

ESH-39B Survey Form Unrestricted Release

Are there any inaccessible surfaces (i.e. surfaces that could not be surveyed?) **Yes**

Inaccessible Surface Disclaimer: The accessible surfaces of these items/materials have been surveyed and have been found to satisfy the current radiological criteria for unrestricted release. A completed and approved ANL-241 must accompany these survey results to demonstrate full compliance with ANL-E procedure for unrestricted release of equipment and materials (ESH 5-17).

Site/Location: Building 366 High Bay

Survey Date/Time: 3/12/2008 :18:00

Surveyor(s): A. Maly

A. Maly

Badge #(s): 53714/

Survey Instruments Used	Set #	Initial Field Op Check	300 Sec α Bkgd (dpm)	300 Sec β Bkgd (dpm) [^]	Final Field Op Check
Eberline E600 [^]	2488	AZ	5.3 dpm (1cpm)	426 dpm(162 cpm)	AZ
DABRAS	2029	AZ			AZ
ASP2e	2118	AZ	509cpm γ		AZ

The ambient bkgd values with the NE must be below 35 dpm α and 3000 dpm β or the survey cannot be conducted in that area

[^] The ambient bkgd values with the E600 must be below 7 cpm α and 900 cpm β or the survey cannot be conducted in that area

Integral Survey ($\alpha\beta$ Mode)

Item Description	Integral Scan α detected ? Y/N ¹	Integral Scan Avg β (Gross dpm)	Integral Scan Avg β (Net dpm)	Avg β (Net) <1000 dpm? Y/N ²	Unrestricted Release Criteria Met? Y/N ⁷
Set 1 sheet 1	N	432 dpm (164 cpm)	5.3 dpm	Y	Y
Sheet 2	N	418 dpm (159 cpm)	0	Y	Y
Sheet 3	N	424 dpm (161 cpm)	0	Y	Y
Sheet 4	N	453 dpm (172 cpm)	26.3 dpm	Y	Y
Sheet 5	N	447dpm (170 cpm)	21.1 dpm	Y	Y
Sheet 6	N	426dpm (162cpm)	0	Y	Y
Sheet 7	N	437 dpm (166 cpm)	10.5 dpm	Y	Y

¹ If alpha activity is detected (the average alpha activity must be under 100 dpm net) record the results

² If No, record the results and inform the custodian that item cannot be released for unrestricted use

Smears

Grid #	Smears Alpha (dpm) ⁴	Smears Beta (dpm) ⁴	Smears Tritium(dpm) ⁵	Mini-FIDLER Max γ (gross) ⁶	Unrestricted Release Criteria Met? Y/N ⁷
Set 1 sheet 1	3.38±6.39	26.14±50.65	N/A	628	Y
Sheet 2	8.3±10.12	59.42±49.03	N/A	651	Y
Sheet 3	0.25±8.2	0.87±49.63	N/A	589	Y
Sheet 4	2.39±5.12	19.54±47.33	N/A	516	Y
Sheet 5	1.56±7.35	34.51±48.17	N/A	527	Y
Sheet 6	2.96±8.02	26.52±47.68	N/A	642	Y
Sheet 7	4.18±5.78	32.71±29.09	N/A	561	Y

⁴ The limit values must be below 20 dpm α and 200 dpm β . if above, record the results

⁵ The limit values must be below 1000 dpm net β . if above, record the results

⁶ If volumetric activity is detected through an increase of the audible count rate, record the results.

⁷ If NO, inform the custodian that the item cannot be released for unrestricted use.

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DABRAS	2029	AZ			AZ
ASP2e	2118	AZ	509cpm γ		AZ

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Integral Survey ($\alpha\beta$ Mode)

Item Description	Integral Scan α detected ? Y/N ¹	Integral Scan Avg β (Gross dpm)	Integral Scan Avg β (Net dpm)	Avg β (Net) <1000 dpm? Y/N ²	Unrestricted Release Criteria Met? Y/N ⁷
Set 2 sheet 1	N	371 dpm (141 cpm)	0	Y	Y
Sheet 2	N	445 dpm (169 cpm)	18.4 dpm	Y	Y
Sheet 3	N	468 dpm (178 cpm)	42.1 dpm	Y	Y
Sheet 4	N	500 dpm (190 cpm)	73.7 dpm	Y	Y
Sheet 5	N	429dpm (163cpm)	2.6 dpm	Y	Y
Sheet 6	N	466dpm (158cpm)	0	Y	Y

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² If No , record the results and inform the custodian that item cannot be released for unrestricted use

Smears

Grid #	Smears Alpha (dpm) ⁴	Smears Beta (dpm) ⁴	Smears Tritium(dpm) ⁵	Mini-FIDLER Max γ (gross) ⁶	Unrestricted Release Criteria Met? Y/N ⁷
Set 2 sheet 1	2.44±8.51	44.35±28.15	N/A	527	Y
Sheet 2	3.76±9.81	18.72±53.46	N/A	561	Y
Sheet 3	1.95±10.85	11.57±36.92	N/A	544	Y
Sheet 4	3.07±7.64	35.73±44.81	N/A	501	Y
Sheet 5	2.27±10.25	26.59±47.26	N/A	539	Y
Sheet 6	5.82±6.35	54.20±32.65	N/A	552	Y

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⁵ The limit values must be below 1000 dpm net β . if above, record the results

⁶ If volumetric activity is detected through an increase of the audible count rate, record the results.

⁷ If NO, inform the custodian that the item cannot be released for unrestricted use.

JZ

Radiological Use History for Items with Inaccessible Surfaces

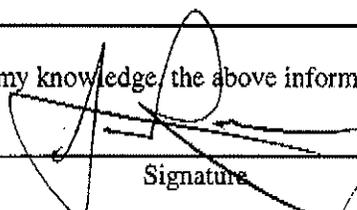
Requestor (print name) Leon T Reed Division HEP

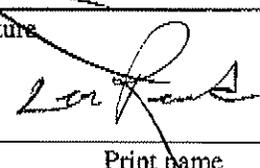
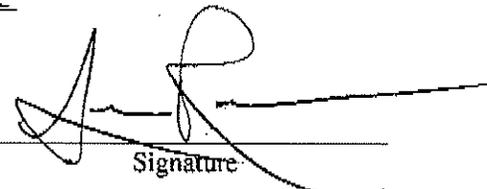
Phone Number 2-4478 Location B 362 Date 3/10/08

This radiological use history is necessary to demonstrate that inaccessible, and therefore unsurveyable, surfaces are likely to be within the acceptable limits given in ESH Manual Section 5.17.

Item number, description, and location	History
1) Two (2) 5x8' plywood sheets with 0.125 lead cladding affixed onto one side, inside Building 366 hybay.	Used as shielding for module containing depleted uranium, U235. The innermost side inaccessible for rad survey because lead is glued (fixed) onto the plywood.

To the best of my knowledge, the above information is complete and accurate.

Requestor  ID# 34176

Approval for release:
Division Director/Designee  Print name Leon T Reed  Signature

Material/equipment custodian must retain the original of this form and health physics personnel must retain a copy when used with radiological survey documentation.