11/98	0	5	NA	NA
12	CEILING	C90	2/18/98	11	NA	2/18/98	320	NA	2/11/98	0	8	NA	NA
13	CEILING	C92	2/18/98	7	NA	2/18/98	304	NA	2/11/98	1	3	NA	NA
14	CEILING	C104	2/18/98	4	NA	2/18/98	295	NA	2/11/98	0	3	NA	NA
15	FLOOR	F68	NA	NA	NA	NA	NA	NA	NA	NA	NA	3/3/98	2271
16	FLOOR	F77	NA	NA	NA	NA	NA	NA	NA	NA	NA	3/3/98	2215
17													
18													
19													
20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: [signature] Date: 3/3/98

Reviewed By: [signature] Date: 7/9/98

WED FEB 11. 1998
GROUP A BLDG. T011 ROOM 104

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	14:05:31
2		1.00	0	7	-0.70	3.70	-2.1250759	10.969463	14:06:43
3		1.00	1	4	0.30	0.70	.91074681	2.0753039	14:07:54
4		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	14:09:06
5		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	14:10:18
6		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	14:11:30
7		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	14:12:42
8		1.00	0	10	-0.70	6.70	-2.1250759	19.863623	14:13:54
9		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	14:15:06
10		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	14:16:18
11		1.00	1	4	0.30	0.70	.91074681	2.0753039	14:17:30
12		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	14:18:42
13		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	14:19:54
14		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	14:21:06
15		1.00	1	3	0.30	-0.30	.91074681	-.88941595	14:22:18

OPERATION COMPLETE

February 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency *%*	β Counter Efficiency *%*
1										
2	8	2	38	29	0.5	3.4	2797.3	3229.9	33.35	33.93
3	9	8	19	38	0.9	2.9	2886.0	3215.4	34.41	33.78
4	3	6	26	38	0.5	3.2	2773.8	3245.7	33.08	34.10
5	5	7	32	41	0.6	3.7	2771.9	3223.8	33.05	33.86
6	2	7	20	31	0.5	2.6	2809.4	3234.3	33.50	33.98
7										
8										
9	12	3	24	33	0.8	2.9	2775.8	3240.3	33.10	34.04
10	8	6	60	27	0.7	4.4	2786.4	3243.9	33.22	34.06
11	6	8	38	27	0.7	3.3	2762.3	3210.7	32.94	33.73
12					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

FINAL SURVEY DATA SHEET

DATE: 3/6/98 PAGE: 1 of 4

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: Sink Traps

			GROSS COUNTS IN 5 MINUTES						GROSS COUNTS IN 1 MIN			COUNTS IN 1 MIN	
	SAMPLE GRID	GRID	ALPHA			BETA			REMOVABLE			GAMMA	
	LOCATION	NO.	CS DATE	TOTAL	MAX	CS DATE	TOTAL	MAX	CS DATE	Alpha	Beta	CS DATE	TOTAL
1	Room:												
2	118A	NA	NA	NA	NA	3/5/98	309	NA	3/6/98	0	2	NA	NA
3	120	NA	NA	NA	NA	3/5/98	216	NA	3/6/98	0	5	NA	NA
4	122A North	NA	NA	NA	NA	3/5/98	268	NA	3/6/98	1	7	NA	NA
5	122A Middle	NA	NA	NA	NA	3/5/98	265	NA	3/6/98	0	3	NA	NA
6	122A South	NA	NA	NA	NA	3/5/98	286	NA	3/6/98	0	7	NA	NA
7													
8													
9													
10													
11													
12													
13													
14													
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20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: [signature] Date: 3/6/98

Reviewed By: [signature] Date: 7/9/98

FRI MAR 06, 1998

GROUP A ~~RELEASE OF MATERIAL~~ WCS 3-6-98 SINK TRAPS BLDG 701

	SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC	
1	36	WCS 3-6-98	1.00	0	2	-0.70	-0.90	-2.0777679	-2.6501767	12:13:25	118A
2	37		1.00	0	5	-0.70	2.10	-2.0777679	6.1837456	12:14:37	120
3	38		1.00	1	7	0.30	4.10	.89047195	12.073027	12:15:49	122A NORTH
4	39		1.00	0	3	-0.70	0.10	-2.0777679	.29446408	12:17:01	122A MIDDLE
5	40		1.00	0	7	-0.70	4.10	-2.0777679	12.073027	12:18:13	122A SOUTH

OPERATION COMPLETE

March 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency *%*	β Counter Efficiency *%*
1										
2	11	9	34	31	1.0	3.3	2790.0	3206.3	33.26	33.68
3	1	12	36	32	0.7	3.4	2811.5	3213.5	33.52	33.75
4	5	8	42	41	0.7	4.2	2810.1	3236.8	33.51	33.99
5	8	9	32	32	0.9	3.2	2829.3	3242.7	33.73	34.06
6	8	6	25	32	0.7	2.9	2825.8	3232.8	33.69	33.96
7										
8										
9					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
10					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
11					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
12					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
31					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

FINAL SURVEY DATA SHEET

DATE: 3/3/98 PAGE: 1 of 3

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: Room 104

			GROSS COUNTS IN 5 MINUTES						GROSS COUNTS IN 1 MIN			COUNTS IN 1 MIN	
	SAMPLE GRID	GRID	ALPHA			BETA			REMOVABLE			GAMMA	
	LOCATION	NO.	CS DATE	TOTAL	MAX	CS DATE	TOTAL	MAX	CS DATE	Alpha	Beta	CS DATE	TOTAL
1	NORTH WALL	1	2/19/98	6	NA	2/19/98	227	NA	2/11/98	0	3	NA	NA
2	NORTH WALL	16	2/19/98	8	NA	2/19/98	300	NA	2/11/98	0	7	NA	NA
3	EAST WALL	24	2/19/98	5	NA	2/19/98	242	NA	2/11/98	1	4	NA	NA
4	EAST WALL	27	2/19/98	7	NA	2/19/98	254	NA	2/11/98	0	3	NA	NA
5	SOUTH WALL	40	2/19/98	4	NA	2/19/98	249	NA	2/11/98	0	3	NA	NA
6	WEST WALL	57	2/19/98	6	NA	2/19/98	286	NA	2/11/98	0	4	NA	NA
7	WEST WALL	58	2/19/98	6	NA	2/19/98	258	NA	2/11/98	0	5	NA	NA
8	FLOOR	F65	2/19/98	3	NA	2/19/98	307	NA	2/11/98	0	10	3/3/98	2303
9	FLOOR	F75	2/19/98	5	NA	2/19/98	325	NA	2/11/98	0	3	3/3/98	2411
10	FLOOR	F80	2/19/98	5	NA	2/19/98	316	NA	2/11/98	0	5	3/3/98	2289
11	FLOOR	F85	2/19/98	7	NA	2/19/98	288	NA	2/11/98	1	4	3/3/98	2281
12	CEILING	C95	2/19/98	2	NA	2/19/98	313	NA	2/11/98	0	5	NA	NA
13	CEILING	C105	2/19/98	1	NA	2/19/98	293	NA	2/11/98	0	3	NA	NA
14	CEILING	C110	2/19/98	3	NA	2/19/98	306	NA	2/11/98	0	4	NA	NA
15	CEILING	C115	2/19/98	9	NA	2/19/98	337	NA	2/11/98	1	3	NA	NA
16													
17													
18													
19													
20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: [signature] Date: 3/3/98

Reviewed By: [signature] Date: 7/9/98

WED FEB 11. 1998
GROUP A BLDG. T011 ROOM 103

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	12:19:11
2		1.00	1	3	0.30	-0.30	.91074681	-.88941595	12:20:23
3		1.00	0	7	-0.70	3.70	-2.1250759	10.969463	12:21:35
4		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	12:22:47
5		1.00	1	8	0.30	4.70	.91074681	13.934183	12:23:59
6		1.00	0	1	-0.70	-2.30	-2.1250759	-6.8188556	12:25:11
7		1.00	0	6	-0.70	2.70	-2.1250759	8.0047436	12:26:23
8		1.00	1	6	0.30	2.70	.91074681	8.0047436	12:27:36
9		1.00	1	6	0.30	2.70	.91074681	8.0047436	12:28:47
10		1.00	1	4	0.30	0.70	.91074681	2.0753039	12:29:59
11		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	12:31:11
12		1.00	0	8	-0.70	4.70	-2.1250759	13.934183	12:32:23
13		1.00	1	3	0.30	-0.30	.91074681	-.88941595	12:33:35
14		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	12:34:47

OPERATION COMPLETE

February 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency %	β Counter Efficiency %
1										
2	8	2	38	29	0.5	3.4	2797.3	3229.9	33.35	33.93
3	9	8	19	38	0.9	2.9	2886.0	3215.4	34.41	33.78
4	3	6	26	38	0.5	3.2	2773.8	3245.7	33.08	34.10
5	5	7	32	41	0.6	3.7	2771.9	3223.8	33.05	33.86
6	2	7	20	31	0.5	2.6	2809.4	3234.3	33.50	33.98
7										
8										
9	12	3	24	33	0.8	2.9	2775.8	3240.3	33.10	34.04
10	8	6	60	27	0.7	4.4	2786.4	3243.9	33.22	34.06
11	6	8	38	27	0.7	3.3	2762.3	3210.7	32.94	33.73
12					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

DATA PACKAGE #3

SURVEY OF ASBESTOS FLOOR TILES PRIOR TO DEMOLITION

As part of building demolition, all the floor tiles had to be removed to permit access to the concrete surfaces beneath the tiles. These tiles were composed of asbestos; thus the hazardous nature of the tile required a modified approach to the radiological survey. Prior to removal, these tiles were subjected to the following surveys:

1) 100% qualitative survey of floor surfaces (see packages above)

2) Quantitative survey of floor surfaces (see packages above)

3) Scan with portable beta survey instruments of the underside of statistically selected floor tiles

4) 100% qualitative survey of floor surfaces after removal of floor tiles and mastic.

5) Survey for removable contamination on the concrete floor surfaces.

These surveys demonstrated that residual levels of activity were in compliance with Rocketdyne release limits.

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey: Under 9"x9" Asbestos Floor Tile	UNITS	α dpm/100cm2	β dpm/100cm2	α cpm Direct Frisk	β cpm Direct Frisk
			DESCRIPTION	LIMIT	20	100	NDA	NDA
1 to 8	5/18/98	5/18/98	Room # 108					
			Survey Points: F58,F61,F64,F66,F74,F75,F76,F79		<20	<100	NDA	NDA
9 to 16	5/18/98	5/18/98	Room # 111					
			Survey Points: F56,F59,F61,F64,F66,F72,F74,F81		<20	<100	NDA	NDA
17 to 31	5/18/98	5/18/98	Room # East Hallway					
			Survey Points: F142,F146,F148,F151,F157,F159,F161,F164,F165,		<20	<100	NDA	NDA
			F167,F171,F173,F176,F184,F187					
			Direct α Frisk.					
			NDA α = 2 times bkgd. 7/9/98					
			Direct Beta Frisk					
			Backgroung Range: 40 to 60 cpm					
			**NDA*= lowest background + 100 cpm Beta					

COMMENTS:

Acceptable for Non-radioactive Disposal

(See Rocketdyne N001OP000034)

PROCEDURE: N001SRR140128

INSTRUMENT	Tennelec	Tennelec	Ludlum 12	Ludlum 3
IDENTIFICATION	NO842489	NO842489	Met 6946	EX 040899
CALIBRATION DUE	Daily	Daily	8/14/98	8/14/98
BACKGROUND	0.8 cpm	3.7 cpm	0-1 cpm	40 -60 cpm
EFFICIENCY	33.77%	33.90%	13.30%	13.10%
COUNT TIME	1 min	1 min	NA	NA

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

See Attachment ☐ Page 1 of 2

FORM 732-A REV 6-92

Rocketdyne Division

OPERATION COMPLETE

MON MAY 18, 1998
GROUP A BLDG. T011 FINAL SURVEY: UNDER 9"x9" ASBESTOS FLOOR TILE

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC	SAMPLE POINTS	
1		1.00	2	7	1.20	3.30	3.5534498	9.7345133	16:14:46	F58	
2		1.00	1	4	0.20	0.30	.59224163	.88495575	16:15:58	F61	
3		1.00	1	5	0.20	1.30	.59224163	3.8348083	16:17:10	F64	Room #108
4		1.00	1	2	0.20	-1.70	.59224163	-5.0147493	16:18:22	F66	
5		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	16:19:34	F74	
6		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	16:20:46	F75	
7		1.00	1	5	0.20	1.30	.59224163	3.8348083	16:21:58	F76	
8		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	16:23:10	F79	
9		1.00	0	1	-0.80	-2.70	-2.3689665	-7.9646018	16:24:22	F56	
10		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	16:25:34	F59	
11		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	16:26:46	F61	
12		1.00	1	1	0.20	-2.70	.59224163	-7.9646018	16:27:58	F64	
13		1.00	3	7	2.20	3.30	6.514658	9.7345133	16:29:09	F66	Room #111
14		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:30:22	F72	
15		1.00	0	1	-0.80	-2.70	-2.3689665	-7.9646018	16:31:34	F74	
16		1.00	0	7	-0.80	3.30	-2.3689665	9.7345133	16:32:46	F81	
17		1.00	1	5	0.20	1.30	.59224163	3.8348083	16:33:57	F142	
18		1.00	1	5	0.20	1.30	.59224163	3.8348083	16:35:09	F146	
19		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	16:36:21	F148	
20		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:37:33	F151	
21		1.00	1	3	0.20	-0.70	.59224163	-2.0648968	16:38:45	F157	
22		1.00	0	7	-0.80	3.30	-2.3689665	9.7345133	16:39:57	F159	
23		1.00	3	5	2.20	1.30	6.514658	3.8348083	16:41:09	F161	
24		1.00	0	7	-0.80	3.30	-2.3689665	9.7345133	16:42:21	F164	East Hallway
25		1.00	1	2	0.20	-1.70	.59224163	-5.0147493	16:43:33	F165	
26		1.00	1	5	0.20	1.30	.59224163	3.8348083	16:44:45	F167	
27		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	16:45:57	F171	
28		1.00	1	6	0.20	2.30	.59224163	6.7846608	16:47:09	F173	
29		1.00	2	5	1.20	1.30	3.5534498	3.8348083	16:48:21	F176	
30		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:49:33	F184	
31		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:50:45	F187	

OPERATION COMPLETE

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey: Under 9"x9" Asbestos Floor Tile	UNITS	α dpm/100cm2	β dpm/100cm2	α cpm Direct Frisk	β cpm Direct Frisk
			DESCRIPTION	LIMIT	20	100	NDA	NDA
1 to 2	5/18/98	5/18/98	Room # 100					
			Survey Points: F26,F27		<20	<100	NDA	NDA
3 to 18	5/18/98	5/18/98	Room # 102					
			Survey Points: F72A-B,F76,F77,F80A-B,F85,F89,F90,F93,F94,F107,		<20	<100	NDA	NDA
			F108,F109,F110,F112					
19 to 27	5/18/98	5/18/98	Room # 104					
			Survey Points: F61,F63,F64,F73,F79,F82,F86,F88A-B		<20	<100	NDA	NDA
28 to 35	5/18/98	5/18/98	Room # 105					
			Survey Points: F47,F48,F57,F58,F59,F63,F64,F68		<20	<100	NDA	NDA
36 to 45	5/18/98	5/18/98	Room # 106					
			Survey Points: F63,F67,F68,F72,F76,F78,F81,F84,F85,F95		<20	<100	NDA	NDA
			Direct α Frisk					
			NDA = 2 times bkgd. 7/9/98					
			Direct Beta Frisk					
			Backgroung Range: 40 to 60 cpm					
			**NDA*= lowest background + 100 cpm Beta					

COMMENTS:

Acceptable for Non-radioactive Disposal

(See Rocketdyne N001OP000034)

PROCEDURE: N001SRR140128

INSTRUMENT	Tennelec	Tennelec	Ludlum 12	Ludlum 3
IDENTIFICATION	NO842489	NO842489	Met 6946	EX 040899
CALIBRATION DUE	Daily	Daily	8/14/98	8/14/98
BACKGROUND	0.8 cpm	3.7 cpm	0-1 cpm	40 -60 cpm
EFFICIENCY	33.77%	33.90%	13.30%	13.10%
COUNT TIME	1 min	1 min	NA	NA

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

See Attachment ☐ Page 1 of 2

FORM 732-A REV 8-97

Rocketdyne Division

MON MAY 18, 1998
GROUP A BLDG. T011 FINAL SURVEY: UNDER 9"x9" ASBESTOS FLOOR TILE

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC	SAMPLE POINTS	
1		1.00	0	10	-0.80	6.30	-2.3689665	18.584071	15:18:22	F26	
2		1.00	3	5	2.20	1.30	6.514658	3.8348083	15:19:34	F27	Room #100
3		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	15:20:46	F72A	
4		1.00	2	3	1.20	-0.70	3.5534498	-2.0648968	15:21:58	F72B	
5		1.00	0	3	-0.80	-0.70	-2.3689665	-2.0648968	15:23:10	F76	
6		1.00	1	4	0.20	0.30	.59224163	.88495575	15:24:22	F77	
7		1.00	0	2	-0.80	-1.70	-2.3689665	-5.0147493	15:25:34	F80A	
8		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	15:26:46	F80B	Room #102
9		1.00	2	4	1.20	0.30	3.5534498	.88495575	15:27:58	F85	
10		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	15:29:10	F89	
11		1.00	0	2	-0.80	-1.70	-2.3689665	-5.0147493	15:30:22	F90	
12		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	15:31:34	F93	
13		1.00	0	7	-0.80	3.30	-2.3689665	9.7345133	15:32:46	F94	
14		1.00	1	2	0.20	-1.70	.59224163	-5.0147493	15:33:58	F107	
15		1.00	2	3	1.20	-0.70	3.5534498	-2.0648968	15:35:09	F108	
16		1.00	2	12	1.20	8.30	3.5534498	24.483776	15:36:21	F109	
17		1.00	1	5	0.20	1.30	.59224163	3.8348083	15:37:33	F110	
18		1.00	0	2	-0.80	-1.70	-2.3689665	-5.0147493	15:38:45	F112	
19		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	15:39:57	F61	
20		1.00	2	0	1.20	-3.70	3.5534498	-10.914454	15:41:09	F63	
21		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	15:42:21	F64	
22		1.00	0	8	-0.80	4.30	-2.3689665	12.684366	15:43:33	F73	
23		1.00	2	6	1.20	2.30	3.5534498	6.7846608	15:44:45	F79	
24		1.00	1	6	0.20	2.30	.59224163	6.7846608	15:45:57	F82	
25		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	15:47:09	F86	Room # 104
26		1.00	0	3	-0.80	-0.70	-2.3689665	-2.0648968	15:48:22	F88A	

MON MAY 18, 1998
GROUP A BLDG. T011

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC	
27		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	15:50:35	F88B
28		1.00	1	8	0.20	4.30	.59224163	12.684366	15:51:47	F47
29		1.00	1	3	0.20	-0.70	.59224163	-2.0648968	15:52:59	F48
30		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	15:54:11	F57
31		1.00	1	2	0.20	-1.70	.59224163	-5.0147493	15:55:23	F58 Room # 105
32		1.00	1	6	0.20	2.30	.59224163	6.7846608	15:56:35	FF9
33		1.00	0	3	-0.80	-0.70	-2.3689665	-2.0648968	15:57:47	F63
34		1.00	0	0	-0.80	-3.70	-2.3689665	-10.914454	15:58:59	F64
35		1.00	0	3	-0.80	-0.70	-2.3689665	-2.0648968	16:00:11	F68
36		1.00	0	8	-0.80	4.30	-2.3689665	12.684366	16:01:23	F63
37		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:02:35	F67
38		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:03:47	F68
39		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	16:04:59	F72
40		1.00	1	4	0.20	0.30	.59224163	.88495575	16:06:11	F76 Room #106
41		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	16:07:23	F78
42		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	16:08:35	F81
43		1.00	1	6	0.20	2.30	.59224163	6.7846608	16:09:47	F84
44		1.00	1	1	0.20	-2.70	.59224163	-7.9646018	16:10:59	F85
45		1.00	1	6	0.20	2.30	.59224163	6.7846608	16:12:11	F95

OPERATION COMPLETE

MAY 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency %	β Counter Efficiency %
1	8	5	37	30	0.7	3.4	2827.5	3222.9	33.71	33.85
2										
3										
4	3	6	34	38	0.5	3.6	2799.4	3184.2	33.38	33.44
5	8	8	37	27	0.8	3.2	2789.8	3186.0	33.26	33.47
6	7	4	26	27	0.6	2.7	2837.6	3219.7	33.83	33.83
7	6	2	24	13	0.4	1.9	2823.3	3198.6	33.67	33.61
8	9	11	34	31	1.0	3.3	2833.7	3235.7	33.78	33.99
9										
10										
11	8	7	28	24	0.8	2.6	2822.1	3211.6	33.65	33.74
12	4	8	28	32	0.6	3.0	2805.2	3218.2	33.45	33.81
13	6	4	30	29	0.5	3.0	2837.6	3183.6	33.84	33.45
14	5	6	37	39	0.6	3.8	2823.7	3205.6	33.67	33.67
15	8	11	29	32	1.0	3.1	2816.6	3181.6	33.58	33.42
16										
17										
18	10	6	35	38	0.8	3.7	2832.7	3227.4	33.77	33.90
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
22					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
23										
24										
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
29					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Release Survey / DESCRIPTION	UNITS / LIMIT	α cpm Direct frisk / NDA	βγ cpm Direct frisk / NDA		
	6/20/98	6/20/98	100 % Direct Frisk of Concrete Floor After Tile and		NDA	NDA		
			Mastic Removal (Affected and Unaffected Areas)					
			Direct α Frisk					
			NDA = 2 times bkgd. 7/9/98					
			Direct Beta Frisk					
			Background Range 60 to 80 cpm					
			NDA = Lowest Background + 100 cpm Beta					

COMMENTS:

INSTRUMENT	Ludlum 12	Ludlum 3	Ludlum 3
IDENTIFICATION	Met-6946	NO 355662	EX 040899
CALIBRATION DUE	8/14/98	7/17/98	8/14/98
BACKGROUND	0-1 cpm	60 - 80	60 - 80
EFFICIENCY	13%	13.10%	13.10%
COUNT TIME	NA	NA	NA
See Attachment ☐	Page	of	

SAMPLED BY: G. Bell

ANALYZED BY: William Schaeppi

REVIEWED BY: DATE: 7/9/98

FORM 732-A REV 8-97

Rocketdyne Division

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Contamination Survey / DESCRIPTION	UNITS / LIMIT	α dpm/100cm2 / 20	βγ dpm/100cm2 / 100		
1 to 79	6/20/98	6/20/98	Smears Taken On Floor After Tile And Mastic Removed		<20	<100		
			Affected and Unaffected Areas					

COMMENTS:

INSTRUMENT	Tennelec	Tennelec		
IDENTIFICATION	NR007137	NR007137		
CALIBRATION DUE	Daily	Daily		
BACKGROUND	0.4 cpm	3.1 cpm		
EFFICIENCY	35.70%	38.66%		
COUNT TIME	1 min	1 min		

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

See Attachment ☐ Page 1 of 3

FORM 732-A REV 8-97

Rocketdyne Division

SAT JUN 20, 1998
GROUP B SMEARS. T011 FLOOR

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
100	1	1.00	1	1	0.60	-2.10	1.6806723	-5.431971	08:21:14
100	2	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	08:23:11
49	3	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	08:25:09
30	4	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	08:27:06
13	5	1.00	0	6	-0.40	2.90	-1.1204482	7.5012933	08:29:04
64	6	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	08:31:01
3	7	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	08:32:59
17	8	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	08:34:56
8	9	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	08:36:53
86	10	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	08:38:51
69	11	1.00	1	3	0.60	-0.10	1.6806723	-.25866529	08:40:48
82	12	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	08:42:46
42	13	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	08:44:43
2	14	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	08:46:40
18	15	1.00	0	0	-0.40	-3.10	-1.1204482	-8.0186239	08:48:38
4	16	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	08:50:35
99	17	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	08:52:33
5	18	1.00	0	6	-0.40	2.90	-1.1204482	7.5012933	08:54:30
80	19	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	08:56:28
43	20	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	08:58:25
91	21	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	09:00:23
95	22	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	09:02:20
3	23	1.00	1	4	0.60	0.90	1.6806723	2.3279876	09:04:18
60	24	1.00	0	0	-0.40	-3.10	-1.1204482	-8.0186239	09:06:15
50	25	1.00	1	3	0.60	-0.10	1.6806723	-.25866529	09:08:13
43	26	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	09:10:10
23	27	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	09:12:08
51	28	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	09:14:06
89	29	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	09:16:04
63	30	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	09:18:02
12	31	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	09:19:59
4	32	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	09:21:57
31	33	1.00	0	6	-0.40	2.90	-1.1204482	7.5012933	09:23:54
65	34	1.00	0	7	-0.40	3.90	-1.1204482	10.087946	09:25:52
30	35	1.00	0	8	-0.40	4.90	-1.1204482	12.674599	09:27:50
2	36	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	09:29:47
48	37	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:31:45
49	38	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:33:43
97	39	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	09:35:40
32	40	1.00	1	7	0.60	3.90	1.6806723	10.087946	09:37:38
55	41	1.00	1	3	0.60	-0.10	1.6806723	-.25866529	09:39:36
61	42	1.00	0	8	-0.40	4.90	-1.1204482	12.674599	09:41:33
8	43	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:43:31
71	44	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:45:28
78	45	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	09:47:26
11	46	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:49:24
11	47	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:51:21
47	48	1.00	1	5	0.60	1.90	1.6806723	4.9146405	09:53:19
34	49	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	09:55:17

N=7

SAT JUN 20, 1998
GROUP B SMEARS. TO 11 FLOOR

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
97	50	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	12:23:44
48	51	1.00	0	8	-0.40	4.90	-1.1204482	12.674599	12:25:42
2	52	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	12:27:39
48	53	1.00	1	1	0.60	-2.10	1.6806723	-5.431971	12:29:36
32	54	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	12:31:34
87	55	1.00	0	7	-0.40	3.90	-1.1204482	10.087946	12:33:31
63	56	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	12:35:29
12	57	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	12:37:26
4	58	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	12:39:24
31	59	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	12:41:21
66	60	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	12:43:20
30	61	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	12:45:17
50	62	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	12:47:15
43	63	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	12:49:12
23	64	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	12:51:10
51	65	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	12:53:08
89	66	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	12:55:05
38	67	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	12:57:03
42	68	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	12:59:01
2	69	1.00	1	6	0.60	2.90	1.6806723	7.5012933	13:00:58
18	70	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	13:02:56
4	71	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	13:04:54
99	72	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	13:06:51
5	73	1.00	0	6	-0.40	2.90	-1.1204482	7.5012933	13:08:49
43	74	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	13:10:47
91	75	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	13:12:45
95	76	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	13:14:42
3	77	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	13:16:40
80	78	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	13:18:38
80	79	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	13:20:36

BLDG T011 NUMBER OF TILES IN BLDG.

AFFECTED AREAS		UNAFFECTED AREAS	
Room #	# OF TILES	Room #	# OF TILES
100	78	101	262
102	909	103	576
104	567	115	256
105	432	118A	61
106	630	118B	81
108	504	122A	260
111	496	122B	54
EAST HALLWAY	872	** 124	144
TOTAL	4488	WEST HALLWAY	763
		* 120	45
		TOTAL	2502

* NO QUANTITATIVE SCANS DONE ON THIS ROOM

** TILES 12" x 12" [REST OF TILES 9" x 9" IN OTHER ROOMS]

PROCEDURE SAYS 4 TILES PER ROOM SURVEYED IN AFFECTED AREA'S

(b) Single sampling tables for Lot Tolerance Percent Defective:

(1) Lot Tolerance Percent Defective 0.5 percent:

Lot size	Sample size	Acceptance No.
1 to 180	All	0
181 to 210	180	0
211 to 250	210	0
251 to 300	240	0
301 to 400	275	0
401 to 500	300	0
501 to 600	320	0
601 to 800	350	0
801 to 1,000	365	0
1,001 to 2,000	410	0
2,001 to 3,000	430	0
3,001 to 4,000	440	0
4,001 to 5,000	445	0
5,001 to 7,000	450	0
7,001 to 10,000	455	0
10,001 to 20,000	460	0
20,001 to 50,000	775	1
50,001 to 100,000	780	1

(2) Lot Tolerance Percent Defective 1.0 percent:

Lot size	Sample size	Acceptance No.
1 to 120	All	0
121 to 150	120	0
151 to 200	140	0
201 to 300	165	0
301 to 400	175	0
401 to 500	180	0
501 to 600	190	0
601 to 800	200	0
801 to 1,000	205	0
1,001 to 3,000	220	0
3,001 to 5,000	225	0
5,001 to 10,000	230	0
10,001 to 100,000	390	1

(3) Lot Tolerance Percent Defective 2.0 percent:

Lot size	Sample size	Acceptance No.
1 to 75	All	0
76 to 100	70	0
101 to 200	85	0
201 to 300	95	0
301 to 400	100	0
401 to 600	105	0
601 to 800	110	0
801 to 4,000	115	0
4,001 to 10,000	195	1
10,001 to 100,000	200	1

(4) Lot Tolerance Percent Defective 3.0 percent:

Lot size	Sample size	Acceptance No.
1 to 40	All	0
41 to 55	40	0
56 to 100	55	0
101 to 200	65	0
201 to 500	70	0
501 to 3,000	75	0
3,001 to 100,000	130	1

(5) Lot Tolerance Percent Defective 4.0 percent:

Lot size	Sample size	Acceptance No.
1 to 35	All	0
36 to 50	34	0
51 to 100	44	0
101 to 200	50	0
201 to 2,000	55	0
2,001 to 100,000	95	1

(6) Lot Tolerance Percent Defective 5.0 percent:

Lot size	Sample size	Acceptance No.
1 to 30	All	0
31 to 50	30	0
51 to 100	37	0
101 to 200	40	0
201 to 300	43	0
301 to 400	44	0
401 to 2,000	45	0
2,001 to 100,000	75	1

(7) Lot Tolerance Percent Defective 7.0 percent:

Lot size	Sample size	Acceptance No.
1 to 25	All	0
26 to 50	24	0
51 to 100	28	0
101 to 200	30	0
201 to 300	31	0
301 to 800	32	0
801 to 1,000	33	0
1,001 to 100,000	55	1

(8) Lot Tolerance Percent Defective 10.0 percent:

Lot size	Sample size	Acceptance No.
1 to 20	All	0
21 to 50	17	0
51 to 100	20	0
101 to 200	22	0
201 to 800	23	0

Lot size	Samp size
801 to 100,000	

[39 FR 22130, June 20, 1974]

Subpart D—Specifically Items

§ 32.210 Registration of proc tion.

(a) Any manufacturer o tributor of a sealed sour containing a sealed source uct is intended for use unc license may submit a requ for evaluation of radiatic formation about its produ registration.

(b) The request for rev made in duplicate and sen Nuclear Regulatory Comr sion of Fuel Cycle, Medic and Commercial Use Saf Academic, and Commerci Branch; Washington, DC

(c) The request for revi source or a device must cient information about manufacture, prototype ity control program, labe uses and leak testing anc the request must also cient information abou service and maintenan and safety instructions, tial hazards, to provide surance that the radiatic erties of the source or quate to protect health danger to life and prope

(d) The NRC normal sealed source or a dev ation safety criteria in try standards. If these criteria do not readily ticular case, the NRC sonable standards anc the help of the manu tributor. The NRC sh and standards suffici that the radiation safe the device or sealed quate to protect healt danger to life and prop

(e) After completion tion, the Commission cate of registration

DATA PACKAGE #4

SURVEY OF OVERHEAD EQUIPMENT DURING AND FOLLOWING DEMOLITION

On June 3, 1998, Mr. Roger Lupo (Radiologic Health Branch, California Department of Health Services) conducted a confirmatory survey of the building interior prior to the demolition of the interior structures. Mr. Lupo's survey demonstrated that residual levels of radioactivity were in compliance with Rocketdyne release limits.

At this time, the building interior was demolished and placed in large refuse containers for eventual disposal in a construction landfill.

During this demolition, additional surveys were performed of surfaces that were inaccessible during the original survey (e.g., vent ducts, structural roof supports, etc.). The surveys of these areas are included in this data package. These surveys demonstrate that the levels of radioactivity are below Rocketdyne release levels.

BOEING

RADIATION SURVEY REPORT

FACILITY:	T011
LOCATION:	Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Informational Survey / DESCRIPTION	UNITS / LIMIT	α dpm/100cm2 / 20	βγ dpm/100cm2 / 100		
1 to 86	6/25/98	6/26/98	Structural Roof Support I-Beam Horizontal Surfaces		<20	<100		

COMMENTS:

INSTRUMENT	Tennelec	Tennelec		
IDENTIFICATION	NR007137	NR007137		
CALIBRATION DUE	Daily	Daily		
BACKGROUND	0.4 cpm	2.5 cpm		
EFFICIENCY	34.57%	38.95%		
COUNT TIME	1 min	1 min		

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

See Attachment ☐ Page 1 of 3

FORM 732-A REV 8-97

Rocketdyne Division

FRI JUN 26, 1998
GROUP B SMEARS. T011

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
15	1	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	09:33:13
16	2	1.00	0	8	-0.40	5.50	-1.1570726	14.120668	09:35:10
17	3	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	09:37:08
18	4	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	09:39:05
19	5	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	09:41:03
20	6	1.00	1	2	0.60	-0.50	1.7356089	-1.283697	09:43:00
11	7	1.00	1	5	0.60	2.50	1.7356089	6.4184852	09:44:58
12	8	1.00	0	12	-0.40	9.50	-1.1570726	24.390244	09:46:55
13	9	1.00	2	10	1.60	7.50	4.6282904	19.255456	09:48:53
14	10	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	09:50:50
33	11	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	09:52:48
34	12	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	09:54:45
61	13	1.00	0	9	-0.40	6.50	-1.1570726	16.688062	09:56:43
63	14	1.00	2	10	1.60	7.50	4.6282904	19.255456	09:58:41
64	15	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	10:00:38
66	16	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	10:02:36
81	17	1.00	0	9	-0.40	6.50	-1.1570726	16.688062	10:04:34
82	18	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	10:06:32
51	19	1.00	0	9	-0.40	6.50	-1.1570726	16.688062	10:08:29
53	20	1.00	1	10	0.60	7.50	1.7356089	19.255456	10:10:27
54	21	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	10:12:25
45	22	1.00	0	1	-0.40	-1.50	-1.1570726	-3.8510911	10:14:22
46	23	1.00	1	8	0.60	5.50	1.7356089	14.120668	10:16:20
47	24	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	10:18:18
32	25	1.00	1	9	0.60	6.50	1.7356089	16.688062	10:20:16
31	26	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	10:22:13
48	27	1.00	0	8	-0.40	5.50	-1.1570726	14.120668	10:24:12
49	28	1.00	2	4	1.60	1.50	4.6282904	3.8510911	10:26:10
50	29	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	10:28:07
41	30	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	10:30:05
42	31	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	10:32:03
43	32	1.00	1	8	0.60	5.50	1.7356089	14.120668	10:34:00
44	33	1.00	1	7	0.60	4.50	1.7356089	11.553273	10:35:58
35	34	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	10:37:55
37	35	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	10:39:53
38	36	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	10:41:50
1	37	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	10:43:48
2	38	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	10:45:46
3	39	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	10:47:43
4	40	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	10:49:41
5	41	1.00	2	5	1.60	2.50	4.6282904	6.4184852	10:51:38
7	42	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	10:53:36
8	43	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	10:55:33
9	44	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	10:57:31
10	45	1.00	1	5	0.60	2.50	1.7356089	6.4184852	10:59:28
39	46	1.00	0	12	-0.40	9.50	-1.1570726	24.390244	11:01:26
40	47	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	11:03:24
22	48	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	11:05:22
21	49	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	11:07:19
23	50	1.00	1	7	0.60	4.50	1.7356089	11.553273	11:09:17

FRI JUN 26, 1998
GROUP B SMEARS. TO 11

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
61	51	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	05:49:49
63	52	1.00	1	5	0.60	2.50	1.7356089	6.4184852	05:51:47
64	53	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	05:53:44
66	54	1.00	1	8	0.60	5.50	1.7356089	14.120668	05:55:42
81	55	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	05:57:39
82	56	1.00	2	5	1.60	2.50	4.6282904	6.4184852	05:59:37
51	57	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	06:01:34
53	58	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	06:03:32
54	59	1.00	1	3	0.60	0.50	1.7356089	1.283697	06:05:29
45	60	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	06:07:27
46	61	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	06:09:24
47	62	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	06:11:22
48	63	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	06:13:20
49	64	1.00	1	4	0.60	1.50	1.7356089	3.8510911	06:15:17
50	65	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	06:17:15
41	66	1.00	1	4	0.60	1.50	1.7356089	3.8510911	06:19:13
42	67	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	06:21:10
43	68	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	06:23:08
44	69	1.00	1	8	0.60	5.50	1.7356089	14.120668	06:25:06
35	70	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	06:27:03
37	71	1.00	1	3	0.60	0.50	1.7356089	1.283697	06:29:01
38	72	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	06:30:59
39	73	1.00	2	4	1.60	1.50	4.6282904	3.8510911	06:32:56
40	74	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	06:34:54
21	75	1.00	1	4	0.60	1.50	1.7356089	3.8510911	06:36:52
22	76	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	06:38:50
23	77	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	06:40:48
24	78	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	06:42:45
25	79	1.00	2	6	1.60	3.50	4.6282904	8.9858793	06:44:43
26	80	1.00	0	8	-0.40	5.50	-1.1570726	14.120668	06:46:41
27	81	1.00	1	5	0.60	2.50	1.7356089	6.4184852	06:48:39
28	82	1.00	2	7	1.60	4.50	4.6282904	11.553273	06:50:37
29	83	1.00	1	3	0.60	0.50	1.7356089	1.283697	06:52:35
30	84	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	06:54:32
31	85	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	06:56:30
32	86	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	06:58:29

MS

BOEING

RADIATION SURVEY REPORT

FACILITY: T 011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Contamination Survey	UNITS	α dpm/100cm2	β dpm/100cm2	cpm Direct Frisk	
			DESCRIPTION	LIMIT	20	100	NDA	
1 to 25	6/10/98	6/10/98	Survey Above Drop Ceiling on Vent Ducting,Piping,		<20	<100	NDA	
			Support Beams, and Ceiling Pannels.					
			Direct Beta Frisk					
			Background Range 60 to 80 cpm					
			NDA = Lowest Background + 100 cpm Beta					

COMMENTS:

INSTRUMENT	Tennelec	Tennelec	Ludlum 3	
IDENTIFICATION	NR007137	NR007137	EX 040899	
CALIBRATION DUE	Daily	Daily	8/14/98	
BACKGROUND	1.6 cpm	6.4 cpm	60 - 80	
EFFICIENCY	35.10%	38.68%	0.131	
COUNT TIME	1 min	1 min	NA	

SAMPLED BY: William Schaeppi ANALYZED BY: [signature]

REVIEWED BY: [signature] DATE: 7/9/98

See Attachment ☐ Page 1 of 2

FORM 732-A REV 8-97

Rocketdyne Division

WED JUN 10, 1998
GROUP B SMEARS. T011 OVERHEAD SURVEY

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
8		1.00	1	4	-0.60	-2.40	-1.7094017	-6.204757	13:59:45
89		1.00	0	6	-1.60	-0.40	-4.5584046	-1.0341262	14:01:43
80		1.00	1	4	-0.60	-2.40	-1.7094017	-6.204757	14:03:40
100		1.00	0	3	-1.60	-3.40	-4.5584046	-8.7900724	14:05:37
95		1.00	1	3	-0.60	-3.40	-1.7094017	-8.7900724	14:07:34
43		1.00	1	3	-0.60	-3.40	-1.7094017	-8.7900724	14:09:32
18		1.00	2	6	0.40	-0.40	1.1396011	-1.0341262	14:11:29
49		1.00	0	3	-1.60	-3.40	-4.5584046	-8.7900724	14:13:26
91		1.00	0	4	-1.60	-2.40	-4.5584046	-6.204757	14:15:23
1		1.00	1	5	-0.60	-1.40	-1.7094017	-3.6194416	14:17:21
58		1.00	0	2	-1.60	-4.40	-4.5584046	-11.375388	14:19:18
23		1.00	1	5	-0.60	-1.40	-1.7094017	-3.6194416	14:21:15
28		1.00	1	6	-0.60	-0.40	-1.7094017	-1.0341262	14:23:12
51		1.00	0	4	-1.60	-2.40	-4.5584046	-6.204757	14:25:10
10		1.00	0	3	-1.60	-3.40	-4.5584046	-8.7900724	14:27:07
8		1.00	1	5	-0.60	-1.40	-1.7094017	-3.6194416	14:29:04
71		1.00	0	3	-1.60	-3.40	-4.5584046	-8.7900724	14:31:01
78		1.00	0	6	-1.60	-0.40	-4.5584046	-1.0341262	14:32:58
30		1.00	0	4	-1.60	-2.40	-4.5584046	-6.204757	14:34:56
2		1.00	0	2	-1.60	-4.40	-4.5584046	-11.375388	14:36:53

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Contamination Survey	UNITS	α dpm/100cm2	β dpm/100cm2		
			DESCRIPTION	LIMIT	20	100		
1 to 6	6/11/98	6/12/98	Smears Taken Inside Vent Ducting During Removal		<20	<100		

COMMENTS:

INSTRUMENT	Tennelec	Tennelec		
IDENTIFICATION	NR007137	NR007137		
CALIBRATION DUE	Daily	Daily		
BACKGROUND	0.7 cpm α	2.9 cpm β		
EFFICIENCY	34.44%	38.65%		
COUNT TIME	1 min	1 min		
See Attachment ☐	Page	1	of	2

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

FORM 732-A REV 8-97

Rocketdyne Division

FRI JUN 12, 1998
GROUP B SMEARS. T011 VENT DUCTENG

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
3	1	1.00	0	6	-0.70	3.10	-2.0325203	8.0206986	06:12:39
12	2	1.00	0	7	-0.70	4.10	-2.0325203	10.608021	06:14:36
13	3	1.00	1	11	0.30	8.10	.87108014	20.957309	06:16:33
100	4	1.00	1	12	0.30	9.10	.87108014	23.544631	06:18:31
17	5	1.00	2	7	1.30	4.10	3.7746806	10.608021	06:20:28
64	6	1.00	1	8	0.30	5.10	.87108014	13.195343	06:22:25

DATA PACKAGE #5

SURVEY OF WASTE CONTAINERS

A survey of each waste container was conducted to demonstrate that the accumulation of materials from the building did not result in an increase in radiation levels in the area. Radiation in the vicinity of the containers was found to be in compliance with Rocketdyne release limits (i.e., < 5 uR/hr above ambient background).

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Yard

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Survey of Construction Material in Roll-Offs	UNITS	α cpm Direct Frisk	βγ cpm Direct Frisk	μR/Hr @ Contact	
			DESCRIPTION	LIMIT	NDA	NDA	NA	
	6/24/98	6/24/98	Roll-Off # 7741 (walls,plaster,sheetrock)		NDA	NDA	23	
	6/24/98	6/24/98	Roll-Off # 7734 (insulation,ceiling tiles)		NDA	NDA	24	
	6/24/98	6/24/98	Roll-Off # 7339 (metal,ducting)		NDA	NDA	22	
	6/24/98	6/24/98	Roll-Off # 8074 (metal,ducting)		NDA	NDA	25	
	6/24/98	6/24/98	Roll-Off # 50-32 (walls,plaster,sheetrock)		NDA	NDA	25	
			Direct α Frisk					
			NDA α = 2 times bkgd. 7/9/98					
			Direct β Frisk					
			Background Range 40-60 cpm					
			NDA β = (lowest bkgd) + 100 cpm β					

COMMENTS:

INSTRUMENT	Ludlum 12	Ludlum 3	Ludlum 19
IDENTIFICATION	MET-6946	Ex040899	EX030418
CALIBRATION DUE	8/14/98	8/14/98	8/14/98
BACKGROUND	0-1 cpm	60-80 cpm	22 μR/HR
EFFICIENCY	13%	13.10%	NA
COUNT TIME	NA	NA	NA
See Attachment ☐	Page		of

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

FORM 732-A REV 8-97

Rocketdyne Division

DATA PACKAGE #6

JANITORIAL SINK DRAIN TRAP

During the survey of the building, it was discovered the sink trap to the janitorial sink was contaminated with low levels of Uranium. Gamma spectrography indicated that the source of the contamination was sludge that had accumulated in the trap of the sink (see Analysis Report for ENV98102).

The wall in the area was removed to permit access to the sink. The sink and trap were removed and disposed of as radioactive waste. An additional sludge sample was taken from a location several feet into the line. This sample was found to meet release criteria (see Analysis Report for ENV98166).

The remaining line was surveyed for removable contamination. No additional contamination was detected. The line now meets Rocketdyne release criteria.

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Yard

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Utility Sink Drain Pipe	UNITS	α dpm/100cm2	βγ dpm/100cm2		
			DESCRIPTION	LIMIT	20	100		
			Smears Inside of the Utility Sink Drain Pipe After Cutting Out					
1 to 2	6/24/98	6/24/98	Cut out Drain Pipe:		<20	<100		
3 to 4	6/24/98	6/24/98	Drain Pipe Above Floor:		<20	<100		

COMMENTS:

Radiometric Analysis: ENV-98166

INSTRUMENT	Tennelec	Tennelec		
IDENTIFICATION	NR007137	NR007137		
CALIBRATION DUE	Daily	Daily		
BACKGROUND	0.7 cpm	3.3cpm		
EFFICIENCY	34.62%	38.84%		
COUNT TIME	1 min	1 min		
See Attachment ☐	Page	1	of	2

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

FORM 732-A REV 8-97

Rocketdyne Division

WED JUN 24, 1998
GROUP B SMEARS. T011

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC	
91	1	1.00	0	5	-0.70	1.70	-2.0219526	4.376931	09:47:29	CUT OUT DRAIN PIPE
95	2	1.00	0	3	-0.70	-0.30	-2.0219526	-.77239959	09:49:27	
51	3	1.00	1	3	0.30	-0.30	.86655113	-.77239959	09:51:25	DRAIN PIPE ABOVE FLOOR
18	4	1.00	0	2	-0.70	-1.30	-2.0219526	-3.3470649	09:53:22	

WKS

SAMPO 90, 1990 PA,MN,JR. 9-Jun-1998 12:48:23

GAMMA SPECTRUM ANALYSIS REPORT

FOR ENV98102

Boeing North American / Rocketdyne - SHEA Env Lab
Sample description: T011- FOLLOWUP SINK SEDIMENT, ENV980102, 4/17/98
Spectrum file name: ENV98102
Sample identifier : SCHAEPPI
Sample size : 4.660E+02 g
Measured by : FCD

Date of Activity Calculation : 1-May-1998 at 8:47:20
Collect started on : 1-May-1998 at 8:47:20
Collect ended on : 1-May-1998 at 10:44: 5

Decay time : 0 years 0 days 0 hours 0 minutes
Live time: 7.000E+03 s real time: 7.005E+03 s dead time: .07 %

Calibration Files

Shape calibration requested : ZM012298
Shape calibration used : ZM012298
Created : 5-Jan-1995
Modified : 26-Jan-1998

Energy calibration requested : ZM012298
Energy calibration used : ZM012298
Created : 5-Jan-1995
Modified : 26-Jan-1998

Efficiency calibration requested : ZM012298
Efficiency calibration used : ZM012298
Created : 2-Feb-1996
Modified : 26-Jan-1998

ENV-980066 6/9/98
U-238 - 14.4 pCi/g
U-234 - 2.1
U-235 - 8.7
Th-234 -
Co-60 - .11 pCi/g
Cs 137 -

Last search discrimination level: 3.00
Last search FROM channel 12 TO channel
Last fitting discrimination level: 1.64
Last fit FROM channel 1 TO channel
Identification energy tolerance : 1.00
Minimum intensity conv. factor : 10.00
Gamma reference library : C:\SAMPO\LIBRARY\LIBRARY.ILF
with 38 isotopes and 191 gamma lines.

MDA library name: C:\SAMPO\LIBRARY\MDALIB1A.ILF
MDA energy tolerance: 1.00 keV
MDA decision limit 1-alpha: 95.00 %
MDA detection limit 1-beta: 95.00 %

Peaked backround file: C:\SAMPO\SPECTRA\BM080497.PTF
Energy tolerance for peaked backround subtraction: 1.00 keV
Threshold factor for peak areas: 1.00

Report Reviewed and
Conforms to N001OP000028 By: [signature] RP&HPS Date: 6/9/98

U-238 12 pCi/g
U-234 27.2 pCi/g
U-235 1.4 pCi/g
Th-234 8.5 pCi/g

Co-60 0.03 pCi/g
Cs-137 0.14 pCi/g

Spectrum file: ENV98102 Date: 1-May-1998 Time: 10:44: 5

********** R A D I O N U C L I D E A N A L Y S I S R E P O R T *******

number	nuclide	conf.value	Activity (pCi/g) measured		decay corrected	saturation
1	K-40	.8811	1.957E+00	+- 8.60%	1.957E+00	0.000E+00
2	CO-60	.9168	3.285E-02	+- 22.67%	3.285E-02	0.000E+00
3	CS-137	.9712	1.408E-01	+- 5.09%	1.408E-01	0.000E+00
4	Tl-208T	.9077	6.413E-01	+- 4.13%	6.413E-01	0.000E+00
5	Pb-212T	.9970	1.998E+00	+- 13.10%	1.998E+00	0.000E+00
6	Pb-214U	.8960	2.398E-01	+- 9.37%	2.398E-01	0.000E+00
7	Bi-214U	.7942	1.842E-01	+- 6.64%	1.842E-01	0.000E+00
8	Ra-224T	.9934	1.023E+00	+- 26.51%	1.023E+00	0.000E+00
9	Ac-228T	.6208	1.741E+00	+- 2.63%	1.741E+00	0.000E+00
10	Th-234U	.8652	8.569E+00	+- 5.31%	8.569E+00	0.000E+00
11	Pa-234mU	.9122	1.209E+01	+- 5.58%	1.209E+01	0.000E+00
12	U-234U	.9793	2.717E+01	+- 13.00%	2.717E+01	0.000E+00
13	U-235	.9886	1.392E+00	+- 4.75%	1.392E+00	0.000E+00
			5.719E+01		5.719E+01	0.000E+00

Flags: C = check; nuclide is a part of an underdetermined solution

SAMPO 90, 1990 PA,MN,JR. 24-Jun-1998 13:43:22

G A M M A S P E C T R U M A N A L Y S I S R E P O R T

FOR ENV98166

Boeing North American / Rocketdyne - SHEA Env Lab
Sample description: T011- SLUDGE #3 IN JANITOR DRN, ENV980166, 6/23/98
Spectrum file name: ENV98166
Sample identifier : SCHAEPPI
Sample size : 5.900E+01 g
Measured by : fcd

Date of Activity Calculation : 23-Jun-1998 at 17: 5:43
Collect started on : 23-Jun-1998 at 17: 5:43
Collect ended on : 23-Jun-1998 at 19: 2:25

Decay time : 0 years 0 days 0 hours 0 minutes
Live time: 7.000E+03 s real time: 7.002E+03 s dead time: .03 %

Calibration Files

Shape calibration requested : ZM051198
Shape calibration used : ZM051198
Created : 5-Jan-1995 9:39:36
Modified : 28-May-1998 15:21:41

Energy calibration requested : ZM051198
Energy calibration used : ZM051198
Created : 5-Jan-1995 9:39: 3
Modified : 28-May-1998 15:26:23

Efficiency calibration requested : ZM051198
Efficiency calibration used : ZM051198
Created : 2-Feb-1996 10: 6:29
Modified : 28-May-1998 15:29:49

Last search discrimination level: 3.00
Last search FROM channel 12 TO channel 8180
Last fitting discrimination level: 1.64
Last fit FROM channel 1 TO channel 8192
Identification energy tolerance : .70
Minimum intensity conv. factor : 10.00
Gamma reference library : C:\SAMPO\LIBRARY\LIBRARY.ILF
with 38 isotopes and 191 gamma lines.

MDA library name: C:\SAMPO\LIBRARY\LIBRARY.ILF 3
MDA energy tolerance: .70 keV
MDA decision limit 1-alpha: 95.00 %
MDA detection limit 1-beta: 95.00 %

Peaked backround file: C:\SAMPO\SPECTRA\BX051198.PTF
Energy tolerance for peaked backround subtraction: .70 keV
Threshold factor for peak areas: 1.00

Report Reviewed and
Conforms to N001OP000028 By: _____ Date: 6/24/98
RP&HPS

Cs-137 0.34 pCi/g <9.2 pCi/g release criteria

Acceptable for Non-radioactive Disposal
(See Rocketdyne N001OP000034)

ectrum file: ENV98166 Date: 23-Jun-1998 Time: 19: 2:25

******** R A D I O N U C L I D E A N A L Y S I S R E P O R T *******

mber	nuclide	conf.value	Activity (pCi/g) measured	decay corrected	saturation
1	K-40	.9801	2.857E+00 +- 25.14%	2.857E+00	0.000E+00
2	CS-137	1.0000	3.430E-01 +- 7.30%	3.430E-01	0.000E+00
3	Tl-208T	.9984	4.766E-01 +- 8.69%	4.766E-01	0.000E+00
4	Pb-212T	.9977	1.930E+00 +- 5.63%	1.930E+00	0.000E+00
5	Pb-214U	.9063	1.091E+00 +- 5.53%	1.091E+00	0.000E+00
6	Bi-214U	.9105	1.113E+00 +- 8.17%	1.113E+00	0.000E+00
7	Ra-224T	.9971	2.849E+00 +- 12.64%	2.849E+00	0.000E+00
8	Ra-226U	.9991	4.613E+00 +- 13.27%	4.613E+00	0.000E+00
9	Ac-228T	.9816	1.843E+00 +- 7.85%	1.843E+00	0.000E+00
10	Th-234U	.9988	1.604E+00 +- 26.11%	1.604E+00	0.000E+00
11	U-235	.9892	2.802E-01 +- 13.27%	2.802E-01	0.000E+00
			1.900E+01	1.900E+01	0.000E+00

lags: C = check; nuclide is a part of an underdetermined solution

WED FEB 11. 1998
GROUP A BLDG. T011 ROOM 101

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	11:08:20
2		1.00	1	4	0.30	0.70	.91074681	2.0753039	11:09:32
3		1.00	2	2	1.30	-1.30	3.9465695	-3.8541358	11:10:44
4		1.00	1	7	0.30	3.70	.91074681	10.969463	11:11:56
5		1.00	1	5	0.30	1.70	.91074681	5.0400237	11:13:08
6		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	11:14:20
7		1.00	0	2	-0.70	-1.30	-2.1250759	-3.8541358	11:15:32
8		1.00	1	5	0.30	1.70	.91074681	5.0400237	11:16:44
9		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	11:17:56

OPERATION COMPLETE

February 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency %	β Counter Efficiency %
1										
2	8	2	38	29	0.5	3.4	2797.3	3229.9	33.35	33.93
3	9	8	19	38	0.9	2.9	2886.0	3215.4	34.41	33.78
4	3	6	26	38	0.5	3.2	2773.8	3245.7	33.08	34.10
5	5	7	32	41	0.6	3.7	2771.9	3223.8	33.05	33.86
6	2	7	20	31	0.5	2.6	2809.4	3234.3	33.50	33.98
7										
8										
9	12	3	24	33	0.8	2.9	2775.8	3240.3	33.10	34.04
10	8	6	60	27	0.7	4.4	2786.4	3243.9	33.22	34.06
11	6	8	38	27	0.7	3.3	2762.3	3210.7	32.94	33.73
12					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

PAGE 3 OF 3

FINAL SURVEY DATA SHEET

DATE: 3/3/98 PAGE: 1 of 3

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: Room 102

	SAMPLE GRID LOCATION	GRID NO.	GROSS COUNTS IN 5 MINUTES						GROSS COUNTS IN 1 MIN			COUNTS IN 1 MIN	
			ALPHA			BETA			REMOVABLE			GAMMA	
			CS DATE	TOTAL	MAX	CS DATE	TOTAL	MAX	CS DATE	Alpha	Beta	CS DATE	TOTAL
1	NORTH WALL	4	2/18/98	7	NA	2/18/98	251	NA	2/11/98	0	4	NA	NA
2	NORTH WALL	21	2/18/98	4	NA	2/18/98	298	NA	2/11/98	1	5	NA	NA
3	NORTH EAST WALL	30	2/18/98	4	NA	2/18/98	319	NA	2/11/98	0	5	NA	NA
4	EAST SOUTH WALL	33	2/18/98	1	NA	2/18/98	266	NA	2/11/98	0	2	NA	NA
5	SOUTH EAST WALL	37	2/18/98	0	NA	2/18/98	251	NA	2/11/98	1	7	NA	NA
6	WEST SOUTH WALL	42	2/18/98	4	NA	2/18/98	243	NA	2/11/98	0	4	NA	NA
7	WEST SOUTH WALL	54	2/18/98	15	NA	2/18/98	271	NA	2/11/98	2	5	NA	NA
8	WEST WALL	66	2/18/98	6	NA	2/18/98	270	NA	2/11/98	0	3	NA	NA
9	FLOOR	F75	2/18/98	5	NA	2/18/98	325	NA	2/11/98	0	5	3/3/98	2228
10	FLOOR	F79	2/18/98	6	NA	2/18/98	321	NA	2/11/98	0	2	3/3/98	2345
11	FLOOR	F81	2/18/98	4	NA	2/18/98	324	NA	2/11/98	0	10	3/3/98	2433
12	FLOOR	F101	2/18/98	6	NA	2/18/98	345	NA	2/11/98	0	6	3/3/98	2394
13	FLOOR	F105	2/18/98	1	NA	2/18/98	331	NA	2/11/98	2	6	3/3/98	2329
14	CEILING	C116	2/18/98	11	NA	2/18/98	331	NA	2/11/98	2	8	NA	NA
15	CEILING	C120	2/18/98	3	NA	2/18/98	350	NA	2/11/98	0	3	NA	NA
16	CEILING	C122	2/18/98	6	NA	2/18/98	310	NA	2/11/98	1	5	NA	NA
17	CEILING	C142	2/18/98	12	NA	2/18/98	340	NA	2/11/98	0	6	NA	NA
18	CEILING	C145	2/18/98	6	NA	2/18/98	331	NA	2/11/98	0	4	NA	NA
19													
20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: [signature] Date: 3/3/98

Reviewed By: [signature] Date: 7/9/98

WED FEB 11. 1998
GROUP A BLDG. T011 ROOM 102

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	11:47:05
2		1.00	1	5	0.30	1.70	.91074681	5.0400237	11:48:17
3		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	11:49:29
4		1.00	0	2	-0.70	-1.30	-2.1250759	-3.8541358	11:50:41
5		1.00	1	7	0.30	3.70	.91074681	10.969463	11:51:53
6		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	11:53:05
7		1.00	2	5	1.30	1.70	3.9465695	5.0400237	11:54:17
8		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	11:55:29
9		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	11:56:41
10		1.00	0	2	-0.70	-1.30	-2.1250759	-3.8541358	11:57:53
11		1.00	0	10	-0.70	6.70	-2.1250759	19.863623	11:59:05
12		1.00	0	6	-0.70	2.70	-2.1250759	8.0047436	12:00:17
13		1.00	2	6	1.30	2.70	3.9465695	8.0047436	12:01:29
14		1.00	2	8	1.30	4.70	3.9465695	13.934183	12:02:41
15		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	12:03:53
16		1.00	1	5	0.30	1.70	.91074681	5.0400237	12:05:05
17		1.00	0	6	-0.70	2.70	-2.1250759	8.0047436	12:06:17
18		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	12:07:29

OPERATION COMPLETE

OPERATION COMPLETE

February 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency %	β Counter Efficiency %
1										
2	8	2	38	29	0.5	3.4	2797.3	3229.9	33.35	33.93
3	9	8	19	38	0.9	2.9	2886.0	3215.4	34.41	33.78
4	3	6	26	38	0.5	3.2	2773.8	3245.7	33.08	34.10
5	5	7	32	41	0.6	3.7	2771.9	3223.8	33.05	33.86
6	2	7	20	31	0.5	2.6	2809.4	3234.3	33.50	33.98
7										
8										
9	12	3	24	33	0.8	2.9	2775.8	3240.3	33.10	34.04
10	8	6	60	27	0.7	4.4	2786.4	3243.9	33.22	34.06
11	6	8	38	27	0.7	3.3	2762.3	3210.7	32.94	33.73
12					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

FINAL SURVEY DATA SHEET

DATE: 3/3/98 PAGE: 1 of 3

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: Room 103

	SAMPLE GRID LOCATION	GRID NO.	GROSS COUNTS IN 5 MINUTES						GROSS COUNTS IN 1 MIN			COUNTS IN 1 MIN	
			ALPHA			BETA			REMOVABLE			GAMMA	
			CS DATE	TOTAL	MAX	CS DATE	TOTAL	MAX	CS DATE	Alpha	Beta	CS DATE	TOTAL
1	NORTH WALL	9	2/18/98	1	NA	2/18/98	272	NA	2/11/98	0	4		
2	NORTH WALL	18	2/18/98	7	NA	2/18/98	245	NA	2/11/98	1	3	NA	NA
3	EAST WALL	22	2/18/98	1	NA	2/18/98	227	NA	2/11/98	0	7	NA	NA
4	SOUTH WALL	36	2/18/98	4	NA	2/18/98	262	NA	2/11/98	0	5	NA	NA
5	SOUTH WALL	37	2/18/98	6	NA	2/18/98	293	NA	2/11/98	1	8	NA	NA
6	WEST WALL	48	2/18/98	1	NA	2/18/98	234	NA	2/11/98	0	1	NA	NA
7	FLOOR	F56	2/18/98	3	NA	2/18/98	290	NA	2/11/98	0	6	3/3/98	2068
8	FLOOR	F59	2/18/98	5	NA	2/18/98	310	NA	2/11/98	1	6	3/3/98	2327
9	FLOOR	F61	2/18/98	2	NA	2/18/98	309	NA	2/11/98	1	6	3/3/98	2101
10	FLOOR	F73	2/18/98	5	NA	2/18/98	321	NA	2/11/98	1	4	3/3/98	2243
11	CEILING	C87	2/18/98	4	NA	2/18/98	352	NA	2/11/98	0	5	NA	NA
12	CEILING	C90	2/18/98	11	NA	2/18/98	320	NA	2/11/98	0	8	NA	NA
13	CEILING	C92	2/18/98	7	NA	2/18/98	304	NA	2/11/98	1	3	NA	NA
14	CEILING	C104	2/18/98	4	NA	2/18/98	295	NA	2/11/98	0	3	NA	NA
15	FLOOR	F68	NA	NA	NA	NA	NA	NA	NA	NA	NA	3/3/98	2271
16	FLOOR	F77	NA	NA	NA	NA	NA	NA	NA	NA	NA	3/3/98	2215
17													
18													
19													
20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: [signature] Date: 3/3/98

Reviewed By: [signature] Date: 7/9/98

WED FEB 11. 1998
GROUP A BLDG. T011 ROOM 104

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	14:05:31
2		1.00	0	7	-0.70	3.70	-2.1250759	10.969463	14:06:43
3		1.00	1	4	0.30	0.70	.91074681	2.0753039	14:07:54
4		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	14:09:06
5		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	14:10:18
6		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	14:11:30
7		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	14:12:42
8		1.00	0	10	-0.70	6.70	-2.1250759	19.863623	14:13:54
9		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	14:15:06
10		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	14:16:18
11		1.00	1	4	0.30	0.70	.91074681	2.0753039	14:17:30
12		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	14:18:42
13		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	14:19:54
14		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	14:21:06
15		1.00	1	3	0.30	-0.30	.91074681	-.88941595	14:22:18

OPERATION COMPLETE

February 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency *%*	β Counter Efficiency *%*
1										
2	8	2	38	29	0.5	3.4	2797.3	3229.9	33.35	33.93
3	9	8	19	38	0.9	2.9	2886.0	3215.4	34.41	33.78
4	3	6	26	38	0.5	3.2	2773.8	3245.7	33.08	34.10
5	5	7	32	41	0.6	3.7	2771.9	3223.8	33.05	33.86
6	2	7	20	31	0.5	2.6	2809.4	3234.3	33.50	33.98
7										
8										
9	12	3	24	33	0.8	2.9	2775.8	3240.3	33.10	34.04
10	8	6	60	27	0.7	4.4	2786.4	3243.9	33.22	34.06
11	6	8	38	27	0.7	3.3	2762.3	3210.7	32.94	33.73
12					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

FINAL SURVEY DATA SHEET

DATE: 3/6/98 PAGE: 1 of 4

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: Sink Traps

			GROSS COUNTS IN 5 MINUTES						GROSS COUNTS IN 1 MIN			COUNTS IN 1 MIN	
	SAMPLE GRID	GRID	ALPHA			BETA			REMOVABLE			GAMMA	
	LOCATION	NO.	CS DATE	TOTAL	MAX	CS DATE	TOTAL	MAX	CS DATE	Alpha	Beta	CS DATE	TOTAL
1	Room:												
2	118A	NA	NA	NA	NA	3/5/98	309	NA	3/6/98	0	2	NA	NA
3	120	NA	NA	NA	NA	3/5/98	216	NA	3/6/98	0	5	NA	NA
4	122A North	NA	NA	NA	NA	3/5/98	268	NA	3/6/98	1	7	NA	NA
5	122A Middle	NA	NA	NA	NA	3/5/98	265	NA	3/6/98	0	3	NA	NA
6	122A South	NA	NA	NA	NA	3/5/98	286	NA	3/6/98	0	7	NA	NA
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: [signature] Date: 3/6/98

Reviewed By: [signature] Date: 7/9/98

FRI MAR 06, 1998

GROUP A ~~RELEASE OF MATERIAL~~ WCS 3-6-98 SINK TRAPS BLDG 701

	SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC	
1	36	WCS 3-6-98	1.00	0	2	-0.70	-0.90	-2.0777679	-2.6501767	12:13:25	118A
2	37		1.00	0	5	-0.70	2.10	-2.0777679	6.1837456	12:14:37	120
3	38		1.00	1	7	0.30	4.10	.89047195	12.073027	12:15:49	122A NORTH
4	39		1.00	0	3	-0.70	0.10	-2.0777679	.29446408	12:17:01	122A MIDDLE
5	40		1.00	0	7	-0.70	4.10	-2.0777679	12.073027	12:18:13	122A SOUTH

OPERATION COMPLETE

March 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency *%*	β Counter Efficiency *%*
1										
2	11	9	34	31	1.0	3.3	2790.0	3206.3	33.26	33.68
3	1	12	36	32	0.7	3.4	2811.5	3213.5	33.52	33.75
4	5	8	42	41	0.7	4.2	2810.1	3236.8	33.51	33.99
5	8	9	32	32	0.9	3.2	2829.3	3242.7	33.73	34.06
6	8	6	25	32	0.7	2.9	2825.8	3232.8	33.69	33.96
7										
8										
9					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
10					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
11					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
12					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
31					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

FINAL SURVEY DATA SHEET

DATE: 3/3/98 PAGE: 1 of 3

BUILDING: T 011 PROCEDURE: N001SRR140128

DATA DESCRIPTION: Room 104

			GROSS COUNTS IN 5 MINUTES						GROSS COUNTS IN 1 MIN			COUNTS IN 1 MIN	
	SAMPLE GRID	GRID	ALPHA			BETA			REMOVABLE			GAMMA	
	LOCATION	NO.	CS DATE	TOTAL	MAX	CS DATE	TOTAL	MAX	CS DATE	Alpha	Beta	CS DATE	TOTAL
1	NORTH WALL	1	2/19/98	6	NA	2/19/98	227	NA	2/11/98	0	3	NA	NA
2	NORTH WALL	16	2/19/98	8	NA	2/19/98	300	NA	2/11/98	0	7	NA	NA
3	EAST WALL	24	2/19/98	5	NA	2/19/98	242	NA	2/11/98	1	4	NA	NA
4	EAST WALL	27	2/19/98	7	NA	2/19/98	254	NA	2/11/98	0	3	NA	NA
5	SOUTH WALL	40	2/19/98	4	NA	2/19/98	249	NA	2/11/98	0	3	NA	NA
6	WEST WALL	57	2/19/98	6	NA	2/19/98	286	NA	2/11/98	0	4	NA	NA
7	WEST WALL	58	2/19/98	6	NA	2/19/98	258	NA	2/11/98	0	5	NA	NA
8	FLOOR	F65	2/19/98	3	NA	2/19/98	307	NA	2/11/98	0	10	3/3/98	2303
9	FLOOR	F75	2/19/98	5	NA	2/19/98	325	NA	2/11/98	0	3	3/3/98	2411
10	FLOOR	F80	2/19/98	5	NA	2/19/98	316	NA	2/11/98	0	5	3/3/98	2289
11	FLOOR	F85	2/19/98	7	NA	2/19/98	288	NA	2/11/98	1	4	3/3/98	2281
12	CEILING	C95	2/19/98	2	NA	2/19/98	313	NA	2/11/98	0	5	NA	NA
13	CEILING	C105	2/19/98	1	NA	2/19/98	293	NA	2/11/98	0	3	NA	NA
14	CEILING	C110	2/19/98	3	NA	2/19/98	306	NA	2/11/98	0	4	NA	NA
15	CEILING	C115	2/19/98	9	NA	2/19/98	337	NA	2/11/98	1	3	NA	NA
16													
17													
18													
19													
20													

Note: CS = Calibration Sheet

Surveyed BY: William Schaeppi Signature: [signature] Date: 3/3/98

Reviewed By: [signature] Date: 7/9/98

WED FEB 11. 1998
GROUP A BLDG. T011 ROOM 103

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
1		1.00	0	4	-0.70	0.70	-2.1250759	2.0753039	12:19:11
2		1.00	1	3	0.30	-0.30	.91074681	-.88941595	12:20:23
3		1.00	0	7	-0.70	3.70	-2.1250759	10.969463	12:21:35
4		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	12:22:47
5		1.00	1	8	0.30	4.70	.91074681	13.934183	12:23:59
6		1.00	0	1	-0.70	-2.30	-2.1250759	-6.8188556	12:25:11
7		1.00	0	6	-0.70	2.70	-2.1250759	8.0047436	12:26:23
8		1.00	1	6	0.30	2.70	.91074681	8.0047436	12:27:36
9		1.00	1	6	0.30	2.70	.91074681	8.0047436	12:28:47
10		1.00	1	4	0.30	0.70	.91074681	2.0753039	12:29:59
11		1.00	0	5	-0.70	1.70	-2.1250759	5.0400237	12:31:11
12		1.00	0	8	-0.70	4.70	-2.1250759	13.934183	12:32:23
13		1.00	1	3	0.30	-0.30	.91074681	-.88941595	12:33:35
14		1.00	0	3	-0.70	-0.30	-2.1250759	-.88941595	12:34:47

OPERATION COMPLETE

February 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency %	β Counter Efficiency %
1										
2	8	2	38	29	0.5	3.4	2797.3	3229.9	33.35	33.93
3	9	8	19	38	0.9	2.9	2886.0	3215.4	34.41	33.78
4	3	6	26	38	0.5	3.2	2773.8	3245.7	33.08	34.10
5	5	7	32	41	0.6	3.7	2771.9	3223.8	33.05	33.86
6	2	7	20	31	0.5	2.6	2809.4	3234.3	33.50	33.98
7										
8										
9	12	3	24	33	0.8	2.9	2775.8	3240.3	33.10	34.04
10	8	6	60	27	0.7	4.4	2786.4	3243.9	33.22	34.06
11	6	8	38	27	0.7	3.3	2762.3	3210.7	32.94	33.73
12					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
13					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
14										
15										
16					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
17					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
18					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21										
22										
23					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
24					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28										
29										
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

DATA PACKAGE #3

SURVEY OF ASBESTOS FLOOR TILES PRIOR TO DEMOLITION

As part of building demolition, all the floor tiles had to be removed to permit access to the concrete surfaces beneath the tiles. These tiles were composed of asbestos; thus the hazardous nature of the tile required a modified approach to the radiological survey. Prior to removal, these tiles were subjected to the following surveys:

1) 100% qualitative survey of floor surfaces (see packages above)

2) Quantitative survey of floor surfaces (see packages above)

3) Scan with portable beta survey instruments of the underside of statistically selected floor tiles

4) 100% qualitative survey of floor surfaces after removal of floor tiles and mastic.

5) Survey for removable contamination on the concrete floor surfaces.

These surveys demonstrated that residual levels of activity were in compliance with Rocketdyne release limits.

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey: Under 9"x9" Asbestos Floor Tile	UNITS	α dpm/100cm2	β dpm/100cm2	α cpm Direct Frisk	β cpm Direct Frisk
			DESCRIPTION	LIMIT	20	100	NDA	NDA
1 to 8	5/18/98	5/18/98	Room # 108					
			Survey Points: F58,F61,F64,F66,F74,F75,F76,F79		<20	<100	NDA	NDA
9 to 16	5/18/98	5/18/98	Room # 111					
			Survey Points: F56,F59,F61,F64,F66,F72,F74,F81		<20	<100	NDA	NDA
17 to 31	5/18/98	5/18/98	Room # East Hallway					
			Survey Points: F142,F146,F148,F151,F157,F159,F161,F164,F165,		<20	<100	NDA	NDA
			F167,F171,F173,F176,F184,F187					
			Direct α Frisk.					
			NDA α = 2 times bkgd. 7/9/98					
			Direct Beta Frisk					
			Backgroung Range: 40 to 60 cpm					
			**NDA*= lowest background + 100 cpm Beta					

COMMENTS:

Acceptable for Non-radioactive Disposal

(See Rocketdyne N001OP000034)

PROCEDURE: N001SRR140128

INSTRUMENT	Tennelec	Tennelec	Ludlum 12	Ludlum 3
IDENTIFICATION	NO842489	NO842489	Met 6946	EX 040899
CALIBRATION DUE	Daily	Daily	8/14/98	8/14/98
BACKGROUND	0.8 cpm	3.7 cpm	0-1 cpm	40 -60 cpm
EFFICIENCY	33.77%	33.90%	13.30%	13.10%
COUNT TIME	1 min	1 min	NA	NA

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

See Attachment ☐ Page 1 of 2

FORM 732-A REV 6-92

Rocketdyne Division

OPERATION COMPLETE

MON MAY 18, 1998
GROUP A BLDG. T011 FINAL SURVEY: UNDER 9"x9" ASBESTOS FLOOR TILE

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC	SAMPLE POINTS	
1		1.00	2	7	1.20	3.30	3.5534498	9.7345133	16:14:46	F58	
2		1.00	1	4	0.20	0.30	.59224163	.88495575	16:15:58	F61	
3		1.00	1	5	0.20	1.30	.59224163	3.8348083	16:17:10	F64	Room #108
4		1.00	1	2	0.20	-1.70	.59224163	-5.0147493	16:18:22	F66	
5		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	16:19:34	F74	
6		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	16:20:46	F75	
7		1.00	1	5	0.20	1.30	.59224163	3.8348083	16:21:58	F76	
8		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	16:23:10	F79	
9		1.00	0	1	-0.80	-2.70	-2.3689665	-7.9646018	16:24:22	F56	
10		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	16:25:34	F59	
11		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	16:26:46	F61	
12		1.00	1	1	0.20	-2.70	.59224163	-7.9646018	16:27:58	F64	
13		1.00	3	7	2.20	3.30	6.514658	9.7345133	16:29:09	F66	Room #111
14		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:30:22	F72	
15		1.00	0	1	-0.80	-2.70	-2.3689665	-7.9646018	16:31:34	F74	
16		1.00	0	7	-0.80	3.30	-2.3689665	9.7345133	16:32:46	F81	
17		1.00	1	5	0.20	1.30	.59224163	3.8348083	16:33:57	F142	
18		1.00	1	5	0.20	1.30	.59224163	3.8348083	16:35:09	F146	
19		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	16:36:21	F148	
20		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:37:33	F151	
21		1.00	1	3	0.20	-0.70	.59224163	-2.0648968	16:38:45	F157	
22		1.00	0	7	-0.80	3.30	-2.3689665	9.7345133	16:39:57	F159	
23		1.00	3	5	2.20	1.30	6.514658	3.8348083	16:41:09	F161	
24		1.00	0	7	-0.80	3.30	-2.3689665	9.7345133	16:42:21	F164	East Hallway
25		1.00	1	2	0.20	-1.70	.59224163	-5.0147493	16:43:33	F165	
26		1.00	1	5	0.20	1.30	.59224163	3.8348083	16:44:45	F167	
27		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	16:45:57	F171	
28		1.00	1	6	0.20	2.30	.59224163	6.7846608	16:47:09	F173	
29		1.00	2	5	1.20	1.30	3.5534498	3.8348083	16:48:21	F176	
30		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:49:33	F184	
31		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:50:45	F187	

OPERATION COMPLETE

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Final Survey: Under 9"x9" Asbestos Floor Tile	UNITS	α dpm/100cm2	β dpm/100cm2	α cpm Direct Frisk	β cpm Direct Frisk
			DESCRIPTION	LIMIT	20	100	NDA	NDA
1 to 2	5/18/98	5/18/98	Room # 100					
			Survey Points: F26,F27		<20	<100	NDA	NDA
3 to 18	5/18/98	5/18/98	Room # 102					
			Survey Points: F72A-B,F76,F77,F80A-B,F85,F89,F90,F93,F94,F107,		<20	<100	NDA	NDA
			F108,F109,F110,F112					
19 to 27	5/18/98	5/18/98	Room # 104					
			Survey Points: F61,F63,F64,F73,F79,F82,F86,F88A-B		<20	<100	NDA	NDA
28 to 35	5/18/98	5/18/98	Room # 105					
			Survey Points: F47,F48,F57,F58,F59,F63,F64,F68		<20	<100	NDA	NDA
36 to 45	5/18/98	5/18/98	Room # 106					
			Survey Points: F63,F67,F68,F72,F76,F78,F81,F84,F85,F95		<20	<100	NDA	NDA
			Direct α Frisk					
			NDA = 2 times bkgd. 7/9/98					
			Direct Beta Frisk					
			Backgroung Range: 40 to 60 cpm					
			**NDA*= lowest background + 100 cpm Beta					

COMMENTS:

Acceptable for Non-radioactive Disposal

(See Rocketdyne N001OP000034)

PROCEDURE: N001SRR140128

INSTRUMENT	Tennelec	Tennelec	Ludlum 12	Ludlum 3
IDENTIFICATION	NO842489	NO842489	Met 6946	EX 040899
CALIBRATION DUE	Daily	Daily	8/14/98	8/14/98
BACKGROUND	0.8 cpm	3.7 cpm	0-1 cpm	40 -60 cpm
EFFICIENCY	33.77%	33.90%	13.30%	13.10%
COUNT TIME	1 min	1 min	NA	NA

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

See Attachment ☐ Page 1 of 2

FORM 732-A REV 8-97

Rocketdyne Division

MON MAY 18, 1998
GROUP A BLDG. T011 FINAL SURVEY: UNDER 9"x9" ASBESTOS FLOOR TILE

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC	SAMPLE POINTS	
1		1.00	0	10	-0.80	6.30	-2.3689665	18.584071	15:18:22	F26	
2		1.00	3	5	2.20	1.30	6.514658	3.8348083	15:19:34	F27	Room #100
3		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	15:20:46	F72A	
4		1.00	2	3	1.20	-0.70	3.5534498	-2.0648968	15:21:58	F72B	
5		1.00	0	3	-0.80	-0.70	-2.3689665	-2.0648968	15:23:10	F76	
6		1.00	1	4	0.20	0.30	.59224163	.88495575	15:24:22	F77	
7		1.00	0	2	-0.80	-1.70	-2.3689665	-5.0147493	15:25:34	F80A	
8		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	15:26:46	F80B	Room #102
9		1.00	2	4	1.20	0.30	3.5534498	.88495575	15:27:58	F85	
10		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	15:29:10	F89	
11		1.00	0	2	-0.80	-1.70	-2.3689665	-5.0147493	15:30:22	F90	
12		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	15:31:34	F93	
13		1.00	0	7	-0.80	3.30	-2.3689665	9.7345133	15:32:46	F94	
14		1.00	1	2	0.20	-1.70	.59224163	-5.0147493	15:33:58	F107	
15		1.00	2	3	1.20	-0.70	3.5534498	-2.0648968	15:35:09	F108	
16		1.00	2	12	1.20	8.30	3.5534498	24.483776	15:36:21	F109	
17		1.00	1	5	0.20	1.30	.59224163	3.8348083	15:37:33	F110	
18		1.00	0	2	-0.80	-1.70	-2.3689665	-5.0147493	15:38:45	F112	
19		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	15:39:57	F61	
20		1.00	2	0	1.20	-3.70	3.5534498	-10.914454	15:41:09	F63	
21		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	15:42:21	F64	
22		1.00	0	8	-0.80	4.30	-2.3689665	12.684366	15:43:33	F73	
23		1.00	2	6	1.20	2.30	3.5534498	6.7846608	15:44:45	F79	
24		1.00	1	6	0.20	2.30	.59224163	6.7846608	15:45:57	F82	
25		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	15:47:09	F86	Room # 104
26		1.00	0	3	-0.80	-0.70	-2.3689665	-2.0648968	15:48:22	F88A	

MON MAY 18, 1998
GROUP A BLDG. T011

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC	
27		1.00	0	6	-0.80	2.30	-2.3689665	6.7846608	15:50:35	F88B
28		1.00	1	8	0.20	4.30	.59224163	12.684366	15:51:47	F47
29		1.00	1	3	0.20	-0.70	.59224163	-2.0648968	15:52:59	F48
30		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	15:54:11	F57
31		1.00	1	2	0.20	-1.70	.59224163	-5.0147493	15:55:23	F58 Room # 105
32		1.00	1	6	0.20	2.30	.59224163	6.7846608	15:56:35	FF9
33		1.00	0	3	-0.80	-0.70	-2.3689665	-2.0648968	15:57:47	F63
34		1.00	0	0	-0.80	-3.70	-2.3689665	-10.914454	15:58:59	F64
35		1.00	0	3	-0.80	-0.70	-2.3689665	-2.0648968	16:00:11	F68
36		1.00	0	8	-0.80	4.30	-2.3689665	12.684366	16:01:23	F63
37		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:02:35	F67
38		1.00	0	5	-0.80	1.30	-2.3689665	3.8348083	16:03:47	F68
39		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	16:04:59	F72
40		1.00	1	4	0.20	0.30	.59224163	.88495575	16:06:11	F76 Room #106
41		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	16:07:23	F78
42		1.00	0	4	-0.80	0.30	-2.3689665	.88495575	16:08:35	F81
43		1.00	1	6	0.20	2.30	.59224163	6.7846608	16:09:47	F84
44		1.00	1	1	0.20	-2.70	.59224163	-7.9646018	16:10:59	F85
45		1.00	1	6	0.20	2.30	.59224163	6.7846608	16:12:11	F95

OPERATION COMPLETE

MAY 1998 Tennelec # NO842489 Counter Control Log

Day	α Background 1 *c/10 min.*	α Background 2 *c/10 min.*	β Background 1 *c/10 min.*	β Background 2 *c/10 min.*	α Daily Bkg. *cpm*	β Daily Bkg. *cpm*	α Source Count *cpm*	β Source Count *cpm*	α Counter Efficiency %	β Counter Efficiency %
1	8	5	37	30	0.7	3.4	2827.5	3222.9	33.71	33.85
2										
3										
4	3	6	34	38	0.5	3.6	2799.4	3184.2	33.38	33.44
5	8	8	37	27	0.8	3.2	2789.8	3186.0	33.26	33.47
6	7	4	26	27	0.6	2.7	2837.6	3219.7	33.83	33.83
7	6	2	24	13	0.4	1.9	2823.3	3198.6	33.67	33.61
8	9	11	34	31	1.0	3.3	2833.7	3235.7	33.78	33.99
9										
10										
11	8	7	28	24	0.8	2.6	2822.1	3211.6	33.65	33.74
12	4	8	28	32	0.6	3.0	2805.2	3218.2	33.45	33.81
13	6	4	30	29	0.5	3.0	2837.6	3183.6	33.84	33.45
14	5	6	37	39	0.6	3.8	2823.7	3205.6	33.67	33.67
15	8	11	29	32	1.0	3.1	2816.6	3181.6	33.58	33.42
16										
17										
18	10	6	35	38	0.8	3.7	2832.7	3227.4	33.77	33.90
19					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
20					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
21					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
22					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
23										
24										
25					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
26					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
27					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
28					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
29					#DIV/0!	#DIV/0!			#DIV/0!	#DIV/0!
30										
31										

α Source:Th230# 11209 8385 dpm
β Source:Tc99# 452-80 9510 dpm

Counter Efficiency=Observed counts (cpm)/
Source value (dpm) x100

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Release Survey / DESCRIPTION	UNITS / LIMIT	α cpm Direct frisk / NDA	βγ cpm Direct frisk / NDA		
	6/20/98	6/20/98	100 % Direct Frisk of Concrete Floor After Tile and		NDA	NDA		
			Mastic Removal (Affected and Unaffected Areas)					
			Direct α Frisk					
			NDA = 2 times bkgd. 7/9/98					
			Direct Beta Frisk					
			Background Range 60 to 80 cpm					
			NDA = Lowest Background + 100 cpm Beta					

COMMENTS:

INSTRUMENT	Ludlum 12	Ludlum 3	Ludlum 3
IDENTIFICATION	Met-6946	NO 355662	EX 040899
CALIBRATION DUE	8/14/98	7/17/98	8/14/98
BACKGROUND	0-1 cpm	60 - 80	60 - 80
EFFICIENCY	13%	13.10%	13.10%
COUNT TIME	NA	NA	NA
See Attachment ☐	Page	of	

SAMPLED BY: G. Bell

ANALYZED BY: William Schaeppi

REVIEWED BY: DATE: 7/9/98

FORM 732-A REV 8-97

Rocketdyne Division

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Contamination Survey / DESCRIPTION	UNITS / LIMIT	α dpm/100cm2 / 20	βγ dpm/100cm2 / 100		
1 to 79	6/20/98	6/20/98	Smears Taken On Floor After Tile And Mastic Removed		<20	<100		
			Affected and Unaffected Areas					

COMMENTS:

INSTRUMENT	Tennelec	Tennelec		
IDENTIFICATION	NR007137	NR007137		
CALIBRATION DUE	Daily	Daily		
BACKGROUND	0.4 cpm	3.1 cpm		
EFFICIENCY	35.70%	38.66%		
COUNT TIME	1 min	1 min		

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

See Attachment ☐ Page 1 of 3

FORM 732-A REV 8-97

Rocketdyne Division

SAT JUN 20, 1998
GROUP B SMEARS. T011 FLOOR

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
100	1	1.00	1	1	0.60	-2.10	1.6806723	-5.431971	08:21:14
100	2	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	08:23:11
49	3	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	08:25:09
30	4	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	08:27:06
13	5	1.00	0	6	-0.40	2.90	-1.1204482	7.5012933	08:29:04
64	6	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	08:31:01
3	7	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	08:32:59
17	8	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	08:34:56
8	9	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	08:36:53
86	10	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	08:38:51
69	11	1.00	1	3	0.60	-0.10	1.6806723	-.25866529	08:40:48
82	12	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	08:42:46
42	13	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	08:44:43
2	14	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	08:46:40
18	15	1.00	0	0	-0.40	-3.10	-1.1204482	-8.0186239	08:48:38
4	16	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	08:50:35
99	17	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	08:52:33
5	18	1.00	0	6	-0.40	2.90	-1.1204482	7.5012933	08:54:30
80	19	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	08:56:28
43	20	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	08:58:25
91	21	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	09:00:23
95	22	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	09:02:20
3	23	1.00	1	4	0.60	0.90	1.6806723	2.3279876	09:04:18
60	24	1.00	0	0	-0.40	-3.10	-1.1204482	-8.0186239	09:06:15
50	25	1.00	1	3	0.60	-0.10	1.6806723	-.25866529	09:08:13
43	26	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	09:10:10
23	27	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	09:12:08
51	28	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	09:14:06
89	29	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	09:16:04
63	30	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	09:18:02
12	31	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	09:19:59
4	32	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	09:21:57
31	33	1.00	0	6	-0.40	2.90	-1.1204482	7.5012933	09:23:54
65	34	1.00	0	7	-0.40	3.90	-1.1204482	10.087946	09:25:52
30	35	1.00	0	8	-0.40	4.90	-1.1204482	12.674599	09:27:50
2	36	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	09:29:47
48	37	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:31:45
49	38	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:33:43
97	39	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	09:35:40
32	40	1.00	1	7	0.60	3.90	1.6806723	10.087946	09:37:38
55	41	1.00	1	3	0.60	-0.10	1.6806723	-.25866529	09:39:36
61	42	1.00	0	8	-0.40	4.90	-1.1204482	12.674599	09:41:33
8	43	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:43:31
71	44	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:45:28
78	45	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	09:47:26
11	46	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:49:24
11	47	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	09:51:21
47	48	1.00	1	5	0.60	1.90	1.6806723	4.9146405	09:53:19
34	49	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	09:55:17

N=7

SAT JUN 20, 1998
GROUP B SMEARS. TO 11 FLOOR

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
97	50	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	12:23:44
48	51	1.00	0	8	-0.40	4.90	-1.1204482	12.674599	12:25:42
2	52	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	12:27:39
48	53	1.00	1	1	0.60	-2.10	1.6806723	-5.431971	12:29:36
32	54	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	12:31:34
87	55	1.00	0	7	-0.40	3.90	-1.1204482	10.087946	12:33:31
63	56	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	12:35:29
12	57	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	12:37:26
4	58	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	12:39:24
31	59	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	12:41:21
66	60	1.00	0	1	-0.40	-2.10	-1.1204482	-5.431971	12:43:20
30	61	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	12:45:17
50	62	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	12:47:15
43	63	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	12:49:12
23	64	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	12:51:10
51	65	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	12:53:08
89	66	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	12:55:05
38	67	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	12:57:03
42	68	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	12:59:01
2	69	1.00	1	6	0.60	2.90	1.6806723	7.5012933	13:00:58
18	70	1.00	0	4	-0.40	0.90	-1.1204482	2.3279876	13:02:56
4	71	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	13:04:54
99	72	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	13:06:51
5	73	1.00	0	6	-0.40	2.90	-1.1204482	7.5012933	13:08:49
43	74	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	13:10:47
91	75	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	13:12:45
95	76	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	13:14:42
3	77	1.00	0	3	-0.40	-0.10	-1.1204482	-.25866529	13:16:40
80	78	1.00	0	5	-0.40	1.90	-1.1204482	4.9146405	13:18:38
80	79	1.00	0	2	-0.40	-1.10	-1.1204482	-2.8453182	13:20:36

BLDG T011 NUMBER OF TILES IN BLDG.

AFFECTED AREAS		UNAFFECTED AREAS	
Room #	# OF TILES	Room #	# OF TILES
100	78	101	262
102	909	103	576
104	567	115	256
105	432	118A	61
106	630	118B	81
108	504	122A	260
111	496	122B	54
EAST HALLWAY	872	** 124	144
TOTAL	4488	WEST HALLWAY	763
		* 120	45
		TOTAL	2502

* NO QUANTITATIVE SCANS DONE ON THIS ROOM

** TILES 12" x 12" [REST OF TILES 9" x 9" IN OTHER ROOMS]

PROCEDURE SAYS 4 TILES PER ROOM SURVEYED IN AFFECTED AREA'S

(b) Single sampling tables for Lot Tolerance Percent Defective:

(1) Lot Tolerance Percent Defective 0.5 percent:

Lot size	Sample size	Acceptance No.
1 to 180	All	0
181 to 210	180	0
211 to 250	210	0
251 to 300	240	0
301 to 400	275	0
401 to 500	300	0
501 to 600	320	0
601 to 800	350	0
801 to 1,000	365	0
1,001 to 2,000	410	0
2,001 to 3,000	430	0
3,001 to 4,000	440	0
4,001 to 5,000	445	0
5,001 to 7,000	450	0
7,001 to 10,000	455	0
10,001 to 20,000	460	0
20,001 to 50,000	775	1
50,001 to 100,000	780	1

(2) Lot Tolerance Percent Defective 1.0 percent:

Lot size	Sample size	Acceptance No.
1 to 120	All	0
121 to 150	120	0
151 to 200	140	0
201 to 300	165	0
301 to 400	175	0
401 to 500	180	0
501 to 600	190	0
601 to 800	200	0
801 to 1,000	205	0
1,001 to 3,000	220	0
3,001 to 5,000	225	0
5,001 to 10,000	230	0
10,001 to 100,000	390	1

(3) Lot Tolerance Percent Defective 2.0 percent:

Lot size	Sample size	Acceptance No.
1 to 75	All	0
76 to 100	70	0
101 to 200	85	0
201 to 300	95	0
301 to 400	100	0
401 to 600	105	0
601 to 800	110	0
801 to 4,000	115	0
4,001 to 10,000	195	1
10,001 to 100,000	200	1

(4) Lot Tolerance Percent Defective 3.0 percent:

Lot size	Sample size	Acceptance No.
1 to 40	All	0
41 to 55	40	0
56 to 100	55	0
101 to 200	65	0
201 to 500	70	0
501 to 3,000	75	0
3,001 to 100,000	130	1

(5) Lot Tolerance Percent Defective 4.0 percent:

Lot size	Sample size	Acceptance No.
1 to 35	All	0
36 to 50	34	0
51 to 100	44	0
101 to 200	50	0
201 to 2,000	55	0
2,001 to 100,000	95	1

(6) Lot Tolerance Percent Defective 5.0 percent:

Lot size	Sample size	Acceptance No.
1 to 30	All	0
31 to 50	30	0
51 to 100	37	0
101 to 200	40	0
201 to 300	43	0
301 to 400	44	0
401 to 2,000	45	0
2,001 to 100,000	75	1

(7) Lot Tolerance Percent Defective 7.0 percent:

Lot size	Sample size	Acceptance No.
1 to 25	All	0
26 to 50	24	0
51 to 100	28	0
101 to 200	30	0
201 to 300	31	0
301 to 800	32	0
801 to 1,000	33	0
1,001 to 100,000	55	1

(8) Lot Tolerance Percent Defective 10.0 percent:

Lot size	Sample size	Acceptance No.
1 to 20	All	0
21 to 50	17	0
51 to 100	20	0
101 to 200	22	0
201 to 800	23	0

Lot size	Samp size
801 to 100,000	

[39 FR 22130, June 20, 1974]

Subpart D—Specifically Items

§ 32.210 Registration of proc tion.

(a) Any manufacturer o tributor of a sealed sour containing a sealed source uct is intended for use unc license may submit a requ for evaluation of radiatic formation about its produ registration.

(b) The request for rev made in duplicate and sen Nuclear Regulatory Comr sion of Fuel Cycle, Medic and Commercial Use Saf Academic, and Commerci Branch; Washington, DC

(c) The request for revi source or a device must cient information about manufacture, prototype ity control program, labe uses and leak testing anc the request must also cient information abou service and maintenan and safety instructions, tial hazards, to provide surance that the radiatic erties of the source or quate to protect health danger to life and prope

(d) The NRC normal sealed source or a dev ation safety criteria in try standards. If these criteria do not readily ticular case, the NRC sonable standards anc the help of the manu tributor. The NRC sh and standards suffici that the radiation safe the device or sealed quate to protect healt danger to life and prop

(e) After completion tion, the Commission cate of registration

DATA PACKAGE #4

SURVEY OF OVERHEAD EQUIPMENT DURING AND FOLLOWING DEMOLITION

On June 3, 1998, Mr. Roger Lupo (Radiologic Health Branch, California Department of Health Services) conducted a confirmatory survey of the building interior prior to the demolition of the interior structures. Mr. Lupo's survey demonstrated that residual levels of radioactivity were in compliance with Rocketdyne release limits.

At this time, the building interior was demolished and placed in large refuse containers for eventual disposal in a construction landfill.

During this demolition, additional surveys were performed of surfaces that were inaccessible during the original survey (e.g., vent ducts, structural roof supports, etc.). The surveys of these areas are included in this data package. These surveys demonstrate that the levels of radioactivity are below Rocketdyne release levels.

BOEING

RADIATION SURVEY REPORT

FACILITY:	T011
LOCATION:	Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Informational Survey / DESCRIPTION	UNITS / LIMIT	α dpm/100cm2 / 20	βγ dpm/100cm2 / 100		
1 to 86	6/25/98	6/26/98	Structural Roof Support I-Beam Horizontal Surfaces		<20	<100		

COMMENTS:

INSTRUMENT	Tennelec	Tennelec		
IDENTIFICATION	NR007137	NR007137		
CALIBRATION DUE	Daily	Daily		
BACKGROUND	0.4 cpm	2.5 cpm		
EFFICIENCY	34.57%	38.95%		
COUNT TIME	1 min	1 min		

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

See Attachment ☐ Page 1 of 3

FORM 732-A REV 8-97

Rocketdyne Division

FRI JUN 26, 1998
GROUP B SMEARS. T011

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
15	1	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	09:33:13
16	2	1.00	0	8	-0.40	5.50	-1.1570726	14.120668	09:35:10
17	3	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	09:37:08
18	4	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	09:39:05
19	5	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	09:41:03
20	6	1.00	1	2	0.60	-0.50	1.7356089	-1.283697	09:43:00
11	7	1.00	1	5	0.60	2.50	1.7356089	6.4184852	09:44:58
12	8	1.00	0	12	-0.40	9.50	-1.1570726	24.390244	09:46:55
13	9	1.00	2	10	1.60	7.50	4.6282904	19.255456	09:48:53
14	10	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	09:50:50
33	11	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	09:52:48
34	12	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	09:54:45
61	13	1.00	0	9	-0.40	6.50	-1.1570726	16.688062	09:56:43
63	14	1.00	2	10	1.60	7.50	4.6282904	19.255456	09:58:41
64	15	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	10:00:38
66	16	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	10:02:36
81	17	1.00	0	9	-0.40	6.50	-1.1570726	16.688062	10:04:34
82	18	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	10:06:32
51	19	1.00	0	9	-0.40	6.50	-1.1570726	16.688062	10:08:29
53	20	1.00	1	10	0.60	7.50	1.7356089	19.255456	10:10:27
54	21	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	10:12:25
45	22	1.00	0	1	-0.40	-1.50	-1.1570726	-3.8510911	10:14:22
46	23	1.00	1	8	0.60	5.50	1.7356089	14.120668	10:16:20
47	24	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	10:18:18
32	25	1.00	1	9	0.60	6.50	1.7356089	16.688062	10:20:16
31	26	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	10:22:13
48	27	1.00	0	8	-0.40	5.50	-1.1570726	14.120668	10:24:12
49	28	1.00	2	4	1.60	1.50	4.6282904	3.8510911	10:26:10
50	29	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	10:28:07
41	30	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	10:30:05
42	31	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	10:32:03
43	32	1.00	1	8	0.60	5.50	1.7356089	14.120668	10:34:00
44	33	1.00	1	7	0.60	4.50	1.7356089	11.553273	10:35:58
35	34	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	10:37:55
37	35	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	10:39:53
38	36	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	10:41:50
1	37	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	10:43:48
2	38	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	10:45:46
3	39	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	10:47:43
4	40	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	10:49:41
5	41	1.00	2	5	1.60	2.50	4.6282904	6.4184852	10:51:38
7	42	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	10:53:36
8	43	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	10:55:33
9	44	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	10:57:31
10	45	1.00	1	5	0.60	2.50	1.7356089	6.4184852	10:59:28
39	46	1.00	0	12	-0.40	9.50	-1.1570726	24.390244	11:01:26
40	47	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	11:03:24
22	48	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	11:05:22
21	49	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	11:07:19
23	50	1.00	1	7	0.60	4.50	1.7356089	11.553273	11:09:17

FRI JUN 26, 1998
GROUP B SMEARS. TO 11

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
61	51	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	05:49:49
63	52	1.00	1	5	0.60	2.50	1.7356089	6.4184852	05:51:47
64	53	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	05:53:44
66	54	1.00	1	8	0.60	5.50	1.7356089	14.120668	05:55:42
81	55	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	05:57:39
82	56	1.00	2	5	1.60	2.50	4.6282904	6.4184852	05:59:37
51	57	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	06:01:34
53	58	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	06:03:32
54	59	1.00	1	3	0.60	0.50	1.7356089	1.283697	06:05:29
45	60	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	06:07:27
46	61	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	06:09:24
47	62	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	06:11:22
48	63	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	06:13:20
49	64	1.00	1	4	0.60	1.50	1.7356089	3.8510911	06:15:17
50	65	1.00	0	3	-0.40	0.50	-1.1570726	1.283697	06:17:15
41	66	1.00	1	4	0.60	1.50	1.7356089	3.8510911	06:19:13
42	67	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	06:21:10
43	68	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	06:23:08
44	69	1.00	1	8	0.60	5.50	1.7356089	14.120668	06:25:06
35	70	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	06:27:03
37	71	1.00	1	3	0.60	0.50	1.7356089	1.283697	06:29:01
38	72	1.00	0	6	-0.40	3.50	-1.1570726	8.9858793	06:30:59
39	73	1.00	2	4	1.60	1.50	4.6282904	3.8510911	06:32:56
40	74	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	06:34:54
21	75	1.00	1	4	0.60	1.50	1.7356089	3.8510911	06:36:52
22	76	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	06:38:50
23	77	1.00	0	5	-0.40	2.50	-1.1570726	6.4184852	06:40:48
24	78	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	06:42:45
25	79	1.00	2	6	1.60	3.50	4.6282904	8.9858793	06:44:43
26	80	1.00	0	8	-0.40	5.50	-1.1570726	14.120668	06:46:41
27	81	1.00	1	5	0.60	2.50	1.7356089	6.4184852	06:48:39
28	82	1.00	2	7	1.60	4.50	4.6282904	11.553273	06:50:37
29	83	1.00	1	3	0.60	0.50	1.7356089	1.283697	06:52:35
30	84	1.00	0	2	-0.40	-0.50	-1.1570726	-1.283697	06:54:32
31	85	1.00	0	4	-0.40	1.50	-1.1570726	3.8510911	06:56:30
32	86	1.00	0	7	-0.40	4.50	-1.1570726	11.553273	06:58:29

MS

BOEING

RADIATION SURVEY REPORT

FACILITY: T 011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Contamination Survey	UNITS	α dpm/100cm2	β dpm/100cm2	cpm Direct Frisk	
			DESCRIPTION	LIMIT	20	100	NDA	
1 to 25	6/10/98	6/10/98	Survey Above Drop Ceiling on Vent Ducting,Piping,		<20	<100	NDA	
			Support Beams, and Ceiling Pannels.					
			Direct Beta Frisk					
			Background Range 60 to 80 cpm					
			NDA = Lowest Background + 100 cpm Beta					

COMMENTS:

INSTRUMENT	Tennelec	Tennelec	Ludlum 3	
IDENTIFICATION	NR007137	NR007137	EX 040899	
CALIBRATION DUE	Daily	Daily	8/14/98	
BACKGROUND	1.6 cpm	6.4 cpm	60 - 80	
EFFICIENCY	35.10%	38.68%	0.131	
COUNT TIME	1 min	1 min	NA	

SAMPLED BY: William Schaeppi ANALYZED BY: [signature]

REVIEWED BY: [signature] DATE: 7/9/98

See Attachment ☐ Page 1 of 2

FORM 732-A REV 8-97

Rocketdyne Division

WED JUN 10, 1998
GROUP B SMEARS. T011 OVERHEAD SURVEY

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
8		1.00	1	4	-0.60	-2.40	-1.7094017	-6.204757	13:59:45
89		1.00	0	6	-1.60	-0.40	-4.5584046	-1.0341262	14:01:43
80		1.00	1	4	-0.60	-2.40	-1.7094017	-6.204757	14:03:40
100		1.00	0	3	-1.60	-3.40	-4.5584046	-8.7900724	14:05:37
95		1.00	1	3	-0.60	-3.40	-1.7094017	-8.7900724	14:07:34
43		1.00	1	3	-0.60	-3.40	-1.7094017	-8.7900724	14:09:32
18		1.00	2	6	0.40	-0.40	1.1396011	-1.0341262	14:11:29
49		1.00	0	3	-1.60	-3.40	-4.5584046	-8.7900724	14:13:26
91		1.00	0	4	-1.60	-2.40	-4.5584046	-6.204757	14:15:23
1		1.00	1	5	-0.60	-1.40	-1.7094017	-3.6194416	14:17:21
58		1.00	0	2	-1.60	-4.40	-4.5584046	-11.375388	14:19:18
23		1.00	1	5	-0.60	-1.40	-1.7094017	-3.6194416	14:21:15
28		1.00	1	6	-0.60	-0.40	-1.7094017	-1.0341262	14:23:12
51		1.00	0	4	-1.60	-2.40	-4.5584046	-6.204757	14:25:10
10		1.00	0	3	-1.60	-3.40	-4.5584046	-8.7900724	14:27:07
8		1.00	1	5	-0.60	-1.40	-1.7094017	-3.6194416	14:29:04
71		1.00	0	3	-1.60	-3.40	-4.5584046	-8.7900724	14:31:01
78		1.00	0	6	-1.60	-0.40	-4.5584046	-1.0341262	14:32:58
30		1.00	0	4	-1.60	-2.40	-4.5584046	-6.204757	14:34:56
2		1.00	0	2	-1.60	-4.40	-4.5584046	-11.375388	14:36:53

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Office Area

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Contamination Survey	UNITS	α dpm/100cm2	β dpm/100cm2		
			DESCRIPTION	LIMIT	20	100		
1 to 6	6/11/98	6/12/98	Smears Taken Inside Vent Ducting During Removal		<20	<100		

COMMENTS:

INSTRUMENT	Tennelec	Tennelec		
IDENTIFICATION	NR007137	NR007137		
CALIBRATION DUE	Daily	Daily		
BACKGROUND	0.7 cpm α	2.9 cpm β		
EFFICIENCY	34.44%	38.65%		
COUNT TIME	1 min	1 min		
See Attachment ☐	Page	1	of	2

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

FORM 732-A REV 8-97

Rocketdyne Division

FRI JUN 12, 1998
GROUP B SMEARS. T011 VENT DUCTENG

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC
3	1	1.00	0	6	-0.70	3.10	-2.0325203	8.0206986	06:12:39
12	2	1.00	0	7	-0.70	4.10	-2.0325203	10.608021	06:14:36
13	3	1.00	1	11	0.30	8.10	.87108014	20.957309	06:16:33
100	4	1.00	1	12	0.30	9.10	.87108014	23.544631	06:18:31
17	5	1.00	2	7	1.30	4.10	3.7746806	10.608021	06:20:28
64	6	1.00	1	8	0.30	5.10	.87108014	13.195343	06:22:25

DATA PACKAGE #5

SURVEY OF WASTE CONTAINERS

A survey of each waste container was conducted to demonstrate that the accumulation of materials from the building did not result in an increase in radiation levels in the area. Radiation in the vicinity of the containers was found to be in compliance with Rocketdyne release limits (i.e., < 5 uR/hr above ambient background).

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Yard

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Survey of Construction Material in Roll-Offs	UNITS	α cpm Direct Frisk	βγ cpm Direct Frisk	μR/Hr @ Contact	
			DESCRIPTION	LIMIT	NDA	NDA	NA	
	6/24/98	6/24/98	Roll-Off # 7741 (walls,plaster,sheetrock)		NDA	NDA	23	
	6/24/98	6/24/98	Roll-Off # 7734 (insulation,ceiling tiles)		NDA	NDA	24	
	6/24/98	6/24/98	Roll-Off # 7339 (metal,ducting)		NDA	NDA	22	
	6/24/98	6/24/98	Roll-Off # 8074 (metal,ducting)		NDA	NDA	25	
	6/24/98	6/24/98	Roll-Off # 50-32 (walls,plaster,sheetrock)		NDA	NDA	25	
			Direct α Frisk					
			NDA α = 2 times bkgd. 7/9/98					
			Direct β Frisk					
			Background Range 40-60 cpm					
			NDA β = (lowest bkgd) + 100 cpm β					

COMMENTS:

INSTRUMENT	Ludlum 12	Ludlum 3	Ludlum 19
IDENTIFICATION	MET-6946	Ex040899	EX030418
CALIBRATION DUE	8/14/98	8/14/98	8/14/98
BACKGROUND	0-1 cpm	60-80 cpm	22 μR/HR
EFFICIENCY	13%	13.10%	NA
COUNT TIME	NA	NA	NA
See Attachment ☐	Page		of

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

FORM 732-A REV 8-97

Rocketdyne Division

DATA PACKAGE #6

JANITORIAL SINK DRAIN TRAP

During the survey of the building, it was discovered the sink trap to the janitorial sink was contaminated with low levels of Uranium. Gamma spectrography indicated that the source of the contamination was sludge that had accumulated in the trap of the sink (see Analysis Report for ENV98102).

The wall in the area was removed to permit access to the sink. The sink and trap were removed and disposed of as radioactive waste. An additional sludge sample was taken from a location several feet into the line. This sample was found to meet release criteria (see Analysis Report for ENV98166).

The remaining line was surveyed for removable contamination. No additional contamination was detected. The line now meets Rocketdyne release criteria.

BOEING

RADIATION SURVEY REPORT

FACILITY: T011

LOCATION: Yard

SAMPLE NUMBER	DATE SAMPLED	DATE ANALYZED	PURPOSE: Utility Sink Drain Pipe	UNITS	α dpm/100cm2	βγ dpm/100cm2		
			DESCRIPTION	LIMIT	20	100		
			Smears Inside of the Utility Sink Drain Pipe After Cutting Out					
1 to 2	6/24/98	6/24/98	Cut out Drain Pipe:		<20	<100		
3 to 4	6/24/98	6/24/98	Drain Pipe Above Floor:		<20	<100		

COMMENTS:

Radiometric Analysis: ENV-98166

INSTRUMENT	Tennelec	Tennelec		
IDENTIFICATION	NR007137	NR007137		
CALIBRATION DUE	Daily	Daily		
BACKGROUND	0.7 cpm	3.3cpm		
EFFICIENCY	34.62%	38.84%		
COUNT TIME	1 min	1 min		
See Attachment ☐	Page	1	of	2

SAMPLED BY: William Schaeppi ANALYZED BY:

REVIEWED BY: DATE: 7/9/98

FORM 732-A REV 8-97

Rocketdyne Division

WED JUN 24, 1998
GROUP B SMEARS. T011

SAMPLE SN	CODE	TIME (MIN.)	ALPHA COUNTS	BETA COUNTS	ALPHA CPM	BETA CPM	ALPHA CORRECTED	BETA CORRECTED	TOD CLOCK HR:MN:SEC	
91	1	1.00	0	5	-0.70	1.70	-2.0219526	4.376931	09:47:29	CUT OUT DRAIN PIPE
95	2	1.00	0	3	-0.70	-0.30	-2.0219526	-.77239959	09:49:27	
51	3	1.00	1	3	0.30	-0.30	.86655113	-.77239959	09:51:25	DRAIN PIPE ABOVE FLOOR
18	4	1.00	0	2	-0.70	-1.30	-2.0219526	-3.3470649	09:53:22	

WKS

SAMPO 90, 1990 PA,MN,JR. 9-Jun-1998 12:48:23

GAMMA SPECTRUM ANALYSIS REPORT

FOR ENV98102

Boeing North American / Rocketdyne - SHEA Env Lab
Sample description: T011- FOLLOWUP SINK SEDIMENT, ENV980102, 4/17/98
Spectrum file name: ENV98102
Sample identifier : SCHAEPPI
Sample size : 4.660E+02 g
Measured by : FCD

Date of Activity Calculation : 1-May-1998 at 8:47:20
Collect started on : 1-May-1998 at 8:47:20
Collect ended on : 1-May-1998 at 10:44: 5

Decay time : 0 years 0 days 0 hours 0 minutes
Live time: 7.000E+03 s real time: 7.005E+03 s dead time: .07 %

Calibration Files

Shape calibration requested : ZM012298
Shape calibration used : ZM012298
Created : 5-Jan-1995
Modified : 26-Jan-1998

Energy calibration requested : ZM012298
Energy calibration used : ZM012298
Created : 5-Jan-1995
Modified : 26-Jan-1998

Efficiency calibration requested : ZM012298
Efficiency calibration used : ZM012298
Created : 2-Feb-1996
Modified : 26-Jan-1998

ENV-980066 6/9/98
U-238 - 14.4 pCi/g
U-234 - 2.1
U-235 - 8.7
Th-234 -
Co-60 - .11 pCi/g
Cs 137 -

Last search discrimination level: 3.00
Last search FROM channel 12 TO channel
Last fitting discrimination level: 1.64
Last fit FROM channel 1 TO channel
Identification energy tolerance : 1.00
Minimum intensity conv. factor : 10.00
Gamma reference library : C:\SAMPO\LIBRARY\LIBRARY.ILF
with 38 isotopes and 191 gamma lines.

MDA library name: C:\SAMPO\LIBRARY\MDALIB1A.ILF
MDA energy tolerance: 1.00 keV
MDA decision limit 1-alpha: 95.00 %
MDA detection limit 1-beta: 95.00 %

Peaked backround file: C:\SAMPO\SPECTRA\BM080497.PTF
Energy tolerance for peaked backround subtraction: 1.00 keV
Threshold factor for peak areas: 1.00

Report Reviewed and
Conforms to N001OP000028 By: [signature] RP&HPS Date: 6/9/98

U-238 12 pCi/g
U-234 27.2 pCi/g
U-235 1.4 pCi/g
Th-234 8.5 pCi/g

Co-60 0.03 pCi/g
Cs-137 0.14 pCi/g

Spectrum file: ENV98102 Date: 1-May-1998 Time: 10:44: 5

********** R A D I O N U C L I D E A N A L Y S I S R E P O R T *******

number	nuclide	conf.value	Activity (pCi/g) measured		decay corrected	saturation
1	K-40	.8811	1.957E+00	+- 8.60%	1.957E+00	0.000E+00
2	CO-60	.9168	3.285E-02	+- 22.67%	3.285E-02	0.000E+00
3	CS-137	.9712	1.408E-01	+- 5.09%	1.408E-01	0.000E+00
4	Tl-208T	.9077	6.413E-01	+- 4.13%	6.413E-01	0.000E+00
5	Pb-212T	.9970	1.998E+00	+- 13.10%	1.998E+00	0.000E+00
6	Pb-214U	.8960	2.398E-01	+- 9.37%	2.398E-01	0.000E+00
7	Bi-214U	.7942	1.842E-01	+- 6.64%	1.842E-01	0.000E+00
8	Ra-224T	.9934	1.023E+00	+- 26.51%	1.023E+00	0.000E+00
9	Ac-228T	.6208	1.741E+00	+- 2.63%	1.741E+00	0.000E+00
10	Th-234U	.8652	8.569E+00	+- 5.31%	8.569E+00	0.000E+00
11	Pa-234mU	.9122	1.209E+01	+- 5.58%	1.209E+01	0.000E+00
12	U-234U	.9793	2.717E+01	+- 13.00%	2.717E+01	0.000E+00
13	U-235	.9886	1.392E+00	+- 4.75%	1.392E+00	0.000E+00
			5.719E+01		5.719E+01	0.000E+00

Flags: C = check; nuclide is a part of an underdetermined solution

SAMPO 90, 1990 PA,MN,JR. 24-Jun-1998 13:43:22

G A M M A S P E C T R U M A N A L Y S I S R E P O R T

FOR ENV98166

Boeing North American / Rocketdyne - SHEA Env Lab
Sample description: T011- SLUDGE #3 IN JANITOR DRN, ENV980166, 6/23/98
Spectrum file name: ENV98166
Sample identifier : SCHAEPPI
Sample size : 5.900E+01 g
Measured by : fcd

Date of Activity Calculation : 23-Jun-1998 at 17: 5:43
Collect started on : 23-Jun-1998 at 17: 5:43
Collect ended on : 23-Jun-1998 at 19: 2:25

Decay time : 0 years 0 days 0 hours 0 minutes
Live time: 7.000E+03 s real time: 7.002E+03 s dead time: .03 %

Calibration Files

Shape calibration requested : ZM051198
Shape calibration used : ZM051198
Created : 5-Jan-1995 9:39:36
Modified : 28-May-1998 15:21:41

Energy calibration requested : ZM051198
Energy calibration used : ZM051198
Created : 5-Jan-1995 9:39: 3
Modified : 28-May-1998 15:26:23

Efficiency calibration requested : ZM051198
Efficiency calibration used : ZM051198
Created : 2-Feb-1996 10: 6:29
Modified : 28-May-1998 15:29:49

Last search discrimination level: 3.00
Last search FROM channel 12 TO channel 8180
Last fitting discrimination level: 1.64
Last fit FROM channel 1 TO channel 8192
Identification energy tolerance : .70
Minimum intensity conv. factor : 10.00
Gamma reference library : C:\SAMPO\LIBRARY\LIBRARY.ILF
with 38 isotopes and 191 gamma lines.

MDA library name: C:\SAMPO\LIBRARY\LIBRARY.ILF 3
MDA energy tolerance: .70 keV
MDA decision limit 1-alpha: 95.00 %
MDA detection limit 1-beta: 95.00 %

Peaked backround file: C:\SAMPO\SPECTRA\BX051198.PTF
Energy tolerance for peaked backround subtraction: .70 keV
Threshold factor for peak areas: 1.00

Report Reviewed and
Conforms to N001OP000028 By: _____ Date: 6/24/98
RP&HPS

Cs-137 0.34 pCi/g <9.2 pCi/g release criteria

Acceptable for Non-radioactive Disposal
(See Rocketdyne N001OP000034)

ectrum file: ENV98166 Date: 23-Jun-1998 Time: 19: 2:25

******** R A D I O N U C L I D E A N A L Y S I S R E P O R T *******

mber	nuclide	conf.value	Activity (pCi/g) measured	decay corrected	saturation
1	K-40	.9801	2.857E+00 +- 25.14%	2.857E+00	0.000E+00
2	CS-137	1.0000	3.430E-01 +- 7.30%	3.430E-01	0.000E+00
3	Tl-208T	.9984	4.766E-01 +- 8.69%	4.766E-01	0.000E+00
4	Pb-212T	.9977	1.930E+00 +- 5.63%	1.930E+00	0.000E+00
5	Pb-214U	.9063	1.091E+00 +- 5.53%	1.091E+00	0.000E+00
6	Bi-214U	.9105	1.113E+00 +- 8.17%	1.113E+00	0.000E+00
7	Ra-224T	.9971	2.849E+00 +- 12.64%	2.849E+00	0.000E+00
8	Ra-226U	.9991	4.613E+00 +- 13.27%	4.613E+00	0.000E+00
9	Ac-228T	.9816	1.843E+00 +- 7.85%	1.843E+00	0.000E+00
10	Th-234U	.9988	1.604E+00 +- 26.11%	1.604E+00	0.000E+00
11	U-235	.9892	2.802E-01 +- 13.27%	2.802E-01	0.000E+00
			1.900E+01	1.900E+01	0.000E+00

lags: C = check; nuclide is a part of an underdetermined solution