Rocky Flats Environmental Technology Site

Building 776/777 Area V Final Survey Report

Survey Units:
776012

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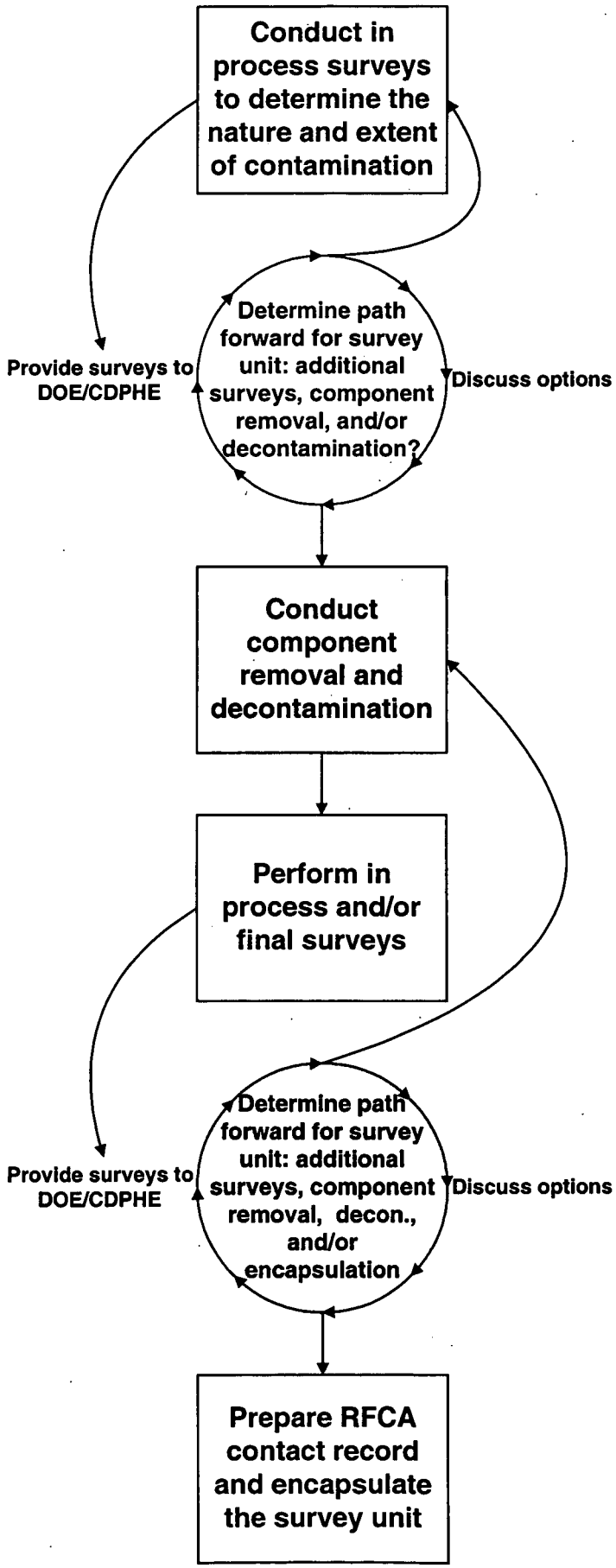
ADMIN RECORD


Conduct in process surveys to determine the nature and extent of contamination
Provide surveys to DOE/CDPHE
Determine path forward for survey unit: additional surveys, component removal, and/or decontamination?
Discuss options
Conduct component removal and decontamination
Perform in process and/or final surveys
Provide surveys to DOE/CDPHE
Determine path forward for survey unit: additional surveys, component removal, decon., and/or encapsulation
Discuss options
Prepare RFCA contact record and encapsulate the survey unit

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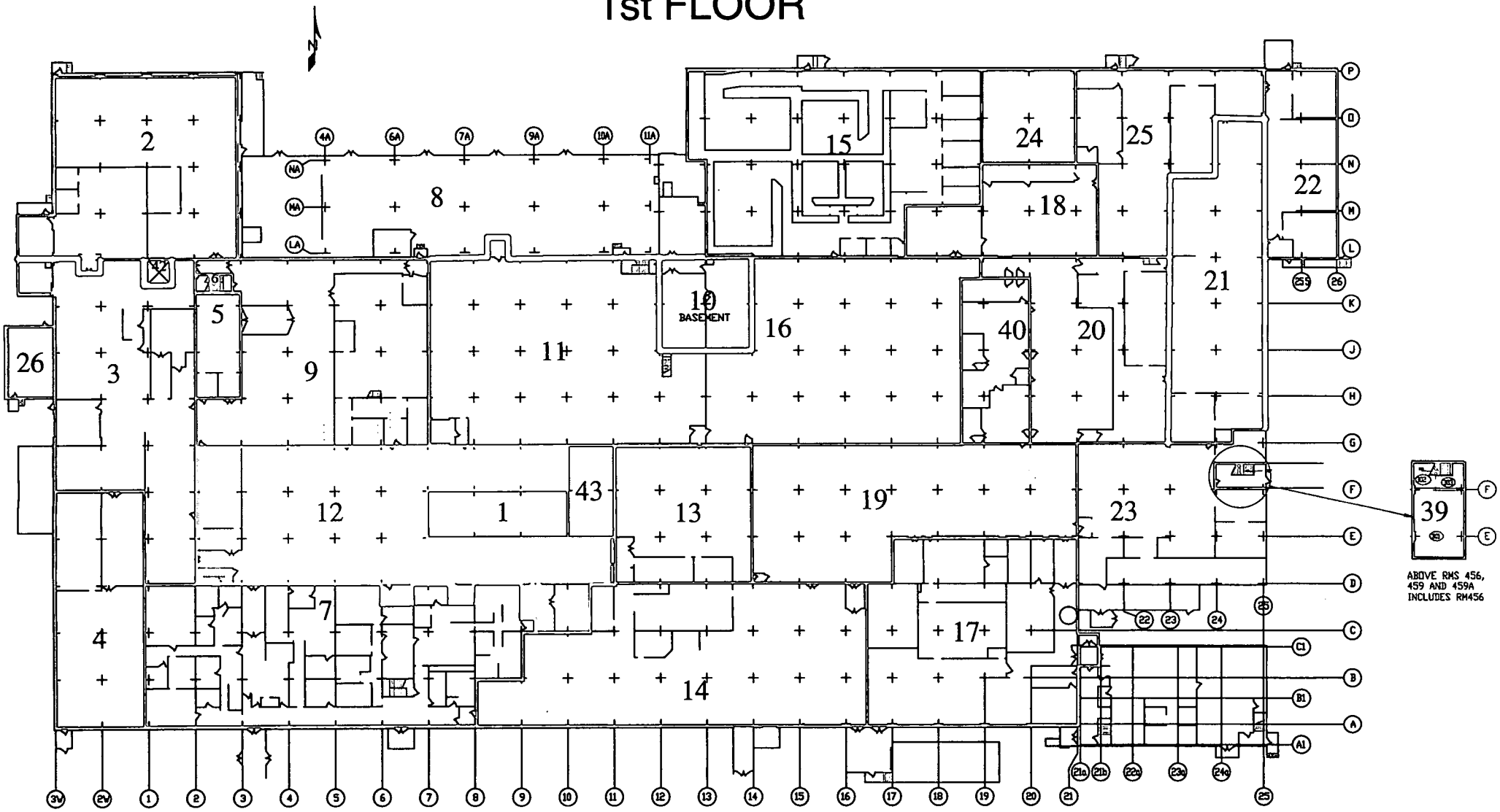
B776/777 SURVEY UNITS
1st FLOOR



FINAL SURVEY REPORT
Survey Unit 776012

1) Introduction and Scope

A pre-demolition radiological survey (PDS) is performed prior to building demolition to define the radiological conditions of a facility. A PDS survey for survey unit 776012 has been completed in accordance with guidelines outlined in the "Radiological Pre-Demolition Survey Plan Building 776/777". Based on the results it is recommended that no further remediation is needed, and that the survey unit may be encapsulated in preparation for demolition. Isolation controls shall be put in place to prevent recontamination of the area. This report has been prepared in accordance with sections 3 and 8 of the "Radiological Pre-Demolition Survey Plan Building 776/777".

Survey unit 776012 includes room 115, 116A, 130, 130A, 134, 135 and 140. Unit 776012 was part of the original construction of building 776 and was effected by the 1969 fire. At the time of the 1969 fire this area contained several gloveboxes and casting furnaces that supported foundry operations. By 1974 all casting furnaces were removed from the area and it was used for waste container storage and to house support equipment for the advanced size reduction facility, the size reduction vault, and both fluidized bed incinerators. The area contains three pits that were filled with concrete and metallic debris during the fire cleanup.

2) PDS Methods and Techniques

The PDS survey results determine the Average Surface Contamination Value ($ASCV_u$) and source term for the survey unit. These parameters are used determine whether the building may be demolished within the limits outlined in the "Radiological Pre-Demolition Survey Plan Building 776/777".

To obtain a statistically powerful number of data points, a minimum of 30 survey points were selected per survey unit. A random start, systematic grid method was used to identify the survey point locations. Three types of surveys are performed at each survey point as follows:

a) Painted surfaces are evaluated for potential contamination under coatings using sodium iodide (NaI) gamma detectors attached to a single channel analyzer windowed for the 59 keV gamma-ray (Am^{241}). The standard background reference in room 119, near column C-9, was used. Since these gamma measurements quantify contamination at depth as well as the surface, this survey data is used to estimate contamination levels on all surfaces of the survey unit.
b) Direct alpha surface contamination measurements are performed using a NE Electra survey instrument with attached DP-6 probe. This data may be compared to the NaI survey data to show the fraction of contamination that is directly on the surface verses imbedded in the material matrix.
c) Removable surface alpha contamination surveys were performed by swiping the survey point with a 47mm filter paper then counting the filter paper on a SAC-4 alpha counter. This data may be used to gauge the effectiveness of encapsulation following the PDS.

To conservatively determine the final Average Surface Contamination Value ($ASCV_u$) for the survey unit, the source term associated with inaccessible areas of the survey unit (as

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described in section 4 of this report) is added to the source term calculated by the PDS survey.

3) ALARA Post Remediation Surveys

In addition to the PDS used to determine the Average Surface Contamination Value ($ASCV_u$) and source term for the survey unit, surveys were taken to determine the effectiveness of remediation efforts. Remediation is performed to demonstrate a reasonable best effort is made to maintain releases to the environment and doses to the workers ALARA. Remediation may include decontamination, or removal of parts of the structure such as block wall removal.

a) Floors

The in-process surveys showed widespread contamination associated with the floors in this survey unit. The decision was made to shave the entire floor surface and re-survey. A summary of remediation results is shown below in Table 1. This data indicates a highly successful decontamination factor (DF) of 46 or a 78% reduction in source term.

Table 1:
Floor Remediation Results

	Pre-Remediation (In-process)	Post-Remediation (Follow-up)
Maximum (dpm/100cm^2)	84,751,989	840,900
Minimum (dpm/100cm^2)	22,931	9,498
Average (dpm/100cm^2)	5,341,313	115,338
Average (μCi/m^2)	254.11	5.2
Source Term (μCi)	23,653	4,310

b) Walls

"High density" NaI surveys were performed on walls in Area III to develop a risk based classification of walls. Additionally, a series of holes were made in the hollow block to provide internal contamination levels. The general trend of contamination levels showed the highest levels at the top and the lowest levels at the bottom. This data along with the identification of load-bearing walls provided the basis for classification of building 776 area V walls into three categories:

i) Type I – Structural or non-structural wall with average contamination levels ranging from < MDA to approximately 100,000 dpm/100 cm^2. These walls require no further remediation.
ii) Type II – Structural or non-structural wall with average contamination levels that range from >100,000 dpm/100cm^2 to <1,000,000 dpm/100cm^2. Some of the type II walls are structural and it has been determined by Engineering that removal is not allowed. For non-structural type II walls partial removal was performed to eliminate the inaccessible area at the top of wall. This will allow additional engineering

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controls to be applied to minimize the risk of a localized airborne event during demolition.

iii) Type III - Structural or non-structural wall with average contamination levels that exceed >1,000,000 dpm/100cm^2. Some of the type III walls are structural and it has been determined by Engineering that no remediation is allowed. Additional mitigating techniques will be utilized to minimize the potential of a localized airborne event during demolition. For non-structural type III walls partial removal was performed to eliminate the inaccessible area at the top of wall. This will allow additional engineering controls to be applied to minimize the risk of a localized airborne event during demolition.

The remediation effort associated with walls resulted in reducing the total source term from 23,470 µCi to 18,663 µCi providing a source term reduction of approximately 21%. Initial and Final Data from survey unit 776012 walls is summarized in Table 2. Source term from walls is summarized in Table 3.

Several of the walls within unit 776012 were ineligible for invasive remediation due to their construction. These walls are classified as "special demolition controls" walls. The entire south wall of survey unit 776012 (wall 12-13) is structural support for the main plenum located on the second floor. Due to this block removal is not possible for this wall. Wall 12-13 will be included in a separate survey unit consisting of only "special demolition control" walls.

The walls of room 135 (walls 12-3, 12-4, 12-20 through 12-23) consist of 12" thick poured concrete. The only possible remediation for these walls was removal of the grout that was in place between the top of the concrete walls and the bottom of the ceiling beams. All grout was removed from these areas. The north wall (wall 5) is structural support for the second floor, but limited block removal was possible. These walls represent 89% (7132 uCi) of the total remaining wall source term in unit 776012.

Table 2
B776/777 Survey Unit 12, Area V Wall Summary

Wall	Section	Structural	Initial Characterization			Follow-up Characterization		
			Type 1	Type 2	Type 3	Type 1	Type 2	Type 3
776012-1	A							
776012-2	A							
776012-3	A	x						
776012-4	A	x						
	B	x						
	C	x						
776012-5	A	x						
	B	x						
	C	x						
	D	x						
	E	x						

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Survey Unit 776012

Wall	Section	Structural	Initial Characterization			Follow-up Characterization		
			Type 1	Type 2	Type 3	Type 1	Type 2	Type 3
776012-5	F	x						
	G	x						
776012-10	A	x						
776012-11	A							
776012-12	A							
776012-14	A							
776012-16.1	A							
16.2	A					moved to 776029		
776012-17	A					moved to 776029		
776012-18	A					moved to 776029		
776012-19	A					moved to 776029		
776012-20	A	x						
	B	x						
	C	x						
776012-21	A	x						
776012-22	A	x						
	B	x						
	C	x						
776012-23	A	x						
776012-32	A							
776012-33	A							
776012-34	A							
776012-35	A							
115N	A							
115W	A							
115S	A							
115E	A							
776012-38	A							
776012-39	A							
776012-40	A							
776012-41	A							
776012-32.1	A							
776012-33.1	A							
776012-34.1	A							
776012-35.1	A							
	Type 1: <100,000 dpm/100 cm^2							
	Type 2: >100,000 dpm/100 cm^2 to <1,000,000 dpm/100 cm^2							
	Type 3: >1,000,000 dpm/100 cm^2							

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Table 3
B776/777 Survey Unit 776012, Area V Wall Source Term

Wall Designation	Wall Type	Area (ft^2)	Area (m^2)	Average dpm/100cm^2	Total Activity (uCi)	Comments	Remediated Average DPM/100cm^2	Remediated Total Activity (uCi)
776012-1A	II	149	13.8421	887,193	553		107,764	67
776012-2A	II	305	28.3345	583,872	516		55,593	71
776012-3A	II	368	34.1872	820,252	1,191	Concrete	1,004,453	1,547
776012-4A	III	97	9.0113	1,698,036	381	Concrete	364,501	148
776012-4B	III	350	32.515	1,855,387	1,628	Concrete	2,249,598	3,295
776012-4C	III	350	32.515	2,845,404	1,696	Concrete	921,536	1,350
776012-5A	I	180	16.722	54,943	41	Structural	54,943	41
5B	I	350	32.515	10,442	15	Structural	10,442	15
5C	II	350	32.515	276,099	404	Structural	365,178	535
5D	I	298	27.6842	17,750	22	Structural	9,324	12
5E	I	265	24.6185	67,968	75	Structural	57,803	64
5F	I	350	32.515	41,253	60	Structural	41,253	60
5G	I	350	32.515	28,594	42	Structural	28,594	42
776012-10A	II	210	19.509	181,225	159		65,861	58
776012-11A	II	53	4.9237	283,484	63		154,946	34
776012-12A	II	140	13.006	408,241	239		161,854	95
776012-14A	II	82	7.6178	622,377	214		260,397	89
776012-16.1A	III	82	7.6178	2,118,080	594		147,421	51
776012-20A	I	97	9.0113	79,046	32	Concrete	79,046	32
20C	II	350	32.515	126,505	185	Concrete	104,210	153
776012-22A	II	97	9.0113	125,275	51	Concrete	52,616	21
22B	II	350	32.515	203,648	298	Concrete	91,263	134
22C	II	350	32.515	260,789	382	Concrete	89,212	131
776012-23A	I	368	34.1872	86,438	133	Concrete	86,438	133
776012-32A	II	98	9.1042	276,550	113		69,022	28
776012-33A	II	50	4.645	550,449	115		304,603	64
776012-34A	I	98	9.1042	92,669	38		128,074	53
776012-35A	I	98	9.1042	23,958	10		16,987	7
115N	I	98	9.1042	67,709	26		62,613	26
115W	I	50	4.645	75,597	16		28,243	6
115S	I	98	9.1042	74,302	30		70,433	29
115E	I	98	9.1042	94,908	39		82,454	34
776012-38A	I	167	15.5143	15,198	11		15,198	11
776012-39A	I	115	10.6835	78,052	38		78,042	38
776012-41A	I	115	10.6835	6,920	3		6,920	3
776012-32.1A	I	156	14.4924	50,167	33		50,167	33
776012-33.1A	I	137	12.7273	94,967	54		94,967	54
776012-34.1A	I	167	15.5143	76,330	53		76,330	53
776012-35.1A	I	120	11.148	9,121	3		5,014	3
							Source term from structural walls	7,713
							Source term from other walls	1,228
		Total (ft^2)	Total (m^2)	Average dpm/100cm^2	Total uCi		Average dpm/100cm^2	Total uCi
Average		7,606	706.5974	391,518	9,556		196,239	8,620

*Struc./SDC: Structural / Special Demolition Controls

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c) Ceilings

The In-Process NaI survey of the ceilings found forty-nine locations exceeding 100,000 dpm/100cm^2.

As stated in the In-Process Report, it was suspected that "shine" from the highly contaminated floors was causing these high readings. These areas were investigated further after the floor was shaved removing a significant portion of the source term.

The forty-nine elevated areas were re-surveyed duplicating the In-Process technique. The results confirm that the floor was a major contributor as shown in Table 4 below.

Survey grids 12-109, 12-127, 12-128, 12-147 and 12-148 were elevated due to process components that were left during decommissioning. Five additional measurements were collected in each of these grids to prove that the high measurements were due to the left over components. The measurements collected on the components were re-classified as inaccessible areas and the results are summarized in table 5.

The remediation effort resulted in reducing the source term from 9,553 μCi to 1,492μCi providing a source term reduction of approximately 84%.

Table 4:
Ceiling Remediation Results

	Pre-Remediation (In-process)	Post-Remediation
Maximum (dpm/100cm^2)	6,961430	714,930
Minimum (dpm/100cm^2)	14,128	10,892
Average (dpm/100cm^2)	255,815	39,585
Average (μCi/m^2)	11.5	1.8
Source Term (μCi)	9,553	1,492

4) Inaccessible Areas

Note:
This report reflects the results of the remediation of floor expansion joint areas greater than 1,000,000 dpm/100cm^2.

a) Floors

Concrete shaving of the contaminated sections of the floors uncovers cracks and concrete seams including floor and column expansion joints as well as imbedded bolts in the floor. These seams and bolts trap contamination and can contain significant source term. Upon completion of the shaving effort, NaI readings along the seams showed higher levels of contamination than the general floor area.

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The In-Process Survey Report for survey unit 776012 did not account for all of this added floor activity. In order to calculate a more realistic decontamination factor (DF), this activity will be added to the source term reported in the 776012 In-Process Report (232,663 μCi), and then compared to the post remediation source term. Approximately 420 linear feet of expansion joint were removed at a depth of up to 8 inches. 62 bolts were removed.

Areas greater than 1,000,000 dpm/100cm^2 were remediated. The result of the remediation effort for the inaccessible areas of the floor is summarized in Table 5 below. Total inventory calculations assume contamination does not extend beyond eight inches deep. Cracks around the tops of buried equipment pits between columns F and G, 9 and 10 were remediated down to nine inches below the slab surface. Contamination levels as high 38,406,504 dpm/100cm^2 were found at the bottom of these cracks. Since the foundation slab is only eight inches deep contamination below eight inches will be accounted for in the buried equipment pit survey unit. Inventory calculations for buried equipment will be reported in report for survey unit 776044.

Several crack and expansion joint areas in unit 776012 were remediated to soil. In most cases the soil was found to be highly contaminated (up to 26,571,872 dpm/100cm^2) below the expansion joint areas. This was to be expected due to the permeability of the felt expansion joint material. However, soil remediation is beyond the scope of the Building 776 demolition and will be remediated after removal of the foundation slab. Due to this contaminated soil remains at the bottom of remediated joints in survey unit 776. This contamination is not accounted for in the survey unit 776012 report.

b) Walls

The highest source of contamination exists near the ceiling, generally within the top three feet. This area of wall was removed for the following Type II walls in the survey unit: 776012-1A, 2A, 12A, 16.1A, and 17A. Removal of grout above walls 3, 4, 20, 21, 22 and 23 was also removed. This provides for the largest source term reduction on these walls and allows access to the interior of the block walls where they exist for further engineering controls in preparation for and during demolition.

c) Ceilings

Significant levels of contamination were found at points on the ceiling where protrusions of decommissioned process piping and ventilation were left during D&D. These remaining protrusions were removed.

Areas greater than 1,000,000 dpm/100cm^2 were remediated. The result of the remediation effort for the inaccessible areas of the floor is summarized in Table 5 below.

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d) Summary

The inaccessible area remediation effort resulted in reducing the source term from 68,449 µCi to 326 µCi providing a source term reduction of approximately 99.5%.

Table 5:
Inaccessible Area Remediation Results

	Pre-Remediation (In-process) **	Post-Remediation
Column Maximum (dpm/100cm^2)	232,115,430	136,896
Column Minimum (dpm/100cm^2)	62,715	11,968
Column Average (dpm/100cm^2)	42,783,143	64,507
Column Average (µCi/m^2)	1,927	2.91
Column Source Term (µCi)	19,802.21	7.56
DF	-	2619
Source Term Reduction (%)	-	99.7%
Seam/Crack Maximum (dpm/100cm^2)	232,115,430	226,848
Seam/Crack Minimum (dpm/100cm^2)	18,496	10,366
Seam/Crack Average (dpm/100cm^2)	42,783,143	81,377
Seam/Crack Average (µCi/m^2)	1,927	58.19
Seam/Crack Source Term (µCi)	16,802	47.62
DF	-	106
Source Term Reduction (%)	-	99.06%
Bolt/Floor Maximum (dpm/100cm^2)	290,346,585	187,680
Bolt/Floor Minimum (dpm/100cm^2)	1,128,870	17,112
Bolt/Floor Average (dpm/100cm^2)	164,989,371	89,884
Bolt/Floor Average (µCi/m^2)	7,432	4.04
Bolt/Floor Source Term (µCi)	43,476.93	1.39
DF		31,278
Source Term Reduction (%)		99.99%
Ceiling Maximum (dpm/100cm^2)	13,954,179	13,954,179
Ceiling Minimum (dpm/100cm^2)	38,817	38,817
Ceiling Average (dpm/100cm^2)	5,856,374	5,856,374
Ceiling Average (µCi/m^2)	628.57	628.57
Ceiling Source Term (µCi)	157.14	157.14
DF	-	0
Source Term Reduction (%)	-	0.00%
Total Source Term (µCi)	**80,238.28**	**213.71**
Total DF	**-**	**375**
Total Source term Reduction (%)	**-**	**99.73%**

**- Includes all activity from cracks, expansion joints, and seams not accounted for in the In-Process Survey Report.

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Survey Unit 776012

5) PDS Survey Results Summary

Note:
This report reflects the results of the remediation of floor expansion joint areas greater than 1,000,000 dpm/100cm^2.

The values for the accessible areas and inaccessible areas were summed and divided by the total area for the survey unit to calculate the "Average Surface Contamination Value" ($ASCV_u$) and source term for the survey unit. The results are summarized in Table 6 below:

Table 6:
PDS Final Results

	Final Results
776012 Source Term Inaccessible Areas (μCi)	214
776012 Source Term Accessible Areas (μCi)	14,422
776012 Total Source Term (μCi)	14,636
Survey Unit Area (m^2)	2,909
$ASCV_u$ (μCi/m^2)	5.03
$ASCV_u$ (dpm/100cm^2)	111,694

Table 6 Notes:
a) Inaccessible areas source term from Section 4, Table 5 of this report.
b) Accessible area source term is the sum of source terms attributed ~~to floors (table 1), walls (table 3) and ceiling (table 4)~~.
c) Structural/ Special Demolition Control walls source term from table 3 of this report.
d) Total Source Term equals the sums of the source terms of Inaccessible Area + Accessible Area.
Total Source Term = (214 + 14,422) μCi = 14,636 μCi
e) Average Surface Contamination for the Survey Unit ($ASCV_u$) in dpm/100cm^2 equals:
$ASCV_u$ = (14,636 μCi)(22,200 dpm/100cm^2 / μCi/m2) / (2909 m^2) = 111,694 dpm/100cm^2

Summary PDS

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In-Process Follow-up NaI Data

Location #	Column letter	Column Number	North	East	Elevation	Gross Counts	BKG	In-Process dpm/100cm2	Follow-up dpm/100cm^2
12-1	F	2	19	7	0	1521	1164	5,421,557	53,550
12-2	F	2	11	11	0	1567	1108	6,018,012	68,850
12-3	F	3	20	8	0	1540	1108	799,834	64,800
12-3A	F	3	15	8	0	1108	1108	76,749	11,609
12-4	F	3	19	11	0	1183	1108	623,714	11,609
12-5	F	4	16	8	0	1287	1108	357,103	26,850
12-5A	F	4	15	5	0	1332	1108	120,091	33,600
12-6	F	4	6	13	0	5511	1107	1,002,171	660,450
12-7	F	5	19	1	0	1617	1108	8,805,154	76,350
12-7A	F	5	17	6	0	1583	1108	538,509	71,250
12-8	F	5	15	19	0	6595	1108	8,668,360	823,050
12-8A	F	5	11	11	0	1007	1108	1,581,909	11,609
12-9	F	6	18	5	0	2079	1108	9,772,017	145,650
12-9A	F	6	12	9	0	3005	1108	916,966	284,550
12-10	F	6	16	16	0	2788	1108	18,492,600	252,000
12-10A	F	6	11	11	0	1759	1108	1,624,617	97,650
12-11	F	7	16	0	0	2865	1108	82,925,246	263,550
12-11A	F	7	11	9	0	1487	1108	1,819,343	56,850
12-12	F	7	16	14	0	2129	1108	84,751,989	153,150
12-12A	F	7	15	19	0	2539	1108	1,976,223	214,650
12-13	F	8	17	1	0	1909	1108	2,422,337	120,150
12-13A	F	8	15	6	0	1246	1108	99,794	20,700
12-14	F	8	18	19	0	1589	1108	55,200,194	72,150
12-14A	F	8	12	12	0	1469	1108	809,983	54,150
12-15	CENTER	OF	GRID		0	1547	1108		65,850
12-16	F	9	19	13	0	1845	1108	43,432,291	110,550
12-16A	F	9	19	17	0	1287	1108	2,681,760	26,850
12-17	Moved to SurveyUnit 776043								
12-18	Moved to SurveyUnit 776043								
12-18A	Moved to SurveyUnit 776043								
12-19	Moved to SurveyUnit 776043								
12-20	Moved to SurveyUnit 776043								
12-21	F	9	3	17	0	640	1108	8,648,697	11,609
12-21A	F	9	7	17	0	1752	1108	22,931	96,600
12-22	F	9	8	5	0	4202	1108	15,599,623	464,100
12-22A	F	9	4	6	0	1467	1108	4,415,474	53,850
12-23	F	8	3	16	0	1538	1108	7,618,194	64,500
12-23A	F	8	7	14	0	1680	1108	928,594	85,800
12-24	F	8	1	1	0	2287	1108	2,833,989	176,850
12-24A	F	8	6	4	0	1652	1108	58,143	81,600
12-25	F	7	8	17	0	6714	1108	7,659,000	840,900

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In-Process Follow-up NaI Data

Location #	Column letter	Column Number	North	East	Elevation	Gross Counts	BKG	In-Process dpm/100cm2	Follow-up dpm/100cm^2
12-25	F	7	8	17	0	6714	1108	7,659,000	840,900
12-25A	F	7	4	18	0	1589	1108	702,154	72,150
12-26	F	7	7	4	0	1586	1108	23,906,440	71,700
12-26A	F	7	3	6	0	1494	1108	2,934,840	57,900
12-27	F	6	7	11	0	1541	1108	34,458,840	64,950
12-27A	F	6	3	18	0	1795	1108	8,580,829	103,050
12-28	F	6	1	6	0	2225	1108	39,637,571	167,550
12-28A	F	6	8	7	0	2781	1108	17,222,760	250,950
12-29	F	5	3	19	0	1500	1108	9,784,703	58,800
12-29A	F	5	8	12	0	1007	1108	1,229,457	11,609
12-30	F	5	1	1	0	1296	1108	2,894,246	28,200
12-31 Avg						1694.6	1159	5,554,229	64,272
12-32	F	4	1	8	0	1310	1164	2,669,074	21,900
12-32A	F	4	4	8	0	1312	1164	197,474	22,200
12-33	F	3	1	19	0	1300	1164	2,007,726	20,400
12-33A	F	3	7	16	0	1430	1164	286,063	39,900
12-34	F	3	5	1	0	2882	2143	800,891	102,223
12-34A	F	3	4	7	0	2324	2143	48,629	25,037
12-35	F	2	9	11	0	1515	1164	2,514,263	52,650
12-36	F	2	9	5	0	1574	1164	3,401,584	61,500
12-37	E	2	17	3	0	1043	1164	5,219,039	11,898
12-38	E	2	19	12	0	1085	1164	1,358,504	11,898
12-39	E	3	15	8	0	2454	2346	1,820,400	10,658
12-39A	E	3	14	4	0	2673	2346	713,994	30,948
12-40	E	3	19	19	0	1299	1164	1,766,063	20,250
12-40A	E	3	16	15	0	1290	1164	349,069	18,900
12-41	E	4	14	9	0	1305	1164	2,911,794	21,150
12-41A	E	4	16	3	0	1398	1164	95,143	35,100
12-42	E	4	14	13	0	1354	1164	3,638,686	28,500
12-42A	E	4	13	13	0	1436	1164	478,674	40,800
12-43	E	5	18	2	0	1339	1164	2,453,840	26,250
12-43A	E	5	13	3	0	1022	1164	23,529	11,898
12-44	E	5	15	18	0	1672	1164	9,412,377	76,200
12-44A	E	5	14	12	0	1268	1164	1,082,514	15,600
12-45	E	6	18	4	0	1527	1164	12,615,309	54,450
12-45A	E	6	13	7	0	1501	1164	1,028,600	50,550
12-46	E	6	18	14	0	1391	1164	12,292,246	34,050
12-46A	E	6	13	15	0	1350	1164	667,903	27,900
12-47			Moved to SurveyUnit 776043						
12-48			Moved to SurveyUnit 776043						
12-49			Moved to SurveyUnit 776043						

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In-Process Follow-up NaI Data

Location #	Column letter	Column Number	North	East	Elevation	Gross Counts	BKG	In-Process dpm/100cm2	Follow-up dpm/100cm^2
12-50			Moved to SurveyUnit 776043						
12-51	E	6	4	16	0	2032	1164	13,061,423	130,200
12-51A	E	6	7	14	0	1926	1164	1,769,869	114,300
12-52	E	6	8	2	0	1647	1164	5,655,926	72,450
12-52A	E	6	8	8	0	1855	1164	497,914	103,650
12-53	E	5	18	18	0	1583	1164	5,356,120	62,850
12-53A	E	5	15	15	0	1356	1164	134,046	28,800
12-54	E	5	1	1	0	1560	1164	5,070,480	59,400
12-54A	E	5	6	6	0	1306	1164	23,529	21,300
12-55	E	4	19	19	0	1378	1164	2,265,880	32,100
12-55A	E	4	15	15	0	1135	1164	127,703	11,898
12-56	E	4	5	5	0	1208	1164		11,898
12-57	E	3	1	19	0	2409	1164	21,807,589	186,750
12-57A	E	3	7	14	0	1367	1164	179,291	30,450
12-58	E	3	6	8	0	884	1164	424,337	11,898
12-59	E	2	1	17	0	1515	1164	8,633,988	52,650
12-60	E	2	7	7	0	916	1159	6,769,414	9,498
12-61	D	2	16	1	0	1659	1164	4,966,910	74,250
12-62	D	2	19	17	0	1376	1164	6,763,071	31,800
12-63	D	3	11	1	0	1333	1164	1,100,697	25,350
12-63A	D	3	15	5	0	1261	1164	221,154	14,550
12-64	D	3	19	17	0	2292	1164	35,477,291	169,200
12-64A	D	3	13	16	0	1238	1164	999,846	11,898
12-65	D	4	15	5	0	1485	1164		48,150
12-66	D	4	19	19	0	2266	1159	20,491,657	132,840
12-66A	D	4	14	16	0	1765	1164	189,651	90,150
12-67	D	5	19	1	0	3644	1164	25,850,103	372,000
12-67A	D	5	15	5	0	2091	1164	1,781,709	139,050
12-68	D	5	19	19	0	2631	1164	1,885,097	220,050
12-68A	D	3	14	15	0	1937	1164	831,549	115,950
12-69	D	6	17	5	0	1794	1146	2,804,600	97,200
12-69A	D	6	15	5	0	1774	1146	874,046	94,200
12-70	D	6	19	19	0	2291	1146	12,561,817	171,750
12-70A	D	6	14	15	0	2034	1146	1,489,937	133,200
12-71	D	7	19	1	0	2875	1146	10,570,583	259,350
12-71A	D	7	16	7	0	2757	1146	266,400	241,650
12-72	D	7	12	12	0	3202	1146	2,280,046	308,400
12-72A	D	7	15	16	0	5044	1146	810,617	584,700
12-73	D	8	19	1	0	2289	1146	3,409,920	171,450
12-73A	D	8	14	5	0	2525	1146	357,737	206,850
12-74	D	8	13	14	0	1981	1146	8,625,863	125,250

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In-Process Follow-up NaI Data

Location #	Column letter	Column Number	North	East	Elevation	Gross Counts	BKG	In-Process dpm/100cm2	Follow-up dpm/100cm^2
12-74A	D	8	17	13	0	1528	1146	715,474	57,300
12-75	D	9	13	5	0	1756	1146	2,422,760	91,500
12-75A	D	9	17	4	0	1780	1146	178,234	95,100
12-76	D	9	12	19	0	1441	1146	3,512,463	44,250
12-76A	D	9	17	16	0	1416	1146	121,571	40,500
12-77	D	10	13	8	0	1501	1146	518,000	53,250
12-77A	D	10	15	3	0	1407	1146	579,949	39,150
12-78	D	10	11	14	0	1514	1146	1,515,097	55,200
12-78A	D	10	14	14	0	1327	1146	707,229	27,150
12-79	D	10	8	13	0	4649	1146	3,962,171	525,450
12-79A	D	10	4	14	0	1560	1146	925,423	62,100
12-80	D	10	8	6	0	2109	1146	6,338,417	144,450
12-80A	D	10	3	6	0	2045	1146	1,182,943	134,850
12-81	D	9	2	19	0	2320	1146	2,359,331	176,100
12-81A	D	9	4	15	0	1650	1146	972,783	75,600
12-82	D	9	5	6	0	1563	1146	3,263,823	62,550
12-82A	D	9	9	8	0	1237	1146	233,417	13,650
12-83	D	8	5	18	0	2881	1146	961,577	260,250
12-83A	D	8	5	14	0	1881	1146	129,606	110,250
12-84	D	8	8	3	0	2242	1146	18,245,651	164,400
12-84A	D	8	5	7	0	1564	1146	376,766	62,700
12-85	D	7	3	16	0	3341	1146	4,539,583	329,250
12-85A	D	7	4	12	0	3201	1146	1,447,440	308,250
12-85B	C	7	16	15	0	2436	1146	1,777,903	193,500
12-85C	C	7	18	12	0	2103	1146	633,651	143,550
12-86	D	7	3	8	0	3360	1146	10,601,240	332,100
12-86A	D	7	9	2	0	3157	1146	1,544,274	301,650
12-87	D	6	1	19	0	5636	1146	12,388,869	673,500
12-87A	D	6	3	12	0	5390	1146	2,101,177	636,600
12-87B	C	6	14	12	0	2627	1146	2,043,246	222,150
12-87C	C	6	13	11	0	2106	1146	1,268,149	144,000
12-88	D	6	3	6	0	1946	1146	7,904,680	120,000
12-88A	D	6	4	2	0	1915	1146	2,271,166	115,350
12-88B	C	6	18	5	0	1799	1146	1,810,251	97,950
12-88C	C	6	13	3	0	1466	1146	701,520	48,000
12-89	D	5	9	13	0	2117	1146	1,578,314	145,650
12-89A	D	5	4	12	0	2800	1146	657,331	248,100
12-90	D	5	1	1	0	2178	1146	4,867,297	154,800
12-90A	D	5	6	5	0	2461	1146	830,280	197,250
12-91	D	4	7	11	0	1850	1146	5,896,743	105,600
12-91A	D	4	5	15	0	1350	1146	837,469	30,600

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In-Process Follow-up NaI Data

Location #	Column letter	Column Number	North	East	Elevation	Gross Counts	BKG	In-Process dpm/100cm2	Follow-up dpm/100cm^2
12-92	D	4	7	8	0	1708	1146	3,737,211	84,300
12-92A	D	4	3	4	0	1085	1146	1,049,531	11,806
12-93	D	3	2	15	0	1547	1146	2,034,154	60,150
12-93A	D	3	6	18	0	1147	1146	1,529,051	11,806
12-94	D	3	3	7	0	1389	1146	1,682,549	36,450
12-94A	D	3	3	6	0	1247	1146	717,800	15,150
12-95	D	2	7	16	0	2370	1146	456,686	183,600
12-95A	D	2	4	13	0	1430	1146	129,183	42,600
12-96	D	2	7	3	0	1562	1146	161,531	62,400
12-96A	D	2	4	6	0	1408	1146	157,514	39,300
12-97	C	9	17	8	0	1420	1146	131,931	41,100
12-97A	C	9	17	3	0	1446	1146	111,423	45,000
12-98	C	9	16	14	0	1531	1146	114,806	57,750
12-98A	C	9	14	16	0	1501	1146	134,469	53,250
12-99	C	10	14	6	0	1410	1146	148,000	39,600
12-99A	C	10	17	5	0	1395	1146	120,937	37,350
12-100	C	10	2	5	0	1365	1146	111,000	32,850
12-100A	C	10	5	2	0	1490	1146	145,463	51,600
12-101	C	9	4	18	0	1633	1146	127,703	73,050
12-101A	C	9	3	15	0	1523	1146	118,823	56,550
12-102	C	9	6	7	0	1441	1146	128,549	44,250
12-102A	C	9	9	4	0	1445	1146	118,611	44,850
12-103	F	2	16	4	17	183	307	28,261	28,173
12-104	F	2	17	17	17	158	307	28,261	28,173
12-105	F	3	16	2	17	164	125	60,155	26,972
12-106	F	3	15	15	17	189	144	32,226	32,372
12-107	F	4	12	8	17	73	144	19,980	20,071
12-108	F	4	17	16	17	80	144	19,980	20,071
12-109 avg					17	158.25	156	65,168	20,083
12-110	F	5	15	15	17	206	144	44,400	44,601
12-111	F	6	15	6	17	150	144	19,980	20,071
12-112	F	6	15	15	17	176	144	22,916	23,020
12-113 avg					17	256	156	693,213	68,928
12-114 avg					17	1189.75	156	3,617,884	714,930
12-115	F	8	15	5	17	119	105	27,213	15,299
12-116	F	8	17	14	17	152	86	40,238	45,645
12-117	F	9	17	6	17	140	86	33,300	37,346
12-118	F	9	17	16	17	135	86	23,588	33,888
12-119			Moved to SurveyUnit 776043						
12-120			Moved to SurveyUnit 776043						

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In-Process Follow-up NaI Data

Location #	Column letter	Column Number	North	East	Elevation	Gross Counts	BKG	In-Process dpm/100cm2	Follow-up dpm/100cm^2
12-121			Moved to SurveyUnit 776043						
12-122			Moved to SurveyUnit 776043						
12-123	F	9	3	17	17	117	86	17,797	21,439
12-124	F	9	4	4	17	151	144	19,980	20,071
12-125	F	8	5	15	17	188	144	14,128	14,192
12-126	F	8	5	5	17	203	144	14,128	14,192
12-127 avg					17	134	156	204,179	20,083
12-128 avg					17	101.75	156	353,133	20,083
12-129	F	6	3	15	17	145	144	14,128	14,192
12-130	F	6	2	3	17	154	144	14,128	14,192
12-131	F	5	5	15	17	229	144	14,128	14,192
12-132	F	5	5	5	17	230	144	14,128	14,192
12-133	F	4	2	16	17	89	144	14,128	14,192
12-134	F	4	5	5	17	69	144	14,128	14,192
12-135	F	3	3	17	17	185	144	14,128	14,192
12-136	F	3	1	1	17	376	156	88,084	152,150
12-136A	F	3	1	9	17	251	156		65,701
12-137	F	2	3	15	17	169	307	28,261	28,173
12-138	F	2	5	6	17	123	307	28,261	28,173
12-139	E	2	18	5	17	165	307	28,261	28,173
12-140	E	2	16	17	17	139	307	28,261	28,173
12-141	E	3	17	4	17	232	144	14,128	14,192
12-142	E	3	15	15	17	189	144	32,226	32,372
12-143	E	4	16	5	17	194	144	35,806	35,969
12-144	E	4	17	16	17	152	86	45,788	45,645
12-145	E	5	18	3	17	199	125	99,900	51,178
12-146	E	5	17	15	17	134	125	60,871	17,977
12-147 avg					17	127.5	156	1,134,348	20,083
12-148 avg					17	190.25	156	916,645	23,687
12-149			Moved to SurveyUnit 776043						
12-150			Moved to SurveyUnit 776043						
12-151			Moved to SurveyUnit 776043						
12-152			Moved to SurveyUnit 776043						
12-153	E	6	5	16	17	187	105	104,945	52,658
12-154	E	6	2	4	17	109	105	416,755	15,299
12-155	E	5	4	15	17	159	105	93,845	34,677
12-156	E	5	9	5	17	200	125	102,927	51,869
12-157	E	4	4	16	17	179	125	61,555	37,346
12-158	E	3	3	4	17	161	86	56,194	51,869
12-159	E	4	4	16	17	180	86	46,481	65,009
12-160	E	3	3	3	17	182	125	65,591	39,421

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In-Process Follow-up NaI Data

Location #	Column letter	Column Number	North	East	Elevation	Gross Counts	BKG	In-Process dpm/100cm2	Follow-up dpm/100cm^2
12-161	E	2	8	18	17	130	307	28,261	28,173
12-162	E	2	6	4	17	111	307	28,261	28,173
12-163	D	2	19	4	17	125	307	28,261	28,173
12-164	D	2	18	18	17	163	307	28,261	28,173
12-165	D	3	16	4	17	164	125	179,618	26,972
12-166	D	3	17	17	17	148	125	130,173	17,977
12-167	D	4	17	4	17	139	86	48,563	36,654
12-168	D	4	17	16	17	146	125	175,582	17,977
12-169	D	5	13	5	17	207	125	237,136	56,710
12-170	D	5	13	15	17	150	105	183,655	28,898
12-171	D	6	17	7	17	123	105	170,536	15,299
12-172	D	6	17	15	17	122	105	64,582	15,299
12-173	D	7	17	5	17	108	105	96,873	15,299
12-174	D	7	14	14	17	158	104	54,491	53,951
12-175	D	8	17	5	17	93	105	89,809	15,299
12-176	D	8	17	15	17	116	105	60,545	15,299
12-177	D	9	12	4	17	90	98	88,800	10,892
12-177A	D	9	16	6	17	120	105		15,173
12-178	D	9	13	14	17	67	98	69,627	10,892
12-178A	D	9	16	16	17	90	105		15,299
12-179	D	10	16	5	17	160	104	56,509	55,950
12-180	D	10	16	15	17	100	105	65,591	15,299
12-181			Stairwell Pass-through						
12-182			Stairwell Pass-through						
12-183	D	9	3	15	17	127	105	72,655	15,299
12-184	D	9	5	4	17	160	105	97,882	35,320
12-185	D	8	4	16	18	131	98	294,655	15,617
12-185A	D	8	4	12	17	190	105		54,585
12-186	D	8	4	5	17	162	105	217,964	36,604
12-187	D	7	6	16	18	260	156	1,654,909	71,925
12-187A	D	7	6	16	18	100	98	254,291	10,892
12-187B	D	7	3	12	17	168	105		40,457
12-188	D	7	4	4	18	95	98	638,755	10,892
12-188A	D	7	4	7	17	147	105		26,971
12-189	D	6	4	15	17	202	105	194,755	62,291
12-190	D	6	4	4	17	172	105	85,773	43,026
12-191	D	5	2	16	17	343	156	429,873	129,327
12-192	D	5	3	3	17	177	125	600,409	35,963
12-193	D	4	3	4	17	210	125	95,864	58,785
12-194	D	4	3	3	17	145	125	91,827	17,977
12-195	D	3	3	15	17	208	125	265,391	57,402

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In-Process Follow-up NaI Data

Location #	Column letter	Column Number	North	East	Elevation	Gross Counts	BKG	In-Process dpm/100cm2	Follow-up dpm/100cm^2
12-196	D	3	6	6	18	259	156	1,323,927	71,234
12-196A	D	3	1	3	17	244	156		60,860
12-197			Stairwell Pass-through						
12-198			Stairwell Pass-through						
12-199	C	9	17	7	12	153	104	49,445	48,956
12-200	C	9	12	16	12	155	104	51,464	50,954
12-201	C	10	17	3	12	119	104	23,926	23,689
12-202	C	10	5	6	12	138	104	34,309	33,969
12-203	C	9	4	14	17	99	105	66,600	15,299
12-204	C	9	4	8	12	143	104	39,355	38,965
12-205	C	6	11	16	17	122	105		15,299
12-206	C	7	16	12	17	114	105		15,299

Survey Instructions
Building 776 Area V
Survey Unit 776012

Purpose:

This instruction provides guidance for collecting gross gamma and removable contamination data to quantify the amount of residual contamination in Survey Unit 776012 prior to demolition. NaI measurements are performed in accordance with " INS-535-Ludlum2350-1 with Sodium Iodide Detector".

Equipment and materials:

1. A Ludlum 44-17 attached to a Ludlum 2350-1 set to collect five-minute counts that will be displayed on its LCD window.
2. A Bicron G-5 attached to a Ludlum 2350-1 set to collect five-minute counts that will be displayed on its LCD window.
3. One Electra with attached DP-6, calibrated and daily response checked.
4. Two probe holders, one for the G-5 and one for the 44-17 with tin shielding.
5. Calibrated and daily response checked SAC-4.
6. Measuring tape or laser range finder.

Note: The NE Electra with DP-6 probe and the Eberline SAC-4 shall be used in accordance with RSP- 7.01 and 7.02

Procedure:

1. Inspect instrument for obvious damage and ensure battery voltage is equal to or greater than 4.6 volts. If battery voltage is less than 4.6 volts change the batteries.
2. Complete daily performance checks for Sodium Iodide detectors to ensure the instrument is functioning properly by using Americium-241 source TS-912. Record results on Sodium Iodide Data Sheet.
3. For floor and concrete wall background measurements, perform a 300-second background count with a Bicron G-5 for floors or Ludlum 44-17 for walls at background location in room 119 near column C-9. Record background counts next to "Bkg Floor" or "Bkg Concrete Wall"in background column of attached "Sodium Iodide Data Collection" sheets as needed.
4. For block wall background measurements, perform a 300-second background count with a Ludlum 44-17 at background location in room 119 near column C-9. Record background counts next to "Bkg Block Wall" in background column of attached Sodium Iodide data collection sheets as needed.
5. For ceiling background measurements, perform a 300-second background count with a Ludlum 44-17 at background location in room 119 near column C-9. Hold the probe waist high, pointed toward ceiling using a sheet metal plate in front of the detector (take background measurement in this configuration). Record background counts next to "Bkg Metal Ceiling" in background column of attached Sodium Iodide data collection sheets as needed.
6. Mark the sample locations on the surfaces to be measured. Take all measurements on contact with the marked surface using tin side shields on the Bicron G-5 and tin side and back shields on the Ludlum 44-17. All Sodium Iodide readings shall have 300 second count times.
7. Collect sodium Iodide, total surface activity and removable surface activity measurements at all locations marked on the attached map.
8. Record the NaI and NE Electra measurements on the attached sheet. Note any items or conditions that may have affected the measurement in the "remarks" section.
9. Count swipes for 60 seconds with a SAC-4, record result on attached sheet for removable contamination.

Table 776012-1: Survey Requirements

Surface	Type of Survey	Probe	Placement	Count Time
Floor	Total Alpha Activity	Bicron G-5	On contact	300 seconds
All Surfaces	Total Alpha Activity	Electra with DP-6	On contact	60 seconds
Block walls	Total Alpha Activity	Bicron G-5 or Ludlum 44-17	On contact	300 seconds
All Surfaces	Removable Alpha	SAC-4	Swipe in placed in tray	60 seconds
Ceiling	Total Alpha Activity	Ludlum 44-17	On Contact	300 seconds
Block Walls	Background measurement	Bicron G-5 or Ludlum 44-17	On contact with wall in room 119 near column C-9	300 seconds
Floors and cement walls	Background measurement	Bicron G-5 or Ludlum 44-17	On contact with floor in room 119 near column C-9	300 seconds
Metal ceilings	Background measurement	Ludlum 44-17	Probe waist high, pointed toward ceiling with sheet metal plate on end in room 119 near column C-9	300 seconds

Survey Unit 776012 Summary

Total Surface Activity Measurements

30	30	
Number Required	Number Obtained	
MIN	3,826	dpm/100 cm^2
MAX	312,999	dpm/100 cm^2
Average	43,539	dpm/100 cm^2
STD DEV	56,138	dpm/100 cm^2

Total Surface Area	2909	m^2
Inaccessible Areas	3576.0	µCi, Alpha
Accessible Surfaces	5705.2	µCi, Alpha

Total Inventory	9281.2	µCi, Alpha
$ASCV_u$	70,830	dpm/100cm^2
$ASCV_u$	3.19	µCi per m^2

Sample Location Number	NaI Activity Measurements				
	Measurement Used	Comment	Surface	Coating	(dpm/100 cm^2)
1	Sodium Iodide	N/A	wall	Thin/No Paint	13,889.5
2	Sodium Iodide	N/A	wall	Thin/No Paint	20,111.9
3	Sodium Iodide	N/A	wall	Thin/No Paint	23,556.5
4	Sodium Iodide	N/A	wall	Thin/No Paint	14,333.9
5	Sodium Iodide	N/A	Floor	Thin/No Paint	3,826.4
6	Sodium Iodide	N/A	Floor	Thin/No Paint	3,826.4
7	Sodium Iodide	N/A	Floor	Thin/No Paint	312,999.3
8	Sodium Iodide	N/A	Floor	Thin/No Paint	55,772.7
9	Sodium Iodide	N/A	Floor	Thin/No Paint	3,826.4
10	Sodium Iodide	N/A	Floor	Thin/No Paint	74,607.8
11	Sodium Iodide	N/A	Floor	Thin/No Paint	37,088.4
12	Sodium Iodide	N/A	Floor	Thin/No Paint	3,826.4
13	Sodium Iodide	N/A	Wall	Thin/No Paint	54,891.1
14	Sodium Iodide	N/A	Ceiling	Thin/No Paint	28,779.0
15	Sodium Iodide	N/A	Ceiling	Thin/No Paint	59,113.5
16	Sodium Iodide	N/A	Ceiling	Thin/No Paint	34,112.5
17	Sodium Iodide	N/A	wall	Thin/No Paint	53,113.3
18	Sodium Iodide	N/A	wall	Thin/No Paint	63,224.8
19	Sodium Iodide	N/A	wall	Thin/No Paint	75,003.1
20	Sodium Iodide	N/A	Ceiling	Thin/No Paint	28,334.5
21	Sodium Iodide	N/A	Ceiling	Thin/No Paint	28,112.3
22	Sodium Iodide	N/A	Floor	Thin/No Paint	23,231.4
23	Sodium Iodide	N/A	Floor	Thin/No Paint	3,826.4
24	Sodium Iodide	N/A	Floor	Thin/No Paint	22,628.0
25	Sodium Iodide	N/A	Floor	Thin/No Paint	96,697.0
26	Sodium Iodide	N/A	Ceiling	Thin/No Paint	37,446.0
27	Sodium Iodide	N/A	Ceiling	Thin/No Paint	19,111.9
28	Sodium Iodide	N/A	Ceiling	Thin/No Paint	38,890.5
29	Sodium Iodide	N/A	Ceiling	Thin/No Paint	36,668.2
30	Sodium Iodide	N/A	Ceiling	Thin/No Paint	35,334.8
				MIN	**3,826**
				MAX	**312,999**
				AVERAGE	**43,539**
				SD	**56,138**

Data and Sodium Iodide Instrument Information

Survey Area:	V	Survey Unit:	776012	Survey Date(s):	08/08/04

Instrument Specifications

Instrument #	1	2
Meter Model:	Ludlum 2350-1	Ludlum 2350-1
Meter Serial #:	203457	192614
Detector Model:	Bicron G-5	Ludlum 44-17
Detector #:	B940T	209090
Detector Size (cm^2):	125	17.8
Calibration Due Date:	12/3/04	10/20/04
Count Time (min)	5	5
Contact Efficiency	6.05%	8.24%

Ratio Used

Pu to Am - 241	8.1

Comments

In cases where the critical level is greater than the calculated dpm/100cm2, the critical level will be used for statistical analysis.

Count Times for backgrounds and samples are equal.

Attenuation Factors: Based on observation of Walls and Ceilings. Epoxy on Floor determined by chip sampling.

Background (Gross)

Instrument #	1	2
Gamma (Ceilings)	N/A	381
Gamma (Floors)	5825	N/A
Gamma (Block Walls)	N/A	752
Gamma (Solid Walls)	N/A	1217

Background (cpm)

Instrument #	1	2
Gamma (Ceilings)	N/A	76.2
Gamma (Floors)	1165	N/A
Gamma (Block Walls)	N/A	150.4
Gamma (Metal Walls)	N/A	243.4

Efficiencies (cpm/dpm)

Instrument #	1	2
Thin/No Paint	0.060	0.082
Epoxy	0.049	0.066
Other	0.057	0.078

Coatings	Thickness (Inches)
Thin/No Paint	0.007
Epoxy	0.250
Other	0.06

Total Surface Activity

Survey Area:	V	Survey Unit:	776012				
Meter Model:	NE Electra w/ DP6 Probe					Dates Counted:	8/9/04
Instrument #:	2397	n/a	n/a	n/a	n/a	A priori MDA:	94
Cal. Due Date:	1/19/05	n/a	n/a	n/a	n/a	Avg. Local Bkgd	7.9
Efficiency (c/d):	0.220	n/a	n/a	n/a	n/a	Avg. Efficiency	0.220

Sample Location #	RCT ID #	Inst. #	Instrument (cpm)	Local Bkgd (cpm)	(dpm/100 cm^2)
1	1	2397	10	5.0	22.7
2	1	2397	10	14.0	-18.2
3	1	2397	22	13.0	40.9
4	1	2397	18	8.0	45.5
5	1	2397	348	7.0	1550.0
6	1	2397	94	2.0	418.2
7	1	2397	241	5.0	1072.7
8	1	2397	297	5.0	1327.3
9	1	2397	167	3.0	745.5
10	1	2397	661	6.0	2977.3
11	1	2397	48	5.0	195.5
12	1	2397	210	3.0	940.9
13	1	2397	10	11.0	-4.5
14	1	2397	70	3.0	304.5
15	1	2397	452	3.0	2040.9
16	1	2397	25	2.0	104.5
17	1	2397	9	4.0	22.7
18	1	2397	6	1.0	22.7
19	1	2397	10	5.0	22.7
20	1	2397	6	6.0	0.0
21	1	2397	9	6.0	13.6
22	1	2397	34	7.0	122.7
23	1	2397	67	6.0	277.3
24	1	2397	106	16.0	409.1
25	1	2397	25	16.0	40.9
26	1	2397	61	28.0	150.0
27	1	2397	52	33.0	86.4
28	1	2397	192	3.0	859.1
29	1	2397	368	5.0	1650.0
30	1	2397	9	5.0	18.2
				MIN	-18.2
				MAX	2977.3
				MEAN	515.3
				SD	740.3

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Removable Activity

Survey Area:		V	Survey Unit:		776012
Dates Counted:	5/23/04				
A priori MDA:	16				
Efficiency (c/d)	0.333				
Smear Location Number	Smear Results				
	RCT ID #	Serial Number	Gross (cpm)	Bkg.	(dpm/100 cm^2)
1	1	1	0	0.5	-2
2	1	2	10	0.2	29
3	1	1	0	0.5	-2
4	1	2	0	0.2	-1
5	1	1	22	0.5	65
6	1	2	0	0.2	-1
7	1	1	2	0.5	5
8	1	2	1	0.2	2
9	1	1	0	0.5	-2
10	1	2	0	0.2	-1
11	1	1	3	0.5	8
12	1	2	1	0.2	2
13	1	1	3	0.5	8
14	1	2	0	0.2	-1
15	1	1	0	0.5	-2
16	1	2	2	0.2	5
17	1	1	1	0.5	2
18	1	2	2	0.2	5
19	1	1	0	0.5	-2
20	1	2	1	0.2	2
21	1	1	0	0.5	-2
22	1	2	1	0.2	2
23	1	1	1	0.5	2
24	1	2	116	0.2	348
25	1	1	2	0.5	5
26	1	2	9	0.2	26
27	1	1	1	0.5	2
28	1	2	0	0.2	-1
29	1	1	1	0.5	2
30	1	2	0	0.2	-1
				MIN	-1.5
				MAX	347.7
				MEAN	16.9
				SD	63.9

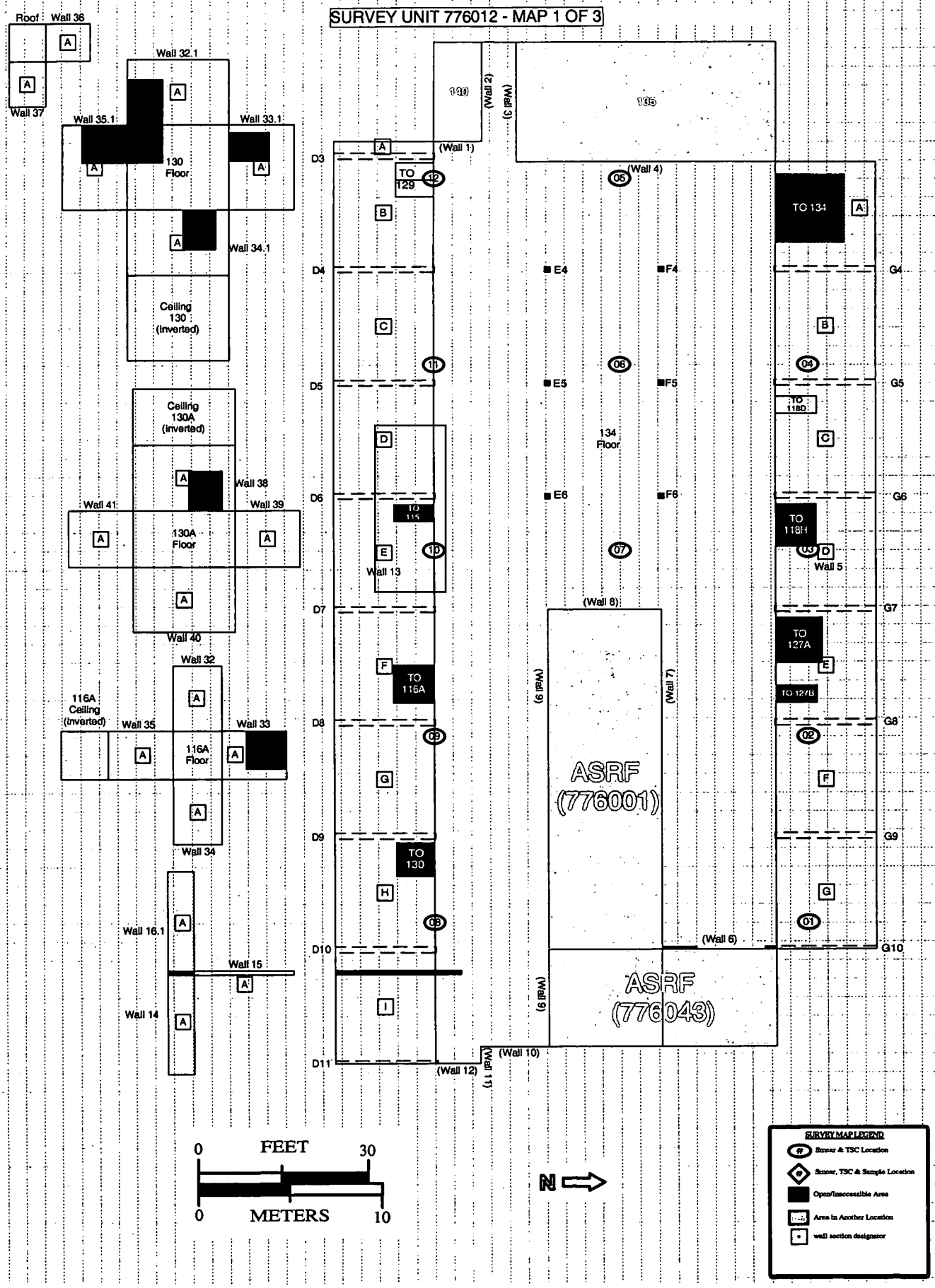
27

RADIOLOGICAL CLOSEOUT SURVEY FOR THE 776 CLUSTER

Survey Area: 5 **Survey Unit: 776012** **Classification: NA**
Building: 776
Survey Unit Description: First floor

Total Floor Area: 829 sq. m **Total Area: 2909 sq. m** **Random Sample Grid Size: 10 x 10 sq.m**

SURVEY UNIT 776012 - MAP 1 OF 3



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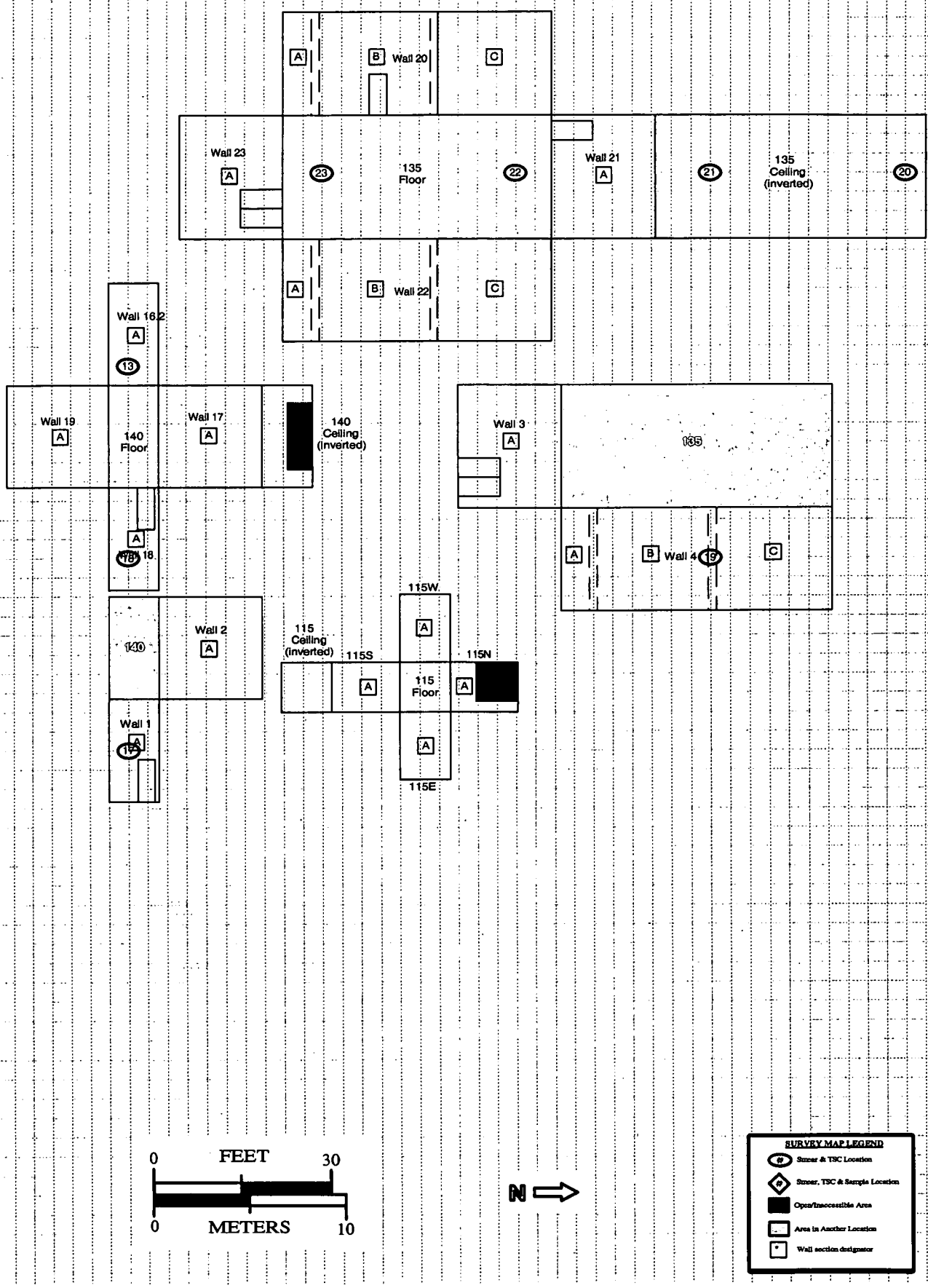
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 776 CLUSTER

Survey Area: 5 **Survey Unit: 776012** **Classification: NA**
Building: 776
Survey Unit Description: First floor

Total Floor Area: 829 sq. m **Total Area: 2909 sq. m** **Random Sample Grid Size: 10 x 10 sq.m**

SURVEY UNIT 776012 - MAP 2 OF 3

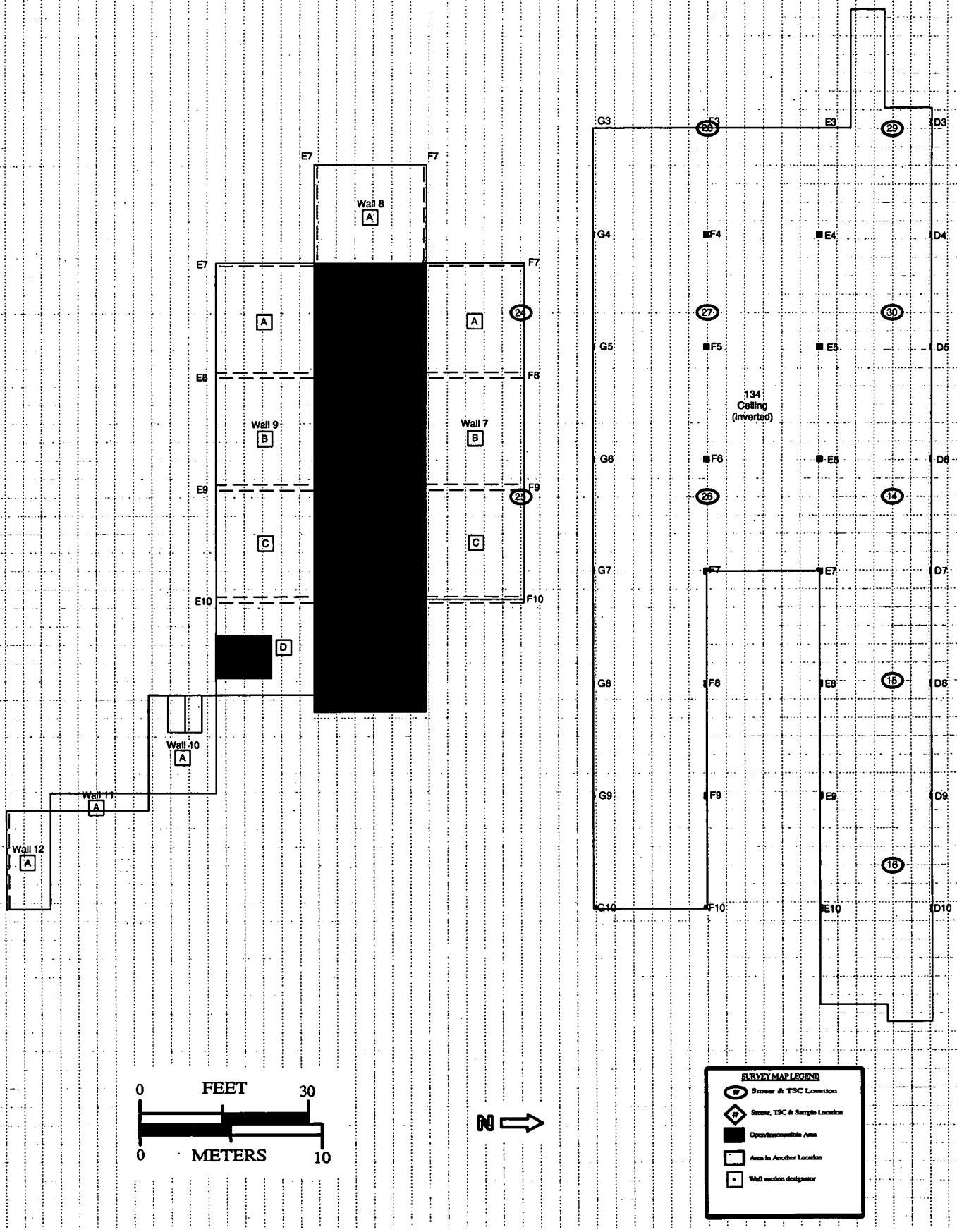


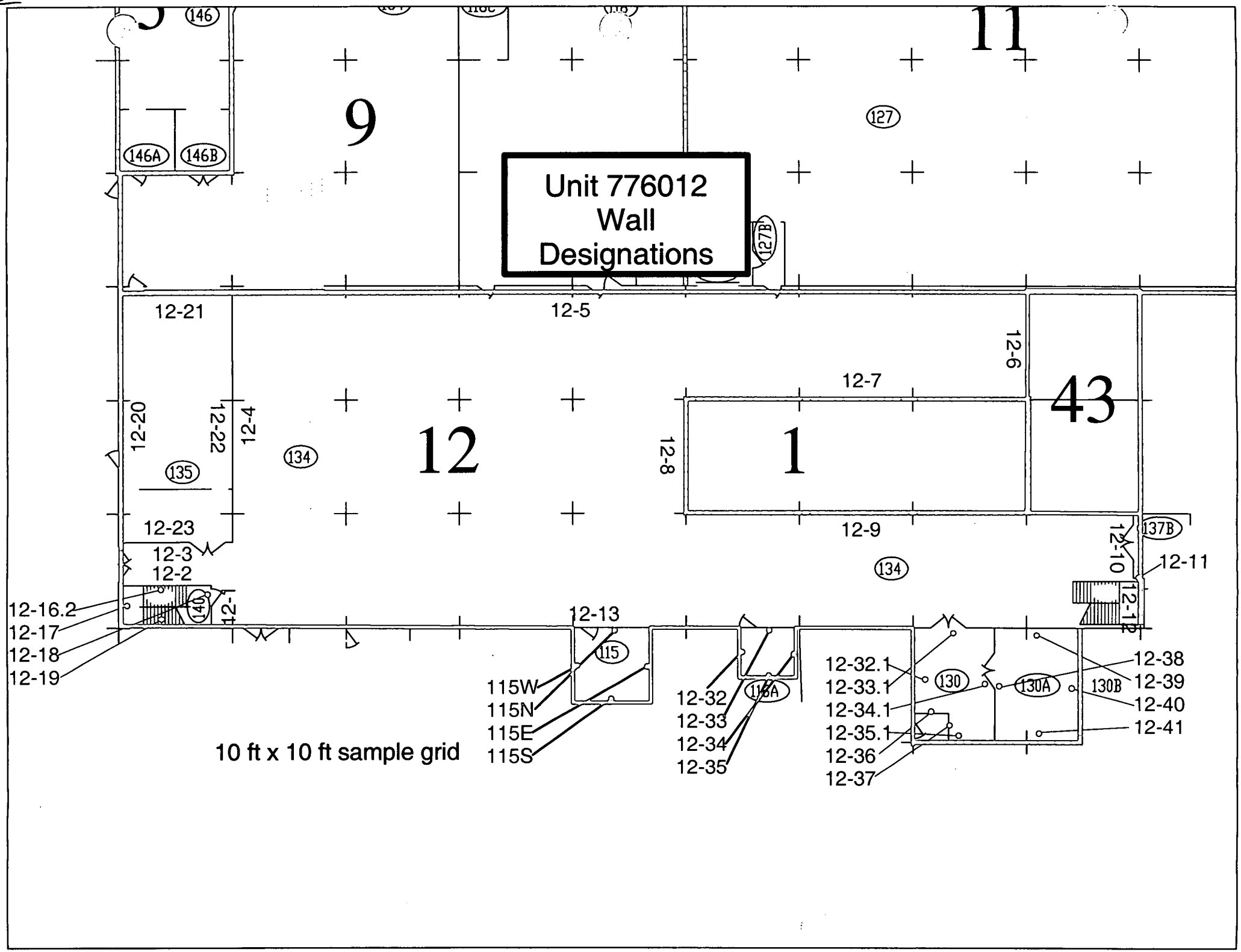
RADIOLOGICAL CLOSEOUT SURVEY FOR THE 776 CLUSTER

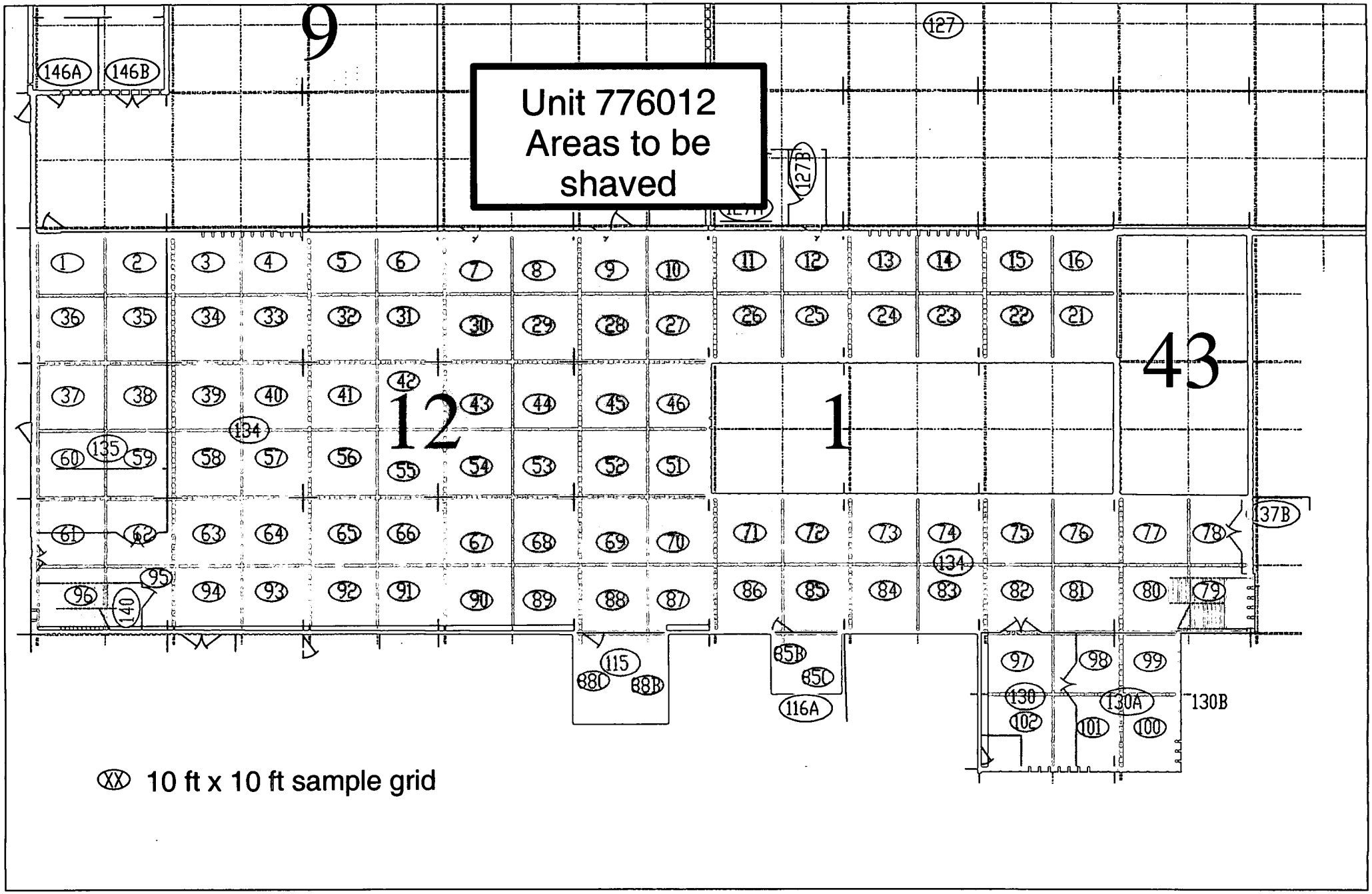
Survey Area: 5 **Survey Unit: 776012** **Classification: NA**
Building: 776
Survey Unit Description: First floor

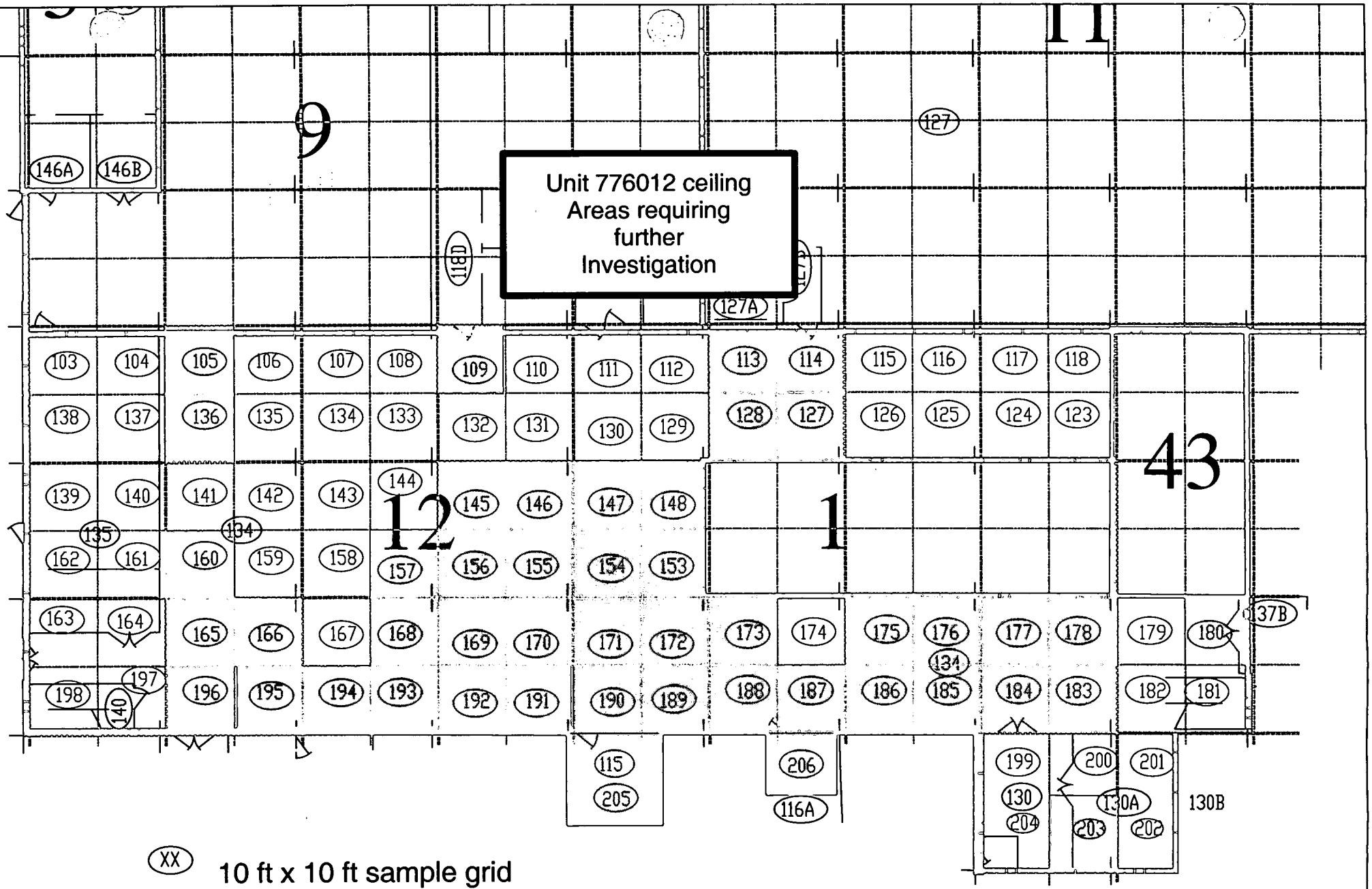
Total Floor Area: 829 sq. m **Total Area: 2909 sq. m** **Random Sample Grid Size: 10 x 10 sq.m**

SURVEY UNIT 776012 - MAP 3 OF 3




Unit 776012
Wall
Designations
9
11
12
1
43
146
146A
146B
127
127B
12-21
12-5
12-6
12-7
12-8
12-9
12-20
12-22
12-4
134
135
12-23
12-3
12-2
12-1
140
12-16.2
12-17
12-18
12-19
12-13
115
115W
115N
115E
115S
12-32
12-33
12-34
12-35
116A
12-32.1
12-33.1
12-34.1
12-35.1
12-36
12-37
130
130A
130B
12-38
12-39
12-40
12-41
137B
12-10
12-11
12-12
10 ft x 10 ft sample grid


Unit 776012
Areas to be shaved
9
12
1
43
146A
146B
127
127B
37B
134
135
140
95
115
88C
88B
85B
85C
116A
130
130A
130B
102
101
100
XX 10 ft x 10 ft sample grid


Unit 776012 ceiling
Areas requiring
further
Investigation
9
11
12
1
43
146A
146B
118D
127
127A
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
138
137
136
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134
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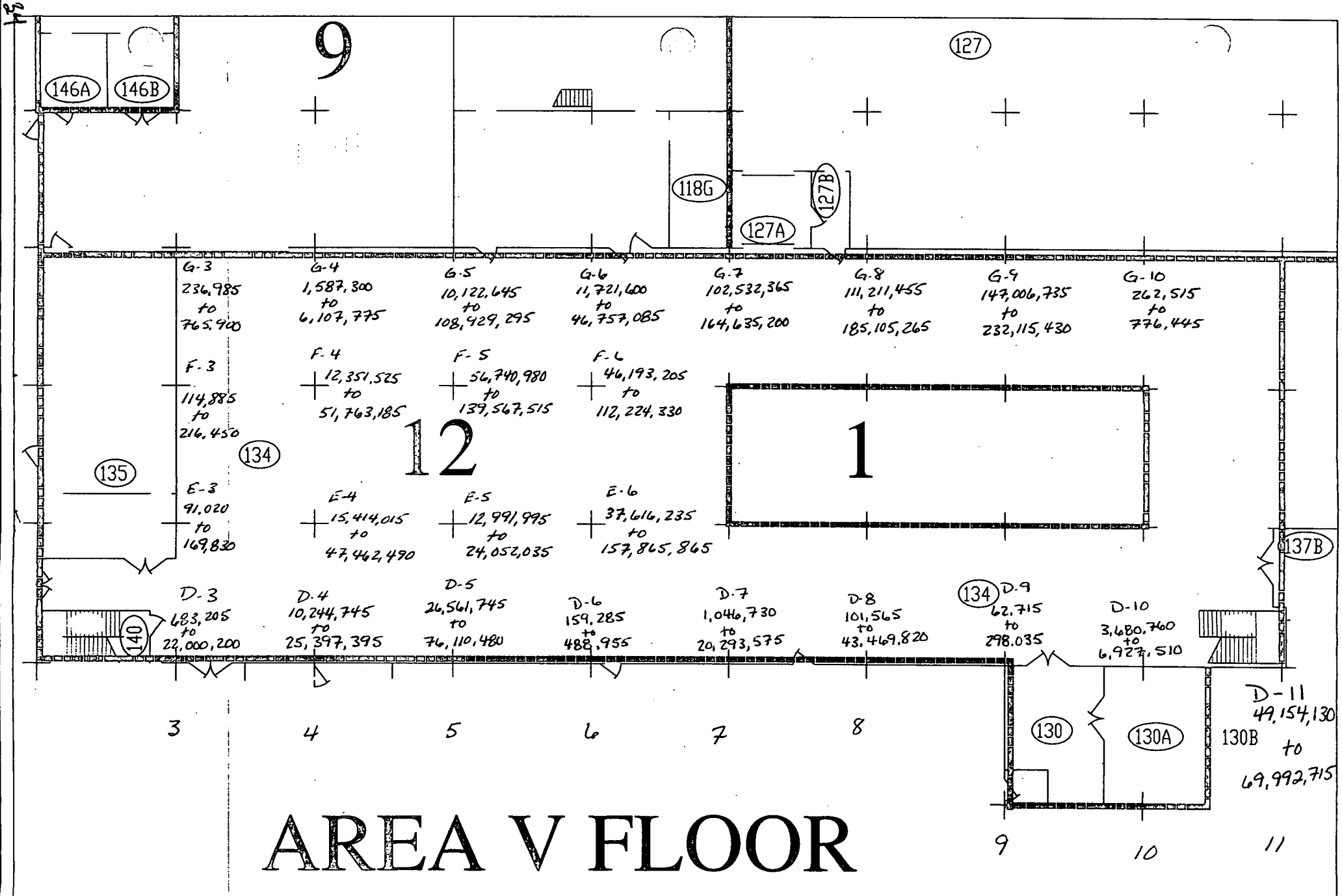
170
171
172
173
174
175
176
177
178
179
180
137B
134
198
197
140
196
195
194
193
192
191
190
189
188
187
186
185
184
183
182
181
115
205
206
116A
199
200
201
130
204
130A
203
202
130B
XX
10 ft x 10 ft sample grid

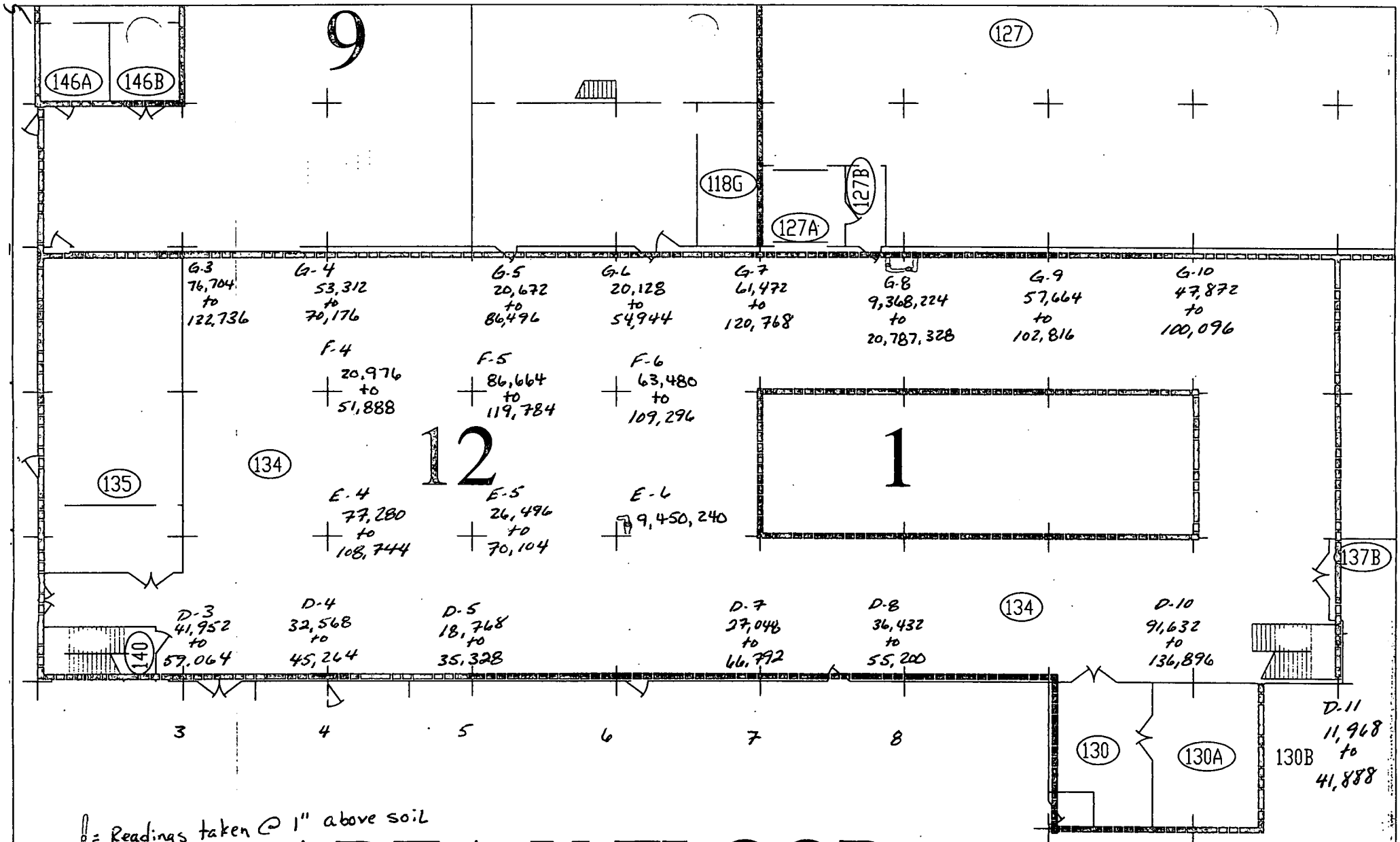


AREA V FLOOR

Results in dpm/100 cm²

776012 Column Base survey prior to Remediation

P. Turner



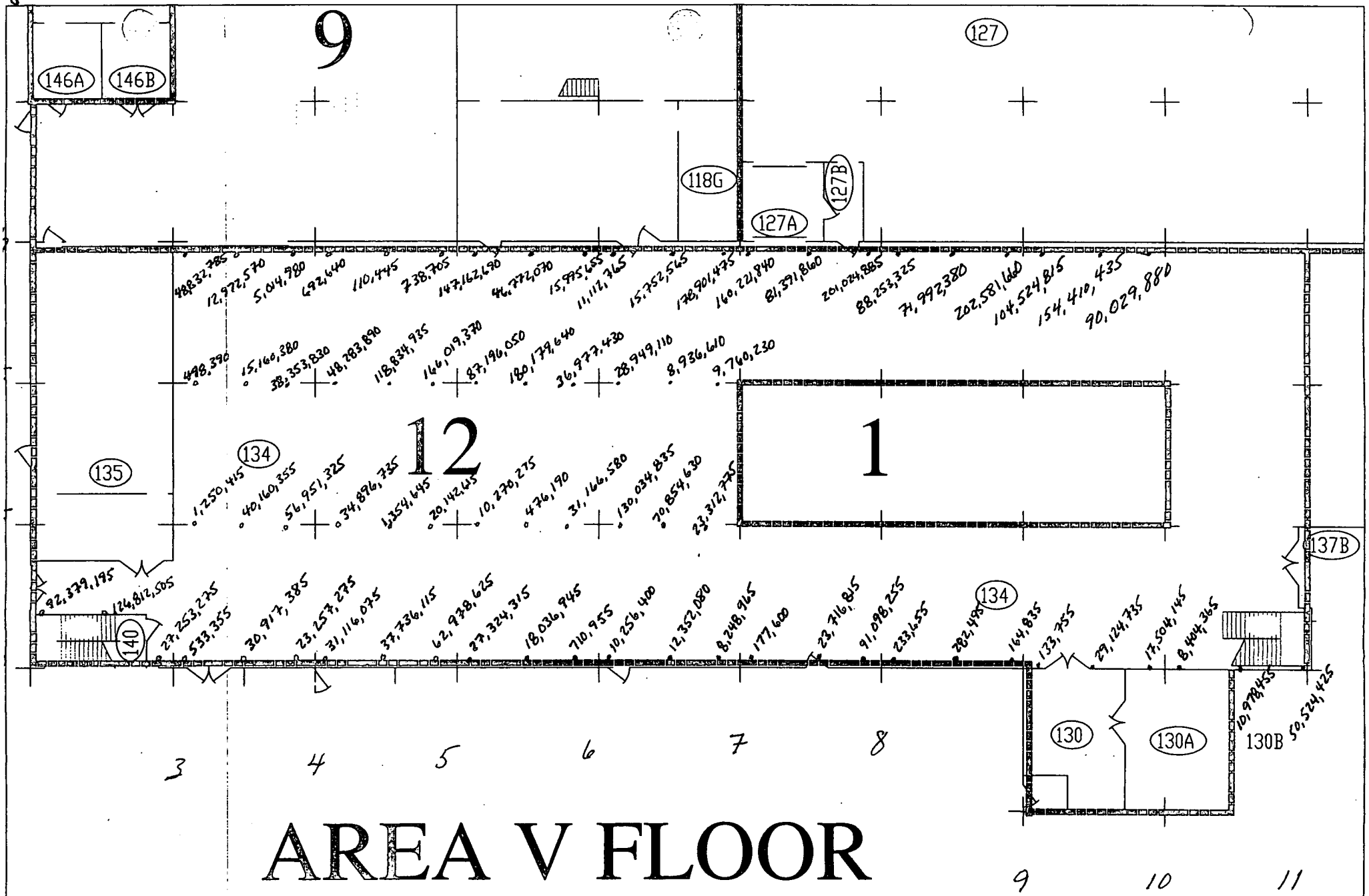
= Readings taken @ 1" above soil

AREA V FLOOR

Results in dpm/100 cm²

776012 Column Base Survey post Remediation

P. Turner

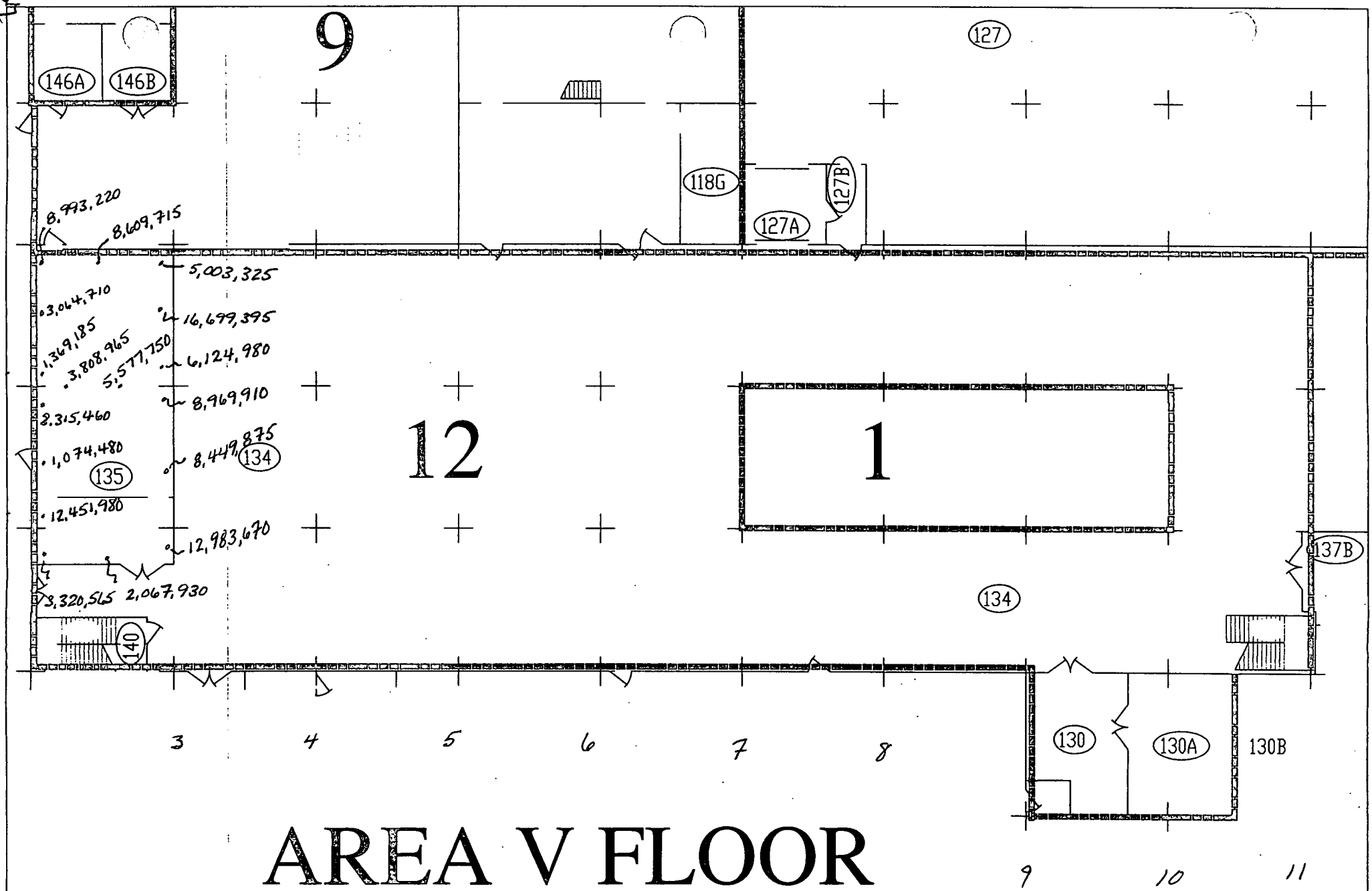


AREA V FLOOR

Results in dpm/100 cm²

776012 Expansion Joint Survey Prior to Remediation

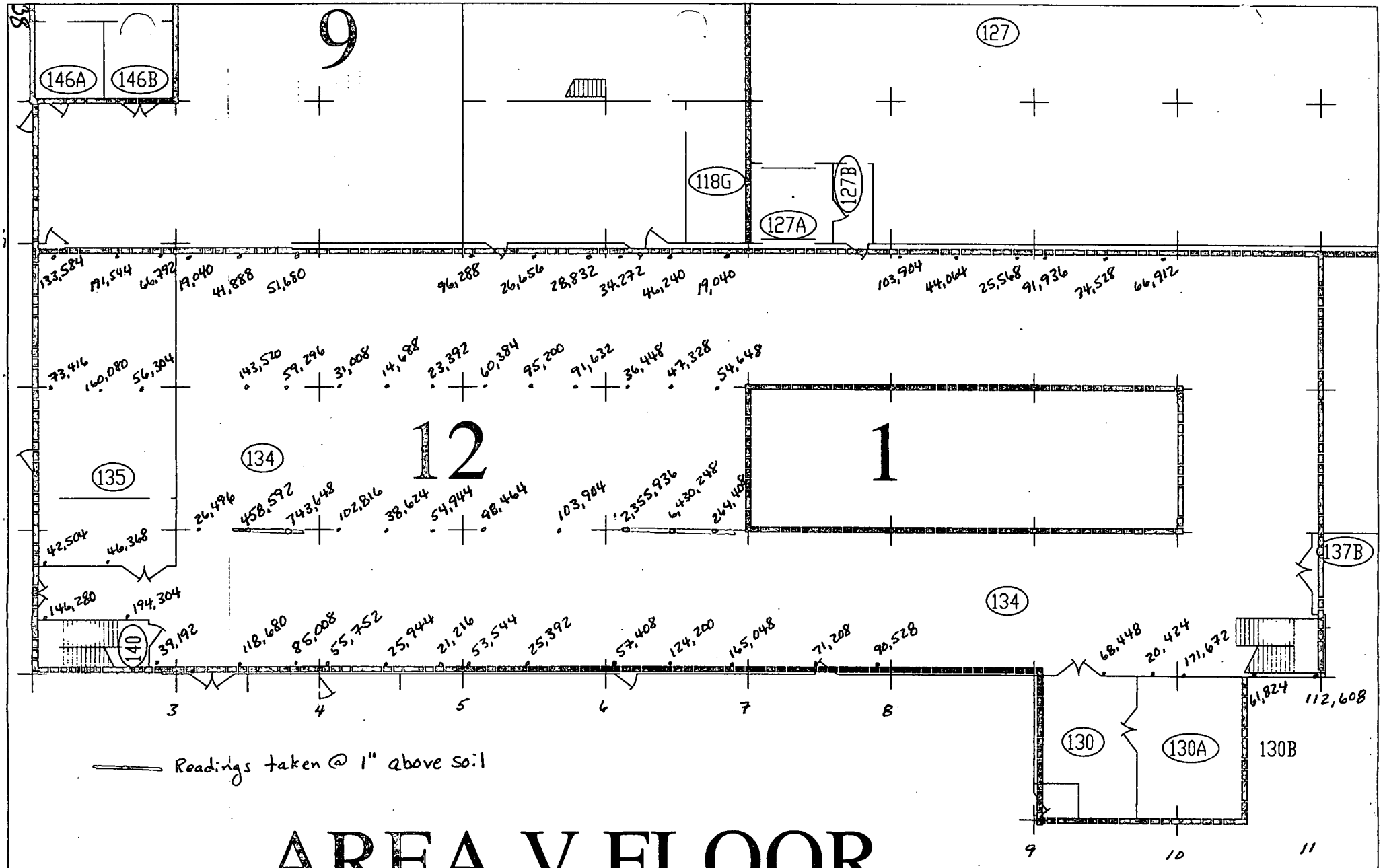
P. Turner



AREA V FLOOR

Results in dpm/100 cm²

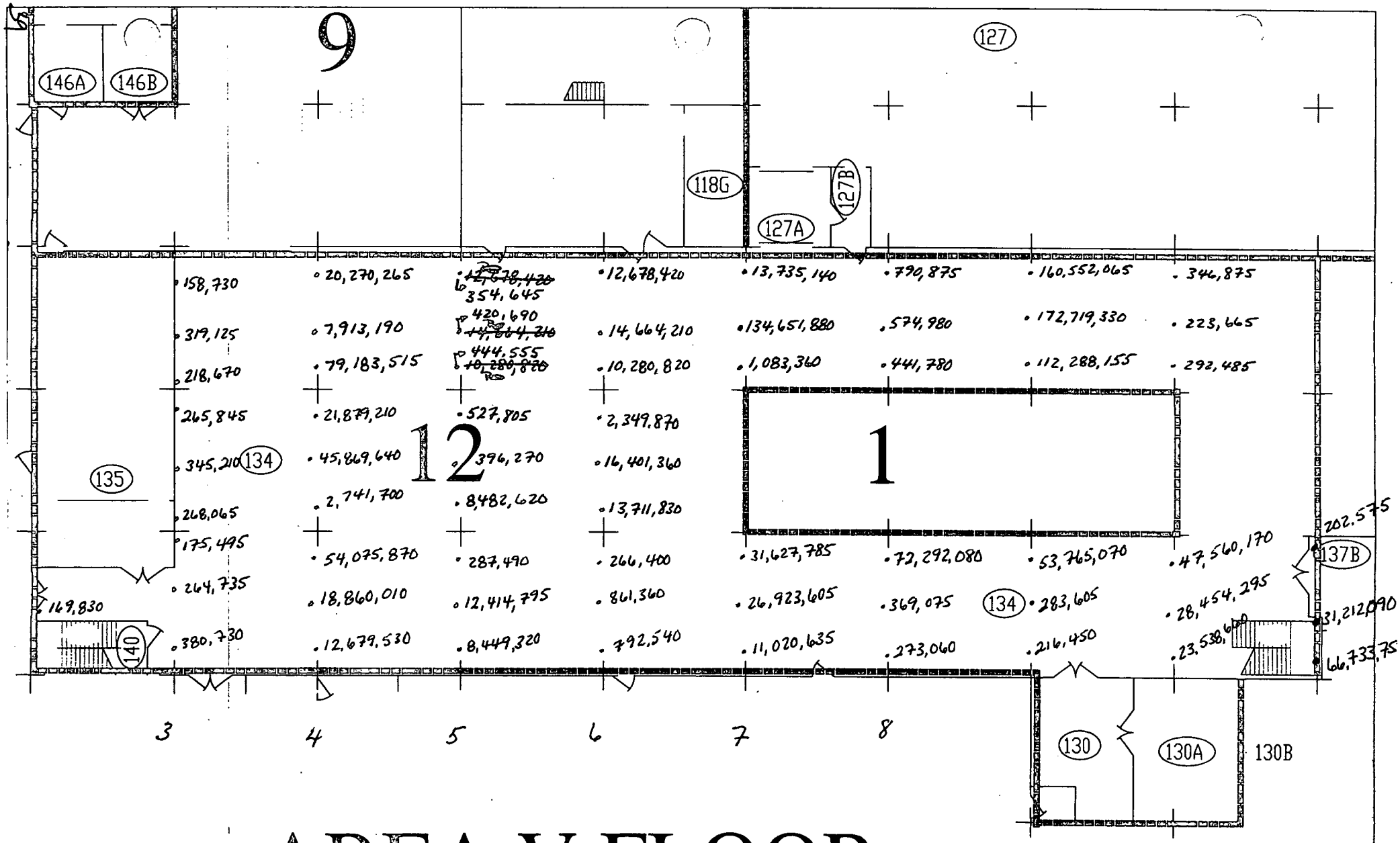
776012 Expansion Joint Survey prior to Remediation Rm. 135 P. Turner



AREA V FLOOR

Results in dpm/100 cm²

776012 Expansion Joint Survey post remediation P. Turner

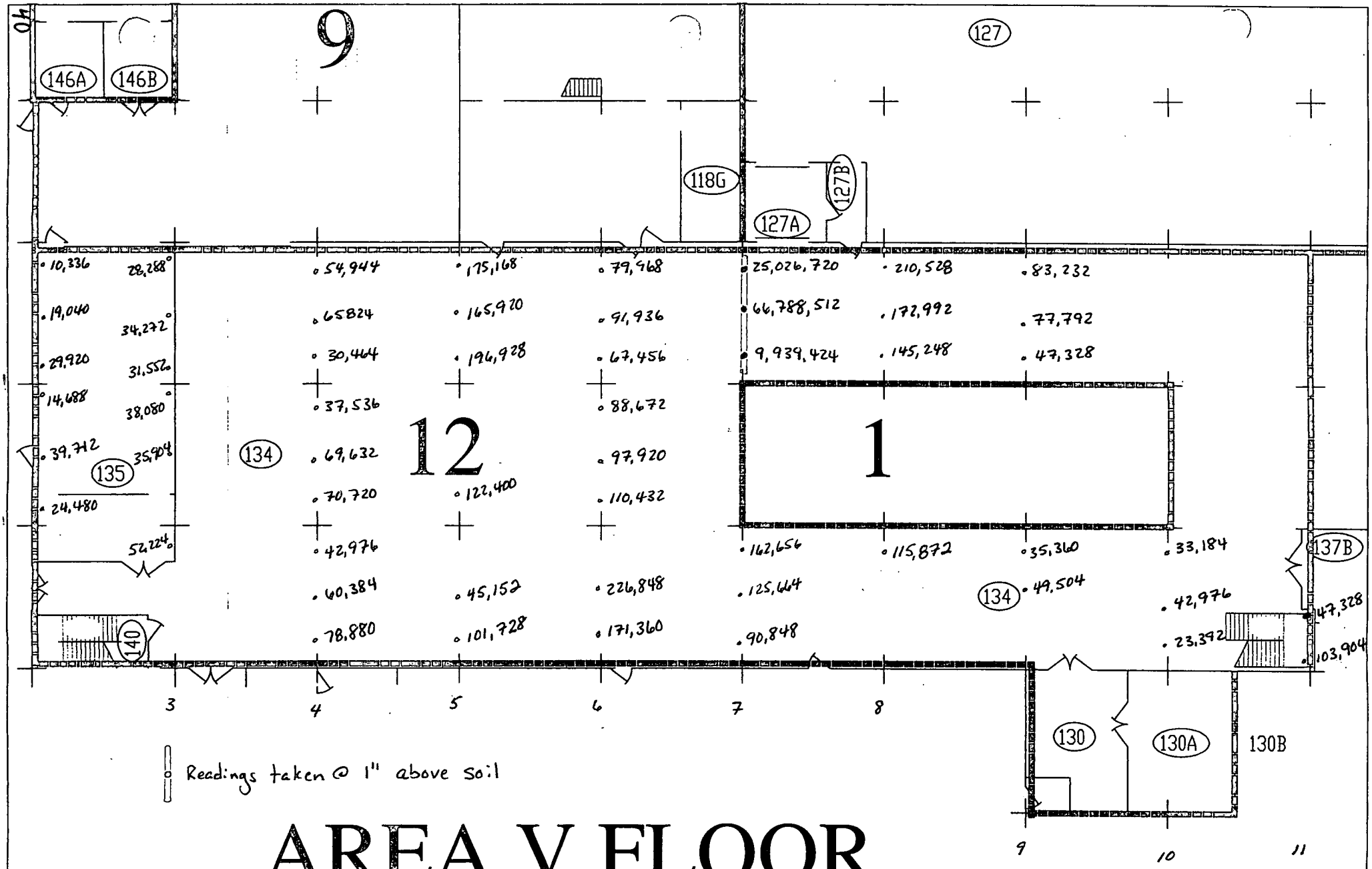


AREA V FLOOR

Results in dpm/100 cm²

776012 Expansion Joint Survey prior to Remediation

P. Turner

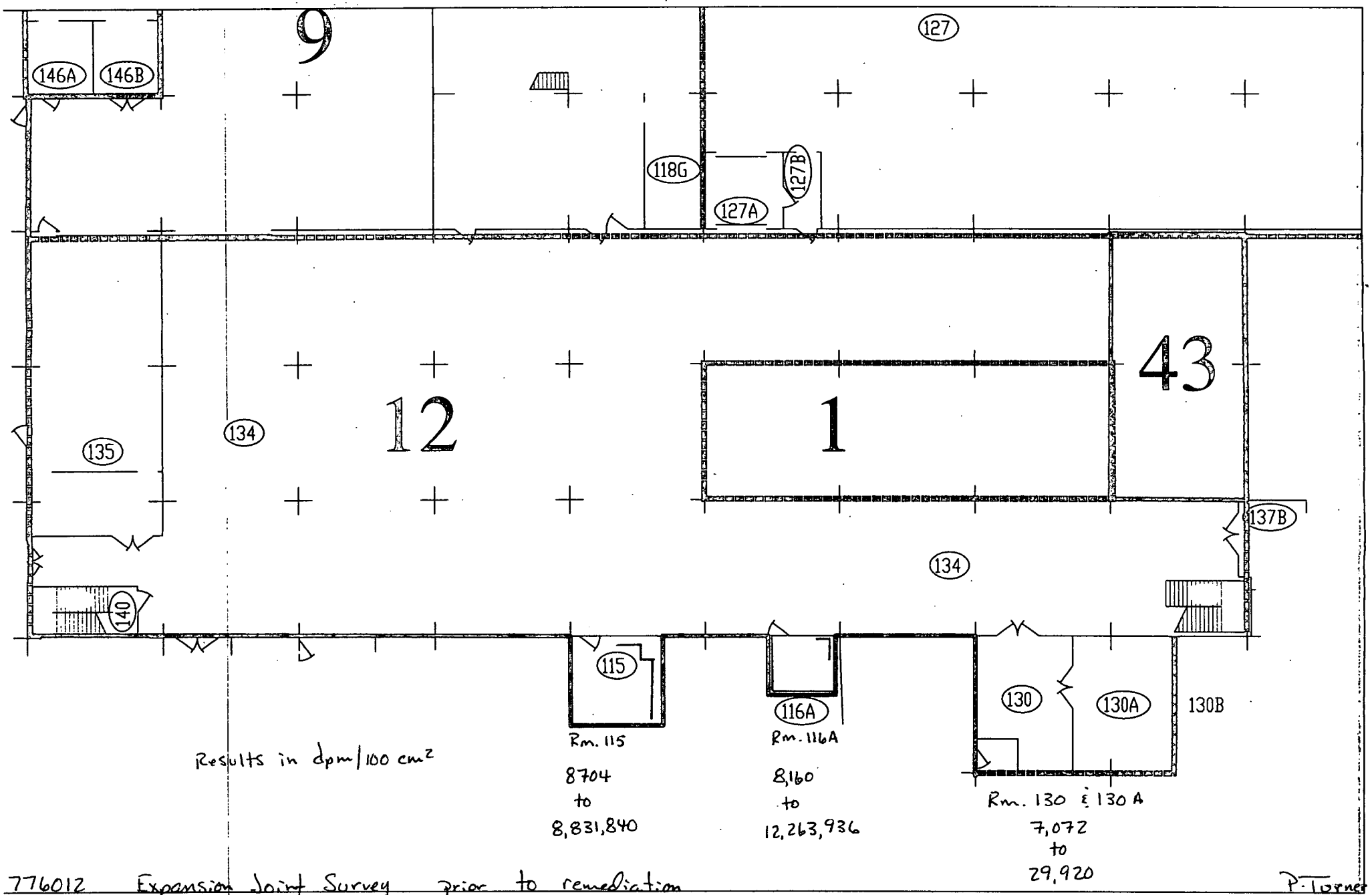


AREA V FLOOR

Results in dpm/100 cm²

776012 Expansion Joint Survey post Remediation

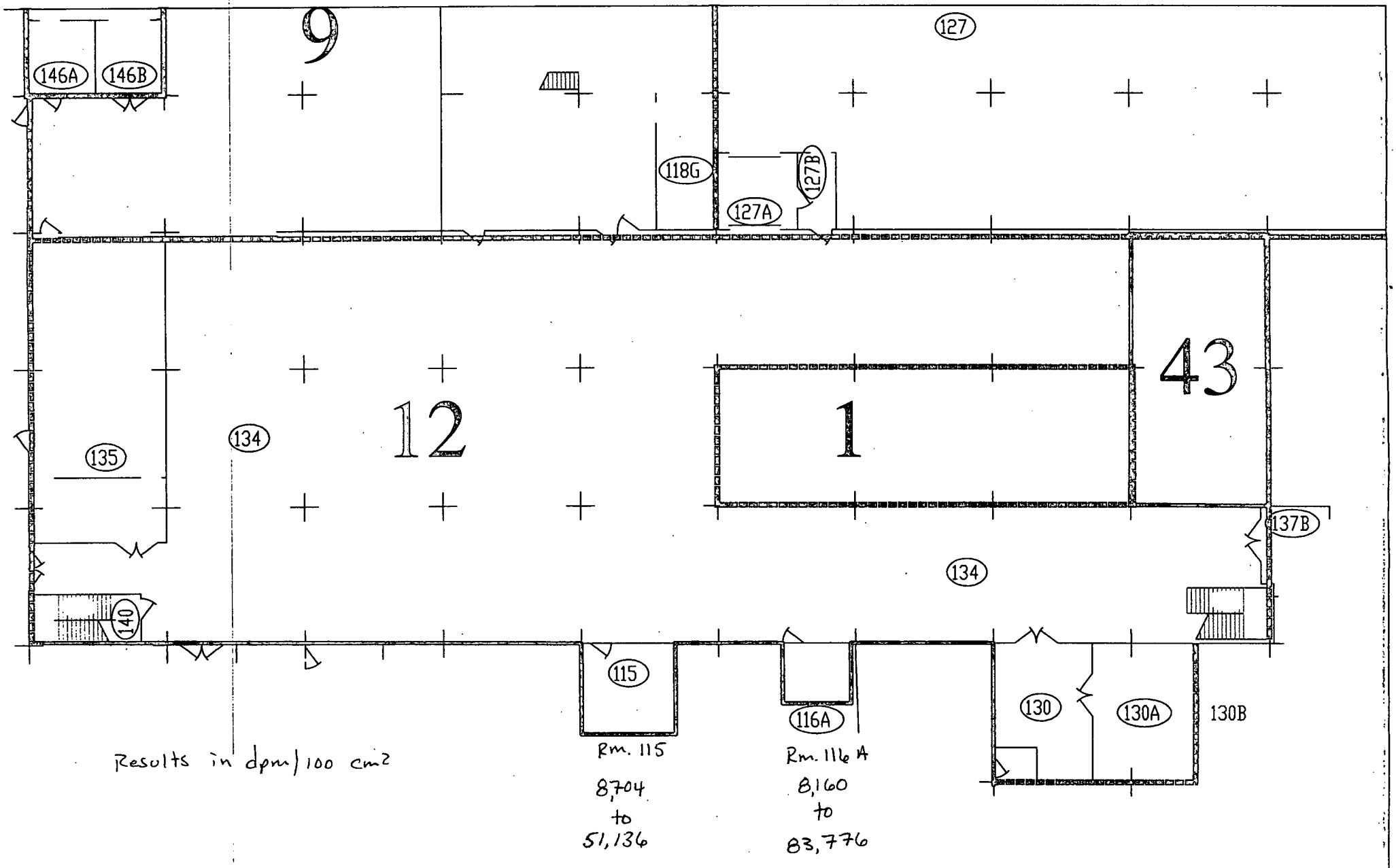
P. Turner



Results in dpm/100 cm²

776012 Expansion Joint Survey prior to remediation of 115 & 116A

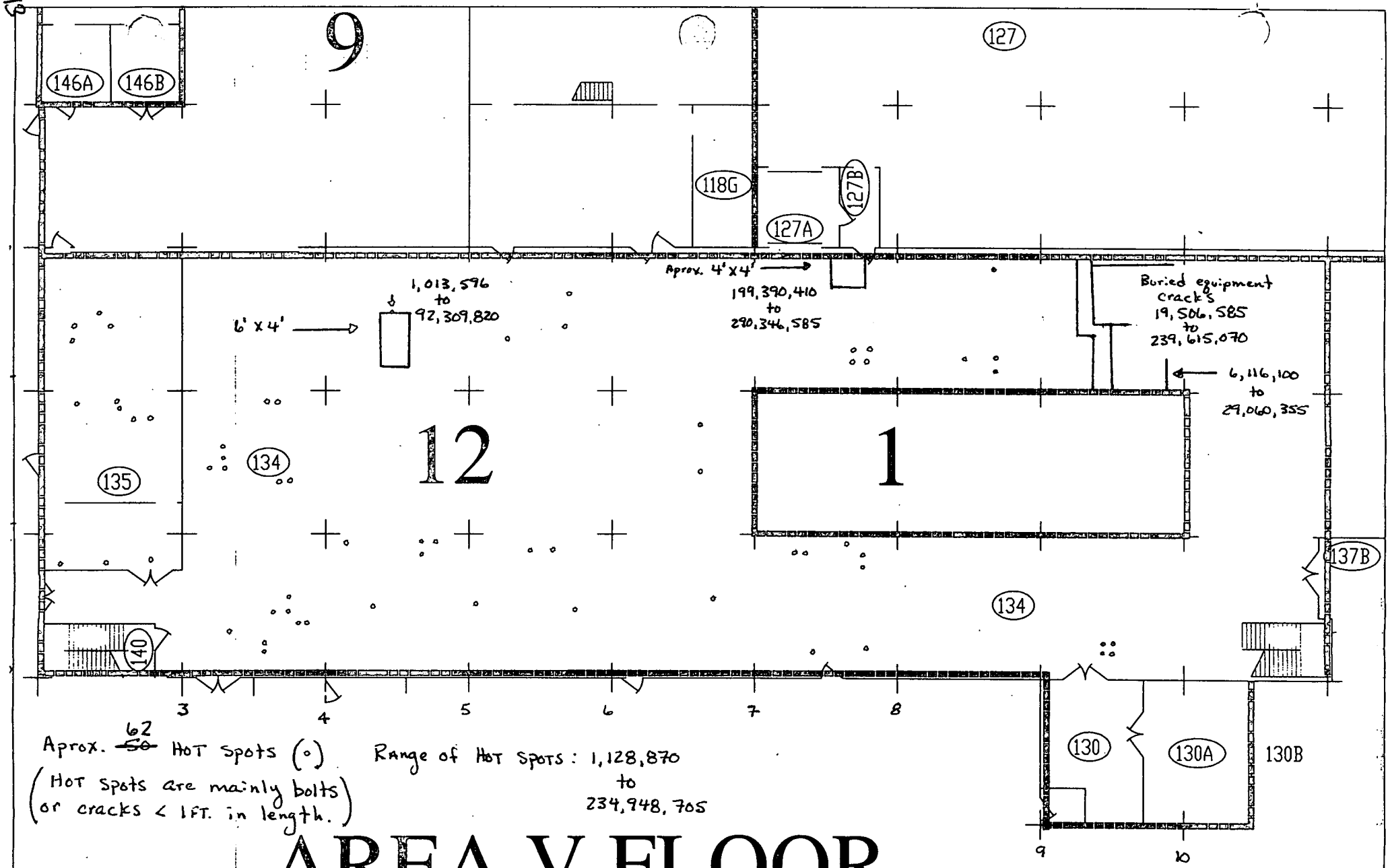
P. Turner



Results in dpm/100 cm²

776012 Expansion Joint survey post remediation of 115 & 116 A

P. Turner



Aprox. ~~50~~ 62 HOT Spots (∘)

(HOT Spots are mainly bolts or cracks < 1FT. in length.)

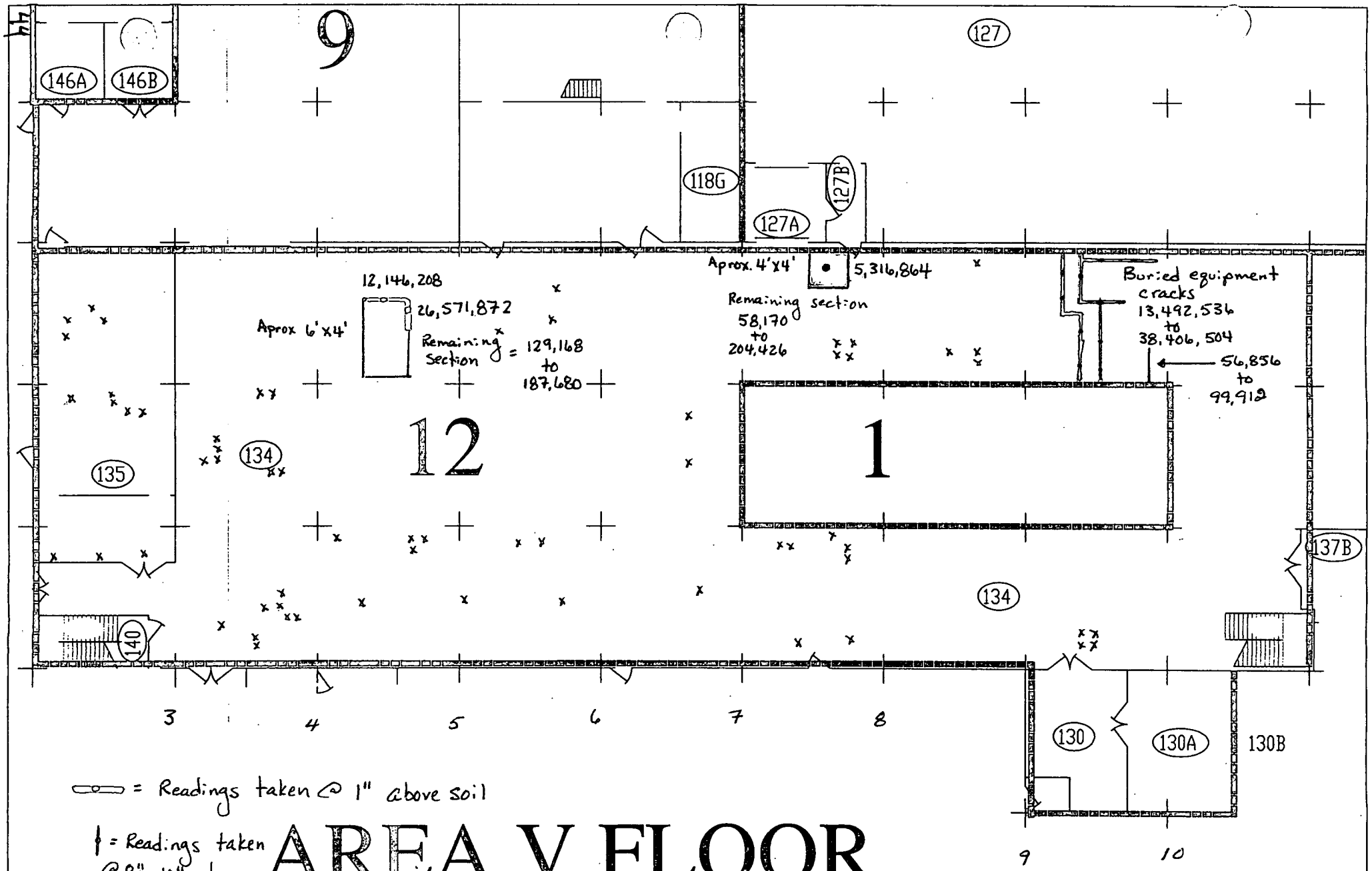
Range of HOT SPOTS: 1,128,870 to 234,948,705

AREA V FLOOR

Results in dpm/100 cm²

776012 HOT Spot Survey prior to remediation including cracks

P. Turner



= Readings taken @ 1" above soil

= Readings taken @ 8"-10" deep

x = Hot spots (bolts or cracks < 1 FT in length)

Range of hot spots post remediation 17,112 to 48,576

AREA V FLOOR

Results in dpm/100 cm²

776012 Hot Spot & Crack survey post Remediation P. Turner

45

Unit	776012	Wall	1	Section		Date	4/19/04

6/6/04

Column #							Column #	Row Average
				Actual location of 2,461,854 NOTE: ON CONTACT	Actual location of 3,681,404 NOTE: ON CONTACT	Actual location of 3,230,249 NOTE: ON CONTACT		#DIV/0!
								Row Average #DIV/0!
ELEV. (ft) 12								Row Average #DIV/0!
				184,815	220,779	166,509 NOTE: ON CONTACT		Row Average 190,701
9				2,634 NOTE: ON CONTACT	43,437 NOTE: ON CONTACT			Row Average 23,035
6				170,829	140,859			Row Average 155,844
3				6,920	33,095 NOTE: ON CONTACT			Row Average 20,007
0								

Probe# 1	199765	Background 1	285
Efficiency 1	180	RCT 1	Turner
Contact Eff. 1	0.0700		

Probe# 2	212348	Background 2	184
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average 107,764

dpm/100cm^2

Count Time (s)	30

46

Unit	776012	Wall	2	Section		Date	4/19/04

Column #	Actual location of 4,210,570 NOTE: ON CONTACT	Actual location of 1,428,220 NOTE: ON CONTACT	Actual location of 1,621,276 NOTE: ON CONTACT	Actual location of 3,287,565 NOTE: ON CONTACT	Actual location of 2,278,544 NOTE: ON CONTACT		Column #
ELEV. (ft)							
12							
9	354,645	282,717	46,953	6,920	176,823		
6	6,920	6,920	142,857	6,920	6,920		
3	6,920	6,920	6,920	6,920	6,920		
0	6,920	6,920	6,920	10,989	6,920		

Row Average
#DIV/0!
Row Average #DIV/0!
Row Average #DIV/0!
Row Average 173,612
Row Average 34,107
Row Average 6,920
Row Average 7,734

Probe# 1	199765	Background 1	285
Efficiency 1	180	RCT 1	P.Turner
Contact Eff. 1	0.0700		

Probe# 2		Background 2	
Efficiency 2		RCT 2	
Contact Eff. 2			

Section Average
55,593

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	3	Section	A	Date	4/21/04

6/6/04

Column #	E-2						E-3	Row Average
								#DIV/0!
								Row Average #DIV/0!
ELEV. (ft)								
12								Row Average #DIV/0!
9	197,802	217,283	224,775	335,664	530,469	524,475		Row Average 338,411
6	121,379	104,895	92,907	154,346	154,346	265,235		Row Average 148,851
3	94,631 (NOTE: ON CONTACT)	102,905 (NOTE: ON CONTACT)	137,862	136,364		403,862 (NOTE: ON CONTACT)		Row Average 175,125
0	3,812,647 (NOTE: ON CONTACT)	508,318 (NOTE: ON CONTACT)	102,905 (NOTE: ON CONTACT)	2,927,356 (NOTE: ON CONTACT)		3,771,278 (NOTE: ON CONTACT)		Row Average 2,224,501

Probe# 1	204360	Background 1	124
Efficiency 1	240	RCT 1	Harvey
Contact Eff. 1	0.0750		

Probe# 2	212348	Background 2	57
Efficiency 2	380	RCT 2	E.Bartolomy
Contact Eff. 2	0.0880		

Section Average
678,259

dpm/100cm^2

Count Time (s)	30

48

Unit	776012	Wall	3	Section	A	Date	8/1/04

Column #							Column #	Row Average
								#DIV/0!
								Row Average #DIV/0!
ELEV. (ft)	1,403,274 NOTE: ON CONTACT	1,079,654 NOTE: ON CONTACT	1,168,014 NOTE: ON CONTACT	1,744,566 NOTE: ON CONTACT	3,966,831 NOTE: ON CONTACT	3,449,922 NOTE: ON CONTACT		Row Average 2,135,377
12								Row Average #DIV/0!
9								Row Average #DIV/0!
6								Row Average #DIV/0!
3								Row Average #DIV/0!
0								

Probe# 1	209090	Background 1	141	Probe# 2		Background 2	
Efficiency 1	260	RCT 1	R.Burke	Efficiency 2		RCT 2	Jones
Contact Eff. 1	0.0824			Contact Eff. 2			

Section Average
2,135,377

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	4	Section	A	Date	4/20/04

6/6/04

Column # D-3						Column # E-3	Row Average
							Row Average #DIV/0!
							Row Average #DIV/0!
ELEV. (ft)							
12						735,048	Row Average 735,048
9						580,669	Row Average 580,669
6						285,464	Row Average 285,464
3						107,042 NOTE: ON CONTACT	Row Average 107,042
0						114,281 NOTE: ON CONTACT	Row Average 114,281

Probe# 1	204360	Background 1	139
Efficiency 1	240	RCT 1	Fessenden
Contact Eff. 1	0.0750		

Probe# 2	212348	Background 2	57
Efficiency 2	380	RCT 2	E.Bartolomy
Contact Eff. 2	0.0880		

Section Average
364,501

dpm/100cm^2

Count Time (s)	30

50

Unit	776012	Wall	4	Section	B	Date	4/20/04

6/6/04

Column #	E-3						Column # F-3	Row Average #DIV/0! Row Average #DIV/0!
ELEV. (ft)	1,932,332	1,845,076	1,702,595	1,116,103	2,864,534	1,342,526		Row Average 1,800,528
12	547,702	423,326	286,963	250,999	576,173	648,101		Row Average 455,544
9	180,471 NOTE: ON CONTACT	3,519,963 NOTE: ON CONTACT	7,553,415 NOTE: ON CONTACT	209,041	261,488	1,885,898 NOTE: ON CONTACT		Row Average 2,268,379
6	951,998 NOTE: ON CONTACT	758,599 NOTE: ON CONTACT	7,181,097 NOTE: BLOCK NOTE: ON CONTACT	176,074	132,617	136,000 NOTE: ON CONTACT		Row Average 1,556,064
3	471,087 NOTE: ON CONTACT	2,226,156 NOTE: ON CONTACT	27,969,925 NOTE: ON CONTACT	128,760 NOTE: ON CONTACT	125,658 NOTE: ON CONTACT	83,255 NOTE: ON CONTACT		Row Average 5,167,473
0								

Probe# 1	204360	Background 1	139
Efficiency 1	240	RCT 1	Fessenden
Contact Eff. 1	0.0750		

Probe# 2	212348	Background 2	57
Efficiency 2	380	RCT 2	E.Bartolomy
Contact Eff. 2	0.0880		

Section Average
2,249,598

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	4	Section	C	Date	4/20/04

Column #	F-3						G-3	Row Average
								#DIV/0!
								Row Average #DIV/0!
ELEV. (ft)								
12	3,270,992	2,640,320	3,980,085	3,525,029 (NOTE: ON CONTACT)	3,120,780	2,845,758 (NOTE: ON CONTACT)		Row Average 3,230,494
9	465,284	277,972	420,329	504,245	651,098	501,248		Row Average 470,030
6	143,107	122,128	132,617	107,143	170,080	180,569		Row Average 142,607
3	173,077	132,617	126,623	81,668	48,701	96,653		Row Average 109,890
0	583,816 (NOTE: ON CONTACT)	275,619 (NOTE: ON CONTACT)	152,547 (NOTE: ON CONTACT)	98,768 (NOTE: ON CONTACT)	247,695 (NOTE: ON CONTACT)	2,569,516 (NOTE: ON CONTACT)		Row Average 654,660

Probe# 1	204360	Background 1	139
Efficiency 1	240	RCT 1	Fessenden
Contact Eff. 1	0.0750		

Probe# 2	212348	Background 2	57
Efficiency 2	380	RCT 2	E.Bartolomy
Contact Eff. 2	0.0880		

Section Average
921,536

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	5	Section	A	Date	4/14/04

				6,545	6,545						6,545	6,545	6,545	6,545	6,545	
Column #																Column #
G-3																G-4
ELEV. (ft)				362,637		112,887				6,545		372,627				
12	6,545			6,545		30,969		30,969		6,545		6,545				
9	6,545			4,995		4,995		4,995		4,995		6,545				
6	6,545											6,545				
3																
0																

Row Average #DIV/0!
Row Average 6,545
Row Average 213,674
Row Average 14,687
Row Average 5,512
Row Average 6,545
Row Average #DIV/0!

Probe# 1	199765	Background 1	255
Efficiency 1	180	RCT 1	A.Merezko
Contact Eff. 1	0.0700		

Probe# 2		Background 2	
Efficiency 2		RCT 2	
Contact Eff. 2			

Section Average
54,943

dpm/100cm^2

Count Time (s)	30

53

Unit	776012	Wall	5	Section	B	Date	4/15/04

Column #	G-4															Column #	G-5	Row Average
		6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545	6,545			#DIV/0! Row Average 6,545
ELEV. (ft)																		
12			4,560 Note: ON CONTACT		6,545		6,545		6,545		6,545		6,545					Row Average 6,148
9			4,560 Note: ON CONTACT		6,545		6,545		6,545		6,545		6,545					Row Average 6,148
6		6,545	18,981		6,545		6,545		6,545		32,967							Row Average 13,022
3		6,545	16,983		6,545		6,545		6,545		46,953							Row Average 15,020
0																		Row Average #DIV/0!

Probe# 1	199765	Background 1	255
Efficiency 1	180	RCT 1	A.Merezko
Contact Eff. 1	0.0700		

Probe# 2	204360	Background 2	220
Efficiency 2	240	RCT 2	A.Merezko
Contact Eff. 2	0.0750		

Section Average
10,442

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	5	Section	C	Date	4/15/04

6/8/04

Column #	G-5						Column #	Row Average
								#DIV/0!
								Row Average #DIV/0!
		427,073	256,244	200,799	379,121 NOTE: ON CONTACT	149,850 NOTE: ON CONTACT	G-6	Row Average 282,617
15	116,883	376,124	248,751	272,727	298,202	292,208		Row Average 267,482
ELEV. (ft) 12	92,907	172,328	89,910	116,883	226,274	887,112 NOTE: ON CONTACT		Row Average 264,236
9	32,967	95,904	197,802	218,781	317,682	630,869		Row Average 249,001
6	313,187		215,784	184,316	251,748	507,992		Row Average 294,605
3	2,210,642 NOTE: ON CONTACT		141,171 NOTE: ON CONTACT	632,425 NOTE: ON CONTACT	1,225,032 NOTE: ON CONTACT	1,366,720 NOTE: ON CONTACT		Row Average 1,115,198
0								

Probe# 1	204360	Background 1	220
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0750		

Probe# 2	212348	Background 2	57
Efficiency 2	380	RCT 2	E.Bartolomy
Contact Eff. 2	0.0880		

Section Average
365,178

dpm/100cm^2

Count Time (s)	30

55

Unit	776012	Wall	5	Section	D	Date	4/16/04

6/6/04

																Row Average #DIV/0!
	4,560	4,560	4,560	4,560	4,560	4,560	4,560		4,560	4,560	4,560	4,560	4,560	4,560		Row Average 4,560
Column #	G-6														Column #	G-7
ELEV. (ft) 12	6,323		6,323		17,982		6,323		6,323		6,323					Row Average 8,267
9	3,045 NOTE: ON CONTACT		6,323		6,323		6,323		6,323		6,323					Row Average 5,777
6	6,323 NOTE: ON CONTACT						45,954		6,323		6,323					Row Average 16,231
3																Row Average #DIV/0!
0																Row Average #DIV/0!

Probe# 1	204360	Background 1	220
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0750		

Probe# 2	199765	Background 2	238
Efficiency 2	180	RCT 2	A.Merezko
Contact Eff. 2	0.0700		

Section Average
9,324

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	5	Section	E	Date	4/15/04

															Row Average #DIV/0!
Column #	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560		4,560	4,560	4,560	4,560	4,560	Row Average 4,560
G-7															G-8
ELEV. (ft) 12		25,475	95,904	52,448	77,922	70,430									Row Average 64,436
9	55,445	86,913	130,370	73,427	49,451	40,460									Row Average 72,677
6				3,045 (NOTE: ON CONTACT)	14,985 (NOTE: ON CONTACT)	32,967 (NOTE: ON CONTACT)									Row Average 16,999
3															Row Average #DIV/0!
0															Row Average #DIV/0!

Probe# 1	204360	Background 1	220
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0750		

Probe# 2	199764	Background 2	178
Efficiency 2	240	RCT 2	Woods
Contact Eff. 2	0.0840		

Section Average
57,803

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	5	Section	F	Date	4/15/04

																Row Average #DIV/0!
	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560			Row Average 4,560
Column # G-8															Column # G-9	
ELEV. (ft) 12		34,466		53,946		40,460		4,101								Row Average 33,243
9	80,919	11,988 NOTE: ON CONTACT		43,457		4,101 NOTE: ON CONTACT		20,979 NOTE: ON CONTACT		16,484						Row Average 29,655
6	95,904	64,436		38,961		43,457		68,931		37,463						Row Average 58,192
3																Row Average #DIV/0!
0																Row Average #DIV/0!

Probe# 1	204360	Background 1	220
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0750		

Probe# 2	199764	Background 2	178
Efficiency 2	240	RCT 2	Woods
Contact Eff. 2	0.0840		

Section Average
41,253

dpm/100cm^2

Count Time (s)	30

58

Unit	776012	Wall	5	Section	G	Date	4/15/04

																Row Average #DIV/0!
Column #	4,297	4,297	25,528	7,769	4,297	19,978	4,297	22,198	4,297	16,648	4,297	12,209	4,297	4,297	4,297	Row Average 9,534
G-9																G-10
ELEV. (ft)	70,430		41,958			22,478			19,481		52,448			34,466		Row Average 40,210
12	47,952		37,463			22,478			5,994		14,985			4,101		Row Average 22,162
9	64,436		44,955			4,101			4,496		13,487			8,991		Row Average 23,411
6																Row Average #DIV/0!
3																Row Average #DIV/0!
0																

Probe# 1	204362	Background 1	212
Efficiency 1	250	RCT 1	Woods/Fess
Contact Eff. 1	0.0820		

Probe# 2	199764	Background 2	178
Efficiency 2	240	RCT 2	Woods
Contact Eff. 2	0.0840		

Section Average
28,594

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	10	Section	A	Date	4/20/04

4/14/04

	6,920	6,920	6,920	6,920	6,920	6,920	6,920	6,920	6,920							Row Average 6,920
Column #															Column #	Row Average #DIV/0!
ELEV. (ft)																
12	6,920	6,920	16,983	44,955												Row Average 18,944
9	6,920	6,920	56,943	96,699 NOTE: ON CONTACT												Row Average 41,870
6	6,920	6,920	60,939	65,673 NOTE: ON CONTACT												Row Average 35,113
3	69,051		108,076 NOTE: ON CONTACT	87,391 NOTE: ON CONTACT												Row Average 88,173
0	50,160 NOTE: ON CONTACT		122,555 NOTE: ON CONTACT	364,562 NOTE: ON CONTACT												Row Average 179,092

Probe# 1	199765	Background 1	285	Probe# 2	204362	Background 2	202
Efficiency 1	180	RCT 1	A.Merezko	Efficiency 2	250	RCT 2	Fessenden
Contact Eff. 1	0.0700			Contact Eff. 2	0.0820		

Section Average
65,861

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	11	Section	A	Date	4/20/04

4/14/04

												6,920	6,920		
Column #															Column #
ELEV. (ft)															
12													36,963		
9													148,851		
6													280,719		
3													139,102		
0													169,095		

NOTE: ON CONTACT

NOTE: ON CONTACT

Row Average 6,920

Row Average #DIV/0!

Row Average 36,963

Row Average 148,851

Row Average 280,719

Row Average 139,102

Row Average 169,095

Probe# 1	199765	Background 1	285	Probe# 2	204362	Background 2	202
Efficiency 1	180	RCT 1	A.Merezko	Efficiency 2	250	RCT 2	Fessenden
Contact Eff. 1	0.0700			Contact Eff. 2	0.0820		

Section Average
154,946

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	12	Section	A	Date	4/20/04

4/14/04

											339,992	488,210	219,077	91,661	130,666	
Column #																Column #
ELEV. (ft)																
12																
9											NOTE: ON CONTACT	NOTE: ON CONTACT				
6											450,919 NOTE: ON CONTACT	3,045 NOTE: ON CONTACT				
3											74,981 NOTE: ON CONTACT	156,684 NOTE: ON CONTACT				
0											213,566 NOTE: ON CONTACT	71,928				

Row Average	253,921
Row Average	#DIV/0!
Row Average	#DIV/0!
Row Average	#DIV/0!
Row Average	226,982
Row Average	115,832
Row Average	142,747

Probe# 1	199765	Background 1	285
Efficiency 1	180	RCT 1	A.Merezko
Contact Eff. 1	0.0700		

Probe# 2	204362	Background 2	202
Efficiency 2	250	RCT 2	Fessenden
Contact Eff. 2	0.0820		

Section Average
161,854

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	14	Section	A	Date	4/20/04

Column #							Column #	Row Average
								#DIV/0!
								Row Average #DIV/0!
ELEV. (ft)							D-10	
12						NOTE: ON CONTACT		Row Average #DIV/0!
9								Row Average #DIV/0!
6						418,581		Row Average 418,581
3						304,695		Row Average 304,695
0						57,916 NOTE: ON CONTACT		Row Average 57,916

Probe# 1	199765	Background 1	285
Efficiency 1	180	RCT 1	A.Merezko
Contact Eff. 1	0.0700		

Probe# 2	212348	Background 2	184
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
260,397

dpm/100cm^2

Count Time (s)	30

63

Unit	776012	Wall	16.1	Section	A	Date	4/20/04

Column #							Column #	Row Average
								#DIV/0!
								Row Average #DIV/0!
							D-10	
ELEV. (ft)								Row Average #DIV/0!
12								
								Row Average #DIV/0!
9								
						306,693		Row Average 306,693
6								
						114,885		Row Average 114,885
3								
						20,684		Row Average 20,684
0						NOTE: ON CONTACT		

Probe# 1	199765	Background 1	285	Probe# 2	212348	Background 2	184
Efficiency 1	180	RCT 1	A.Merezko	Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 1	0.0700			Contact Eff. 2	0.0880		

Section Average
147,421

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	16.2 WEST	Section	A	Date	4/25/04

ELEV. (ft)	Column #						Column #	Row Average
								#DIV/0!
								#DIV/0!
								#DIV/0!
12	5,217	23,976						14,597
9	5,217	40,460						22,838
6	5,217	31,469						18,343
3	5,217	29,970						17,594
0								

Probe# 1	199764	Background 1	288
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0840		

Probe# 2		Background 2	
Efficiency 2		RCT 2	Woods
Contact Eff. 2			

Section Average
18,343

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	17	Section	A	Date	4/25/04

NORTH

Column #							Row Average
							#DIV/0!
							Row Average #DIV/0!
ELEV. (ft)							Row Average #DIV/0!
12	34,466	59,940	26,973	7,493	38,266 (NOTE: ON CONTACT)		Row Average 33,427
9	7,493	5,217	23,976	46,454	17,982		Row Average 20,224
6	5,217	5,217	5,217	5,217	20,979		Row Average 8,369
3	8,991	14,985	34,466	26,973	23,976		Row Average 21,676
0							

Probe# 1	199764	Background 1	288
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0840		

Probe# 2	212348	Background 2	184
Efficiency 2	380	RCT 2	Woods
Contact Eff. 2	0.0880		

Section Average
20,975

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	18	Section	A	Date	4/25/04

Column #															Column #	Row Average
																#DIV/0!
																#DIV/0!
ELEV. (ft)																
12			NOTE: ON CONTACT	NOTE: ON CONTACT												Row Average #DIV/0!
9			97,403	13,445 NOTE: ON CONTACT												Row Average 55,424
6			52,448	76,424												Row Average 64,436
3				49,451	76,424											Row Average 62,937
0				34,466	32,967											Row Average 33,716

Probe# 1	199764	Background 1	288
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0840		

Probe# 2	212348	Background 2	184
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
54,128

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	19 SOUTH	Section	A	Date	4/25/04

		5,217	5,217	5,217	5,217	5,217	5,217	5,217	5,217	5,217	5,217				
Column #															Column #
ELEV. (ft)		5,217	16,484	5,217	5,217	5,217									
12		5,217	10,490	5,217	5,217	5,217									
9		5,217	19,481	28,472	5,217	5,217									
6		80,919	5,217	5,217	5,217	5,217									
3		70,430	5,217	5,217	26,973	5,217									
0															

Row Average 5,217
Row Average #DIV/0!
Row Average 7,470
Row Average 6,272
Row Average 12,721
Row Average 20,357
Row Average 22,611

Probe# 1	199764	Background 1	288	Probe# 2		Background 2	
Efficiency 1	240	RCT 1	A.Merezko	Efficiency 2		RCT 2	Woods
Contact Eff. 1	0.0840			Contact Eff. 2			

Section Average
13,886

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	20	Section	A	Date	4/26/04

Column #	E-2						F-2	Row Average
								#DIV/0!
								#DIV/0!
ELEV. (ft)								
12	121,379							121,379
9	35,964							35,964
6	85,415							85,415
3	73,427							73,427
0								#DIV/0!

Probe# 1	199764	Background 1	264	Probe# 2		Background 2	
Efficiency 1	240	RCT 1	A.Merezko	Efficiency 2		RCT 2	
Contact Eff. 1	0.0840			Contact Eff. 2			

Section Average
79,046

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	20	Section	B	Date	4/26/04

Column #							Row Average
							#DIV/0!
							#DIV/0!
ELEV. (ft)							#DIV/0!
12	62,937	161,338 (NOTE: ON CONTACT)	172,715 (NOTE: ON CONTACT)	186,159 (NOTE: ON CONTACT)	62,937	197,536 (NOTE: ON CONTACT)	140,604
9	31,469	4,995	61,439	50,949	41,958	77,922	44,788
6	82,418	91,409	131,868		53,946	62,937	84,515
3	189,262 (NOTE: ON CONTACT)	64,122 (NOTE: ON CONTACT)	112,730 (NOTE: ON CONTACT)		97,217 (NOTE: ON CONTACT)		115,832
0							

Probe# 1	199764	Background 1	264
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0840		

Probe# 2	212348	Background 2	184
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
95,155

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	20	Section	C	Date	4/26/04

Column # F-2						Column # G-2	Row Average
							#DIV/0!
							Row Average #DIV/0!
ELEV. (ft)							Row Average #DIV/0!
12	220,280	134,865	113,886	136,364	155,844		Row Average 152,248
9	65,934	65,934	82,418	112,388	154,346		Row Average 96,204
6	92,907	44,955	95,904	125,874	158,841		Row Average 103,696
3	36,198 (NOTE: ON CONTACT)	89,977 (NOTE: ON CONTACT)	41,369 (NOTE: ON CONTACT)		51,711 (NOTE: ON CONTACT)		Row Average 54,814
0							

Probe# 1	199764	Background 1	264
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0840		

Probe# 2	212348	Background 2	184
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
104,210

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	21	Section	A	Date	4/26/04

Column #							Column #	Row Average
								#DIV/0!
								#DIV/0!
ELEV. (ft)								
								Row Average #DIV/0!
12	106,394	188,811	131,868	170,829	89,910			Row Average 137,562
9	104,895	99,285 (NOTE: ON CONTACT)	146,853	89,910	84,806 (NOTE: ON CONTACT)			Row Average 105,150
6		107,892	139,361	91,409	167,832			Row Average 126,623
3		64,122 (NOTE: ON CONTACT)	71,361 (NOTE: ON CONTACT)	73,430 (NOTE: ON CONTACT)	67,224 (NOTE: ON CONTACT)			Row Average 69,034
0								

Probe# 1	199764	Background 1	264
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0840		

Probe# 2	212348	Background 2	184
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
110,899

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	22	Section	A	Date	4/26/04

6/12/04

Column #							Row Average
							#DIV/0!
							#DIV/0!
E-3						D-3	
ELEV. (ft)	48,386 (NOTE: ON CONTACT)						Row Average 48,386
12	62,937						Row Average 62,937
9	13,487						Row Average 13,487
6	44,955						Row Average 44,955
3	93,315 (NOTE: ON CONTACT)						Row Average 93,315
0							

Probe# 1	204360	Background 1	220
Efficiency 1	240	RCT 1	Fessenden
Contact Eff. 1	0.0750		

Probe# 2	199757	Background 2	108
Efficiency 2	280	RCT 2	Jones
Contact Eff. 2	0.0790		

Section Average
52,616

dpm/100cm^2

Count Time (s)	30

73

Unit	776012	Wall	22	Section	B	Date	4/26/04

6/12/04

Column #	F-3						Column # E-3	Row Average
								#DIV/0!
								Row Average #DIV/0!
ELEV. (ft)	89,859 NOTE: ON CONTACT	55,298 NOTE: ON CONTACT	69,122 NOTE: ON CONTACT	50,690 NOTE: ON CONTACT	67,970 NOTE: ON CONTACT	78,339 NOTE: ON CONTACT		Row Average 68,546
12	428,571	293,706	64,436	32,967	11,988	86,913		Row Average 153,097
9	221,778	214,286	64,436	85,251 NOTE: ON CONTACT	16,484	77,922		Row Average 113,359
6	89,910	58,442	56,943	112,388	20,979	40,460		Row Average 63,187
3	74,883 NOTE: ON CONTACT	77,187 NOTE: ON CONTACT	73,731 NOTE: ON CONTACT	4,560 NOTE: ON CONTACT	64,436	53,946		Row Average 58,124
0								

Probe# 1	204360	Background 1	220
Efficiency 1	240	RCT 1	Fessenden
Contact Eff. 1	0.0750		

Probe# 2	199757	Background 2	108
Efficiency 2	280	RCT 2	Jones
Contact Eff. 2	0.0790		

Section Average
91,263

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	22	Section	C	Date	4/26/04

6/12/04

Column #	G-3						F-3	Row Average
								#DIV/0!
								#DIV/0!
ELEV. (ft)								
12	96,771 (NOTE: ON CONTACT)	87,555 (NOTE: ON CONTACT)	55,298 (NOTE: ON CONTACT)	50,690 (NOTE: ON CONTACT)	71,427 (NOTE: ON CONTACT)	72,579 (NOTE: ON CONTACT)		Row Average 72,387
9	278,721	100,400	98,901	71,928	32,967	118,382		Row Average 116,883
6	107,892	55,445	56,943	86,913	11,988	56,943		Row Average 62,687
3	139,361	149,850	94,406	116,883	67,433	79,421		Row Average 107,892
0	54,146 (NOTE: ON CONTACT)	91,011 (NOTE: ON CONTACT)	99,076 (NOTE: ON CONTACT)	107,140 (NOTE: ON CONTACT)	88,707 (NOTE: ON CONTACT)	77,187 (NOTE: ON CONTACT)		Row Average 86,211

Probe# 1	204360	Background 1	220
Efficiency 1	240	RCT 1	Fessenden
Contact Eff. 1	0.0750		

Probe# 2	199757	Background 2	108
Efficiency 2	280	RCT 2	Jones
Contact Eff. 2	0.0790		

Section Average
89,212

dpm/100cm^2

Count Time (s)	30

75

Unit	776012	Wall	23	Section	A	Date	4/26/04

Column #							Row Average
							#DIV/0!
							Row Average
Column #							#DIV/0!
D-3						D-2	
ELEV. (ft)	127,373	43,457	142,358	103,397	104,895	65,934	Row Average 97,902
12	52,448	50,949	5,994	35,964	17,982	86,913	Row Average 41,708
9	28,472	4,560	4,560	4,560	49,451	103,397	Row Average 32,500
6	31,469		53,946	74,925	94,406	133,367	Row Average 77,622
3	89,910		317,682	220,280	154,346	217,283	Row Average 199,900
0							

Probe# 1	204360	Background 1	220	Probe# 2		Background 2	
Efficiency 1	240	RCT 1	Fessenden	Efficiency 2		RCT 2	Harvey
Contact Eff. 1	0.0750			Contact Eff. 2			

Section Average
86,438

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	25	Section	A	Date	4/16/04

4/15/04

		4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560	4,560			Row Average 4,560
Column #															Column #	Row Average #DIV/0!
ELEV. (ft) 12		5,994	44,955	38,961	40,460	34,466										Row Average 32,967
9		4,260	4,260	37,463	11,988	4,260										Row Average 12,446
6		8,991	34,466	4,496	29,970	25,475										Row Average 20,679
3																Row Average #DIV/0!
0																Row Average #DIV/0!

Probe# 1	199764	Background 1	192
Efficiency 1	240	RCT 1	Fessenden
Contact Eff. 1	0.0840		

Probe# 2	204360	Background 2	220
Efficiency 2	240	RCT 2	A.Merezko
Contact Eff. 2	0.0750		

Section Average
22,031

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	26	Section	A	Date	4/29/04

Column # G-11						Column # F-11	
							Row Average #DIV/0!
							Row Average #DIV/0!
ELEV. (ft)							Row Average #DIV/0!
12	7,608	4,423	18,674	4,423	31,123	28,356	Row Average 15,768
9	4,423	4,423	4,423	38,039	50,488	24,207	Row Average 21,001
6	33,889	10,374	4,423	24,207	31,123	32,506	Row Average 22,754
3	21,440	41,886 NOTE: ON CONTACT	62,937	80,919	4,423	4,423	Row Average 36,005
0							

Probe# 1	209090	Background 1	243
Efficiency 1	260	RCT 1	A.Merezko
Contact Eff. 1	0.0824		

Probe# 2	212348	Background 2	57
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
23,882

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	32	Section	A	Date	4/20/04

Column #	1	2	3	4	5	6	Row Average
	6,920	6,920	6,920	6,920	6,920	6,920	6,920
							#DIV/0!
ELEV. (ft) 12	48,951	6,920	98,901				51,591
9	3,045 (NOTE: ON CONTACT)	3,045 (NOTE: ON CONTACT)	3,045 (NOTE: ON CONTACT)				3,045
6	122,038 (NOTE: ON CONTACT)	169,612 (NOTE: ON CONTACT)	41,369 (NOTE: ON CONTACT)				111,006
3	182,817	19,650 (NOTE: ON CONTACT)	128,871				110,446
0							#DIV/0!

Probe# 1	199765	Background 1	285
Efficiency 1	180	RCT 1	A.Merezko
Contact Eff. 1	0.0700		

Probe# 2	212348	Background 2	246
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
69,022

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	33	Section	A	Date	4/20/04

									154,069	7,151	250,281	391,998	238,579	274,984		Row Average 219,510
															Column #	Row Average #DIV/0!
Column #																
ELEV. (ft)																
12													488,511			Row Average 488,511
9							294,705			538,461			162,372 NOTE: ON CONTACT			Row Average 331,846
6													328,671			Row Average 328,671
3													236,763			Row Average 236,763
0													82,737 NOTE: ON CONTACT			Row Average 82,737

Probe# 1	199765	Background 1	285
Efficiency 1	180	RCT 1	A.Merezko
Contact Eff. 1	0.0700		

Probe# 2	212348	Background 2	246
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
304,603

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	34	Section	A	Date	4/20/04

	6,920	6,920	6,920	6,920	6,920	6,920										Row Average 6,920
Column #															Column #	Row Average #DIV/0!
ELEV. (ft)		30,969	88,911													Row Average 59,940
12	1,144,880 NOTE: ON CONTACT	3,045 NOTE: ON CONTACT	3,045 NOTE: ON CONTACT													Row Average 383,657
9	54,945	6,920	3,045													Row Average 21,637
6	63,087 NOTE: ON CONTACT	6,920	3,045													Row Average 24,351
3																Row Average #DIV/0!
0																

Probe# 1	199765	Background 1	285
Efficiency 1	180	RCT 1	A.Merezko
Contact Eff. 1	0.0700		

Probe# 2	212348	Background 2	246
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
128,074

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	35	Section	A	Date	4/20/04

RM 116A SOUTH

6/6/04

									6,920	6,920	6,920	6,920	18,852	6,920	6,920	Row Average 8,624
Column #																Row Average #DIV/0!
ELEV. (ft)									6,920		6,920		26,973			Row Average 13,604
12									38,961		18,981		26,973			Row Average 28,305
9													22,977			Row Average 22,977
6													42,957			Row Average 16,349
3	3,045 NOTE: ON CONTACT		3,045 NOTE: ON CONTACT													
0	3,045 NOTE: ON CONTACT		3,045 NOTE: ON CONTACT													Row Average 3,045

Probe# 1	199765	Background 1	285	Probe# 2	212348	Background 2	246
Efficiency 1	180	RCT 1	A.Merezko	Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 1	0.0700			Contact Eff. 2	0.0880		

Section Average 16,987

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	NORTH	Section	RM 115	Date	4/22/04

	122,562	243,910	262,112	143,191	5,014	74,022	311,885	20,629	61,888						
Column #															Column #
D-6															D-7
ELEV. (ft)	43,457		74,925			40,460			56,943						
12	17,982		115,385			34,466			17,982						
9	70,430		144,791 (NOTE: ON CONTACT)			71,928									
6															
3															
0															

Row Average 138,355
Row Average #DIV/0!
Row Average 53,946
Row Average 46,454
Row Average 95,716
Row Average #DIV/0!
Row Average #DIV/0!

Probe# 1	204360	Background 1	266
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0750		

Probe# 2	212348	Background 2	246
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
62,613

dpm/100cm^2

Count Time (s)	30

83

Unit	776012	Wall	WEST	Section	RM 115	Date	4/22/04

	5,014	5,014	5,014	5,014	5,014											Row Average 5,014
																Row Average #DIV/0!
Column #	C-6														D-6	
ELEV. (ft) 12	20,979		5,014													Row Average 12,996
9	43,457		5,014													Row Average 24,235
6	62,937		32,061 NOTE: ON CONTACT													Row Average 47,499
3																Row Average #DIV/0!
0																Row Average #DIV/0!

Probe# 1	204360	Background 1	266
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0750		

Probe# 2	212348	Background 2	246
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
28,243

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	SOUTH	Section	RM 115	Date	4/22/04

	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014	5,014							Row Average 5,014
Column #																Column #	Row Average #DIV/0!
D-7																D-6	
ELEV. (ft)	7,493		5,014		17,982		74,925										Row Average 26,353
12	34,466		55,445		38,961		58,442										Row Average 46,828
9	122,877		71,928		71,928		64,436										Row Average 82,792
6	221,323 NOTE: ON CONTACT		122,877		65,934		92,907										Row Average 125,760
3																	Row Average #DIV/0!
0																	

Probe# 1	204360	Background 1	266
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0750		

Probe# 2	212348	Background 2	184
Efficiency 2	380	RCT 2	A.Merezko
Contact Eff. 2	0.0880		

Section Average
70,433

dpm/100cm^2

Count Time (s)	30

85

Unit	776012	Wall	EAST	Section	RM 115	Date	4/22/04

	5,014	5,014	5,014	5,014	5,014	5,014										Row Average 5,014
	344,395															Row Average 344,395
Column #	D-7														C-7	
ELEV. (ft)																
12	5,014	23,976														Row Average 14,495
9	56,943	43,457														Row Average 50,200
6	31,469	71,928														Row Average 51,698
3		344,395 (NOTE: ON CONTACT)														Row Average 344,395
0																Row Average #DIV/0!

Probe# 1	204360	Background 1	266
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0750		

Probe# 2	212348	Background 2	184
Efficiency 2	380	RCT 2	Woods
Contact Eff. 2	0.0880		

Section Average
82,454

dpm/100cm^2

Count Time (s)	30

98

Unit	776012	Wall	38	Section	A	Date	4/20/04

					6,920	6,920	6,920	6,920	6,920	6,920	6,920	6,920	6,920	6,920		Row Average 6,920
																Row Average #DIV/0!
Column #															Column #	
															D-10	
ELEV. (ft)	6,920	6,920	6,920	6,920	6,920	18,981										Row Average 8,930
12	10,989	6,920	16,983	14,985		6,920										Row Average 11,359
9	26,973	20,979	34,965	42,957		6,920										Row Average 26,559
6																Row Average #DIV/0!
3																Row Average #DIV/0!
0																

Probe# 1	199765	Background 1	285	Probe# 2		Background 2	
Efficiency 1	180	RCT 1	A.Merezko	Efficiency 2		RCT 2	Woods
Contact Eff. 1	0.0700			Contact Eff. 2			

Section Average
15,198

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	39	Section	A	Date	4/20/04

									6,920	6,920	6,920	6,920	6,920			Row Average 6,920
Column #															Column #	Row Average #DIV/0!
D-10																
ELEV. (ft)									6,920	6,920	6,920					Row Average 6,920
12									6,920	64,935	132,867					Row Average 68,241
9											*NOTE: HOTSPOT 2448CPM *2,160,837					
									6,920	92,907	452,547					Row Average 184,125
6									6,920	108,891	42,957					Row Average 52,923
3																Row Average #DIV/0!
0																

Probe# 1	199765	Background 1	285	Probe# 2		Background 2	
Efficiency 1	180	RCT 1	A.Merezko	Efficiency 2		RCT 2	Woods
Contact Eff. 1	0.0700			Contact Eff. 2			

Section Average
78,052

dpm/100cm^2

Count Time (s)	30

88

Unit	776012	Wall	40	Section	A	Date	4/20/04

												6,920	6,920		
Column #														Column #	Row Average 6,920
															Row Average #DIV/0!
ELEV. (ft)	6,920	6,920	6,920	6,920	6,920	6,920									Row Average 6,920
12	22,977	12,987	6,920	20,979	16,983	6,920									Row Average 14,628
9	22,977	52,947	16,983	6,920	22,977	10,989									Row Average 22,299
6															Row Average #DIV/0!
3															Row Average #DIV/0!
0															

Probe# 1	199765	Background 1	285
Efficiency 1	180	RCT 1	A.Merezko
Contact Eff. 1	0.0700		

Probe# 2		Background 2	
Efficiency 2		RCT 2	Woods
Contact Eff. 2			

Section Average
14,615

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	41	Section	A	Date	4/20/04

Column #															Column #	Row Average
																#DIV/0!
																#DIV/0!
ELEV. (ft)																
12			6,920	6,920	6,920	6,920										Row Average 6,920
9			6,920	6,920	6,920	6,920										Row Average 6,920
6			6,920	6,920	6,920	6,920										Row Average 6,920
3																Row Average #DIV/0!
0																Row Average #DIV/0!

Probe# 1	199765	Background 1	285
Efficiency 1	180	RCT 1	A.Merezko
Contact Eff. 1	0.0700		

Probe# 2		Background 2	
Efficiency 2		RCT 2	Woods
Contact Eff. 2			

Section Average
6,920

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	32.1	Section	A	Date	4/21/04

					3,423	3,423	3,423	3,423	6,067	23,056	3,423	3,423	3,423	3,423	3,423	Row Average 5,448
Column #																Row Average #DIV/0!
C-9																D-9
ELEV. (ft)	38,961		22,478													Row Average 30,719
12	41,958		25,475													Row Average 33,716
9					3,423		17,982		3,423		25,475					Row Average 12,576
6	47,952		85,415		47,952		56,943		71,928		50,949					Row Average 60,190
3	43,457		79,421		35,964		101,898		85,415		116,883					Row Average 77,173
0																

Probe# 1	204360	Background 1	124
Efficiency 1	240	RCT 1	Harvey
Contact Eff. 1	0.0750		

Probe# 2		Background 2	
Efficiency 2		RCT 2	Fessenden
Contact Eff. 2			

Section Average
50,167

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	33.1	Section	A	Date	4/21/04

		457,483	92,225	71,596	149,258	416,225	103,146	78,876	69,169	49,753	31,551	89,798	38,831	213,573	
Column #															Column #
D-9															D-10
ELEV. (ft)															
12															
9															
6		265,235	46,454	112,388	71,928	65,934	133,367								
3		4,496		67,433	95,904	88,412	125,874								
0		50,949		103,397	77,922	83,916	125,874								

Row Average	143,191
Row Average	#DIV/0!
Row Average	#DIV/0!
Row Average	#DIV/0!
Row Average	115,884
Row Average	76,424
Row Average	88,412

Probe# 1	204360	Background 1	124	Probe# 2		Background 2	
Efficiency 1	240	RCT 1	Harvey	Efficiency 2		RCT 2	Fessenden
Contact Eff. 1	0.0750			Contact Eff. 2			

Section Average
94,967

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	34.1	Section	A	Date	4/21/04

	10,921	8,494	48,539	4,854	57,034	23,056	24,270	52,180	38,404	7,281	31,551	43,685	6,067	31,551	3,423
Column #	D-10														C-9
ELEV. (ft)															
12															
9															
6	83,916	65,934	59,940	53,946	29,970	8,991									
3	70,430		85,415	98,901	82,418	89,910									
0	80,919		109,391	95,904	98,901	106,394									

Row Average	25,954
Row Average	#DIV/0!
Row Average	#DIV/0!
Row Average	#DIV/0!
Row Average	50,450
Row Average	85,415
Row Average	98,302

Probe# 1	204360	Background 1	124	Probe# 2		Background 2	
Efficiency 1	240	RCT 1	Harvey	Efficiency 2		RCT 2	Fessenden
Contact Eff. 1	0.0750			Contact Eff. 2			

Section Average
76,330

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	35.1	Section	A	Date	4/22/04

ELEV. (ft)	Column #						Column #	Row Average
								#DIV/0!
								#DIV/0!
12								#DIV/0!
9								#DIV/0!
6		5,014	5,014	5,014				5,014
3	5,014	5,014	5,014	5,014				5,014
0	5,014	5,014	5,014	5,014				5,014

Probe# 1	204360	Background 1	266
Efficiency 1	240	RCT 1	A.Merezko
Contact Eff. 1	0.0750		

Probe# 2		Background 2	
Efficiency 2		RCT 2	Woods
Contact Eff. 2			

Section Average: 5,014

dpm/100cm^2

Count Time (s)	30

Unit	776012	Wall	36	Section	A	Date	4/22/04

WALL OF INNER CORNER WITHIN RM 130

	92,311	104,013	109,213	6,455	6,455											
Column #																Column #
																D-9
ELEV. (ft) 12																
9																
6																
3																
0																

Row Average
63,690
Row Average #DIV/0!
Row Average #DIV/0!
Row Average #DIV/0!
Row Average #DIV/0!
Row Average #DIV/0!
Row Average #DIV/0!

Probe# 1	199765	Background 1	248	Probe# 2		Background 2	
Efficiency 1	180	RCT 1	A.Merezko	Efficiency 2		RCT 2	Woods
Contact Eff. 1	0.0700			Contact Eff. 2			

Section Average
#DIV/0!

dpm/100cm^2

Count Time (s)	30