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Public Service  
Company of Colorado

December 14, 1995  
Fort St. Vrain  
P-95121

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

ATTN: Mr. Michael F. Weber, Chief  
Decommissioning and  
Regulatory Issues Branch

Docket No. 50-267

**SUBJECT: Final Survey Release Records**

Dear Mr. Weber:

Enclosed for your information are five example Release Records from the Fort St. Vrain (FSV) Final Survey Program. The enclosed Release Records provide examples of the format that Public Service Company of Colorado (PSCo) will use to describe survey areas and document final survey results. Release Records will be included in the FSV Final Survey Report for each Survey Area. The NRC requested example data packages during an October 16, 1995, telephone conference with Messrs. Clayton Pittiglio and David Fauver of your staff.

The enclosed Release Records include the following Survey Areas:

- Survey Area 0344 *Training Building #109, Simulator Room, Walls Above 2 meters and Ceiling*
- Survey Area B0014 *Chiller Building #3, Gas Charging Building #4, Security Diesel Generator Building #36, Acid Storage Tank Pump Building #1008*
- Survey Area B0005 *North Warehouse Building #13, Electrical Warehouse Building #14, Restroom and Shower Building #1014*
- Survey Area 0350 *Visitor Center, Building #107, Auditorium*
- Survey Area B0017 *Electrical Warehouse, Building #14*

The above five Survey Areas were reviewed by the NRC during an inspection of the FSV Final Survey Program, conducted from September 25-28, 1995. Due to the current status of final survey activities, exposure rate measurements are not included in the

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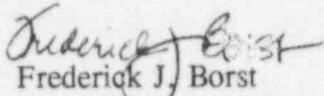
December 14, 1995

Page 2

enclosed example Release Records. Exposure rate measurements will be included before the Release Records are submitted as part of the FSV Final Survey Report.

If you have any questions regarding the enclosed information, please contact Mr. M. H. Holmes at (303) 620-1701.

Sincerely,



Frederick J. Borst  
Decommissioning Program Director

FJB/SWC

Enclosures

cc: with enclosures

Regional Administrator, Region IV

Mr. Robert M. Quillin, Director  
Radiation Control Division  
Colorado Department of Public Health and Environment



**Release Record - Survey Area  
(EXAMPLE)**

**Survey Package ID:** B0017

**Survey Area Description:** Electrical Warehouse - Building #14

**Survey Area Operational History:**

The Electrical Warehouse - Building #14 is located within the Protected Area fence and north of the road running west to east from the main truck access gate. Located within the building are a main workshop room, three (3) storage rooms, a corridor and a soil drying room.

The soil drying room, located in the southeast corner of the building, has been in service since 12/94 as a controlled soil drying and sieving area and will be surveyed in accordance with Survey Package ID: I0010.

In the late 1970's and early 1980's, radioactive material was stored in the northeast area of the Electrical Warehouse. Records indicated there were no spills or occurrences in this area which resulted in contamination.

The south central storage room in Building #14 was initially classified as Unaffected and was surveyed in accordance with Survey Package ID: B0005 instructions. A hot spot of total surface activity > 50% of the guideline value of 5,000 dpm/100 cm<sup>2</sup> for an Unaffected Survey Unit was found in the south central storage room. The survey unit was subsequently removed from Survey Package ID: B0005, reclassified as Affected and Survey Package ID: B0017 prepared to provide new survey instructions for the area.

### Release Record - Survey Area

Survey Package ID: B0017

#### Survey Area Decommissioning and Remediation Activities:

An area of elevated activity on the concrete floor in the south central storage room was decontaminated on 9/21/95 (Survey Package ID: B0005 - survey measurement location number 24, download report 514). The decontamination consisted of removing approximately 100 cm<sup>2</sup> of the top several millimeters of the concrete floor.

An area of elevated activity on the concrete floor in the southeast storage room was decontaminated on 9/21/95 - survey measurement location number 285, download report 655). The decontamination consisted of removing approximately 100 cm<sup>2</sup> of the top several millimeters of the concrete floor.

Several contaminated tools were removed from the building.

**Isolation and Control Measures:** Level 2 Control

No use, storage or movement of radioactive material was permitted in Group B buildings.

All radioactive storage areas outside the Reactor Building were controlled by the Radwaste Supervisor.

The Radwaste Supervisor was notified that final surveys of Group B Buildings were commencing and that no radioactive material was authorized in these areas.

All access points to these buildings were posted with a Level 2 Isolation Label.

Final configuration of this area was maintained throughout the entire survey process. Authorization was required prior to the painting of surfaces structural renovation and/or removal of components from this area.

**Survey Area Conclusions:**

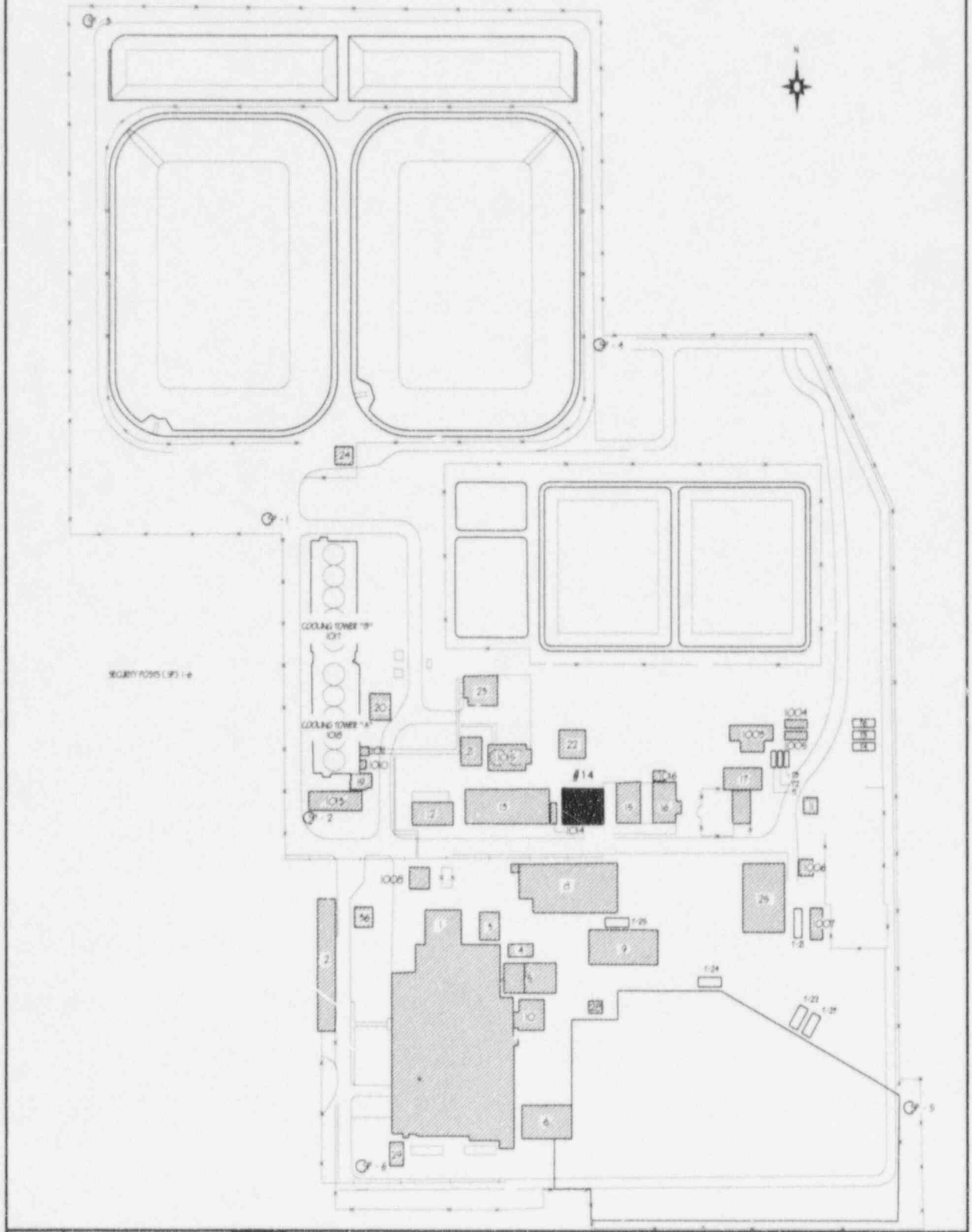
The results of exposure rate measurements collected within these survey units have not been formally evaluated and have not been included in this "Example" Release Record.

The results of total and removable surface activity measurements collected within these survey units meet the criteria for release for unrestricted use.

**Survey Area References:**

FSV Decommissioning Project Initial Radiological Site Characterization Report - Volume 9  
Survey Package ID: B0005 Data Investigation Form dated 10/25/95  
Radiological Occurrence Reports #95-058, 95-059 and 95-061

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP



LEGEND -X-X- FENCE

▨ BUILDING

FILE: GRP\_B\PACKAGE\90179 (00)



**Release Record - Survey Unit**

**Location Code:** B0017BZ001BZT01  
(B017B0AB01 and B017B02B01)

**Group ID:** B

**Survey Area Number:** 0017

**Surface Category:** BZ001 - Lower Walls & Floor Surfaces

**Survey Unit Classification:** BZ - Suspect Affected

**Survey Reason:** T01

**Survey Unit Description:** Electrical Warehouse - Building #14  
South Central Storage Room  
Floors - bare concrete  
Walls < 2 meters - generic

**Survey Unit Decommissioning and Remediation Activities:** None



### Release Record - Survey Unit

**Location Code:** B0017BZ001BZT01  
(B017B0AB01 and B017B02B01)

**Survey Design:**

**Beta Scan:** Scanned 100% of accessible surfaces and identified areas of elevated activity.

**Total Surface Activity:** 130 measurements. Collected total activity (direct) measurements at grid intersections and at any area(s) of elevated activity identified during the scan.

**Exposure Rate:** 62 measurements. At 1 meter from total surface activity survey measurement locations marked for exposure rate measurements.

**$\beta\gamma$  Smears:** 130 measurements. At same survey measurement locations as total surface activity measurements.

### Survey Unit Investigations:

11/21/95

A review of the data set, particularly the graphical presentation of the data, indicated a trend in the number and magnitude of positive results obtained from the surfaces located near the south and east walls of the building. The net results do not exceed the investigation action levels.

To evaluate this condition, the local area background values specific to the surfaces located near the south and east walls of the building were selected for correction of the gross measurement results obtained from these surfaces. The standard approach is to use the average of all local area background values collected from the survey unit. The use of the local area background values specific to these surfaces resulted in net results for these surfaces which were comparable to the net results obtained from other portions of the building.

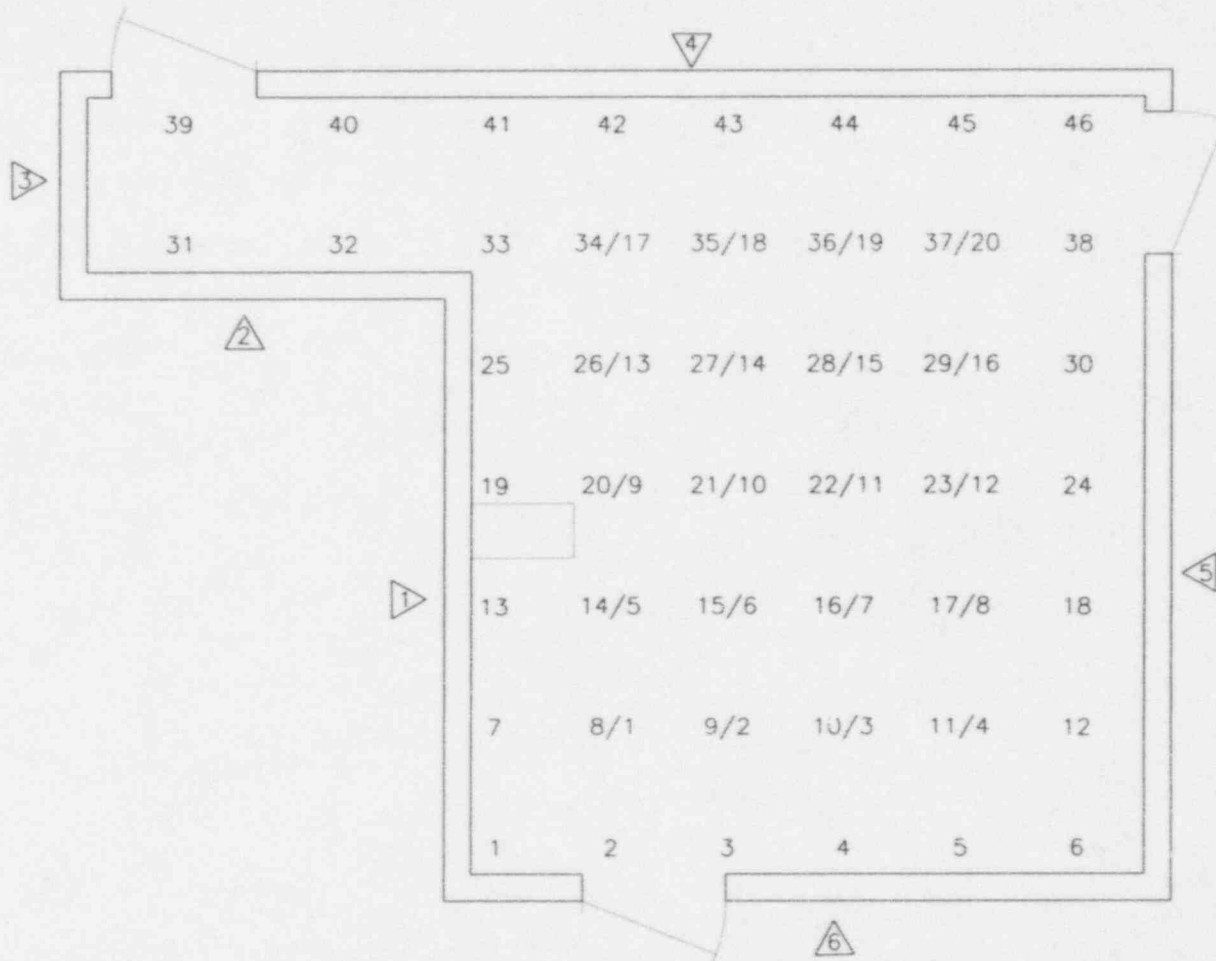
It has been determined that the measurements collected from surfaces located near the south and east interior wall of the building were affected by the contribution from activated concrete which was staged for shipment outside of the building. The use of the average of the local area background values caused a number of the net results obtained from surfaces located near the south and east walls of the building to be biased slightly high. Net measurement results for floor survey locations #1 through #46 (B017B0AB01), and wall survey locations #95 through #130 (B017B02B01) appear to have been affected.

The net results, as originally corrected for local area background using the average of the local area background values, do not include significant error relative to the action levels and release criteria. For reporting purposes, no adjustment to the local area background value is required for these measurements.



SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL SHOP - BLDG 14  
FLOOR



Survey Package ID: BO17 Master Drawing #: SITE SUB Bldg: ELECTRICAL SHOP - BLDG 14 Elev: 4791'  
 Location Code: BO17BOABO1 Description: CONCRETE FLOORS (SML #1-46) Approx. M<sup>2</sup> 22 Grid Size 1 X 1 M  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Sensors  H-9 Sensors  Liquid Sample  Sediment Sample  Surface Sol  Subsurface Sol  Other  
 Location Code: BO17BOABO1 Description: CONCRETE FLOORS (SML #1-20) Approx. M<sup>2</sup> 22 Grid Size 1 X 1 M  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Sensors  H-9 Sensors  Liquid Sample  Sediment Sample  Surface Sol  Subsurface Sol  Other  
 Signatures on file

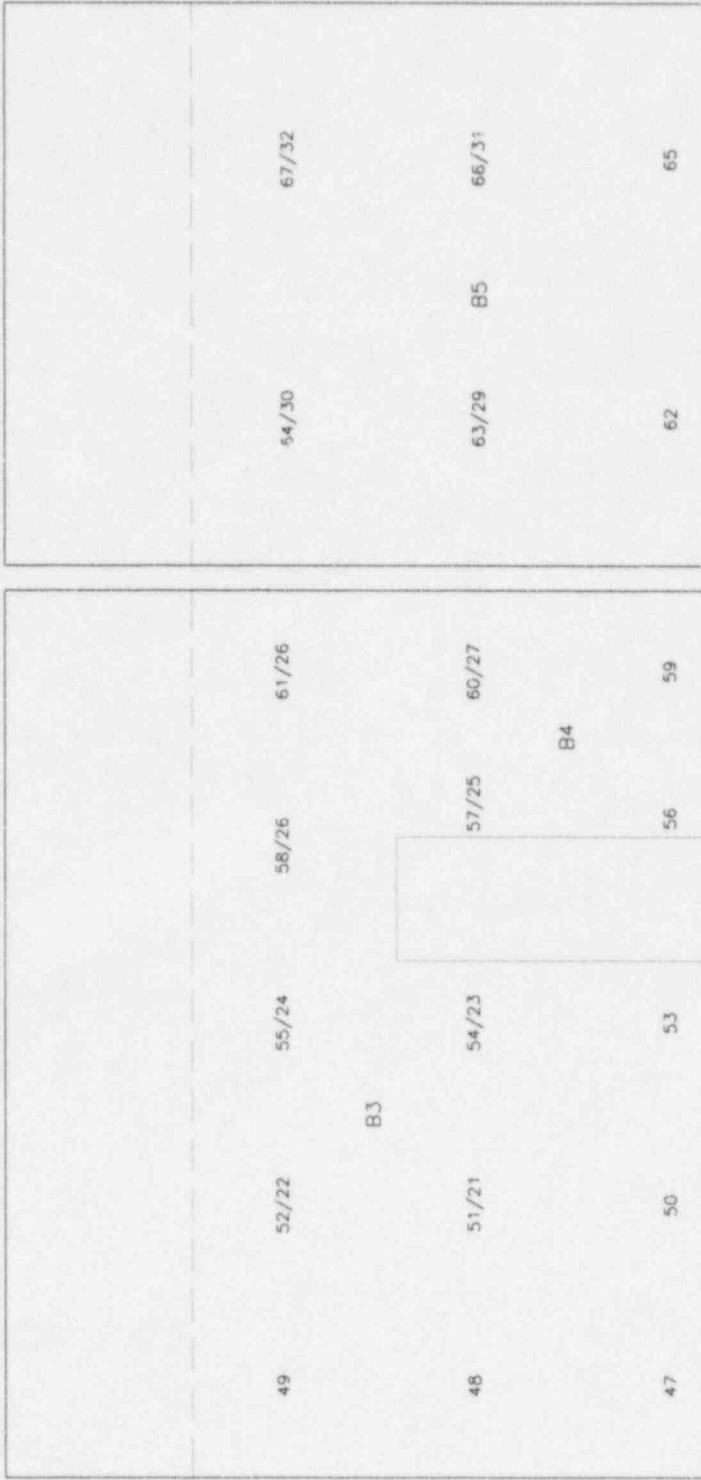
LEGEND  WALL MEASUREMENT LOCATION  FLOOR MEASUREMENT LOCATION  FLOOR SCAN LOCATION  WALL SCAN LOCATION B# - BACKGROUND \* - ELEVATED READING  WALL \* FILE: GRP\_D\PACKAGE\BO17A.CAD

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. BRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL SHOP - BLDG 14

WALL 1

WALL 2



Survey Package ID: BO17 Member Drawing #: SITE SUB Bldg: ELECTRICAL SHOP - BLDG 14 Elev: 4791'

Location Code: BO17BOZBO1 Description: WALLS BELOW 2 METERS (SML #47-67) Approx. M<sup>2</sup> 10 Grid Size 1 X 1 M

Location Code: BO17BOZBO1 Description: WALLS BELOW 2 METERS (SML #21-52) Approx. M<sup>2</sup> 10 Grid Size 1 X 1 M

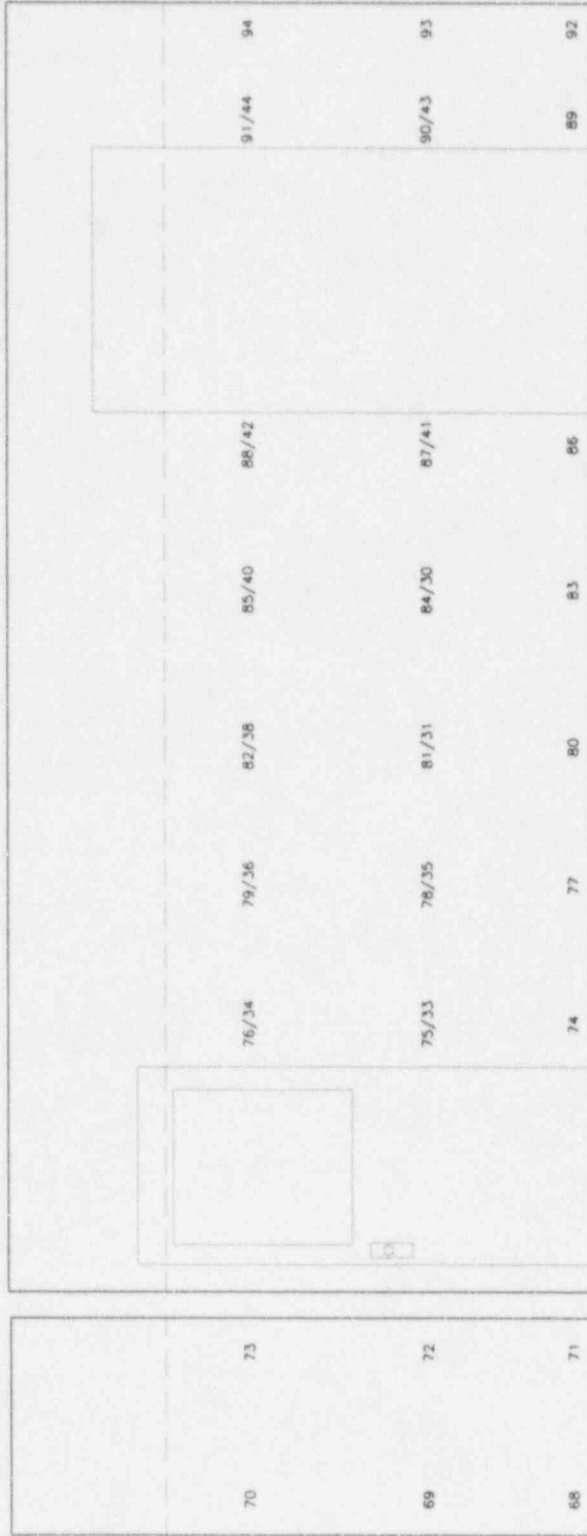
Signatures on file

LEGEND: WALL MEASUREMENT LOCATION FLOOR SCAN LOCATION B\* - BROWSE BEARING \* - BROWSE BEARING FILE: GRP\_P\PACKAGE\DOTA\GD

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. BRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL SHOP - BLDG 14

WALL 4



Survey Package ID: BO17 Master Drawing #: SITE SLIP Bid: ELECTRICAL SHOP - BLDG 14 Elev: 4791'

Location Code: BO17BOZBO1 Description: WALLS BELOW 2 METERS (SML #68-94) Approx. M<sup>2</sup> 12 Grid Size 1X1M

Beta Scan  Gamma Scan  Total Activity  Gamma Pip Rate  H-3 Scans  Liquid Sample  Subsoil Sample  Surface Sol  Surface Sol  Other

Location Code: BO17BOZBO1 Description: WALLS BELOW 2 METERS (SML #33-44) Approx. M<sup>2</sup> 12 Grid Size 1X1M

Beta Scan  Gamma Scan  Total Activity  Gamma Pip Rate  H-3 Scans  Liquid Sample  Subsoil Sample  Surface Sol  Surface Sol  Other

Signatures on file

LEGEND  WALL MEASUREMENT LOCATION  FLOOR SCAN LOCATION  WALL SCAN LOCATION  IN-BOUNDED \* - BLIND READING FILE: GRP\_PACKAGE\BOTA\GD

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL SHOP - BLDG 14

WALL 5



WALL 6



Survey Package ID: BO17

Location Code: BO17BO2B01

Location Code: BO17BO2B01

Location Code: BO17BO2B01

Location Code: BO17BO2B01

Location Code: BO17BO2B01

Master Drawing #: SITE SLIP

Description: WALLS BELOW 2 METERS (SNL # 95-150)

Description: WALLS BELOW 2 METERS (SNL # 45-62)

Description: WALLS BELOW 2 METERS (SNL # 45-62)

Description: WALLS BELOW 2 METERS (SNL # 45-62)

Description: WALLS BELOW 2 METERS (SNL # 45-62)

Blkq: ELECTRICAL SHOP - BLDG 14

Approx. M<sup>2</sup> 10

Approx. M<sup>2</sup> 10

Approx. M<sup>2</sup> 10

Approx. M<sup>2</sup> 10

Approx. M<sup>2</sup> 10

Elev: 4791'

Grid Size 1 X 1 M

Grid Size 1 X 1 M

Grid Size 1 X 1 M

Grid Size 1 X 1 M

Grid Size 1 X 1 M

FILE: GRP\_PACKAGE\BCTTA.LOP

\* - BEWARE BEARING

\*\* - BACKGROUND

WALL SCAN LOCATION

FLOOR SCAN LOCATION

FLOOR MEASUREMENT LOCATION

WALL MEASUREMENT LOCATION

FLOOR MEASUREMENT LOCATION

WALL MEASUREMENT LOCATION

WALL MEASUREMENT LOCATION

Signatures on file

**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B  
**Survey Unit Code:** B0017BZ001BZT01  
**Mediums:** Concrete - Bare, Generic Medium Collection #1

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** BZ001 - Lower Walls & Floor Surfaces  
**Survey Unit Classification:** BZ - Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	169.4
Mean	117.2
Maximum	962.1
Minimum	-622.2
Standard Deviation	362.2
Minimum Detectable Activity	987.3
Critical Level	472.4
Samples Reported	130
Samples Prescribed	130

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 2,000.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 3,000.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 4,000.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 4,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017BZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 472.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

Medium: Concrete - Bare

Download # -Station #	Location #	Activity
582-1	1	<u>571.6</u>
582-1	2	6.9
582-1	3	<u>493.1</u>
582-1	4	53.9
582-1	5	210.8
582-1	6	-24.5
582-1	7	383.3
582-1	8	273.5
582-1	9	<u>508.8</u>
582-1	10	<u>791.2</u>
582-1	11	<u>618.6</u>
582-1	12	195.1
582-1	13	<u>540.2</u>
582-1	14	<u>697.1</u>
582-1	15	367.6
582-1	16	101.0
582-1	17	53.9
582-1	18	273.5
582-1	19	22.5
582-1	20	273.5
582-1	21	-118.6
582-1	22	-102.9
582-1	23	430.4



Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017BZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 472.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

Medium: Concrete - Bare

Download # -Station #	Location #	Activity
582-1	24	179.4
582-1	25	461.8
582-1	26	<u>618.6</u>
582-1	27	-150.0
582-1	28	320.6
582-1	29	-244.1
582-1	30	-55.9
582-1	31	304.9
582-1	32	-40.2
582-1	33	304.9
582-1	34	-24.5
582-1	35	383.3
582-1	36	-150.0
582-1	37	304.9
582-1	38	446.1
582-1	39	-448.0
582-1	40	116.7
582-1	41	-181.4
582-1	42	-24.5
582-1	43	195.1
582-1	44	-118.6
582-1	45	-322.6
582-1	46	-118.6



**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017BZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 308.9 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Generic Medium Collection #1

<u>Download #</u> <u>-Station #</u>	<u>Location #</u>	<u>Activity</u>
582-1	47	-183.0
582-1	48	36.6
582-1	49	-230.1
582-1	50	-120.3
582-1	51	-10.5
582-1	52	-386.9
582-1	53	-135.9
582-1	54	-230.1
582-1	55	-10.5
582-1	56	-151.6
582-1	57	-261.4
582-1	58	-418.3
582-1	59	-308.5
582-1	60	-386.9
582-1	61	-606.5
582-1	62	-371.2
582-1	63	-371.2
582-1	64	-622.2
582-1	65	-386.9
582-1	66	-449.7
582-1	67	-386.9
582-1	68	-167.3
582-1	69	-622.2
582-1	70	-324.2
582-1	71	-355.6
582-1	72	-434.0
582-1	73	-434.0
582-1	74	-371.2
582-1	75	-496.7
582-1	76	-151.6
582-1	77	-104.6
582-1	78	-167.3
582-1	79	-10.5
582-1	80	-88.9
582-1	81	-167.3
582-1	82	-26.1
582-1	83	-104.6
582-1	84	-308.5
582-1	85	5.2
582-1	86	209.2

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: E0017BZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 308.9 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

Download # -Station #	Location #	Activity
582-1	87	-151.6
582-1	88	162.1
582-1	89	5.2
582-1	90	115.0
588-1	91	50.9
582-1	92	<u>397.4</u>
582-1	93	68.0
582-1	94	<u>319.0</u>
582-1	95	240.5
582-1	96	130.7
582-1	97	209.2
582-1	98	<u>350.3</u>
582-1	99	115.0
582-1	100	130.7
582-1	101	<u>554.2</u>
582-1	102	224.8
582-1	103	224.8
582-1	104	<u>397.4</u>
582-1	105	<u>334.6</u>
582-1	106	146.4
582-1	107	<u>350.3</u>
582-1	108	146.4

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017BZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 308.9 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

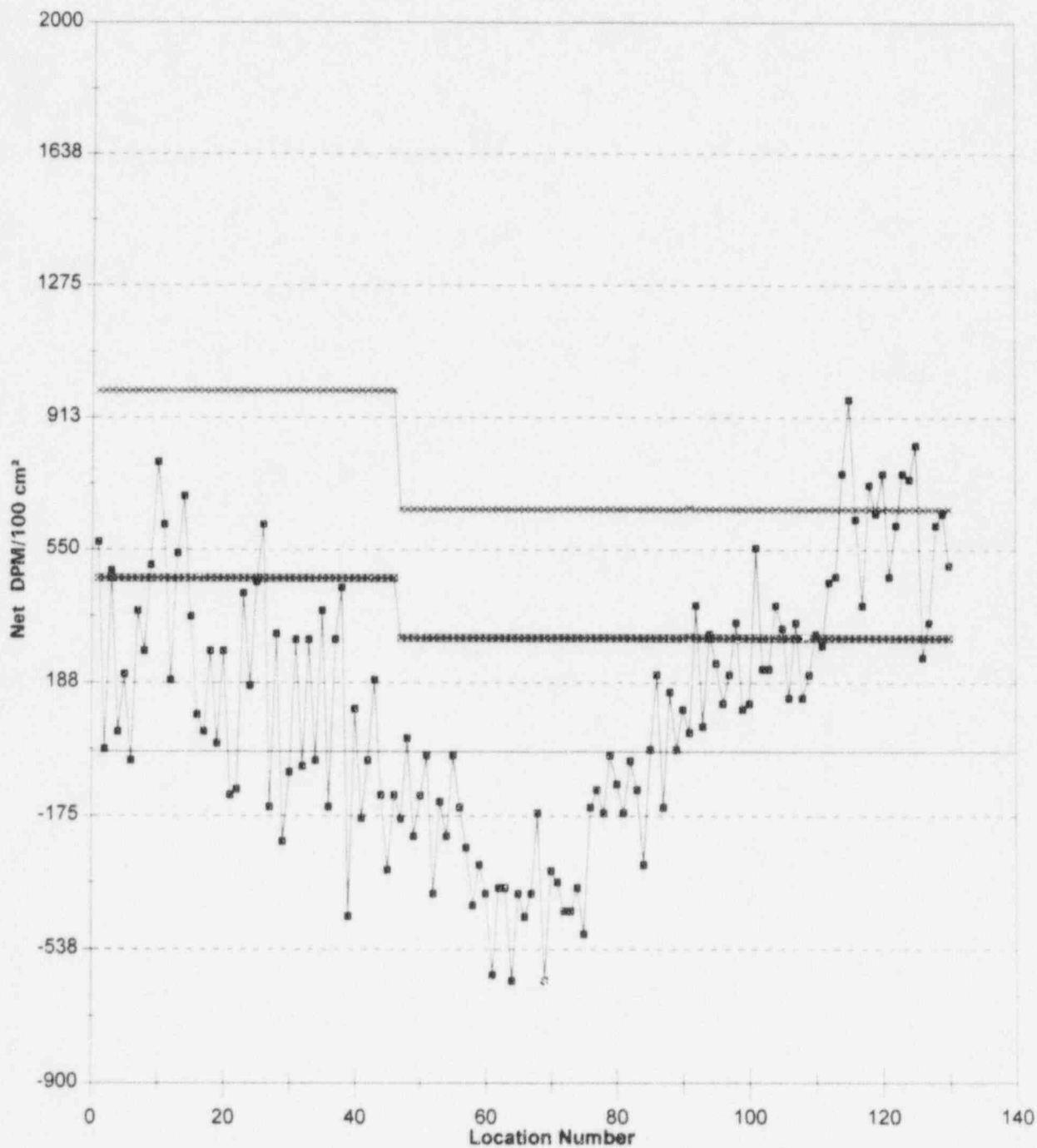
**Medium:** Generic Medium Collection #1

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
582-1	109	209.2
582-1	110	<u>319.0</u>
582-1	111	287.6
582-1	112	<u>460.1</u>
582-1	113	<u>475.8</u>
582-1	114	<u>758.2</u>
582-1	115	<u>962.1</u>
582-1	116	<u>632.7</u>
582-1	117	<u>397.4</u>
582-1	118	<u>726.8</u>
582-1	119	<u>648.4</u>
582-1	120	<u>758.2</u>
582-1	121	<u>475.8</u>
582-1	122	<u>617.0</u>
582-1	123	<u>758.2</u>
582-1	124	<u>742.5</u>
582-1	125	<u>836.6</u>
582-1	126	256.2
582-1	127	<u>350.3</u>
582-1	128	<u>617.0</u>
582-1	129	<u>648.4</u>
582-1	130	<u>507.2</u>



### Total Surface Activity - Beta Survey

Survey Unit Code: B0017BZ001BZT01



--- MDA      - - - Critical Level      ···· Guideline Value      ■ Activity

Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B  
Survey Unit Code: B0017BZ001BZT01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

Download # -Station #	Medium	Count Time	Critical Level	MDA
582-1	Concrete - Bare	15.0	472.4	987.3
582-1	Generic Medium Collection	15.0	308.9	660.4
588-1	Generic Medium Collection	15.0	312.1	664.0

**Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017BZ001BZT01

**Comments:** Field Background (Bkg) reported in CPM/detector area.  
Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
Field Bkg Count time averaged over all reported samples for each medium surveyed.  
Count time is reported in seconds.

<b>Download # -Station #</b>	<b>Medium</b>	<b>Count Time</b>	<b>Field Bkg</b>	<b>Medium Bkg</b>
582-1	Concrete - Bare	15.0	474.7	767.00
582-1	Generic Medium Collection	15.0	286.7	0.00
588-1	Generic Medium Collection	15.0	334.1	0.00

**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** B0017BZ001BZT01  
**Mediums:** Concrete - Bare, Air

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** BZ001 - Lower Walls & Floor Surfaces  
**Survey Unit Classification:** BZ - Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	2.6
Mean	2.0
Maximum	15.0
Minimum	-3.5
Standard Deviation	3.9
Minimum Detectable Activity	19.5
Critical Level	6.6
Samples Reported	130
Samples Prescribed	130

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 187.5 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 562.5 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 750.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 750.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test



Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0017BZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 6.6 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

Medium: Concrete - Bare

Location #	Activity
1	<u>15.0</u>
2	1.2
3	3.5
4	3.5
5	1.2
6	<u>8.1</u>
7	3.5
8	5.8
9	3.5
10	-1.2
11	<u>10.4</u>
12	1.2
13	3.5
14	<u>10.4</u>
15	1.2
16	-3.5
17	<u>8.1</u>
18	5.8
19	3.5
20	3.5
21	<u>10.4</u>
22	-1.2
23	-1.2

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0017BZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 6.6 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

Medium: Concrete - Bare

Location #	Activity
24	<u>8.1</u>
25	-1.2
26	<u>8.1</u>
27	-1.2
28	1.2
29	3.5
30	-3.5
31	-1.2
32	5.8
33	1.2
34	5.8
35	1.2
36	1.2
37	<u>10.4</u>
38	-1.2
39	1.2
40	1.2
41	<u>8.1</u>
42	1.2
43	-1.2
44	1.2
45	1.2
46	3.5

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0017BZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 6.6 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

Medium: Air

Location #	Activity
47	<u>8.1</u>
48	-3.5
49	1.2
50	1.2
51	1.2
52	1.2
53	1.2
54	-1.2
55	-1.2
56	1.2
57	1.2
58	1.2
59	3.5
60	-1.2
61	1.2
62	1.2
63	-3.5
64	3.5
65	<u>8.1</u>
66	-1.2
67	5.8
68	1.2
69	-1.2
70	-1.2
71	1.2
72	-1.2
73	-1.2
74	-1.2
75	-1.2
76	<u>8.1</u>
77	-1.2
78	-1.2
79	-1.2
80	5.8
81	-3.5
82	-1.2
83	1.2
84	1.2
85	-3.5
86	1.2

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0017BZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 6.6 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

Medium: Air

Location #	Activity
87	3.5
88	3.5
89	3.5
90	-1.2
91	-1.2
92	-1.2
93	1.2
94	-1.2
95	-1.2
96	-1.2
97	<u>12.7</u>
98	1.2
99	3.5
100	<u>8.1</u>
101	-3.5
102	<u>8.1</u>
103	-1.2
104	3.5
105	<u>10.4</u>
106	-3.5
107	1.2
108	3.5

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017BZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 6.6 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

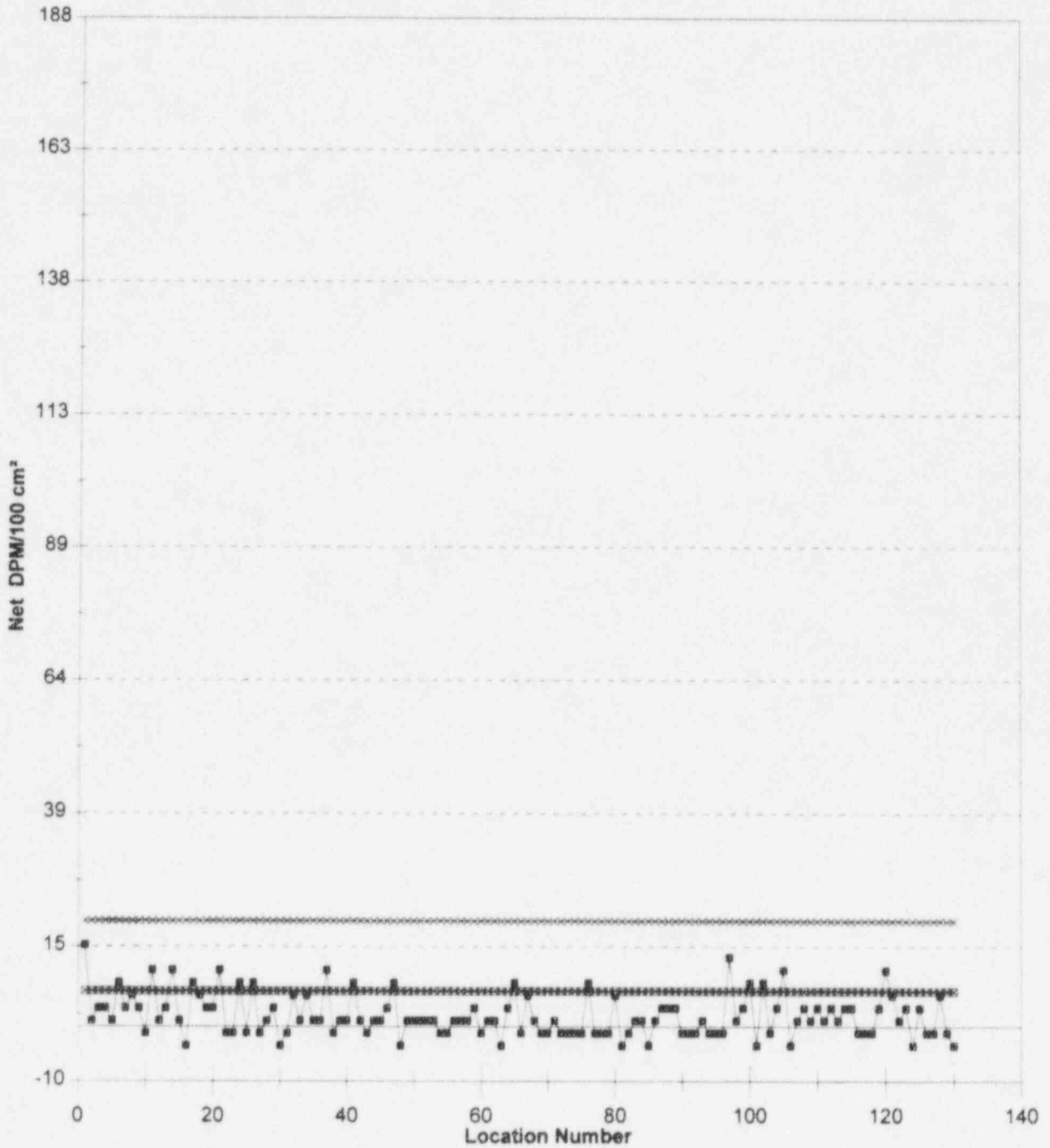
**Medium:** Air

Location #	Activity
109	1.2
110	3.5
111	1.2
112	3.5
113	1.2
114	3.5
115	3.5
116	-1.2
117	-1.2
118	-1.2
119	3.5
120	<u>10.4</u>
121	5.8
122	1.2
123	3.5
124	-3.5
125	3.5
126	-1.2
127	-1.2
128	5.8
129	-1.2
130	-3.5



**Lab Analysis, Beta Smear**

Survey Unit Code: B0017BZ001BZT01



— MDA      \* Critical Level      - - - Guideline Value      • Activity



**Release Record - Survey Unit**

**Location Code:** B0017AZ001CZT01  
(B017C02A01)

**Group ID:** B

**Survey Area Number:** 0017

**Surface Category:** AZ001

**Survey Unit Classification:** CZ - Non-Suspect Affected

**Survey Reason:** T01

**Survey Unit Description:** Electrical Warehouse - Building #14  
South Central Storage Room  
Upper Walls/Ceiling/Overhead Structures - generic

**Survey Unit Decommissioning and Remediation Activities:** None





### Release Record - Survey Unit

**Location Code:** B0017AZ001CZT01  
(B017C02A01)

**Survey Design:**

**Beta Scan:** Selected measurement locations from those surfaces of highest contamination potential. Scanned a minimum of 1 m<sup>2</sup> at each total surface activity survey measurement location and identified areas of elevated activity.

**Total Surface Activity:** 40 measurements. Collected total activity (direct) measurements within each previously scanned 1 m<sup>2</sup> and at any area(s) of elevated activity identified during the scan.

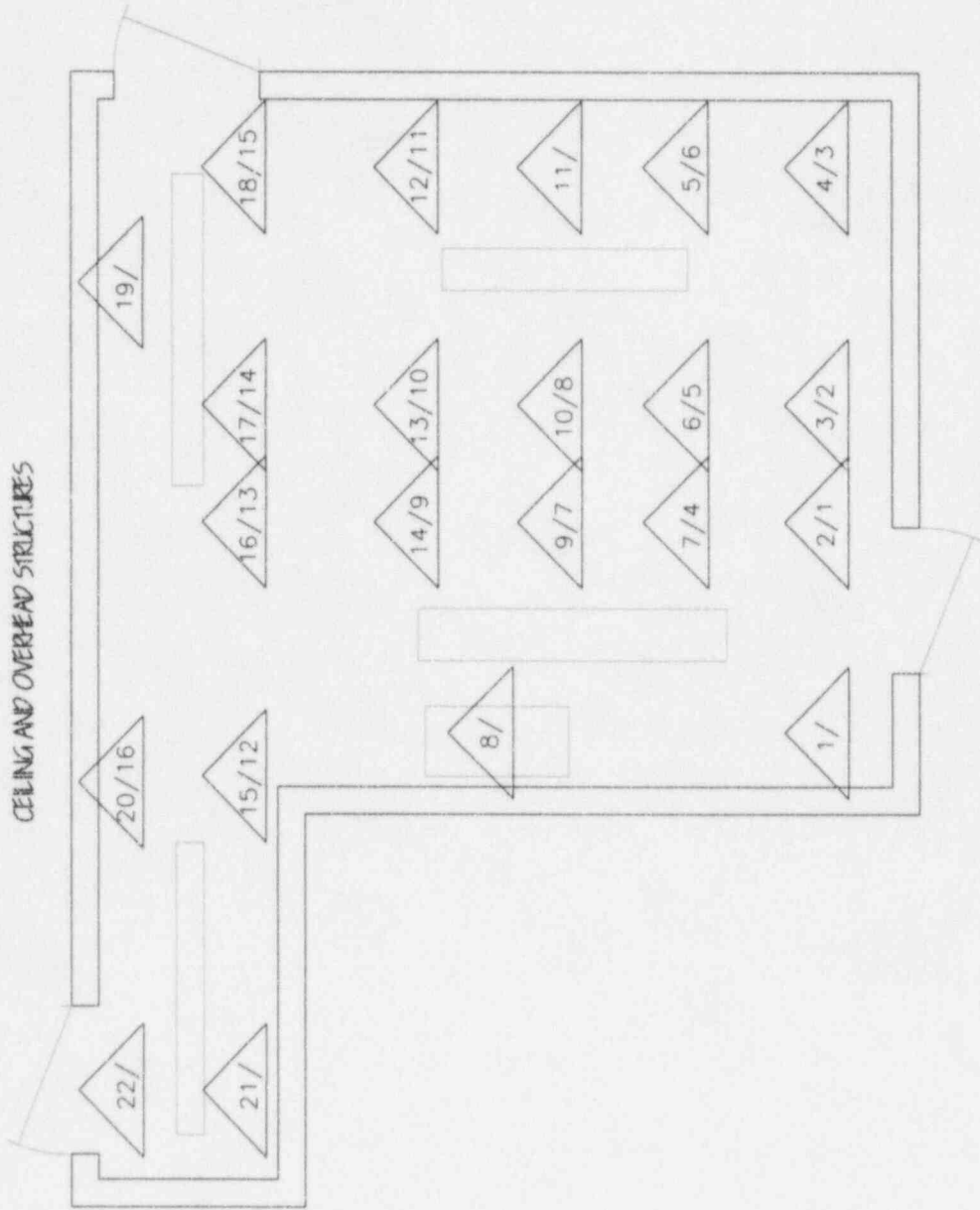
**Exposure Rate:** 30 measurements. At 1 meter from total surface activity survey measurement locations.

**$\beta\gamma$  Smears:** 40 measurements. At same survey measurement locations as total surface activity measurements.

**Survey Unit Investigations:** None

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. BRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL SHOP - BLDG 14  
CEILING AND OVERHEAD STRUCTURES



Survey Package ID: BOI1 BOI1 Master Drawing #: SITE SUB Bldg: ELECTRICAL SHOP - BLDG 14 Elev: 4791'

Location Code: BOTTCO2A01 Description: CEILING / OVERHEAD STRUCTURES (SNL #1-22) Approx. M<sup>2</sup> 22 Grid Size N/A

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  H-3 Scans  Liquid Sample  Surface Sd  Substrate Sample  Surface Sd  Other

Location Code: BOTTCO2A01 Description: CEILING / OVERHEAD STRUCTURES (SNL #1-16) Approx. M<sup>2</sup> 22 Grid Size N/A

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  H-3 Scans  Liquid Sample  Surface Sd  Substrate Sample  Surface Sd  Other

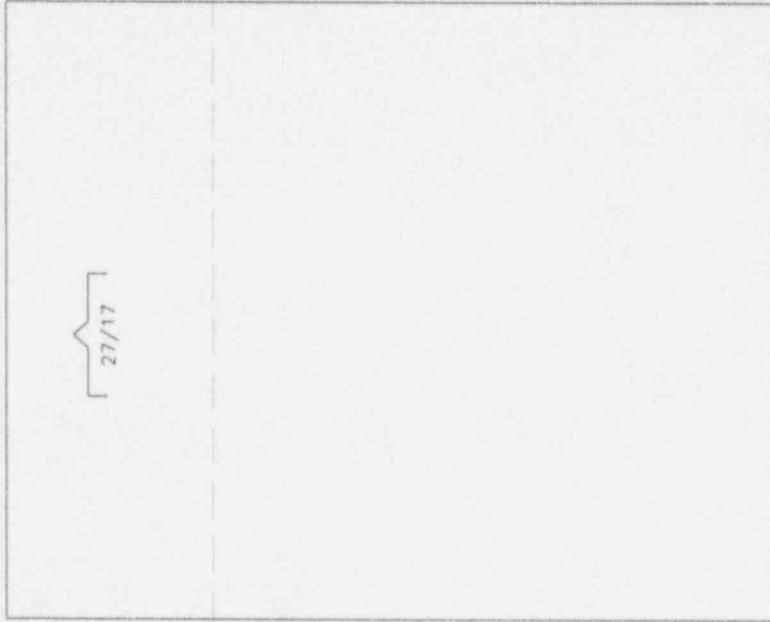
Signatures on file

LEGEND  CEILING SCAN LOCATION  FLOOR MEASUREMENT LOCATION  WALL SCAN LOCATION  PB - INGROUND \* - BURNED READING FILE: GP\_PACKAGE\BOI1.CAD

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL SHOP - BLDG. 14

WALL 2



WALL 1



Survey Package ID: BO17 Master Drawing #: SITE SUB Bldg: ELECTRICAL SHOP - BLDG 14 Elev: 4791'

Location Code: BOITCOZAO1 Description: WALLS ABOVE 2 METERS (SNL #23-27) Approx. M<sup>2</sup> 12 Grid Size N/A

Photo Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  H-3 Isomers  Liquid Sample  Substrate Sample  Surface Sd  Other

Location Code: BOITCOZAO1 Description: WALLS ABOVE 2 METERS (SNL #17-21) Approx. M<sup>2</sup> 12 Grid Size N/A

Photo Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  H-3 Isomers  Liquid Sample  Substrate Sample  Surface Sd  Other

Signatures on file

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LEGEND  WALL MEASUREMENT LOCATION • FLOOR MEASUREMENT LOCATION  WALL SCAN LOCATION  FLOOR SCAN LOCATION  IN-INCLUDING  IN-EXCLUDING

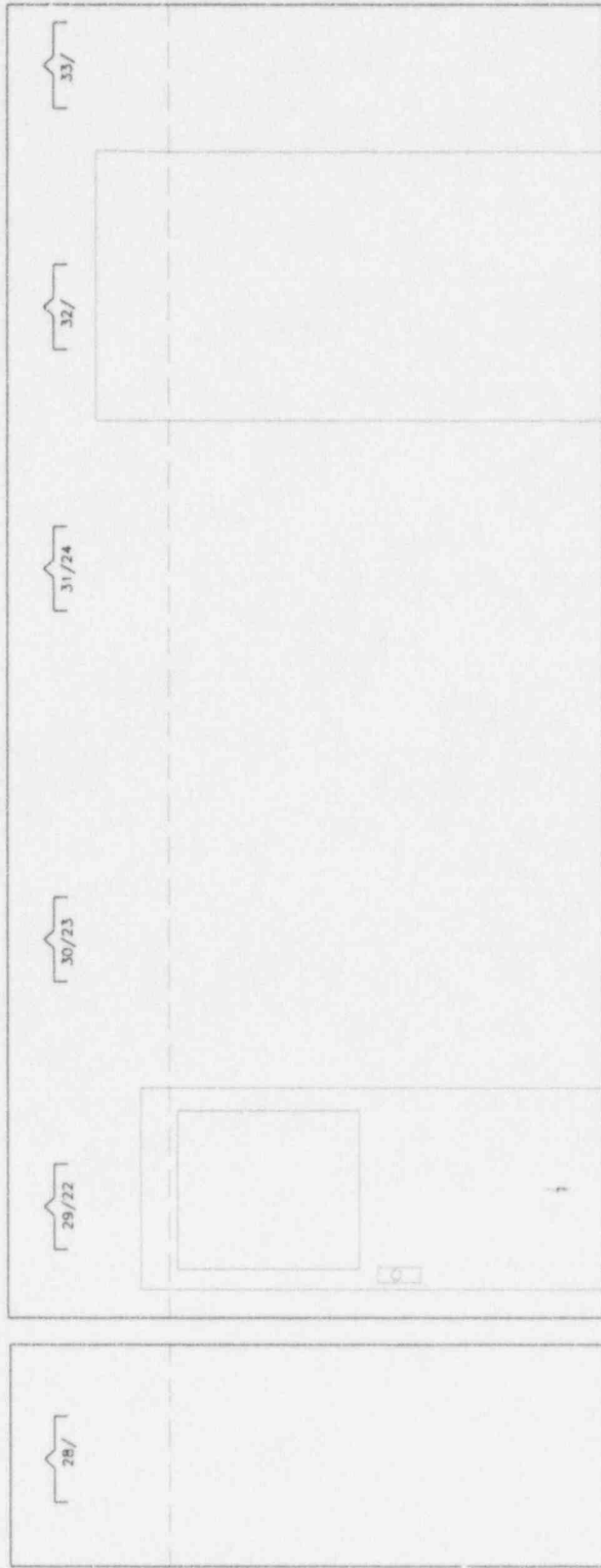
FILE: GRP\_B\PACKAGE\BO17.GPJ

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL SHOP - BLDG 14

WALL 3

WALL 4



Survey Package ID: BO17 Master Drawing #: SITE SUB Bldg: ELECTRICAL SHOP - BLDG 14 Elev: 4791'

Location Code: BOITCOZAO1 Description: WALLS ABOVE 2 METERS (SML # 28-33) Approx. M<sup>2</sup> 8 Grid Size N/A

Pole Scan  Gamma Scan  Total Activity  Gamma Sp. Rate  Beta/Gamma Sp. Rate  Liquid Sample  Subsoil Sample  Surface Sd  Surface Sd  Other

Location Code: BOITCOZAO1 Description: WALLS ABOVE 2 METERS (SML # 22-24) Approx. M<sup>2</sup> 8 Grid Size N/A

Pole Scan  Gamma Scan  Total Activity  Gamma Sp. Rate  Beta/Gamma Sp. Rate  Liquid Sample  Subsoil Sample  Surface Sd  Surface Sd  Other

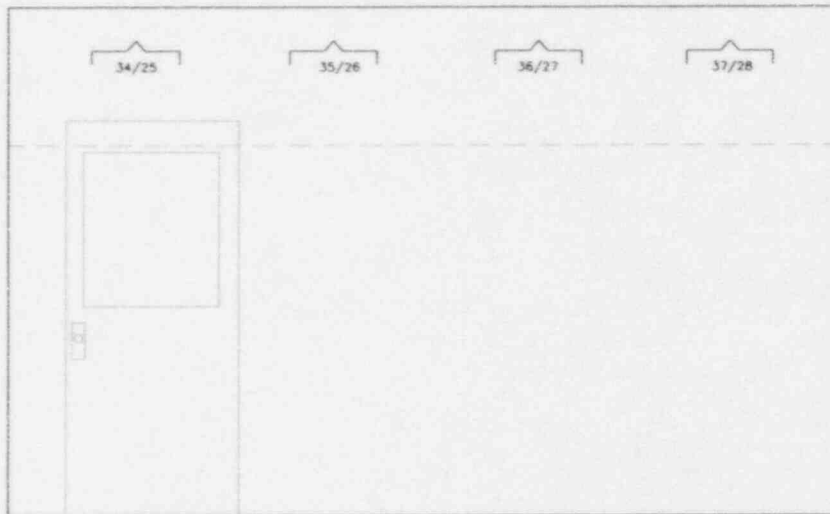
Signatures on file

LEGEND  WALL MEASUREMENT LOCATION  FLOOR MEASUREMENT LOCATION  WALL SCULLION  PIP - PIPING  \* - BLIND REBAR FILE: GP\_BYPAGE\BO17.GPJ

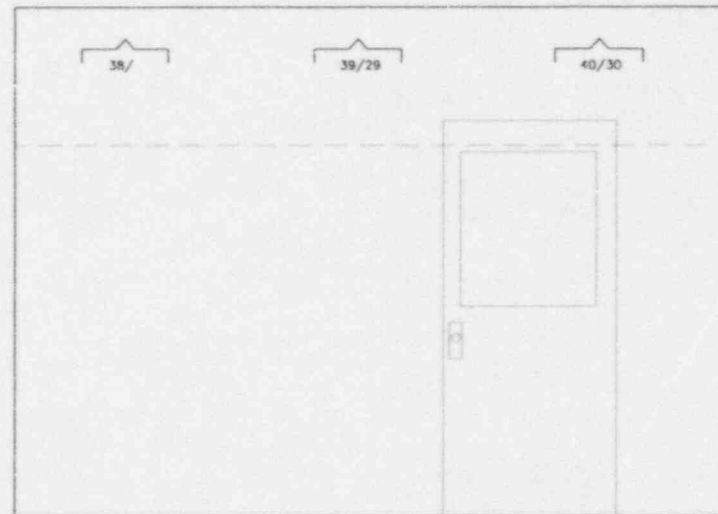
SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL SHOP - BLDG 14

WALL 5



WALL 6



Survey Package ID: BO17 Master Drawing #: SITE\_SUB Bldg: ELECTRICAL SHOP - BLDG 14 Elev: 4791'

Location Code: BO17CO2AO1 Description: WALLS ABOVE 2 METERS (SML #34-40) Approx. M<sup>2</sup> 10 Grid Size N/A

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/ Gamma Snipers  H-B Snipers  Liquid Sample  Soilment Sample  Surface Sol  Subsurface Sol  Other

Location Code: BO17CO2AO1 Description: WALLS ABOVE 2 METERS (SML #25-30) Approx. M<sup>2</sup> 10 Grid Size N/A

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/ Gamma Snipers  H-B Snipers  Liquid Sample  Soilment Sample  Surface Sol  Subsurface Sol  Other

Signatures on file

LEGEND  WALL MEASUREMENT LOCATION  FLOOR MEASUREMENT LOCATION  FLOOR SCAN LOCATION  WALL SCAN LOCATION  BACKGROUND \* - ELEVATED READING FILE: GRP\_B\PACKAGE\BO17 (0)

**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B  
**Survey Unit Code:** B0017AZ001CZT01  
**Mediums:** Generic Medium Colletion #1

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** AZ001 - Upper Walls & Ceiling Surfaces  
**Survey Unit Classification:** CZ - Non-Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	249.8
Mean	138.7
Maximum	1,111.9
Minimum	-517.4
Standard Deviation	417.0
Minimum Detectable Activity	776.2
Critical Level	368.2
Samples Reported	40
Samples Prescribed	40

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 2,000.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 2,000.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 3,000.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 4,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017AZ001CZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 368.2 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 2,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

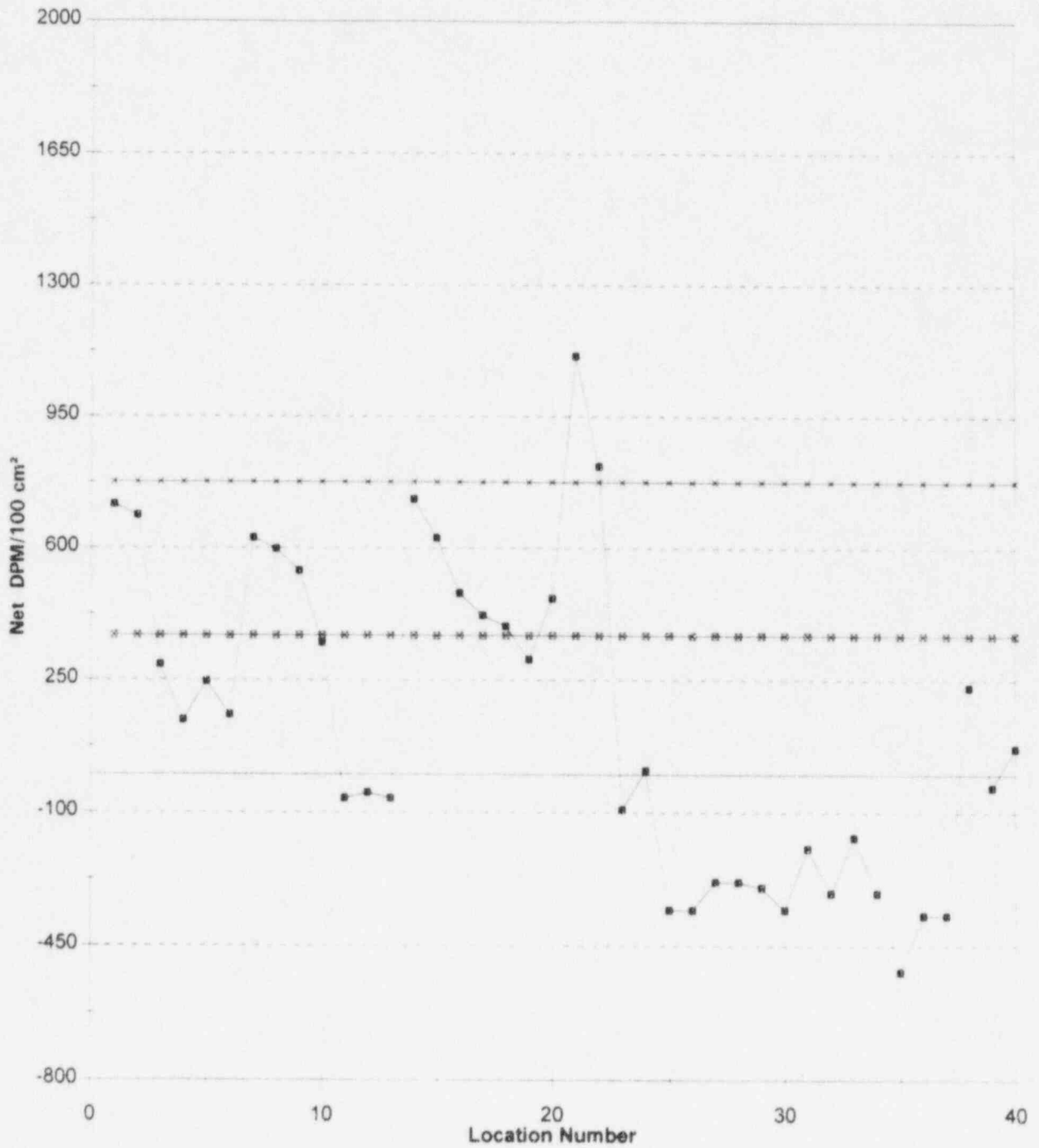
Download # -Station #	Location #	Activity
583-1	1	<u>715.6</u>
583-1	2	<u>686.2</u>
583-1	3	289.9
583-1	4	143.1
583-1	5	245.9
583-1	6	157.8
583-1	7	<u>627.5</u>
583-1	8	<u>598.2</u>
583-1	9	<u>539.4</u>
583-1	10	348.6
583-1	11	-62.4
583-1	12	-47.7
583-1	13	-62.4
583-1	14	<u>730.3</u>
583-1	15	<u>627.5</u>
583-1	16	<u>480.7</u>
583-1	17	<u>422.0</u>
583-1	18	<u>392.7</u>
583-1	19	304.6
583-1	20	<u>466.1</u>
583-1	21	<u>1111.9</u>
583-1	22	<u>818.3</u>
583-1	23	-91.7
583-1	24	11.0
583-1	25	-356.0
583-1	26	-356.0
583-1	27	-282.6
583-1	28	-282.6
583-1	29	-297.2
583-1	30	-356.0
583-1	31	-194.5
583-1	32	-311.9
583-1	33	-165.1
583-1	34	-311.9
583-1	35	-517.4
583-1	36	-370.6
583-1	37	-370.6
583-1	38	231.2
583-1	39	-33.0
583-1	40	69.7





### Total Surface Activity - Beta Survey

Survey Unit Code: B0017AZ001CZT01



← MDA      \* Critical Level      - - - Guideline Value      ■ Activity



Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B  
Survey Unit Code: B0017AZ001CZT01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

Download # -Station #	Medium	Count Time	Critical Level	MDA
583-1	Generic Medium Colletion #1	15.0	368.2	776.2

Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017AZ001CZT01

Comments: Field Background (Bkg) reported in CPM/detector area.  
Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
Field Bkg Count time averaged over all reported samples for each medium surveyed.  
Count time is reported in seconds.

<u>Download # -Station #</u>	<u>Medium</u>	<u>Count Time</u>	<u>Field Bkg</u>	<u>Medium Bkg</u>
583-1	Generic Medium Colletion #1	15.0	465.0	0.00

**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** B0017AZ001CZT01  
**Mediums:** Generic Medium Collection #1

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** AZ001 - Upper Walls & Ceiling Surfaces  
**Survey Unit Classification:** CZ - Non-Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	0.4
Mean	-0.3
Maximum	7.4
Minimum	-4.2
Standard Deviation	2.8
Minimum Detectable Activity	20.7
Critical Level	7.2
Samples Reported	40
Samples Prescribed	40

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 187.5 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 375.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 562.5 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 750.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0017AZ001CZT01

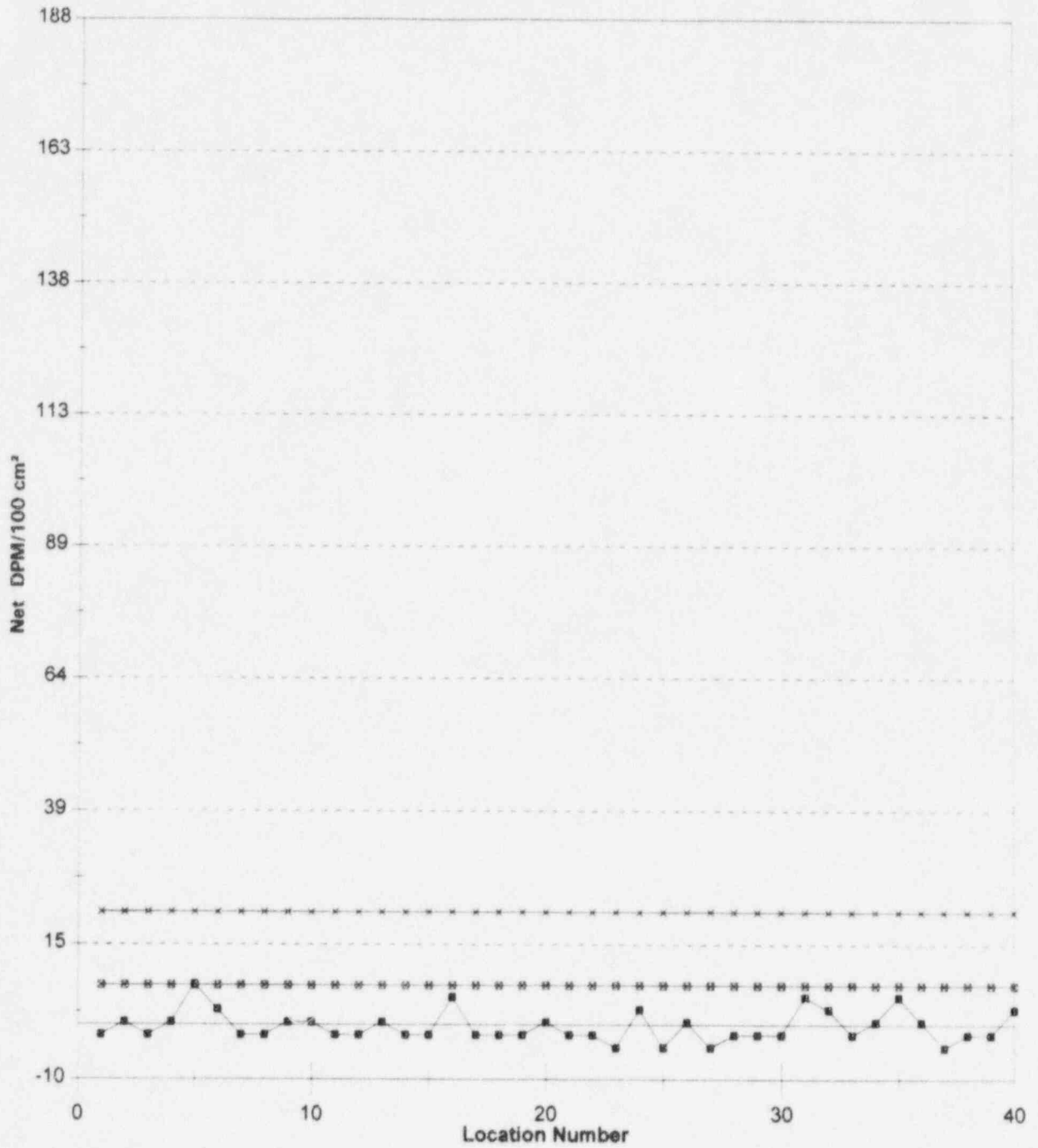
Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 7.2 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 375.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 562.5 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

Location #	Activity
1	-1.9
2	0.5
3	-1.9
4	0.5
5	<u>7.4</u>
6	2.8
7	-1.9
8	-1.9
9	0.5
10	0.5
11	-1.9
12	-1.9
13	0.5
14	-1.9
15	-1.9
16	5.1
17	-1.9
18	-1.9
19	-1.9
20	0.5
21	-1.9
22	-1.9
23	-4.2
24	2.8
25	-4.2
26	0.5
27	-4.2
28	-1.9
29	-1.9
30	-1.9
31	5.1
32	2.8
33	-1.9
34	0.5
35	5.1
36	0.5
37	-4.2
38	-1.9
39	-1.9
40	2.8



**Lab Analysis, Beta Smear**  
Survey Unit Code: B0017AZ001CZT01



---x--- MDA      ---+--- Critical Level      --- - --- Guideline Value      ---■--- Activity



**Release Record - Survey Unit**

**Location Code:** B0017AZ002CZT01  
(B017C02A02)

**Group ID:** B

**Survey Area Number:** 0017

**Surface Category:** AZ002

**Survey Unit Classification:** CZ - Non-Suspect Affected

**Survey Reason:** T01

**Survey Unit Description:** Electrical Warehouse - Building #14  
North Shop Area  
South Central Corridor  
Southeast Room  
Upper Walls/Ceiling - generic

**Survey Unit Decommissioning and Remediation Activities:** None



**Release Record - Survey Unit**

**Location Code:** B0017AZ002CZT01  
(B017C02A02)

**Group ID:** B

**Survey Area Number:** 0017

**Surface Category:** AZ002

**Survey Unit Classification:** CZ - Non-Suspect Affected

**Survey Reason:** T01

**Survey Unit Description:** Electrical Warehouse - Building #14  
North Shop Area  
South Central Corridor  
Southeast Room  
Upper Walls/Ceiling - generic

**Survey Unit Decommissioning and Remediation Activities:** None

### Release Record - Survey Unit

**Location Code:** B0017AZ002CZT01  
(B017C02A02)

**Survey Design:**

**Beta Scan:** Selected measurement locations from those surfaces of highest contamination potential. Scanned a minimum of 1 m<sup>2</sup> at each total surface activity survey measurement location and identified areas of elevated activity.

**Total Surface Activity:** 50 measurements. Collected total activity (direct) measurements within each previously scanned 1 m<sup>2</sup> and at any area(s) of elevated activity identified during the scan.

**Exposure Rate:** 50 measurements. At 1 meter from total surface activity survey measurement locations.

**$\beta\gamma$  Smears:** 50 measurements. At same survey measurement locations as total surface activity measurements.

**Survey Unit Investigations:** None

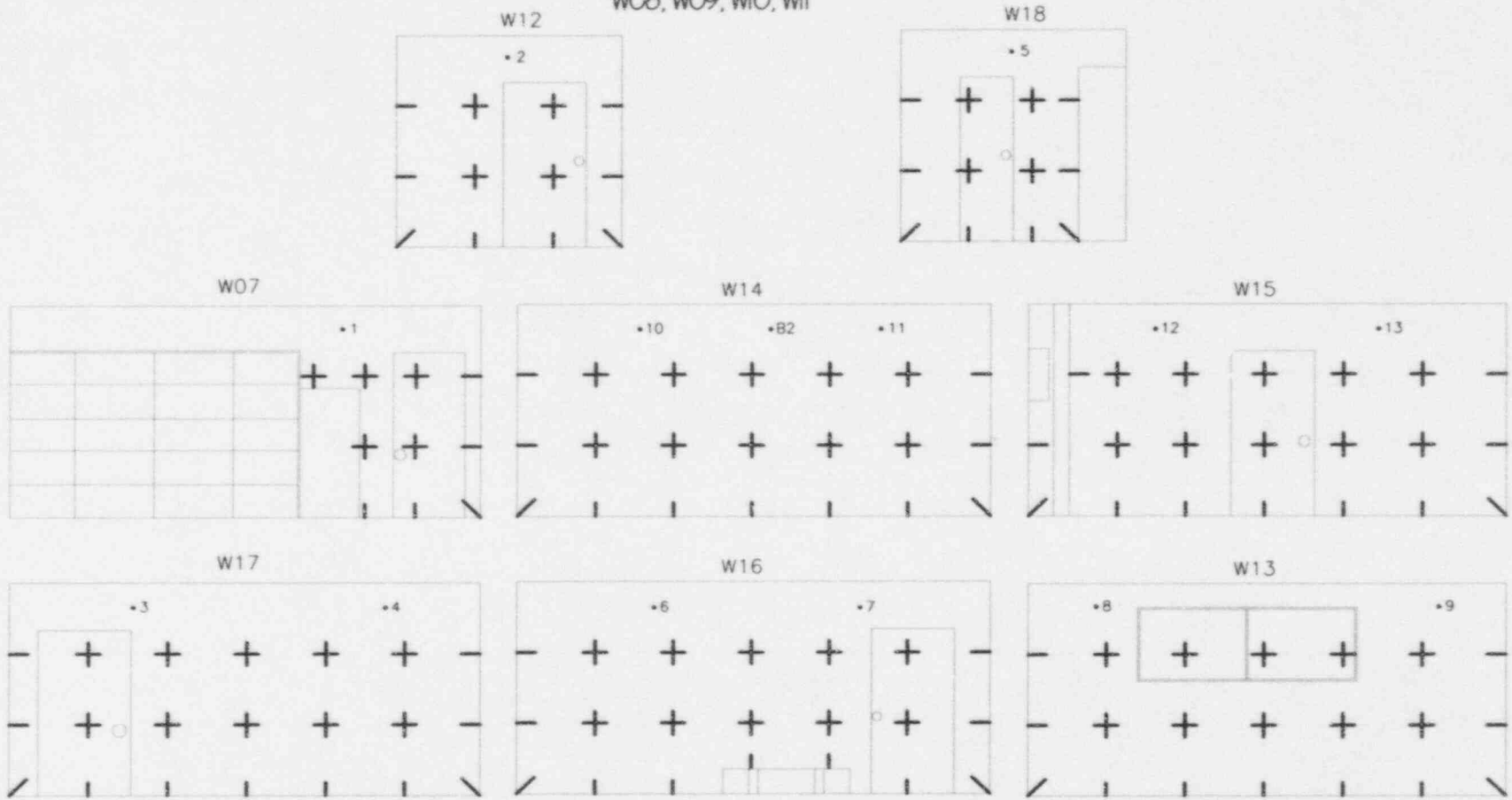


SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL WAREHOUSE - BLDG 14

WALL GRID

W08, W09, W10, W11



NOTE: LOCAL AREA BACKGROUND SCANNED APPROXIMATELY 1 SQUARE METER AROUND EACH SAMPLE LOCATION POINT

Survey Package ID: BO17 Master Drawing #: SITE\_SUB Bldg: ELECTRICAL WAREHOUSE - BLDG 14 Elev: 4791'  
 Location Code: BO17CO2AO2 Description: UPPER WALLS / CEILING - GENERIC MATERIALS (SNL #1-13) Approx. M<sup>2</sup> 385 Grid Size 1 X 1 M

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/ Gamma Scanners  H-3 Scanners  Liquid Sample  Sediment Sample  Surface Soil  Subsurface Soil  Other

Location Code: \_\_\_\_\_ Description: \_\_\_\_\_ Approx. M<sup>2</sup> \_\_\_\_\_ Grid Size \_\_\_\_\_

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/ Gamma Scanners  H-3 Scanners  Liquid Sample  Sediment Sample  Surface Soil  Subsurface Soil  Other

Signatures on file

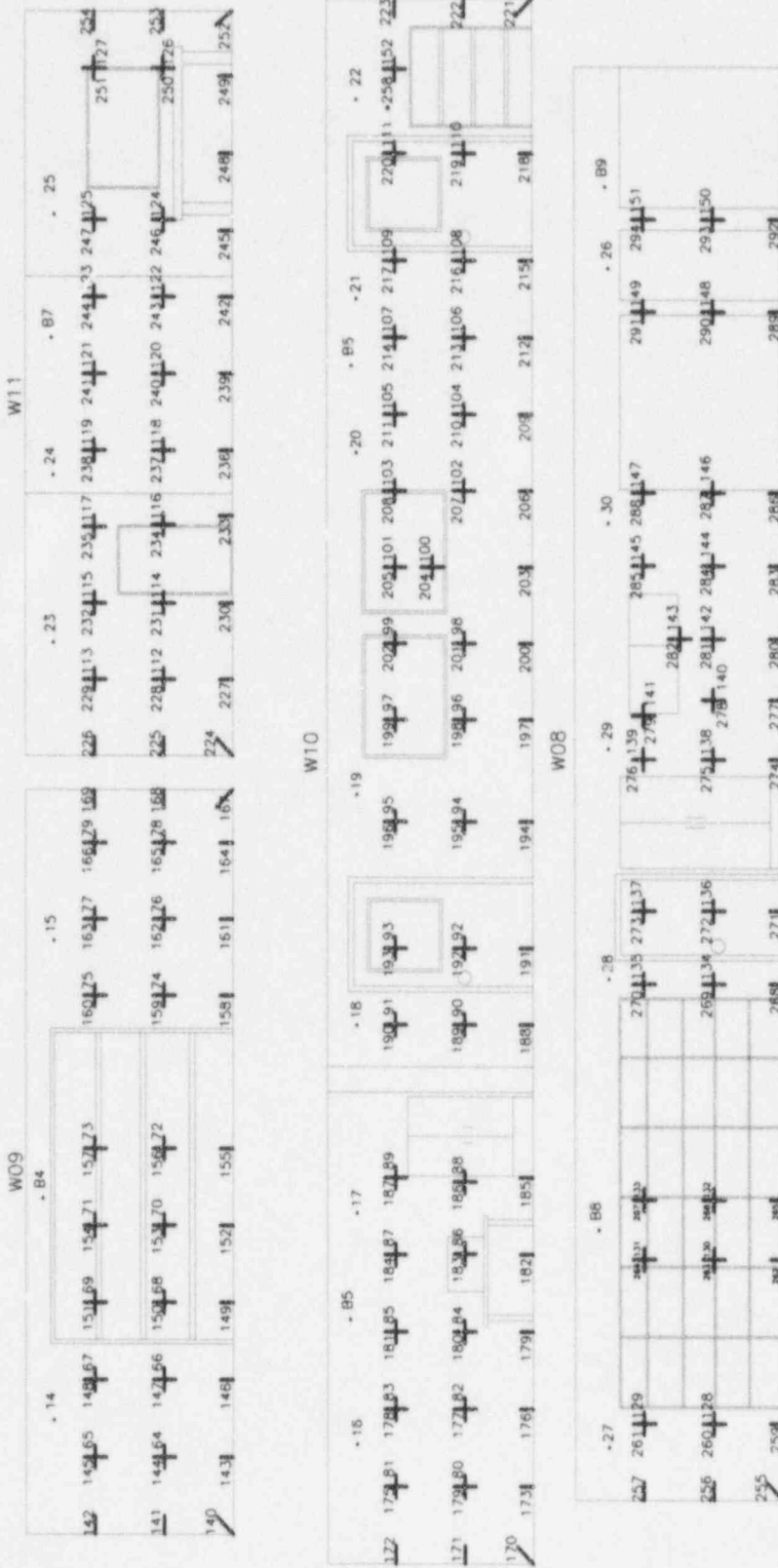
LEGEND WALL MEASUREMENT LOCATION FLOOR MEASUREMENT LOCATION FLOOR SCAN LOCATION WALL SCAN LOCATION B\* - BACKGROUND \* - ELEVATED READING FILE: GRP\_BD\PACKAGE\BO17C.CHD

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VEIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL WAREHOUSE - BLDG 14

WALL GRID

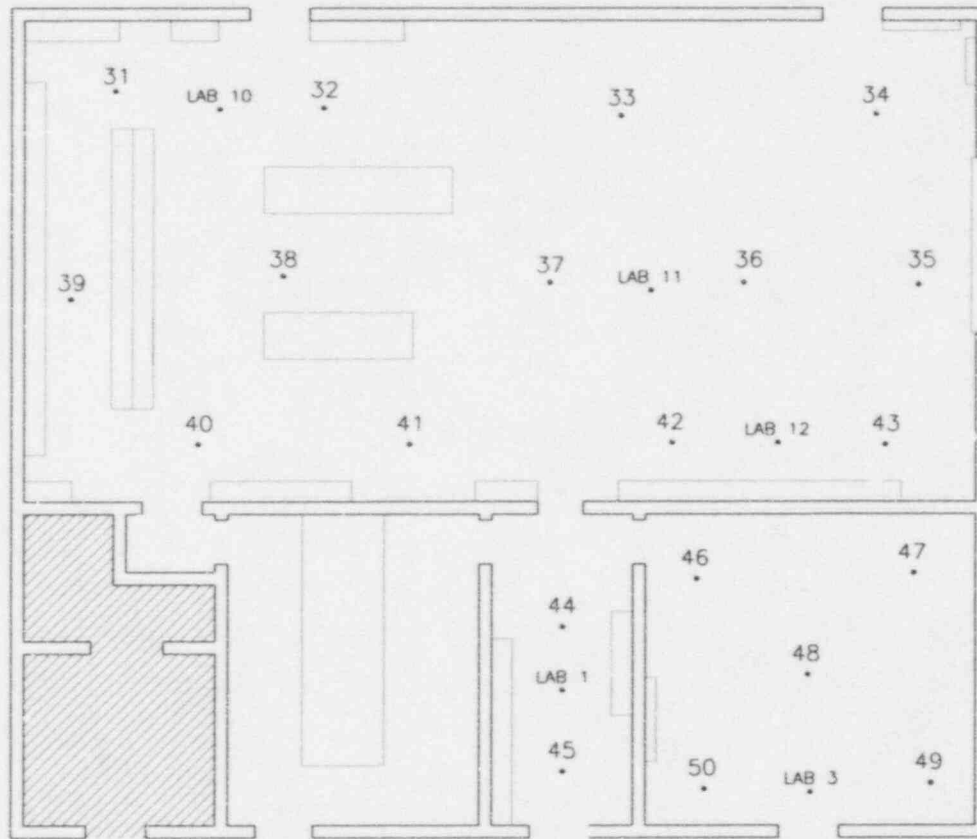
W08, W09, W10, W11



Survey Package ID: BO17 Master Drawing #: SITE SLIP Bldg: ELECTRICAL WAREHOUSE - BLDG 14 Elev: 4791'  
 Location Code: BOITCO2A02 Description: UPPER WALLS / CEILING - GENERIC MATERIALS (SML #14-30) Approx. M<sup>2</sup>: 385 Grid Size: 1 X 1 M  
 Beta Scan  Gamma Scan  Total Activity  Gamma Top Rate  Photo / Gamma Scans  H-3 Scans  Liquid Sample  Subsoil Sample  Surface Sat  Subsurface Sat  Other  
 Location Code: \_\_\_\_\_ Description: \_\_\_\_\_ Approx. M<sup>2</sup>: \_\_\_\_\_ Grid Size: \_\_\_\_\_  
 Beta Scan  Gamma Scan  Gamma Top Rate  Photo / Gamma Scans  H-3 Scans  Liquid Sample  Subsoil Sample  Surface Sat  Subsurface Sat  Other  
 Signatures on file

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP



ELECTRICAL WAREHOUSE - BLDG 14  
CEILING



NOTE: LAB SCANNED APPROXIMATELY 1 SQ. METER AROUND EACH SAMPLE LOCATION POINT



Survey Package ID: BO17 Master Drawing #: SHE\_SUB Bldg: ELECTRICAL WAREHOUSE - BLDG 14 Elev: 4791'  
 Location Code: BO17CO2AO2 Description: UPPER WALLS / CEILING - GENERIC MATERIALS (SML #31-50) Approx. M<sup>2</sup> 385 Grid Size N/A  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scanners  H-3 Scanners  Liquid Sample  Sw/Asst. Sample  Surface Soil  Subsurface Soil  Other  
 Location Code: \_\_\_\_\_ Description: \_\_\_\_\_ Approx. M<sup>2</sup> \_\_\_\_\_ Grid Size \_\_\_\_\_  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scanners  H-3 Scanners  Liquid Sample  Sediment Sample  Surface Soil  Subsurface Soil  Other  
 Signatures on file

LEGEND  WALL MEASUREMENT LOCATION  FLOOR MEASUREMENT LOCATION  FLOOR SCAN LOCATION  WALL SCAN LOCATION B# - BACKGROUND \* - ELEVATED READING LAB - LOCAL AREA BACKGROUND FILE: GRP\_B\PACKAGE\BO17D (10)

**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B  
**Survey Unit Code:** B0017AZ002CZT01  
**Mediums:** Generic Medium Collection #1

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** AZ002 - Upper Walls & Ceiling Surfaces  
**Survey Unit Classification:** CZ - Non-Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

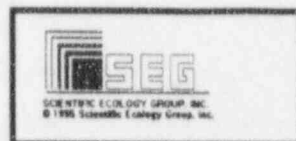
	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	65.8
Mean	3.1
Maximum	592.3
Minimum	-392.3
Standard Deviation	263.5
Minimum Detectable Activity	766.4
Critical Level	362.4
Samples Reported	50
Samples Prescribed	50

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 2,000.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 2,000.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 3,000.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 4,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017AZ002CZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 362.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 2,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

Download # -Station #	Location #	Activity
662-1	1	-238.5
662-1	2	-269.2
662-1	3	-161.5
662-1	4	-284.6
662-1	5	-84.6
662-1	6	-100.0
662-1	7	-115.4
662-1	8	-376.9
662-1	9	-38.5
662-1	10	-346.2
662-1	11	-238.5
662-1	12	100.0
662-1	13	-238.5
662-1	14	-223.1
662-1	15	84.6
662-1	16	7.7
662-1	17	-176.9
662-1	18	-253.8
662-1	19	-53.8
662-1	20	-300.0
662-1	21	-284.6
662-1	22	-223.1
662-1	23	-161.5
662-1	24	176.9
662-1	25	-115.4

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017AZ002CZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 362.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 2,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>

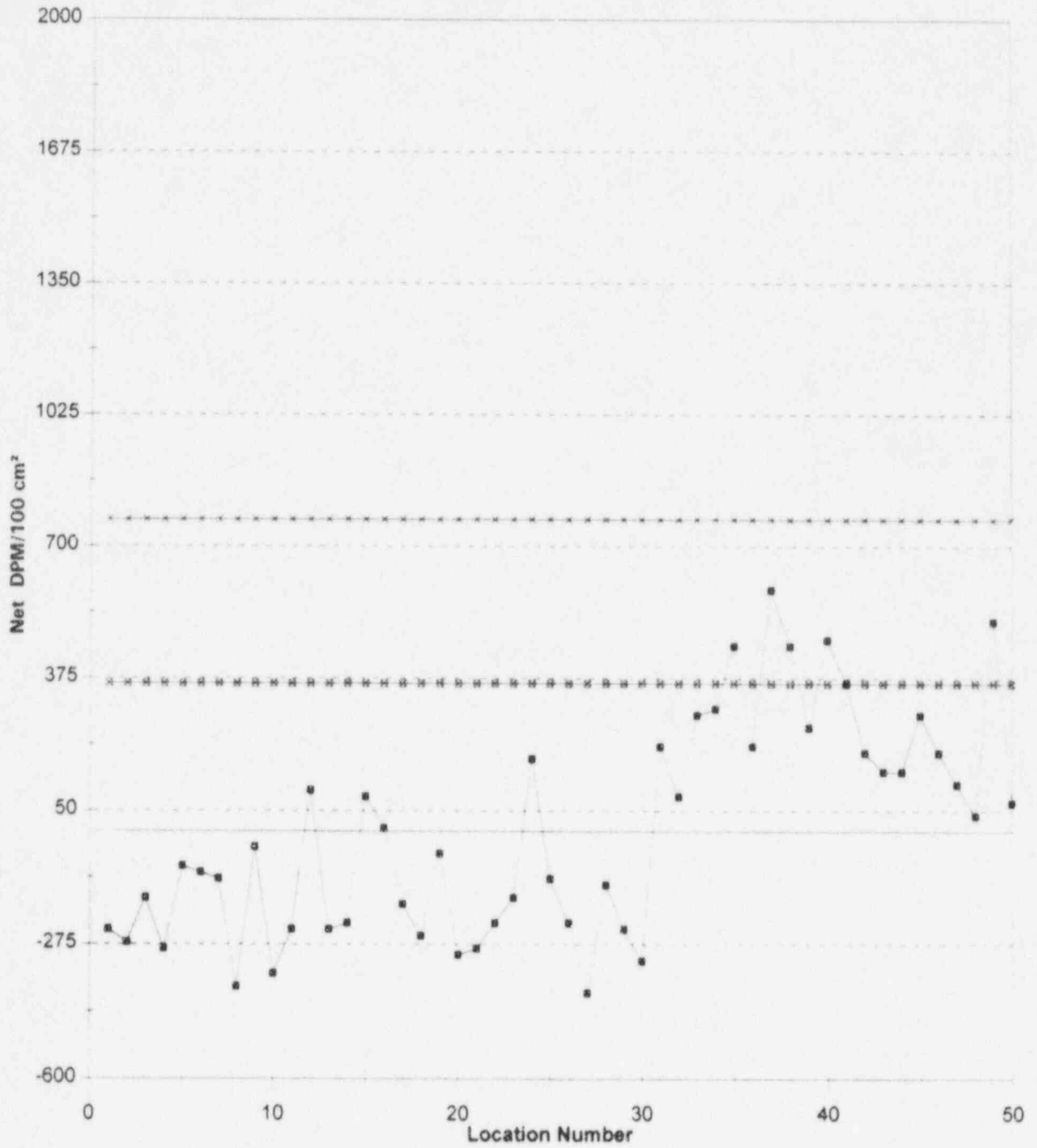
Medium: Generic Medium Collection #1

Download # -Station #	Location #	Activity
662-1	26	-223.1
662-1	27	-392.3
662-1	28	-130.8
662-1	29	-238.5
662-1	30	-315.4
662-1	31	207.7
662-1	32	84.6
662-1	33	284.6
662-1	34	300.0
662-1	35	<u>453.8</u>
662-1	36	207.7
662-1	37	<u>592.3</u>
662-1	38	<u>453.8</u>
662-1	39	253.8
662-1	40	<u>469.2</u>
662-1	41	361.5
662-1	42	192.3
662-1	43	146.2
662-1	44	146.2
662-1	45	284.6
662-1	46	192.3
662-1	47	115.4
662-1	48	38.5
662-1	49	<u>515.4</u>
662-1	50	69.2



**Total Surface Activity - Beta Survey**

Survey Unit Code: B0017AZ002CZT01



— MDA      \* Critical Level      - - - Guideline Value      ● Activity



Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B  
Survey Unit Code: B0017AZ002CZT01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

<u>Download # -Station #</u>	<u>Medium</u>	<u>Count Time</u>	<u>Critical Level</u>	<u>MDA</u>
662-1	Generic Medium Collection #1	15.0	362.4	766.4



Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017AZ002CZT01

Comments:

Field Background (Bkg) reported in CPM/detector area.

Medium Bkg reported in DPM/100 cm<sup>2</sup>.

Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.

Field Bkg Count time averaged over all reported samples for each medium surveyed.

Count time is reported in seconds.

<u>Download # -Station #</u>	<u>Medium</u>	<u>Count Time</u>	<u>Field Bkg</u>	<u>Medium Bkg</u>
662-1	Generic Medium Colletion #1	15.0	410.0	0.00

**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** B0017AZ002CZT01  
**Mediums:** Generic Medium Collection #1

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** AZ002 - Upper Walls & Ceiling Surfaces  
**Survey Unit Classification:** CZ - Non-Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	-0.9
Mean	-1.6
Maximum	3.7
Minimum	-5.6
Standard Deviation	2.9
Minimum Detectable Activity	22.9
Critical Level	8.3
Samples Reported	50
Samples Prescribed	50

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 187.5 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 375.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 562.5 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 750.0 DPM/100 cm <sup>2</sup>	YES	Passed

- (3) 10% Test
- (4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017AZ002CZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 8.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 375.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 562.5 DPM/100 cm<sup>2</sup>

**Medium:** Generic Medium Collection #1

Location #	Activity
1	-5.6
2	-3.2
3	3.7
4	-0.9
5	3.7
6	-3.2
7	3.7
8	-5.6
9	-0.9
10	-3.2
11	-5.6
12	-0.9
13	-0.9
14	-5.6
15	-0.9
16	-3.2
17	1.4
18	-3.2
19	1.4
20	-0.9
21	-5.6
22	-3.2
23	-0.9
24	-3.2
25	-3.2

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0017AZ002CZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 8.3 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 375.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 562.5 DPM/100 cm<sup>2</sup>

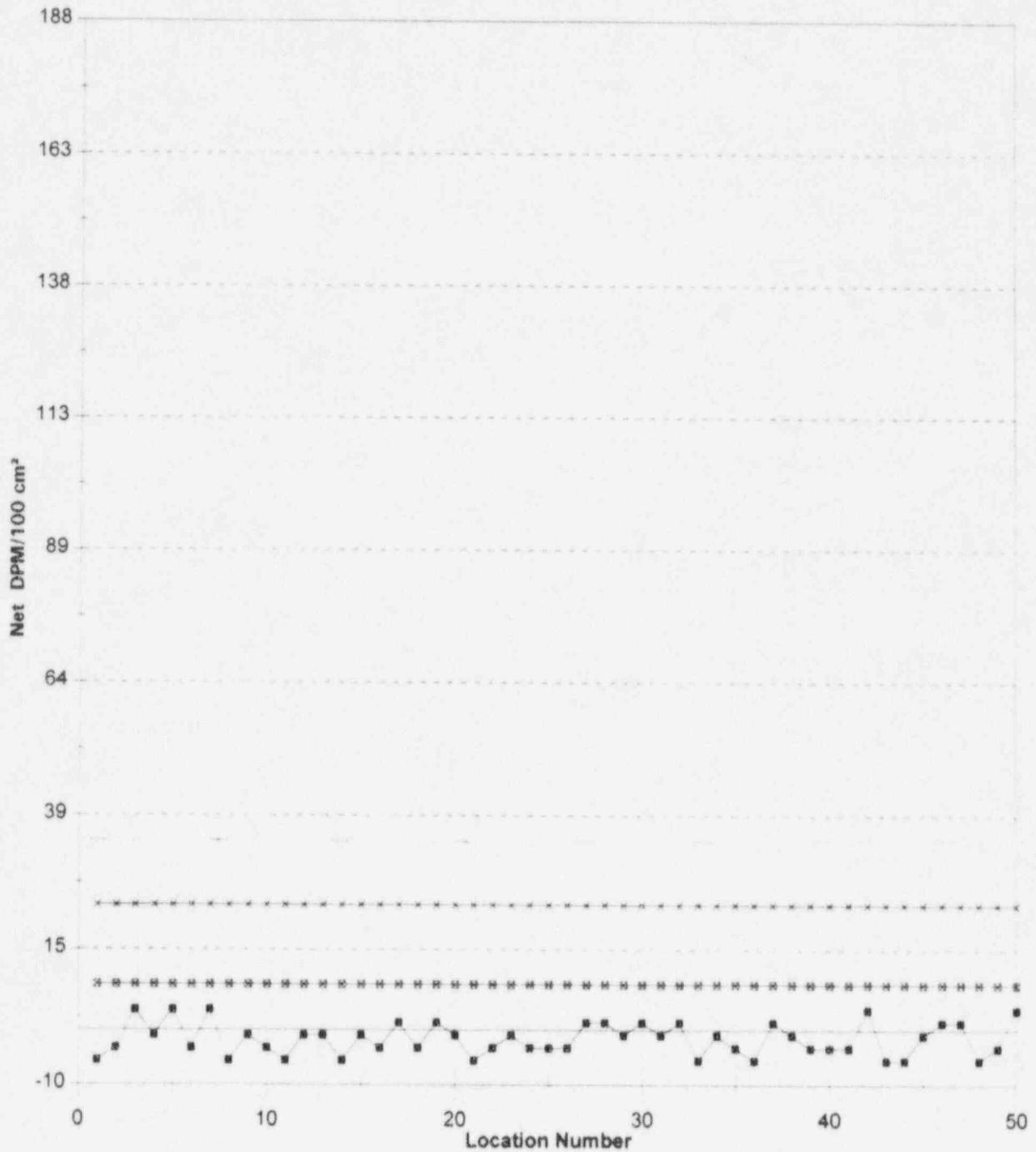
Medium: Generic Medium Collection #1

Location #	Activity
26	-3.2
27	1.4
28	1.4
29	-0.9
30	1.4
31	-0.9
32	1.4
33	-5.6
34	-0.9
35	-3.2
36	-5.6
37	1.4
38	-0.9
39	-3.2
40	-3.2
41	-3.2
42	3.7
43	-5.6
44	-5.6
45	-0.9
46	1.4
47	1.4
48	-5.6
49	-3.2
50	3.7



**Lab Analysis, Beta Smear**

Survey Unit Code: B0017AZ002CZT01



--- MDA      ··· Critical Level      — Guideline Value      ● Activity



**Release Record - Survey Unit**

**Location Code:** B0017FZ001BZT01  
(B017B0AF01)

**Group ID:** B

**Survey Area Number:** 0017

**Surface Category:** FZ001

**Survey Unit Classification:** BZ - Suspect Affected

**Survey Reason:** T01

**Survey Unit Description:** Electrical Warehouse - Building #14  
North Shop Area  
South Central Corridor  
Southeast Room  
Floors - Concrete bare

**Survey Unit Decommissioning and Remediation Activities:**

An area of elevated activity in the Southeast Storage Room floor was decontaminated on 9/21/95 - the area surrounding survey measurement location number 285, download report 655. The decontamination consisted of removing approximately 100 cm<sup>2</sup> of the top several millimeters of the concrete floor surface.

### Release Record - Survey Unit

**Location Code:** B0017FZ001BZT01, B0017FZ001BZR01  
(B017B0AF01, and B017BRAFO1)

**Survey Design:**

**Beta Scan:** Scanned 100% of the accessible surfaces. Marked areas of elevated activity.

**Total Surface Activity:** 329 measurements. Collected measurements at grid intersections. Then collected measurements at any areas of elevated activity identified and marked during the scan. Used the next sequential survey measurement location number for the additional measurements.

**Exposure Rate:** 163 measurements. Collected measurements at 1 meter from the survey measurement locations marked for exposure rate measurements.

**$\beta\gamma$  Smears:** 329 measurements. Collected at the same survey measurement locations as the total surface activity measurements.

#### Survey Unit Investigations:

10/24/95

Building #14 was originally classified as Unaffected and was surveyed in accordance with the instructions provided in Survey Package ID: B0005. A hot spot of total surface activity which was greater than 50% of the guideline value of 5,000 dpm/100 cm<sup>2</sup> was identified on the concrete floor in the South Central Storage Room of Building #14 during the initial final survey of the area. An investigation survey conducted in the immediate area of the hot spot confirmed the elevated activity. As a result of the investigation, the survey unit was reclassified as Affected and Survey Package ID: B0017 generated.

The concrete floor surrounding the identified hot spot was decontaminated by removing the top several millimeters of concrete. An area of approximately 100 cm<sup>2</sup> was decontaminated. During the initial final survey of the storage room conducted in accordance with Survey Package ID: B0017, contaminated tools were discovered (Refer to RORs 95-058 and 95-059) and the final survey was discontinued.

A characterization survey was performed in the adjacent storage rooms and the main workshop of Building #14. The characterization survey consisted of a 100% beta scan and smears on approximately 1100 hand tools. Three additional tools with fixed contamination were identified (Refer to ROR 95-061) during the survey. As a result of the characterization survey, a radioactive materials storage area was established in Building #14, the three contaminated tools were transferred to the marked storage area and the remaining portions of Building #14 reclassified as Affected. The contaminated tools were removed from the building and the radioactive materials storage area cleared before initiation of the final survey under Survey Package ID: B0017.

11/6/95

SML 285 of download report 655 was collected on the concrete floor of the southeast storage room in Building #14 and indicated total surface activity of 6777 dpm/100 cm<sup>2</sup>. The location code for these measurements was B017B0AF01. The area was decontaminated by removing the top several millimeters of concrete. Following decontamination, the 1 x 1 meter grid containing SML 285 and each adjoining grid was resurveyed.

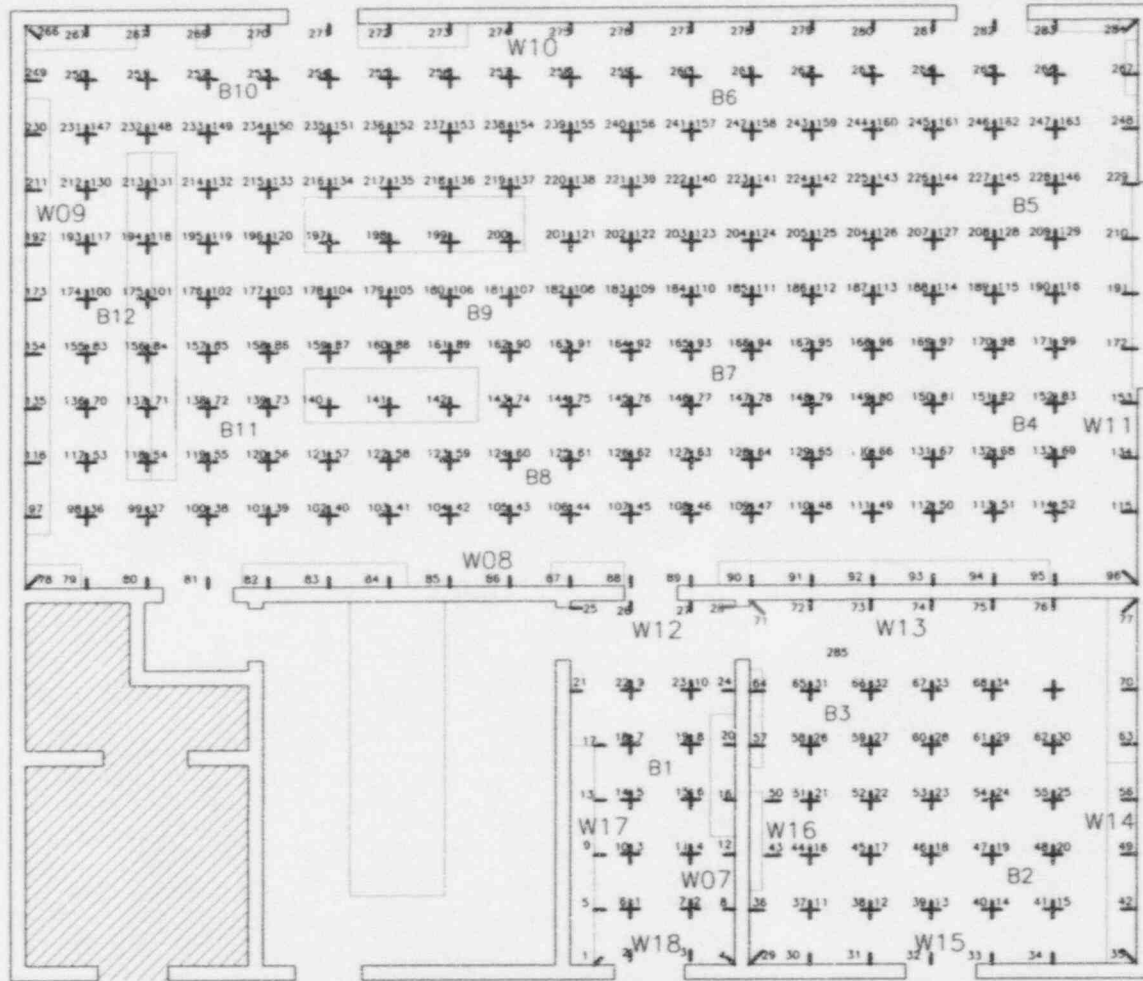
A 100% beta scan was performed on the concrete floor surface of the nine square meter area with five total activity measurements collected from each grid. A total of 45 measurements were collected under the location B017BRAFO1 (download report 698). Smears were collected at the total activity measurement locations. No additional exposure rates were obtained.

SML 285 was removed from the data set for the survey unit. While the 45 measurements collected under location code B017BRAFO1 were added to the survey unit's data set as SML 286 - 330.



SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL WAREHOUSE - BLDG 14  
FLOOR GRID



Survey Package ID: BO17 Master Drawing #: SHE SUB Bldg: ELECTRICAL WAREHOUSE - BLDG 14 Elev: 4791'

Location Code: BO17BOAFO1 Description: CONCRETE FLOORS (SML #1-284) Approx. M<sup>2</sup> N/A Grid Size 1X1M

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Sensors  H-3 Sensors  Liquid Sample  Sediment Sample  Surface Soil  Subsurface Soil  Other

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Location Code: BO17BOAFO1 Description: CONCRETE FLOORS (SML #1-163) Approx. M<sup>2</sup> N/A Grid Size 1X1M

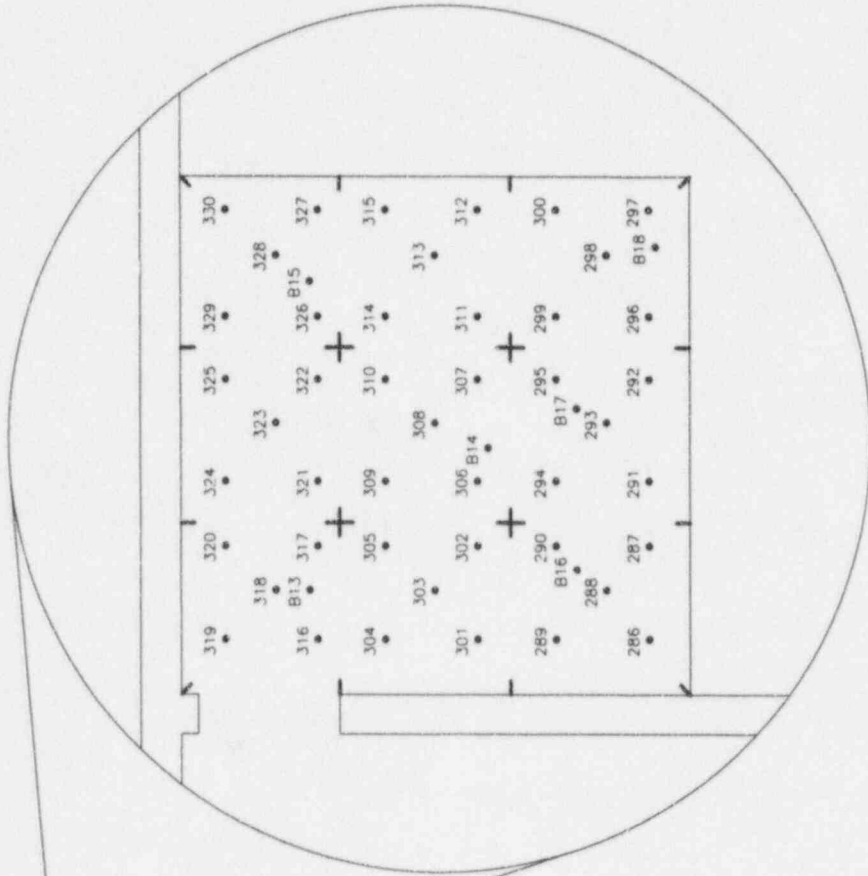
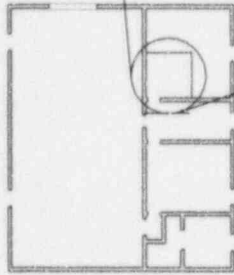
Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Sensors  H-3 Sensors  Liquid Sample  Sediment Sample  Surface Soil  Subsurface Soil  Other

Signatures on file

LEGEND WALL MEASUREMENT LOCATION FLOOR MEASUREMENT LOCATION FLOOR SCAN LOCATION WALL SCAN LOCATION B\* - BACKGROUND \* - ELEVATED READING FILE: GRP\_B\PACKAGE\BO17C.CHD

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VEIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL WAREHOUSE - BLDG 14  
FLOOR GRID



Survey Package ID: BO17 Master Drawing #: SITE SUB Bldg: ELECTRICAL WAREHOUSE - BLDG 14 Elev: 4791'  
 Location Code: BO17/BR/FOI Description: CONCRETE FLOORS - BARE (SML # 286-550) Approx. M<sup>2</sup>: N/A Grid Size: 1 X 1 M  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scans  H-3 Scans  Liquid Sample  Soaked Sample  Surface Set  Other  Subsurface Set  
 Location Code:  Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scans  H-3 Scans  Liquid Sample  Soaked Sample  Surface Set  Other  Subsurface Set  
 Signatures on file  
 LEGEND:  WALL MEASUREMENT LOCATION  FLOOR SCAN LOCATION  WALL SCAN LOCATION  BS - BACKGROUND \* - BLINDED BEADING FILE: GRP\_P\PACKAGE\BO17B.C00

**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B  
**Survey Unit Code:** B0017FZ001BZT01  
**Mediums:** Concrete - Bare

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** FZ001 - Floor & Trench Surfaces  
**Survey Unit Classification:** BZ - Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	175.6
Mean	151.2
Maximum	856.8
Minimum	-620.6
Standard Deviation	269.0
Minimum Detectable Activity	1,023.2
Critical Level	490.4
Samples Reported	329
Samples Prescribed	284

**Tests Performed**

Samples Reported >= Samples Prescribed	YES	Passed
MDA < 2,000.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 3,000.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 4,000.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 4,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 448.9 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
658-1	1	<u>751.6</u>
658-1	2	<u>571.3</u>
658-1	3	<u>466.2</u>
658-1	4	<u>856.8</u>
658-1	5	<u>556.3</u>
658-1	6	361.0
658-1	7	391.1
658-1	8	<u>496.2</u>
658-1	9	<u>631.4</u>
658-1	10	-239.9
658-1	11	-14.6
658-1	12	300.9
658-1	13	391.1
658-1	14	<u>751.6</u>
658-1	15	210.8
658-1	16	285.9
658-1	17	-480.3
658-1	18	-224.9
658-1	19	165.7
658-1	20	436.1
658-1	21	45.5
658-1	22	195.8
658-1	23	391.1
658-1	24	195.8
658-1	25	60.5
658-1	26	90.6
658-1	27	75.6
658-1	28	-74.7
658-1	29	240.8
658-1	30	<u>451.2</u>
658-1	31	-14.6
658-1	32	346.0
658-1	33	376.0
658-1	34	<u>766.6</u>
658-1	35	<u>451.2</u>
658-1	36	210.8
658-1	37	300.9
658-1	38	406.1
658-1	39	<u>721.6</u>
658-1	40	<u>466.2</u>

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 448.9 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
658-1	41	376.0
658-1	42	<u>676.5</u>
658-1	43	-29.6
658-1	44	<u>511.2</u>
658-1	45	45.5
658-1	46	346.0
658-1	47	45.5
658-1	48	<u>451.2</u>
658-1	49	<u>616.4</u>
658-1	50	<u>481.2</u>
658-1	51	<u>706.6</u>
658-1	52	195.8
658-1	53	105.6
658-1	54	421.1
658-1	55	135.7
658-1	56	<u>541.3</u>
658-1	57	120.6
658-1	58	210.8
658-1	59	<u>736.6</u>
658-1	60	165.7
658-1	61	436.1
658-1	62	300.9
658-1	63	376.0
658-1	64	-134.8
658-1	65	165.7
658-1	66	180.7
658-1	67	300.9
658-1	68	-74.7
658-1	69	436.1
658-1	70	105.6
658-1	71	45.5
658-1	72	-375.1
658-1	73	135.7
658-1	74	-14.6
658-1	75	165.7
658-1	76	315.9
658-1	77	<u>511.2</u>
658-1	78	120.6
658-1	79	135.7
658-1	80	-164.8

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 448.9 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
658-1	81	-209.9
658-1	82	391.1
658-1	83	-74.7
658-1	84	-315.0
658-1	85	150.7
658-1	86	45.5
658-1	87	-345.1
658-1	88	30.5
658-1	89	165.7
658-1	90	60.5
658-1	91	-119.7
658-1	92	195.8
658-1	93	210.8
658-1	94	376.0
658-1	95	300.9
658-1	96	-89.7
658-1	97	-14.6
658-1	98	0.4
658-1	99	150.7
658-1	100	30.6
658-1	101	<u>736.6</u>
658-1	102	436.1
658-1	103	315.9
658-1	104	100.7
658-1	105	210.8
658-1	106	120.6
658-1	107	-465.3
658-1	108	-14.6
658-1	109	300.9
658-1	110	-14.6
658-1	111	165.7
658-1	112	<u>-239.9</u>
658-1	113	001.4
658-1	114	-104.8
658-1	115	-59.3
658-1	116	421.1
658-1	117	300.9
658-1	118	<u>631.4</u>
658-1	119	-224.9
658-1	120	30.5

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 448.9 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
658-1	121	-149.8
658-1	122	-420.2
658-1	123	-104.7
658-1	124	<u>601.4</u>
658-1	125	45.5
658-1	126	0.4
658-1	127	315.9
658-1	128	-315.0
658-1	129	-89.7
658-1	130	240.8
658-1	131	-119.7
658-1	132	90.6
658-1	133	421.1
658-1	134	120.6
658-1	135	-164.8
658-1	136	300.9
658-1	137	150.7
658-1	138	105.6
658-1	139	-59.6
658-1	140	-14.6
658-1	141	-74.7
658-1	142	-194.9
655-1	143	<u>626.9</u>
655-1	144	176.0
655-1	145	336.0
655-1	146	-27.6
655-1	147	161.5
655-1	148	277.8
655-1	149	176.0
655-1	150	30.6
655-1	151	103.3
655-1	152	176.0
655-1	153	176.0
655-1	154	-71.2
655-1	155	205.1
655-1	156	<u>481.5</u>
655-1	157	234.2
655-1	158	88.8
655-1	159	176.0
655-1	160	-13.1



**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in *Nat* DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 443.7 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
655-1	161	277.8
655-1	162	190.6
655-1	163	205.1
655-1	164	30.6
655-1	165	394.2
655-1	166	263.3
655-1	167	-100.3
655-1	168	-56.7
655-1	169	394.2
655-1	170	234.2
655-1	171	146.9
655-1	172	277.8
655-1	173	59.7
655-1	174	132.4
655-1	175	321.5
655-1	176	<u>539.7</u>
655-1	177	-27.6
655-1	178	379.7
655-1	179	<u>481.5</u>
655-1	180	277.8
655-1	181	176.0
655-1	182	190.6
655-1	183	30.6
655-1	184	379.7
655-1	185	219.7
655-1	186	234.2
655-1	187	74.2
655-1	188	<u>510.6</u>
655-1	189	176.0
655-1	190	205.1
655-1	191	292.4
655-1	192	74.2
655-1	193	74.2
655-1	194	88.8
655-1	195	-56.7
655-1	196	277.8
655-1	197	263.3
655-1	198	161.5
655-1	199	234.2
655-1	200	74.2



**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 443.7 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
655-1	201	-85.8
655-1	202	263.3
655-1	203	-42.2
655-1	204	321.5
655-1	205	350.6
655-1	206	161.5
655-1	207	423.3
655-1	208	<u>772.4</u>
655-1	209	30.6
655-1	210	176.0
655-1	211	234.2
655-1	212	103.3
655-1	213	379.7
655-1	214	219.7
655-1	215	-85.8
655-1	216	-27.6
655-1	217	263.3
655-1	218	-42.2
655-1	219	<u>525.1</u>
655-1	220	234.2
655-1	221	234.2
655-1	222	350.6
655-1	223	394.2
655-1	224	103.3
655-1	225	277.8
655-1	226	219.7
655-1	227	-420.3
655-1	228	336.0
655-1	229	277.8
655-1	230	<u>496.0</u>
655-1	231	30.6
655-1	232	<u>321.5</u>
655-1	233	597.8
655-1	234	-231.2
655-1	235	59.7
655-1	236	<u>568.8</u>
655-1	237	<u>641.5</u>
655-1	238	219.7
655-1	239	336.0
655-1	240	205.1

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 443.7 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
655-1	241	219.7
655-1	242	103.3
655-1	243	45.1
655-1	244	59.7
655-1	245	-56.7
655-1	246	74.2
655-1	247	132.4
655-1	248	-13.1
655-1	249	30.6
655-1	250	-304.0
655-1	251	263.3
655-1	252	321.5
655-1	253	74.2
655-1	254	-85.8
655-1	255	263.3
655-1	256	263.3
655-1	257	117.8
655-1	258	-129.4
655-1	259	117.8
655-1	260	103.3
655-1	261	350.6
655-1	262	263.3
655-1	263	248.8
655-1	264	277.8
655-1	265	408.8
655-1	266	234.2
655-1	267	234.2
655-1	268	-144.0
655-1	269	<u>525.1</u>
655-1	270	205.1
655-1	271	30.6
655-1	272	<u>568.8</u>
655-1	273	685.1
655-1	274	<u>510.6</u>
655-1	275	-144.0
655-1	276	365.1
655-1	277	<u>743.3</u>
655-1	278	277.8
655-1	279	234.2
655-1	280	219.7

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 443.7 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
655-1	281	-129.
655-1	282	-100.3
655-1	283	-274.9
655-1	284	-42.2
698-1	286	-150.0
698-1	287	148.0
698-1	288	-102.9
698-1	289	210.8
698-1	290	-165.7
698-1	291	-197.1
698-1	292	-181.4
698-1	293	-8.8
698-1	294	-165.7
698-1	295	257.8
698-1	296	-71.6
698-1	297	195.1
698-1	298	-150.0
698-1	299	-275.5
698-1	300	-244.1
698-1	301	-102.9
698-1	302	-275.5
698-1	303	-416.7
698-1	304	22.5
698-1	305	-275.5

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 490.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

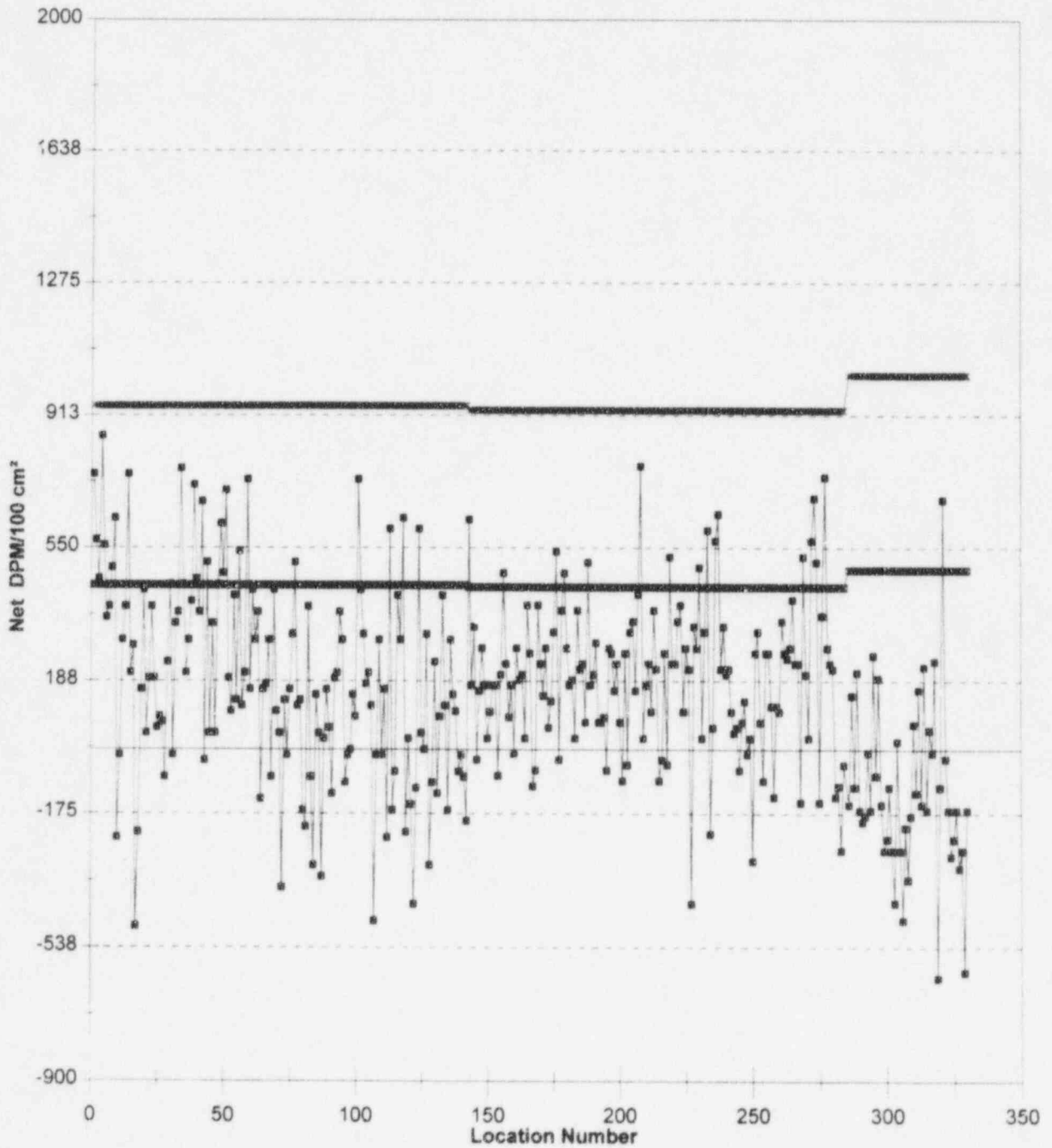
**Medium:** Concrete - Bare

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
698-1	306	-463.7
698-1	307	-212.8
698-1	308	-353.9
698-1	309	-181.4
698-1	310	69.6
698-1	311	-118.6
698-1	312	163.7
698-1	313	-150.0
698-1	314	226.5
698-1	315	-165.7
698-1	316	53.9
698-1	317	-8.8
698-1	318	242.2
698-1	319	-620.6
698-1	320	-102.9
698-1	321	<u>681.4</u>
698-1	322	-24.5
698-1	323	-165.7
698-1	324	-291.2
698-1	325	-244.1
698-1	326	-165.7
698-1	327	-322.6
698-1	328	-275.5
698-1	329	-604.9
698-1	330	-165.7



**Total Surface Activity - Beta Survey**

Survey Unit Code: B0017FZ001BZT01



**Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

<b>Download # -Station #</b>	<b>Medium</b>	<b>Count Time</b>	<b>Critical Level</b>	<b>MDA</b>
655-1	Concrete - Bare	15.0	443.7	926.7
658-1	Concrete - Bare	15.0	448.9	938.5
698-1	Concrete - Bare	15.0	490.4	1,023.2

**Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Field Background (Bkg) reported in CPM/detector area.  
 Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
 Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
 Field Bkg Count time averaged over all reported samples for each medium surveyed.  
 Count time is reported in seconds.

<b>Download # -Station #</b>	<b>Medium</b>	<b>Count Time</b>	<b>Field Bkg</b>	<b>Medium Bkg</b>
655-1	Concrete - Bare	15.0	476.7	767.00
658-1	Concrete - Bare	15.0	455.7	767.00
698-1	Concrete - Bare	15.0	526.7	767.00

**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017FZ001BZT01

**Mediums:** Concrete - Bare

**Group ID:** B

**Survey Area Number:** 0017

**Surface Category:** FZ001 - Floor & Trench Surfaces

**Survey Unit Classification:** BZ - Suspect, Affected Structure

**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
<b>Upper Confidence Level (UCL)</b>	-1.1
<b>Mean</b>	-1.4
<b>Maximum</b>	13.7
<b>Minimum</b>	-7.2
<b>Standard Deviation</b>	3.6
<b>Minimum Detectable Activity</b>	25.2
<b>Critical Level</b>	9.5
<b>Samples Reported</b>	329
<b>Samples Prescribed</b>	284

**Tests Performed**

<b>Samples Reported &gt;= Samples Prescribed</b>	YES	<b>Passed</b>
<b>MDA &lt; 187.5 DPM/100 cm<sup>2</sup></b>	YES	<b>Passed</b>
<b>Percent of Samples &gt; 562.5 DPM/100 cm<sup>2</sup></b>	0.0	<b>Passed (3)</b>
<b>Number of Samples &gt; 750.0 DPM/100 cm<sup>2</sup></b>	0	<b>Passed (4)</b>
<b>UCL of Mean &lt; 750.0 DPM/100 cm<sup>2</sup></b>	YES	<b>Passed</b>

(3) 10% Test

(4) Single Measurement Test



**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<b>RC #</b>	<b>Location #</b>	<b>Activity</b>
26.06550	1	0.5
26.06551	2	-6.5
26.06552	3	-4.2
26.06553	4	-1.9
26.06554	5	-1.9
26.06555	6	-1.9
26.06556	7	-1.9
26.06557	8	-1.9
26.06558	9	-4.2
26.06559	10	-1.9
26.06560	11	0.5
26.06561	12	-1.9
26.06562	13	-6.5
26.06563	14	-1.9
26.06564	15	-4.2
26.06565	16	0.5
26.06566	17	2.8
26.06567	18	0.5
26.06568	19	-4.2
26.06569	20	-6.5
26.06570	21	2.8
26.06571	22	-1.9
26.06572	23	-1.9
26.06573	24	-6.5
26.06574	25	-1.9
26.06575	26	-1.9
26.06576	27	-4.2
26.06577	28	-4.2
26.06578	29	-6.5
26.06579	30	0.5
26.06580	31	0.5
26.06581	32	-4.2
26.06582	33	-6.5
26.06583	34	-4.2
26.06584	35	-6.5
26.06585	36	-6.5
26.06586	37	0.5
26.06587	38	2.8
26.06588	39	0.5
26.06589	40	-6.5

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

RC #	Location #	Activity
26.06590	41	-1.9
26.06591	42	-4.2
26.06592	43	-4.2
26.06593	44	-6.5
26.06594	45	-4.2
26.06595	46	-1.9
26.06596	47	-4.2
26.06597	48	0.5
26.06598	49	-6.5
26.06599	50	-6.5
26.06600	51	-1.9
26.06601	52	-4.2
26.06602	53	-4.2
26.06603	54	7.4
26.06604	55	0.5
26.06605	56	-1.9
26.06606	57	-1.9
26.06607	58	-1.9
26.06608	59	-4.2
26.06609	60	0.5
26.06610	61	-4.2
26.06611	62	0.5
26.06612	63	0.5
26.06613	64	-4.2
26.06614	65	0.5
26.06615	66	-1.9
26.06616	67	0.5
26.06617	68	-1.9
26.06618	69	2.8
26.06619	70	5.1
26.06620	71	-4.2
26.06621	72	0.5
26.06622	73	-1.9
26.06623	74	0.5
26.06624	75	0.5
26.06625	76	-1.9
26.06626	77	-6.5
26.06627	78	-1.9
26.06628	79	-1.9
26.06629	80	0.5

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

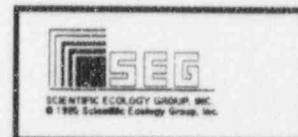
**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<b>RC #</b>	<b>Location #</b>	<b>Activity</b>
26.06630	81	-6.5
26.06631	82	-1.9
26.06632	83	-1.9
26.06633	84	0.5
26.06634	85	-6.5
26.06635	86	0.5
26.06636	87	-6.5
26.06637	88	0.5
26.06638	89	5.1
26.06639	90	-1.9
26.06640	91	-6.5
26.06641	92	-6.5
26.06642	93	0.5
26.06643	94	-4.2
26.06644	95	0.5
26.06645	96	-4.2
26.06646	97	-1.9
26.06647	98	-4.2
26.06648	99	2.8
26.06649	100	-1.9
26.06650	101	2.8
26.06651	102	5.1
26.06652	103	-4.2
26.06653	104	<u>12.0</u>
26.06654	105	0.5
26.06655	106	-1.9
26.06656	107	7.4
26.06657	108	-6.5
26.06658	109	0.5
26.06659	110	-4.2
26.06660	111	-1.9
26.06661	112	-1.9
26.06662	113	0.5
26.06663	114	0.5
26.06664	115	-4.2
26.06665	116	-1.9
26.06666	117	-1.9
26.06667	118	5.1
26.06668	119	0.5
26.06669	120	-1.9

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

RC #	Location #	Activity
26.06670	121	0.5
26.06671	122	0.5
26.06672	123	-1.9
26.06673	124	0.5
26.06674	125	0.5
26.06675	126	2.8
26.06676	127	-6.5
26.06677	128	0.5
26.06678	129	-1.9
26.06679	130	-1.9
26.06680	131	0.5
26.06681	132	-6.5
26.06682	133	0.5
26.06683	134	2.8
26.06684	135	-1.9
26.06685	136	-1.9
26.06686	137	-1.9
26.06687	138	-1.9
26.06688	139	-1.9
26.06689	140	5.1
26.06690	141	2.8
26.06691	142	-4.2
26.06692	143	<u>9.7</u>
26.06693	144	0.5
26.06694	145	-6.5
26.06695	146	-1.9
26.06696	147	2.8
26.06697	148	-6.5
26.06698	149	-4.2
26.06699	150	-6.5
26.06700	151	2.8
26.06701	152	-4.2
26.06702	153	-1.9
26.06703	154	-1.9
26.06704	155	0.5
26.06705	156	-1.9
26.06706	157	-1.9
26.06707	158	2.8
26.06708	159	-6.5
26.06709	160	-1.9

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

RC #	Location #	Activity
26.06710	161	-4.2
26.06711	162	2.8
26.06712	163	0.5
26.06713	164	7.4
26.06714	165	0.5
26.06715	166	-1.9
26.06716	167	0.5
26.06717	168	-6.5
26.06718	169	-4.2
26.06719	170	-4.2
26.06720	171	-1.9
26.06721	172	0.5
26.06722	173	0.5
26.06723	174	2.8
26.06724	175	-1.9
26.06725	176	-1.9
26.06726	177	-1.9
26.06727	178	5.1
26.06728	179	-1.9
26.06729	180	2.8
26.06730	181	0.5
26.06731	182	2.8
26.06732	183	-4.2
26.06733	184	-1.9
26.06734	185	2.8
26.06735	186	-4.2
26.06736	187	2.8
26.06737	188	<u>9.7</u>
26.06738	189	-4.2
26.06739	190	0.5
26.06740	191	-6.5
26.06741	192	-4.2
26.06742	193	5.1
26.06743	194	2.8
26.06744	195	-4.2
26.06745	196	0.5
26.06746	197	0.5
26.06747	198	-1.9
26.06748	199	-1.9
26.06749	200	-1.9

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

RC #	Location #	Activity
26.06750	201	-6.5
26.06751	202	-4.2
26.06752	203	0.5
26.06753	204	0.5
26.06754	205	2.8
26.06755	206	-4.2
26.06756	207	5.1
26.06757	208	-1.9
26.06758	209	-1.9
26.06759	210	-1.9
26.06760	211	2.8
26.06761	212	2.8
26.06762	213	-6.5
26.06763	214	-4.2
26.06764	215	-4.2
26.06765	216	-1.9
26.06766	217	-4.2
26.06767	218	-1.9
26.06768	219	0.5
26.06769	220	2.8
26.06770	221	-1.9
26.06771	222	-6.5
26.06772	223	-4.2
26.06773	224	2.8
26.06774	225	-1.9
26.06775	226	-6.5
26.06776	227	0.5
26.06777	228	0.5
26.06778	229	-6.5
26.06779	230	-4.2
26.06780	231	0.5
26.06781	232	5.1
26.06782	233	2.8
26.06783	234	-1.9
26.06784	235	-1.9
26.06785	236	0.5
26.06786	237	-6.5
26.06787	238	-6.5
26.06788	239	2.8
26.06789	240	-4.2

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<b>RC #</b>	<b>Location #</b>	<b>Activity</b>
26.06790	241	-1.9
26.06791	242	-4.2
26.06792	243	-1.9
26.06793	244	-6.5
26.06794	245	-1.9
26.06795	246	-1.9
26.06796	247	-1.9
26.06797	248	0.5
26.06798	249	-6.5
26.06799	250	-6.5
26.06800	251	-1.9
26.06801	252	0.5
26.06802	253	-6.5
26.06803	254	2.8
26.06804	255	-4.2
26.06805	256	0.5
26.06806	257	0.5
26.06807	258	-4.2
26.06808	259	-4.2
26.06809	260	0.5
26.06810	261	2.8
26.06811	262	2.8
26.06812	263	-1.9
26.06813	264	-4.2
26.06814	265	-4.2
26.06815	266	2.8
26.06816	267	2.8
26.06817	268	0.5
26.06818	269	2.8
26.06819	270	-4.2
26.06820	271	-6.5
26.06821	272	-1.9
26.06822	273	-4.2
26.06823	274	-1.9
26.06824	275	-1.9
26.06825	276	0.5
26.06826	277	-1.9
26.06827	278	-1.9
26.06828	279	0.5
26.06829	280	2.8

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
**Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>**  
*Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>*

**Medium:** Concrete - Bare

RC #	Location #	Activity
26.06830	281	-6.5
26.06831	282	-1.9
26.06832	283	-1.9
26.06833	284	-4.2
26.08146	286	-7.2
26.08147	287	-2.5
26.08148	288	-7.2
26.08149	289	-4.9
26.08150	290	4.4
26.08151	291	-0.2
26.08152	292	-4.9
26.08153	293	-0.2
26.08154	294	-0.2
26.08155	295	2.1
26.08156	296	-2.5
26.08157	297	2.1
26.08158	298	-7.2
26.08159	299	6.7
26.08160	300	-4.9
26.08161	301	-4.9
26.08162	302	-7.2
26.08163	303	2.1
26.08164	304	2.1
26.08165	305	-2.5



**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017FZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.5 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

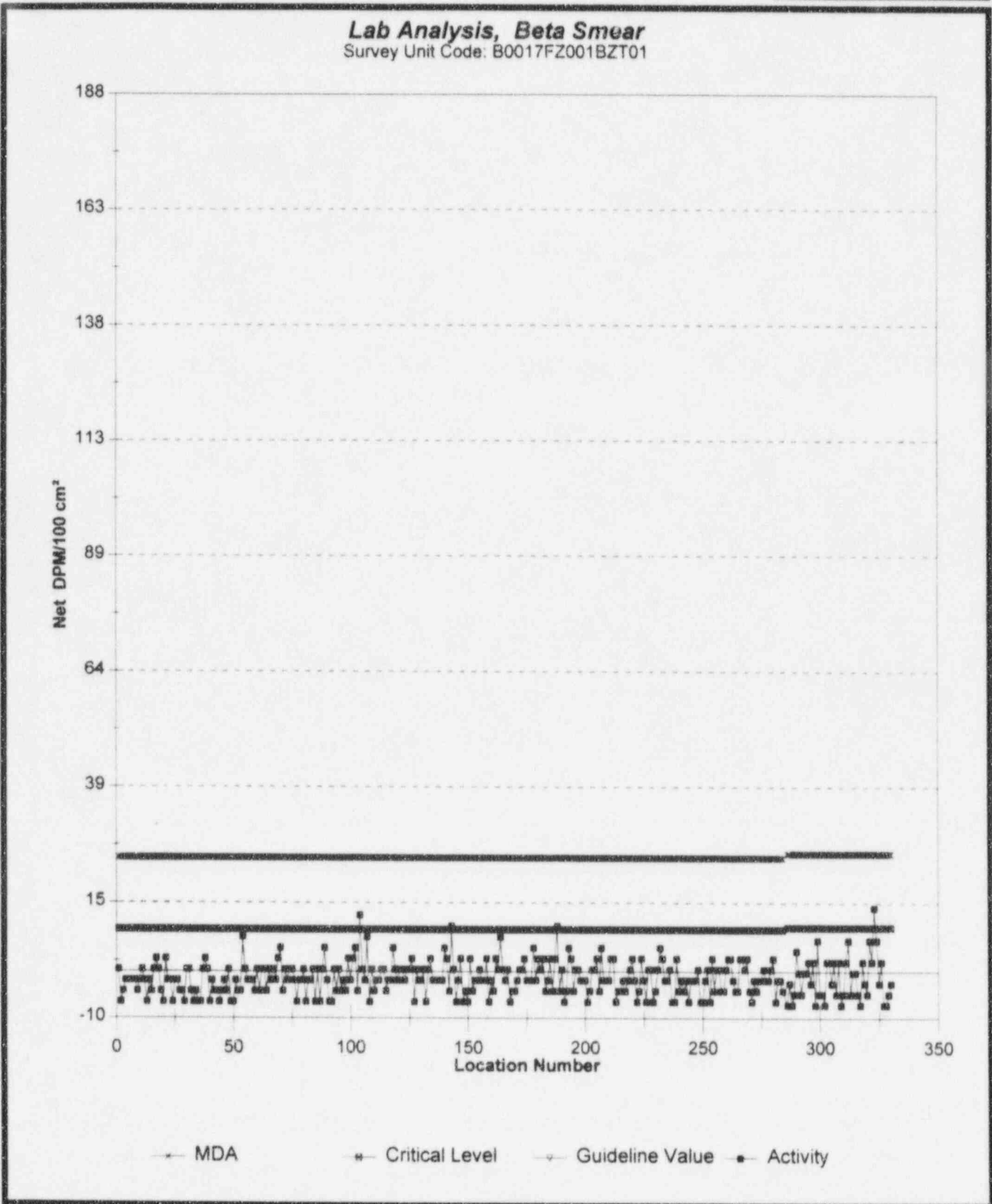
**Medium:** Concrete - Bare

RC #	Location #	Activity
26.08166	306	2.1
26.08167	307	-4.9
26.08168	308	2.1
26.08169	309	-7.2
26.08170	310	-4.9
26.08171	311	2.1
26.08172	312	6.7
26.08173	313	-4.9
26.08174	314	-0.2
26.08175	315	-0.2
26.08176	316	-4.9
26.08177	317	-7.2
26.08178	318	2.1
26.08179	319	-2.5
26.08180	320	-4.9
26.08181	321	6.7
26.08182	322	2.1
26.08183	323	<u>13.7</u>
26.08184	324	6.7
26.08185	325	-2.5
26.08186	326	2.1
26.08187	327	-7.2
26.08188	328	-7.2
26.08189	329	-4.9
26.08190	330	-2.5



**Lab Analysis, Beta Smear**

Survey Unit Code: B0017FZ001BZT01





**Release Record - Survey Unit**

**Location Code:** B0017SZ001BZT01  
(B017B02S01)

**Group ID:** B

**Survey Area Number:** 0017

**Surface Category:** SZ001

**Survey Unit Classification:** BZ - Suspect Affected

**Survey Reason:** T01

**Survey Unit Description:** Electrical Warehouse - Building #14  
Exterior/Interior surfaces of machinery/cabinets -  
generic

**Survey Unit Decommissioning and Remediation Activities:** None



**Release Record - Survey Unit**

**Location Code:** B0017SZ001BZT01  
(B017B02S01)

**Survey Design:**

Beta Scan: Scanned 100% of accessible surfaces and identified areas of elevated activity.

Total Surface Activity: 50 measurements. Collected total activity (direct) measurements at grid intersections and at any area(s) of elevated activity identified during the scan.

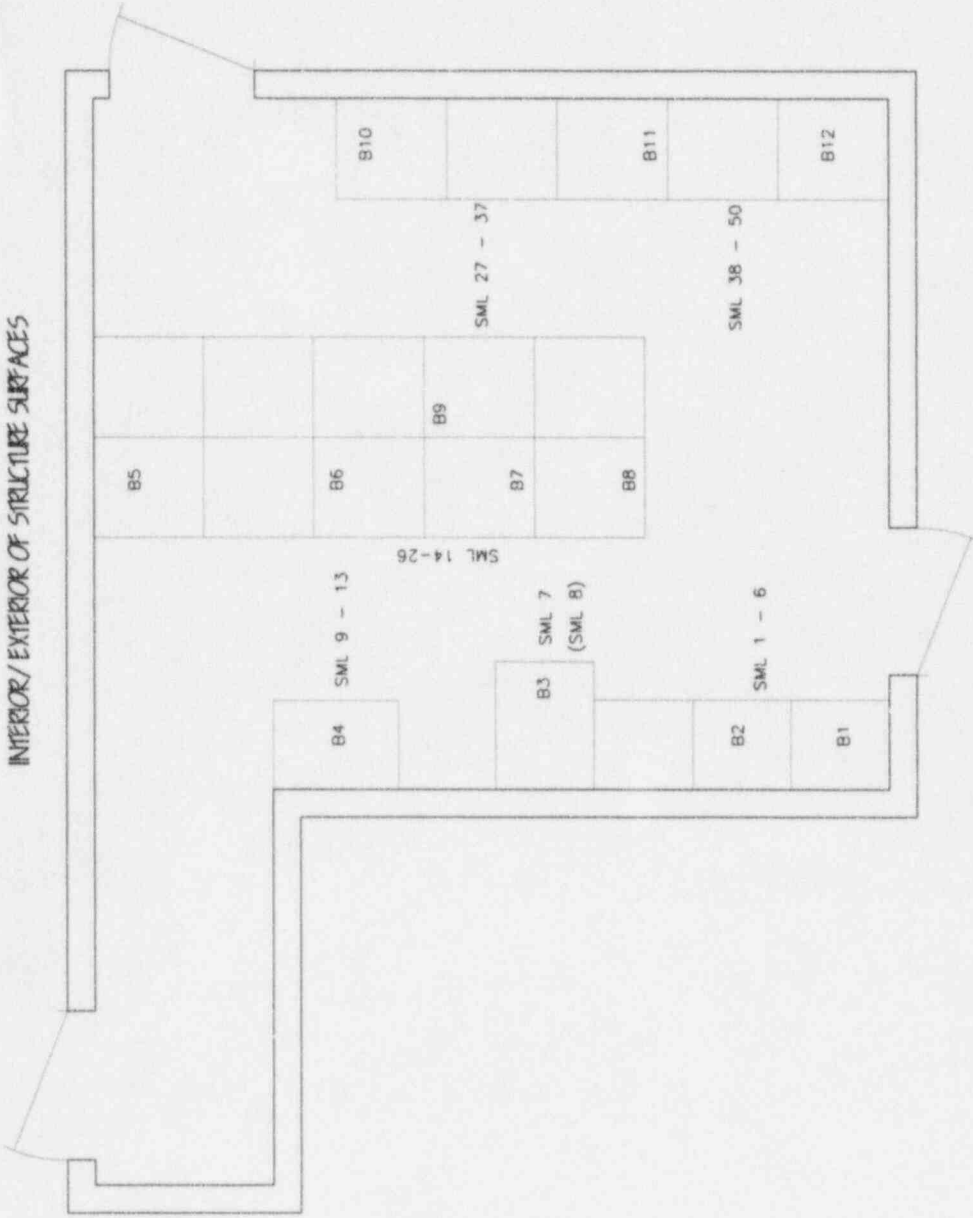
Exposure Rate: N/A

$\beta\gamma$  Smears: 50 measurements. At same survey measurement locations as total surface activity measurements.

**Survey Unit Investigations:** None

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VEAN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL SHOP - BLDG 14  
INTERIOR / EXTERIOR OF STRUCTURE SURFACES



NOTE: ( ) INDICATES MEASUREMENT TAKEN INSIDE STRUCTURE

Survey Package ID:	BO17	Master Drawing #:	SITE SUB	BLDG:	ELECTRICAL SHOP - BLDG 14	Elev:	4791'
Location Code:	BO17BO2501	Description:	INTERIOR / EXTERIOR STRUCTURE SURFACES (SML #1-50)	Approx. M <sup>2</sup> :	25	Grid Size:	N/A
<input type="checkbox"/> Photo Scan	<input type="checkbox"/> Gamma Scan	<input type="checkbox"/> Total Activity	<input type="checkbox"/> Gamma Exp. Rate	<input type="checkbox"/> Photo/ Gamma Scans	<input type="checkbox"/> H-5 Scans	<input type="checkbox"/> Liquid Sample	<input type="checkbox"/> Subsoil Sample
<input type="checkbox"/> Photo Scan	<input type="checkbox"/> Gamma Scan	<input type="checkbox"/> Total Activity	<input type="checkbox"/> Gamma Exp. Rate	<input type="checkbox"/> Photo/ Gamma Scans	<input type="checkbox"/> H-5 Scans	<input type="checkbox"/> Liquid Sample	<input type="checkbox"/> Subsoil Sample
Signatures on file				Approx. M <sup>2</sup> _____ Grid Size _____			
LEGEND		FLOOR MEASUREMENT LOCATION		WALL SCAN LOCATION		P# - INGRESS	
		* - BLANDED BEARING				FILE: GRP_PACKAGES\BO17\CO1	

**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B  
**Survey Unit Code:** B0017SZ001BZT01  
**Mediums:** Generic Medium Collection #1

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** SZ001 - Surfaces And Structures  
**Survey Unit Classification:** BZ - Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	159.2
Mean	106.6
Maximum	495.4
Minimum	-315.3
Standard Deviation	221.1
Minimum Detectable Activity	663.4
Critical Level	312.4
Samples Reported	50
Samples Prescribed	50

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 2,000.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 3,000.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 4,000.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 4,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017SZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 312.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Generic Medium Collection #1

<b>Download # -Station #</b>	<b>Location #</b>	<b>Activity</b>
661-1	1	<u>324.7</u>
661-1	2	<u>452.7</u>
661-1	3	296.3
661-1	4	-201.5
661-1	5	-30.8
661-1	6	-130.4
661-1	7	111.4
661-1	8	<u>353.2</u>
661-1	9	<u>353.2</u>
661-1	10	125.6
661-1	11	-173.0
661-1	12	225.2
661-1	13	-173.0
661-1	14	267.9
661-1	15	125.6
661-1	16	68.7
661-1	17	-301.0
661-1	18	-116.1
661-1	19	267.9
661-1	20	<u>381.6</u>
661-1	21	296.3
661-1	22	<u>381.6</u>
661-1	23	-158.8
661-1	24	54.5
661-1	25	-315.3

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B  
 Survey Unit Code: B0017SZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 312.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>  
 Medium: Generic Medium Collection #1

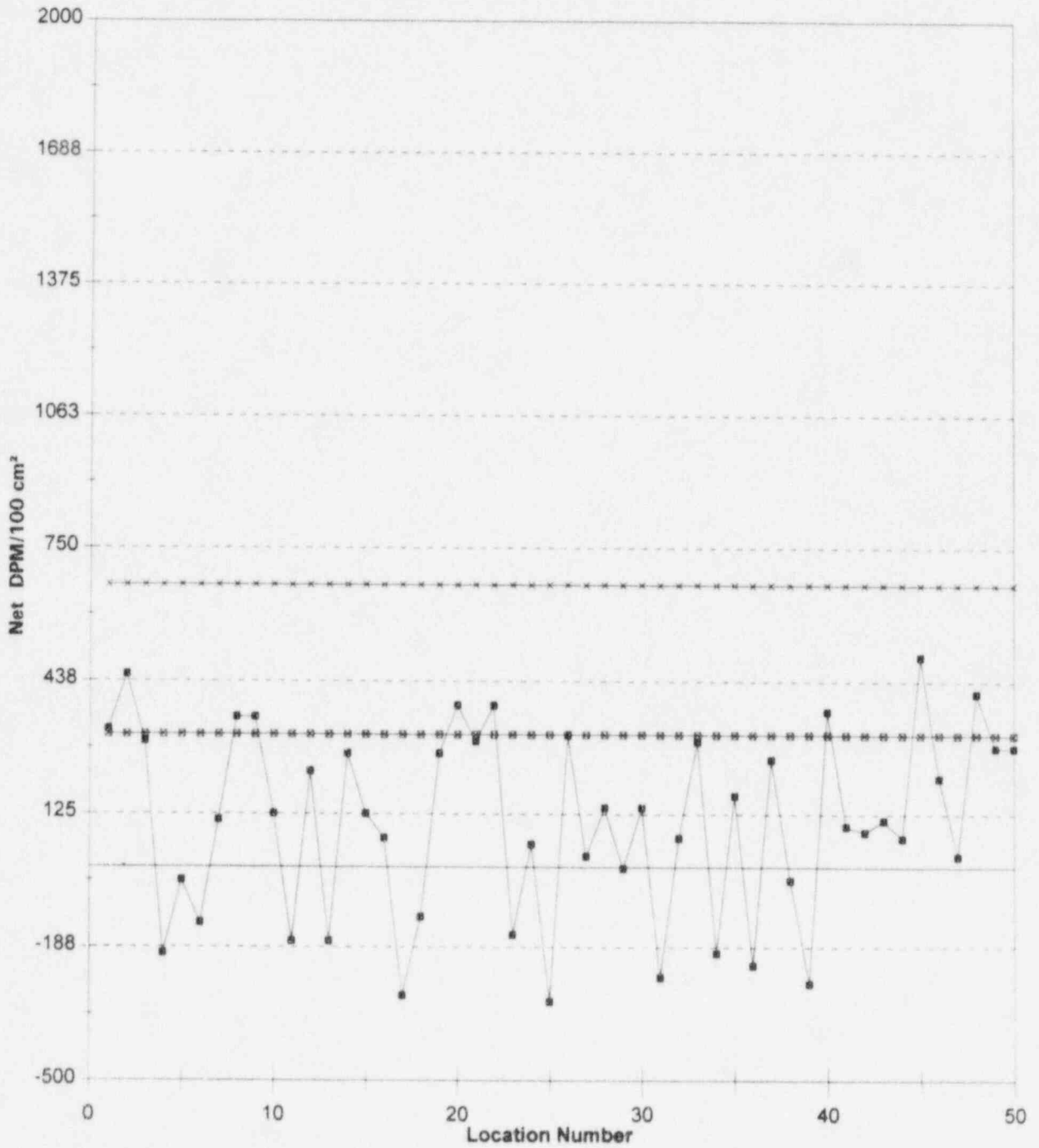
Download # -Station #	Location #	Activity
661-1	26	310.5
661-1	27	26.1
661-1	28	139.9
661-1	29	-2.4
661-1	30	139.9
661-1	31	-258.4
661-1	32	68.7
661-1	33	296.3
661-1	34	-201.5
661-1	35	168.3
661-1	36	-229.9
661-1	37	253.6
661-1	38	-30.8
661-1	39	-272.6
661-1	40	<u>367.4</u>
661-1	41	97.2
661-1	42	83.0
661-1	43	111.4
661-1	44	68.7
661-1	45	<u>495.4</u>
661-1	46	211.0
661-1	47	26.1
661-1	48	<u>410.1</u>
661-1	49	282.1
661-1	50	282.1





**Total Surface Activity - Beta Survey**

Survey Unit Code: B0017SZ001BZT01



--- MDA      -x- Critical Level      -v- Guideline Value      -●- Activity

Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey

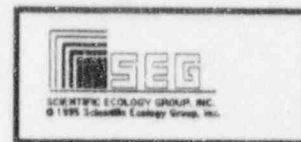


Detector Model: LMI 43-68B  
Survey Unit Code: B0017SZ001BZT01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

<u>Download # -Station #</u>	<u>Medium</u>	<u>Count Time</u>	<u>Critical Level</u>	<u>MDA</u>
661-1	Generic Medium Collection	15.0	312.4	663.4

Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017SZ001BZT01

Comments: Field Background (Bkg) reported in CPM/detector area.  
Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
Field Bkg Count time averaged over all reported samples for each medium surveyed.  
Count time is reported in seconds.

Download # -Station #	Medium	Count Time	Field Bkg	Medium Bkg
661-1	Generic Medium Collection	15.0	356.7	0.00

**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** B0017SZ001BZT01  
**Mediums:** Air

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** SZ001 - Surfaces And Structures  
**Survey Unit Classification:** BZ - Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	1.5
Mean	0.6
Maximum	13.0
Minimum	-5.6
Standard Deviation	4.0
Minimum Detectable Activity	22.9
Critical Level	8.3
Samples Reported	50
Samples Prescribed	50

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 187.5 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 562.5 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 750.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 750.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0017SZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 8.3 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

Medium: Air

Location #	Activity
1	-0.9
2	-3.2
3	1.4
4	-5.6
5	8.3
6	1.4
7	-5.6
8	1.4
9	1.4
10	1.4
11	-3.2
12	-0.9
13	-0.9
14	-0.9
15	3.7
16	1.4
17	-3.2
18	1.4
19	-5.6
20	1.4
21	3.2
22	-3.2
23	-5.6
24	-3.2
25	<u>13.0</u>

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0017SZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 8.3 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

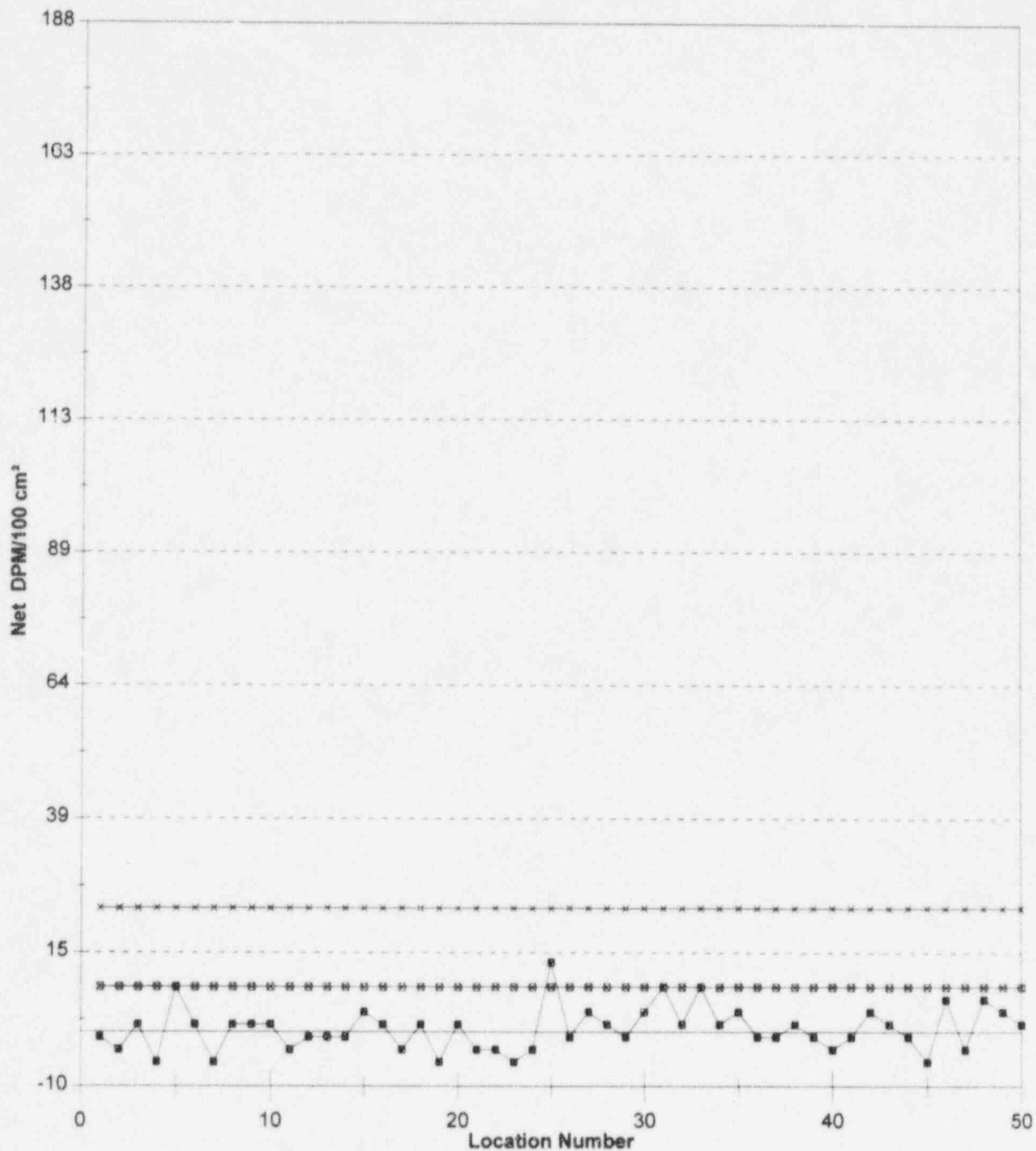
Medium: Air

Location #	Activity
26	-0.9
27	3.7
28	1.4
29	-0.9
30	3.7
31	8.3
32	1.4
33	8.3
34	1.4
35	3.7
36	-0.9
37	-0.9
38	1.4
39	-0.9
40	-3.2
41	-0.9
42	3.7
43	1.4
44	-0.9
45	-5.6
46	6.0
47	-3.2
48	6.0
49	3.7
50	1.4



**Lab Analysis, Beta Smear**

Survey Unit Code: B0017SZ001BZT01



—x— MDA      —\*— Critical Level      —v— Guideline Value      —●— Activity



**Release Record - Survey Unit**

**Location Code:** B0017SZ002CZT01  
(B017C02S02)

**Group ID:** B

**Survey Area Number:** 0017

**Surface Category:** SZ002

**Survey Unit Classification:** CZ - Non-Suspect Affected

**Survey Reason:** T01

**Survey Unit Description:** Electrical Warehouse - Building #14  
North Shop Area  
South Central Corridor  
Southeast Room  
Cabinets/Equipment - generic

**Survey Unit Decommissioning and Remediation Activities:** None



### Release Record - Survey Unit

**Location Code:** B0017SZ002BZT01  
(B017C02S02)

**Survey Design:**

**Beta Scan:** Selected survey measurement locations from those surfaces of highest contamination potential. Scanned a minimum of 1 m<sup>2</sup> at each total surface activity survey measurement location and identified areas of elevated activity.

**Total Surface Activity:** 50 measurements. Collected total activity (direct) measurements within each previously scanned 1 m<sup>2</sup> and at any area(s) of elevated activity identified during the scan.

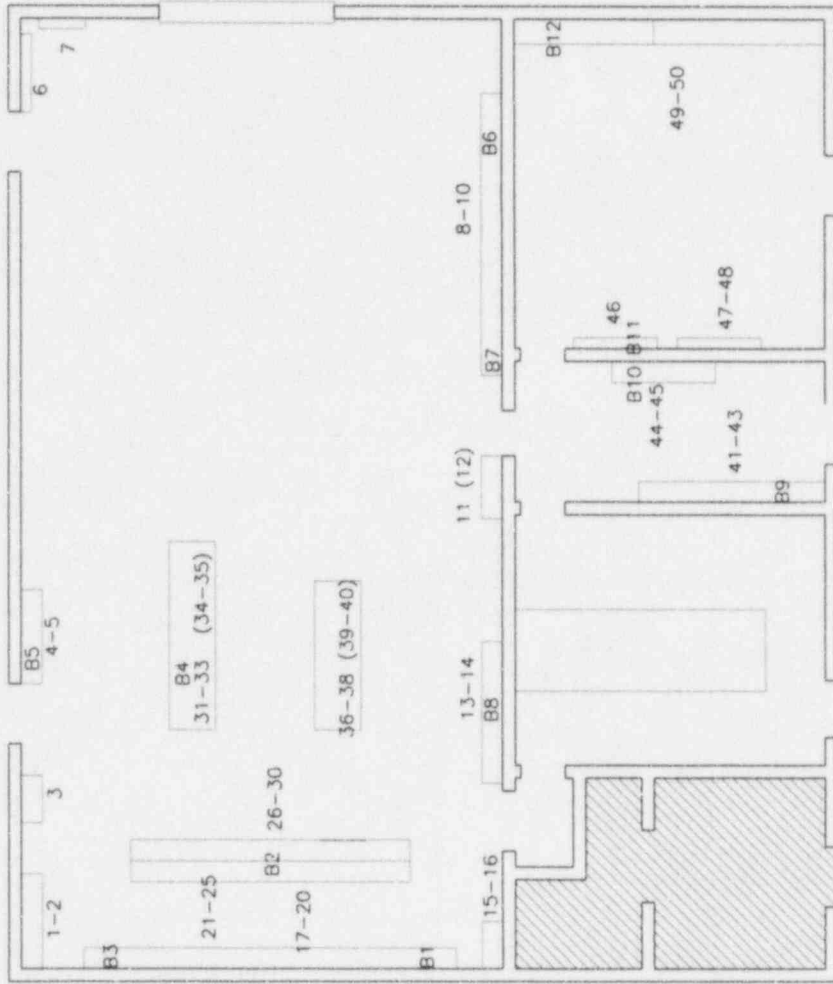
**Exposure Rate:** N/A

**$\beta\gamma$  Smears:** 50 measurements. At same survey measurement locations as total surface activity measurements.

**Survey Unit Investigations:** None

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL WAREHOUSE - BLDG 14  
COUNTERS AND CABINETS



NOTE: LAB SCANNED APPROXIMATELY 1 SQ. METER AROUND EACH SAMPLE LOCATION POINT

Survey Package ID: BO17 Master Drawing #: SITE SUB Bldg: ELECTRICAL WAREHOUSE - BLDG 14 Elev: 4791'  
 Location Code: BO17C02502 Description: MACHINERY / CABINETS (SML #1-50) Approx. M<sup>2</sup> N/A Grid Size N/A

Beta Scan    Gamma Scan    Gamma Exp. Rate    Total Activity    Photo/ Gamma Scanners    H-3 Scanners    Liquid Sample    Subsoil Sample    Surface Sd    Subsurface Sd    Other  
 Location Code:    Gamma Scan    Gamma Exp. Rate    Total Activity    Photo/ Gamma Scanners    H-3 Scanners    Liquid Sample    Subsoil Sample    Surface Sd    Subsurface Sd    Other  
 Signatures on file

LEGEND    WALL MEASUREMENT LOCATION    FLOOR MEASUREMENT LOCATION    FLOOR SCAN LOCATION    WALL SCAN LOCATION    IN-GROUND    \* - ELEVATED BEARING   FILE: GRP\_E\PACKAGE\BO17B.GPJ

**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B  
**Survey Unit Code:** B0017SZ002CZT01  
**Mediums:** Generic Medium Collection #1

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** SZ002 - Surfaces And Structures  
**Survey Unit Classification:** CZ - Non-Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	-51.5
Mean	-98.7
Maximum	215.6
Minimum	-577.1
Standard Deviation	198.3
Minimum Detectable Activity	773.1
Critical Level	365.6
Samples Reported	50
Samples Prescribed	50

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 2,000.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 2,000.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 3,000.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 4,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017SZ002CZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 323.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 2,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Generic Medium Collection #1

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
659-1	1	202.0
659-1	2	120.3
659-1	3	93.0
659-1	4	38.6
659-1	5	-15.9
659-1	6	-369.9
659-1	7	52.2
659-1	8	-43.1
659-1	9	120.3
659-1	10	-70.4
659-1	11	-424.4
659-1	12	65.8
659-1	13	120.3
659-1	14	-84.0
659-1	15	215.6
659-1	16	174.8
659-1	17	-2.3
659-1	18	93.0
659-1	19	-2.3
659-1	20	-124.8
659-1	21	147.5
659-1	22	147.5
659-1	23	-70.4
659-1	24	65.8
659-1	25	-15.9

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017SZ002CZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 365.6 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 2,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>

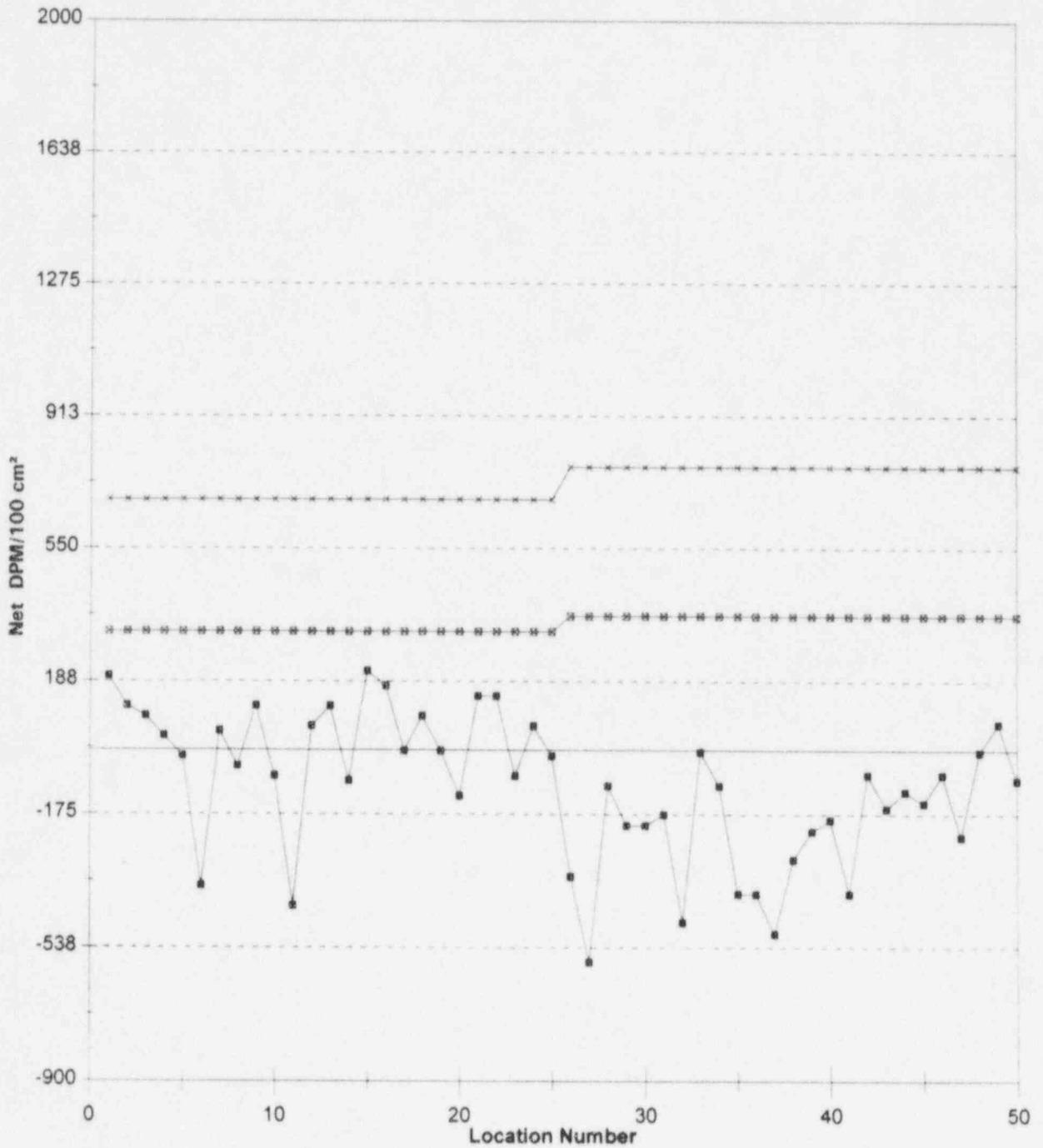
**Medium:** Generic Medium Collection #1

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
660-1	26	-345.2
660-1	27	-577.1
660-1	28	-97.9
660-1	29	-206.1
660-1	30	-206.1
660-1	31	-175.2
660-1	32	-468.9
660-1	33	-5.2
660-1	34	-97.9
660-1	35	-391.6
660-1	36	-391.6
660-1	37	-499.8
660-1	38	-298.9
660-1	39	-221.6
660-1	40	-190.7
660-1	41	-391.6
660-1	42	-67.0
660-1	43	-159.7
660-1	44	-113.4
660-1	45	-144.3
660-1	46	-67.0
660-1	47	-237.0
660-1	48	-5.2
660-1	49	72.1
660-1	50	-82.4



**Total Surface Activity - Beta Survey**

Survey Unit Code: B0017SZ002CZT01



--- MDA      ··· Critical Level      — Guideline Value      ■ Activity

Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B  
Survey Unit Code: B0017SZ002CZT01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

Download # -Station #	Medium	Count Time	Critical Level	MDA
659-1	Generic Medium Collection	15.0	323.3	683.5
660-1	Generic Medium Collection	15.0	365.6	773.1

Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017SZ002CZT01

Comments: Field Background (Bkg) reported in CPM/detector area.  
Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
Field Bkg Count time averaged over all reported samples for each medium surveyed.  
Count time is reported in seconds.

Download # -Station #	Medium	Count Time	Field Bkg	Medium Bkg
659-1	Generic Medium Collection	15.0	416.7	0.00
660-1	Generic Medium Collection	15.0	413.3	0.00



**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** B0017SZ002CZT01  
**Mediums:** Generic Medium Collection #1

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** SZ002 - Surfaces And Structures  
**Survey Unit Classification:** CZ - Non-Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	-1.4
Mean	-2.3
Maximum	7.4
Minimum	-6.5
Standard Deviation	3.7
Minimum Detectable Activity	24.3
Critical Level	9.0
Samples Reported	50
Samples Prescribed	50

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 187.5 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 375.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 562.5 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 750.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0017SZ002CZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 375.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 562.5 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

Location #	Activity
1	-6.5
2	7.4
3	0.5
4	-6.5
5	0.5
6	-4.2
7	-4.2
8	-4.2
9	-4.2
10	-4.2
11	-4.2
12	-1.9
13	-6.5
14	-1.9
15	-4.2
16	0.5
17	-1.9
18	-4.2
19	-6.5
20	-4.2
21	-1.9
22	-6.5
23	-1.9
24	2.8
25	-4.2

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0017SZ002CZT01

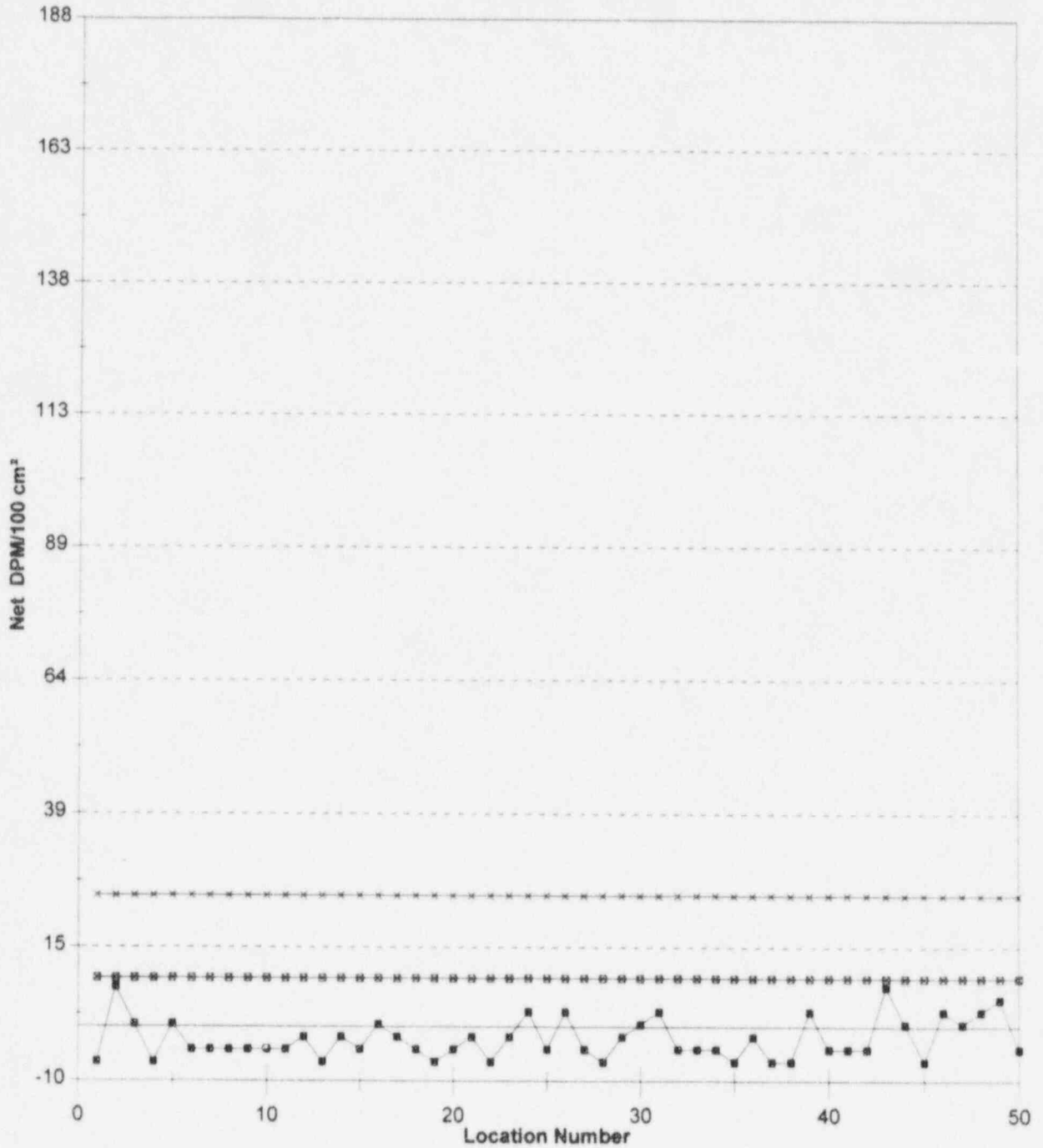
Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 375.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 562.5 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

Location #	Activity
26	2.8
27	-4.2
28	-6.5
29	-1.9
30	0.5
31	2.8
32	-4.2
33	-4.2
34	-4.2
35	-6.5
36	-1.9
37	-6.5
38	-6.5
39	2.8
40	-4.2
41	-4.2
42	-4.2
43	7.4
44	0.5
45	-6.5
46	2.8
47	0.5
48	2.8
49	5.1
50	-4.2



**Lab Analysis, Beta Smear**  
Survey Unit Code: B0017SZ002CZT01



—•— MDA      —■— Critical Level      —▽— Guideline Value      —●— Activity



**Release Record - Survey Unit**

**Location Code:** B0017WZ001BZT01  
(B017B02W01)

**Group ID:** B

**Survey Area Number:** 0017

**Surface Category:** WZ001

**Survey Unit Classification:** BZ - Suspect Affected

**Survey Reason:** T01

**Survey Unit Description:** Electrical Warehouse - Building #14  
North Shop Area  
South Central Corridor  
Southeast Room  
Lower Walls - generic

**Survey Unit Decommissioning and Remediation Activities:** None



### Release Record - Survey Unit

**Location Code:** B0017WZ001BZT01  
(B017B02W01)

**Survey Design:**

**Beta Scan:** Scanned 100% of accessible surfaces and identified areas of elevated activity.

**Total Surface Activity:** 294 measurements. Collected total activity (direct) measurements at grid intersections and at any area(s) of elevated activity identified during the scan.

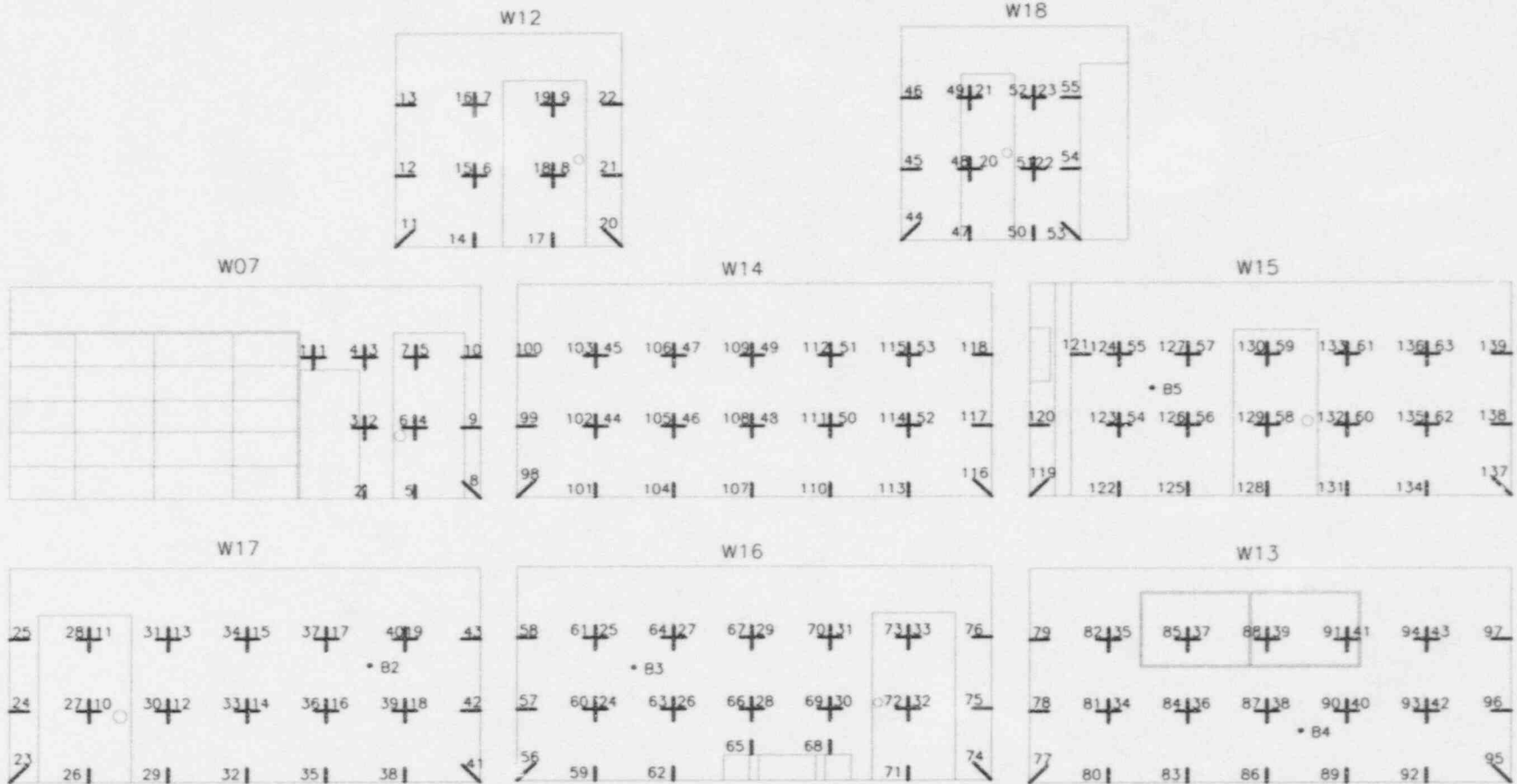
**Exposure Rate:** 152 measurements. At 1 meter from total surface activity survey measurement locations marked for exposure rate measurements.

**$\beta\gamma$  Smears:** 294 measurements. At same survey measurement locations as total surface activity measurements.

**Survey Unit Investigations:** None

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL WAREHOUSE - BLDG 14  
WALL GRID  
W07, W12, W13, W14, W15, W16, W17, W18



Survey Package ID: BO17 Master Drawing #: SHE SUB Bldg: ELECTRICAL WAREHOUSE - BLDG 14 Elev: 4791'  
 Location Code: BO17BO2W01 Description: LOWER WALLS - GENERIC MATERIALS (SML #1-139) Approx. M<sup>2</sup> N/A Grid Size 1X1M  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Portal/Gamma Sensors  H-5 Sensors  Liquid Sample  Sediment Sample  Surface Soil  Subsurface Soil  Other  
 Location Code: BO17BO2W01 Description: LOWER WALLS - GENERIC MATERIALS (SML #1-63) Approx. M<sup>2</sup> N/A Grid Size 1X1M  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Portal/Gamma Sensors  H-5 Sensors  Liquid Sample  Sediment Sample  Surface Soil  Subsurface Soil  Other  
 Signatures on file

LEGEND WALL MEASUREMENT LOCATION FLOOR MEASUREMENT LOCATION FLOOR SCAN LOCATION WALL SCAN LOCATION B# - BACKGROUND \* - ELEVATED READING FILE: GRP\_BV\PACKAGE\BO17C.GXD

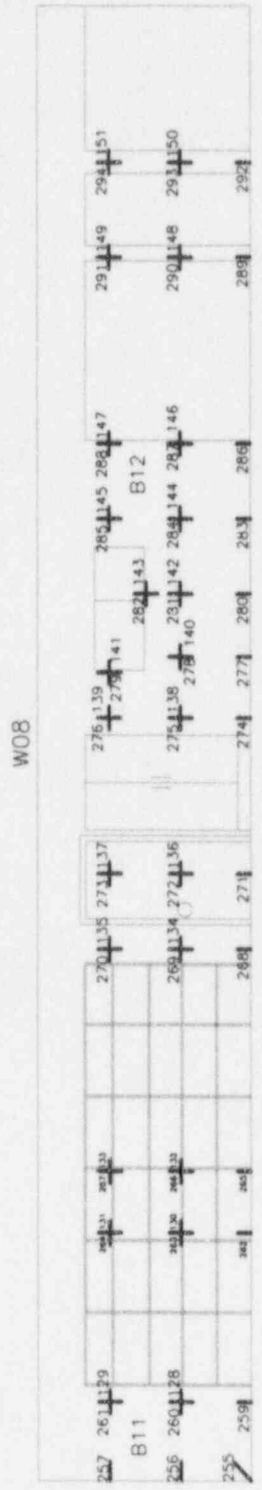
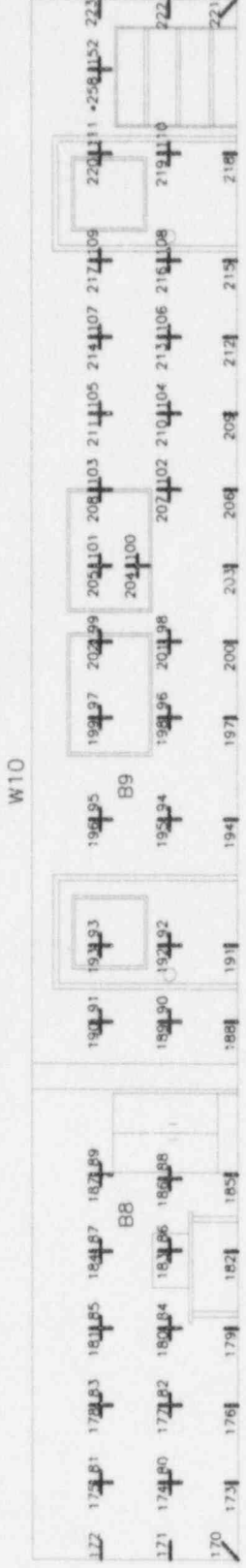
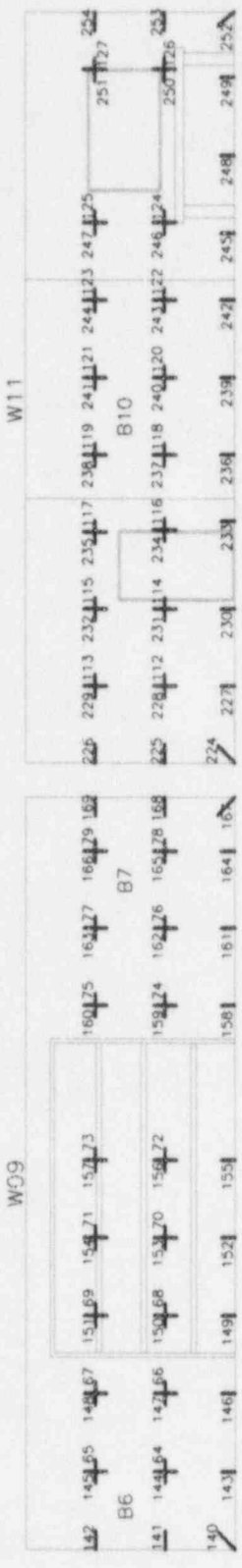


SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ELECTRICAL WAREHOUSE - BLDG 14

WALL GRID

W09, W10, W11



NOTE: SML #285 IS OUT OF SEQUENCE

Survey Package ID: BO17 Master Drawing #: SITE SUB Bldg: ELECTRICAL WAREHOUSE - BLDG 14 Elev: 4791'

Location Code: BOITBOZWOI Description: LOWER WALLS - GENERIC MATERIALS (SML #140-294) Approx. M<sup>2</sup> N/A Grid Size 1 X 1 M

Photo Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scans  H-3 Scans  Liquid Sample  Surface Sed  Subsurface Sed  Other

Location Code: BOITBOZWOI Description: LOWER WALLS - GENERIC MATERIALS (SML #64-152) Approx. M<sup>2</sup> N/A Grid Size 1 X 1 M

Photo Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scans  H-3 Scans  Liquid Sample  Surface Sed  Subsurface Sed  Other

Signatures on file

LEGEND: FLOOR MEASUREMENT LOCATION WALL SCAN LOCATION IN-GROUND ELEVATED BEARING FILE: DRP\_F\PROJECT\BOITC.GXD



**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



Detector Model: LMI 43-68B  
Survey Unit Code: B0017WZ001BZT01  
Mediums: Generic Medium Collection #1

Group ID: B  
Survey Area Number: 0017  
Surface Category: WZ001 - Wall Surfaces  
Survey Unit Classification: BZ - Suspect, Affected Structure  
Survey Reason: T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	116.6
Mean	96.3
Maximum	823.5
Minimum	-375.0
Standard Deviation	211.7
Minimum Detectable Activity	697.3
Critical Level	327.4
Samples Reported	294
Samples Prescribed	294

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 2,000.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 3,000.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 4,000.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 4,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017WZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 309.8 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Generic Medium Collection #1

<u>Download # - Station #</u>	<u>Location #</u>	<u>Activity</u>
657-1	1	-151.4
657-1	2	-95.5
657-1	3	-375.0
657-1	4	-249.2
657-1	5	-25.6
657-1	6	44.3
657-1	7	-11.6
657-1	8	309.8
657-1	9	72.2
657-1	10	-207.3
657-1	11	-25.6
657-1	12	-375.0
657-1	13	2.3
657-1	14	128.1
657-1	15	16.3
657-1	16	-67.5
657-1	17	-25.6
657-1	18	-361.0
657-1	19	-11.6
657-1	20	86.2
657-1	21	-123.4
657-1	22	72.2
657-1	23	58.2
657-1	24	281.8
657-1	25	58.2
657-1	26	-207.3
657-1	27	16.3
657-1	28	-25.6
657-1	29	-207.3
657-1	30	-25.6
657-1	31	156.0
657-1	32	198.0
657-1	33	72.2
657-1	34	-81.5
657-1	35	-151.4
657-1	36	-221.3
657-1	37	-11.6
657-1	38	-221.3
657-1	39	239.9
657-1	40	-235.2

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017WZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 309.8 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Generic Medium Collection #1

<u>Download # - Station #</u>	<u>Location #</u>	<u>Activity</u>
657-1	41	-109.5
657-1	42	<u>421.5</u>
657-1	43	86.2
657-1	44	-39.6
657-1	45	58.2
657-1	46	-319.1
657-1	47	170.0
657-1	48	281.8
657-1	49	58.2
657-1	50	156.0
657-1	51	100.1
657-1	52	184.0
657-1	53	2.3
657-1	54	281.8
657-1	55	128.1
657-1	56	-53.6
657-1	57	44.3
657-1	58	-179.3
657-1	59	100.1
657-1	60	100.1
657-1	61	-137.4
657-1	62	-39.6
657-1	63	44.3
657-1	64	-221.3
657-1	65	-249.2
657-1	66	-249.2
657-1	67	-249.2
657-1	68	142.1
657-1	69	-263.2
657-1	70	198.0
657-1	71	-123.4
657-1	72	-333.0
657-1	73	-165.4
657-1	74	-67.5
657-1	75	-291.1
657-1	76	-277.1
657-1	77	72.2
657-1	78	-263.2
657-1	79	-179.3
657-1	80	309.8

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017WZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 309.8 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

Download # - Station #	Location #	Activity
657-1	81	-151.4
657-1	82	-179.3
657-1	83	-249.2
657-1	84	-151.4
657-1	85	-221.3
657-1	86	-11.6
657-1	87	-67.5
657-1	88	44.3
657-1	89	170.0
657-1	90	-207.3
657-1	91	-291.1
657-1	92	<u>407.6</u>
657-1	93	211.9
657-1	94	-207.3
657-1	95	253.9
657-1	96	-179.3
657-1	97	211.9
657-1	98	-109.5
657-1	99	-151.4
657-1	100	30.3
657-1	101	-39.6
657-1	102	44.3
657-1	103	44.3
657-1	104	239.9
657-1	105	-221.3
657-1	106	2.3
657-1	107	295.8
657-1	108	-53.6
657-1	109	184.0
657-1	110	<u>505.4</u>
657-1	111	253.9
657-1	112	114.1
657-1	113	239.9
657-1	114	239.9
657-1	115	86.2
657-1	116	156.0
657-1	117	-67.5
657-1	118	100.1
657-1	119	58.2
657-1	120	267.8

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017WZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 309.8 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

Download # - Station #	Location #	Activity
657-1	121	30.3
657-1	122	253.9
657-1	123	225.9
657-1	124	-95.5
657-1	125	170.0
657-1	126	-67.5
657-1	127	142.1
657-1	128	253.9
657-1	129	-53.6
657-1	130	267.8
657-1	131	58.2
657-1	132	309.8
657-1	133	281.8
657-1	134	<u>533.3</u>
657-1	135	170.0
657-1	136	156.0
657-1	137	<u>533.3</u>
657-1	138	142.1
657-1	139	-39.6
657-1	140	44.3
657-1	141	-137.4
657-1	142	184.0
657-1	143	156.0
657-1	144	86.2
657-1	145	-193.3
657-1	146	<u>379.6</u>
657-1	147	30.3
656-1	148	86.3
656-1	149	-70.6
656-1	150	117.6
656-1	151	149.0
656-1	152	<u>494.1</u>
656-1	153	86.3
656-1	154	39.2
656-1	155	<u>494.1</u>
656-1	156	<u>337.3</u>
656-1	157	70.6
656-1	158	<u>352.9</u>
656-1	159	180.4
656-1	160	164.7

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017WZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 327.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

Download # - Station #	Location #	Activity
656-1	161	<u>462.7</u>
656-1	162	211.8
656-1	163	-149.0
656-1	164	164.7
656-1	165	149.0
656-1	166	117.6
656-1	167	23.5
656-1	168	<u>368.6</u>
656-1	169	117.6
656-1	170	102.0
656-1	171	196.1
656-1	172	<u>431.4</u>
656-1	173	243.1
656-1	174	-23.5
656-1	175	23.5
656-1	176	133.3
656-1	177	-133.3
656-1	178	196.1
656-1	179	<u>337.3</u>
656-1	180	39.2
656-1	181	<u>400.0</u>
656-1	182	164.7
656-1	183	-70.6
656-1	184	290.2
656-1	185	70.6
656-1	186	54.9
656-1	187	180.4
656-1	188	23.5
656-1	189	-102.0
656-1	190	<u>368.6</u>
656-1	191	274.5
656-1	192	<u>352.9</u>
656-1	193	305.9
656-1	194	133.3
656-1	195	<u>384.3</u>
656-1	196	227.5
656-1	197	7.8
656-1	198	180.4
656-1	199	23.5
656-1	200	86.3

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017WZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 327.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

Download # - Station #	Location #	Activity
656-1	201	164.7
656-1	202	<u>368.6</u>
656-1	203	102.0
656-1	204	<u>337.3</u>
656-1	205	258.8
656-1	206	<u>352.9</u>
656-1	207	133.3
656-1	208	133.3
656-1	209	274.5
656-1	210	180.4
656-1	211	117.6
656-1	212	258.8
656-1	213	70.6
656-1	214	227.5
656-1	215	149.0
656-1	216	-70.6
656-1	217	258.8
656-1	218	<u>494.1</u>
656-1	219	258.8
656-1	220	<u>525.5</u>
656-1	221	<u>462.7</u>
656-1	222	7.8
656-1	223	<u>447.1</u>
656-1	224	117.6
656-1	225	149.0
656-1	226	274.5
656-1	227	164.7
656-1	228	<u>556.9</u>
656-1	229	305.9
656-1	230	258.8
656-1	231	133.3
656-1	232	274.5
656-1	233	196.1
656-1	234	<u>447.1</u>
656-1	235	<u>400.0</u>
656-1	236	<u>525.5</u>
656-1	237	<u>337.3</u>
656-1	238	7.8
656-1	239	<u>337.3</u>
656-1	240	290.2

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017WZ001BZT01

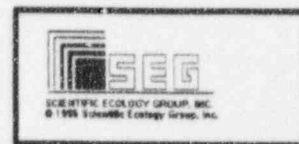
Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 327.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

Download # - Station #	Location #	Activity
656-1	241	39.2
656-1	242	<u>556.9</u>
656-1	243	<u>447.1</u>
656-1	244	-102.0
656-1	245	<u>494.1</u>
656-1	246	149.0
656-1	247	70.6
656-1	248	180.4
656-1	249	243.1
656-1	250	70.6
656-1	251	305.9
656-1	252	<u>462.7</u>
656-1	253	290.2
656-1	254	-133.3
656-1	255	196.1
656-1	256	<u>352.9</u>
656-1	257	70.6
656-1	258	70.6
656-1	259	<u>588.2</u>
656-1	260	196.1
656-1	261	180.4
656-1	262	102.0
656-1	263	7.8
656-1	264	-86.3
656-1	265	227.5
656-1	266	-102.0
656-1	267	39.2



Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0017WZ001BZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 327.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

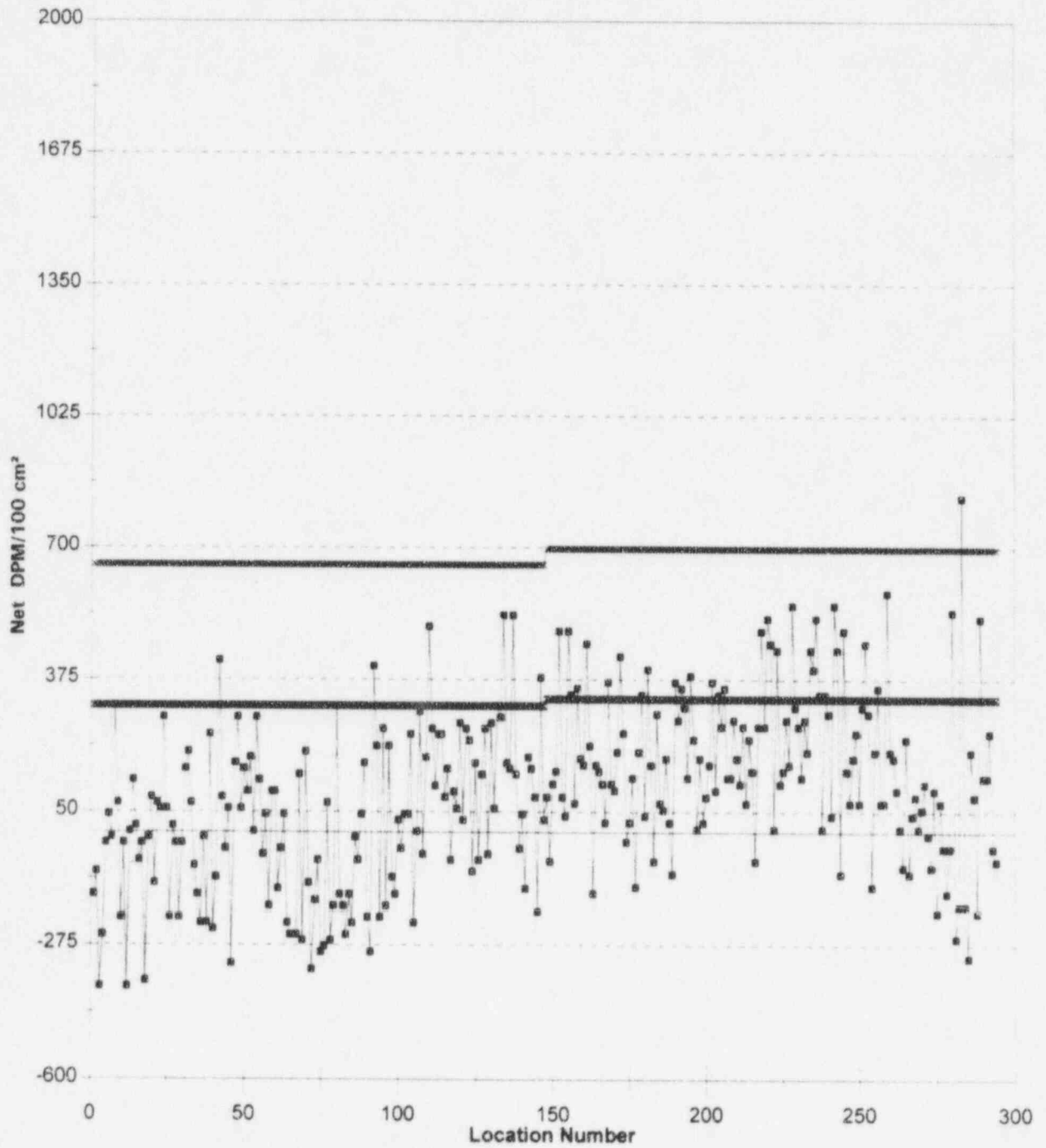
Medium: Generic Medium Collection #1

Download # - Station #	Location #	Activity
656-1	268	86.3
656-1	269	7.8
656-1	270	54.9
656-1	271	117.6
656-1	272	-7.8
656-1	273	-86.3
656-1	274	102.0
656-1	275	-196.1
656-1	276	70.6
656-1	277	-39.2
656-1	278	-149.0
656-1	279	-39.2
656-1	280	<u>541.2</u>
656-1	281	-258.8
656-1	282	-180.4
656-1	283	<u>823.5</u>
656-1	284	-180.4
656-1	285	-305.9
656-1	286	196.1
656-1	287	86.3
656-1	288	-196.1
656-1	289	<u>525.5</u>
656-1	290	133.3
656-1	291	133.3
656-1	292	243.1
656-1	293	-39.2
656-1	294	-70.6



**Total Surface Activity - Beta Survey**

Survey Unit Code: B0017WZ001BZT01



• MDA      + Critical Level      - - - Guideline Value      • Activity

Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B  
Survey Unit Code: B0017WZ001BZT01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

Download # -Station #	Medium	Count Time	Critical Level	MDA
657-1	Generic Medium Collection	15.0	309.8	657.5
656-1	Generic Medium Collection	15.0	327.4	697.3

**Release Record - Summary of Background Correction Values**  
**Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0017WZ001BZT01

**Comments:** Field Background (Bkg) reported in CPM/detector area.  
 Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
 Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
 Field Bkg Count time averaged over all reported samples for each medium surveyed.  
 Count time is reported in seconds.

<b>Download # -Station #</b>	<b>Medium</b>	<b>Count Time</b>	<b>Field Bkg</b>	<b>Medium Bkg</b>
656-1	Generic Medium Collection	15.0	322.0	0.00
657-1	Generic Medium Collection	15.0	363.3	0.00

**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** B0017WZ001BZT01  
**Mediums:** Air

**Group ID:** B  
**Survey Area Number:** 0017  
**Surface Category:** WZ001 - Wall Surfaces  
**Survey Unit Classification:** BZ - Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	-1.4
Mean	-1.7
Maximum	14.3
Minimum	-6.5
Standard Deviation	3.7
Minimum Detectable Activity	24.3
Critical Level	9.0
Samples Reported	294
Samples Prescribed	294

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 187.5 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 562.5 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 750.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 750.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017WZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Air

RC #	Location #	Activity
26.06206	1	-1.9
26.06207	2	-4.2
26.06208	3	-1.9
26.06209	4	-4.2
26.06210	5	0.5
26.06211	6	-4.2
26.06212	7	0.5
26.06213	8	-4.2
26.06214	9	-1.9
26.06215	10	-6.5
26.06216	11	2.8
26.06217	12	-6.5
26.06218	13	-4.2
26.06219	14	-4.2
26.06220	15	0.5
26.06221	16	0.5
26.06222	17	-1.9
26.06223	18	-1.9
26.06224	19	-1.9
26.06225	20	0.5
26.06226	21	0.5
26.06227	22	2.8
26.06228	23	-1.9
26.06229	24	-6.5
26.06230	25	5.1
26.06231	26	2.8
26.06232	27	<u>14.3</u>
26.06233	28	0.5
26.06234	29	2.8
26.06235	30	-6.5
26.06236	31	2.8
26.06237	32	-4.2
26.06238	33	-1.9
26.06239	34	2.8
26.06240	35	-6.5
26.06241	36	-1.9
26.06242	37	-1.9
26.06243	38	-1.9
26.06244	39	-4.2
26.06245	40	-1.9

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017WZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Air

RC #	Location #	Activity
26.06246	41	0.5
26.06247	42	-6.5
26.06248	43	5.1
26.06249	44	0.5
26.06250	45	-4.2
26.06251	46	-4.2
26.06252	47	-4.2
26.06253	48	-4.2
26.06254	49	2.8
26.06255	50	-4.2
26.06256	51	4.2
26.06257	52	-4.2
26.06258	53	-4.2
26.06259	54	-4.2
26.06260	55	0.5
26.06261	56	0.5
26.06262	57	-4.2
26.06263	58	2.8
26.06264	59	-6.5
26.06265	60	7.4
26.06266	61	0.5
26.06267	62	-1.9
26.06268	63	2.8
26.06269	64	0.5
26.06270	65	-1.9
26.06271	66	0.5
26.06272	67	0.5
26.06273	68	-4.2
26.06274	69	0.5
26.06275	70	0.5
26.06276	71	0.5
26.06277	72	7.4
26.06278	73	-4.2
26.06279	74	-6.5
26.06280	75	0.5
26.06281	76	-6.5
26.06282	77	-1.9
26.06283	78	-1.9
26.06284	79	-4.2
26.06285	80	-4.2

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017WZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Air

<b>RC #</b>	<b>Location #</b>	<b>Activity</b>
26.06286	81	-6.5
26.06287	82	2.8
26.06288	83	-4.2
26.06289	84	-1.9
26.06290	85	-4.2
26.06291	86	0.5
26.06292	87	0.5
26.06293	88	0.5
26.06294	89	-4.2
26.06295	90	-1.9
26.06296	91	-1.9
26.06297	92	-4.2
26.06298	93	-4.2
26.06299	94	-4.2
26.06300	95	-6.5
26.06301	96	-1.9
26.06302	97	0.5
26.06303	98	0.5
26.06304	99	-4.2
26.06305	100	2.8
26.06306	101	2.8
26.06307	102	0.5
26.06308	103	2.8
26.06309	104	-4.2
26.06310	105	<u>9.7</u>
26.06311	106	-4.2
26.06312	107	5.1
26.06313	108	2.8
26.06314	109	-4.2
26.06315	110	-6.5
26.06316	111	-1.9
26.06317	112	7.4
26.06318	113	-4.2
26.06319	114	0.5
26.06320	115	0.5
26.06321	116	0.5
26.06322	117	-6.5
26.06323	118	-4.2
26.06324	119	-6.5
26.06325	120	2.8



**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017WZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Air

RC #	Location #	Activity
26.06326	121	2.8
26.06327	122	-4.2
26.06328	123	-6.5
26.06329	124	-6.5
26.06330	125	5.1
26.06331	126	-1.9
26.06332	127	<u>12.0</u>
26.06333	128	2.8
26.06334	129	-1.9
26.06335	130	0.5
26.06336	131	-4.2
26.06337	132	7.4
26.06338	133	2.8
26.06339	134	-4.2
26.06340	135	2.8
26.06341	136	2.8
26.06342	137	-4.2
26.06343	138	-6.5
26.06344	139	-1.9
26.06345	140	-4.2
26.06346	141	-4.2
26.06347	142	-1.9
26.06348	143	-4.2
26.06349	144	2.8
26.06350	145	-1.9
26.06351	146	-4.2
26.06352	147	-1.9
26.06353	148	-4.2
26.06354	149	-4.2
26.06355	150	-6.5
26.06356	151	-4.2
26.06357	152	-4.2
26.06358	153	-4.2
26.06359	154	-1.9
26.06360	155	-1.9
26.06361	156	0.5
26.06362	157	-4.2
26.06363	158	-6.5
26.06364	159	-4.2
26.06365	160	-1.9

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Surveys

**Survey Unit Code:** B0017WZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Air

RC #	Location #	Activity
26.06366	161	-1.9
26.06367	162	-1.9
26.06368	163	-1.9
26.06369	164	0.5
26.06370	165	-4.2
26.06371	166	2.8
26.06372	167	-4.2
26.06373	168	-1.9
26.06374	169	0.5
26.06375	170	-1.9
26.06376	171	-4.2
26.06377	172	-4.2
26.06378	173	-4.2
26.06379	174	-1.9
26.06380	175	-4.2
26.06381	176	-4.2
26.06382	177	2.8
26.06383	178	-6.5
26.06384	179	-1.9
26.06385	180	0.5
26.06386	181	7.4
26.06387	182	-1.9
26.06388	183	-1.9
26.06389	184	-6.5
26.06390	185	0.5
26.06391	186	-4.2
26.06392	187	-1.9
26.06393	188	-4.2
26.06394	189	-1.9
26.06395	190	2.8
26.06396	191	-6.5
26.06397	192	-6.5
26.06398	193	-6.5
26.06399	194	-6.5
26.06400	195	-6.5
26.06401	196	-4.2
26.06402	197	-6.5
26.06403	198	-1.9
26.06404	199	-1.9
26.06405	200	-1.9

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017WZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Air

RC #	Location #	Activity
26.06406	201	0.5
26.06407	202	0.5
26.06408	203	-1.9
26.06409	204	-1.9
26.06410	205	2.8
26.06411	206	-4.2
26.06412	207	2.8
26.06413	208	0.5
26.06414	209	-6.5
26.06415	210	-4.2
26.06416	211	-1.9
26.06417	212	0.5
26.06418	213	-6.5
26.06419	214	0.5
26.06420	215	-1.9
26.06421	216	-4.2
26.06422	217	0.5
26.06423	218	2.8
26.06424	219	-4.2
26.06425	220	-4.2
26.06426	221	2.8
26.06427	222	-4.2
26.06428	223	0.5
26.06429	224	-1.9
26.06430	225	0.5
26.06431	226	2.8
26.06432	227	7.4
26.06433	228	0.5
26.06434	229	<u>14.3</u>
26.06435	230	-1.9
26.06436	231	-6.5
26.06437	232	0.5
26.06438	233	-6.5
26.06439	234	-1.9
26.06440	235	-1.9
26.06441	236	-6.5
26.06442	237	-6.5
26.06443	238	0.5
26.06444	239	-1.9
26.06445	240	-4.2

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017WZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Air

RC #	Location #	Activity
26.06446	241	-1.9
26.06447	242	-6.5
26.06448	243	-4.2
26.06449	244	0.5
26.06450	245	0.5
26.06451	246	-4.2
26.06452	247	-1.9
26.06453	248	-4.2
26.06454	249	-1.9
26.06455	250	-1.9
26.06456	251	-4.2
26.06457	252	-4.2
26.06458	253	-1.9
26.06459	254	5.1
26.06460	255	-6.5
26.06461	256	0.5
26.06462	257	5.1
26.06463	258	-6.5
26.06464	259	2.8
26.06465	260	0.5
26.06466	261	0.5
26.06467	262	-1.9
26.06468	263	-6.5
26.06469	264	-6.5
26.06470	265	-1.9
26.06471	266	-4.2
26.06472	267	-1.9

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0017WZ001BZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Air

RC #	Location #	Activity
26.06473	268	-4.2
26.06474	269	0.5
26.06475	270	-1.9
26.06476	271	-4.2
26.06477	272	0.5
26.06478	273	2.8
26.06479	274	-1.9
26.06480	275	-4.2
26.06481	276	0.5
26.06482	277	-4.2
26.06483	278	-4.2
26.06484	279	-6.5
26.06485	280	0.5
26.06486	281	-4.2
26.06487	282	-1.9
26.06488	283	-6.5
26.06489	284	-6.5
26.06490	285	-4.2
26.06491	286	-1.9
26.06492	287	-4.2
26.06493	288	-1.9
26.06494	289	-6.5
26.06495	290	-6.5
26.06496	291	-4.2
26.06497	292	0.5
26.06498	293	0.5
26.06499	294	-6.5

Scientific Ecology Group, Inc.

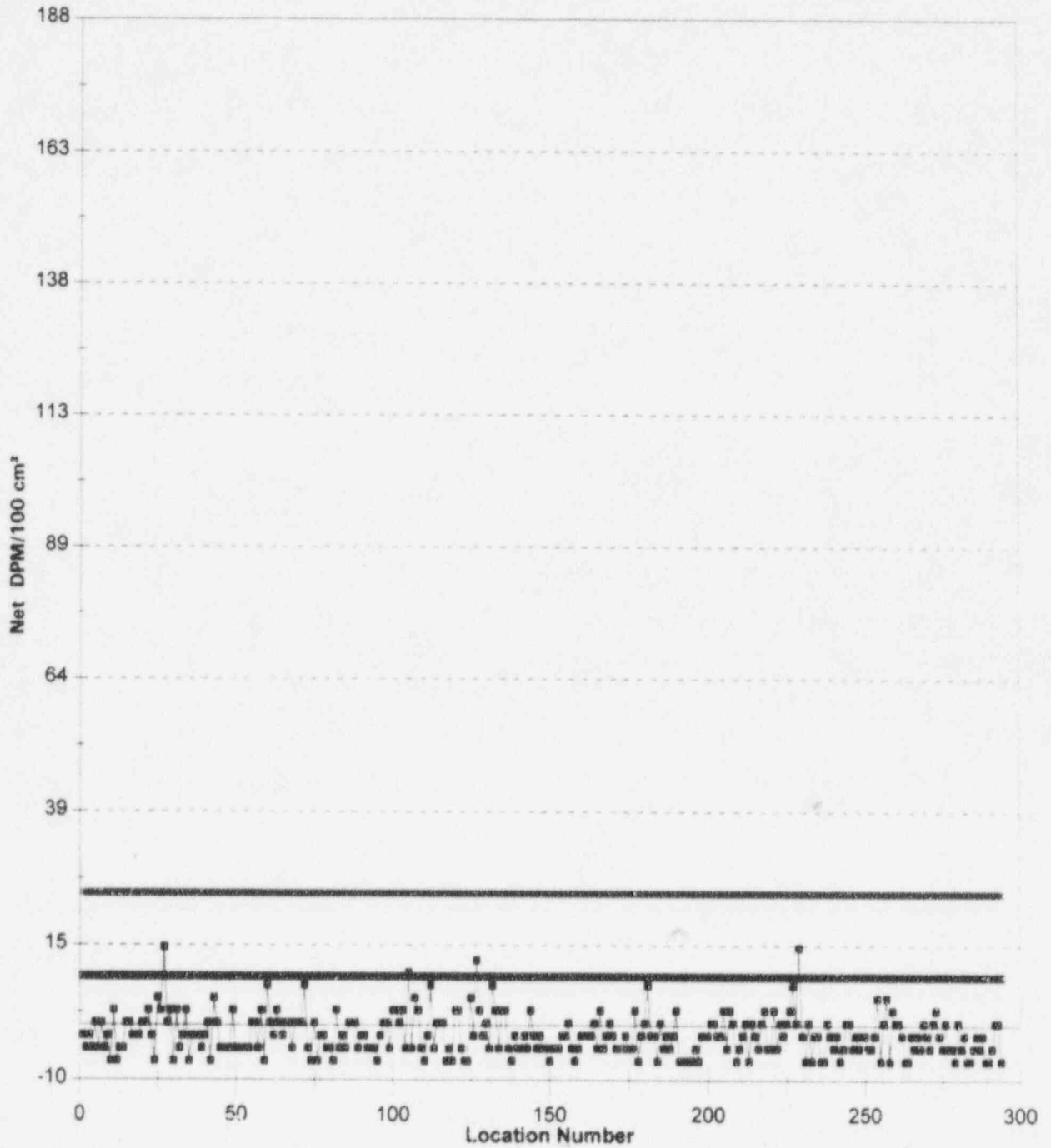
Radiological Engineering & Decommissioning Services

Fort St. Vrain Nuclear Generating Station - Decommissioning Project



**Lab Analysis, Beta Smear**

Survey Unit Code: B0017WZ001BZT01



—x— MDA      —x— Critical Level      —v— Guideline Value      —•— Activity

**Release Record - Survey Area  
(EXAMPLE)**

**Survey Package ID:** 0350

**Survey Area Description:** Visitor Center - Building #107 - Center Meeting Room (Auditorium)

**Survey Area Operational History:**

The Visitor Center, Building #107, had no history of containing licensed quantities of radioactive material. However, non-licensed quantities of naturally occurring radioactive material, used for instructional demonstrations, were stored in display cases in the south hallway of the building. The south hallway was initially classified as Affected and was surveyed as part of the instructions in Survey Package ID: 0346.

While surveying the Auditorium in accordance with Survey Package ID: 0346, approximately 13 square meters of the carpeted floor, 6 square inches on the wooden stage and 6 square inches on a brick wall indicated elevated activity. Two carpet samples were removed for qualitative analysis by gamma spectroscopy and indicated that the elevated activity was primarily due to uranium (U-238) with trace amounts of Co-60. Approximately 13 square meters of the carpeted floor and 6 square inches of the wooden stage floor were removed prior to initiation of Survey Package ID: 0350.

The Auditorium lower walls and floor were reclassified as a Suspect Affected Survey Unit and gridded in 1 x 1 meter grids.





## Release Record - Survey Area

Survey Package ID: 0350

### Survey Area Decommissioning and Remediation Activities:

The elevated activity on the walls was due to the material of construction. After application of an appropriate background for the material, activity levels were found to be below the action levels for an Unaffected Survey Unit. Once corrected, the highest net activity measurement found on the brick walls was 576 dpm/100 cm<sup>2</sup>.

Elevated count rates on the Auditorium stage wood floor were identified during the scan portion of the final survey. The area was decontaminated prior to performing a final re-survey.

### Isolation and Control Measures: Level 1 Control

No use, storage or movement of radioactive material was permitted in Group A Buildings.

All radioactive storage areas outside the Reactor Building were controlled by the Radwaste Supervisor.

The Radwaste Supervisor was notified that final surveys of Group A Building were commencing and that no radioactive material was authorized in these areas.

Prior to the final survey of Group A Buildings, training sessions were held with site personnel regarding final survey isolation controls.

Final configuration of this area was maintained throughout the entire survey process. Authorization was required prior to the painting of surfaces, structural renovation and/or removal of components from this area.

### Survey Area Conclusions:

The results of exposure rate measurements collected within these survey units have not been formally evaluated, and have not been included in this "Example" Release Record.

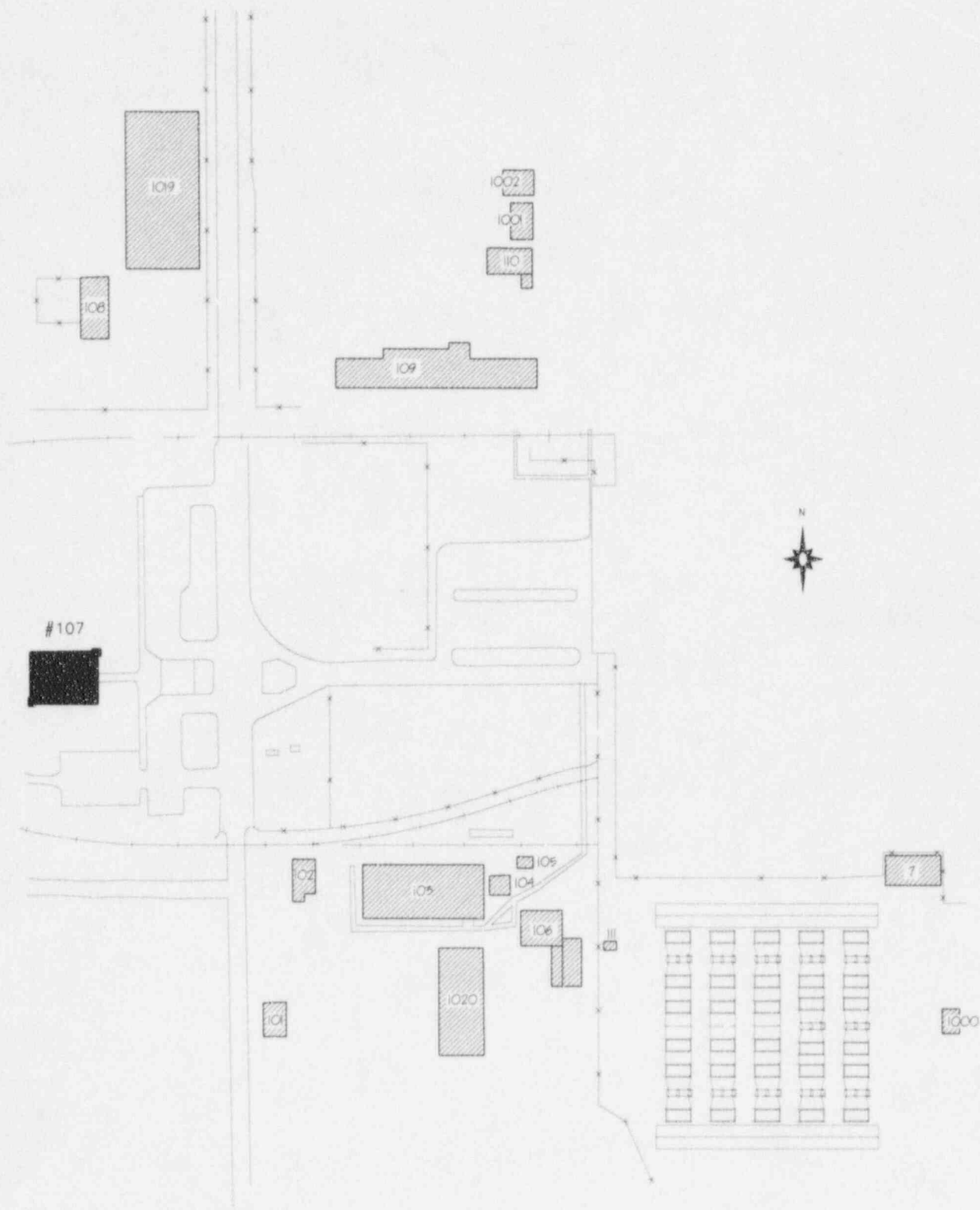


The results of total and removable surface activity measurements collected within these survey units meet the criteria for release for unrestricted use.

**Survey Area References:**

FSV Decommissioning Project Radiological Site Characterization Report - Volume 9.  
Survey Package ID: 0346

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP



LEGEND \*-\* FENCE [shaded box] BUILDING

FILE: GP\_A\PACKAGE\0290100



**Release Record - Survey Unit**

**Location Code:** A0350FZ001BZE01  
(0350B1CF01, 0350B1RF01, 0350B1KF01, 0350B2KF01)

**Group ID:** A

**Survey Area Number:** 0350

**Surface Category:** FZ001 - Floor Surfaces (Carpet, Rubber Pad, Wood)

**Survey Unit Classification:** BZ - Suspect Affected

**Survey Reason:** E01 - Re-Survey

**Survey Unit Description:** Visitor Center - Building #107  
Center Meeting Room (Auditorium)  
Floor Surfaces - carpet, rubber pad, wood

**Survey Unit Decommissioning and Remediation Activities:**

Approximately 13 square meters of the carpeted floor and 6 square inches of the wooden stage floor were removed prior to initiation of Survey Package ID: 0350.

### Release Record - Survey Unit

**Location Code:** A0350FZ001BZE01  
(0350B1CF01, 0350B1RF01, 0350B1KF01, 0350B2KF01)

#### Survey Design:

**Beta Scan:** Scanned 100% of remediated floor surfaces and a 1 meter perimeter around each remediated area. All other floor surfaces were scanned during an investigation survey (see Survey Package ID: 0346).

**Total Surface Activity:** 134 measurements. Collected total activity (direct) measurements at marked areas on the floor surfaces.

**Exposure Rate:** 65 measurement. At 1 meter from total surface activity survey measurement locations marked for exposure rate measurements.

**$\beta\gamma$  Smears:** 134 measurements. At same survey measurement locations as total surface activity measurements.

**$\alpha$  Smears** 17 measurements. At same survey measurement locations as total surface activity on rubber covered concrete floor and on painted wood floor of stage.

#### Survey Unit Investigations:

Auditorium Stage - wood floor

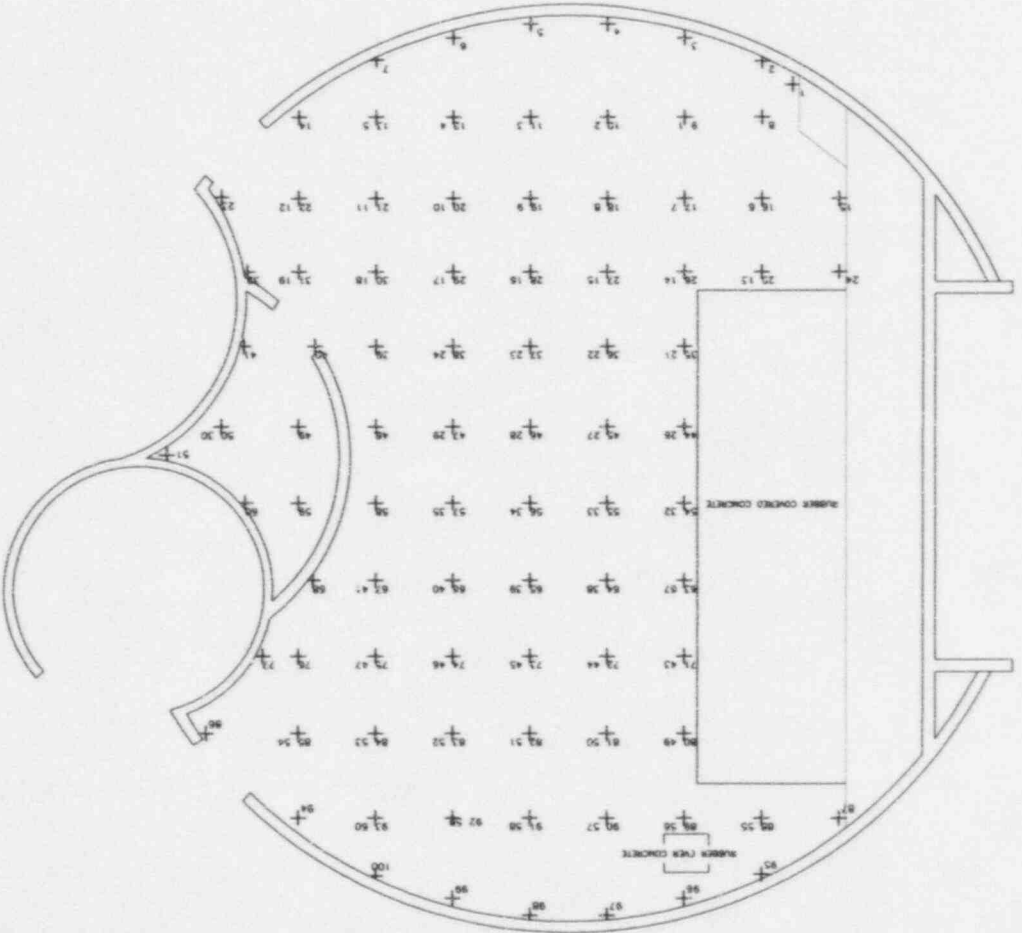
Elevated count rates were identified during the scan survey portion of the final survey (location code 0350B1KF01). A fixed point measurement collected at the area of elevated activity (sample location 30) indicated 16,280 dpm/100 cm<sup>2</sup> without background subtracted.

This location was further decontaminated and resurveyed. The resurvey consisted of a scan of the surrounding surfaces and 5 fixed-point measurements at the location of elevated activity (location code 0350B2KF01). The elevated measurement from the first resurvey (sample

location 30) was extracted from the data set, and the additional 5 measurements from the second resurvey (0350B2KF01) were inserted.

The survey results (location code 0350B2KF01) indicated that the decontamination was successful and the areas within this survey unit meet the criteria for release for unrestricted use.

VISITOR CENTER - BLDG 107  
FLOOR - CENTER MEETING ROOM



Survey Package ID: 0350  
 Master Drawing #: PPI-A  
 Bldg: VISITOR CENTER - BLDG 107  
 Elev: 4791'  
 Location Code: 0550B1C10  
 Description: CARPETED FLOORS OVER CONCRETE  
 Approx. M<sup>2</sup>: 85  
 Land Size: 1X1

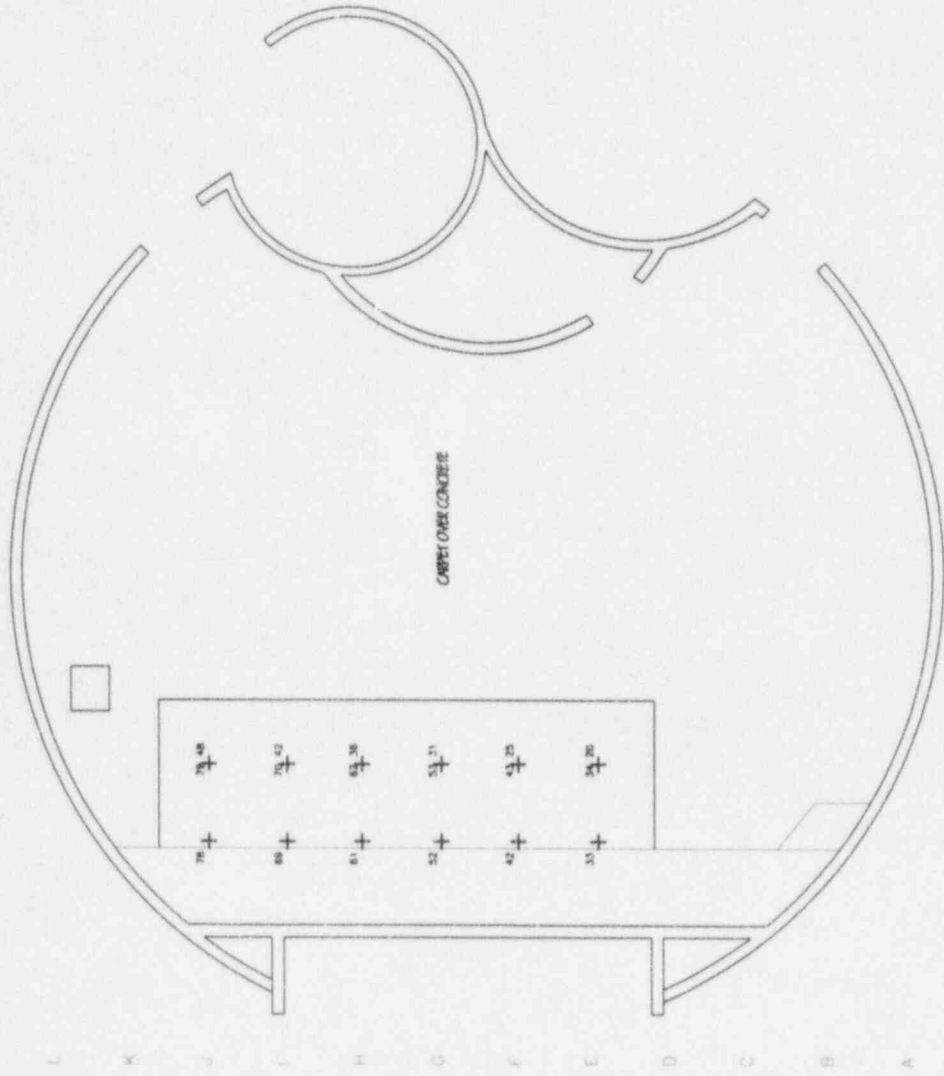
Location Code: 0550B1C10  
 Description: CARPETED FLOORS OVER CONCRETE  
 Approx. M<sup>2</sup>: 85  
 Land Size: 1X1

Location Code: \_\_\_\_\_  
 Description: \_\_\_\_\_  
 Approx. M<sup>2</sup>: \_\_\_\_\_  
 Land Size: \_\_\_\_\_

Legend:  WALL MEASUREMENT LOCATION \* FLOOR MEASUREMENT LOCATION \* FLOOR SCANNING LOCATION \* REVERSE REVIEWS  
 FILE: G:\AV\PACKAGE\0350 (04)

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAN DECOMMISSIONING PROJECT FINAL SURVEY MAP

VISITOR CENTER - BLDG 107  
FLOOR - CENTER MEETING ROOM



Survey Package ID: 0550 Master Drawing #: PPI-A Bid: VISITOR CENTER - BLDG 107 Elev: 479'

Location Code: 0550BRC01 Description: RUBBER COVERED CONCRETE FLOOR Approx. M<sup>2</sup> 15 Grid Size 1 X 1

Total Activity  Gamma Exp. Rate  H-5 Swabs  Liquid Sample  Subsoil Sample  Surface Swab  Surface Swab  Other

Total Activity  Gamma Exp. Rate  H-5 Swabs  Liquid Sample  Subsoil Sample  Surface Swab  Surface Swab  Other

Approx. M<sup>2</sup> \_\_\_\_\_ Grid Size \_\_\_\_\_

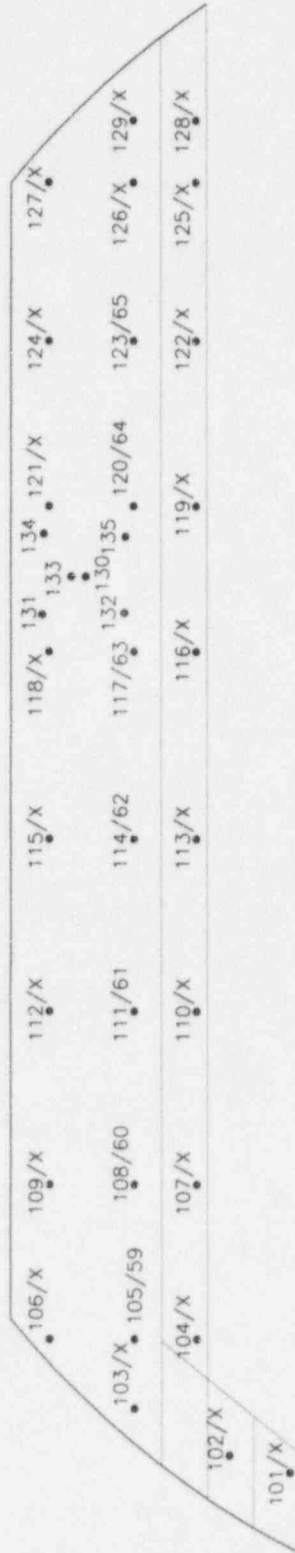
Signature on file \_\_\_\_\_

LEGEND  WALL MEASUREMENT LOCATION  FLOOR MEASUREMENT LOCATION  FLOOR SCAN LOCATION  WALL SCAN LOCATION  IN-CORNER  REMOVED MARKING

FILE: GRP\_A\PACKAGE\0950.GRD

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAN DECOMMISSIONING PROJECT FINAL SURVEY MAP

VISITOR CENTER - BLDG 107  
FLOOR - STAGE IN CENTER MEETING AREA



Survey Package ID: 0550     Master Drawing #: PPI-A     Bldg: VISITOR CENTER - BLDG 107     Elev: 4791'

Location Code: 0550B1KFOI     Description: PAINTED WOOD FLOOR (SML #101 - 150, 59 - 65)     Approx. M<sup>2</sup>: 8     Grid Size: N/A

Delta Scan    Gamma Scan    Total Activity    Gamma Exp. Rate    Photo / Gamma Scans    H-5 Scans    Liquid Sample    Substr. Sample    Surface Set    Slab/Face Set    Other

Location Code: 0550B2KFOI     Description: PAINTED WOOD FLOOR (SML #151 - 155)     Approx. M<sup>2</sup>: 8     Grid Size: 1 X 1

Delta Scan    Gamma Scan    Total Activity    Gamma Exp. Rate    Photo / Gamma Scans    H-5 Scans    Liquid Sample    Substr. Sample    Surface Set    Slab/Face Set    Other

Signatures on file

LEGEND    WALL MEASUREMENT LOCATION    FLOOR MEASUREMENT LOCATION    WALL SCAN LOCATION    FLOOR SCAN LOCATION    RETA / GAMMA    X - NO. P POINT

FILE: GRP\_A\PROJECT\0950\0950.COR



**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B  
**Survey Unit Code:** A0350FZ001BZE01  
**Mediums:** Wood - Painted, Carpet (Over Concrete), Rubber

**Group ID:** A  
**Survey Area Number:** 0350  
**Surface Category:** FZ001 - Floor & Trench Surfaces  
**Survey Unit Classification:** BZ - Suspect, Affected Structure  
**Survey Reason:** E01 - Re-Survey

	Net DPM/100 cm <sup>2</sup>
<b>Upper Confidence Level (UCL)</b>	216.2
<b>Mean</b>	182.1
<b>Maximum</b>	783.2
<b>Minimum</b>	-436.2
<b>Standard Deviation</b>	239.8
<b>Minimum Detectable Activity</b>	914.2
<b>Critical Level</b>	436.0
<b>Samples Reported</b>	134
<b>Samples Prescribed</b>	129

**Tests Performed**

<b>Samples Reported &gt;= Samples Prescribed</b>	YES	<b>Passed</b>
<b>MDA &lt; 2,000.0 DPM/100 cm<sup>2</sup></b>	YES	<b>Passed</b>
<b>Percent of Samples &gt; 3,000.0 DPM/100 cm<sup>2</sup></b>	0.0	<b>Passed (3)</b>
<b>Number of Samples &gt; 4,000.0 DPM/100 cm<sup>2</sup></b>	0	<b>Passed (4)</b>
<b>UCL of Mean &lt; 4,000.0 DPM/100 cm<sup>2</sup></b>	YES	<b>Passed</b>

(3) 10% Test  
(4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** A0350FZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 410.6 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Wood - Painted

<b>Download # -Station #</b>	<b>Location #</b>	<b>Activity</b>
531-1	101	-312.0
531-1	102	340.5
531-1	103	200.6
531-1	104	-327.5
531-1	105	60.8
531-1	106	356.0
531-1	107	247.7
531-1	108	-47.9
531-1	109	231.7
531-1	110	-358.6
531-1	111	-32.4
531-1	112	76.4
531-1	113	-110.0
531-1	114	154.0
531-1	115	<u>759.9</u>
531-1	116	-343.0
531-1	117	324.9
531-1	118	293.9
531-1	119	-249.8
531-1	120	324.9
531-1	121	60.8
531-1	122	-141.1
531-1	123	154.0
531-1	124	200.6
531-1	125	-79.0
531-1	126	45.3
531-1	127	<u>480.3</u>
531-1	128	293.9
531-1	129	324.9
538-1	131	223.1
538-1	132	17.2
538-1	133	254.8
538-1	134	223.1
538-1	135	381.5

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** A0350FZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 432.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Carpet (Over Concrete)

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
531-1	1	309.4
531-1	2	60.8
531-1	3	356.0
531-1	4	45.3
531-1	5	185.1
531-1	6	-141.1
531-1	7	309.4
531-1	8	-32.4
531-1	9	<u>542.4</u>
531-1	10	<u>511.3</u>
531-1	11	371.5
531-1	12	216.2
531-1	13	60.8
531-1	14	138.5
531-1	15	418.1
531-1	16	356.0
531-1	17	<u>433.7</u>
531-1	18	76.4
531-1	19	76.4
531-1	20	-47.9
531-1	21	<u>433.7</u>
531-1	22	-1.3
531-1	23	14.2
531-1	24	340.5
531-1	25	76.4
531-1	26	200.6
531-1	27	185.1
531-1	28	-32.4
531-1	29	91.9
531-1	30	<u>557.9</u>
531-1	31	138.5
531-1	32	-94.5
531-1	35	29.8
531-1	36	-296.4
531-1	37	-79.0
531-1	38	356.0
531-1	39	-436.2
531-1	40	371.5
531-1	41	-187.7
531-1	44	138.5

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** A0350FZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 432.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Carpet (Over Concrete)

<b>Download # -Station #</b>	<b>Location #</b>	<b>Activity</b>
531-1	45	154.0
531-1	46	-79.0
531-1	47	123.0
531-1	48	309.4
531-1	49	418.1
531-1	50	200.6
531-1	51	231.7
531-1	54	418.1
531-1	55	-172.2
531-1	56	371.5
531-1	57	-94.5
531-1	58	138.5
531-1	59	-47.9
531-1	60	418.1
531-1	63	<u>480.3</u>
531-1	64	-249.8
531-1	65	231.7
531-1	66	200.6
531-1	67	340.5
531-1	68	231.7
531-1	71	<u>449.2</u>
531-1	72	-79.0
531-1	73	293.9
531-1	74	200.6

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** A0350FZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 432.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Carpet (Over Concrete)

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
531-1	75	200.6
531-1	76	138.5
531-1	77	60.8
531-1	80	418.1
531-1	81	356.0
531-1	82	-156.6
531-1	83	309.4
531-1	84	216.2
531-1	85	247.2
531-1	86	216.2
531-1	87	<u>542.4</u>
531-1	88	169.6
531-1	89	387.1
531-1	90	200.6
531-1	91	-32.4
531-1	92	138.5
531-1	93	418.1
531-1	94	154.0
531-1	95	<u>480.3</u>
531-1	96	154.0
531-1	97	-187.7
531-1	98	<u>511.3</u>
531-1	99	247.2
531-1	100	169.6

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** A0350FZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 436.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

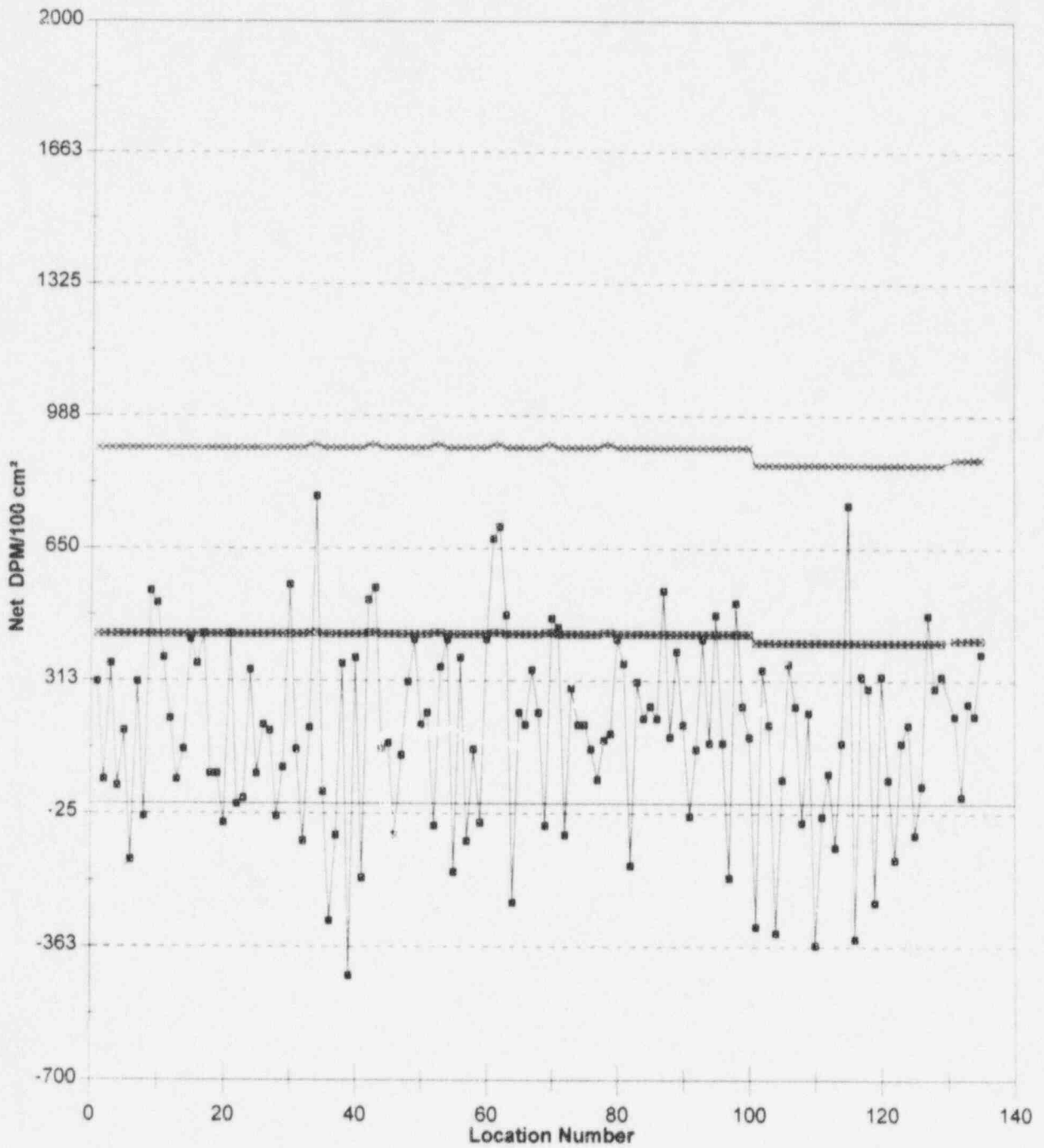
**Medium:** Rubber

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
531-1	33	192.9
531-1	34	<u>783.2</u>
531-1	42	<u>519.1</u>
531-1	43	<u>550.2</u>
531-1	52	-55.7
531-1	53	348.2
531-1	61	<u>674.4</u>
531-1	62	<u>705.5</u>
531-1	69	-55.7
531-1	70	<u>472.5</u>
531-1	78	161.8
531-1	79	177.3



**Total Surface Activity - Beta Survey**

Survey Unit Code: A0350FZ001BZE01



— MDA      - - - Critical Level      - · - Guideline Value      · Activity

Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: A0350FZ001BZE01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

Download # -Station #	Medium	Count Time	Critical Level	MDA
531-1	Wood - Painted	15.0	410.6	863.3
538-1	Wood - Painted	15.0	416.8	876.6
531-1	Carpet (Over Concrete)	15.0	432.3	906.6
531-1	Rubber	15.0	436.0	914.2



**Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** A0350FZ001BZE01

**Comments:** Field Background (Bkg) reported in CPM/detector area.  
 Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
 Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
 Field Bkg Count time averaged over all reported samples for each medium surveyed.  
 Count time is reported in seconds.

<b>Download # -Station #</b>	<b>Medium</b>	<b>Count Time</b>	<b>Field Bkg</b>	<b>Medium Bkg</b>
531-1	Wood - Painted	15.0	516.3	0.00
531-1	Carpet (Over Concrete)	15.0	572.3	0.00
531-1	Rubber	15.0	582.3	0.00
538-1	Wood - Painted	15.0	511.7	0.00

**Release Record - Statistical Summary  
Removable Activity - Alpha Survey**



**Detector Model:** Lab Analysis , Alpha Smears  
**Survey Unit Code:** A0350FZ001BZE01  
**Mediums:** Wood - Painted, Rubber

**Group ID:** A  
**Survey Area Number:** 0350  
**Surface Category:** FZ001 - Floor & Trench Surfaces  
**Survey Unit Classification:** BZ - Suspect, Affected Structure  
**Survey Reason:** E01 - Re-Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	0.5
Mean	0.2
Maximum	2.1
Minimum	-0.4
Standard Deviation	0.6
Minimum Detectable Activity	2.6
Critical Level	0.8
Samples Reported	17
Samples Prescribed	12

**Tests Performed**

Samples Reported $\geq$ Samples Prescribed	YES	Passed
MDA $<$ 5.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples $>$ 15.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples $>$ 20.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean $<$ 20.0 DPM/100 cm <sup>2</sup>	YES	Passed

- (3) 10% Test
- (4) Single Measurement Test

Release Record - Corrected Field Activity Values  
Removable Activity - Alpha Survey



Detector Model: Lab Analysis , Alpha Smears

Survey Unit Code: A0350FZ001BZE01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of .8 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 15.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 20.0 DPM/100 cm<sup>2</sup>

Medium: Wood - Painted

RC #	Location #	Activity
26.04141	13	0.4
26.04142	14	-0.4
26.04143	15	<u>2.1</u>
26.04144	16	-0.4
26.04145	17	<u>1.4</u>

Release Record - Corrected Field Activity Values  
Removable Activity - Alpha Survey



Detector Model: Lab Analysis , Alpha Smears

Survey Unit Code: A0350FZ001BZE01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of .8 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 15.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 20.0 DPM/100 cm<sup>2</sup>

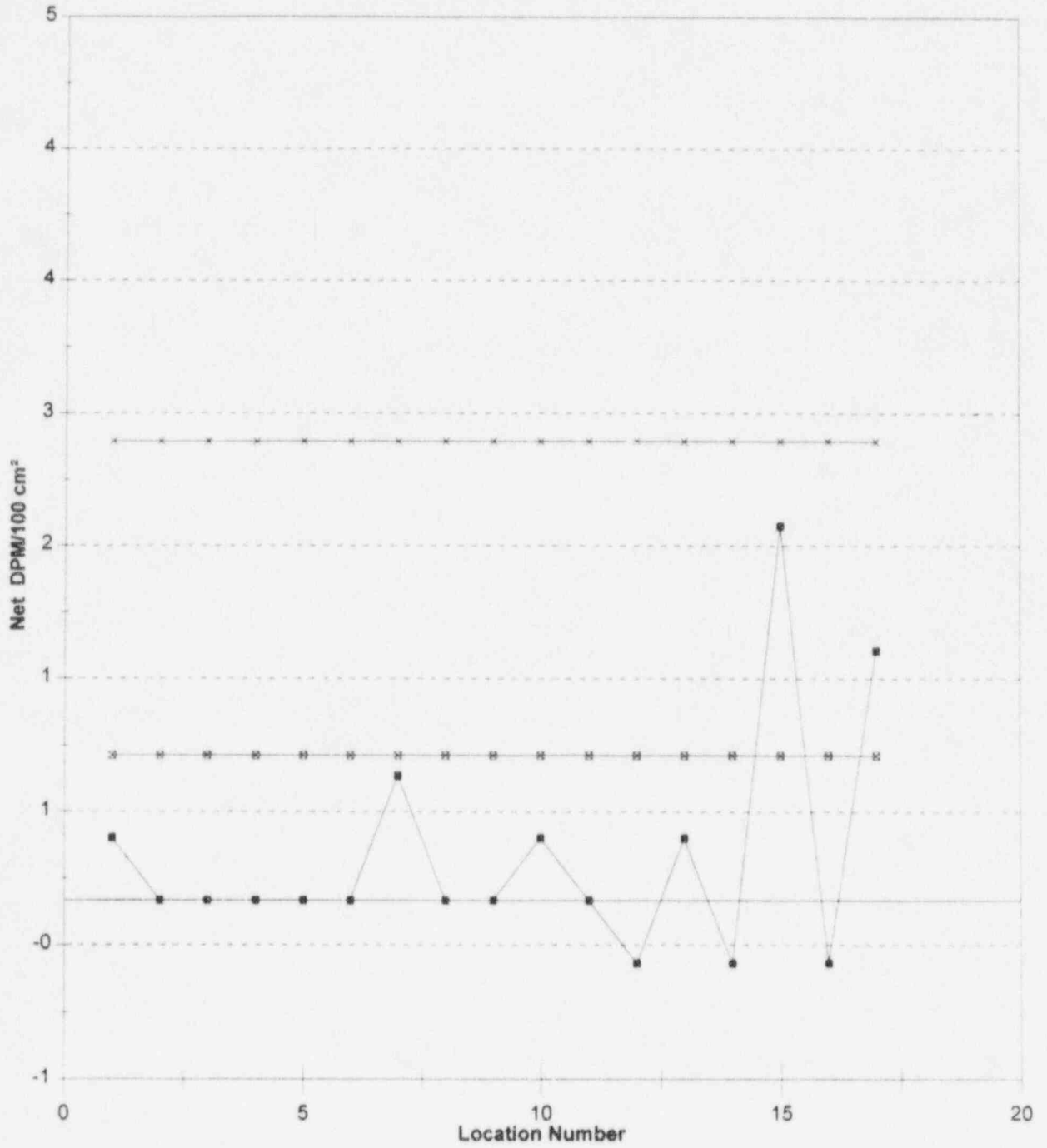
Medium: Rubber

RC #	Location #	Activity
26.03723	1	0.4
26.03724	2	0.0
26.03725	3	0.0
26.03726	4	0.0
26.03727	5	0.0
26.03728	6	0.0
26.03729	7	0.7
26.03730	8	0.0
26.03731	9	0.0
26.03732	10	0.4
26.03733	11	0.0
26.03734	12	-0.4



Lab Analysis, Alpha Smear

Survey Unit Code: A0350FZ001BZE01



--- MDA      -x- Critical Level      -v- Guideline Value      -■- Activity

**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** A0350FZ001BZE01  
**Mediums:** Wood - Painted, Carpet (Over Concrete), Rubber

**Group ID:** A  
**Survey Area Number:** 0350  
**Surface Category:** FZ001 - Floor & Trench Surfaces  
**Survey Unit Classification:** BZ - Suspect, Affected Structure  
**Survey Reason:** E01 - Re-Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	-0.1
Mean	-0.7
Maximum	21.1
Minimum	-6.9
Standard Deviation	4.5
Minimum Detectable Activity	24.9
Critical Level	9.3
Samples Reported	134
Samples Prescribed	129

**Tests Performed**

Samples Reported $\geq$ Samples Prescribed	YES	Passed
MDA $<$ 187.5 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples $>$ 562.5 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples $>$ 750.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean $<$ 750.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** A0350FZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Wood - Painted

Location #	Activity
101	-4.6
102	-2.3
103	6.9
104	0.0
105	6.9
106	4.6
107	2.3
108	0.0
109	0.0
110	-2.3
111	-2.3
112	2.3
113	0.0
114	0.0
115	9.3
116	6.9
117	2.3
118	9.3
119	-4.6
120	-2.3
121	9.3
122	-4.6
123	-4.6
124	4.6
125	0.0
126	-2.3
127	0.0
128	-4.6
129	-6.9
131	-2.1
132	4.9
133	-2.1
134	4.9
135	<u>21.1</u>

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** A0350FZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Carpet (Over Concrete)

Location #	Activity
1	6.9
2	-4.6
3	4.6
4	6.9
5	2.3
6	0.0
7	-4.6
8	-6.9
9	-4.6
10	-4.6
11	6.9
12	-4.6
13	-4.6
14	2.3
15	0.0
16	-6.9
17	2.3
18	0.0
19	0.0
20	-2.3
21	-2.3
22	0.0
23	-6.9
24	-2.3
25	0.0
26	-4.6
27	-2.3
28	-2.3
29	2.3
30	-2.3
31	4.6
32	-4.6
35	0.0
36	0.0
37	-4.6
38	-2.3
39	-2.3
40	-4.6
41	0.0
44	4.6



**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** A0350FZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Carpet (Over Concrete)

<b>Location #</b>	<b>Activity</b>
45	0.0
46	0.0
47	-6.9
48	-6.9
49	-2.3
50	0.0
51	-4.6
54	-2.3
55	-6.9
56	-2.3
57	2.3
58	-4.6
59	2.3
60	0.0
63	-6.9
64	2.3
65	-4.6
66	-2.3
67	2.3
68	-2.3
71	6.9
72	6.9
73	0.0
74	-2.3

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: A0350FZ001BZE01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 9.3 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

Medium: Carpet (Over Concrete)

Location #	Activity
75	0.0
76	-2.3
77	0.0
80	-6.9
81	-2.3
82	-4.6
83	0.0
84	-6.9
85	2.3
86	0.0
87	0.0
88	0.0
89	-4.6
90	-4.6
91	4.6
92	-2.3
93	-2.3
94	-6.9
95	-2.3
96	-2.3
97	-2.3
98	-6.9
99	-4.6
100	-4.6

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: A0350FZ001BZE01

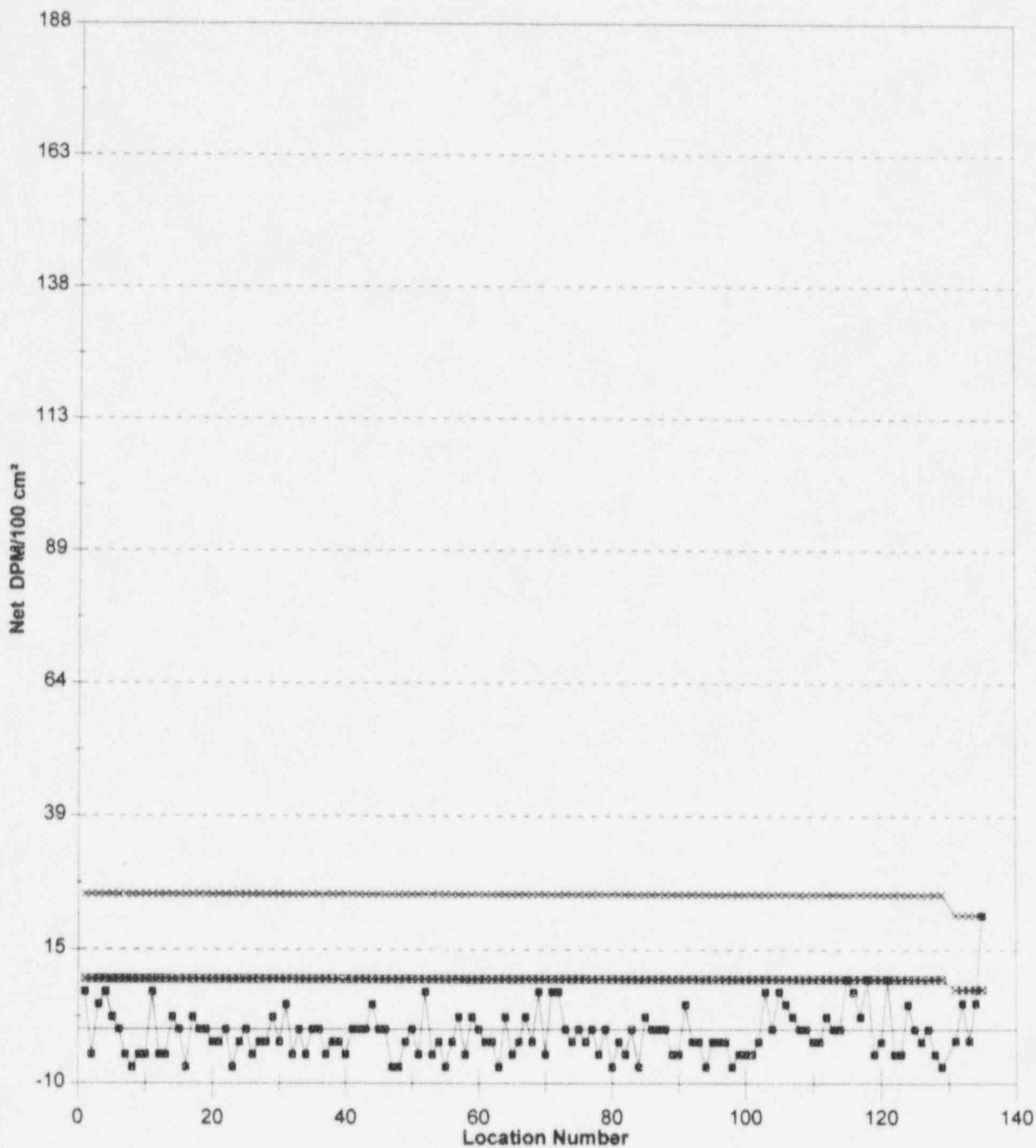
Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 9.3 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

Medium: Rubber

Location #	Activity
33	0.0
34	-4.6
42	0.0
43	0.0
52	6.9
53	-4.6
61	-2.3
62	-2.3
69	6.9
70	-4.6
78	-4.6
79	0.0



**Lab Analysis, Beta Smear**  
Survey Unit Code: A0350FZ001BZE01



—x— MDA      —+— Critical Level      —·— Guideline Value      —■— Activity



**Release Record - Survey Unit**

**Location Code:** A0350WZ001BZE01  
(0350B1TW01)

**Group ID:** A

**Survey Area Number:** 0350

**Surface Category:** WZ001 - Wall Surfaces Below 2 Meters

**Survey Unit Classification:** BZ - Suspect Affected

**Survey Reason:** E01 - Re-Survey

**Survey Unit Description:** Visitor Center - Building #107  
Center Meeting Room (Auditorium)  
Wall Surfaces Below 2 Meters - bare brick

**Survey Unit Decommissioning and Remediation Activities:** None



**Release Record - Survey Unit**

**Location Code:** A0350WZ001BZE01  
(0350B1TW01)

**Survey Design:**

**Beta Scan:** Scanned 100% of the wall surfaces during an investigation survey in accordance with the instructions in Survey Package ID: 0346. No additional scanning necessary.

**Total Surface Activity:** 124 measurements. Collected total activity (direct) measurements at marked areas on the wall surfaces.

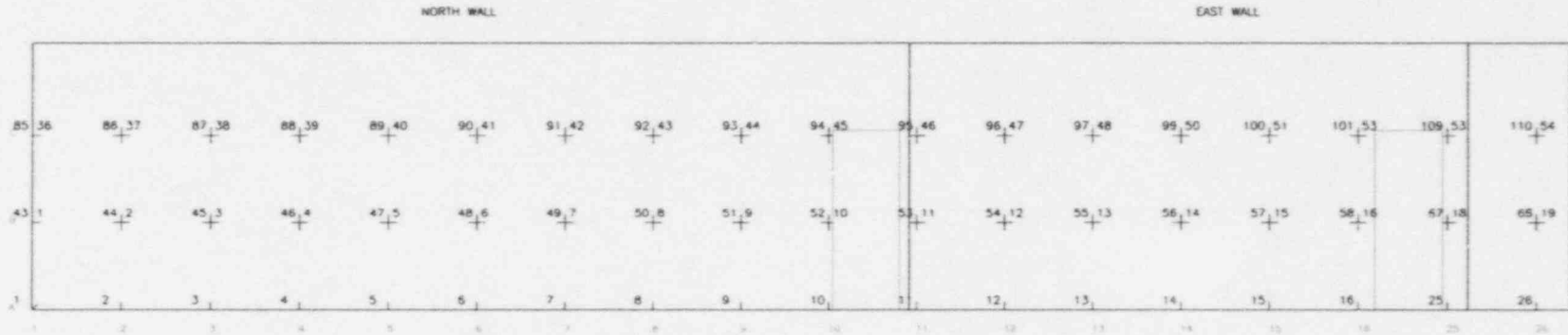
**Exposure Rate:** 68 measurements. At 1 meter from total surface activity survey measurement locations marked for exposure rate measurements.

**$\beta\gamma$  Smears:** 124 measurements. At same survey measurement locations as total surface activity measurements.

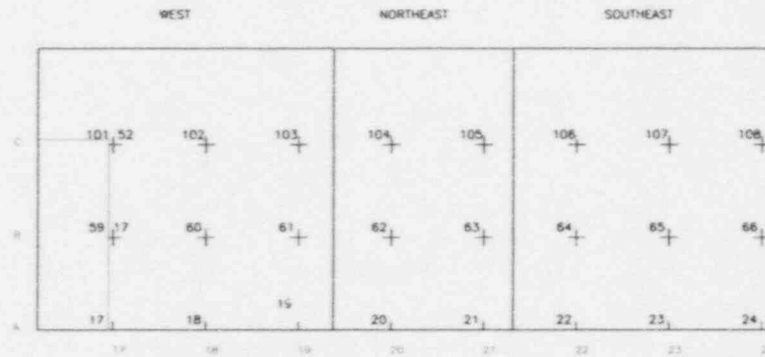
**Survey Unit Investigations:** None

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

VISITOR CENTER - BLDG 107  
CENTER MEETING ROOM



CLOSET WALLS



Survey Package ID: 0350 Master Drawing #: PPI-A Bldg: VISITOR CENTER - BLDG 107 Elev: 4791'

Location Code: 0350BITWOI Description: BRICK WALLS UP TO 2 METERS Approx. M<sup>2</sup> 108 Grid Size 1 X 1

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scanners  H-S Scanners  Liquid Sample  Sediment Sample  Surface Soil  Subsurface Soil  Other

Location Code: \_\_\_\_\_ Description: \_\_\_\_\_ Approx. M<sup>2</sup> \_\_\_\_\_ Grid Size \_\_\_\_\_

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scanners  H-S Scanners  Liquid Sample  Sediment Sample  Surface Soil  Subsurface Soil  Other

Signature on file \_\_\_\_\_

LEGEND WALL MEASUREMENT LOCATION FLOOR MEASUREMENT LOCATION FLOOR SCAN LOCATION WALL SCAN LOCATION B\* - BACKGROUND \* - ELEVATED READING FILE: GRP\_A\PACKAGE\0350\CH0





**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



**Detector Model:** LM! 43-68B  
**Survey Unit Code:** A0350WZ001BZE01  
**Mediums:** Brick - Bare

**Group ID:** A  
**Survey Area Number:** 0350  
**Surface Category:** WZ001 - Wall Surfaces  
**Survey Unit Classification:** BZ - Suspect, Affected Structure  
**Survey Reason:** E01 - Re-Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	-146.6
Mean	-178.4
Maximum	575.8
Minimum	-626.2
Standard Deviation	215.6
Minimum Detectable Activity	1,049.0
Critical Level	503.3
Samples Reported	124
Samples Prescribed	124

**Tests Performed**

Samples Reported >= Samples Prescribed	YES	Passed
MDA < 2,000.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 3,000.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 4,000.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 4,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

- (3) 10% Test
- (4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** A0350WZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 503.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Brick - Bare

<u>Download # - Station #</u>	<u>Location #</u>	<u>Activity</u>
535-1	1	-126.7
535-1	2	-392.0
535-1	3	-189.1
535-1	4	-33.0
535-1	5	-95.5
535-1	6	-454.5
535-1	7	60.6
535-1	8	<u>575.8</u>
535-1	9	91.9
535-1	10	-345.2
535-1	11	-189.1
535-1	12	-423.3
535-1	13	-314.0
535-1	14	-111.1
535-1	15	-142.3
535-1	16	-111.1
535-1	17	-48.6
535-1	18	-360.8
535-1	19	169.9
535-1	20	-298.4
535-1	21	-17.4
535-1	22	-251.6
535-1	23	-360.8
535-1	24	-189.1
535-1	25	-267.2
535-1	26	-470.1
535-1	27	-111.1
535-1	28	-126.7
535-1	29	-111.1
535-1	30	263.6
535-1	31	-392.0
535-1	32	-220.3
535-1	33	-204.7
535-1	34	-220.3
535-1	35	-610.6
535-1	36	-454.5
535-1	37	-204.7
535-1	38	-142.3
535-1	39	-33.0
535-1	40	138.7

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B  
**Survey Unit Code:** A0350WZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 503.3 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Brick - Bare

<u>Download # - Station #</u>	<u>Location #</u>	<u>Activity</u>
535-1	41	107.5
535-1	42	-314.0
535-1	43	-64.2
535-1	44	-298.4
535-1	45	-1.8
535-1	46	13.8
535-1	47	-1.8
535-1	48	-485.7
535-1	49	138.7
535-1	50	-189.1
535-1	51	-626.2
535-1	52	-376.4
535-1	53	-423.3
535-1	54	-1.8
535-1	55	-360.8
535-1	56	-126.7
535-1	57	-360.8
535-1	58	-360.8
535-1	59	-392.0
535-1	60	-470.1
535-1	61	169.9
535-1	62	-64.2
535-1	63	76.2
535-1	64	-282.8
535-1	65	-157.9
535-1	66	-236.0
535-1	67	-516.9
535-1	68	-111.1
535-1	69	-220.3
535-1	70	-423.3
535-1	71	60.6
535-1	72	-79.9
535-1	73	154.3
535-1	74	-407.7
535-1	75	45.0
535-1	76	-17.4
535-1	77	13.8
535-1	78	-1.8
535-1	79	-204.7
535-1	80	-126.7

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** A0350WZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 503.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

**Medium:** Brick - Bare

<b>Download # - Station #</b>	<b>Location #</b>	<b>Activity</b>
535-1	81	-454.5
535-1	82	-454.5
535-1	83	-470.1
535-1	84	-392.0
535-1	85	-173.5
535-1	86	138.7
535-1	87	-438.9
535-1	88	-157.9
535-1	89	-360.8
535-1	90	154.3
535-1	91	-516.9
535-1	92	-251.6
535-1	93	-360.8
535-1	94	-251.6
535-1	95	-220.3
535-1	96	-17.4
535-1	97	-360.8
535-1	98	-345.2
535-1	99	29.4
535-1	100	-142.3
535-1	101	-64.2
535-1	102	-485.7

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** A0350WZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 503.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 4,000.0 DPM/100 cm<sup>2</sup>

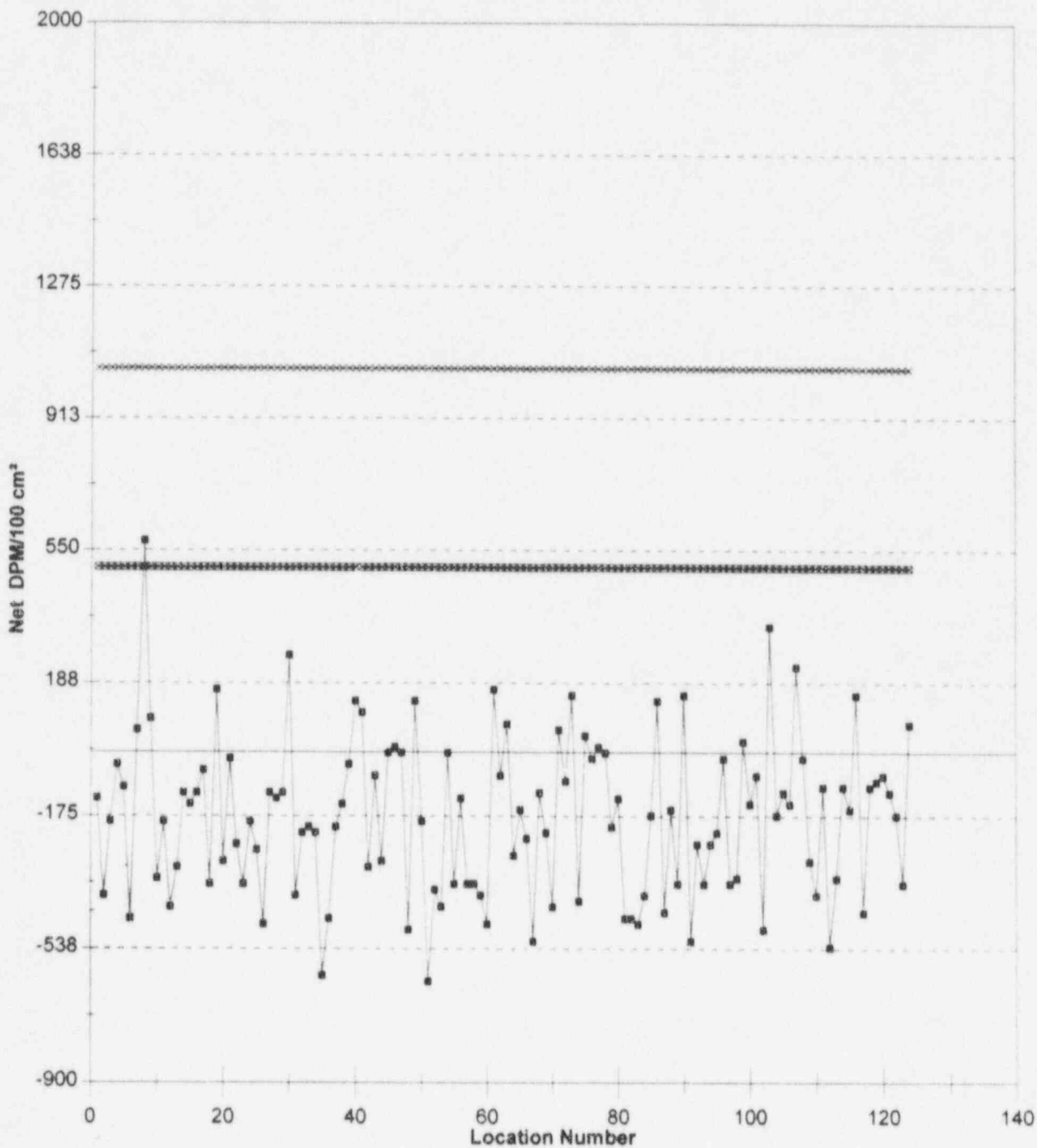
**Medium:** Brick - Bare

<u>Download # - Station #</u>	<u>Location #</u>	<u>Activity</u>
535-1	103	341.6
535-1	104	-173.5
535-1	105	-111.1
535-1	106	-142.3
535-1	107	232.3
535-1	108	-17.4
535-1	109	-298.4
535-1	110	-392.0
535-1	111	-95.5
535-1	112	-532.5
535-1	113	-345.2
535-1	114	-95.5
535-1	115	-157.9
535-1	116	154.3
535-1	117	-438.9
535-1	118	-95.5
535-1	119	-79.9
535-1	120	-64.2
535-1	121	-111.1
535-1	122	-173.5
535-1	123	-360.8
535-1	124	76.2



**Total Surface Activity - Beta Survey**

Survey Unit Code: A0350WZ001BZE01



--- MDA      ··· Critical Level      -·- Guideline Value      ■ Activity

Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B  
Survey Unit Code: A0350WZ001BZE01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

<u>Download # -Station #</u>	<u>Medium</u>	<u>Count Time</u>	<u>Critical Level</u>	<u>MDA</u>
535-1	Brick - Bare	15.0	503.3	1,049.0

Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: A0350WZ001BZE01

Comments:

Field Background (Bkg) reported in CPM/detector area.  
Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
Field Bkg Count time averaged over all reported samples for each medium surveyed.  
Count time is reported in seconds.

Download # -Station #	Medium	Count Time	Field Bkg	Medium Bkg
535-1	Brick - Bare	15.0	524.0	954.00



**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** A0350WZ001BZE01  
**Mediums:** Brick - Bare

**Group ID:** A  
**Survey Area Number:** 0350  
**Surface Category:** WZ001 - Wall Surfaces  
**Survey Unit Classification:** BZ - Suspect, Affected Structure  
**Survey Reason:** E01 - Re-Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	-0.7
Mean	-1.2
Maximum	11.6
Minimum	-6.9
Standard Deviation	3.4
Minimum Detectable Activity	24.9
Critical Level	9.3
Samples Reported	124
Samples Prescribed	124

**Tests Performed**

Samples Reported >= Samples Prescribed	YES	Passed
MDA < 187.5 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 562.5 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 750.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 750.0 DPM/100 cm <sup>2</sup>	YES	Passed

- (3) 10% Test
- (4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** A0350WZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Brick - Bare

RC #	Location #	Activity
26.03853	1	-2.3
26.03854	2	0.0
26.03855	3	-4.6
26.03856	4	-2.3
26.03857	5	6.9
26.03858	6	2.3
26.03859	7	2.3
26.03860	8	0.0
26.03861	9	0.0
26.03862	10	4.6
26.03863	11	0.0
26.03864	12	-2.3
26.03865	13	-4.6
26.03866	14	<u>11.6</u>
26.03867	15	-2.3
26.03868	16	4.6
26.03869	17	0.0
26.03870	18	-4.6
26.03871	19	0.0
26.03872	20	-2.3
26.03873	21	-2.3
26.03874	22	-6.9
26.03875	23	-6.9
26.03876	24	-2.3
26.03877	25	0.0
26.03878	26	-4.6
26.03879	27	2.3
26.03880	28	4.6
26.03881	29	-4.6
26.03882	30	0.0
26.03883	31	4.6
26.03884	32	2.3
26.03885	33	-6.9
26.03886	34	-2.3
26.03887	35	-4.6
26.03888	36	-4.6
26.03889	37	-4.6
26.03890	38	4.6
26.03891	39	0.0
26.03892	40	4.6

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** A0350WZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Brick - Bare

RC #	Location #	Activity
26.03893	41	0.0
26.03894	42	0.0
26.03895	43	-4.6
26.03896	44	-2.3
26.03897	45	-6.9
26.03898	46	2.3
26.03899	47	-4.6
26.03900	48	0.0
26.03901	49	2.3
26.03902	50	-4.6
26.03903	51	-2.3
26.03904	52	2.3
26.03905	53	0.0
26.03906	54	-4.6
26.03907	55	-4.6
26.03908	56	0.0
26.03909	57	-2.3
26.03910	58	2.3
26.03911	59	0.0
26.03912	60	2.3
26.03913	61	2.3
26.03914	62	-2.3
26.03915	63	-4.6
26.03916	64	-4.6
26.03917	65	2.3
26.03918	66	0.0
26.03919	67	-2.3
26.03920	68	0.0
26.03921	69	-4.6
26.03922	70	2.3
26.03923	71	-4.6
26.03924	72	2.3
26.03925	73	2.3
26.03926	74	2.3
26.03927	75	-2.3
26.03928	76	0.0
26.03929	77	-2.3
26.03930	78	-2.3
26.03931	79	-6.9
26.03932	80	4.6

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** A0350WZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Brick - Bare

<b>RC #</b>	<b>Location #</b>	<b>Activity</b>
26.03933	81	2.3
26.03934	82	-6.9
26.03935	83	-4.6
26.03936	84	2.3
26.03937	85	0.0
26.03938	86	-4.6
26.03939	87	-2.3
26.03940	88	-2.3
26.03941	89	0.0
26.03942	90	-4.6
26.03943	91	-6.9
26.03944	92	0.0
26.03945	93	-4.6
26.03946	94	2.3
26.03947	95	-2.3
26.03948	96	0.0
26.03949	97	2.3
26.03950	98	-2.3
26.03951	99	-2.3
26.03952	100	-2.3
26.03953	101	2.3
26.03954	102	-2.3

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** A0350WZ001BZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 9.3 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 562.5 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 750.0 DPM/100 cm<sup>2</sup>

**Medium:** Brick - Bare

RC #	Location #	Activity
26.03955	103	-2.3
26.03956	104	2.3
26.03957	105	-2.3
26.03958	106	-4.6
26.03959	107	2.3
26.03960	108	-2.3
26.03961	109	-2.3
26.03962	110	0.0
26.03963	111	-6.9
26.03964	112	-4.6
26.03965	113	-2.3
26.03966	114	-4.6
26.03967	115	-2.3
26.03968	116	0.0
26.03969	117	-2.3
26.03970	118	-4.6
26.03971	119	-2.3
26.03972	120	-2.3
26.03973	121	0.0
26.03974	122	-2.3
26.03975	123	2.3
26.03976	124	-2.3

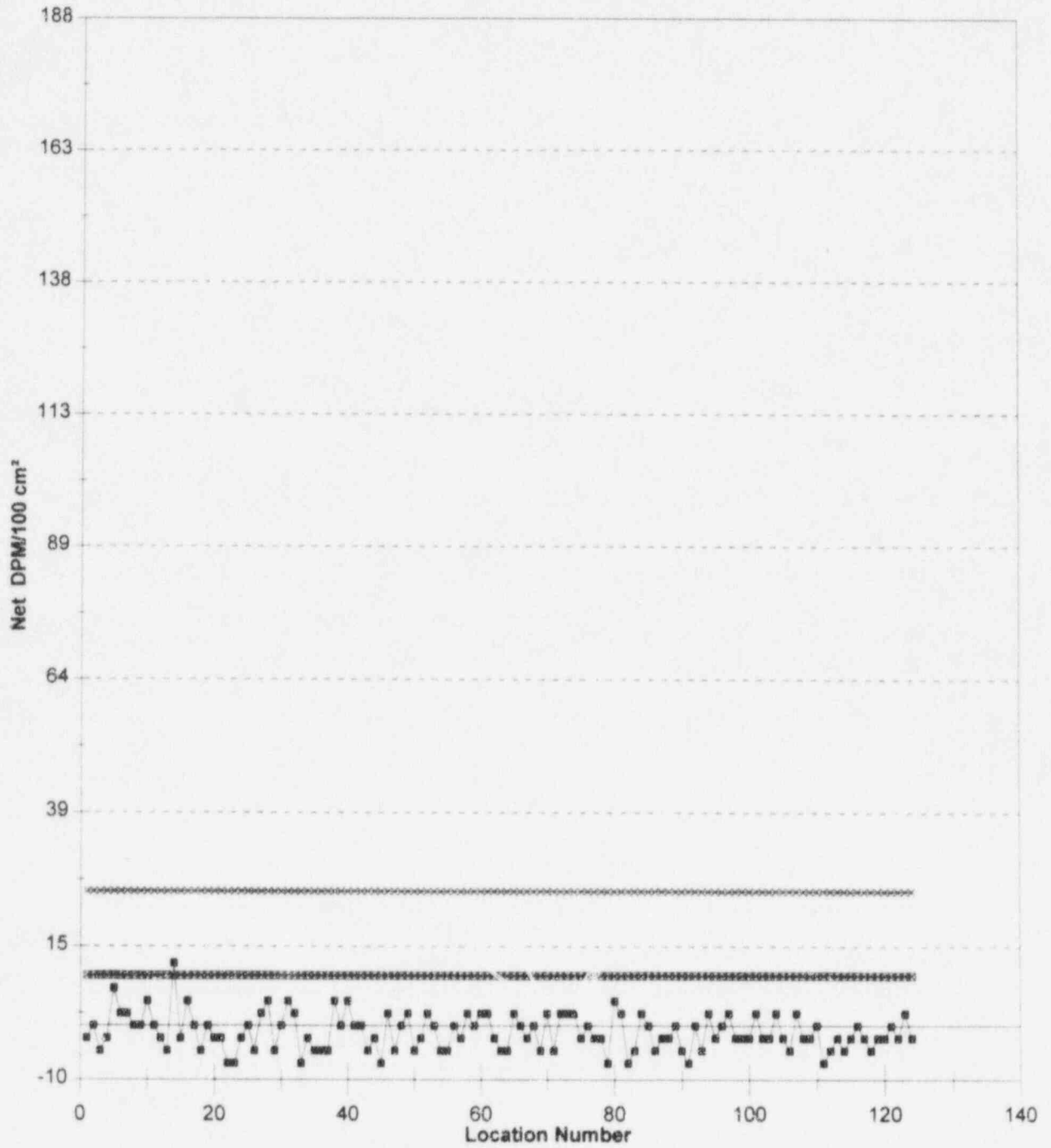
Scientific Ecology Group, Inc.

Radiological Engineering & Decommissioning Services

Fort St. Vrain Nuclear Generating Station - Decommissioning Project



**Lab Analysis, Beta Smear**  
Survey Unit Code: A0350WZ001BZE01



—x— MDA      —■— Critical Level      —◇— Guideline Value      —■— Activity



**Release Record - Survey Area  
(EXAMPLE)**

**Survey Package ID:** B0005

**Survey Area Description:**

North Warehouse - Building #13, Electrical Warehouse - Building #14, Restroom and Shower Facility - Building #1014.

**Survey Area Operational History:**

The North Warehouse and Restroom and Shower Facility had no history of containing radioactive material.

In the late 1970's and early 1980's, radioactive material was stored in the northeast area of the Electrical Warehouse. Records indicated no spills or occurrences in this building which resulted in contamination.

During 1984, a drying facility for soil samples was installed in a room located in the southwest corner of the Electrical Warehouse to support final survey. The drying facility is still being utilized, and is planned for survey as part of Survey Package ID: I0010.

The floors and lower walls of these buildings were initially classified as Unaffected.



### Release Record - Survey Area

Survey Package ID: B0005

#### Survey Area Decommissioning and Remediation Activities:

During final survey of the South Central Storage Room floor of the Electrical Warehouse, Building #14, an area of elevated activity was identified at survey measurement location (SML) #24, download report 514. The location was decontaminated on 9/21/95 by removing several millimeters of the concrete floor over an area of approximately 100 cm<sup>2</sup>.

The Electrical Warehouse, Building #14, was subsequently reclassified as an Affected Survey Unit, removed from this survey package, and resurveyed using Survey Package ID: B0017.

Only measurements of the North Warehouse, Building #13 and the Restroom and Shower Facility, Building #1014, remained in this survey package, and are included in this Release Record.

#### Isolation and Control Measures: Level 2 Control

No use, storage or movement of radioactive material was permitted in Group B Buildings.

All radioactive storage areas outside the Reactor Building were controlled by the Radwaste Supervisor.

The Radwaste Supervisor was notified that final surveys of Group B Buildings were commencing and that no radioactive material was authorized in these areas.

All access points to these buildings were posted with a Level 2 Isolation Label.

Final configuration of this area was maintained throughout the entire survey process. Authorization was required prior to the painting of surfaces, structural renovation and/or removal of components from this area.

#### Survey Area Conclusions:

The results of exposure rate measurements collected within these survey units have not been formally evaluated, and have not been included in this "Example" Release Record.

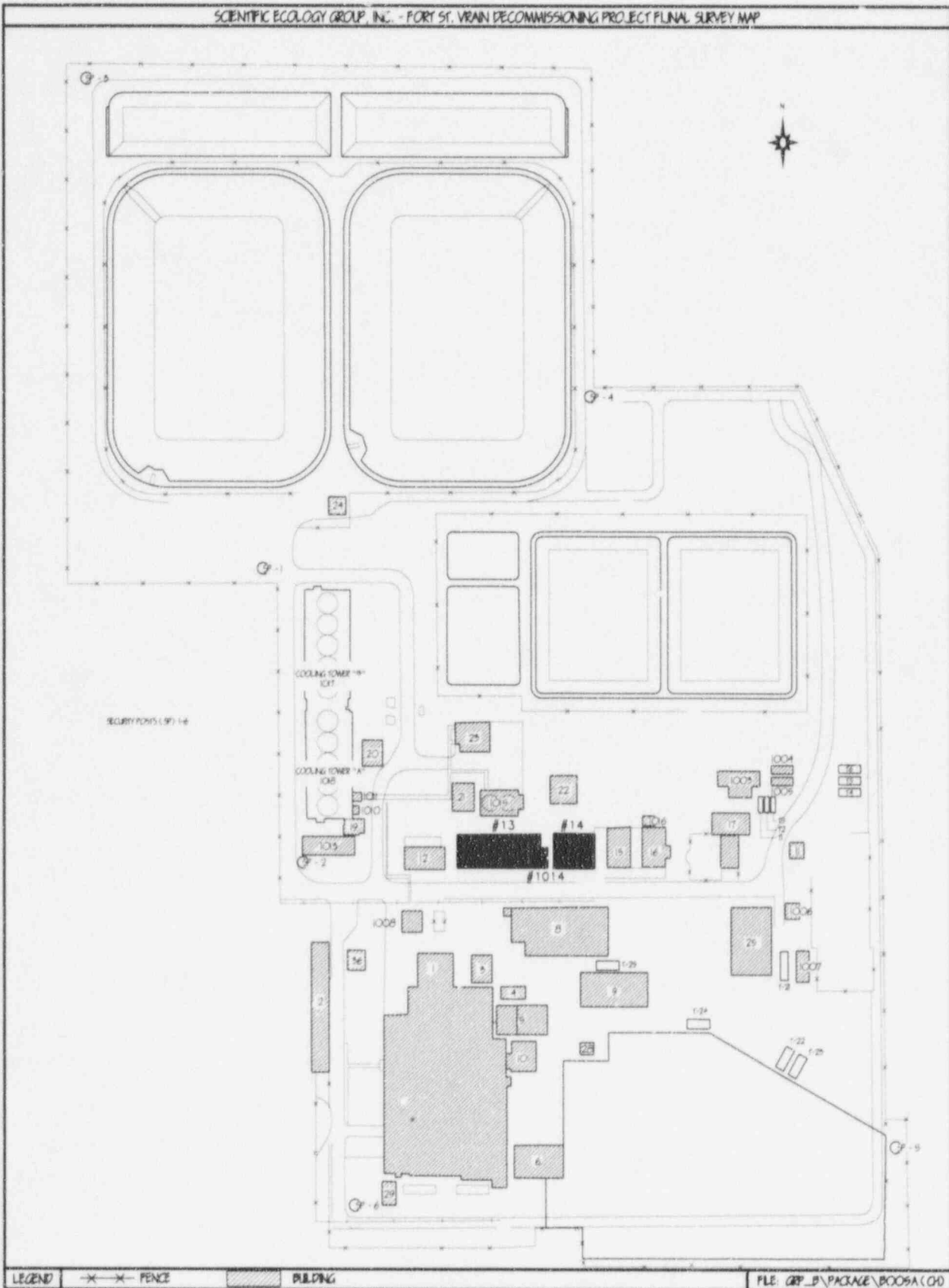


The results of total and removable surface activity measurements collected within these survey units meet the criteria for release for unrestricted use.

**Survey Area References:**

FSV Decommissioning Project Radiological Site Characterization Report - Volume 9

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP



LEGEND - X - X FENCE

█ BUILDING

FILE: GRP\_B\PACKAGE\BOOSA.C00



**Release Record - Survey Unit**

**Location Code:** B0005FZ001AZE01  
(B005A1BF01 and B005A1AF01)

**Group ID:** B

**Survey Area Number:** 0005

**Surface Category:** FZ001

**Survey Unit Classification:** AZ - Unaffected

**Survey Reason:** T01

**Survey Unit Description:** North Warehouse - Building #13  
Concrete Floors - Painted  
Concrete Floors - Bare

**Survey Unit Decommissioning and Remediation Activities:** None

### Release Record - Survey Unit

**Location Code:** B0005FZ001AZE01  
(B005A1BF01 and B005A1AF01)

**Survey Design:**

**Beta Scan:** Scanned a minimum of 10% of accessible floor and wall surfaces (below 2 m), ensuring coverage of those surfaces of highest contamination potential.

**Total Surface Activity:** 17 measurements. Collected total activity (direct) measurements at any area(s) of elevated activity identified during the scan, with the balance of the measurements uniformly distributed throughout the survey unit.

**Exposure Rate:** 17 measurements. At 1 meter from total surface activity survey measurement locations.

**$\beta\gamma$  Smears:** 17 measurements. At same survey measurement locations as total surface activity measurements.

Because the Electrical Warehouse Building #14 was reclassified as Affected, new survey instructions for the area were established under Survey Package ID: B0017. All survey measurements performed in accordance with Survey Package ID: B0005 for Building #14 were removed from the original package. The remaining 17 survey measurement locations within this survey package were collected in the North Warehouse Building #13 and the Restroom and Shower Facility, Building #1014 and were used for the statistical evaluation of the package.

#### Survey Unit Investigations:

9/7/95

On 8/28/95, LMI Detector 43-68B failed the post source check tolerance test and efficiency determination. The original set of total activity measurements acquired for location code B005A0F01 were disqualified, and the measurements were repeated using location code B005A1AF01.

SML #24 of download report 514 was collected on the floor of South Central Storage Room in the Electrical Warehouse, Building #14 and indicated net total activity of 4848 dpm/100 cm<sup>2</sup>. Due to the limited size of the room (6 m<sup>2</sup>), during the investigation the floor surrounding SML #24 was gridded into six 1 meter by 1 meter grids and five total activity measurements were collected from each grid. These 30 measurements were collected using Investigation Survey location code B005AGAF01. A 100% scan survey was also performed on the floor surface of the room and 30 smears were taken at the total activity measurement locations. No additional exposure rate measurements were obtained.

9/13/95

SML #9 of download report 543 (Investigation Survey B005AGAF01) was collected on the floor of the South Central Storage Room and indicated a total activity of 5338 dpm/100 cm<sup>2</sup>. This confirmed the initial measurement of 4848 dpm/100 cm<sup>2</sup> (SML #24 of download report 514). This also exceeded 50% of the guideline value of 5,000 dpm/100 cm<sup>2</sup> for an Unaffected Survey Unit. The room was reclassified as an Affected Survey Unit and Survey Package ID: B0017 prepared to provide appropriate survey instructions.

An addendum was prepared for Survey Package ID: B0005 requiring that an additional 100 measurements of total and removable activity be collected from equipment, cabinets, and the tools and supplies located within other portions of the building. The location code for these additional measurements was B005A02S01.

9/28/95

MK decontaminated the concrete floor surrounding SML #24/9 by removing the top several millimeters of the concrete. An area of approximately 100 cm<sup>2</sup> was decontaminated.

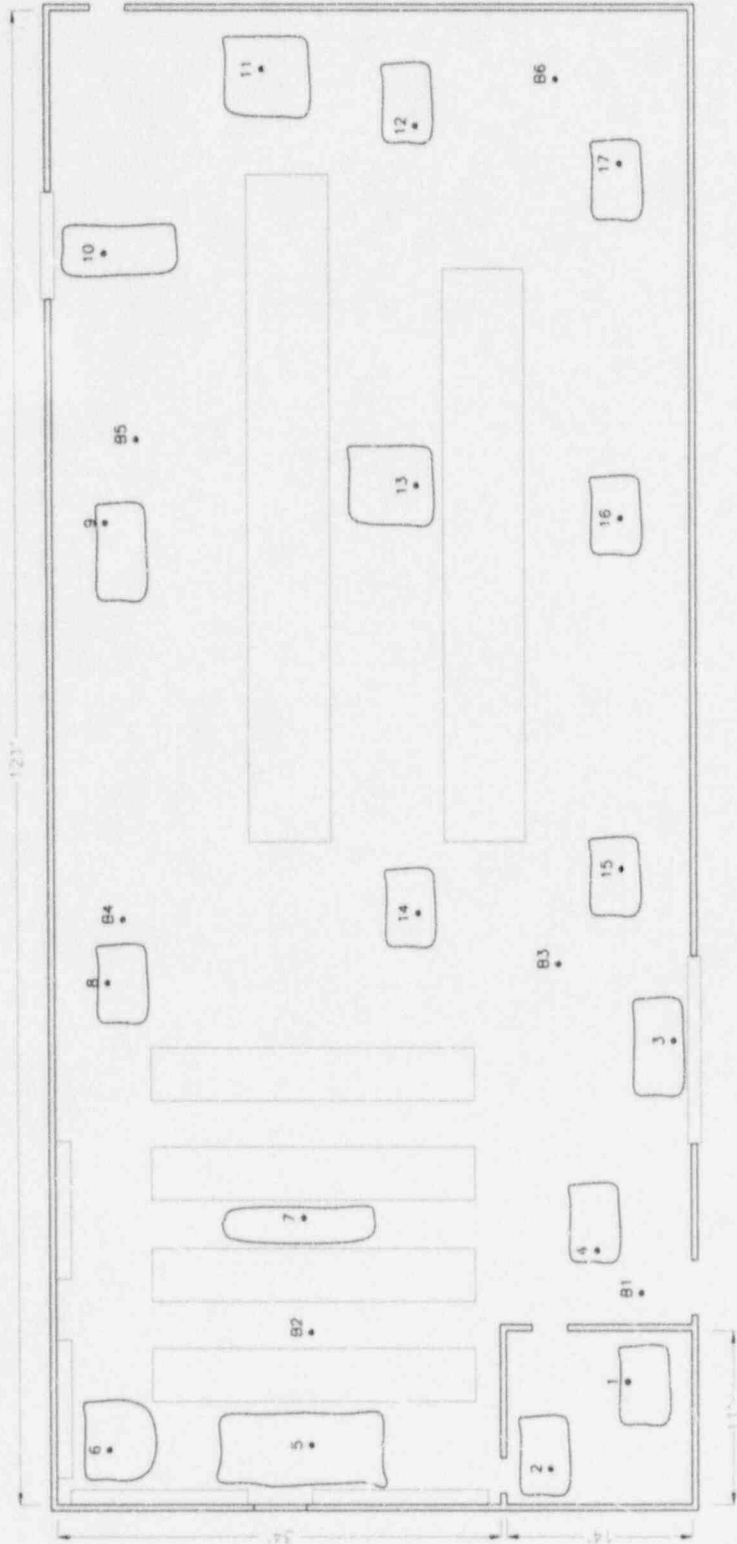
A qualitative gamma isotopic analysis of concrete chips indicated the presence of Co-60. No other licensed material was detected.

During the resurvey of the storage room as an affected survey unit in accordance with the instructions provided in Survey Package ID: B0017, contaminated tools were discovered (Refer to RORs 95-058 and 95-059). Final survey of Building #14 was discontinued under Survey Package ID: B0005, and the addendum to Survey Package ID: B0005 requiring 100 additional measurements was not implemented.

A characterization survey consisting of a scan of approximately 1100 hand tools was performed. Four (4) additional tools and the rung of a step ladder were found to have low levels of residual activity. Based on the characterization survey, the remaining portions of Building #14 were reclassified as Affected and surveyed in accordance with the instructions provided in Survey Package ID: B0017. Measurements taken in Building #14 under Survey Package ID: B0005 as an Unaffected Survey Unit were not used.

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAN DECOMMISSIONING PROJECT FINAL SURVEY MAP

NORTH WAREHOUSE - BLDG 15



Survey Package ID: BOOS  
 Location Code: BOOS-AORFOI  
 Description: CONCRETE FLOORS - PAINTED (SML #1-2)  
 Location Code: BOOS-AOAF01  
 Description: CONCRETE FLOORS - BARE (SML #3-17)

Master Drawing #: SITE SUB  
 Bldg: NORTH WAREHOUSE - BLDG 15  
 Elev: 4791'

Approx. M<sup>2</sup>: 15  
 Grid Size: N/A

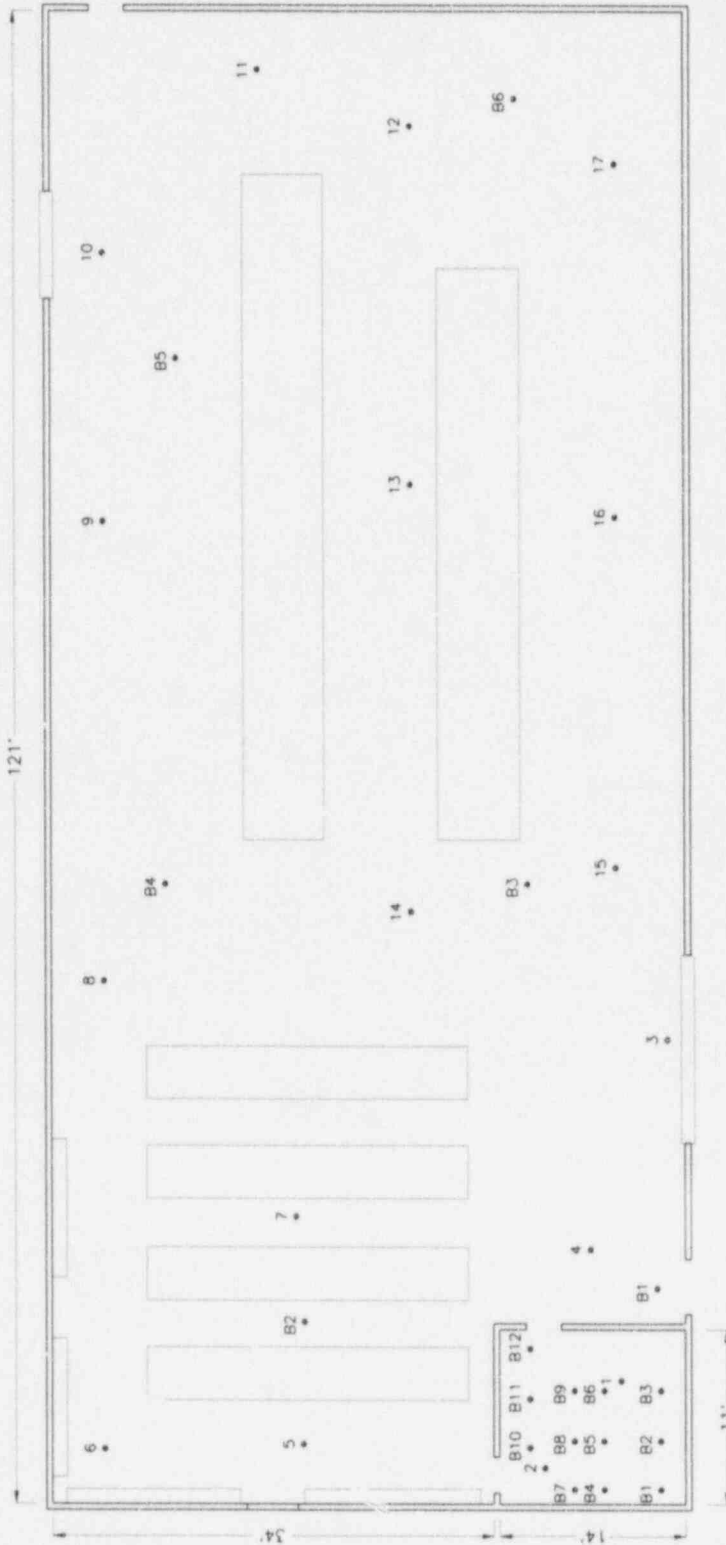
Approx. M<sup>2</sup>: 522  
 Grid Size: N/A

Signatures on file

LEGEND  
 ● FLOOR REGENERATION LOCATION  
 ○ FLOOR SCAN LOCATION  
 ○ WALL SCAN LOCATION  
 \* - BLENDED BARRING  
 ps - PHOTOGRAPH  
 FILE: GRP\_P\PACKAGE\BOOSA.GXD

SCIENTIFIC ECOLOGY GROUP, INC. - FURT ST. BRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

NORTH WAREHOUSE - BLDG 15



Survey Package ID:	BOOS	Master Drawing #:	SITE SLIP	Bldg:	NORTH WAREHOUSE - BLDG 15	Elev:	4791'
Location Code:	BOOSAIPOI	Description:	CONCRETE FLOORS - PAINTED (SAL #1-2)	Approx. M <sup>2</sup> :	15	Grid Size:	N/A
<input type="checkbox"/> Beta Scan	<input type="checkbox"/> Gamma Scan	<input type="checkbox"/> Gamma Exp. Rate	<input type="checkbox"/> Total Activity	<input type="checkbox"/> H-3 Swabs	<input type="checkbox"/> H-3 Swabs	<input type="checkbox"/> Surface Swab	<input type="checkbox"/> Other
Location Code:	BOOSAIPOI	Description:	CONCRETE FLOORS - BARE (SAL #3-17)	Approx. M <sup>2</sup> :	522	Grid Size:	N/A
<input type="checkbox"/> Beta Scan	<input type="checkbox"/> Gamma Scan	<input type="checkbox"/> Gamma Exp. Rate	<input type="checkbox"/> Total Activity	<input type="checkbox"/> H-3 Swabs	<input type="checkbox"/> H-3 Swabs	<input type="checkbox"/> Surface Swab	<input type="checkbox"/> Other
Signatures on file							
LEGEND		<input type="checkbox"/> WALL MEASUREMENT LOCATION	<input type="checkbox"/> FLOOR MEASUREMENT LOCATION	<input type="checkbox"/> WALL SCAN LOCATION	<input type="checkbox"/> P# - PACKAGING	<input type="checkbox"/> * - ELEVATED BEARING	FILE: GRP_B\PACKAGE\BOOSHA (04)



**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B  
**Survey Unit Code:** B0005FZ001AZE01  
**Mediums:** Concrete - Painted, Concrete - Bare

**Group ID:** B  
**Survey Area Number:** 0005  
**Surface Category:** FZ001 - Floor & Trench Surfaces  
**Survey Unit Classification:** AZ - Unaffected Structure  
**Survey Reason:** E01 - Re-Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	165.9
Mean	92.0
Maximum	450.4
Minimum	-117.8
Standard Deviation	174.6
Minimum Detectable Activity	950.7
Critical Level	455.1
Samples Reported	17
Samples Prescribed	17

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 1,250.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 1,250.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 2,500.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 5,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test



Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0005FZ001AZE01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 455.1 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 1,250.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 2,500.0 DPM/100 cm<sup>2</sup>

Medium: Concrete - Painted

<u>Download #</u> <u>-Station #</u>	<u>Location #</u>	<u>Activity</u>
543-1	1	-76.7
543-1	2	-61.7

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0005FZ001AZE01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 448.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 1,250.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 2,500.0 DPM/100 cm<sup>2</sup>

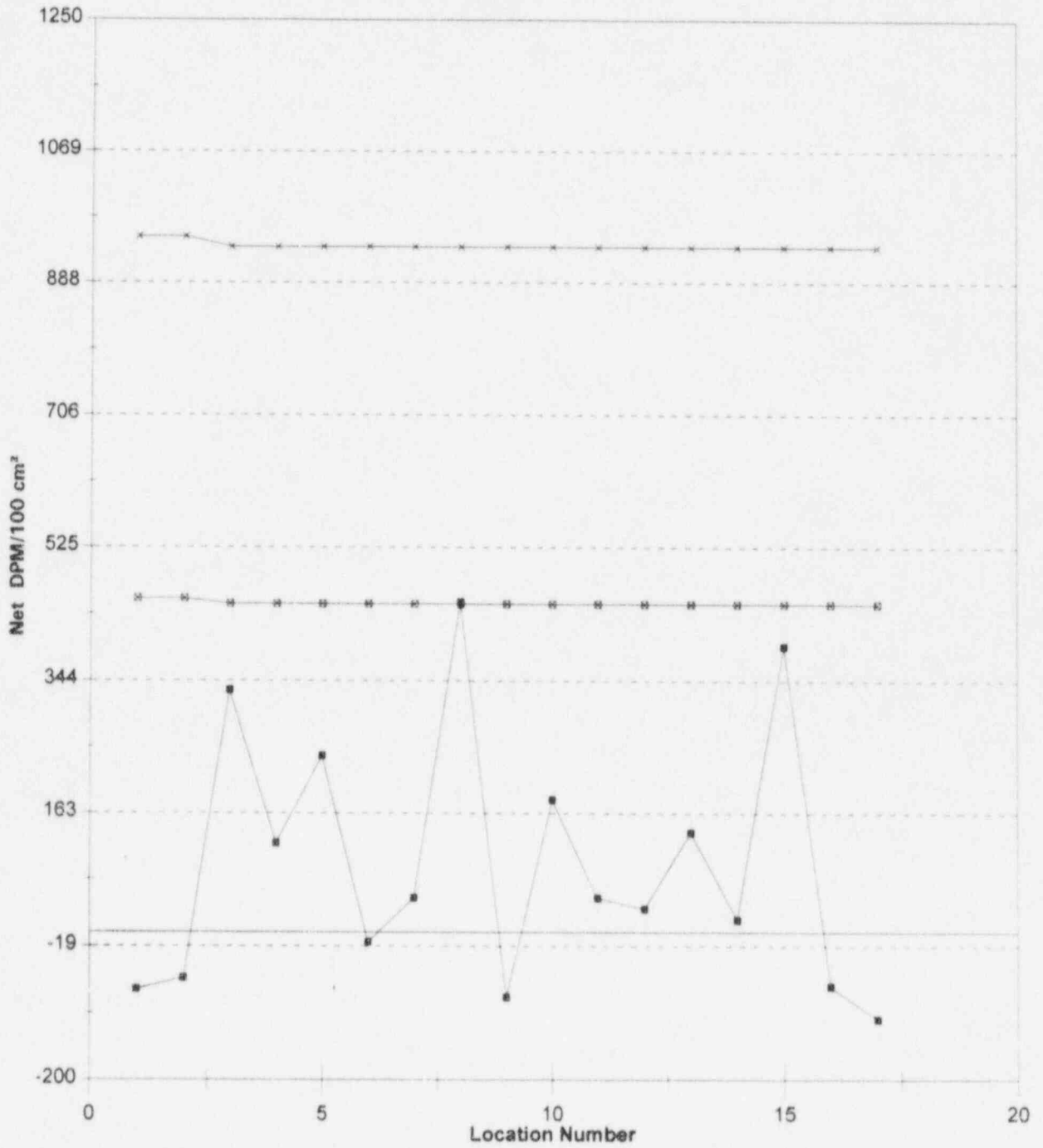
**Medium:** Concrete - Bare

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
543-1	3	330.8
543-1	4	121.5
543-1	5	241.1
543-1	6	-13.1
543-1	7	46.7
543-1	8	<u>450.4</u>
543-1	9	-87.9
543-1	10	181.3
543-1	11	46.7
543-1	12	31.8
543-1	13	136.4
543-1	14	16.8
543-1	15	390.6
543-1	16	-72.9
543-1	17	-117.8



### Total Surface Activity - Beta Survey

Survey Unit Code: B0005FZ001AZE01



← MDA      \* Critical Level      - - - Guideline Value      ■ Activity

Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B  
Survey Unit Code: B0005FZ001AZE01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

<u>Download # -Station #</u>	<u>Medium</u>	<u>Count Time</u>	<u>Critical Level</u>	<u>MDA</u>
543-1	Concrete - Painted	15.0	455.1	950.7
543-1	Concrete - Bare	15.0	448.0	936.6

Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0005FZ001AZE01

Comments: Field Background (Bkg) reported in CPM/detector area.  
Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
Field Bkg Count time averaged over all reported samples for each medium surveyed.  
Count time is reported in seconds.

Download # -Station #	Medium	Count Time	Field Bkg	Medium Bkg
543-1	Concrete - Painted	15.0	479.3	767.00
543-1	Concrete - Bare	15.0	458.3	767.00

**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** B0005FZ001AZT01  
**Mediums:** Concrete - Painted, Concrete - Bare

**Group ID:** B  
**Survey Area Number:** 0005  
**Surface Category:** FZ001 - Floor & Trench Surfaces  
**Survey Unit Classification:** AZ - Unaffected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
<b>Upper Confidence Level (UCL)</b>	0.9
<b>Mean</b>	-0.7
<b>Maximum</b>	5.3
<b>Minimum</b>	-6.2
<b>Standard Deviation</b>	3.8
<b>Minimum Detectable Activity</b>	24.0
<b>Critical Level</b>	8.8
<b>Samples Reported</b>	17
<b>Samples Prescribed</b>	17

**Tests Performed**

<b>Samples Reported &gt;= Samples Prescribed</b>	YES	<b>Passed</b>
<b>MDA &lt; 250.0 DPM/100 cm<sup>2</sup></b>	YES	<b>Passed</b>
<b>Percent of Samples &gt; 250.0 DPM/100 cm<sup>2</sup></b>	0.0	<b>Passed (3)</b>
<b>Number of Samples &gt; 500.0 DPM/100 cm<sup>2</sup></b>	0	<b>Passed (4)</b>
<b>UCL of Mean &lt; 1,000.0 DPM/100 cm<sup>2</sup></b>	YES	<b>Passed</b>

(3) 10% Test  
(4) Single Measurement Test

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0005FZ001AZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 8.8 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 250.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 500.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Painted

<u>Location #</u>	<u>Activity</u>
1	-3.9
2	5.3

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0005FZ001AZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 8.8 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 250.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 500.0 DPM/100 cm<sup>2</sup>

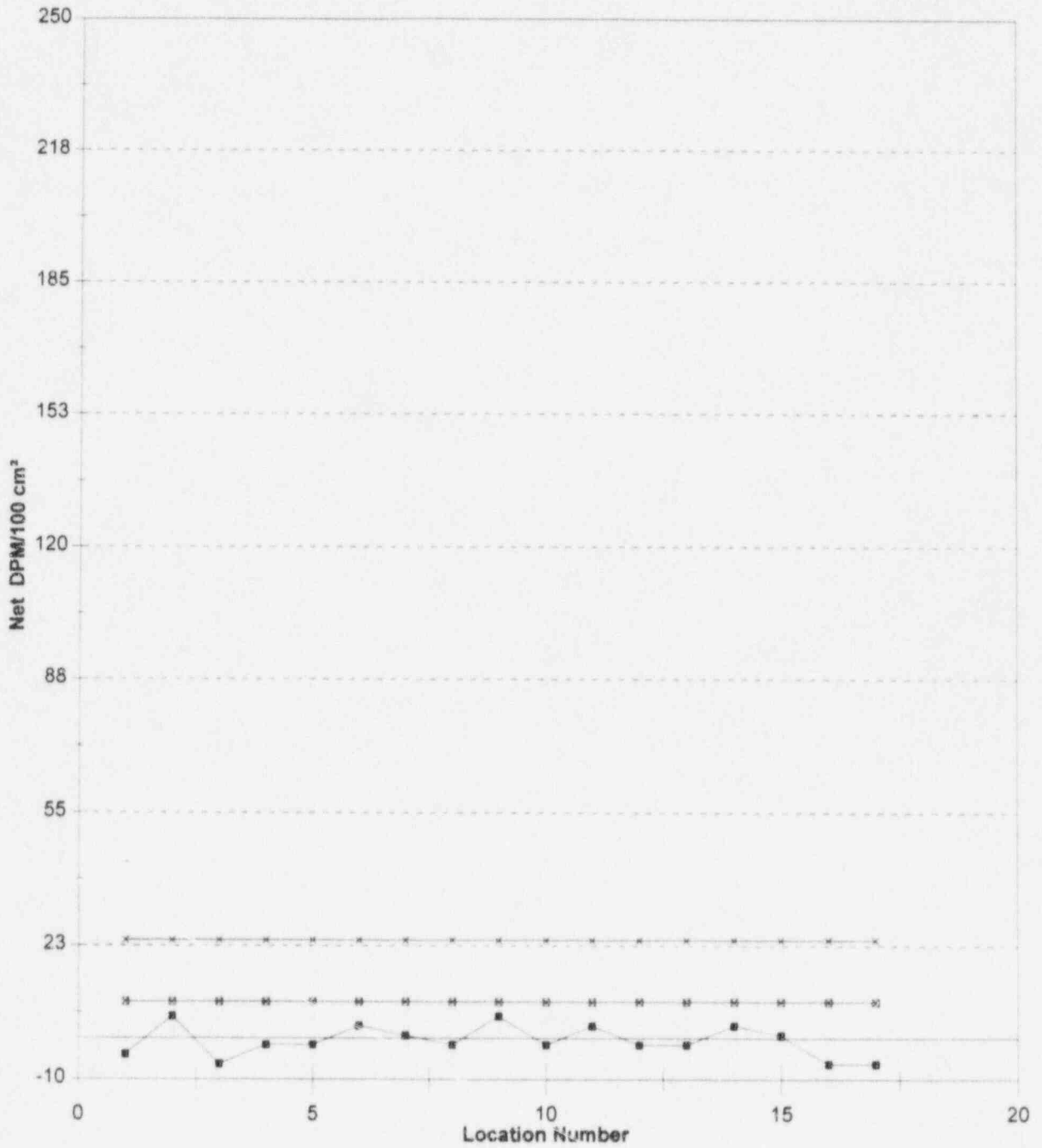
Medium: Concrete - Bare

Location #	Activity
3	-6.2
4	-1.6
5	-1.6
6	3.0
7	0.7
8	-1.6
9	5.3
10	-1.6
11	3.0
12	-1.6
13	-1.6
14	3.0
15	0.7
16	-6.2
17	-6.2





**Lab Analysis, Beta Smear**  
Survey Unit Code: B0005FZ001AZT01



— MDA      — Critical Level      — Guideline Value      — Activity



**Release Record - Survey Unit**

**Location Code:** B0005BZ001AZT01  
(B005A02B01)

**Group ID:** B

**Survey Area Number:** B0005

**Surface Category:** BZ001 - Lower Walls & Floor Surfaces

**Survey Unit Classification:** AZ - Unaffected

**Survey Reason:** T01

**Survey Unit Description:** Restroom/Shower Facility - Building #1014  
North Warehouse - Building #13  
Floors/Walls - generic material

**Survey Unit Decommissioning and Remediation Activities:** None

### Release Record - Survey Unit

**Location Code:** B0005BZ001AZT01  
(B005A02B01)

**Survey Design:**

**Beta Scan:** Scanned a minimum of 10% of accessible floor and wall surfaces (below 2 m), ensuring coverage of those surfaces of highest contamination potential.

**Total Surface Activity** 36 measurements. Collected total activity (direct) measurements at any area(s) of elevated activity identified during the scan, with the balance of the measurements uniformly distributed throughout the survey unit.

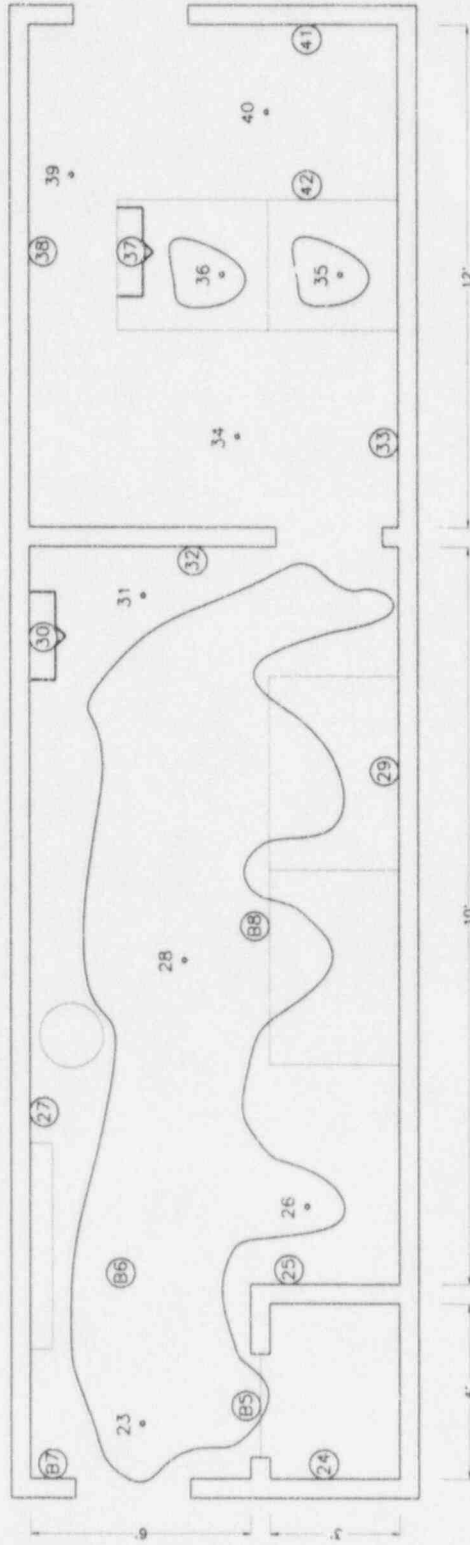
**Exposure Rate** 36 measurements. At 1 meter from total surface activity survey measurement locations.

**$\beta\gamma$  Smears** 36 measurements. At same survey measurement locations as total surface activity measurements.

**Survey Unit Investigations:** None.

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VEIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

RESTROOM AND SHOWER FACILITY - BLDG 1014



Survey Package ID: BO05 Master Drawing #: SITE\_SLIP Bldg: RESTROOM & SHOWER FACILITY - BLDG 1014 Elev: 4791'

Location Code: BO05A02B01 Description: FLOORS / WALLS - GENERIC MATERIAL (SML # 25-42) Approx. M<sup>2</sup> 108 Grid Size N/A

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scans  H-5 Scans  Liquid Sample  Surface Soil  Substrate Soil  Other  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scans  H-5 Scans  Liquid Sample  Surface Soil  Substrate Soil  Other

Location Code: \_\_\_\_\_ Description: \_\_\_\_\_

Approx. M<sup>2</sup> \_\_\_\_\_ Grid Size \_\_\_\_\_

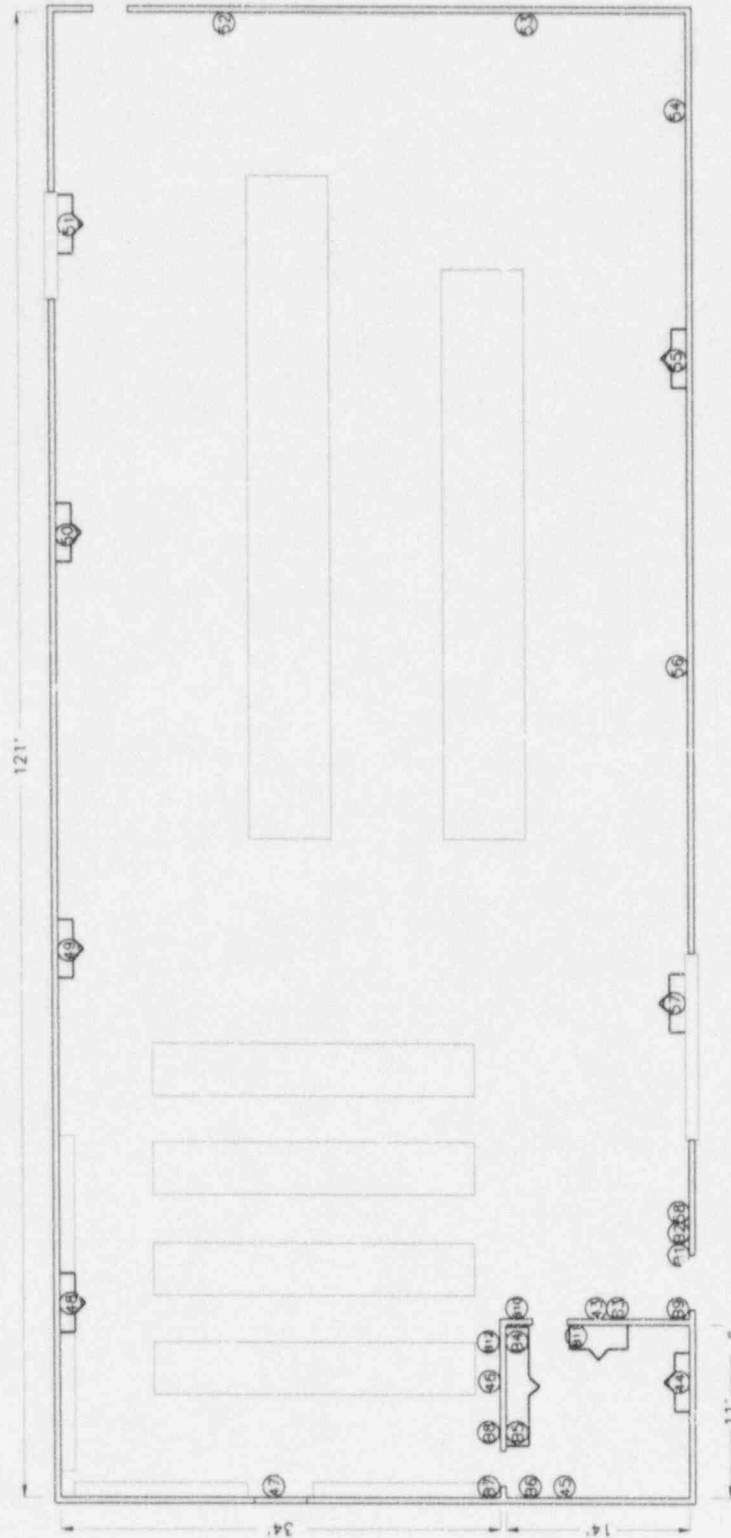
Signatures on file \_\_\_\_\_

WALL MEASUREMENT LOCATION  FLOOR MEASUREMENT LOCATION  WALL SCAN LOCATION  FLOOR SCAN LOCATION  IN-CORNER  \* - ELEVATED READING

FILE: GRP\_B\FACAGE\BO05A\GO

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. BRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

NORTH WAREHOUSE - BLDG 15



B9 - B12 WERE USED FOR BACKGROUND ON 8-28-95 AND 8-29-95  
 B11 = BACKGROUND ON 8-19-95 RESURVEY

Survey Package ID: BOOS Master Drawing #: SITE SUB Bldg: NORTH WAREHOUSE - BLDG 15 Elev: 4791'  
 Location Code: BOOSAOZBO1 Description: FLOORS / WALLS - GENERIC MATERIALS (SML #43-58) Approx. M<sup>2</sup> 237 Grid Size 1 X 1 M  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Total/Genm. Swarms  H-3 Swarms  Liquid Sample  Subst. Sample  Surface Sol  Subsurface Sol  Other  
 Location Code:  Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Total/Genm. Swarms  H-3 Swarms  Liquid Sample  Subst. Sample  Surface Sol  Subsurface Sol  Other  
 Signatures on file

LEGEND  WELL MEASUREMENT LOCATION  FLOOR SCAN LOCATION  WELL SCAN LOCATION  BKG/STAND \* - ELEVATED BEARING

FILE: GRP\_PACKAGE\BOOSAOZBO1.CAD

**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



Detector Model: LMI 43-68B  
 Survey Unit Code: B0005BZ001AZ701  
 Mediums: Generic Medium Collection #1

Group ID: B  
 Survey Area Number: 0005  
 Surface Category: BZ001 - Lower Walls & Floor Surfaces  
 Survey Unit Classification: AZ - Unaffected Structure  
 Survey Reason: T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	374.7
Mean	280.8
Maximum	1,427.5
Minimum	-143.1
Standard Deviation	334.4
Minimum Detectable Activity	701.1
Critical Level	330.6
Samples Reported	36
Samples Prescribed	36

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 1,250.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 1,250.0 DPM/100 cm <sup>2</sup>	2.8	Passed (3)
Number of Samples > 2,500.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 5,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
 (4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0005BZ001AZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 330.6 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 1,250.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 2,500.0 DPM/100 cm<sup>2</sup>

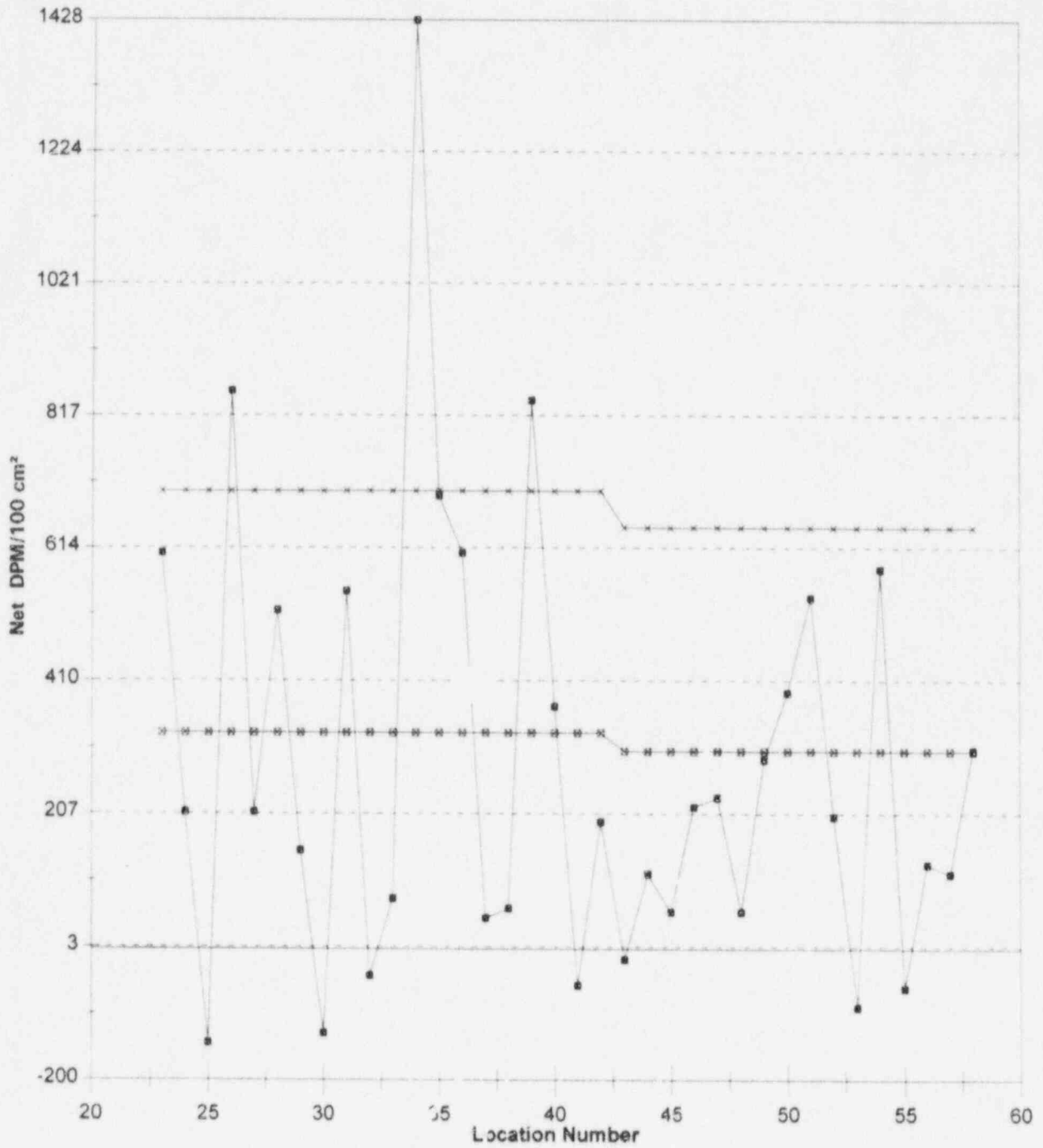
**Medium:** Generic Medium Collection #1

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
513-1	23	<u>605.5</u>
513-1	24	209.2
513-1	25	-143.1
513-1	26	<u>855.0</u>
513-1	27	209.2
513-1	28	<u>517.4</u>
513-1	29	150.5
513-1	30	-128.4
513-1	31	<u>546.8</u>
513-1	32	-40.4
513-1	33	77.1
513-1	34	<u>1427.5</u>
513-1	35	<u>693.6</u>
513-1	36	<u>605.5</u>
513-1	37	47.7
513-1	38	62.4
513-1	39	<u>840.4</u>
513-1	40	<u>370.6</u>
513-1	41	-55.0
513-1	42	194.5
515-1	43	-15.8
515-1	44	115.2
515-1	45	57.0
515-1	46	217.0
515-1	47	231.5
515-1	48	57.0
515-1	49	289.7
515-1	50	<u>391.5</u>
515-1	51	<u>537.0</u>
515-1	52	202.4
515-1	53	-88.5
515-1	54	<u>580.6</u>
515-1	55	-59.4
515-1	56	129.7
515-1	57	115.2
515-1	58	304.2



### Total Surface Activity - Beta Survey

Survey Unit Code: B0005BZ001AZT01



— MDA      \* Critical Level      - - - Guideline Value      • Activity



Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B  
Survey Unit Code: B0005BZ001AZT01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

Download # -Station #	Medium	Count Time	Critical Level	MDA
515-1	Generic Medium Collection	15.0	302.8	645.1
513-1	Generic Medium Collection	15.0	330.6	701.1

**Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0005BZ001AZT01

**Comments:** Field Background (Bkg) reported in CPM/detector area.  
 Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
 Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
 Field Bkg Count time averaged over all reported samples for each medium surveyed.  
 Count time is reported in seconds.

<b>Download # -Station #</b>	<b>Medium</b>	<b>Count Time</b>	<b>Field Bkg</b>	<b>Medium Bkg</b>
513-1	Generic Medium Collection	15.0	375.0	0.00
515-1	Generic Medium Collection	15.0	320.3	0.00

**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** B0005BZ001AZT01  
**Mediums:** Generic Medium Collection #1

**Group ID:** B  
**Survey Area Number:** 0005  
**Surface Category:** BZ001 - Lower Walls & Floor Surfaces  
**Survey Unit Classification:** AZ - Unaffected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	-0.7
Mean	-1.6
Maximum	7.6
Minimum	-6.2
Standard Deviation	3.4
Minimum Detectable Activity	24.0
Critical Level	8.8
Samples Reported	36
Samples Prescribed	36

**Tests Performed**

Samples Reported >= Samples Prescribed	YES	Passed
MDA < 250.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 250.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 500.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 1,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0005BZ001AZT01

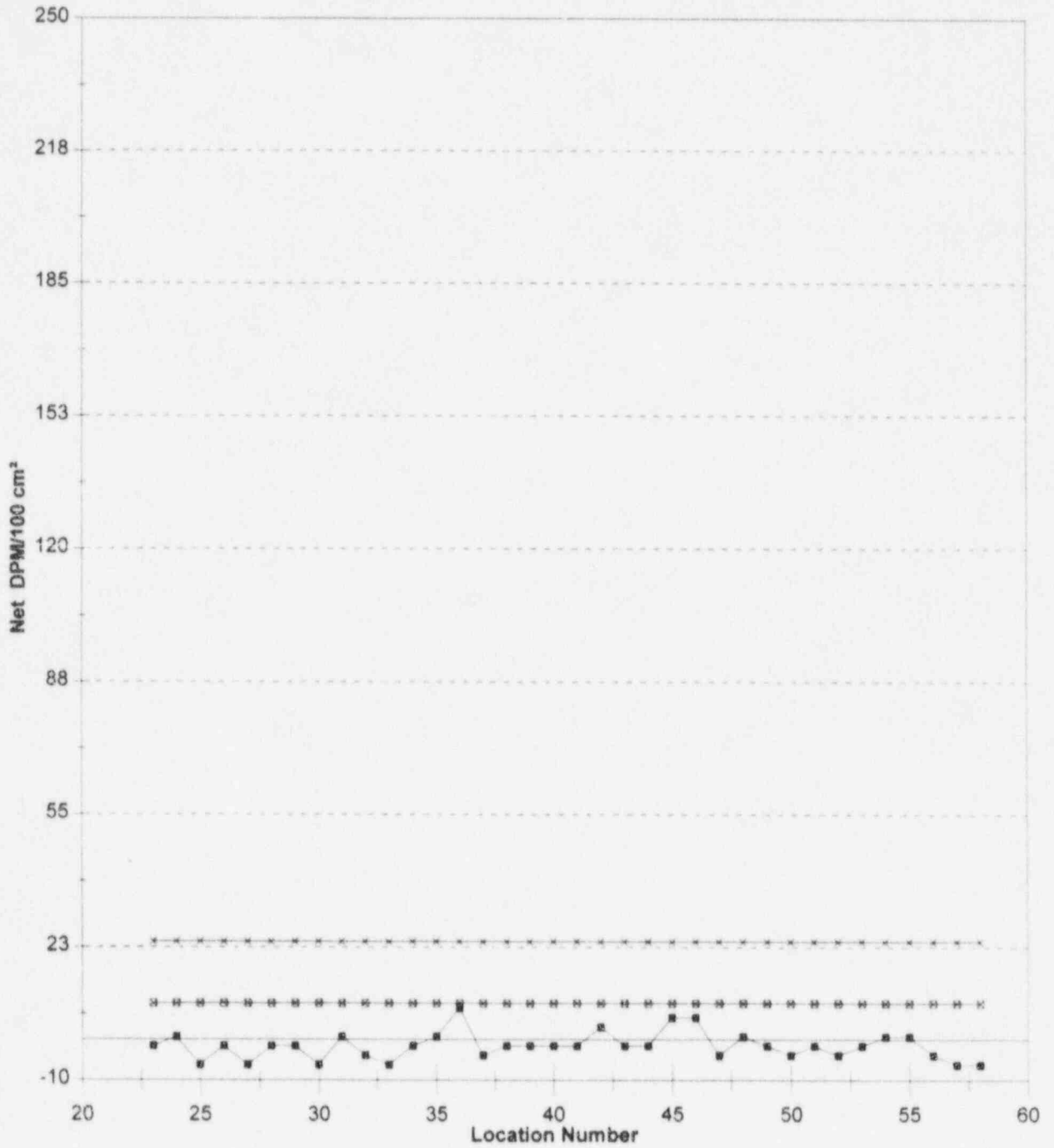
**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 8.8 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 250.0 DPM/100 cm<sup>2</sup>  
 Italic DPM<sup>A</sup> values exceed 500.0 DPM/100 cm<sup>2</sup>

**Medium:** Generic Medium Collection #1

Location #	Activity
23	-1.6
24	0.7
25	-6.2
26	-1.6
27	-6.2
28	-1.6
29	-1.6
30	-6.2
31	0.7
32	-3.9
33	-6.2
34	-1.6
35	0.7
36	7.6
37	-3.9
38	-1.6
39	-1.6
40	-1.6
41	-1.6
42	3.0
43	-1.6
44	-1.6
45	5.3
46	5.3
47	-3.9
48	0.7
49	-1.6
50	-3.9
51	-1.6
52	-3.9
53	-1.6
54	0.7
55	0.7
56	-3.9
57	-6.2
58	-6.2



**Lab Analysis, Beta Smear**  
Survey Unit Code: B0005BZ001AZT01



--- MDA      --- Critical Level      --- Guideline Value      ● Activity



**Release Record - Survey Area  
(EXAMPLE)**

**Survey Package ID:** B0014

**Survey Area Description:**

Chiller Building #3, Gas Charging Building #4, Security Diesel Generator Building #36, Acid Storage Tank Pump Building #1008.

**Survey Area Operational History:**

The Chiller building, Gas Charging building, Security Diesel Generator building, and the Acid Storage Tank Pump Building had no history of containing radioactive material.

There are no affected systems within or traversing these buildings. The portion of System #73 within the Chiller Building #3 is considered to be unaffected.

The floors and lower walls of these buildings were classified as Unaffected.



### Release Record - Survey Area

**Survey Package ID:** B0014

**Survey Area Decommissioning and Remediation Activities:** None.

**Isolation and Control Measures:** Level 2 Control

No use, storage or movement of radioactive material was permitted in Group B buildings.

All radioactive storage areas outside the Reactor Building were controlled by the Radwaste Supervisor.

The Radwaste Supervisor was notified that final surveys of Group B buildings were commencing and that no radioactive material was authorized in these areas.

All access points to these buildings were posted with a Level 2 Isolation Label.

Final configuration of this area was maintained throughout the entire survey process. Authorization was required prior to the painting of surfaces, structural renovation and/or removal of components from this area.

#### **Survey Area Conclusions:**

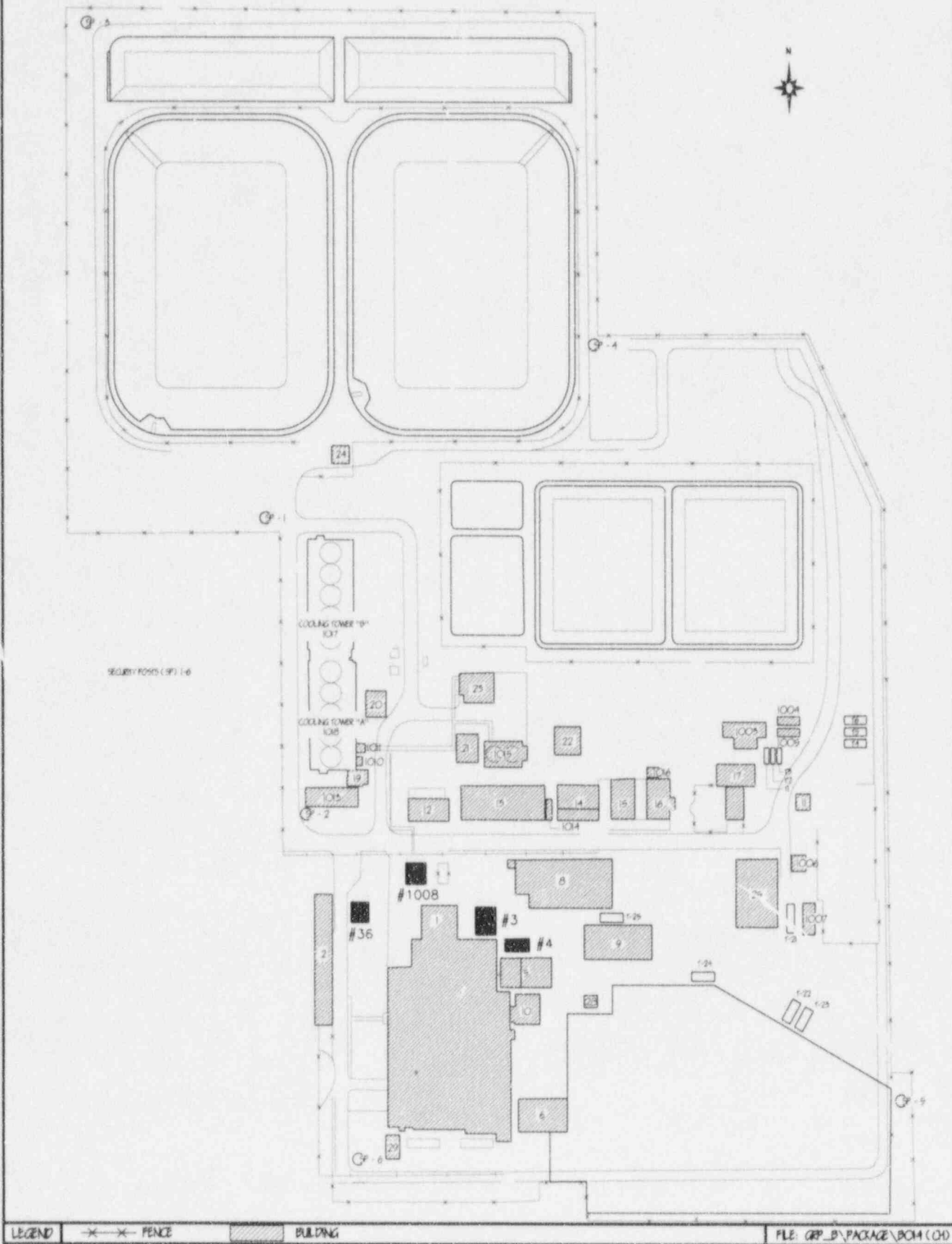
The results of exposure rate measurements collected within these survey units have not been formally evaluated, and have not been included in this "Example" Release Record.

The results of total and removable surface activity measurements collected within these survey units meet the criteria for release for unrestricted use.

#### **Survey Area References:**

FSV Decommissioning Project Radiological Site Characterization Report - Volume 9.

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP







**Release Record - Survey Unit**

**Location Code:** B0014BZ001AZT01  
(B014A0BB01, B014A0AB01, and B014A02B01)

**Group ID:** B

**Survey Area Number:** 0014

**Surface Category:** BZ001 - Lower Walls & Floor Surfaces

**Survey Unit Classification:** AZ - Unaffected Structure

**Survey Reason:** T01 - Initial Final Survey

**Survey Unit Description:** Chiller Building #3, Gas Charging Building #4, Security Diesel Generator Building #36, Acid Storage Tank Pump Building #1008

**Survey Unit Decommissioning and Remediation Activities:** None.

**Release Record - Survey Unit**

**Location Code:** B0014BZ001AZT01  
(B014A0BB01, B014A0AB01, B014A02B01)

**Survey Design:**

**Beta Scan:** Scanned a minimum of 10% of accessible floor and wall surfaces (below 2 m), ensuring coverage of those surfaces of highest contamination potential.

**Total Surface Activity:** 48 measurements. Collected total activity (direct) measurements at any area(s) of elevated activity identified during the scan, with the balance of the measurements uniformly distributed throughout the survey unit.

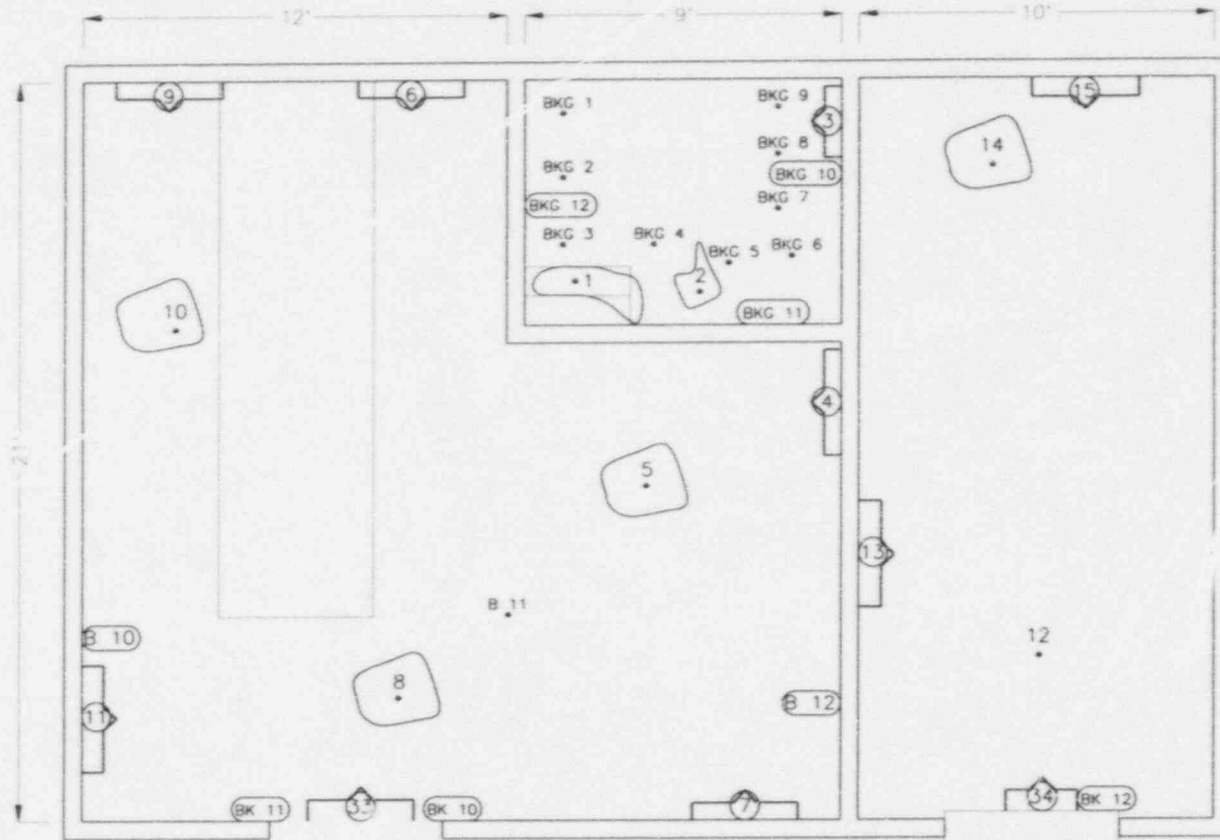
**Exposure Rate:** 48 measurements. At 1 meter from total surface activity survey measurement locations.

**$\beta\gamma$  Smears:** 48 measurements. At same survey measurement locations as total surface activity measurements.

**Survey Unit Investigations:** None.

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

SECURITY DIESEL GENERATOR - BLDG 36



B# = BACKGROUND FOR B014A0AB01

BK# = BACKGROUND FOR B014A02B01

BKG# = BACKGROUND FOR B014A0BB01

Survey Package ID: B014 Master Drawing #: SHE\_SUB Bldg: SECURITY DIESEL GENERATOR - BLDG 36 Elev: 4791'

Location Code: B014A0BB01 Description: CONCRETE FLOORS / WALLS - PAINTED (SML #1-3) Approx. M<sup>2</sup> 7 Grid Size N/A

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/ Gamma Sensors  H-9 Sensors  Liquid Sample  Sediment Sample  Surface Sol  Subsurface Sol  Other

Location Code: B014A0AB01 Description: CONCRETE FLOORS / WALLS - BARE (SML #4-15) Approx. M<sup>2</sup> 78 Grid Size N/A

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/ Gamma Sensors  H-9 Sensors  Liquid Sample  Sediment Sample  Surface Sol  Subsurface Sol  Other

Location Code: B014A02B01 Description: WALLS - GENERIC MATERIALS (SML #33-34) Approx. M<sup>2</sup> 6 Grid Size N/A

Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/ Gamma Sensors  H-9 Sensors  Liquid Sample  Sediment Sample  Surface Sol  Subsurface Sol  Other

Signatures on file

LEGEND  WALL MEASUREMENT LOCATION  FLOOR MEASUREMENT LOCATION  FLOOR SCAN LOCATION  WALL SCAN LOCATION  B# - BACKGROUND \* - ELEVATED READING FILE: GRP\_B\PACKAGE\B014.CAD

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. BRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

CHILLER BUILDING - BLDG 3



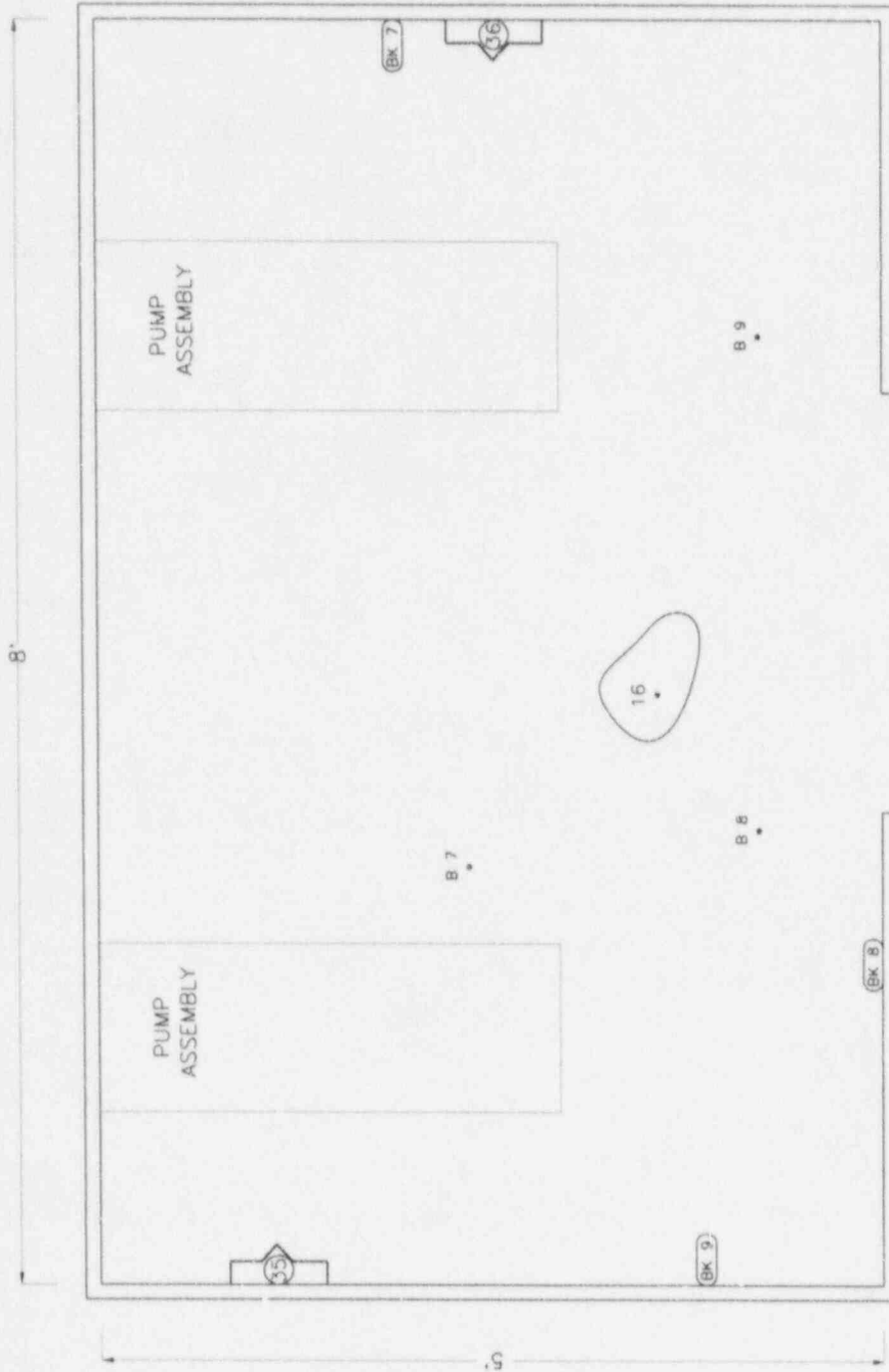
BK # = BACKGROUND FOR B014A02B01

BK # = BACKGROUND FOR B014A0AB01

Survey Package ID:	B014	Master Drawing #:	SITE SLIP	Blk#	CHILLER BUILDING - BLDG 3	Elev.	4791'
Location Code:	B014A0AB01	Description:	CONCRETE FLOORS / WALLS - BARE (SML #17-25)	Approx. M <sup>2</sup>	115	Grid Size	N/A
<input type="checkbox"/> Beta Scan <input type="checkbox"/> Gamma Scan <input type="checkbox"/> Total Activity <input type="checkbox"/> Gamma Top Edge <input type="checkbox"/> Beta/ Gamma Scans <input type="checkbox"/> H-9 Scans <input type="checkbox"/> Liquid Sample <input type="checkbox"/> Substrat Sample <input type="checkbox"/> Surface Sd <input type="checkbox"/> Slsurface Sd <input type="checkbox"/> Other							
Location Code:	B014A02B01	Description:	WALLS - GENERIC MATERIALS (SML #37-41)	Approx. M <sup>2</sup>	87	Grid Size	N/A
<input type="checkbox"/> Beta Scan <input type="checkbox"/> Gamma Scan <input type="checkbox"/> Total Activity <input type="checkbox"/> Gamma Top Edge <input type="checkbox"/> Beta/ Gamma Scans <input type="checkbox"/> H-9 Scans <input type="checkbox"/> Liquid Sample <input type="checkbox"/> Substrat Sample <input type="checkbox"/> Surface Sd <input type="checkbox"/> Slsurface Sd <input type="checkbox"/> Other							
Signatures on file							
LEGEND		<input type="checkbox"/> WALL MEASUREMENT LOCATION <input type="checkbox"/> FLOOR MEASUREMENT LOCATION <input type="checkbox"/> FLOOR SCAN LOCATION <input type="checkbox"/> WALL SCAN LOCATION <input type="checkbox"/> P# - BACKGROUND <input type="checkbox"/> * - BLANKED DRAWING		FILE: GRP_PACKAGE\B014.GPJ			

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. BRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

ACID STORAGE TANK PUMP - BLDG 100B



B# = BACKGROUND FOR B014A0A801

BK# = BACKGROUND FOR B014A02B01

Survey Package ID:	B01A	Master Drawing #:	SITE SUB	Bldg:	ACID STORAGE TANK PUMP - BLDG 100B	Elev:	4791'
Location Code:	B01A0A801	Description:	CONCRETE FLOORS / WALLS - BARE (SML #16)	Approx. M <sup>2</sup> :	4	Grid Size:	N/A
<input type="checkbox"/> Beta Scan	<input type="checkbox"/> Gamma Scan	<input type="checkbox"/> Total Activity	<input type="checkbox"/> H-3 Scans	<input type="checkbox"/> Liquid Sample	<input type="checkbox"/> Surface Sd	<input type="checkbox"/> Subsurface Sd	<input type="checkbox"/> Other
Location Code:	B01A02B01	Description:	WALLS - GENERIC MATERIALS (SML #35-36)	Approx. M <sup>2</sup> :	16	Grid Size:	N/A
<input type="checkbox"/> Beta Scan	<input type="checkbox"/> Gamma Scan	<input type="checkbox"/> Total Activity	<input type="checkbox"/> H-3 Scans	<input type="checkbox"/> Liquid Sample	<input type="checkbox"/> Surface Sd	<input type="checkbox"/> Subsurface Sd	<input type="checkbox"/> Other

Signatures on File

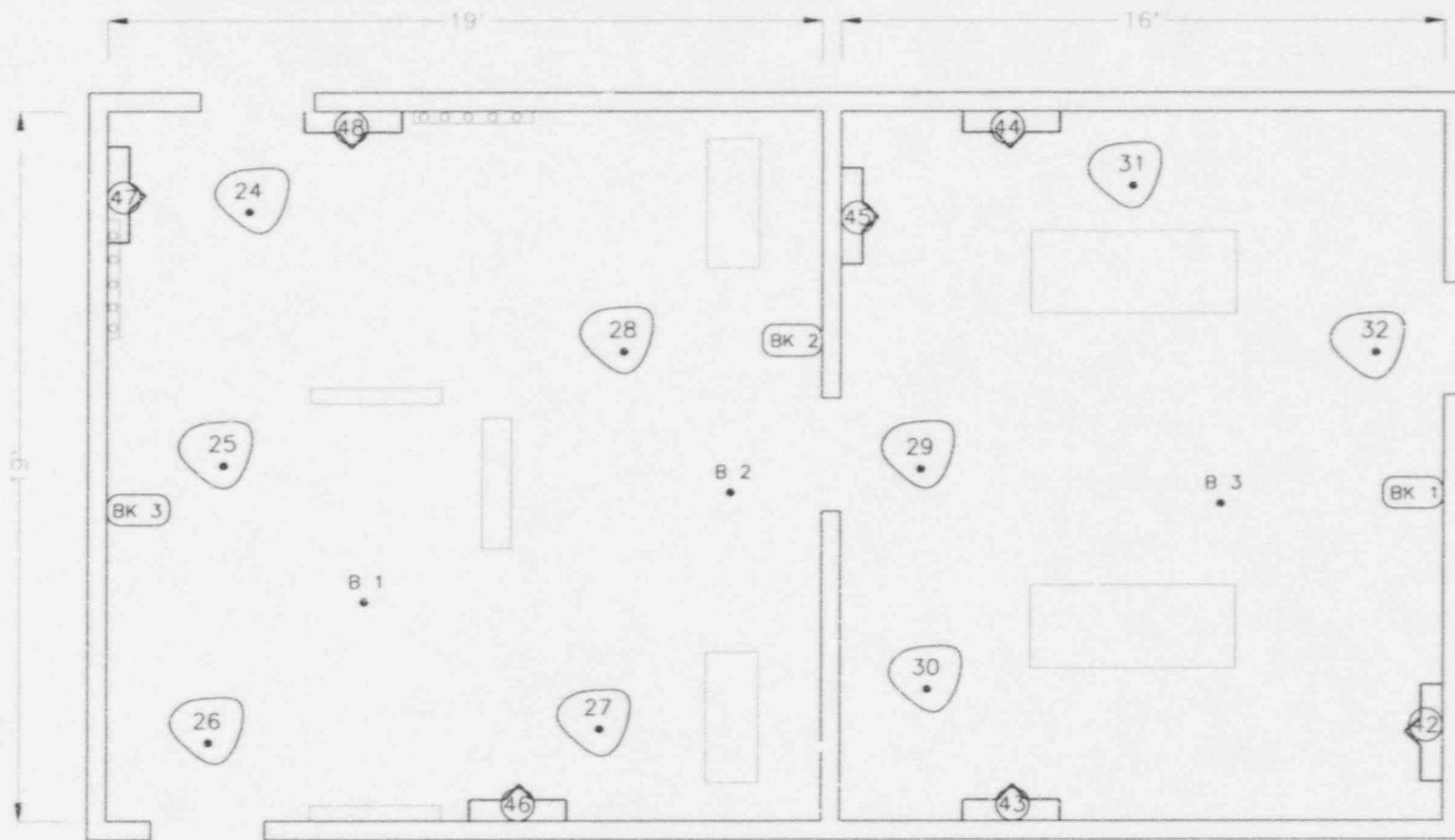
LEGEND

- WELL MEASUREMENT LOCATION
- FLOOR MEASUREMENT LOCATION
- WELL SCALLOTTION
- INCLINATION
- \* - BEHIND READING

FILE: GEP\_PACKAGE\B01A.GPJ

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

GAS CHARGING BUILDING - BLDG 4



B# = BACKGROUND FOR B014A0AB01

BK# = BACKGROUND FOR B014A02B01



Survey Package ID: B014 Master Drawing #: SITE\_SUB Bldg: GAS CHARGING BUILDING - BLDG 4 Elev: 4791'

Location Code: B014A0AB01 Description: CONCRETE FLOORS / WALLS - BARE (SNL #24-32) Approx. M<sup>2</sup> 62 Grid Size N/A

Data Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Sensors  H-β Sensors  Liquid Sample  Sediment Sample  Surface Soil  Subsurface Soil  Other

Location Code: B014A02B01 Description: WALLS - GENERIC MATERIALS (SNL #42-48) Approx. M<sup>2</sup> 77 Grid Size N/A

Data Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Sensors  H-β Sensors  Liquid Sample  Sediment Sample  Surface Soil  Subsurface Soil  Other

Signatures on file

LEGEND WALL MEASUREMENT LOCATION FLOOR MEASUREMENT LOCATION FLOOR SCAN LOCATION WALL SCAN LOCATION B# - BACKGROUND \* - ELEVATED READING

FILE: GRP\_B\PACKAGE\B014.CAD

**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B  
**Survey Unit Code:** B0014BZ001AZT01  
**Mediums:** Concrete - Painted, Concrete - Bare, Generic Medium Collection #1

**Group ID:** B  
**Survey Area Number:** 0014  
**Surface Category:** BZ001 - Lower Walls & Floor Surfaces  
**Survey Unit Classification:** AZ - Unaffected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	247.7
Mean	158.8
Maximum	1,027.5
Minimum	-533.8
Standard Deviation	365.8
Minimum Detectable Activity	973.3
Critical Level	465.7
Samples Reported	48
Samples Prescribed	48

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 1,250.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 1,250.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 2,500.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 5,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test



Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0014BZ001AZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 465.7 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 1,250.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 2,500.0 DPM/100 cm<sup>2</sup>

Medium: Concrete - Painted

<u>Download #</u> <u>-Station #</u>	<u>Location #</u>	<u>Activity</u>
551-1	1	-304.5
551-1	2	174.7
551-1	3	-412.7



Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: B0014BZ001AZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 465.5 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 1,250.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 2,500.0 DPM/100 cm<sup>2</sup>

Medium: Concrete - Bare

Download # -Station #	Location #	Activity
551-1	4	-441.1
551-1	5	<u>672.0</u>
551-1	6	-533.8
551-1	7	-332.9
551-1	8	208.2
551-1	9	-240.1
551-1	10	270.0
551-1	11	-425.6
551-1	12	316.4
551-1	13	-363.8
551-1	14	301.0
551-1	15	-54.6
551-1	16	<u>532.8</u>
551-1	17	362.8
551-1	18	<u>872.9</u>
551-1	19	177.3
551-1	20	69.1
551-1	21	<u>780.2</u>
551-1	22	<u>950.2</u>
551-1	23	<u>1027.5</u>
551-1	24	<u>702.9</u>
551-1	25	-54.6
551-1	26	440.1
551-1	27	115.4
551-1	28	223.7
551-1	29	-54.6
551-1	30	38.2
551-1	31	424.6
551-1	32	393.7

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** B0014BZ001AZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 340.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 1,250.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 2,500.0 DPM/100 cm<sup>2</sup>

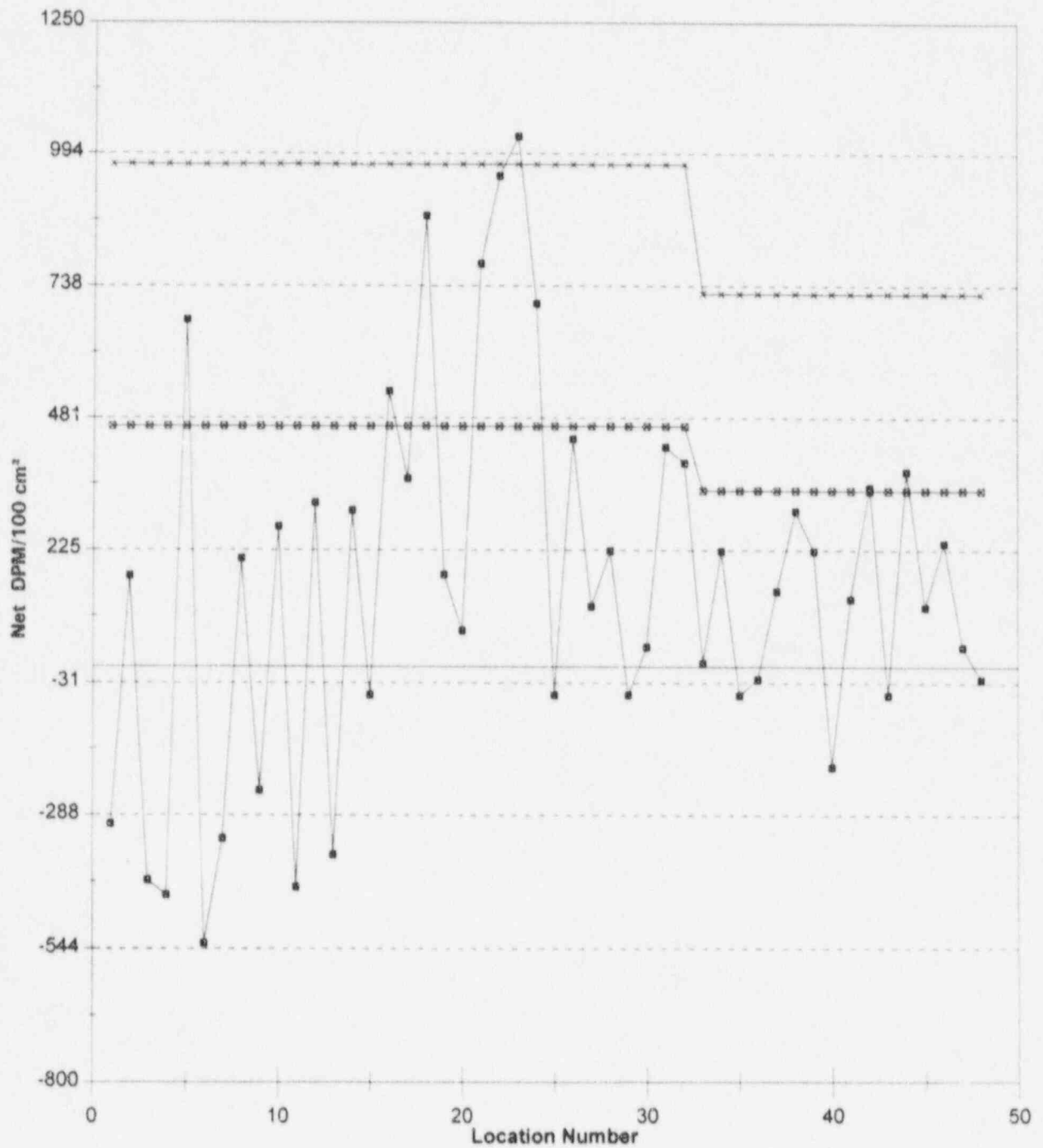
**Medium:** Generic Medium Collection #1

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
551-1	33	6.4
551-1	34	222.9
551-1	35	-55.4
551-1	36	-24.5
551-1	37	145.6
551-1	38	300.2
551-1	39	222.9
551-1	40	-194.5
551-1	41	130.1
551-1	42	<u>346.5</u>
551-1	43	-55.4
551-1	44	<u>377.5</u>
551-1	45	114.7
551-1	46	238.3
551-1	47	37.4
551-1	48	-24.5



**Total Surface Activity - Beta Survey**

Survey Unit Code: B0014BZ001AZT01



— MDA      — Critical Level      — Guideline Value      — Activity

Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B  
Survey Unit Code: B0014BZ001AZT01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

Download # -Station #	Medium	Count Time	Critical Level	MDA
551-1	Concrete - Painted	15.0	465.7	973.3
551-1	Concrete - Bare	15.0	465.5	972.9
551-1	Generic Medium Collection	15.0	340.4	722.7

**Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B  
**Survey Unit Code:** B0014BZ001AZT01

**Comments:** Field Background (Bkg) reported in CPM/detector area.  
 Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
 Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
 Field Bkg Count time averaged over all reported samples for each medium surveyed.  
 Count time is reported in seconds.

<b>Download # -Station #</b>	<b>Medium</b>	<b>Count Time</b>	<b>Field Bkg</b>	<b>Medium Bkg</b>
551-1	Concrete - Painted	15.0	472.3	767.00
551-1	Concrete - Bare	15.0	471.7	767.00
551-1	Generic Medium Collection	15.0	358.3	0.00

**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** B0014BZ001AZT01  
**Mediums:** Concrete - Painted, Concrete - Bare, Generic Medium Collection #1

**Group ID:** B  
**Survey Area Number:** 0014  
**Surface Category:** BZ001 - Lower Walls & Floor Surfaces  
**Survey Unit Classification:** AZ - Unaffected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
<b>Upper Confidence Level (UCL)</b>	1.3
<b>Mean</b>	0.3
<b>Maximum</b>	16.4
<b>Minimum</b>	-4.4
<b>Standard Deviation</b>	3.9
<b>Minimum Detectable Activity</b>	21.1
<b>Critical Level</b>	7.4
<b>Samples Reported</b>	48
<b>Samples Prescribed</b>	48

**Tests Performed**

<b>Samples Reported &gt;= Samples Prescribed</b>	YES	<b>Passed</b>
<b>MDA &lt; 250.0 DPM/100 cm<sup>2</sup></b>	YES	<b>Passed</b>
<b>Percent of Samples &gt; 250.0 DPM/100 cm<sup>2</sup></b>	0.0	<b>Passed (3)</b>
<b>Number of Samples &gt; 500.0 DPM/100 cm<sup>2</sup></b>	0	<b>Passed (4)</b>
<b>UCL of Mean &lt; 1,000.0 DPM/100 cm<sup>2</sup></b>	YES	<b>Passed</b>

- (3) 10% Test
- (4) Single Measurement Test

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0014BZ001AZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 7.4 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 250.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 500.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Painted

<u>Location #</u>	<u>Activity</u>
1	-2.1
2	0.2
3	0.2

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** B0014BZ001AZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 7.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 250.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 500.0 DPM/100 cm<sup>2</sup>

**Medium:** Concrete - Bare

<b>Location #</b>	<b>Activity</b>
4	2.5
5	0.2
6	-2.1
7	2.5
8	<u>16.4</u>
9	0.2
10	2.5
11	0.2
12	2.5
13	-4.4
14	-2.1
15	0.2
16	4.9
17	2.5
18	0.2
19	0.2
20	-2.1
21	0.2
22	4.9
23	0.2
24	-2.1
25	-2.1
26	2.5
27	4.9
28	-2.1
29	0.2
30	0.2
31	-4.4
32	2.5



Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: B0014BZ001AZT01

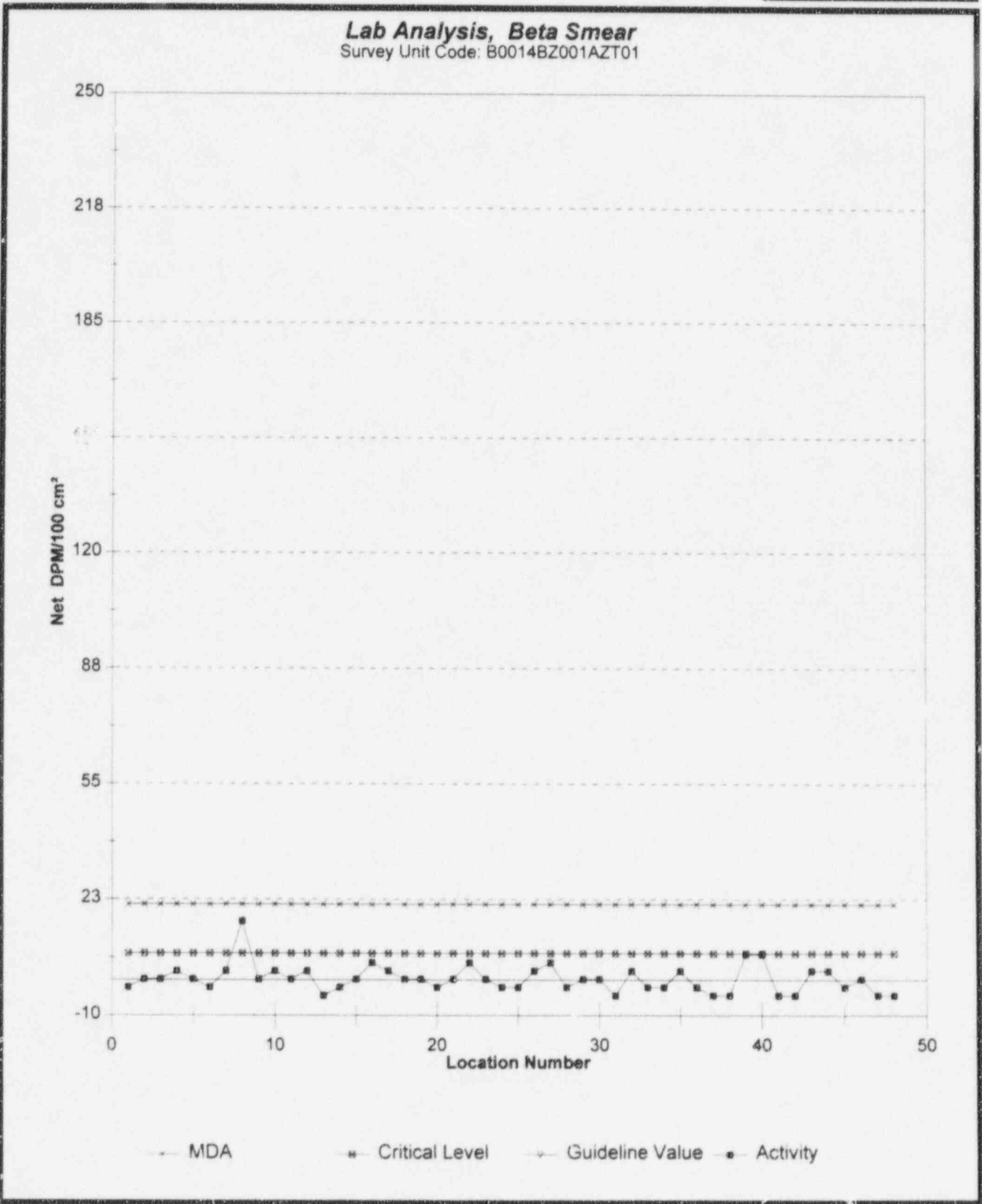
Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 7.4 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 250.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 500.0 DPM/100 cm<sup>2</sup>

Medium: Generic Medium Collection #1

Location #	Activity
33	-2.1
34	-2.1
35	2.5
36	-2.1
37	-4.4
38	-4.4
39	7.2
40	7.2
41	-4.4
42	-4.4
43	2.5
44	2.5
45	-2.1
46	0.2
47	-4.4
48	-4.4



**Lab Analysis, Beta Smear**  
Survey Unit Code: B0014BZ001AZT01



**Release Record - Survey Area  
(EXAMPLE)**

Survey Package ID: 0344

**Survey Area Description:**

Production Training Complex - Building #109 - Simulator Room - Walls above 2 meters and ceiling

**Survey Area Operational History:**

The Simulator Room, located in the Production Training Complex, had no history of containing radioactive material other than non-licensed quantities of radioactive material stored in display cases and used for demonstration purposes. Display cases, which contained Yellow cake ( $U_3O_8$ ), Thorium Oxide (ThO), Thorium Dioxide ( $ThO_2$ ), Uranium Oxide, and Thorium Ore, were stored for a short time in the Simulator Room. No detectable contamination was found on any external surfaces of the display cases or floor surfaces during operational use of the room.

The Simulator Room was classified as Affected due to the storage of radioactive materials within the room. The upper walls and ceiling of the room were classified as Non-Suspect Affected. The floor and walls below 2 meters were classified as Suspect Affected and surveyed in accordance with Survey Package ID: 0341.



### **Release Record - Survey Area**

**Survey Package ID:** 0344

**Survey Area Decommissioning and Remediation Activities:** None.

**Isolation and Control Measures:** Level 1 Control

No use, storage or movement of radioactive material was permitted in Group A Buildings.

All radioactive storage areas outside the Reactor Building were controlled by the Radwaste Supervisor.

The Radwaste Supervisor was notified that final surveys of Group A Buildings were commencing and that no radioactive material was authorized in these areas.

Prior to the final survey of Group A Buildings, training sessions were held with site personnel regarding final survey isolation controls.

Final configuration of this area was maintained throughout the entire survey process. Authorization was required prior to the painting of surfaces, structural renovation and/or removal of components from this area.

#### **Survey Area Conclusions:**

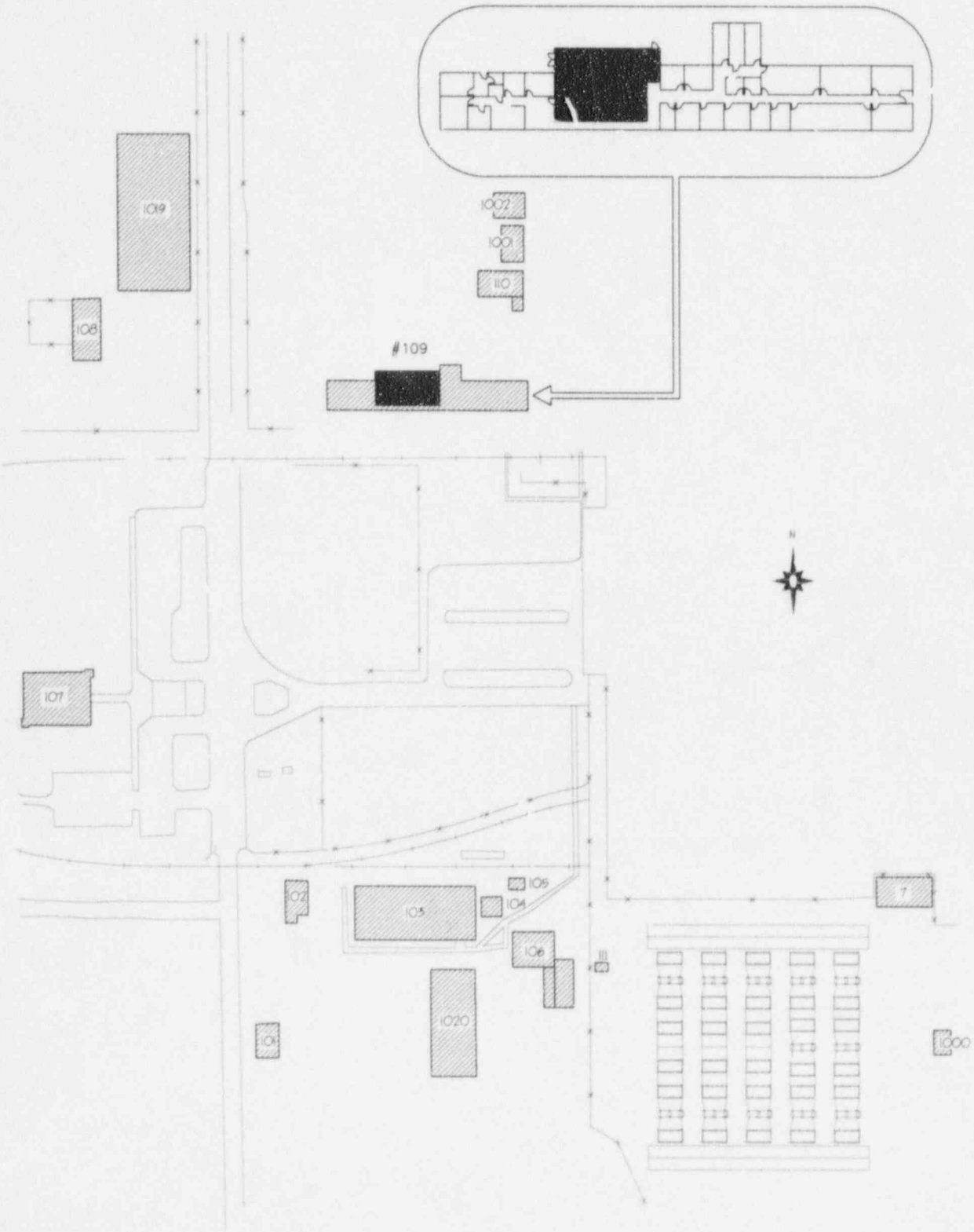
The results of exposure rate measurements collected within these survey units have not been formally evaluated, and have not been included in this "Example" Release Record.

The results of total and removable surface activity measurements collected within these survey units meet the criteria for release for unrestricted use.

#### **Survey Area References:**

FSV Decommissioning Project Radiological Site Characterization Report - Volume 9.

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP



LEGEND \*-\* FENCE [shaded box] BUILDING

FILE: GRP\_A\PACKAGE\_0544.CAD



**Release Record - Survey Unit**

**Location Code:** A0344WZ001CZT01  
(0344COMW01)

**Group ID:** A

**Survey Area Number:** 0344

**Surface Category:** WZ001 - Wall Surfaces Above 2 Meters

**Survey Unit Classification:** CZ - Non-Suspect Affected

**Survey Reason:** T01 - Initial Final Survey

**Survey Unit Description:** Production Training Complex, Building #109  
Simulator Room  
Wall Surfaces Above 2 Meters - painted drywall

**Survey Unit Decommissioning and Remediation Activities:** None.



### Release Record - Survey Unit

**Location Code:** A0344WZ001CZT01  
(0344COMW01)

**Survey Design:**

**Beta Scan:** Scanned at least 1 m<sup>2</sup> at each total surface activity survey measurement location.

**Total Surface Activity:** 40 measurements. Collected a total activity (direct) measurement within the scan of 1 m<sup>2</sup>. Collected total activity measurements at any area of elevated activity identified during the scan of 1 m<sup>2</sup>, or otherwise selected from those locations most likely to accumulate activity.

**Exposure Rate:** 40 measurements. At 1 meter from total surface activity survey measurement locations.

**$\beta\gamma$  Smears:** 40 measurements. At same survey measurement locations as total surface activity measurements.

**Survey Unit Investigations:** None.



SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VEIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

PRODUCTION TRAINING COMPLEX - BLDG 109  
 SIMULATOR ROOM  
 WALLS (PAINTED DRYWALL)



Survey Package ID: 0544 Master Drawing #: PPI-A Bldg: PRODUCTION TRAINING COMPLEX - BLDG 109 Elev: 4791'  
 Location Code: 0544-COMW01 Description: WALLS ABOVE 2 METERS Approx. M<sup>2</sup> 40 Grid Size N/A  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scans  H-5 Scans  Liquid Sample  Subsoil Sample  Surface Sol  Subsurface Sol  Other  
 Location Code: Description: Approx. M<sup>2</sup> Grid Size  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scans  H-5 Scans  Liquid Sample  Subsoil Sample  Surface Sol  Subsurface Sol  Other  
 Supplatures on file

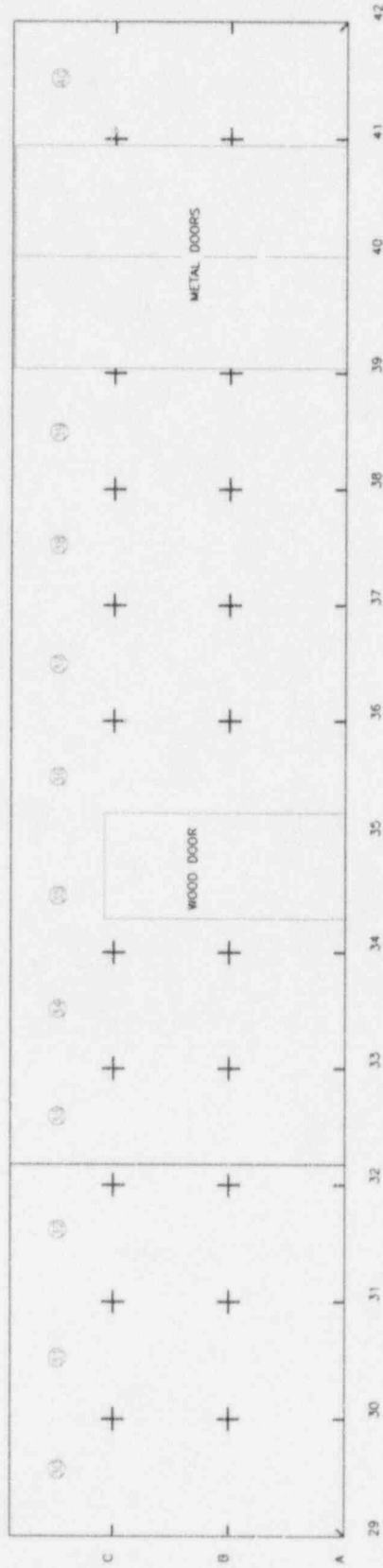
LEGEND  WALL MEASUREMENT LOCATION  FLOOR MEASUREMENT LOCATION  WALL SCAN LOCATION  FLOOR SCAN LOCATION  IN-GROUND  IN-GROUND \* - BLAMED BEARING

FILE: GPF\_A\PACKAGE\0544.CH



SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VRAIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

PRODUCTION TRAINING COMPLEX - BLDG 109  
 SIMULATOR ROOM  
 WALLS (PAINTED DRYWALL)



Survey Package ID: 0544 Master Drawing #: PPI-A Bldg: PRODUCTION TRAINING COMPLEX - BLDG 109 Elev: 4791'  
 Location Code: 0544COMW01 Description: WALLS ABOVE 2 METERS Approx. M<sup>2</sup> 40 Grid Size N/A  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scanners  H-9 Scanners  Liquid Sample  Subsoil Sample  Surface Sol  Subsurface Sol  Other  
 Location Code: Description:  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scanners  H-9 Scanners  Liquid Sample  Subsoil Sample  Surface Sol  Subsurface Sol  Other  
 Signatures on file  
 LEGEND  WALL REPAIRMENT LOCATION  FLOOR REPAIRMENT LOCATION  FLOOR SCAN LOCATION  WALL SCAN LOCATION  PA - IN-CORNER  \* - REVISED BEARING  
 FILE: BRP\_A\PACKAGE\0544.L00

**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



Detector Model: LMI 43-68B  
 Survey Unit Code: A0344WZ001CZT01  
 Mediums: Drywall - Painted (Other)

Group ID: A  
 Survey Area Number: 0344  
 Surface Category: WZ001 - Wall Surfaces  
 Survey Unit Classification: CZ - Non-Suspect, Affected Structure  
 Survey Reason: T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	127.0
Mean	83.7
Maximum	447.1
Minimum	-228.7
Standard Deviation	162.7
Minimum Detectable Activity	641.4
Critical Level	302.0
Samples Reported	40
Samples Prescribed	40

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 2,000.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 2,000.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 3,000.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 4,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
 (4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Total Surface Activity - Beta Survey**



**Detector Model:** LMI 43-68B

**Survey Unit Code:** A0344WZ001CZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 302.0 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 2,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>

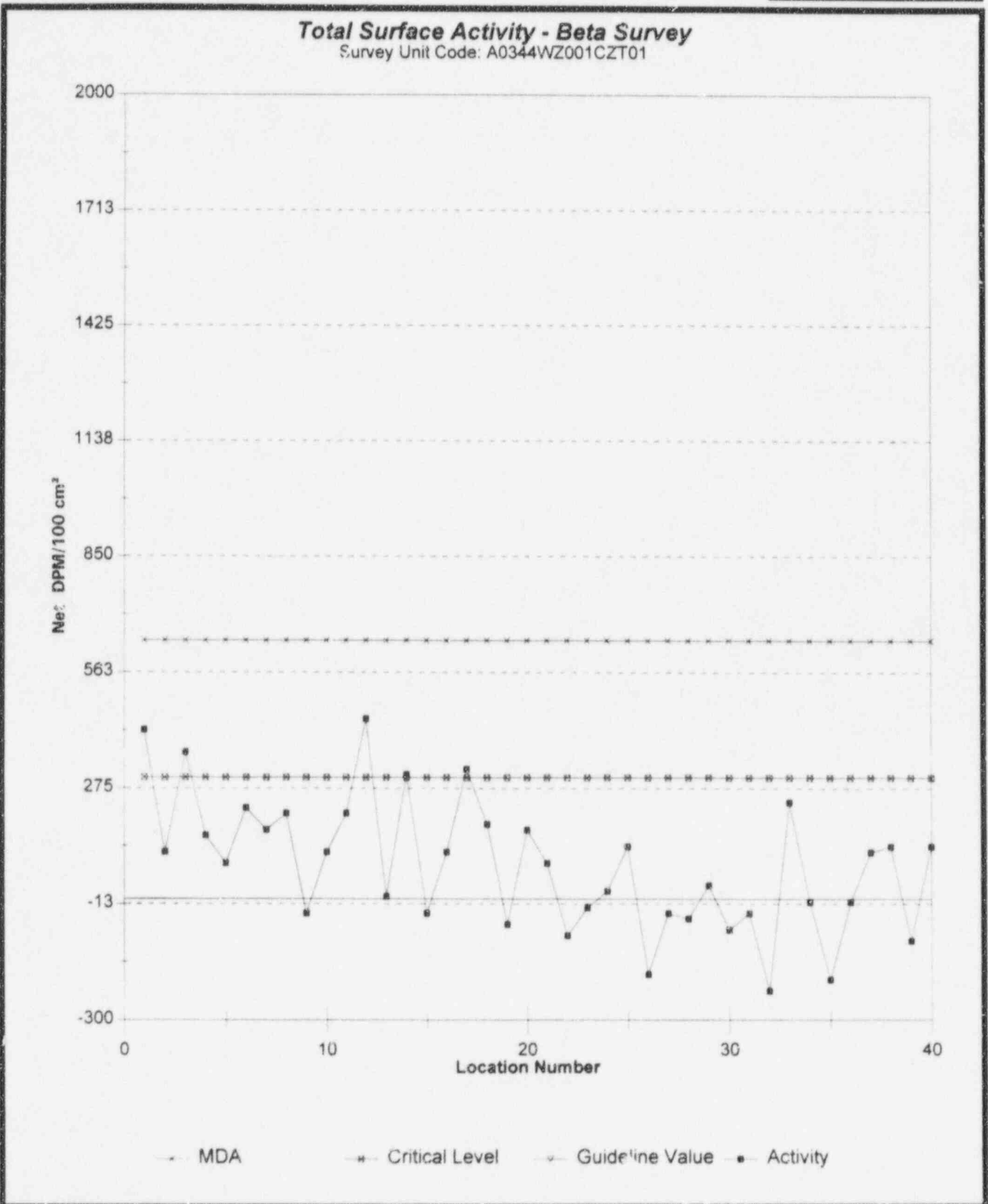
**Medium:** Drywall - Painted (Other)

<u>Download # -Station #</u>	<u>Location #</u>	<u>Activity</u>
458-1	1	<u>419.5</u>
458-1	2	116.1
458-1	3	<u>364.4</u>
458-1	4	157.5
458-1	5	88.5
458-1	6	226.4
458-1	7	171.3
458-1	8	212.6
458-1	9	-35.6
458-1	10	116.1
458-1	11	212.6
458-1	12	<u>447.1</u>
458-1	13	5.7
458-1	14	<u>309.2</u>
458-1	15	-35.6
458-1	16	116.1
458-1	17	<u>323.0</u>
458-1	18	185.1
458-1	19	-63.2
458-1	20	171.3
458-1	21	88.5
458-1	22	-90.8
458-1	23	-21.8
458-1	24	19.5
458-1	25	129.9
458-1	26	-187.4
458-1	27	-35.6
458-1	28	-49.4
458-1	29	33.3
458-1	30	-77.0
458-1	31	-35.6
458-1	32	-228.7
458-1	33	240.2
458-1	34	-8.0
458-1	35	-201.1
458-1	36	-8.0
458-1	37	116.1
458-1	38	129.9
458-1	39	-104.6
458-1	40	129.9



**Total Surface Activity - Beta Survey**

Survey Unit Code: A0344WZ001CZT01



—x— MDA      —+— Critical Level      —v— Guideline Value      —●— Activity

Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: A0344WZ001CZT01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

Download # -Station #	Medium	Count Time	Critical Level	MDA
458-1	Drywall - Painted (Other)	15.0	302.0	641.4

Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: A0344WZ001CZT01

Comments: Field Background (Bkg) reported in CPM/detector area.  
Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
Field Bkg Count time averaged over all reported samples for each medium surveyed.  
Count time is reported in seconds.

Download # -Station #	Medium	Count Time	Field Bkg	Medium Bkg
458-1	Drywall - Painted (Other)	15.0	354.3	0.00

**Release Record - Statistical Summary  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears  
**Survey Unit Code:** A0344WZ001CZT01  
**Mediums:** Drywall - Painted (Other)

**Group ID:** A  
**Survey Area Number:** 0344  
**Surface Category:** WZ001 - Wall Surfaces  
**Survey Unit Classification:** CZ - Non-Suspect, Affected Structure  
**Survey Reason:** T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	1.1
Mean	0.1
Maximum	10.2
Minimum	-6.0
Standard Deviation	3.8
Minimum Detectable Activity	23.6
Critical Level	8.7
Samples Reported	40
Samples Prescribed	40

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 187.5 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 375.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 562.5 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 750.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

**Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey**



**Detector Model:** Lab Analysis , Beta Smears

**Survey Unit Code:** A0344WZ001CZT01

**Comments:** Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 8.7 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 375.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 562.5 DPM/100 cm<sup>2</sup>

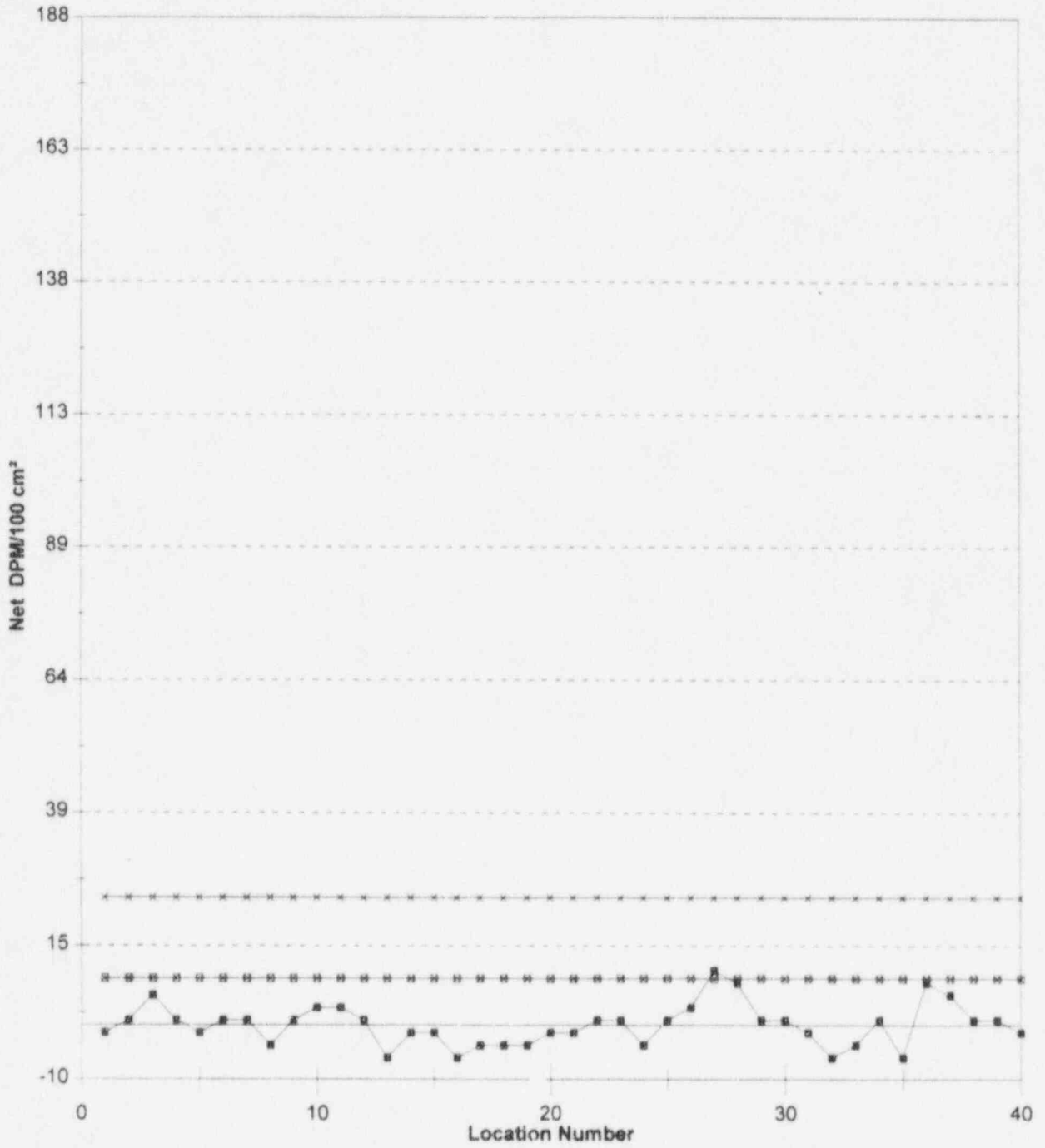
**Medium:** Drywall - Painted (Other)

Location #	Activity
1	-1.4
2	0.9
3	5.6
4	0.9
5	-1.4
6	0.9
7	0.9
8	-3.7
9	0.9
10	3.2
11	3.2
12	0.9
13	-6.0
14	-1.4
15	-1.4
16	-6.0
17	-3.7
18	-3.7
19	-3.7
20	-1.4
21	-1.4
22	0.9
23	0.9
24	-3.7
25	0.9
26	3.2
27	<u>10.2</u>
28	7.9
29	0.9
30	0.9
31	-1.4
32	-6.0
33	-3.7
34	0.9
35	-6.0
36	7.9
37	5.6
38	0.9
39	0.9
40	-1.4





**Lab Analysis, Beta Smear**  
Survey Unit Code: A0344WZ001CZT01



--- MDA      --- Critical Level      --- Guideline Value      ● Activity



**Release Record - Survey Unit**

**Location Code:** A0344CZ001CZT01  
(0344C0MC01)

**Group ID:** A

**Survey Area Number:** 0344

**Surface Category:** CZ001 - Ceiling Surfaces

**Survey Unit Classification:** CZ - Non-Suspect Affected

**Survey Reason:** T01 - Initial Final Survey

**Survey Unit Description:** Production Training Complex, Bldg #109  
Simulator Room  
Ceiling - painted drywall

**Survey Unit Decommissioning and Remediation Activities:** None.



### Release Record - Survey Unit

**Location Code:** A0344CZ001CZT01  
(0344C0MC01)

**Survey Design:**

**Beta Scan:** Scanned at least 1 m<sup>2</sup> at each total surface activity survey measurement location.

**Total Surface Activity:** 30 measurements. Collected a total activity (direct measurement within the scan of 1 m<sup>2</sup>. Collected total activity measurements at any area of elevated activity identified during the scan of 1 m<sup>2</sup>, or otherwise selected from those locations most likely to accumulate activity.

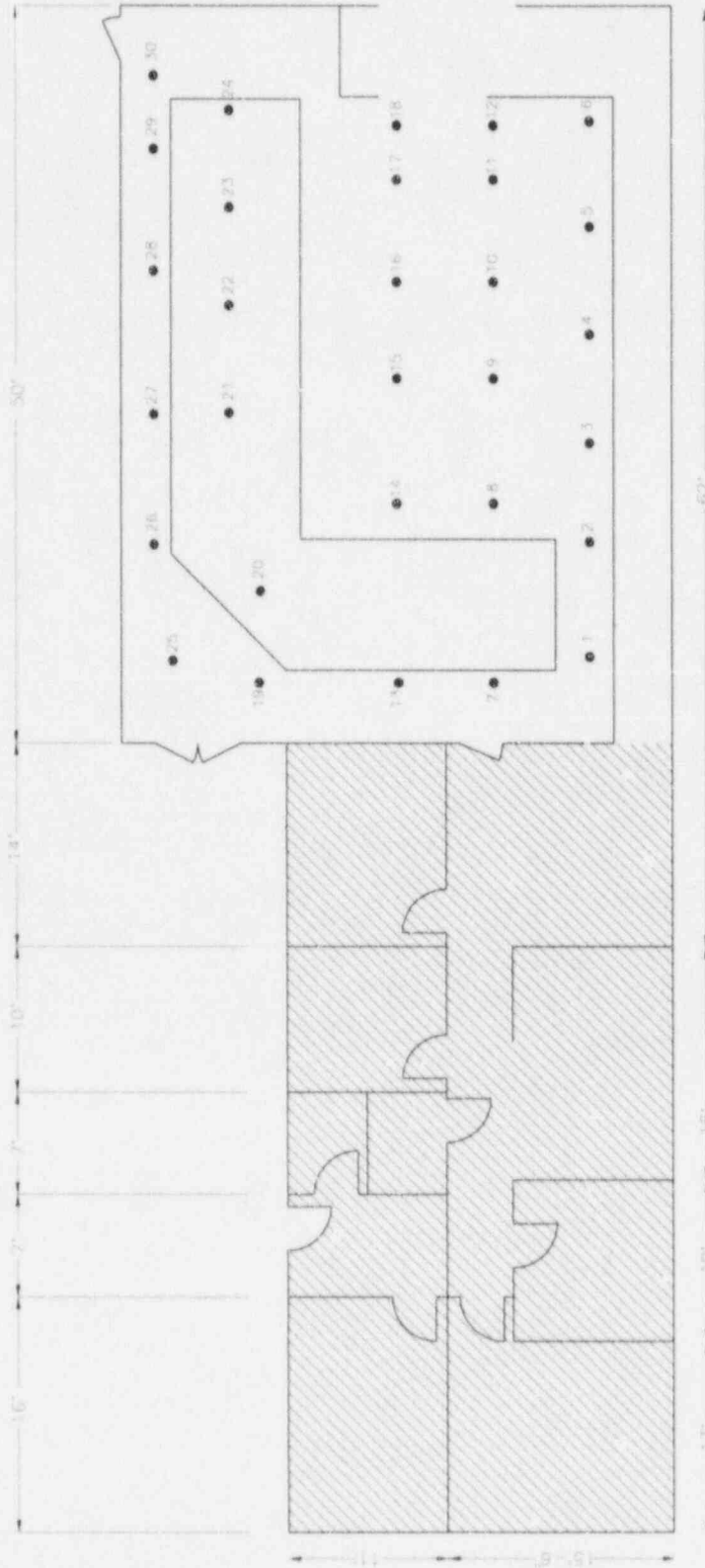
**Exposure Rate:** 30 measurements. At 1 meter from total surface activity survey measurement locations.

**$\beta\gamma$  Smears:** 30 measurements. At same survey measurement locations as total surface activity measurements.

**Survey Unit Investigations:** None.

SCIENTIFIC ECOLOGY GROUP, INC. - FORT ST. VEIN DECOMMISSIONING PROJECT FINAL SURVEY MAP

PRODUCTION TRAINING COMPLEX - BLDG 109  
 SIMULATOR ROOM - WEST SIDE  
 CEILING



Survey Package ID: 0344 Master Drawing #: PPI-A Bid: PRODUCTION TRAINING COMPLEX - BLDG 109 Elev: 4791'  
 Location Code: 0344COMCI Description: CEILING - PAINTED Approx. M<sup>2</sup> 145 Grid Size N/A  
 Beta Scan  Gamma Scan  Total Activity  Gamma Exp. Rate  Beta/Gamma Scans  H-3 Scans  H-3 Scans  Lateral Sample  Substrate Sample  Surface Swab  Surface Swab  Substrate Swab  Other  
 Location Code:  Total Activity  Gamma Exp. Rate  Beta/Gamma Scans  H-3 Scans  Lateral Sample  Substrate Sample  Surface Swab  Surface Swab  Substrate Swab  Other  
 Separators as file

LEGEND  WALL MEASUREMENT LOCATION  FLOOR MEASUREMENT LOCATION  WALL SCAN LOCATION  FLOOR SCAN LOCATION  \* - TOUGHDROP  \* - ELEVATED BEARING

FILE: GRP\_PACKAGE\0344.CDD

**Release Record - Statistical Summary  
Total Surface Activity - Beta Survey**



Detector Model: LMI 43-68B  
Survey Unit Code: A0344CZ001CZT01  
Mediums: Drywall - Painted (Other)

Group ID: A  
Survey Area Number: 0344  
Surface Category: CZ001 - Ceiling Surfaces  
Survey Unit Classification: CZ - Non-Suspect, Affected Structure  
Survey Reason: T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	165.9
Mean	107.8
Maximum	550.6
Minimum	-152.9
Standard Deviation	187.2
Minimum Detectable Activity	692.1
Critical Level	327.4
Samples Reported	30
Samples Prescribed	30

**Tests Performed**

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 2,000.0 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 2,000.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 3,000.0 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 4,000.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test  
(4) Single Measurement Test

Release Record - Corrected Field Activity Values  
 Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: A0344CZ001CZT01

Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
 Underlined DPM values exceed the critical level of 327.4 DPM/100 cm<sup>2</sup>  
 Bold DPM values exceed 2,000.0 DPM/100 cm<sup>2</sup>  
 Italic DPM values exceed 3,000.0 DPM/100 cm<sup>2</sup>

Medium: Drywall - Painted (Other)

Download # -Station #	Location #	Activity
458-1	1	-125.3
458-1	2	109.2
458-1	3	-83.9
458-1	4	54.0
458-1	5	-125.3
458-1	6	-42.5
458-1	7	-28.7
458-1	8	205.7
458-1	9	-28.7
458-1	10	<u>550.6</u>
458-1	11	<u>426.4</u>
458-1	12	123.0
458-1	13	95.4
458-1	14	-152.9
458-1	15	192.0
458-1	16	247.1
458-1	17	123.0
458-1	18	316.1
458-1	19	109.2
458-1	20	<u>398.9</u>
458-1	21	302.3
458-1	22	150.6
458-1	23	-83.9
458-1	24	40.2
458-1	25	<u>371.3</u>
458-1	26	192.0
458-1	27	-152.9
458-1	28	150.6
458-1	29	-70.1
458-1	30	-28.7

Scientific Ecology Group, Inc.

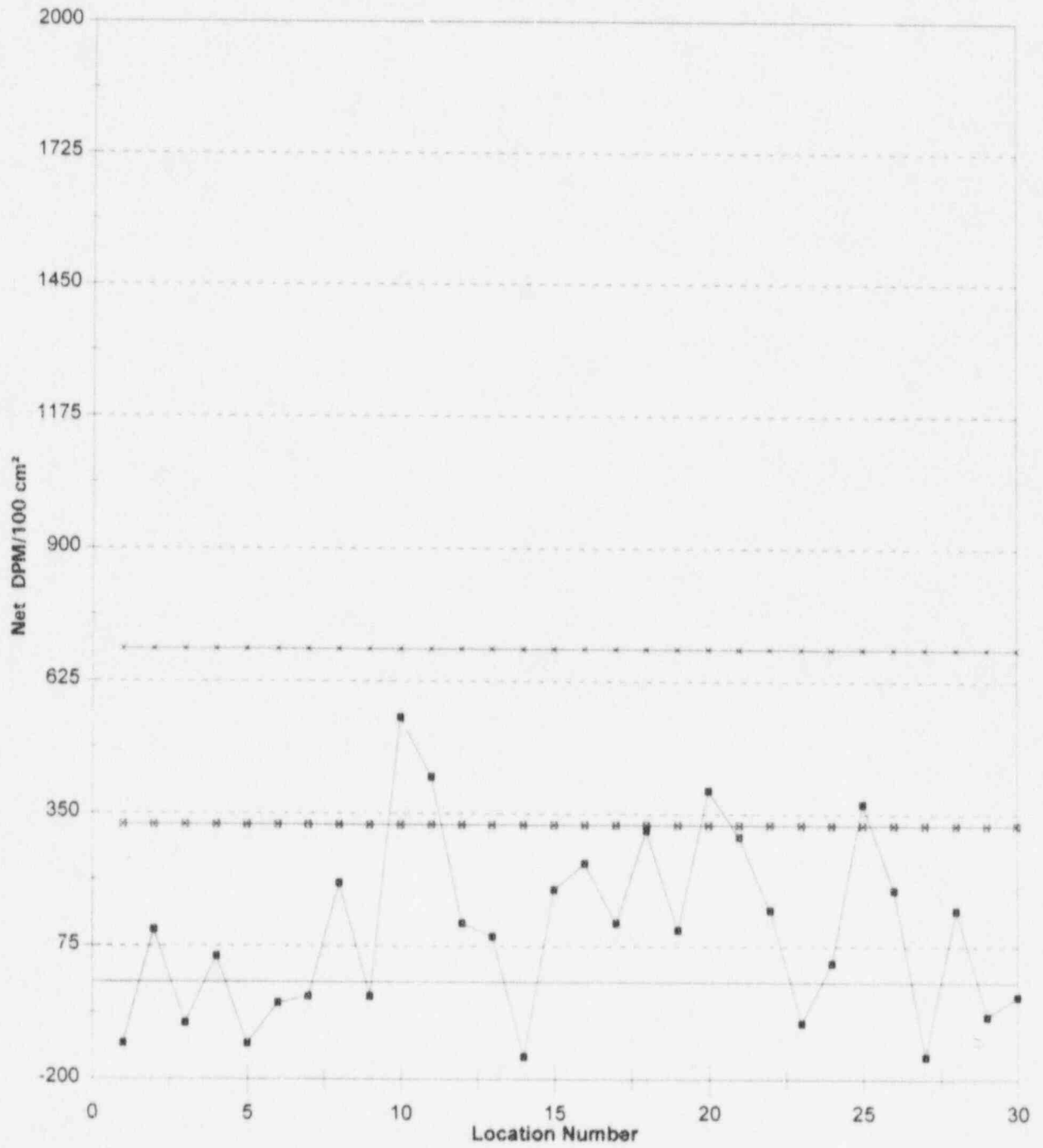
Radiological Engineering & Decommissioning Services

Fort St. Vrain Nuclear Generating Station - Decommissioning Project



### Total Surface Activity - Beta Survey

Survey Unit Code: A0344CZ001CZT01



MDA      Critical Level      Guideline Value      Activity

Release Record - Summary of Minimum Detectable Activity (MDA)  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B  
Survey Unit Code: A0344CZ001CZT01

Comments: MDA and Critical Level reported in DPM/100 cm<sup>2</sup>.  
Count Time averaged over all reported samples for each medium surveyed.  
Count Time reported in seconds.

<u>Download # -Station #</u>	<u>Medium</u>	<u>Count Time</u>	<u>Critical Level</u>	<u>MDA</u>
458-1	Drywall - Painted (Other)	15.0	327.4	692.1



Release Record - Summary of Background Correction Values  
Total Surface Activity - Beta Survey



Detector Model: LMI 43-68B

Survey Unit Code: A0344CZ001CZT01

Comments: Field Background (Bkg) reported in CPM/detector area.  
Medium Bkg reported in DPM/100 cm<sup>2</sup>.  
Field Bkg averaged over all reported Field Bkg samples for each medium surveyed.  
Field Bkg Count time averaged over all reported samples for each medium surveyed.  
Count time is reported in seconds.

Download # -Station #	Medium	Count Time	Field Bkg	Medium Bkg
458-1	Drywall - Painted (Other)	15.0	416.3	0.00

Release Record - Statistical Summary  
Removable Activity - Beta Survey



Detector Model: Lab Analysis, Beta Smears

Survey Unit Code: A0344CZ001CZT01

Mediums: Drywall - Painted (Other)

Group ID: A  
Survey Area Number: 0344  
Surface Category: CZ001 - Ceiling Surfaces  
Survey Unit Classification: CZ - Non-Suspect, Affected Structure  
Survey Reason: T01 - Initial Final Survey

	Net DPM/100 cm <sup>2</sup>
Upper Confidence Level (UCL)	-0.4
Mean	-1.4
Maximum	5.6
Minimum	-6.0
Standard Deviation	3.3
Minimum Detectable Activity	23.6
Critical Level	8.7
Samples Reported	30
Samples Prescribed	30

Tests Performed

Samples Reported > = Samples Prescribed	YES	Passed
MDA < 187.5 DPM/100 cm <sup>2</sup>	YES	Passed
Percent of Samples > 375.0 DPM/100 cm <sup>2</sup>	0.0	Passed (3)
Number of Samples > 562.5 DPM/100 cm <sup>2</sup>	0	Passed (4)
UCL of Mean < 750.0 DPM/100 cm <sup>2</sup>	YES	Passed

(3) 10% Test

(4) Single Measurement Test

Release Record - Corrected Field Activity Values  
Removable Activity - Beta Survey



Detector Model: Lab Analysis , Beta Smears

Survey Unit Code: A0344CZ001CZT01

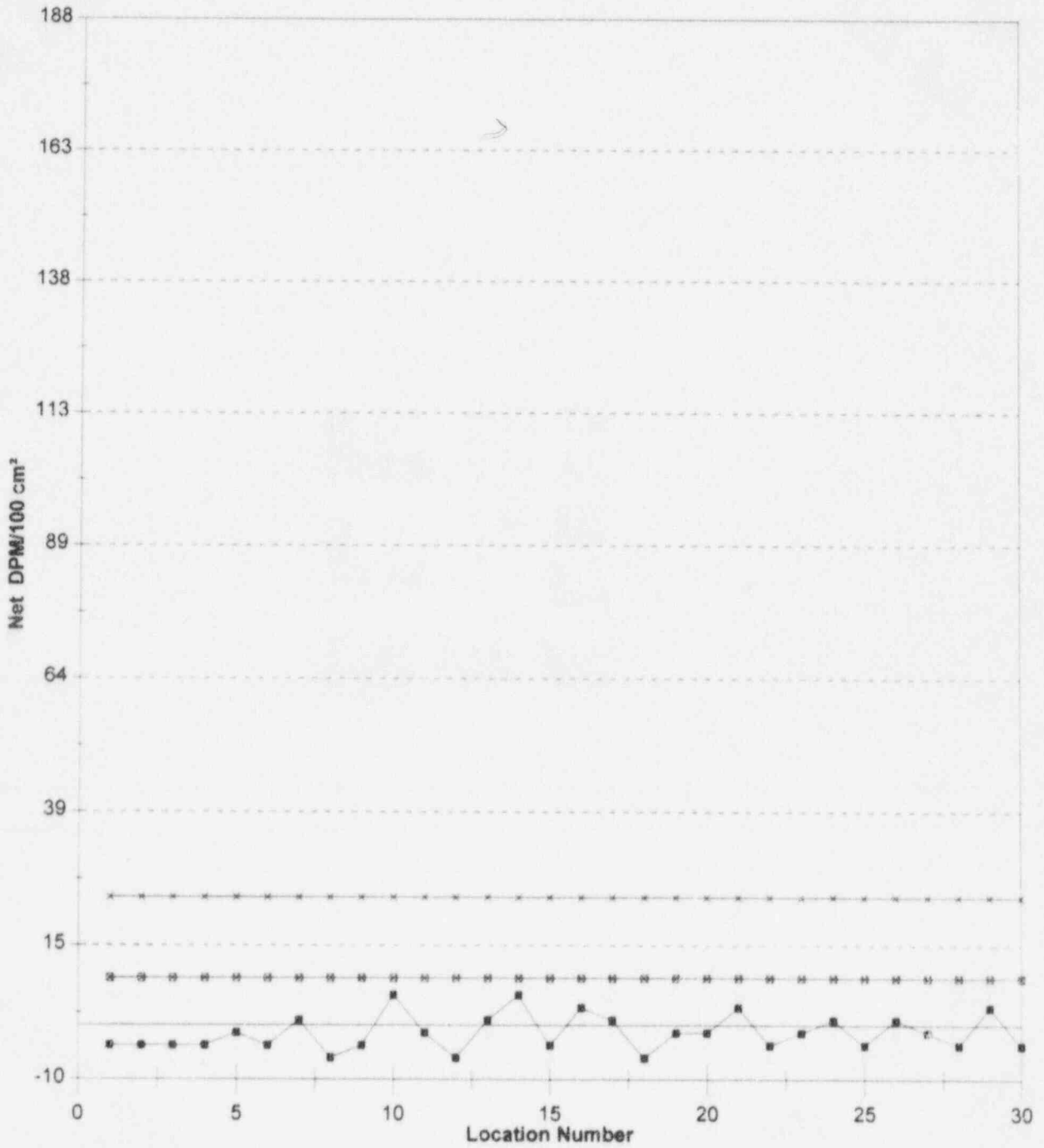
Comments: Activity reported in Net DPM/100 cm<sup>2</sup>  
Underlined DPM values exceed the critical level of 8.7 DPM/100 cm<sup>2</sup>  
Bold DPM values exceed 375.0 DPM/100 cm<sup>2</sup>  
Italic DPM values exceed 562.5 DPM/100 cm<sup>2</sup>

Medium: Drywall - Painted (Other)

Location #	Activity
1	-3.7
2	-3.7
3	-3.7
4	-3.7
5	-1.4
6	-3.7
7	0.9
8	-6.0
9	-3.7
10	5.6
11	-1.4
12	-6.0
13	0.9
14	5.6
15	-3.7
16	3.2
17	0.9
18	-6.0
19	-1.4
20	-1.4
21	3.2
22	-3.7
23	-1.4
24	0.9
25	-3.7
26	0.9
27	-1.4
28	-3.7
29	3.2
30	-3.7



**Lab Analysis, Beta Smear**  
Survey Unit Code: A0344CZ001CZT01



— MDA      — Critical Level      — Guideline Value      — Activity