

RADIOLOGIC AND ENGINEERING ASSESSMENT

FOR

DOE ID NO.: GJ-90001-OT PHASE I  
(INCLUDES GJ-05831, GJ-05832, GJ-05837,  
GJ-05839, AND GJ-05843)  
ADDRESS: 12TH STREET AND GUNNISON AVENUE

JUNE 1985

FOR

URANIUM MILL TAILINGS REMEDIAL ACTION PROJECT OFFICE

ALBUQUERQUE OPERATIONS OFFICE

DEPARTMENT OF ENERGY

BY

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## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 EXECUTIVE SUMMARY . . . . .	1
1.1 Introduction . . . . .	1
1.2 Evaluation and Recommendation . . . . .	1
2.0 PROPERTY DESCRIPTION . . . . .	2
2.1 General Description . . . . .	2
2.2 Existing Facilities and Structures . . . . .	2
3.0 RADIOLOGIC SURVEY . . . . .	5
3.1 Introduction . . . . .	5
3.2 Gamma Exposure-Rate Surveys . . . . .	5
3.2.1 Exterior Findings . . . . .	5
3.2.2 Interior Findings . . . . .	5
3.3 Boreholes, Soil Samples, and Other Measurements . . . . .	6
3.4 Radon/Radon Daughter Concentration (RDC) . . . . .	6
3.5 Extent of Contamination . . . . .	6
4.0 RECOMMENDED REMEDIAL ACTION . . . . .	10
4.1 Decontamination and Restoration . . . . .	10
4.2 Evaluation of Recommended Remedial Action . . . . .	10
5.0 REFERENCES . . . . .	11
6.0 APPENDIX . . . . .	12



## **1.0 EXECUTIVE SUMMARY**

### **1.1 Introduction**

The location, DOE ID No. GJ-90001-OT Phase I, is a commercial facility (two swimming pools and related structures) located at 12th Street and Gunnison Avenue, Grand Junction, Colorado. DOE ID No. GJ-90001-OT Phase I includes GJ-05831, GJ-05832, GJ-05837, GJ-05839, and GJ-05843.

The purpose of this assessment is to evaluate the extent of uranium millsite contamination at this property. This assessment includes recommended remedial action, estimated volume of material to be removed, and estimated cost of the proposed action.

### **1.2 Evaluation and Recommendation**

The action recommended is the removal of contaminated material and related structures and the partial backfill of the property as discussed in Section 4.1. The identified residual radioactive material found on this property is tailings; the estimated volume is: exterior, 4,469 cu. yd.; interior, 0 cu. yd.

Estimated cost to perform remedial action is \$274,236. Remedial action on this property will take approximately 60 days to complete.

## 2.0 PROPERTY DESCRIPTION

### 2.1 General Description

Address: 12th Street and Gunnison Avenue, Grand Junction, Colorado

Zoning: Public Zoning (PZ)

Site: Lincoln Park is approximately 102.6 acres, including the Lincoln Park Golf Course

Size: The approximate area shown on the plot plan for Phase I is 480' x 380' or 4.2 acres

Legal Description: All of blocks 13 thru 28 Slocumb's Additions and the NW 1/4 of NW 1/4 N of Gunnison Avenue, Section 13, 1S, 1W excluding North Avenue and 12th Street, City of Grand Junction, County of Mesa, State of Colorado.

Point of Reference: This property is located approximately 4 miles north of the State of Colorado Tailings Repository. Appendix Figure 2.1 shows the property location relative to its surroundings.

Utilities: Utility locations are shown in Appendix Figure 2.2.

Electrical: Overhead and underground  
 Gas: Underground  
 Telephone: Underground  
 Sewer: Underground  
 Water: Underground  
 Cable TV: None

Borders of Remedial Action Area (Phase I):

North: Asphalt Parking Lot  
 South: Asphalt Drive  
 East: Asphalt Drive  
 West: Grass area and Moyer Pool

### 2.2 Existing Facilities and Structures

Primary Structure:

Type: Public facility (shower room)  
 Size: Approximately 2,781 sf  
 Construction Date: 1956  
 Construction: Structural glazed tile and brick; roof system is wood with built-up roof  
 Foundation: Concrete spread footing with stemwall  
 Footing Depth: Approximately 22" to bottom of footing from grade

Basement:	None
Crawl Space:	None
Condition:	Poor condition, in need of maintenance
General Remarks:	None

Other Structures:

Type:	Public facility (concession stand)
Size:	Approximately 229 sf
Construction:	Structural glazed tile and brick; flat wood roof
Foundation:	Unknown
Condition:	Fair
General Remarks:	None

Type:	Public facility (storage building)
Size:	Approximately 82 sf
Construction:	Metal-frame with metal siding
Foundation:	Wood-block
Condition:	Poor
General Remarks:	The storage building is used to store miscellaneous pool supplies.

Type:	Shed
Size:	Approximately 206 sf
Construction:	Steel-support with wood and metal-frame open on two sides
Foundation:	Unknown
Condition:	Poor
General Remarks:	The shed is used to store chlorine tanks. There is a hoist in this shed mounted to a steel-beam support system.

Type:	Pump house (upper level)
Size:	Approximately 58 sf
Construction:	Reinforced concrete walls, roof, and floor
Foundation:	Unknown
Condition:	Fair
General Remarks:	The pump house (upper level) stores a chlorine distribution system.

Type:	Pump house (basement)
Size:	Approximately 736 sf
Construction:	Reinforced concrete walls, roof, and floor
Foundation:	Spread footing
Condition:	Fair
General Remarks:	The pump house (basement) contains a pump and filter system for pool water purification and distribution.

Type:	Public facility (wading pool)
Size:	Approximately 928 sf
Construction:	Reinforced concrete walls and floor
Foundation:	Unknown
Condition:	Fair
General Remarks:	None

Type:	Public facility (Lincoln Park Pool)
Size:	Approximately 11,079 sf
Construction:	Reinforced concrete floors and walls
Foundation:	Footing is assumed monolithic
Condition:	Poor
General Remarks:	None

General Remarks:

The boiler room, shown in Appendix Figure 3.5a, and the pump house (Moyer Pool), shown in Appendix Figure 3.5b, are not involved in the remedial action. Structures, utilities, landscaping, and other special features of this property are included in Appendix Figure 2.2.

Historical Data:

These structures are not over 50 years old. Therefore, they do not meet the eligibility criteria for consideration of inclusion on the National Register of Historic Places.

### 3.0 RADIOLOGIC SURVEY

#### 3.1 Introduction

Radiologic data were collected by Bendix at DOE ID No. GJ-90001-OT Phase I on April 2, 1985. Data collection methods were performed in accordance with procedures fully described in the Radiologic Support Operations Procedures Manual GJ-07(84) (Bendix Field Engineering Corporation, 1984). These data were evaluated to determine the areal and vertical extent of uranium mill tailings contamination at this property as well as any other contaminated material that may have originated from the millsite.

A review of historical information from the files of the Colorado Department of Health (CDH) and the inclusion data from Oak Ridge National Laboratory (ORNL) was conducted. The records for the Phase I remedial action area indicate contamination of the Lincoln Park Pool and associated buildings, sidewalks, and lawns.

The Bendix radiologic survey was designed to investigate the entire property, with emphasis on previously identified areas of contamination. Conclusions based upon data analyses are discussed in Section 3.5, Extent of Contamination. Photocopies of the Official Survey Report, Memo of Understanding, team leader notes, and deconvolution graphs are included in the Appendix (Section 6.0).

#### 3.2 Gamma Exposure-Rate Surveys

##### 3.2.1 Exterior Findings

Background Readings: 13 to 16 uR/h  
Highest Outside Gamma Reading (HOG): 159 uR/h

Exterior radium-concentration measurements are presented in Appendix Table 3.1. Grid-point survey results are shown in Appendix Figure 3.1. Appendix Figure 3.2 presents the ranges of elevated gamma readings and indicates areas of possible contamination.

##### 3.2.2 Interior Findings

Background Readings: 13 to 18 uR/h  
Highest Inside Gamma Reading (HIG): 49 uR/h

Interior radium-concentration measurements are presented in Appendix Table 3.2. Interior gamma exposure-rate measurements are summarized in Appendix Table 3.3. Appendix Figures 3.3a and 3.3b show interior exposure rates and locations of these measurements.

### 3.3 Boreholes, Soil Samples, and Other Measurements

Areas which displayed elevated gamma levels were further investigated; these areas are shown in Appendix Figures 3.3a, 3.3b, and 3.4. Data from these investigations are included in Appendix Tables 3.1 and 3.2.

### 3.4 Radon/Radon Daughter Concentration (RDC)

Determined by CDH: 0.027 gross working level (WL) in the shower room and 0.040 gross WL in the pump room. No additional RDC measurements were taken by Bendix.

### 3.5 Extent of Contamination

Appendix Figures 3.5a, 3.5b, and 3.5c show identified areas and estimated depths of contamination on this property, based on assessments of all measurements taken. As noted in these figures, areas recommended for remedial action that contain identified residual radioactive materials are:

- (AREA A) The 8-inch-wide by 101-inch-high interior walls and the 8-inch-wide by 122-inch-high exterior walls of the shower room are contaminated (approximately 3,476 sf).
- (AREA B) The 5-inch-thick concrete floor and underlying soil of the shower room have contamination extending to a total depth of 12 inches (approximately 2,781 sf).
- (AREA C) The soil under the 4-inch-thick concrete slab of the concession stand is contaminated to an estimated depth of 8 inches, based on data collected in Area GG. The total estimated depth of contamination is 12 inches (approximately 240 sf).
- (AREA D) Contamination in the shed extends to a total depth of 48 inches. The soil in this area is covered with asphalt (approximately 210 sf).
- (AREA E) The pump house basement floor is contaminated to a total depth of 12 inches. The uncontaminated concrete slab is 8 inches thick (approximately 736 sf).
- (AREA F) The 4-inch-thick sidewalk and soil under it, north of the shower room and along the east fence line, is contaminated to a total depth of 15 inches (approximately 5,426 sf).
- (AREA G) North of the shower room, a small grass-covered area has contamination extending to a 12-inch depth (approximately 83 sf).
- (AREA H) The lawn south of Area G and north of the shower room is contaminated to a depth of 6 inches (approximately 1,460 sf).



- (AREA I) There is contaminated soil along the west half of the north shower room foundation. The depth of contamination is 6 inches (approximately 241 sf).
- (AREA J) A portion of the lawn north of the shower room is contaminated to a depth of 9 inches (approximately 154 sf).
- (AREA K) North of Area J, the lawn has contamination extending to a depth of 6 inches (approximately 680 sf).
- (AREA L) The soil along the east half of the north foundation of the shower room, north of Area M, is contaminated to a depth of 12 inches (approximately 132 sf).
- (AREA M) South of Area L, the soil is contaminated to a 6-inch depth (approximately 90 sf).
- (AREA N) A grass-covered area east of the shower room is contaminated to a 6-inch depth (approximately 916 sf).
- (AREA O) The northern section of the water line, east of the Lincoln Park Pool, is bedded in tailings to a depth of 69 inches (approximately 390 sf).
- (AREA P) South of Area O, the water line is contaminated to a depth of 57 inches (approximately 282 sf).
- (AREA Q) The soil under the 4-inch-thick uncontaminated concrete deck north of Lincoln Park Pool is contaminated to a depth of 38 inches. The total depth of contamination is 42 inches (approximately 782 sf).
- (AREA R) Contamination in the grass-covered area east of the Lincoln Park Pool is 9 inches deep (approximately 2,027 sf).
- (AREA S) The soil under the 4-inch-thick uncontaminated concrete deck east of the Lincoln Park Pool is contaminated to a depth of 68 inches. The total depth of contamination is 72 inches (approximately 1,180 sf).
- (AREA T) The lawn along the east sidewalk is contaminated to a depth of 15 inches (approximately 716 sf).
- (AREA U) Southeast of Area T, the grass-covered area has contamination extending to a 15-inch depth (approximately 810 sf).
- (AREA V) Northeast of Area U, contamination is 6 inches deep (approximately 385 sf).

- (AREA W) In the bottom of Lincoln Park Pool, the total estimated depth of contamination is 36 inches, including the 6 to 8-inch-thick concrete floor (approximately 11,079 sf).
- (AREA X) Adjacent to the east sidewalk, the lawn has contamination extending to a depth of 12 inches (approximately 268 sf).
- (AREA Y) The soil under the 4-inch-thick uncontaminated concrete deck at the southeast side of the Lincoln Park Pool is contaminated to a depth of 80 inches. The total depth of contamination is 84 inches (approximately 1,317 sf).
- (AREA Z) Southeast of the Lincoln Park Pool, a grass-covered area is contaminated to a 15-inch depth (approximately 637 sf).
- (AREA AA) Contamination in the lawn south of Area Z extends to a depth of 18 inches (approximately 322 sf).
- (AREA BB) The soil under the asphalt south of the pump house is contaminated to a total depth of 12 inches (approximately 1,091 sf).
- (AREA CC) The soil under the 4-inch-thick uncontaminated concrete sidewalk south of the pump house is contaminated to a depth of 152 inches. The total depth of contamination is 156 inches (approximately 525 sf).
- (AREA DD) The asphalt-covered area southwest of the Lincoln Park Pool is contaminated to a total depth of 9 inches (approximately 2,705 sf).
- (AREA EE) Between the Lincoln Park Pool and the diving platform, beneath concrete assumed to be 4 inches in depth, contamination extends to an estimated depth of 156 inches, based on data gathered in Area CC (approximately 320 sf).
- (AREA FF) The soil under the 4-inch-thick uncontaminated concrete deck southwest of Lincoln Park Pool is contaminated to a depth of 80 inches. The total depth of contamination is 84 inches (approximately 1,326 sf).
- (AREA GG) There is contamination to a depth of 8 inches under the 4-inch-thick uncontaminated concrete deck and sidewalk surrounding the wading pool and south of the concession stand. The total depth of contamination is 12 inches (approximately 2,101 sf).
- (AREA HH) A grass-covered area south of the wading pool is contaminated to a depth of 6 inches (approximately 675 sf).



- (AREA II) North of Area HH, contamination in the lawn is 9 inches deep (approximately 2,447 sf).
- (AREA JJ) The soil under the 4-inch-thick uncontaminated concrete deck west of the Lincoln Park Pool is contaminated to a depth of 59 inches. The total depth of contamination is 63 inches (approximately 788 sf).
- (AREA KK) Northwest of Area II, contamination in the lawn is 15 inches deep (approximately 270 sf).
- (AREA LL) The estimated depth of contamination under the 8-inch-thick uncontaminated concrete floor of the wading pool is 4 inches, based on data gathered in Area GG. The total depth of contamination is 12 inches (approximately 968 sf).
- (AREA MM) South of the shower room, under the 4-inch-thick uncontaminated concrete deck, a deposit extends to a depth of 11 inches. The total depth of contamination is 15 inches (approximately 1,793 sf).
- (AREA NN) Northwest of the wading pool, the lawn is contaminated to a 6-inch depth (approximately 224 sf).
- (AREA OO) The soil under the 4-inch-thick uncontaminated asphalt sidewalk east of Area NN is contaminated to an estimated depth of 8 inches, based on data gathered in Area GG. The total depth of contamination is 12 inches (approximately 24 sf).
- (AREA PP) The lawn north of the wading pool is contaminated to a depth of 12 inches (approximately 1,217 sf).
- (AREA QQ) The lawn northwest of Area PP, on both sides of the asphalt path, is contaminated to a depth of 15 inches (approximately 653 sf).
- (AREA RR) East of Area PP, the lawn is contaminated to a 9-inch depth (approximately 282 sf).
- (AREA SS) North of Area RR, contamination in the lawn is 6 inches deep (approximately 204 sf).
- (AREA TT) The asphalt path which passes through Area QQ is contaminated to a total depth of 15 inches (approximately 279 sf).

(AREAS REQUIRING FURTHER INVESTIGATION DURING REMEDIAL ACTION)

The Lincoln Park Pool area and Pump House should be monitored closely during remedial action, because the depth of contamination is an estimate based on engineering design.

#### 4.0 RECOMMENDED REMEDIAL ACTION

##### 4.1 Decontamination and Restoration

The recommended remedial action for this property, DOE ID No. GJ-90001-OT Phase I, includes removal of all areas identified as containing radioactive material (as discussed in Section 3.5 and shown in Appendix Figures 3.5a, 3.5b, and 3.5c) and transport of removed material to the disposal site.

After remedial action has been completed, the areas involved will be partially backfilled in accordance with the Bendix drawings, Vicinity Properties General Construction Specification (Bendix Field Engineering Corporation, 1984), and Statement of Work for Construction Subcontractor.

The City of Grand Junction is planning to replace the Lincoln Park Pool and associated structures with a new swimming facility. The Phase I remedial action discussed in this REA (demolition and partial backfill) will provide them with a decontaminated area for the city's use in constructing the new swimming facility. Backfill grades have been coordinated with the City of Grand Junction. This proposed action is deemed to be most cost-effective both to the UMTRA Program and the City of Grand Junction.

Dislocation of the occupants will not be required for this remedial action.

##### 4.2 Evaluation of Recommended Remedial Action

Volume calculations of the areas included for remedial action are presented in Appendix Table 4.1. Cost estimates are presented in Appendix Table 4.2.

Estimated cost of remedial action is \$274,236.

This remedial action will result in removal of the identified residual radioactive materials.

Owner preference is that remedial action begin after September 2, 1985, and no legal or other complications are foreseen at this time.

## 5.0 REFERENCES

ARIX, A Professional Corporation, Procedures Manual for the Grand Junction Remedial Action Program, for Colorado Department of Health, Radiation Control Division, and the U.S. Department of Energy, 1983.

Bendix Field Engineering Corporation, Procedures Manual Radiologic Support Operations Grand Junction Vicinity Properties, (GJ-07), for U.S. Department of Energy, UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico, 1984.

Bendix Field Engineering Corporation, Engineering, Construction, and Land Support Manual Grand Junction Vicinity Properties Project, (GJ-08), for U.S. Department of Energy, UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico, 1984.

Bendix Field Engineering Corporation, Grand Junction Vicinity Properties Operating Manual, (GJ-16) for U.S. Department of Energy, Nuclear Energy Programs, Division of Remedial Action Projects, UMTRA, 1984.

Bendix Field Engineering Corporation, Vicinity Properties General Construction Specification, for U.S. Department of Energy, Nuclear Energy Programs, Division of Remedial Action Projects, UMTRA, 1984.

Bendix Field Engineering Corporation, Environmental Assessment of Preliminary Cleanup Activities at Offsite Properties Contaminated by Tailings from the Grand Junction Inactive Uranium Millsite, (GJ-04), for U.S. Department of Energy, UMTRA Project Office, Albuquerque Operations, Albuquerque, New Mexico, 1983.

U.S. Department of Energy, Programmatic Memorandum of Agreement (DOE No. DE-GM04-84AL28460) between the U.S. Department of Energy, the Advisory Council on Historic Preservation, and the Colorado State Historic Preservation Officer, for UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico, 1984.

U.S. Department of Energy, Vicinity Properties Management and Implementation Manual, for UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico, 1984.

U.S. Environmental Protection Agency, Standards for Remedial Action at Inactive Uranium Processing Sites (40 CFR Part 192), Washington, D.C., 1983.

## 6.0 APPENDIX

This Appendix contains the following:

Appendix Tables:

Table 3.1	Radium Concentrations at Exterior Locations
Table 3.2	Radium Concentrations at Interior Locations
Table 3.3	Summary of Interior Gamma Exposure Rates
Table 4.1	Area and Volume Calculations
Table 4.2	Estimated Cost of Decontamination and Partial Backfilling

Appendix Figures:

Figure 2.1	Vicinity Map
Figure 2.2	Site Plan
Figure 3.1	Exterior Grid-Point Exposure Rates
Figure 3.2	Exterior Gamma Scan
Figure 3.3a	Interior Gamma Exposure Rates and Sample Locations
Figure 3.3b	Interior Gamma Exposure Rates and Sample Locations
Figure 3.4	Exterior Sample Locations
Figure 3.5a	Interior Estimated Extent of Contamination
Figure 3.5b	Interior Estimated Extent of Contamination
Figure 3.5c	Exterior Estimated Extent of Contamination

Official Survey Report

Memo of Understanding

Team Leader Notes

Deconvolution Graphs (Apparent Radium-226 Concentration)

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT

12th Street and Gunnison Avenue

Page 1 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
27	230320	00-05	SS			<1.0	Concrete core
		05-11	SS			1.4	Sandy soil
28	258247	03	TC	2.9		*	Sewer line south of Moyer Pool
		06	TC	3.1		*	
		09	TC	3.2		*	DC = 0 inches
		12	TC	3.3		*	
		15	TC	3.5		*	
		18	TC	3.7		*	
		21	TC	3.7		*	
		24	TC	3.8		*	
		27	TC	3.8		*	
		30	TC	3.7		*	
		33	TC	3.7		*	
		36	TC	3.7		*	
		39	TC	3.7		*	
		42	TC	3.7		*	
		45	TC	3.8		*	
		48	TC	3.7		*	
		51	TC	3.7		*	
		54	TC	3.8		*	
		57	TC	3.7		*	
		60	TC	3.7		*	
		63	TC	3.6		*	
		66	TC	3.7		*	
		69	TC	3.6		*	
		72	TC	3.6		*	
		75	TC	3.6		*	
		78	TC	3.6		*	
		81	TC	3.7		*	
		84	TC	3.7		*	
		87	TC	3.6		*	
		90	TC	3.6		*	
		93	TC	3.6		*	
		96	TC	3.6		*	
		99	TC	3.7		*	
		102	TC	3.6		*	
29	280310	00	DS	1.1		*	In Moyer Pool
30	297250	03	TC	2.9		*	West side of boiler room
		06	TC	3.1		*	
		09	TC	3.1		*	
		12	TC	3.3		*	DC = 0 inches

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT

12th Street and Gunnison Avenue

Page 2 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
30	297250	15	TC	3.4		*	
		18	TC	3.5		*	
		21	TC	3.4		*	
		24	TC	3.6		*	
		27	TC	3.6		*	
		30	TC	3.6		*	
		33	TC	3.7		*	
31	320230	03	TC	3.2		*	DC = 0 inches
		06	TC	3.4		*	
		09	TC	3.5		*	
		12	TC	3.5		*	
		15	TC	3.6		*	
		18	TC	3.7		*	
		21	TC	3.6		*	
		24	TC	3.7		*	
		27	TC	3.7		*	
32	320310	00	DS	<1.0		*	In Moyer Pool
33	330400	03	TC	3.2		*	West of wading pool DC = 0 inches
		06	TC	3.6		*	
		09	TC	3.8		*	
		12	TC	4.0		*	
		15	TC	4.1		*	
		18	TC	4.1		*	
		21	TC	4.2		*	
		24	TC	4.1		*	
		27	TC	4.0		*	
34	330440	03	TC	2.7		*	DC = 0 inches
		06	TC	3.1		*	
		09	TC	3.3		*	
		12	TC	3.4		*	
		15	TC	3.4		*	
		18	TC	3.6		*	
		21	TC	3.8		*	
		24	TC	3.8		*	
		27	TC	3.8		*	
		30	TC	3.9		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT

12th Street and Gunnison Avenue

Page 3 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
34	330440	33	TC	3.9		*	
35	345375	00	DS	3.7		*	North of Moyer
		06	DS	<1.0		*	Pool
		00-06	SS			9.7	Sandy soil
36	345400	00	DS	1.3		*	North of Moyer
		06	DS	1.8		*	Pool
		00-06	SS			4.2	Sandy soil
		03	TC	3.6		*	
		06	TC	3.9		*	DC = 6 inches
		09	TC	4.0		*	Based on all
		12	TC	4.2		*	available data
		15	TC	4.3		*	
		18	TC	4.3		*	
		21	TC	4.3		*	
		24	TC	4.2		*	
		27	TC	4.2		*	
		30	TC	4.1		*	
		33	TC	4.1		*	
		36	TC	4.0		*	
		39	TC	3.9		*	
		42	TC	3.7		*	
37	348438	00	DS	3.3		*	West of wading pool
		06	DS	4.4		*	
		03	TC	5.4		*	
		06	TC	6.6		*	
		09	TC	6.7		*	
		12	TC	5.7		*	
		15	TC	4.8		*	DC = 15 inches
		18	TC	4.4		*	Based on the
		21	TC	4.1		*	deconvolution graph
		24	TC	4.0		*	
		27	TC	3.9		*	
		30	TC	3.9		*	
		33	TC	3.8		*	
		36	TC	3.8		*	
		39	TC	3.9		*	
		42	TC	3.8		*	
		45	TC	3.8		*	
38	360230	32	DS	1.6		*	Gas line



## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT

12th Street and Gunnison Avenue

Page 4 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
39	360310	00	DS	1.2		*	In Moyer Pool
40	360400	03	TC	7.7		*	West of wading pool DC = 9 inches Based on the deconvolution graph
		06	TC	5.9		*	
		09	TC	4.7		*	
		12	TC	4.1		*	
		15	TC	3.9		*	
		18	TC	3.9		*	
		21	TC	3.9		*	
		24	TC	3.9		*	
		27	TC	3.9		*	
		30	TC	3.9		*	
		33	TC	3.9		*	
41	365425	03	TC	8.1		*	West side of wading pool DC = 9 inches Based on the deconvolution graph
		06	TC	7.2		*	
		09	TC	5.5		*	
		12	TC	4.6		*	
		15	TC	4.1		*	
		18	TC	4.0		*	
		21	TC	3.8		*	
		24	TC	3.7		*	
		27	TC	3.8		*	
		30	TC	3.9		*	
		33	TC	3.9		*	
		36	TC	4.0		*	
42	370455	00	DS	2.6		*	Northwest of wading pool Sandy soil
		06	DS	<1.0		*	
		00-06	SS			5.6	
43	375375	03	TC	6.1		*	Between Moyer and wading pool DC = 9 inches Based on the deconvolution graph
		06	TC	5.2		*	
		09	TC	4.4		*	
		12	TC	4.2		*	
		15	TC	3.9		*	
		18	TC	3.9		*	
		21	TC	3.9		*	
		24	TC	3.9		*	
		27	TC	4.0		*	
		30	TC	3.9		*	
		33	TC	3.9		*	



## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT

12th Street and Gunnison Avenue

Page 5 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
44	382456	03	TC	9.8		*	North of wading pool
		06	TC	9.3		*	
		09	TC	7.2		*	
		12	TC	5.7		*	DC = 12 inches Based on the deconvolution graph
		15	TC	4.9		*	
		18	TC	4.7		*	
		21	TC	4.3		*	
		24	TC	4.3		*	
		27	TC	4.2		*	
		30	TC	4.2		*	
		33	TC	4.2		*	
		36	TC	4.2		*	
45	385475	00	DS	1.2		*	West of shower room
		06	DS	<1.0		*	
		00-06	SS			2.7	Sandy soil
46	390320	00-06	SS			<1.0	Concrete core
		06-12	SS			1.8	Sandy, clay soil
		03	TC	3.2		*	Auger refusal
		06	TC	3.6		*	
		09	TC	3.9		*	DC = 0 inches
		12	TC	4.0		*	
		15	TC	3.9		*	
		18	TC	3.8		*	
		21	TC	3.7		*	
47	390520	03	TC	16.5		*	Asphalt path
		06	TC	23.1		*	
		09	TC	20.3		*	
		12	TC	12.3		*	DC = 15 inches Based on the deconvolution graph
		15	TC	7.8		*	
		18	TC	5.5		*	
		21	TC	4.6		*	
		24	TC	4.0		*	
		27	TC	3.8		*	
		30	TC	3.7		*	
		33	TC	3.6		*	
		36	TC	3.6		*	
48	392518	00	DS	2.6		*	West of shower room
		06	DS	3.9		*	
		00-06	SS			2.3	Sandy soil
		03	TC	25.7		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 6 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
48	392518	06	TC	29.5		*	
		09	TC	24.5		*	
		12	TC	16.4		*	DC = 15 inches
		15	TC	9.2		*	Based on the
		18	TC	6.2		*	deconvolution graph
		21	TC	5.0		*	
		24	TC	4.3		*	
		27	TC	4.0		*	
		30	TC	3.8		*	
		33	TC	3.8		*	
		36	TC	3.9		*	
49	395453	00-04	SS			2.6	Concrete core
		04-10	SS			57.1	Sandy soil
		03	TC	22.1		*	North of wading
		06	TC	28.1		*	pool
		09	TC	18.0		*	
		12	TC	11.6		*	DC = 12 inches
		15	TC	8.5		*	Based on the
		18	TC	7.2		*	deconvolution graph
		21	TC	6.4		*	
		24	TC	5.9		*	
		27	TC	5.6		*	
		30	TC	5.3		*	
		33	TC	5.0		*	
		36	TC	4.7		*	
		39	TC	4.7		*	
		42	TC	4.5		*	
		45	TC	4.2		*	
		48	TC	4.1		*	
		51	TC	3.9		*	
		54	TC	3.9		*	
50	399457	03	TC	18.1		*	West of shower room
		06	TC	16.4		*	
		09	TC	12.4		*	
		12	TC	8.7		*	DC = 12 inches
		15	TC	6.7		*	Based on the
		18	TC	5.6		*	deconvolution graph
		21	TC	5.1		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 7 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
50	399457	24	TC	4.8		*	
		27	TC	4.5		*	
		30	TC	4.3		*	
		33	TC	4.2		*	
		36	TC	4.2		*	
		39	TC	4.2		*	
		42	TC	4.1		*	
		45	TC	4.2		*	
		48	TC	4.1		*	
		51	TC	4.0		*	
		54	TC	3.9		*	
		57	TC	4.0		*	
		60	TC	4.1		*	
		63	TC	4.0		*	
51	400375	00	DS	3.4		*	West of Lincoln Pool
		06	DS	1.6		*	
52	405448	00-05	SS			5.1	Concrete core Sandy soil
		05-11	SS			171.3	
53	405495	00	DS	2.7		*	North of wading pool
		06	DS	6.8		*	
		03	TC	6.2		*	
		06	TC	8.0		*	
		09	TC	7.5		*	DC = 12 inches Based on the deconvolution graph
		12	TC	5.7		*	
		15	TC	4.8		*	
		18	TC	4.1		*	
		21	TC	3.7		*	
		24	TC	3.6		*	
		27	TC	3.6		*	
		30	TC	3.6		*	
54	409450	03	TC	63.2		*	Between wading pool and north fence
		06	TC	68.1		*	
		09	TC	43.2		*	
		12	TC	24.6		*	DC = 12 inches Based on the deconvolution graph
		15	TC	14.4		*	
		18	TC	9.9		*	
		21	TC	8.0		*	
		24	TC	6.5		*	
		27	TC	5.7		*	
		30	TC	5.5		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 8 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
54	409450	33	TC	5.1		*	
		36	TC	4.7		*	
		39	TC	4.5		*	
		42	TC	4.4		*	
		45	TC	4.3		*	
		48	TC	4.0		*	
		51	TC	3.9		*	
		54	TC	3.9		*	
		57	TC	3.9		*	
		60	TC	4.0		*	
		63	TC	3.9		*	
		66	TC	3.8		*	
55	411522	00	DS	1.8		*	Northwest of shower
		06	DS	<1.0		*	room
		00-06	SS			5.1	Sandy soil
		03	TC	3.3		*	
		06	TC	3.3		*	DC = 6 inches
		09	TC	3.2		*	Based on all
		12	TC	3.3		*	available data
		15	TC	3.4		*	
		18	TC	3.5		*	
		21	TC	3.6		*	
		24	TC	3.7		*	
		27	TC	3.5		*	
		30	TC	3.5		*	
		33	TC	3.5		*	
		36	TC	3.5		*	
56	412235	00	DS	1.5		*	West of shed
		06	DS	1.2		*	
57	413217	03	TC	7.7		*	Asphalt drive south
		06	TC	7.1		*	of pools
		09	TC	5.3		*	DC = 9 inches
		12	TC	4.4		*	Based on the
		15	TC	4.1		*	deconvolution graph
		18	TC	3.9		*	
		21	TC	3.8		*	
		24	TC	3.7		*	
		27	TC	3.6		*	
		30	TC	3.7		*	
		33	TC	3.5		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 9 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
58	415386	00-04	SS			2.9	Concrete core
		04-10	SS			20.5	Sandy soil
		03	TC	10.1		*	South of wading pool
		06	TC	9.2		*	
		09	TC	7.0		*	
		12	TC	5.6		*	DC = 12 inches
		15	TC	5.0		*	Based on the
		18	TC	4.7		*	deconvolution graph
		21	TC	4.7		*	
		24	TC	4.6		*	
		27	TC	4.4		*	
		30	TC	4.3		*	
		33	TC	4.1		*	
59	418485	03	TC	17.0		*	
		06	TC	13.1		*	
		09	TC	8.3		*	DC = 9 inches
		12	TC	5.9		*	Based on the
		15	TC	4.7		*	deconvolution graph
		18	TC	4.3		*	
		21	TC	4.0		*	
		24	TC	3.8		*	
		27	TC	3.7		*	
		30	TC	3.7		*	
60	420457	00	DS	36.6		*	Electrical line
		12	DS	<1.0		*	
61	429310	00	DS	2.3		*	West side of Lincoln Pool
62	430470	[36]	DS	4.1		*	Shower room wall
		[36]	GS		6.3	*	
63	432536	00	DS	12.2		*	Sidewalk on north
		06	DS	14.6		*	side of shower room
		12	DS	2.8		*	
64	434420	00-04	SS			2.7	Concrete core
		04-10	SS			232.0	Sandy soil
		03	TC	46.5		*	Northeast of
		06	TC	49.2		*	concession stand
		09	TC	32.4		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 10 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
64	434420	12	TC	19.4		*	DC = 12 inches Based on the deconvolution graph
		15	TC	13.4		*	
		18	TC	10.9		*	
		21	TC	9.7		*	
		24	TC	9.2		*	
		27	TC	9.0		*	
		30	TC	8.5		*	
		33	TC	7.3		*	
		36	TC	6.7		*	
		39	TC	6.5		*	
		42	TC	6.0		*	
		45	TC	5.3		*	
		48	TC	4.6		*	
		51	TC	4.1		*	
		54	TC	3.8		*	
		57	TC	3.8		*	
		60	TC	3.7		*	
		63	TC	3.8		*	
		66	TC	3.7		*	
		69	TC	3.7		*	
65	435255	03	TC	7.0		*	West of Lincoln Pool DC = 9 inches Based on the deconvolution graph
		06	TC	5.7		*	
		09	TC	4.7		*	
		12	TC	4.3		*	
		15	TC	4.0		*	
		18	TC	3.9		*	
		21	TC	3.9		*	
		24	TC	3.8		*	
		27	TC	3.7		*	
		30	TC	3.7		*	
		33	TC	3.6		*	
66	435478	00-06	SS			9.1	DC = 6 inches Based on all available data
		03	TC	4.2		*	
		06	TC	4.4		*	
		09	TC	4.2		*	
		12	TC	4.1		*	
		15	TC	4.0		*	
		18	TC	4.0		*	
		21	TC	3.9		*	
		24	TC	3.9		*	
		27	TC	3.9		*	
		30	TC	3.9		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 11 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
67	435515	00	DS	1.2		*	North of shower room
		06	DS	<1.0		*	
		00-06	SS			2.3	Soil
68	439490	00-06	SS			19.3	
69	440500	00-06	SS			4.7	
70	445340	[24]	DS	4.9		*	Wall of Lincoln Pool
71	445346	[36]	GS		7.0	*	West wall of Lincoln Pool
72	445535	00-05	SS			5.8	Concrete core
		05-11	SS			64.6	Sandy soil
		03	TC	22.5		*	Sidewalk
		06	TC	28.7		*	
		09	TC	20.0		*	
		12	TC	12.1		*	DC = 15 inches
		15	TC	7.9		*	Based on the
		18	TC	5.7		*	deconvolution graph
		21	TC	4.7		*	
		24	TC	4.2		*	
		27	TC	3.9		*	
		30	TC	3.8		*	
		33	TC	3.7		*	
		36	TC	3.6		*	
73	446400	03	TC	73.6		*	West of Lincoln
		06	TC	120.5		*	Pool
		09	TC	148.3		*	
		12	TC	161.7		*	
		15	TC	171.7		*	
		18	TC	178.8		*	
		21	TC	183.9		*	
		24	TC	186.4		*	
		27	TC	187.8		*	
		30	TC	184.7		*	
		33	TC	175.1		*	
		36	TC	152.6		*	
		39	TC	131.0		*	
		42	TC	105.2		*	
		45	TC	80.0		*	
		48	TC	64.1		*	



## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 12 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
73	446400	51	TC	53.5		*	
		54	TC	43.9		*	
		57	TC	34.7		*	
		60	TC	25.7		*	
		63	TC	17.3		*	DC = 63 inches Based on the deconvolution graph
		66	TC	11.5		*	
		69	TC	8.1		*	
		72	TC	6.3		*	
		75	TC	5.2		*	
		78	TC	4.6		*	
		81	TC	4.2		*	
		84	TC	4.3		*	
		87	TC	5.1		*	
		90	TC	6.9		*	
74	447385	[36]	GS		5.7	*	West wall of Lincoln Pool
75	448265	00-04	SS			3.4	Concrete core
		04-10	SS			248.4	Sand
		03	TC	77.2		*	Southwest side of Lincoln Pool
		06	TC	120.9		*	
		09	TC	144.7		*	
		12	TC	149.9		*	
		15	TC	141.3		*	
		18	TC	127.7		*	
		21	TC	116.4		*	
		24	TC	111.4		*	
		27	TC	110.8		*	
		30	TC	116.0		*	
		33	TC	127.3		*	
		36	TC	139.5		*	
		39	TC	149.3		*	
		42	TC	160.6		*	
		45	TC	169.5		*	
		48	TC	176.5		*	
		51	TC	181.3		*	
		54	TC	182.6		*	
		57	TC	183.3		*	
		60	TC	179.3		*	
		63	TC	172.8		*	
		66	TC	170.5		*	
		69	TC	169.2		*	
		72	TC	158.6		*	



## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 13 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
75	448265	75	TC	136.0		*	
		78	TC	99.6		*	DC = 84 inches Based on the deconvolution graph
		81	TC	65.3		*	
		84	TC	41.8		*	
		87	TC	27.3		*	
		90	TC	17.5		*	
		93	TC	12.6		*	
		96	TC	10.2		*	
		99	TC	8.9		*	
		102	TC	8.2		*	
		105	TC	7.4		*	
		108	TC	7.3		*	
		111	TC	6.9		*	
		114	TC	6.9		*	
		117	TC	6.9		*	
		120	TC	7.2		*	
		123	TC	6.5		*	
		126	TC	6.3		*	
		129	TC	6.3		*	
		132	TC	6.5		*	
		135	TC	7.3		*	
76	450215	00	DS	2.0		*	South of Lincoln Pool
77	450270	[36]	DS	5.5		*	Wall of Lincoln Pool
78	450400	[22]	DS	2.1		*	Wall of Lincoln Pool
79	450477	[36]	DS	2.6		*	
		[36]	GS		3.2	*	
80	455500	00-06	SS			5.7	
		03	TC	3.6		*	DC = 6 inches Based on all available data
		06	TC	3.7		*	
		09	TC	3.8		*	
		12	TC	3.9		*	
		15	TC	3.9		*	
		18	TC	3.9		*	
		21	TC	4.0		*	
		24	TC	4.0		*	
		27	TC	3.9		*	
		30	TC	3.9		*	
		33	TC	3.8		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 14 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
81	455515	00	DS	1.2		*	North of shower room
		00-06	SS			2.7	
82	458480	00	DS	<1.0		*	Corner of shower room DC = 0 inches
		03	TC	4.0		*	
		06	TC	3.9		*	
		09	TC	3.7		*	
		12	TC	3.7		*	
		15	TC	3.6		*	
		18	TC	3.5		*	
		21	TC	3.5		*	
		24	TC	3.4		*	
		27	TC	3.5		*	
		30	TC	3.5		*	
		33	TC	3.4		*	
83	459227	22	DS	210.5		*	On gas line
84	461227	03	TC	59.9		*	East of shed south of Lincoln Pool
		06	TC	89.7		*	
		09	TC	126.2		*	
		12	TC	152.6		*	
		15	TC	163.9		*	
		18	TC	173.4		*	
		21	TC	181.0		*	
		24	TC	186.6		*	
		27	TC	191.4		*	
		30	TC	195.8		*	
		33	TC	198.2		*	
		36	TC	201.3		*	
		39	TC	202.5		*	
		42	TC	203.8		*	
		45	TC	205.4		*	
		48	TC	206.8		*	
		51	TC	208.3		*	
		54	TC	208.5		*	
		57	TC	209.0		*	
		60	TC	208.2		*	
		63	TC	208.0		*	
		66	TC	208.4		*	
		69	TC	209.2		*	
		72	TC	211.2		*	
		75	TC	211.8		*	
		78	TC	212.6		*	
		81	TC	213.1		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 15 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
84	461227	84	TC	213.4		*	
		87	TC	214.0		*	
		90	TC	214.0		*	
		93	TC	214.6		*	
		96	TC	215.5		*	
		99	TC	214.9		*	
		102	TC	215.4		*	
		105	TC	216.7		*	
		108	TC	217.9		*	
		111	TC	218.7		*	
		114	TC	219.3		*	
		117	TC	219.7		*	
		120	TC	219.6		*	
		123	TC	218.8		*	
		126	TC	217.6		*	DC > 135 inches
		129	TC	215.1		*	
85	465515	00	DS	1.5		*	North of shower room
		06	DS	<1.0		*	
		00-06	SS			3.1	Soil
86	470496	00-06	SS			13.1	
87	475290	00	DS	5.3		*	In Lincoln Pool
88	475330	00	DS	25.9		*	In Lincoln Pool
89	475380	00	DS	26.0		*	In Lincoln Pool
90	475495	00-04	SS			1.8	Concrete core
		04-10	SS			6.7	Rocky soil
		03	TC	6.7		*	
		06	TC	8.3		*	
		09	TC	7.6		*	
		12	TC	6.5		*	
		15	TC	5.7		*	DC = 15 inches
		18	TC	4.9		*	Based on the
		21	TC	4.6		*	deconvolution graph
		24	TC	4.4		*	
		27	TC	4.2		*	
		30	TC	4.0		*	
		33	TC	3.9		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 16 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
91	480226	00-04	SS			2.5	Concrete core
		04-10	SS			157.2	Sandy soil
		03	TC	52.2		*	By pump house
		06	TC	81.3		*	Auger refusal
		09	TC	99.0		*	
		12	TC	107.1		*	
		15	TC	115.9		*	
		18	TC	123.7		*	
		21	TC	125.1		*	
		24	TC	126.1		*	
		27	TC	126.5		*	
		30	TC	125.6		*	
		33	TC	125.1		*	
		36	TC	130.8		*	
		39	TC	135.7		*	
		42	TC	138.9		*	
		45	TC	135.1		*	
		48	TC	133.3		*	
		51	TC	133.3		*	
		54	TC	130.8		*	
		57	TC	124.5		*	
		60	TC	117.1		*	
		63	TC	112.4		*	
		66	TC	105.6		*	
		69	TC	96.6		*	
		72	TC	92.8		*	
		75	TC	90.7		*	
		78	TC	90.4		*	
		81	TC	92.5		*	
		84	TC	95.9		*	
		87	TC	95.0		*	
		90	TC	94.1		*	
		93	TC	92.2		*	DC > 99 inches
		96	TC	92.1		*	
		99	TC	93.3		*	
92	481496	00	DS	9.0		*	Hit concrete
93	481520	00	DS	6.2		*	
		06	DS	2.0		*	
94	485220	03	TC	7.0		*	South of Lincoln
		06	TC	8.7		*	Pool
		09	TC	7.1		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 17 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
94	485220	12	TC	5.6		*	DC = 12 inches
		15	TC	4.8		*	Based on the
		18	TC	4.3		*	deconvolution graph
		21	TC	4.1		*	
		24	TC	4.1		*	
		27	TC	4.0		*	
		30	TC	4.0		*	
		33	TC	4.1		*	
95	485505	00-06	SS			12.3	
96	488488	03	TC	6.1		*	By shower room
		06	TC	6.0		*	
		09	TC	5.5		*	
		12	TC	4.9		*	DC = 12 inches
		15	TC	4.2		*	Based on the
		18	TC	4.2		*	deconvolution graph
		21	TC	4.1		*	
		24	TC	4.1		*	
		27	TC	4.2		*	
		30	TC	4.3		*	
		33	TC	4.1		*	
97	490425	00-04	SS			4.3	Concrete core
		04-10	SS			190.3	Sandy soil
		03	TC	64.4		*	
		06	TC	72.6		*	
		09	TC	68.8		*	
		12	TC	63.4		*	
		15	TC	61.3		*	
		18	TC	55.7		*	
		21	TC	47.1		*	
		24	TC	35.7		*	
		27	TC	26.7		*	
		30	TC	21.3		*	
		33	TC	16.9		*	
		36	TC	14.4		*	
		39	TC	11.8		*	
		42	TC	10.0		*	DC = 42 inches
		45	TC	8.9		*	Based on the
		48	TC	8.0		*	deconvolution graph
		51	TC	7.2		*	
		54	TC	6.6		*	
		57	TC	6.1		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 18 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
97	490425	60	TC	5.7		*	
		63	TC	5.3		*	
98	495479	22	DS	<1.0		*	On footing
99	495495	03	TC	7.9		*	North of shower room
		06	TC	7.2		*	
		09	TC	5.3		*	DC = 9 inches
		12	TC	4.6		*	Based on the
		15	TC	4.2		*	deconvolution graph
		18	TC	4.1		*	
		21	TC	4.2		*	
		24	TC	4.2		*	
		27	TC	4.3		*	
		30	TC	4.3		*	
		33	TC	4.1		*	
		36	TC	4.0		*	
100	500270	[36]	DS	4.0		*	Wall of Lincoln Pool
101	500405	[36]	GS		3.9	*	Wall of Lincoln Pool
102	500500	00	DS	1.5		*	North of shower room
		00-06	SS			3.7	Soil
		06-12	SS			2.5	Soil
		03	TC	3.6		*	
		06	TC	3.7		*	DC = 6 inches
		09	TC	3.7		*	Based on all
		12	TC	3.5		*	available data
		15	TC	3.5		*	
		18	TC	3.6		*	
		21	TC	3.8		*	
		24	TC	3.8		*	
		27	TC	3.7		*	
		30	TC	3.6		*	
		33	TC	3.7		*	
		36	TC	3.6		*	
103	501300	12	TC	17.4		*	In Lincoln Pool
		15	TC	21.6		*	Soil under concrete
		18	TC	15.2		*	had washed out so
		21	TC	9.1		*	first increment to
		24	TC	6.0		*	be logged was 12
		27	TC	4.5		*	inches deep

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 19 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
103	501300	30	TC	4.1		*	DC = 21 inches
		33	TC	3.9		*	Based on the
		36	TC	3.8		*	deconvolution graph
		39	TC	3.7		*	
		42	TC	3.7		*	
104	501400	[22]	DS	3.1		*	Wall of Lincoln Pool
105	504300	06-12	SS			49.6	Sandy soil
		42-48	SS			1.6	Soil
106	505400	00-04	SS			2.9	Concrete core
		04-10	SS			240.0	Sandy soil
		03	TC	98.6		*	Northeast side of
		06	TC	127.2		*	Lincoln Pool
		09	TC	144.8		*	
		12	TC	153.6		*	
		15	TC	157.3		*	
		18	TC	159.5		*	
		21	TC	163.7		*	
		24	TC	167.8		*	
		27	TC	170.5		*	
		30	TC	174.5		*	
		33	TC	176.1		*	
		36	TC	171.2		*	
		39	TC	163.0		*	
		42	TC	148.8		*	
		45	TC	128.3		*	
		48	TC	108.7		*	
		51	TC	93.6		*	
		54	TC	82.5		*	
		57	TC	70.4		*	
		60	TC	54.9		*	
		63	TC	40.6		*	
		66	TC	30.2		*	
		69	TC	21.9		*	
		72	TC	17.3		*	DC = 72 inches
		75	TC	14.4		*	Based on the
		78	TC	12.2		*	deconvolution graph
		81	TC	10.7		*	
107	505478	00-06	SS			2.8	
108	505505	00-06	SS			2.9	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 20 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
109	506340	[24]	DS	1.3		*	
110	506360	[36]	GS		4.6	*	East wall of Lincoln Pool
111	510430	00-04	SS			4.2	Concrete core
		03	TC	8.9		*	Northeast of Lincoln Pool
		06	TC	10.4		*	
		09	TC	9.3		*	
		12	TC	7.5		*	DC = 15 inches
		15	TC	6.2		*	Based on the
		18	TC	5.4		*	deconvolution graph
		21	TC	5.0		*	
		24	TC	4.6		*	
		27	TC	4.3		*	
		30	TC	4.2		*	
112	512490	00-06	SS			20.9	
113	513502	00	DS	<1.0		*	
		06	DS	<1.0		*	
114	514240	03	TC	40.5		*	
		06	TC	54.2		*	
		09	TC	63.4		*	
		12	TC	61.2		*	
		15	TC	40.6		*	
		18	TC	25.6		*	DC = 18 inches
		21	TC	17.2		*	Based on the
		24	TC	13.0		*	deconvolution graph
		27	TC	10.7		*	
		30	TC	9.4		*	
		33	TC	8.7		*	
		36	TC	8.3		*	
		39	TC	7.3		*	
		42	TC	6.6		*	
		45	TC	6.1		*	
		48	TC	5.7		*	
		51	TC	5.5		*	
		54	TC	5.4		*	
		57	TC	5.2		*	
		60	TC	5.0		*	
		63	TC	4.8		*	
		66	TC	4.9		*	
		69	TC	5.0		*	



## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 21 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
114	514240	72	TC	5.3		*	
		75	TC	5.6		*	
		78	TC	5.5		*	
		81	TC	5.1		*	
		84	TC	4.7		*	
		87	TC	4.3		*	
		90	TC	4.2		*	
		93	TC	4.0		*	
		96	TC	4.0		*	
115	515479	03	TC	4.3		*	DC = 0 inches
		06	TC	4.1		*	
		09	TC	4.1		*	
		12	TC	4.0		*	
		15	TC	4.0		*	
		18	TC	4.0		*	
		21	TC	4.0		*	
		24	TC	4.1		*	
		27	TC	4.1		*	
		30	TC	4.1		*	
		33	TC	4.0		*	
		36	TC	3.9		*	
116	520400	00	DS	28.5		*	Concrete by fence
117	520400	[36]	DS	5.7		*	
		[36]	GS		5.6	*	
118	524405	00-04	SS			3.3	Concrete Rocky soil
		04-10	SS			63.4	
		03	TC	22.4		*	
		06	TC	24.3		*	
		09	TC	21.0		*	
		12	TC	13.9		*	
		15	TC	8.3		*	DC = 15 inches Based on the deconvolution graph
		18	TC	6.4		*	
		21	TC	5.5		*	
		24	TC	5.2		*	
		27	TC	5.1		*	
		30	TC	4.9		*	
		33	TC	4.8		*	
		36	TC	5.1		*	
		39	TC	5.2		*	
		42	TC	5.2		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 22 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot.	Ct Spectr.		
118	524405	45	TC	4.8		*	
		48	TC	4.4		*	
		51	TC	4.0		*	
		54	TC	3.9		*	
		57	TC	3.8		*	
		60	TC	4.0		*	
119	526364	00	DS	26.8		*	Old layer asphalt
		06	DS	17.4		*	
		09	DS	9.2		*	
		06-12	SS			36.6	
120	528507	00	DS	2.4		*	
		06	DS	<1.0		*	
121	529241	03	TC	6.5		*	
		06	TC	6.6		*	
		09	TC	6.8		*	
		12	TC	7.2		*	
		15	TC	7.5		*	
		18	TC	7.4		*	
		21	TC	7.3		*	
		24	TC	6.4		*	
		27	TC	5.6		*	
		30	TC	5.8		*	
		33	TC	5.7		*	
		36	TC	5.7		*	
		39	TC	5.6		*	
		42	TC	5.6		*	
		45	TC	5.7		*	
		48	TC	6.0		*	
		51	TC	6.0		*	DC = 57 inches Based on the deconvolution graph
		54	TC	5.8		*	
		57	TC	4.9		*	
		60	TC	4.4		*	
		63	TC	4.1		*	
122	530280	00	DS	2.4		*	Lawn east of Lincoln Pool
		06	DS	3.8		*	
123	530485	03	TC	4.5		*	Northeast corner of shower room
		06	TC	4.9		*	
		09	TC	4.4		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 23 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
123	530485	12	TC	4.1		*	DC = 6 inches Based on all available data
		15	TC	4.0		*	
		18	TC	4.0		*	
		21	TC	4.2		*	
		24	TC	4.4		*	
		27	TC	4.5		*	
		30	TC	4.4		*	
		33	TC	4.4		*	
124	532458	03	TC	21.4		*	Water line
		06	TC	24.1		*	
		09	TC	27.9		*	
		12	BH	32.1	32.3	*	
		15	TC	36.2		*	
		18	TC	37.0		*	
		21	TC	38.0		*	
		24	BH	39.1	36.4	*	
		27	TC	40.2		*	
		30	BH	41.9	39.2	*	
		33	TC	41.0		*	
		36	BH	40.4	36.9	*	
		39	TC	39.6		*	
		42	TC	38.9		*	
		45	TC	38.4		*	
		48	BH	38.9	34.3	*	
		51	TC	40.0		*	
		54	TC	37.7		*	
		57	TC	33.7		*	
		60	TC	30.7		*	
		63	TC	22.7		*	
		66	BH	15.1	12.5	*	DC = 69 inches Based on the deconvolution graph
		69	TC	9.5		*	
		72	TC	6.5		*	
		75	TC	5.1		*	
		78	TC	4.3		*	
		81	TC	3.9		*	
		84	TC	3.8		*	
125	533280	00	DS	2.5		*	East of Lincoln Pool
		06	DS	3.1		*	
		00-06	SS			3.8	Rocky soil
126	535260	00	DS	1.7		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 24 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
127	535265	00	DS	13.5		*	East of Lincoln Pool
		06	DS	12.4		*	
		12	DS	4.2		*	
		15	DS	2.6		*	
128	540220	03	TC	3.2		*	DC = 0 inches
		06	TC	3.5		*	
		09	TC	3.6		*	
		12	TC	3.6		*	
		15	TC	3.6		*	
		18	TC	3.6		*	
		21	TC	3.6		*	
		24	TC	3.5		*	
		27	TC	3.4		*	
		30	TC	3.4		*	
		33	TC	3.3		*	
129	540310	00	DS	2.7		*	Lawn east of Lincoln Pool
		06	DS	4.0		*	
		12	DS	2.0		*	
130	540350	03	TC	10.2		*	East of Lincoln Pool  DC = 15 inches Based on the deconvolution graph
		06	TC	11.4		*	
		09	TC	11.0		*	
		12	TC	8.8		*	
		15	TC	6.8		*	
		18	TC	5.7		*	
		21	TC	5.0		*	
		24	TC	4.8		*	
		27	TC	4.5		*	
		30	TC	4.4		*	
131	540380	03	TC	10.9		*	DC = 9 inches Based on the deconvolution graph
		06	TC	9.0		*	
		09	TC	6.7		*	
		12	TC	5.5		*	
		15	TC	4.8		*	
		18	TC	4.5		*	
132	540430	03	TC	5.0		*	
		06	TC	5.4		*	
		09	TC	4.9		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 25 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
132	540430	12	TC	4.3		*	DC = 9 inches
		15	TC	4.0		*	Based on the
		18	TC	3.9		*	deconvolution graph
		21	TC	3.8		*	
		24	TC	3.7		*	
		27	TC	3.7		*	
133	540450	00	DS	2.4		*	
		06	DS	1.3		*	
134	540490	03	TC	3.4		*	DC = 0 inches
		06	TC	3.7		*	
		09	TC	3.8		*	
		12	TC	3.9		*	
		15	TC	4.0		*	
		18	TC	4.2		*	
		21	TC	4.4		*	
		24	TC	4.4		*	
		27	TC	4.3		*	
		30	TC	4.0		*	
135	555409	00	DS	1.6		*	East of Lincoln Pool
		06	DS	1.2		*	
136	560260	03	TC	3.4		*	DC = 0 inches
		06	TC	3.6		*	
		09	TC	3.8		*	
		12	TC	3.8		*	
		15	TC	3.8		*	
		18	TC	3.7		*	
		21	TC	3.7		*	
		24	TC	3.6		*	
		27	TC	3.5		*	
137	560315	03	TC	3.4		*	DC = 0 inches
		06	TC	3.6		*	
		09	TC	3.7		*	
		12	TC	3.7		*	
		15	TC	3.6		*	
		18	TC	3.7		*	
		21	TC	3.7		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 26 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
137	560315	24	TC	3.7		*	
		27	TC	3.6		*	
		30	TC	3.6		*	
138	560440	00	DS	2.3		*	East of shower room
		06	DS	4.1		*	
		12	DS	1.3		*	
139	560470	03	TC	3.1		*	DC = 0 inches
		06	TC	3.4		*	
		09	TC	3.6		*	
		12	TC	3.6		*	
		15	TC	3.6		*	
		18	TC	3.8		*	
		21	TC	3.7		*	
		24	TC	3.8		*	
		27	TC	3.6		*	
		30	TC	3.6		*	
		33	TC	3.5		*	
140	565355	00	DS	4.0		*	Lawn east of Lincoln Pool
		06	DS	1.9		*	
141	570210	00	DS	<1.0		*	Background
		00-06	SS			2.4	
		03	TC	3.2		*	DC = 0 inches
		06	BH	3.5	1.0	*	
		09	TC	3.5		*	
		12	BH	3.6	<1.0	*	
		15	TC	3.5		*	
		18	TC	3.5		*	
		21	TC	3.5		*	
		24	BH	3.4	<1.0	*	
		27	TC	3.4		*	
		30	BH	3.5	1.6	*	
142	575345	00	DS	3.5		*	East of Lincoln Pool
		06	DS	1.9		*	
143	576378	03	TC	3.7		*	DC = 0 inches
		06	TC	3.8		*	
		09	TC	3.7		*	
		12	TC	3.6		*	
		15	TC	3.6		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 27 of 27

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
143	576378	18	TC	3.7		*	
		21	TC	3.6		*	
		24	TC	3.7		*	
		27	TC	3.7		*	
		30	TC	3.6		*	
		33	TC	3.6		*	

Measurement GB = GAD-6 Borehole  
 Types: GS = GAD-6 Surface  
 DS = Delta Scintillometer  
 TC = Total Count Borehole  
 SS = Soil Sample  
 BH = Combined GAD-6 and  
 Total Count Borehole

Notes: DC = Depth of Contamination  
 \* = No Soil Sample Taken  
 [n] = Reading Taken n-Inches  
 Above Floor or Ground  
 Date of Survey = 04-02-85  
 Team Leader = DM



## Radium Concentrations at Interior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 1 of 4

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
1		00-05	SS			1.6	Concrete core
		05-11	SS			<1.0	Soil
		03	TC	3.6		*	Girls' locker room
		06	TC	3.6		*	
		09	TC	3.6		*	DC = 0 inches
		12	TC	3.6		*	
		15	TC	3.6		*	
		18	TC	3.6		*	
		21	TC	3.5		*	
		24	TC	3.6		*	
		27	TC	3.6		*	
		30	TC	3.6		*	
		33	TC	3.6		*	
2		00-04	SS			6.0	Concrete core
		04-10	SS			26.8	Sandy soil
		03	TC	18.7		*	Boys' locker room
		06	TC	21.3		*	
		09	TC	13.7		*	
		12	TC	9.0		*	DC = 12 inches
		15	TC	8.9		*	Based on the
		18	TC	6.4		*	deconvolution graph
		21	TC	4.9		*	
		24	TC	4.7		*	
		27	TC	4.5		*	
		30	TC	4.2		*	
		33	TC	4.1		*	
3		00-08	SS			1.3	Concrete core
		08-14	SS			15.4	Soil
		03	TC	6.4		*	Pump house
		06	TC	7.6		*	
		09	TC	6.7		*	DC = 12 inches
		12	TC	5.5		*	Based on the
		15	TC	4.5		*	deconvolution graph
		18	TC	4.2		*	
		21	TC	4.1		*	
		24	TC	4.0		*	
		27	TC	4.1		*	
		30	TC	4.2		*	
		33	TC	4.3		*	
		36	TC	4.3		*	

## Radium Concentrations at Interior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 2 of 4

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
4		00	DS	<1.0		*	
5		00	DS	<1.0		*	
6		03	TC	21.4		*	Inside shed south of Lincoln Pool
		06	TC	29.5		*	
		09	TC	32.3		*	
		12	TC	30.7		*	
		15	TC	28.3		*	
		18	TC	23.7		*	
		21	TC	19.8		*	
		24	BH	17.6	15.3	*	
		27	TC	16.3		*	
		30	TC	15.0		*	
		33	TC	14.2		*	
		36	BH	13.2	11.9	*	DC = 48 inches Based on the deconvolution graph
		39	TC	12.2		*	
		42	TC	11.4		*	
		45	TC	10.3		*	
		48	BH	9.4	6.9	*	
		51	TC	9.4		*	
		54	TC	9.5		*	
		57	TC	9.3		*	
		60	BH	8.9	6.3	*	
		63	TC	8.4		*	
		66	TC	7.8		*	
		69	TC	7.4		*	
		72	TC	6.9		*	
		75	TC	6.5		*	
		78	TC	6.2		*	
		81	TC	6.0		*	
		84	TC	5.8		*	
		87	TC	5.7		*	
		90	TC	5.4		*	
		93	TC	5.2		*	
		96	BH	5.0	2.1	*	
		99	TC	4.8		*	
		102	TC	4.7		*	
		105	TC	4.6		*	
7		00	DS	<1.0		*	Moyer pump room
8		00	DS	<1.0		*	Moyer pump room

## Radium Concentrations at Interior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 3 of 4

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
9		00	DS	<1.0		*	Moyer Pump Room
10		00	DS	1.6		*	Northwest corner of girls' shower room
11		00	DS	1.4		*	Northeast corner of girls' shower room
12		[24] [18]	DS GS	4.7	3.1	* *	Horizontally against wall
13		00	DS	2.7		*	Southwest corner of girls' shower room
14		[24] [18]	DS GS	5.6	4.4	* *	Horizontally against wall
15		00	DS	1.9		*	South wall of girls' shower room
16		00	DS	1.7		*	West side of personnel room
17		00	DS	1.3		*	East side of personnel room
18		00	DS	23.0		*	By south entrance in hallway
19		00	DS	12.5		*	In hallway
20		00	DS	1.5		*	In hallway
21		00	DS	9.9		*	Southwest corner of west hallway
22		00	DS	2.2		*	West hallway
23		00	DS	26.0		*	East hallway

## Radium Concentrations at Interior Locations

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue

Page 4 of 4

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
24		00	DS	15.0		*	East hallway
25		00	DS	17.8		*	North end of east hallway
26		00	DS	1.7		*	

Measurement Types: GB = GAD-6 Borehole  
 GS = GAD-6 Surface  
 DS = Delta Scintillometer  
 TC = Total Count Borehole  
 SS = Soil Sample  
 BH = Combined GAD-6 and  
 Total Count Borehole

Notes: DC = Depth of Contamination  
 \* = No Soil Sample Taken  
 [n] = Reading Taken n-Inches  
 Above Floor or Ground  
 Date of Survey = 04-02-85  
 Team Leader = DM

Table 3.3  
Summary of Interior Gamma Exposure Rates

DOE ID #GJ-90001-OT 12th Street and Gunnison Avenue Page 1 of 1

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Location *	Number of Readings Taken at Waist Level	Range at Waist Level (uR/h)	Mean at Waist Level (uR/h)	Number of Readings Taken at Surface	Range at Surface (uR/h)	Mean Surface (uR/h)
ROOM A	09	17-28	23	09	17-34	25
ROOM B	11	16-25	20	11	17-23	20
ROOM C	20	21-37	31	19	21-49	39
ROOM D	11	26-32	29	10	29-47	38
ROOM E	05	22-31	27	05	22-38	30
ROOM F	05	30-38	32	05	28-32	31
ROOM G	03	29-31	30	03	31-37	34
ROOM H	07	22-26	23	07	22-27	23
ROOM I	04	19-23	22	04	17-23	19
ROOM J	05	22-25	24	05	21-24	23
ROOM K	05	21-49	35	05	18-43	32
BOILER ROOM	21	13-16	14	21	13-15	14
CONCESSION STAND	07	16-18	17	07	16-17	17
SHED	05	23-32	27	05	25-42	31
PUMP HOUSE	02	18-19	19	02	18-18	18
PUMP HOUSE BASEMENT	16	17-35	24	16	18-32	24
PUMP ROOM MOYER POOL	17	15-17	16	20	16-17	16

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\*Exposure Rates and Room Locations Shown in Appendix Figures 3.3a and 3.3b

Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-90001-OT Phase I

Page 1 of 11

<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
EXTERIOR MASONRY AND CONCRETE					
Shower Room					
A	37 x 10	= 370			
	90 x 10	= 900			
	37 x 10	= 370			
	90 x 10	= 900			
	117 x 8	= 936			
		<u>3,476</u>	x 0.7	= 2,433	
B	28 x 90	= 2520			
	9 x 29	= 261			
		<u>2,781</u>	x 0.4	= 1,112	
	254 x 2	= 508	x 1.0	= 508	
	244 x 1	= 244	x 0.7	= 171	
Concession Stand					
C	63 x 10	= 630	x 0.7	= 441	
	12 x 20	= 240	x 0.3	= 72	
Pump House (Upper Level)					
E	6 x 10	= 60	x 0.5	= 30	
	32 x 8	= 256	x 0.7	= 179	
	6 x 10	= 60	x 0.5	= 30	
Pump House (Basement)					
E	19 x 3	= 57	x 0.8	= 46	
	23 x 32	= 736	x 0.7	= 515	
	3 x 4 x 2	= 24	x 1.0	= 24	
	10/12 x 4 x 16	= 53	x 1.0	= 53	
	126 x 13	= 1,638	x 0.8	= 1,310	
	109 x 13	= 1,417	x 0.7	= 992	
	23 x 32	= 736	x 0.7	= 515	

Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-90001-OT Phase I

Page 2 of 11

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<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
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Concrete Sidewalks

F	90 x 8	=	720		
	30 x 8	=	240		
	165 x 6	=	990		
	54 x 8	=	432		
	53 x 6	=	318		
	10 x 4	=	40		
	12 x 4	=	48		
	5 x 10	=	50		
	23 x 5	=	115		
	124 x 6	=	744		
	35 x 5	=	175		
	35 x 5	=	175		
	20 x 8	=	160		
	46 x 6	=	276		
	65 x 6	=	390		
	40 x 6	=	240		
	26 x 8	=	208		
	21 x 5	=	105		
			<hr/>		
			5,426	x	0.3 = 1,628

Lincoln Park Pool

Q	7 x 13	=	91		
	13 x 2/2	=	13		
	45 x 9	=	405		
	13 x 7	=	91		
	14 x 13	=	182		
			<hr/>		
			782	x	0.3 = 235
S	13 x 80	=	1,040		
	40 x 7/2	=	140		
			<hr/>		
			1,180	x	0.3 = 354
W	42 x 4	=	168		
	45 x 4	=	180		
	75 x 5	=	375		
	45 x 6	=	270		
			<hr/>		
			993	x	0.7 = 695



Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-90001-OT Phase I

Page 3 of 11

<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
W	45 x 4	= 180			
	75 x 5	= 375			
	45 x 6	= 270			
		<u>825</u>	x 0.7	= 578	
	51 x 43	= 2,193			
	75 x 60	= 4,500			
	51 x 43	= 2,193			
	51 x 43	= 2,193			
		<u>11,079</u>	x 0.7	= 7,755	
	372 x 4	= 1,488	x 0.8	= 1,190	
Y	13 x 47	= 611			
	15 x 16/2	= 120			
	11 x 19/2	= 105			
	13 x 37	= 481			
		<u>1,317</u>	x 0.3	= 395	
CC	35 x 15	= 525	x 0.3	= 158	
EE	3 x 15	= 45			
	43 x 5	= 215			
	4 x 15	= 60			
		<u>320</u>	x 0.3	= 96	
FF	13 x 65	= 845			
	13 x 37	= 481			
		<u>1,326</u>	x 0.3	= 398	
GG	12 x 12	= 144			
	16 x 83	= 1,328			
	11 x 21	= 231			
	11 x 62/2	= 341			
	3 x 19	= 57			
		<u>2,101</u>	x 0.3	= 630	

Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-90001-OT Phase I

Page 4 of 11

<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
JJ	3 x 81 =	243			
	10 x 81/2 =	405			
	7 x 40/2 =	140			
		<hr/> 788	x 0.3 =	236	
MM	59 x 22 =	1,298			
	21 x 15 =	315			
	12 x 15 =	180			
		<hr/> 1,793	x 0.3 =	538	
OO	4 x 15 =	60	x 0.3 =	18	
Wading Pool					
LL	22 x 2 =	44			
	22 x 2 =	44			
	44 x 2 =	88			
	44 x 2 =	88			
	22 x 2 =	44			
	22 x 44 =	968			
		<hr/> 1,276	x 0.7 =	893	
	132 x 3 =	396	x 1.0 =	396	
Volume of Concrete				<hr/> = 24,624 = 24,624/27 =	912

#### ASPHALT

BB	7 x 7 =	49			
	5 x 7/2 =	18			
	12 x 13/2 =	78			
	39 x 28 =	1,092			
	13 x 18/2 =	117			
	13 x 11/2 =	72			
	2 x 6 =	12			
	13 x 17 =	221			
	3 x 7/2 =	11			
		<hr/> 1,670	x 0.2 =	334	

Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-90001-OT Phase I

Page 5 of 11

<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
DD	17 x 17 =	289			
	66 x 8 =	528			
	12 x 58/2 =	348			
	20 x 12 =	240			
	14 x 7 =	98			
	17 x 12 =	204			
	52 x 20 =	1,040			
	52 x 12 =	624			
	17 x 6 =	102			
	17 x 14 =	238			
		<u>3,711</u>	x 0.2 =	742	
TT	5 x 48 =	240	x 0.2 =	48	
					<u>          </u>
Volume of Asphalt				= 1,124 = 1,124/27 =	42

EXTERIOR - FILL

Shower Room

B	28 x 90 =	2,520			
	9 x 29 =	261			
		<u>2,781</u>	x 0.6 =	1,669	

Concession Stand

C	12 x 20 =	240	x 0.7 =	168	
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Shed

D	14 x 15 =	210	x 4.0 =	840	
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Pump House

E	14 x 32 =	448	x 0.3 =	134	
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Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-90001-OT Phase I

Page 6 of 11

<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
F	90 x 8	= 720			
	30 x 8	= 240			
	165 x 6	= 990			
	54 x 8	= 432			
	53 x 6	= 318			
	10 x 4	= 40			
	12 x 4	= 48			
	5 x 10	= 50			
	23 x 5	= 115			
	124 x 6	= 744			
	35 x 5	= 175			
	35 x 5	= 175			
	20 x 8	= 160			
	46 x 6	= 276			
	65 x 6	= 390			
	40 x 6	= 240			
	26 x 8	= 208			
	21 x 5	= 105			
		<u>5,426</u>	x 1.0	=	5,426
G	6 x 11/2	= 33			
	9 x 11/2	= 50			
		<u>83</u>	x 1.0	=	83
H	14 x 8/2	= 56			
	26 x 8/2	= 104			
	40 x 29	= 1,160			
	35 x 8/2	= 140			
		<u>1,460</u>	x 0.5	=	730
I	30 x 4	= 120			
	30 x 7/2	= 105			
	4 x 4	= 16			
		<u>241</u>	x 0.5	=	121
J	22 x 14/2	= 154	x 0.8	=	123
K	40 x 13/2	= 260			
	40 x 21/2	= 420			
		<u>680</u>	x 0.5	=	340

Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-90001-OT Phase I

Page 7 of 11

<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
L	30 x 8/2 = 4 x 3 =	120 12			
		<hr/> 132	x 1.0 =	132	
M	30 x 3 =	90	x 0.5 =	45	
N	21 x 17 = 4 x 17/2 = 13 x 24 = 17 x 8 = 7 x 11 =	357 34 312 136 77			
		<hr/> 916	x 0.5 =	458	
O	130 x 3 =	390	x 5.8 =	2,262	
P	94 x 3 =	282	x 4.8 =	1,354	
Q	7 x 13 = 13 x 2/2 = 45 x 9 = 13 x 7 = 14 x 13 =	91 13 405 91 182			
		<hr/> 782	x 3.2 =	2,502	
R	28 x 15 = 3 x 17 = 68 x 15 = 6 x 15 = 20 x 27/2 = 13 x 27/2 =	420 51 1,020 90 270 176			
		<hr/> 2,027	x 0.8 =	1,622	
S	13 x 80 = 40 x 7/2 =	1,040 140			
		<hr/> 1,180	x 5.7 =	6,726	
T	3 x 25 = 5 x 107 = 2 x 53 =	75 535 106			
		<hr/> 716	x 1.3 =	931	

Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-90001-OT Phase I

Page 8 of 11

<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
U	20 x 10 =	200			
	20 x 7/2 =	70			
	30 x 36/2 =	540			
		<hr/> 810	x 1.3 =	1,053	
V	10 x 22 =	220			
	11 x 15 =	165			
		<hr/> 385	x 0.5 =	193	
W	163 x 60 =	9,780	x 2.3 =	22,494	
X	8 x 26 =	208			
	4 x 15 =	60			
		<hr/> 268	x 1.0 =	268	
Y	13 x 47 =	611			
	15 x 16/2 =	120			
	11 x 19/2 =	105			
	13 x 37 =	481			
		<hr/> 1,317	x 6.7 =	8,824	
Z	4 x 43 =	172			
	7 x 34/2 =	119			
	7 x 8/2 =	28			
	9 x 32 =	288			
	15 x 2 =	30			
		<hr/> 637	x 1.3 =	828	
AA	15 x 8 =	120			
	5 x 10/2 =	25			
	16 x 7 =	112			
	13 x 10/2 =	65			
		<hr/> 322	x 1.5 =	483	

Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-90001-OT Phase I

Page 9 of 11

<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
BB	7 x 7	= 49			
	5 x 7/2	= 18			
	13 x 12/2	= 78			
	39 x 18	= 702			
	2 x 6	= 12			
	13 x 17	= 221			
	3 x 7/2	= 11			
		<u>1,091</u>	x 0.8	= 873	
CC	35 x 15	= 525	x 12.7	= 6,668	
DD	17 x 17	= 289			
	66 x 8	= 528			
	12 x 58/2	= 348			
	20 x 12	= 240			
	14 x 7	= 98			
	13 x 11/2	= 72			
	45 x 20	= 900			
	12 x 6	= 72			
	17 x 6	= 102			
	4 x 14	= 56			
		<u>2,705</u>	x 0.6	= 1,623	
EE	3 x 15	= 45			
	43 x 5	= 215			
	4 x 15	= 60			
		<u>320</u>	x 12.7	= 4,064	
FF	13 x 65	= 845			
	13 x 37	= 481			
		<u>1,326</u>	x 6.7	= 8,884	
GG	12 x 12	= 144			
	16 x 83	= 1,328			
	11 x 21	= 231			
	11 x 62/2	= 341			
	3 x 19	= 57			
		<u>2,101</u>	x 0.7	= 1,471	



Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-90001-OT Phase I

Page 10 of 11

<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
HH	25 x 7	= 175			
	35 x 7	= 245			
	22 x 15/2	= 165			
	6 x 15	= 90			
		<u>675</u>	x 0.5 =	338	
II	13 x 60/2	= 390			
	25 x 60	= 1,500			
	8 x 15	= 120			
	22 x 15/2	= 165			
	17 x 16	= 272			
		<u>2,447</u>	x 0.8 =	1,958	
JJ	3 x 81	= 243			
	10 x 81/2	= 405			
	7 x 40/2	= 140			
		<u>788</u>	x 5.0 =	3,940	
KK	18 x 15	= 270	x 1.3 =	351	
LL	22 x 44	= 968	x 0.3 =	290	
MM	59 x 22	= 1,298			
	21 x 15	= 315			
	12 x 15	= 180			
		<u>1,793</u>	x 1.0 =	1,793	
NN	16 x 14	= 224	x 0.5 =	112	
OO	4 x 6	= 24	x 0.7 =	17	
PP	42 x 11	= 462			
	5 x 6	= 30			
	23 x 10	= 230			
	15 x 33	= 495			
		<u>1,217</u>	x 1.0 =	1,217	

Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-90001-OT Phase I

Page 11 of 11

<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
QQ	21 x 10/2 =	105			
	21 x 16 =	336			
	6 x 11/2 =	33			
	7 x 10 =	70			
	4 x 7/2 =	14			
	7 x 11/2 =	39			
	7 x 8 =	56			
		<hr/> 653	x 1.3 =	849	
RR	6 x 47 =	282	x 0.8 =	226	
SS	6 x 12 =	72			
	6 x 22 =	132			
		<hr/> 204	x 0.5 =	102	
TT	5 x 48 =	240			
	11 x 7/2 =	39			
		<hr/> 279	x 1.1 =	307	
Volume of Fill				= 94,892	= 94,892/27 = 3,515
TOTAL VOLUME - EXTERIOR					<hr/> = 4,469

See Appendix Figures 3.5a, 3.5b, and 3.5c For Areas

EXTERIOR

**Shower Room**

Remove flat-roof system of the structure  
2,890 sf @ \$.61/sf \$ 1,763

Remove identified residual radioactive material including  
all interior and exterior structural glazed tile and brick  
veneer walls  
3,476 sf @ \$3/sf 10,428

Remove all building materials and miscellaneous items from  
this structure, including electrical, plumbing, and heating  
materials, and properly dispose of materials  
\$10,428 @ 30% 3,128

Remove identified residual radioactive material  
4" concrete floor slab reinforced with wire mesh  
2,781 sf @ \$1.25/sf (machine) 3,476

Remove 8" x 1.0' concrete stemwall, reinforced  
6 cy @ \$100/cy (machine) 600

Remove 12" x 24" concrete footing, reinforced  
19 cy @ \$100/cy (machine) 1,900

Remove identified residual radioactive fill  
62 cy @ \$10/cy (machine) 620

**Concession Stand**

Remove flat-roof system of the structure  
209 sf @ \$.61/sf (machine) 127

Remove structural glazed tile and brick veneer  
630 sf @ \$3/sf (machine) 1,890

Remove all building materials and miscellaneous items  
from this structure, including electrical, plumbing, and  
heating materials, and properly dispose of these items  
Allowance 500

Remove 4" concrete floor slab reinforced with wire mesh  
240 sf @ \$1.25/sf 300

Remove identified residual radioactive fill  
6 cy @ \$10/cy (machine) 60

**Storage Shed**

Remove metal frame storage shed 13.9' x 15.0'		
Allowance	\$	300

**Pump House (Upper)**

Remove concrete diving platform		
2 cy @ \$100/cy (machine)		200
Remove 2 concrete stairways to diving platform		
1 cy @ \$100/cy (machine)		170
Remove concrete roof of the pump house		
60 sf @ \$5.70/sf (manual)		342
Remove 8" concrete walls of the pump house		
256 sf @ \$5.70/sf (manual)		1,459
Remove 4" concrete floor of the pump house		
60 sf @ \$1.25/sf (machine)		75
Remove all electrical and mechanical systems from the pump house		
Allowance		2,000

**Pump House (Basement)**

Remove 8" reinforced concrete roof		
736 sf @ \$3.25/sf (machine)		2,392
Remove 8" reinforced concrete walls		
1,417 sf @ \$3.25/sf (machine)		4,605
Remove 10" reinforced concrete walls		
1,638 sf @ \$3.25/sf (machine)		5,324
Remove 36" x 12" concrete footing, reinforced		
110 lf @ \$12.65/lf (machine)		1,392
Remove 8" reinforced concrete floor		
736 sf @ \$3.25/sf (machine)		2,392
Remove identified residual radioactive fill		
5 cy @ \$10/cy (machine)		50
Remove reinforced concrete stairway		
2 cy @ \$200/cy (manual)		400

---

Remove all mechanical, electrical, and plumbing equipment from the lower level of the pump house	
Allowance	\$ 6,000
<b>Metal Shed</b>	
Remove identified residual radioactive material 31 cy @ \$10/cy (machine)	310
Remove shed and steel frame Allowance	1,500
<b>Concrete (Walks)</b>	
Remove identified residual radioactive 4" concrete sidewalk reinforced with wire mesh 5,426 sf @ \$1.25/sf (machine)	6,783
<b>Concrete (Pool Decks)</b>	
Remove 4" concrete slab reinforced with wire mesh 10,192 sf @ \$1.25/sf (machine)	12,740
<b>Concrete (Lincoln Park Pool)</b>	
Remove 8" concrete walls of the swimming pool reinforced with approximately #4 bar @ 8" oc ea way 1,818 sf @ \$3.25/sf (machine)	5,909
Remove 8" concrete floor of the swimming pool reinforced with approximately #4 bar 8" oc ea way 11,079 sf @ \$3.25/sf (machine)	36,007
Remove 10" concrete footing reinforced (amount of reinforcement is unknown), approximate footing size 372 lf x 4 ft wide x 10 in thick 1,488 sf @ \$3.25/sf (machine)	4,836
<b>Concrete (Wading Pool)</b>	
Remove 8" concrete walls of the wading pool, reinforced (amount of reinforcement is unknown) 308 sf @ \$3.25/sf (machine)	1,001
Remove 8" concrete floor of the wading pool, reinforced (amount of reinforcement unknown) 968 sf @ \$3.25/sf (machine)	3,146

Remove 12" concrete footing of the wading pool, approximate size 132 lf x 3 ft wide 396 sf @ \$3.25/sf	\$ 1,287
<b>Asphalt</b>	
Remove 2" asphalt concrete pavement 5,621 sf @ \$.60/sf (machine)	3,373
Sawcut asphalt concrete pavement 172 lf @ \$.44/lf (machine)	76
<b>Identified Residual Radioactive Fill</b>	
Remove identified residual radioactive fill 3,411 cy @ \$10/cy (machine)	34,110
<b>Miscellaneous</b>	
Remove 60' x 24' canopy, south side of shower room Allowance	750
Remove 10' x 42' canopy west side of the wading pool Allowance	500
Remove chainlink fence and posts 620 lf @ \$1.24/lf (machine)	769
Remove mature trees 7 ea @ \$100/ea (machine)	700
Remove underground utilities and cap all utilities as indicated per drawings. Remove and store utility poles and miscellaneous. Allowance	8,000
<b>Limited Backfill</b>	
Replace 6" pit run to a level of 5 feet below original grade 1,268 cy @ \$9/cy (machine)	11,412
Reinstall security chainlink fence using existing fabric and required amount of new fabric and all new 8 foot posts 1,000 lf @ \$6.53/lf	6,530

---

Install 2 dewatering sumps 16 ft deep 36 in diameter, with two 150 gal/min submersible sump pumps Alum perf culvert with brass webb and base cap Allowance	\$ 13,000
Install 500x mirifi fabric 1,800 sy @ \$1/sy	1,800
	<hr/>
TOTAL EXTERIOR	\$ 206,362
TOTAL INTERIOR	0
ACCESS CONTROL	1,000
	<hr/>
SUBTOTAL	\$ 207,362
CONTINGENCY @ 15%	31,104
	<hr/>
SUBTOTAL	\$ 238,466
CONTRACTOR OVERHEAD & PROFIT @ 15%	35,770
	<hr/>
GRAND TOTAL	\$ 274,236

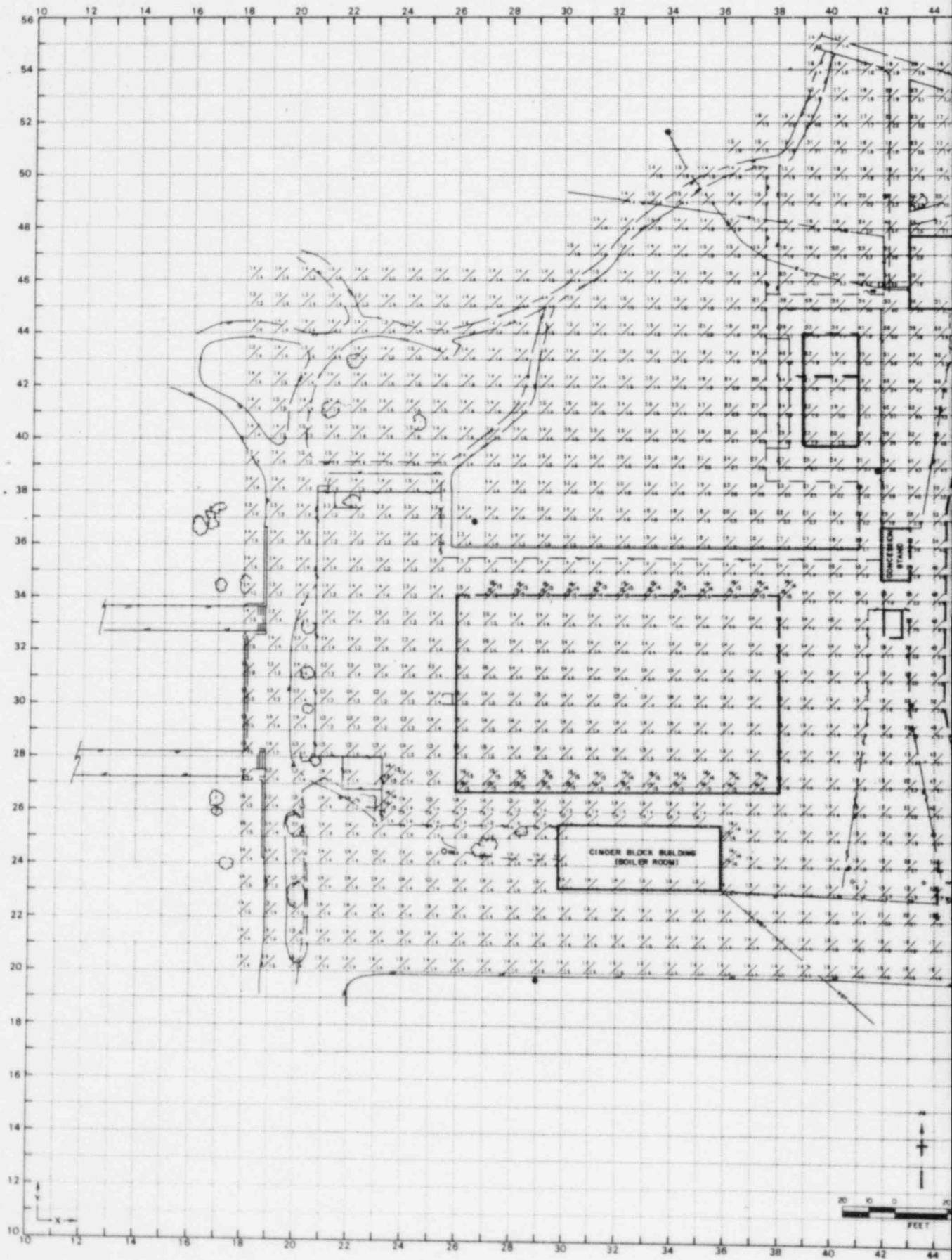
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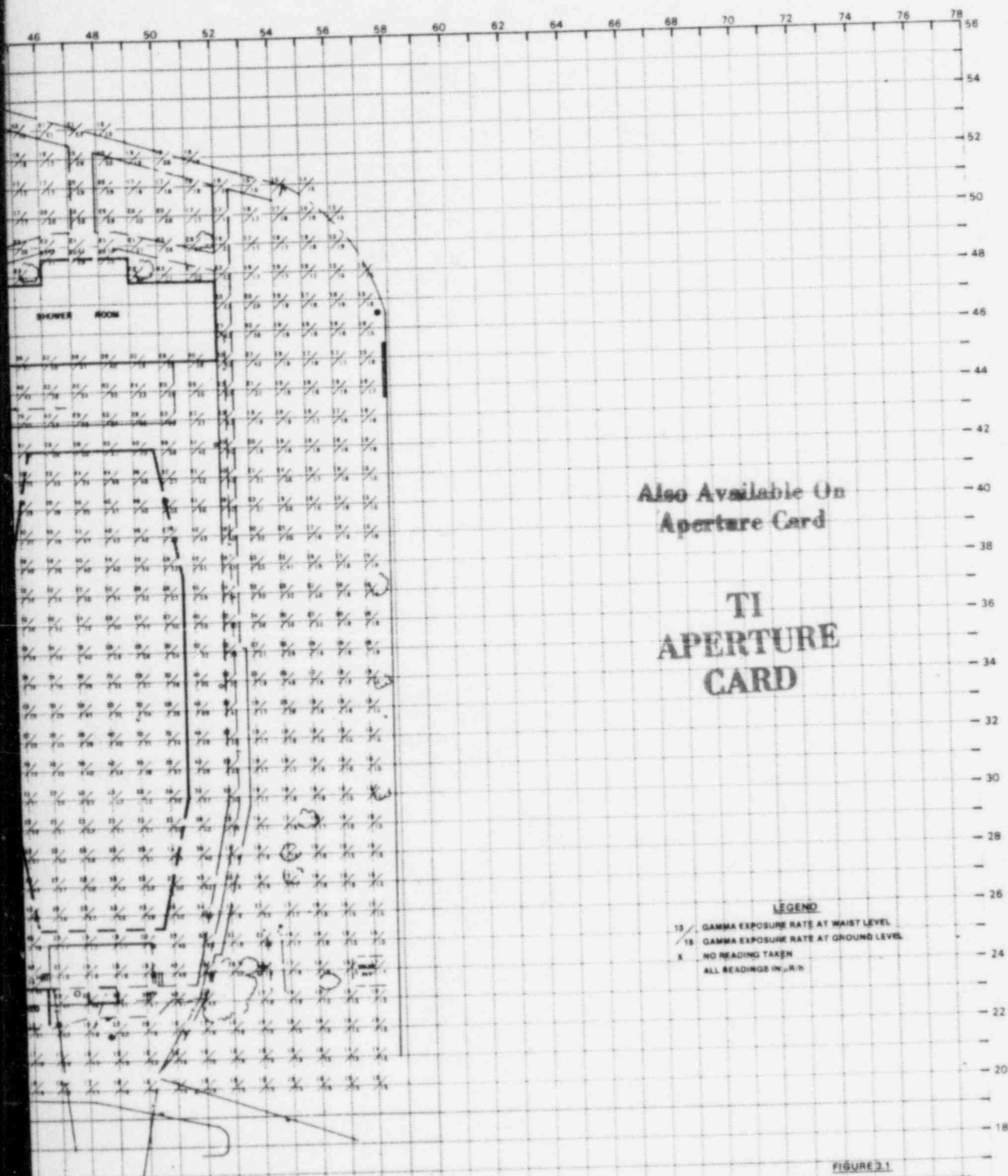
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## LEGEND

- / GAMMA EXPOSURE RATE AT WAIST LEVEL
  - . GAMMA EXPOSURE RATE AT GROUND LEVEL
  - X NO READING TAKEN
- ALL READINGS IN R/H

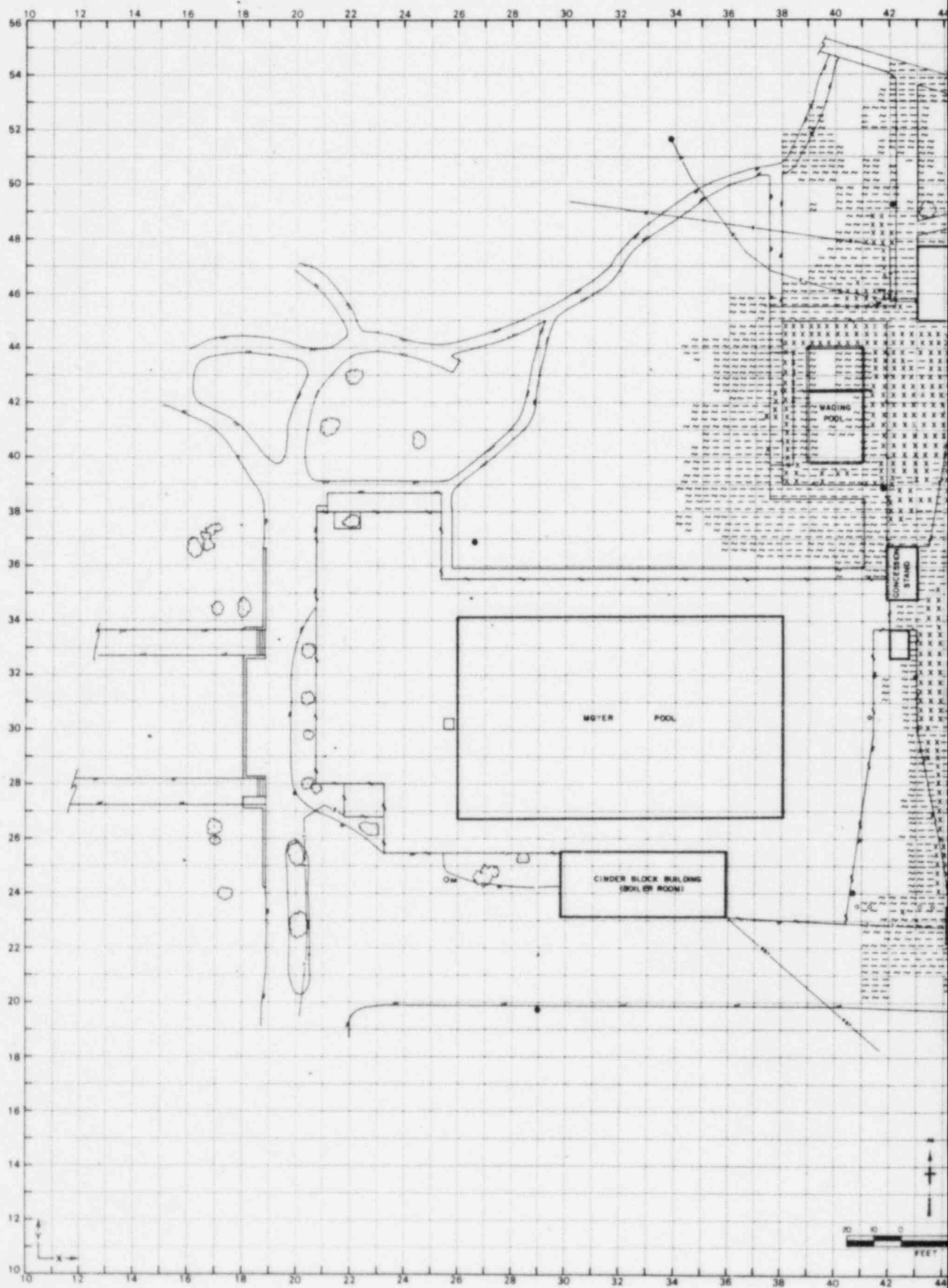
FIGURE 3.1  
EXTERIOR GRID-POINT EXPOSURE RATES

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Remediation Action Project, is for the use of the U.S.  
Department of Energy and its contractors. It is not to be  
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approval of the contractor or owner. Buildings or  
other features are shown as they appear.

NO. DATE		REVISIONS		BY		DATE		NO. DATE		REVISIONS		BY		DATE	
U.S. DEPARTMENT OF ENERGY															
GRAND JUNCTION AREA OFFICE, COLORADO															
PROJECT NO. 5-45				DRAWN BY J. P. J.				CHECKED BY J. P. J.				DATE 5-8-61			
SURVEY DATE 5-8-61				SURVEY TIME 10:00 AM				SURVEY LOCATION 12TH ST & JUNCTION AVE. GRAND JUNCTION, COLORADO				DATE 5-8-61			
SURVEY DATE 5-8-61				SURVEY TIME 10:00 AM				SURVEY LOCATION 12TH ST & JUNCTION AVE. GRAND JUNCTION, COLORADO				DATE 5-8-61			
SURVEY DATE 5-8-61				SURVEY TIME 10:00 AM				SURVEY LOCATION 12TH ST & JUNCTION AVE. GRAND JUNCTION, COLORADO				DATE 5-8-61			

8507190407-01





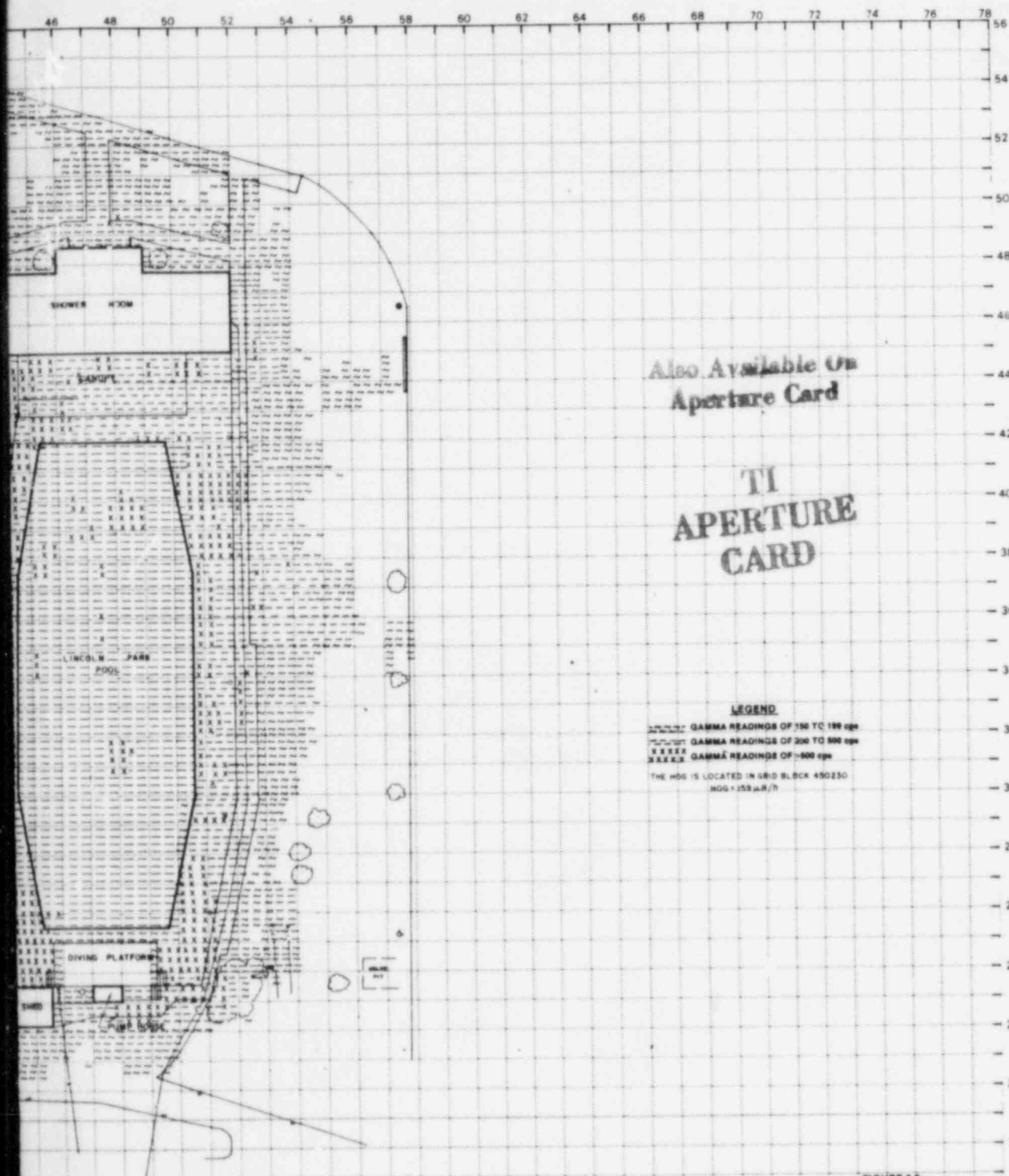
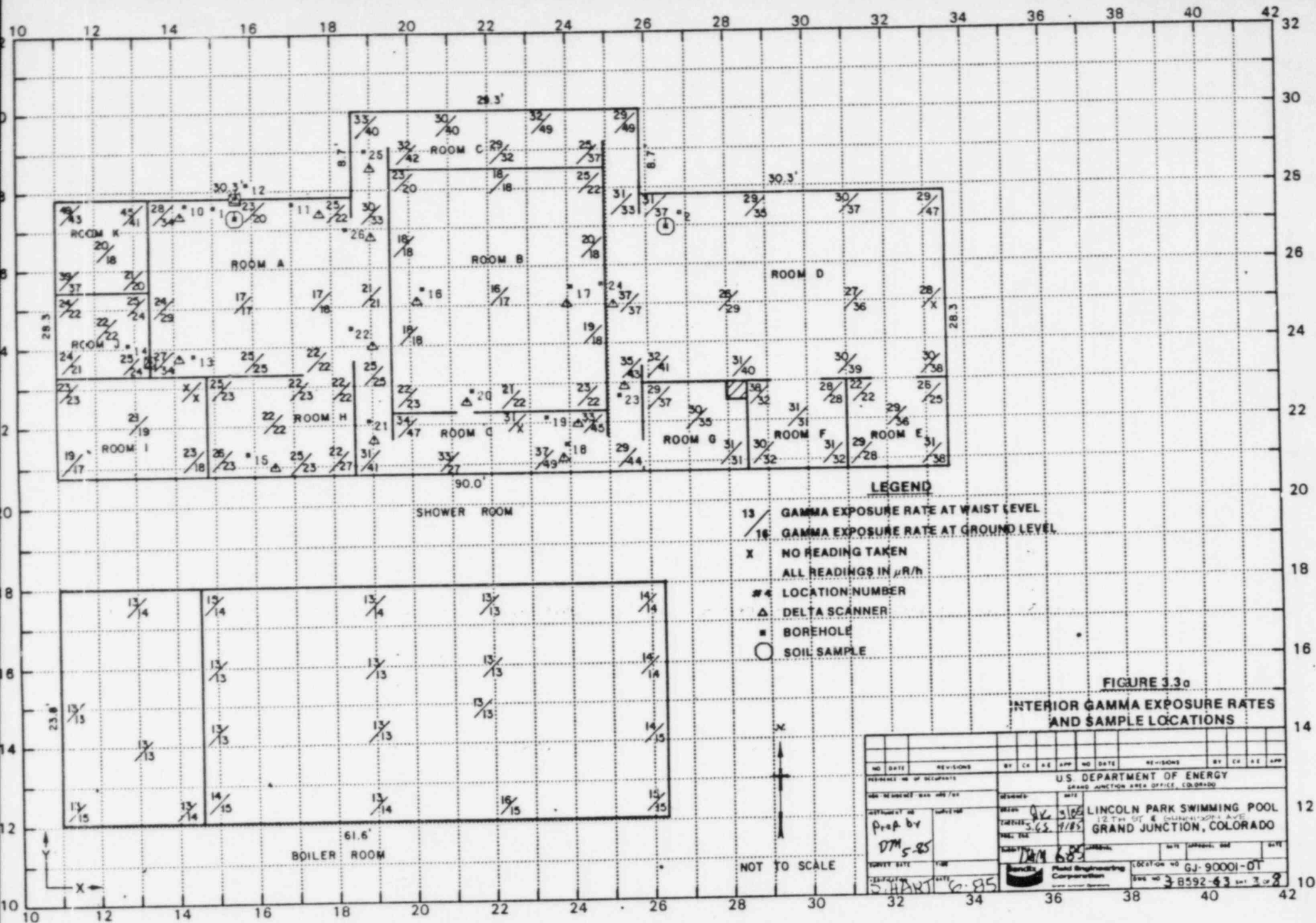


FIGURE 3-2  
EXTERIOR GAMMA SCAN

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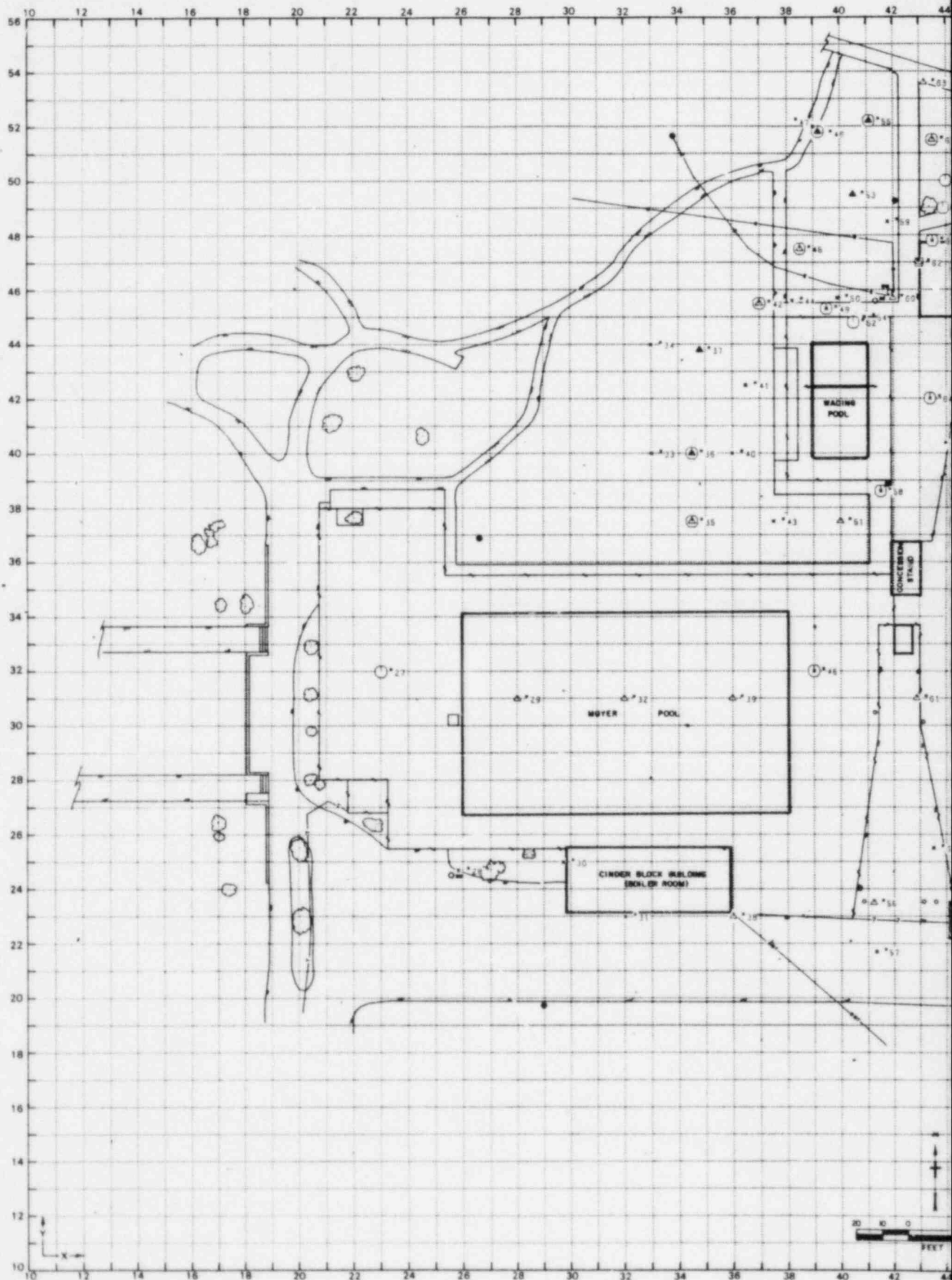
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U.S. DEPARTMENT OF ENERGY																							
LINCOLN PARK SWIMMING POOL																							
1515 S. QUINN AVENUE																							
GRAND JUNCTION, COLORADO																							
DESIGNED BY				DATE				DRAWN BY				DATE											
CHECKED BY				DATE				TWOX BY				DATE											
APPROVED BY				DATE				SUBMITTED BY				DATE											
PROJECT NO.				DATE				LOCATION NO.				DATE											
CONTRACT NO.				DATE				CONTRACT NO.				DATE											

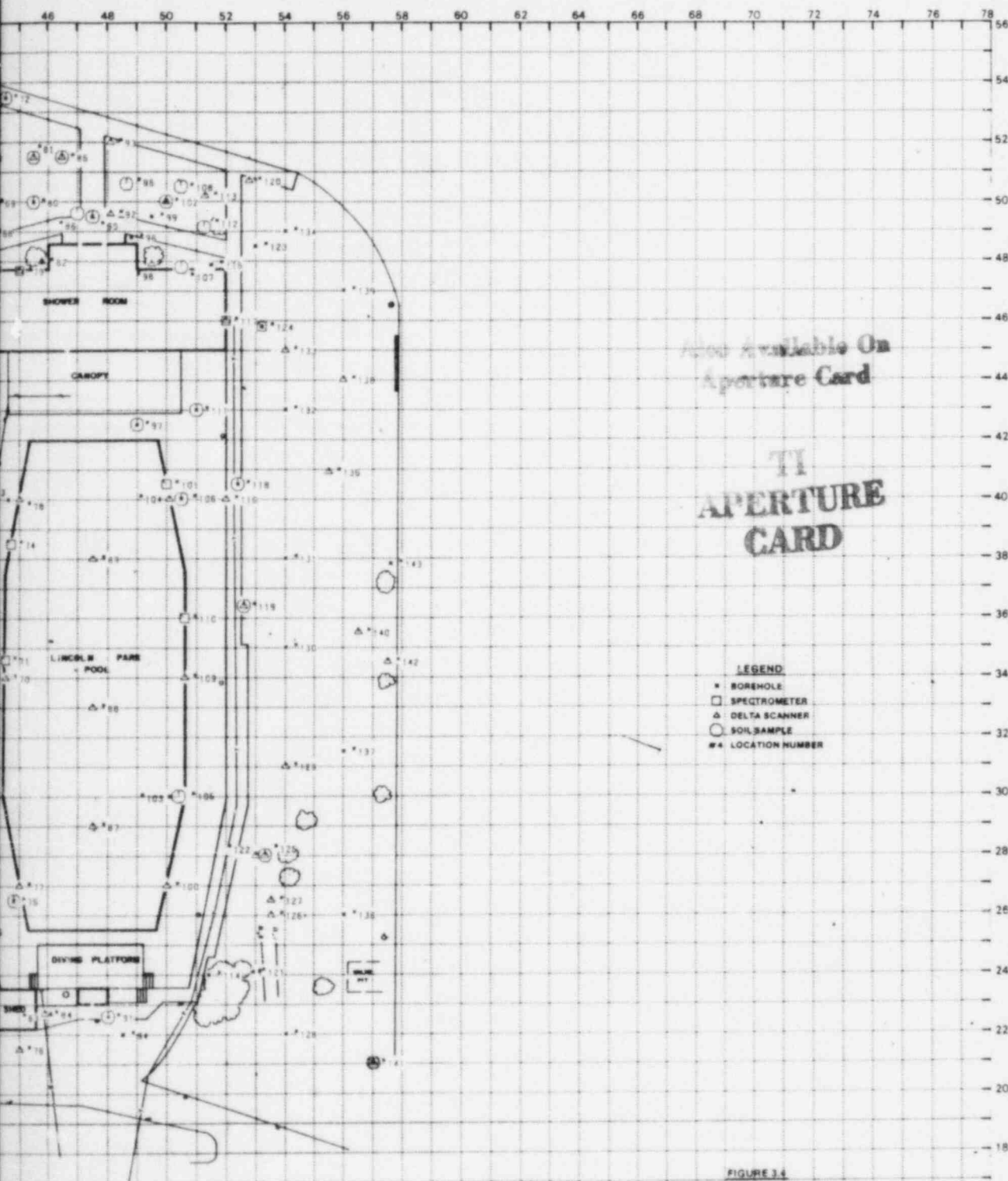
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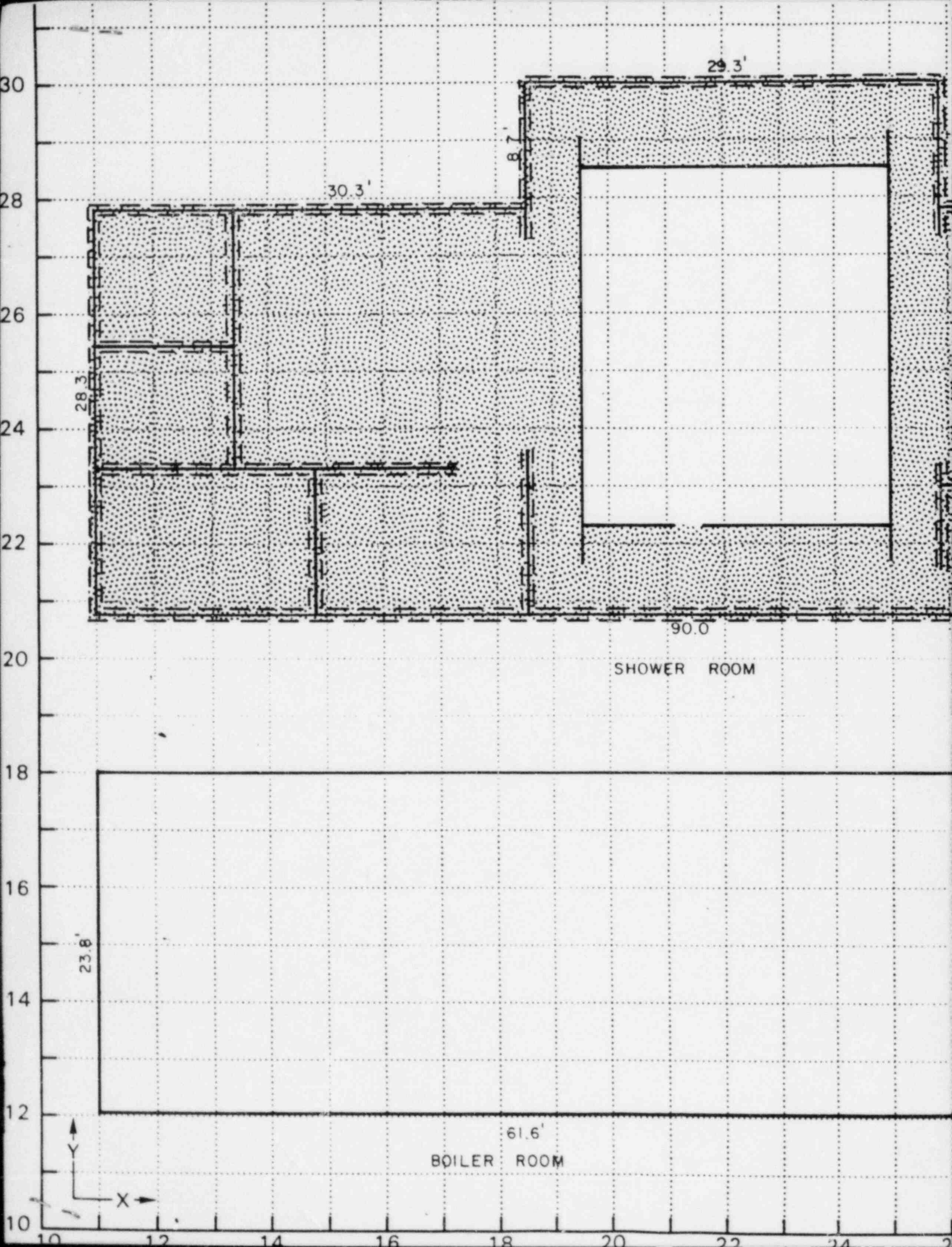


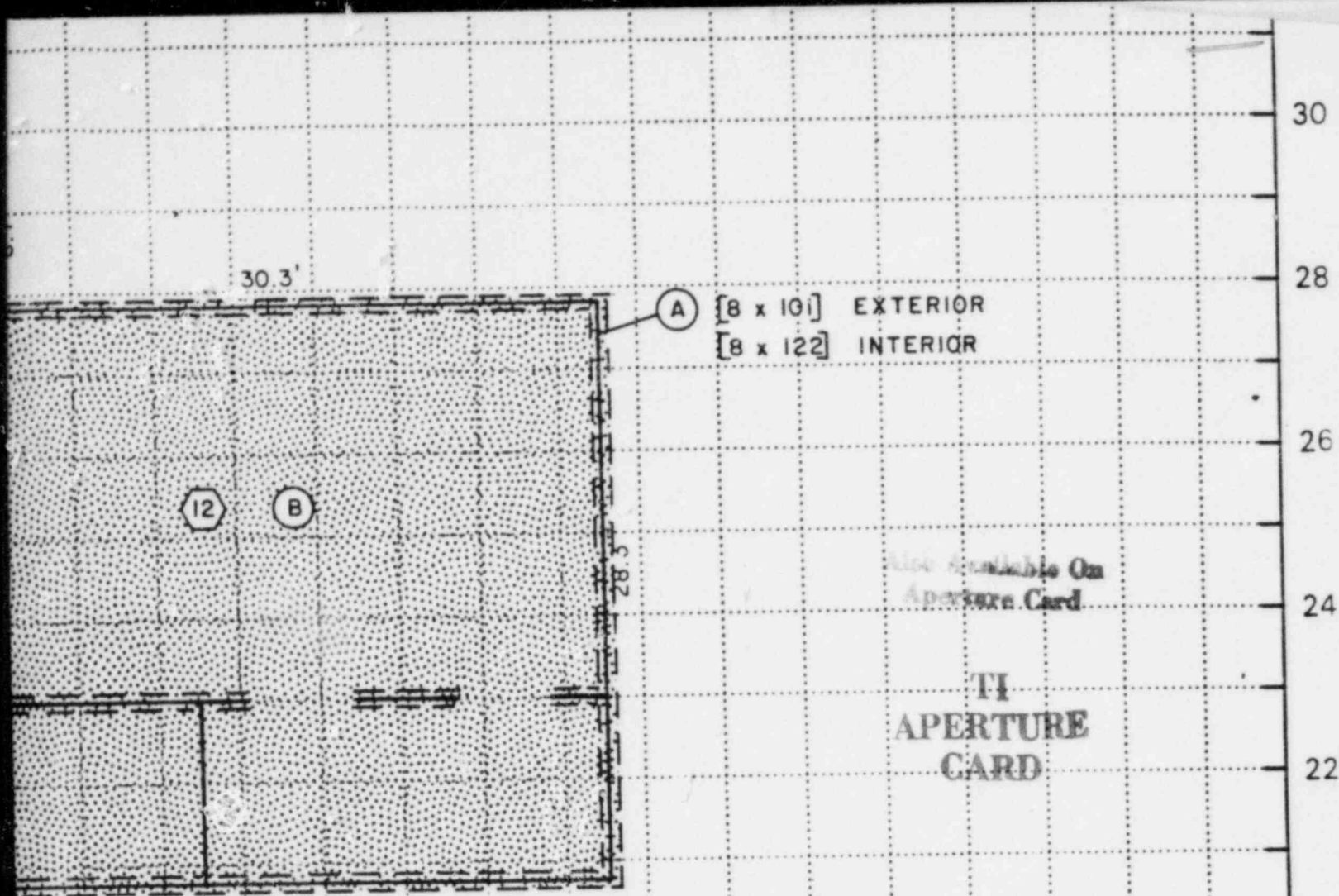






8507190407-03





### LEGEND

- BOUNDARY OF CONTAMINATION
- AREA OF CONTAMINATION
- DEPTH OF CONTAMINATION (INCHES)
- CONTAMINATED AREA
- APPROXIMATE WIDTH X HEIGHT OF WALL CONTAMINATION (INCHES)

FIGURE 3.5a

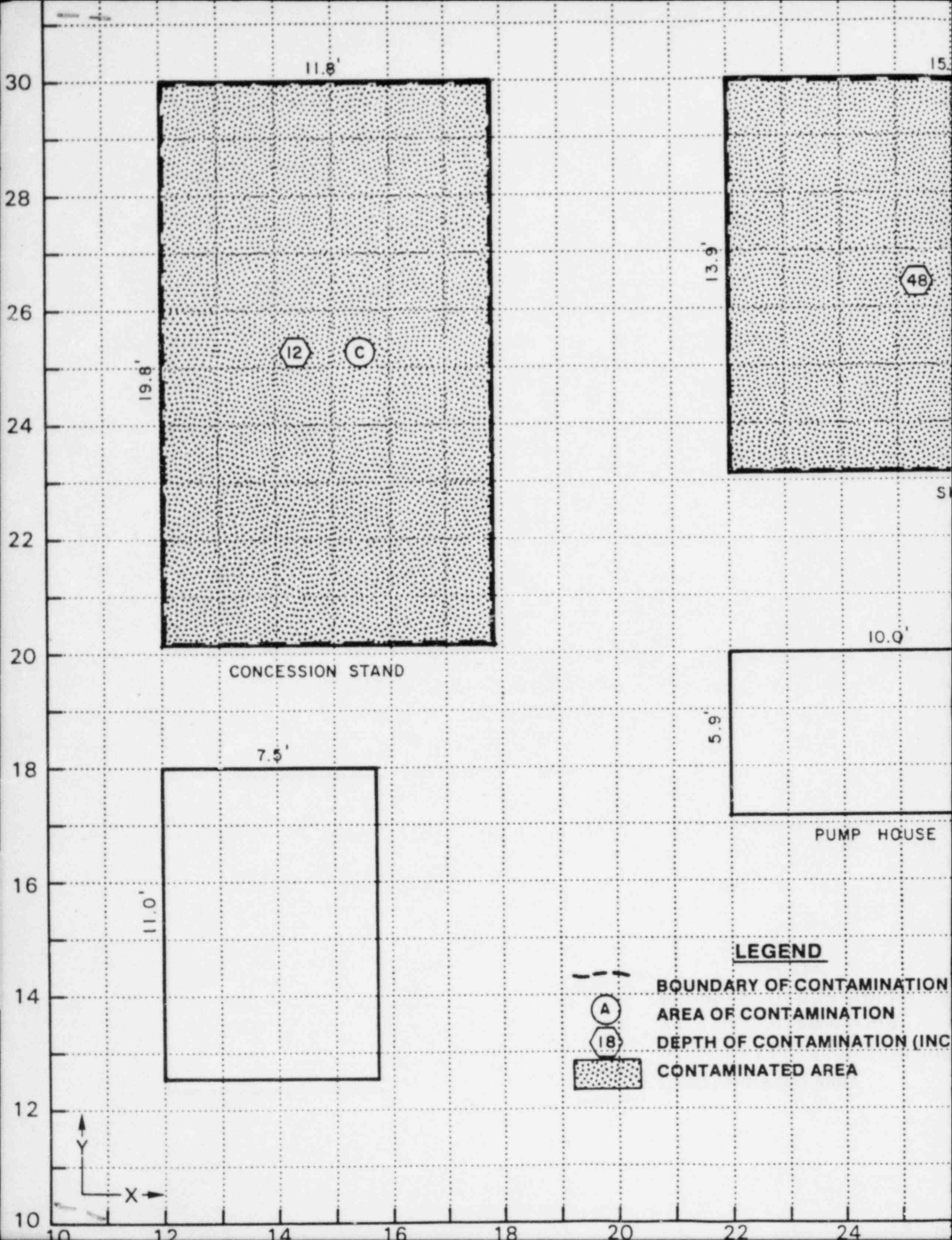
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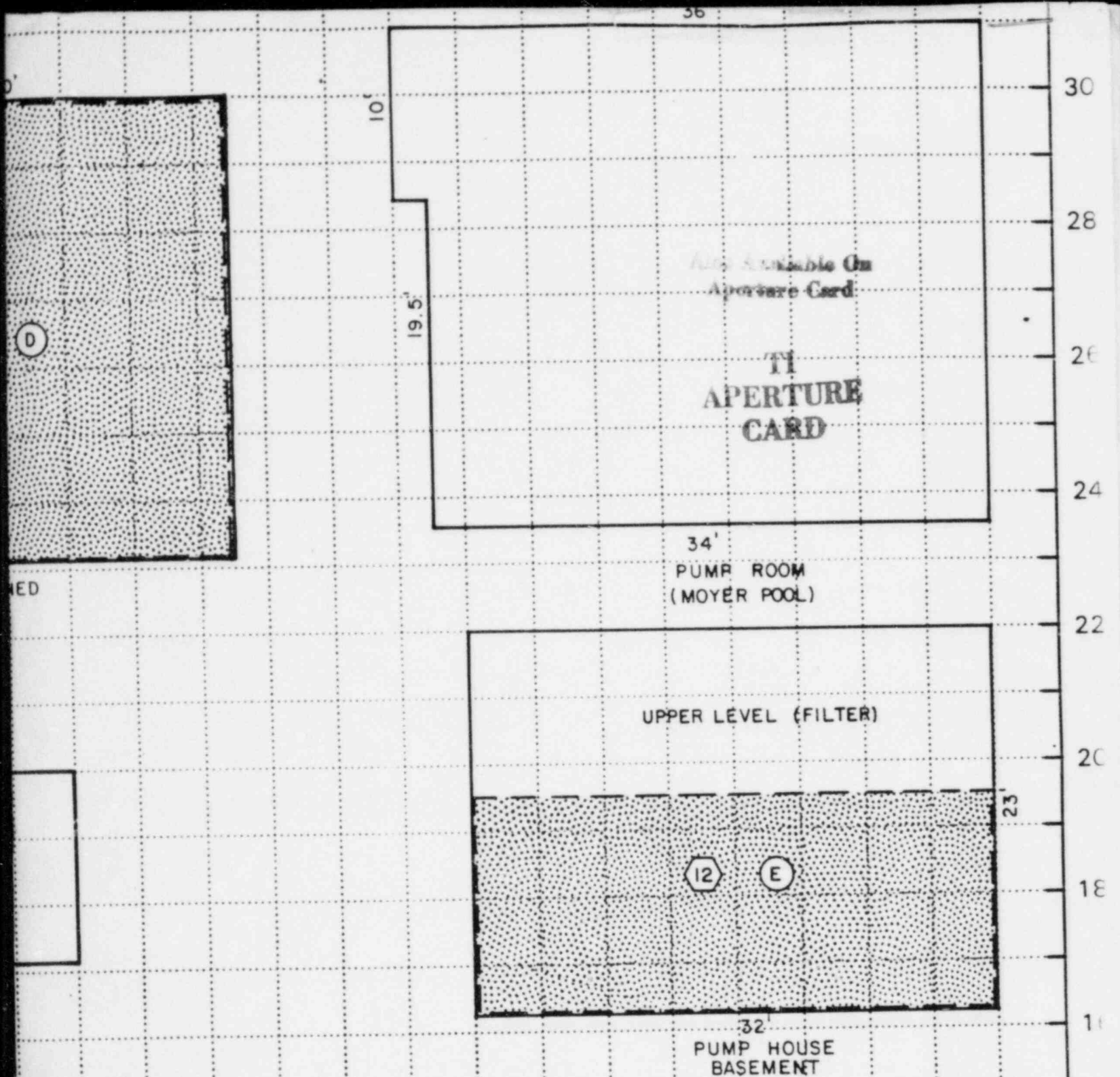
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NO. DATE				REVISIONS				BY CR AE APP				NO. DATE				REVISIONS				BY CR AE APP			
HUT. DENCE NO. OF OCCUPANTS												U.S. DEPARTMENT OF ENERGY GRAND JUNCTION AREA OFFICE, COLORADO											
NON-RESIDENCE - MAN. HRS. / WK.												DESIGNED DATE											
INSTRUMENT NO.						SURVEYOR						DRAWN <i>AK</i> 3/85						LINCOLN PARK SWIMMING POOL 12TH ST. & GUNNISON AVE. GRAND JUNCTION, COLORADO					
PREP. BY <i>DM</i> 6-85						CHECKED <i>SS</i> 4/85						PROJ. ENG.											
SURVEY DATE						TIME						SUBMITTED <i>AK</i> 6-85											
VERIFICATION						DATE						Bendix Field Engineering Corporation						LOCATION NO. GJ-90001-0T					
3-4-85						6-85						DWG NO. 3-8592-66 SHT 6 OF 8											

8507180407-04



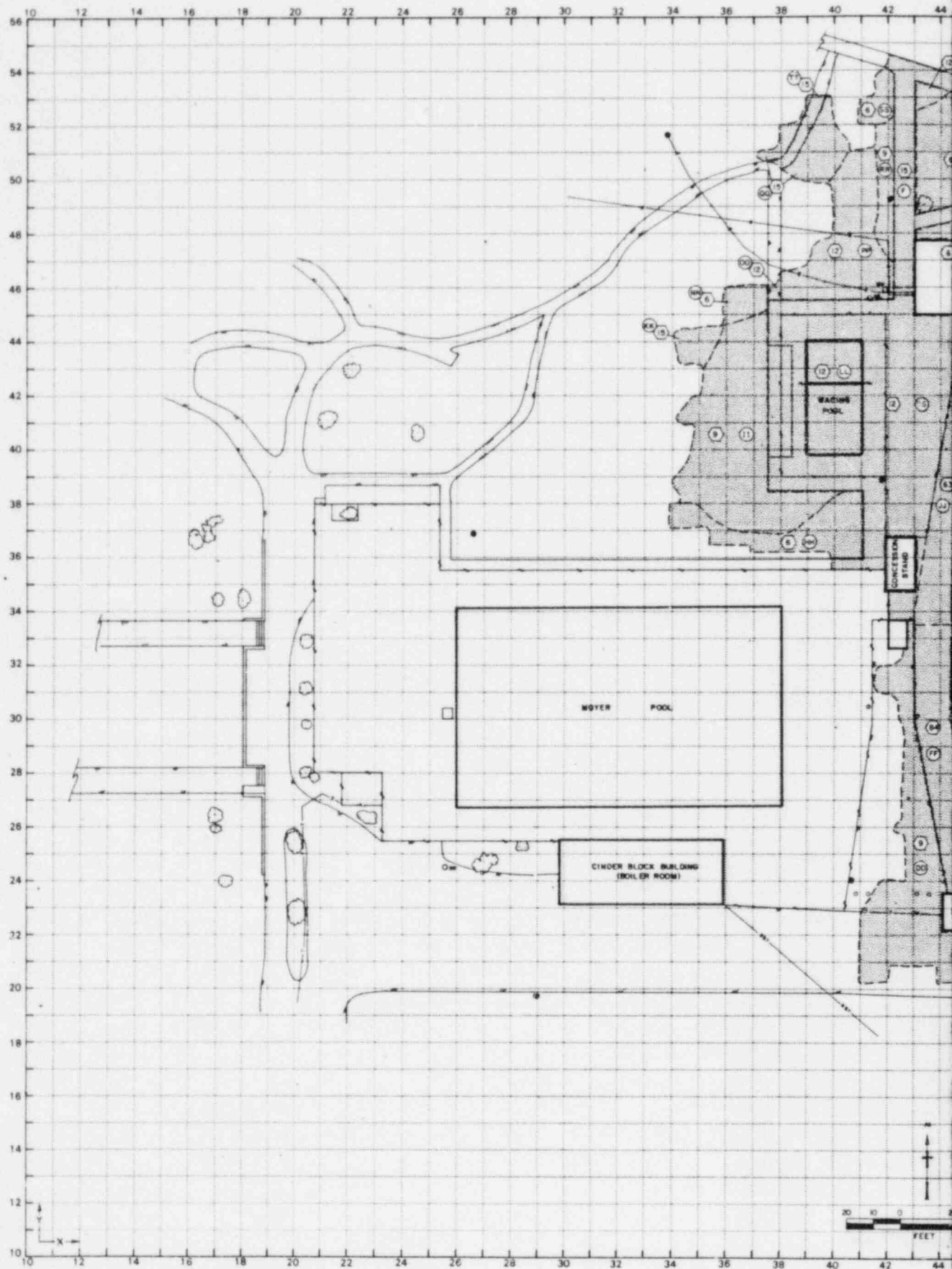


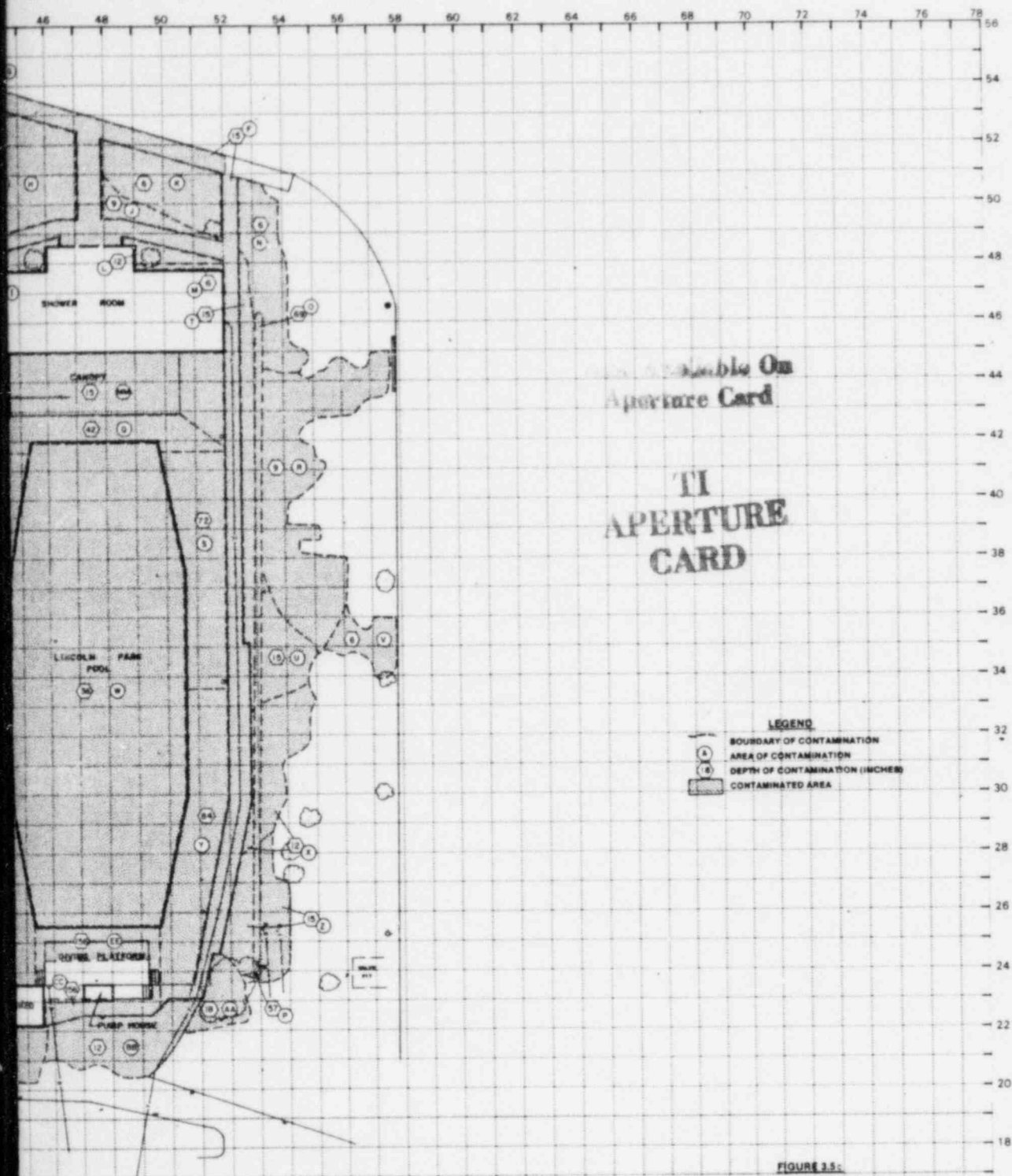


# INTERIOR ESTIMATED EXTENT OF CONTAMINATION

NO. DATE REVISIONS BY CK AE APP				8507190407-05			
RESIDENCE - NO. OF OCCUPANTS				U.S. DEPARTMENT OF ENERGY			
NON-RESIDENCE - MAR - HRS / WK				GRAND JUNCTION AREA OFFICE, COLORADO			
INSTRUMENT NO.		SURVEYOR		DESIGNED		DATE	
prep. by DM 6-25				DRAWN		3/85	
SURVEY DATE		TIME		CHECKED		5.6. 4/85	
VERIFICATION		DATE		PROJ. ENG			
S. HART		6.05		SUBMITTED		12/85	
Bendix Field Engineering Corporation				APPROVAL			
LOCATION NO. GJ-90001-0T				DATE			
DWG NO. 3-B592-67				APPROVAL DOE			
SHT 7 of 9				DATE			

NOT TO SCALE





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**LEGEND**  
 --- BOUNDARY OF CONTAMINATION  
 ( ) AREA OF CONTAMINATION  
 ( ) DEPTH OF CONTAMINATION (INCHES)  
 [ ] CONTAMINATED AREA

**FIGURE 3.5:**  
EXTERIOR ESTIMATED EXTENT OF CONTAMINATION

This drawing, prepared by the Division of Facilities Management, is for the use of the U.S. Department of Energy and its contractors. It is not to be used for any other purpose without the written approval of the Division of Facilities Management.

NO. DATE		REVISIONS		BY		CHK		APP		NO. DATE		REVISIONS		BY		CHK		APP	
RESIDENTIAL NO. OF OCCUPANTS																			
U.S. DEPARTMENT OF ENERGY																			
GRAND JUNCTION AREA OFFICE, COLORADO																			
DRAWN: [Signature] DATE: 5/85																			
CHECKED: [Signature] DATE: 5/85																			
APPROVED: [Signature] DATE: 5/85																			
SUBMITTED: [Signature] DATE: 5/85																			
DATE: 5/85																			
LOCATION NO. 02-90001-07																			
Dwg. NO. 3-0592-68																			
SHEET 8 OF 8																			

8507190407-06



3/85

DOE ID NO.

GJ-90001-OT

Date

5-85

U.S. DEPARTMENT OF ENERGY  
URANIUM MILL TAILINGS REMEDIAL ACTION PROJECT  
GRAND JUNCTION VICINITY PROPERTIES

Official Survey Report

Property Address 12th and Gunnison

Property Owner City of Grand Junction, Parks Dept.

Address of Owner (if different from above) 250 N. 5th Street.

Report Prepared By DM

I. PRESENCE/ABSENCE OF RESIDUAL RADIOACTIVE MATERIALS

1 1 No evidence of residual radioactive material on surveyed property.

1 VV 1 Residual radioactive materials found at the following locations:

1 VV 1 In open areas.

1 1 Under or around exterior improvements.

1 1 Under or around a typically nonoccupied structure.

1 XX 1 Under or around a typically occupied structure.

II. RESULTS OF RADIOLOGIC ASSESSMENT

1 1 Levels of radiation from residual radioactive materials, if any, do not exceed EPA Standards and no action is required under the Uranium Mill Tailings Remedial Action Project.

1 XX 1 Levels of radiation from residual radioactive materials exceed EPA Standards such that Remedial Action is recommended and will be accomplished, with your consent, as soon as budget and schedule permit.

cc:

G. A. Franz, III, GJ/CDH

J. Themelis, Mgr. UMTRA Proj. Off.

HIG = 49 uR/h  
HOG = 159 uR/h

May 23, 1985

Colorado Department of Health  
222 South 6th Street  
Grand Junction, Colorado 81501

ATTN: Elaine Brummett

Dear Elaine:

The following is in response to your questions and comments during the Technical Review concerning Department of Energy (DOE) Identification (ID) number GJ-90001-OT (12th and Gunnison), conducted on 3 May 1985.

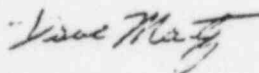
1. Mylars and interior extent of contamination maps were delivered on the date of the Technical Review.
2. In Figure 3.3b, the structure with no access is storage, south of the concession stand. No key is available to check the interior.
3. The map of Moyer pump room was delivered on the date of the review.
4. The structure at Location 422330 is a storage shed.
5. The interior extent of contamination maps were delivered on the date of the review.
6. Edits in the comment section of Table 3.2 will be added to make it more informative.
7. The walls of the shower room are contaminated, based on all available data.
8. The exterior locations map has been revised to correspond to Table 3.1.
9. The delta reading at Location 61 is positive, and is included in the contaminated area.

10. Borehole logging is not accurate for near surface, low level contamination, so a soil sample was taken at Location 435478.
11. To confirm the positive scan, soil samples were taken at Locations 440500, 439490, 455500, 470496, 485505, 500500, 505505, and 512490.
12. Concerning radon gas build-up, our instruments do not measure radon gas. In the case of Location 93, we know there are tailings under the pool.
13. The reason for elevated delta readings and a clean soil sample at Location 117 is because contamination is 15-inches deep in this area.
14. To core through a buried slab, surface concrete would have to be removed first. There is no history of the buried slab available.
15. I am calling for removal at Location 415315 because there was an error on the scan map, which was delivered on 1 May 1985.
16. The area just south of the concession stand is concrete, which would require coring. This area is the same pour as around the wading pool area.
17. Auger holes were not permitted inside of the pools. Two auger hole locations are just north of the wading pool (Locations 405448 and 409450).
18. The two small deep deposits at Locations 532458 and 529241 are the water line. Final maps will show contaminated water lines.

19. To confirm contaminated walls in the shower room, spectrometer readings were taken which showed contamination. No mortar samples were taken because of the long analysis time.

Thank you for your time and cooperation. If you should have additional questions or comments you may contact me at 242-8621, extension 473.

Very truly yours,



D. Martz  
RSD Survey Team Leader

DM:pr

MEMORANDUM

ALLIED Bendix  
Aerospace

Bendix Field Engineering Corporation  
Grand Junction Operations  
Grand Junction, Colorado

Date: May 9, 1985

To: Files

From: Dave Martz *VP 5-85*

Subject: Team Leader Notes - GJ-90001-OT

Address: Lincoln Parks Pool  
12th and Gunnison

Owner: City of Grand Junction Parks Department

Team Members

D. Martz (Team Leader)  
M. Darter  
S. Larsen  
V. Rochman  
B. Moody  
R. Wilkins

K. Cary (Assistant, Team Leader)  
R. Herman  
J. Hebel  
S. Southern  
D. Dow  
L. Kula

Instruments

Delta Scintillometer - C-3942, C-3940  
Downhole Spectrometer - C-1372  
Crutch Scintillometer - C-1196, C-1181, C-1184, C-1208, C-3510,  
C-1239, C-1182, C-1180, C-3502

Date: April 2, 1985

The Colorado Department of Health (CDH) data indicates contamination located in the buildings, sidewalks, lawns, and around the pool areas.

Ron Felt, City Parks Department, and personnel located and marked water lines. Discussions were held concerning overhead lights, pool lights, and filter lines. Power for overhead and pool

Team Leader Notes  
Dave Martz  
GJ-90001-OT  
May 9, 1985  
Page 2

lights enter from the southwest corner of the shower building. Filter lines run from the pump house all the way around the pool. Mr. Felt indicated that he did not know the diameter or how far from the edge of the pool these lines might be. Water service for shower rooms is provided through valves located at the southeast corner of the property, running approximately 6-feet east of the sidewalk. The main water service for the pump room also comes from these valves. The water meter pit shown on the map, 5-feet(+) west of the shower building, was half full of water, which made it impossible to locate a meter or lines. Power and water lines for the concession stand use is supplied through the southeast corner of the floor.

The team members proceeded to gamma scan the interiors and exteriors of the Lincoln Park pool area.

Health and Safety arrived at the site and roped-off the deep end of the pool.

All personnel were alpha scanned before leaving the property.

Team Leader Notes  
Dave Martz  
GJ-90001-OT  
May 9, 1985  
Page 3

Team Members

D. Martz (Team Leader)	K. Cary (Assistant, Team Leader)
M. Dexter	V. Rothman
B. Moody	J. Hebel
R. Beltz	L. Kula
R. Wilkins	S. Larsen
N. Wallace	

Instruments

Crutch Scintillometers - C-1182, C-3502, C-3510, C-1247, C-1128,  
C-1213, C-1180  
Delta Scintillometers - C-3942, C-3937  
Downhole Spectrometer - C-3431

Date: April 3, 1985

Team members returned to the site and continued the gamma scan and grid points. An unknown utility shown on the map turned out to be a plastic tubing in conduit, possibly used for chlorine. The Moyer pump room is below ground level, no maps were provided so it was sketched onto the interior maps. The gamma scan and grid point survey were completed.

All personnel were alpha scanned before leaving the property.

Date: April 9, 1985

Team Members

K. Cary (Team Leader)	D. Dow
B. Moody	B. Herman
J. Hebel	N. Wallace
S. Southern	J. Garcia

Instruments

Crutch Scintillometer - C-3502, C-1163  
Total Count - C-4006, C-3959  
Delta Scintillometer - C-3942, C-3935  
Surface Spectrometer - C-1372

Scintillometer readings on the outside sides of the shower building were 200 to 250 cps, as far up as could be reached. Spectrometer and delta readings were taken on the sides of the shower building which showed probable contamination. Two auger refusals were experienced from inside of the fence of the wading pool, hit obstruction 1 to 2 feet below ground level. Three cores were performed to determine the depth.

Pulled grate at drain on the bottom of the Lincoln Park pool to try and log the drain. The drain was not deep enough to give useful information. The drain was a concrete trench 1 foot by 1 foot by 10 feet. The drain pipe runs horizontally to the south.

All personnel were scanned and found to be free off contamination.



Team Leader Notes  
Dave Martz  
GJ-90001-OT  
May 9, 1985  
Page 6

Date: April 12, 1985

Team Members

K. Cary (Team Leader)	B. Moody
H. Mattison	D. Dow
L. Kula	

Instruments

Total Count - C-3573  
Delta Scintillometer - C-3935

Cored and augered on the sides of the pool 4 feet from the edge.  
Tried to core 6 inches from the edge of the pool but never reached  
the bottom of the concrete. Might have hit the wall of the pool.

All personnel were scanned and found to be free of contamination.

Team Leader Notes  
Dave Martz  
GJ-90001-OT  
May 9, 1985  
Page 7

Date: April 16, 1985

Team Members

K. Cary (Team Leader)	B. Moody
S. Southern	R. Beltz
J. Hebel	M. Duran
B. Herman	D. Dow

Instruments

Crutch Scintillometer - C-1036, C-1180  
Total Count - C-3959, C-4006  
Delta Scintillometer - C-3935

Augered next to the gas line against the pump house, drilled 180 inches and did not get out of the tailings. No more auger flights were available. The hole caved-in to a depth of 11 feet.

Cored and augered the sidewalk next to the pump house to a depth of 117 inches, due to heavy mud the auger would not go deeper.

Suspect that the pump house was backfilled with tailings to depth of the basement (12 feet). Previous auger information in the pump house floor indicated contamination to a depth of 12 inches under the floor.

Two cores in the Moyer pool area were auger refusals. On the west side large rocks prevented augering. Soil and core samples were taken. On the east side a large concrete slab was hit at a depth of 21 inches. The hole was logged and soil samples were taken. No elevated readings were observed.

All personnel were scanned and found to be free of contamination.

Team Leader Notes  
Dave Martz  
GJ-90001-OT  
May 9, 1985  
Page 8

Date: May 3, 1985

Team Members

D. Martz (Team Leader)      S. Southern  
S. Larsen

Instruments

Total Count - C-4006

Augered two holes in the bottom of Lincoln Park pool while the city workers had concrete removed for repairs. Only reached a depth of approximately 40 inches when we were stopped by mud and water.

We logged 501300 and soil sampled 504300.

Concrete on the bottom of the pool varies from 6 to 8 inches. The walls of the pool sit on a 1-foot-thick footing.

Team Leader Notes  
Dave Martz  
GJ-90001-OT  
May 9, 1985  
Page 4

Lincoln Park's Pool

Date: April 4, 1985

Team Members

D. Martz (Team Leader)	K. Cary
R. Wilkins	B. Moody
B. Foust	S. Larsen
J. Hebel	

Instruments

Total Count - C-4006, C-3959  
Delta Scintillometer - C-3937  
Downhole Spectrometer - C-0498

Team members continued the investigation with auger holes, soil samples, and delta scintillometer readings. Concrete cores were drilled in the shower rooms, on the deck around the pool, on the sidewalks, and in the floor of the pump room. Auger holes were drilled by the water line that services the shower rooms (one by the building and one by the water valves) on the southeast corner of the property. Both holes showed contamination.

Team Leader Notes  
Dave Martz  
GJ-90001-OT  
May 9, 1985  
Page 9

Date: May 9, 1985

Team Members

D. Martz (Team Leader)  
K. Cary

Instruments

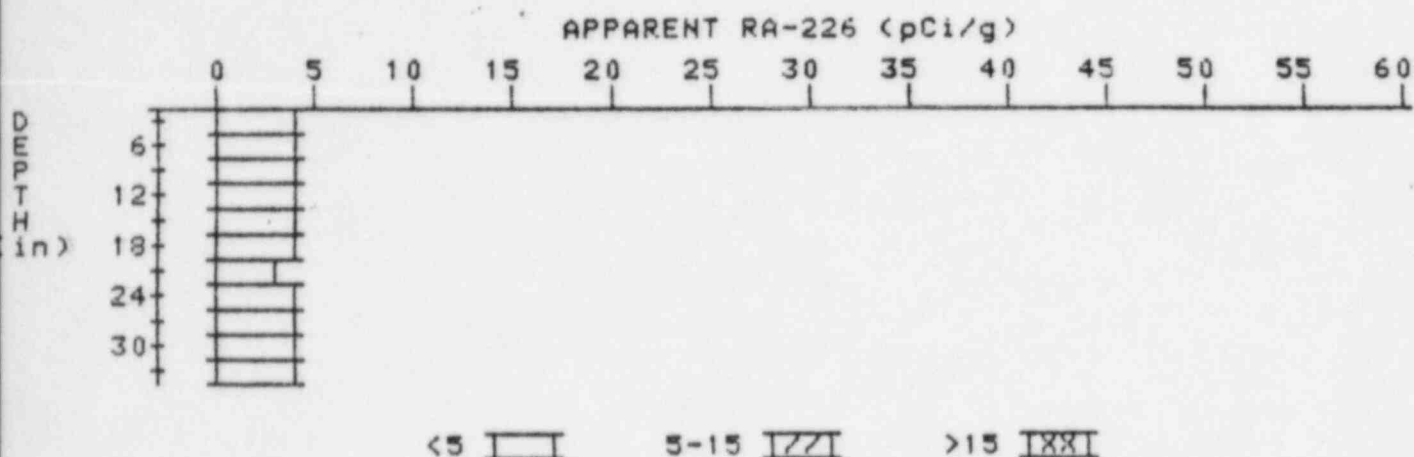
Downhole Spectrometer - C-1372

Gathered spectrometer data from two interior locations (12 and 14) 18 inches up the wall in the girls shower room. Also collected eight soil samples in the grass covered areas north of the shower building.

The walls of the shower building are made of two different types of brick. Standard size on the outside and 12 inch by 5 inch hollow tile brick on the inside.

# APPARENT RADIUM-226 CONCENTRATION 1 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 1  
LOCATION:



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.6	3.6
6	3.6	3.6
9	3.6	3.6
12	3.6	3.6
15	3.6	3.6
18	3.6	3.8
21	3.5	3.1
24	3.6	3.8
27	3.6	3.6
30	3.6	3.6
33	3.6	3.6

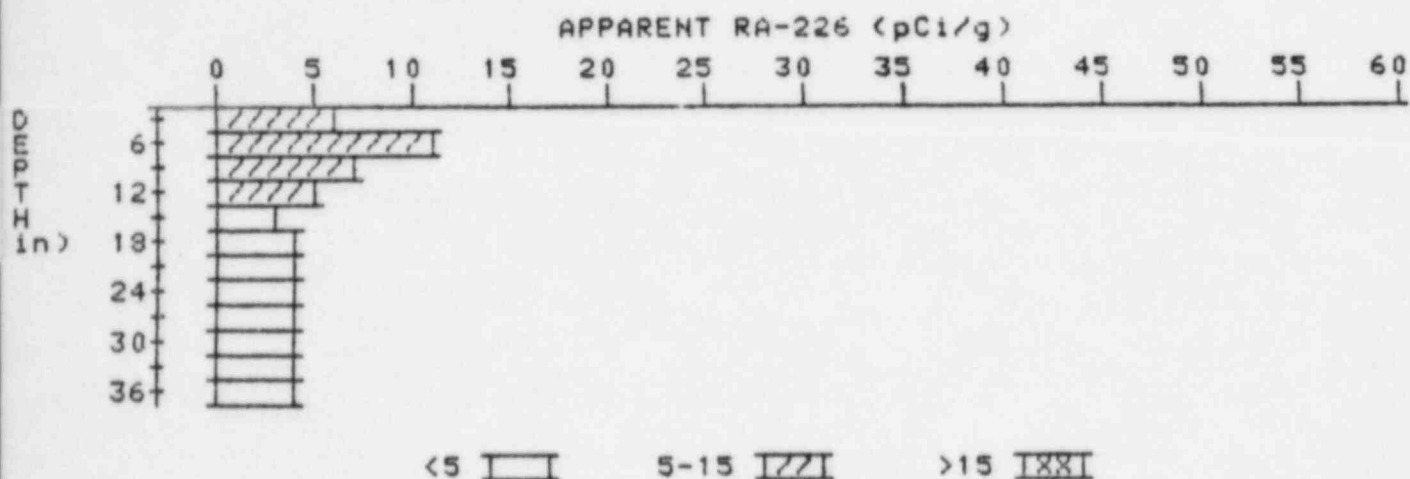
# APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

3

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 3

LOCATION:



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	6.4	6.4
6	7.6	11.3
9	6.7	7.2
12	5.5	5.1
15	4.5	3.3
18	4.2	3.8
21	4.1	4.1
24	4.0	3.6
27	4.1	4.1
30	4.2	4.2
33	4.3	4.5
36	4.3	4.3

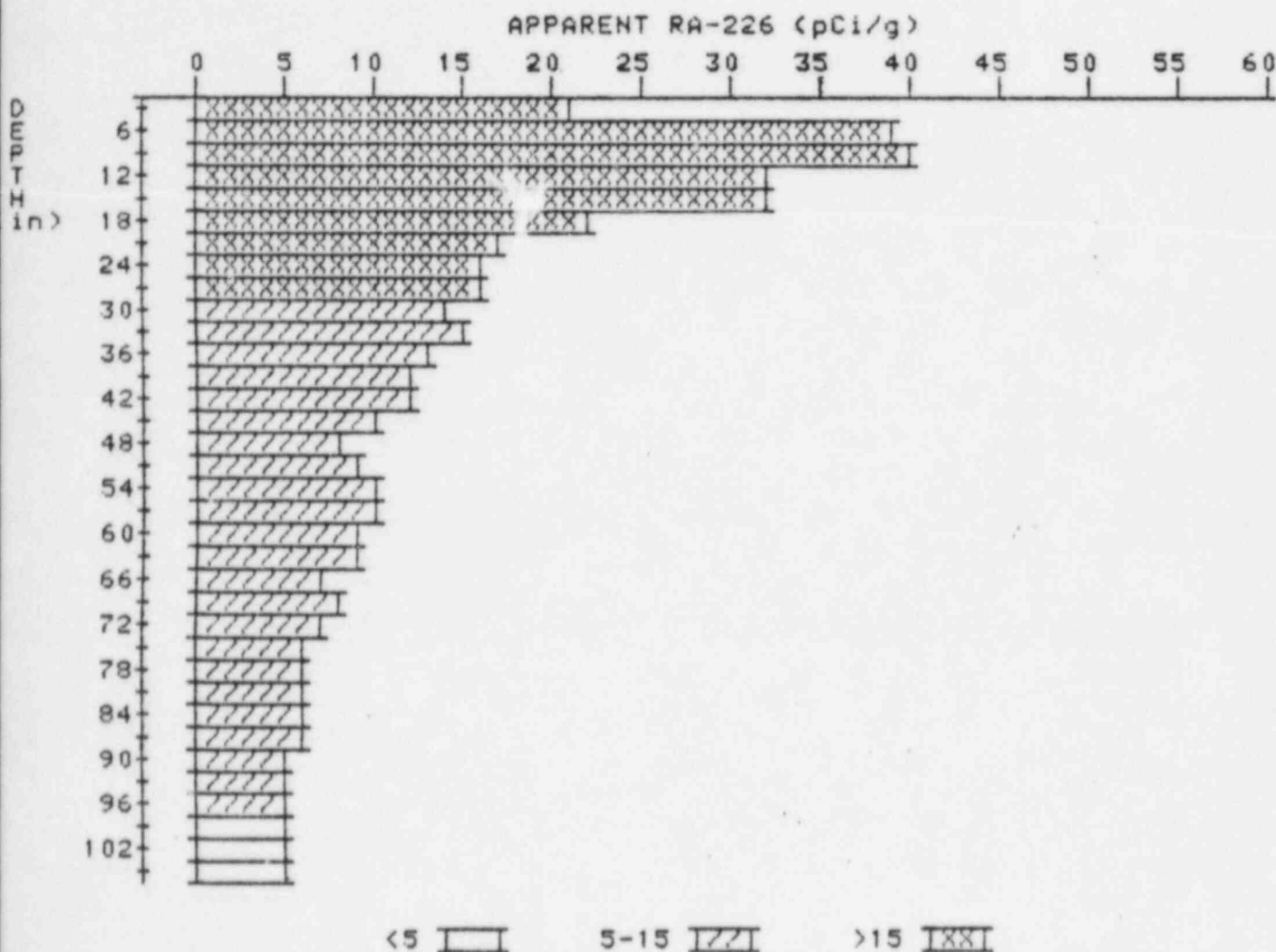
# APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

6

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 6

LOCATION:



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	21.4	21.4
6	29.5	38.9
9	32.3	40.1
12	30.7	32.1
15	28.3	32.2
18	23.7	22.5



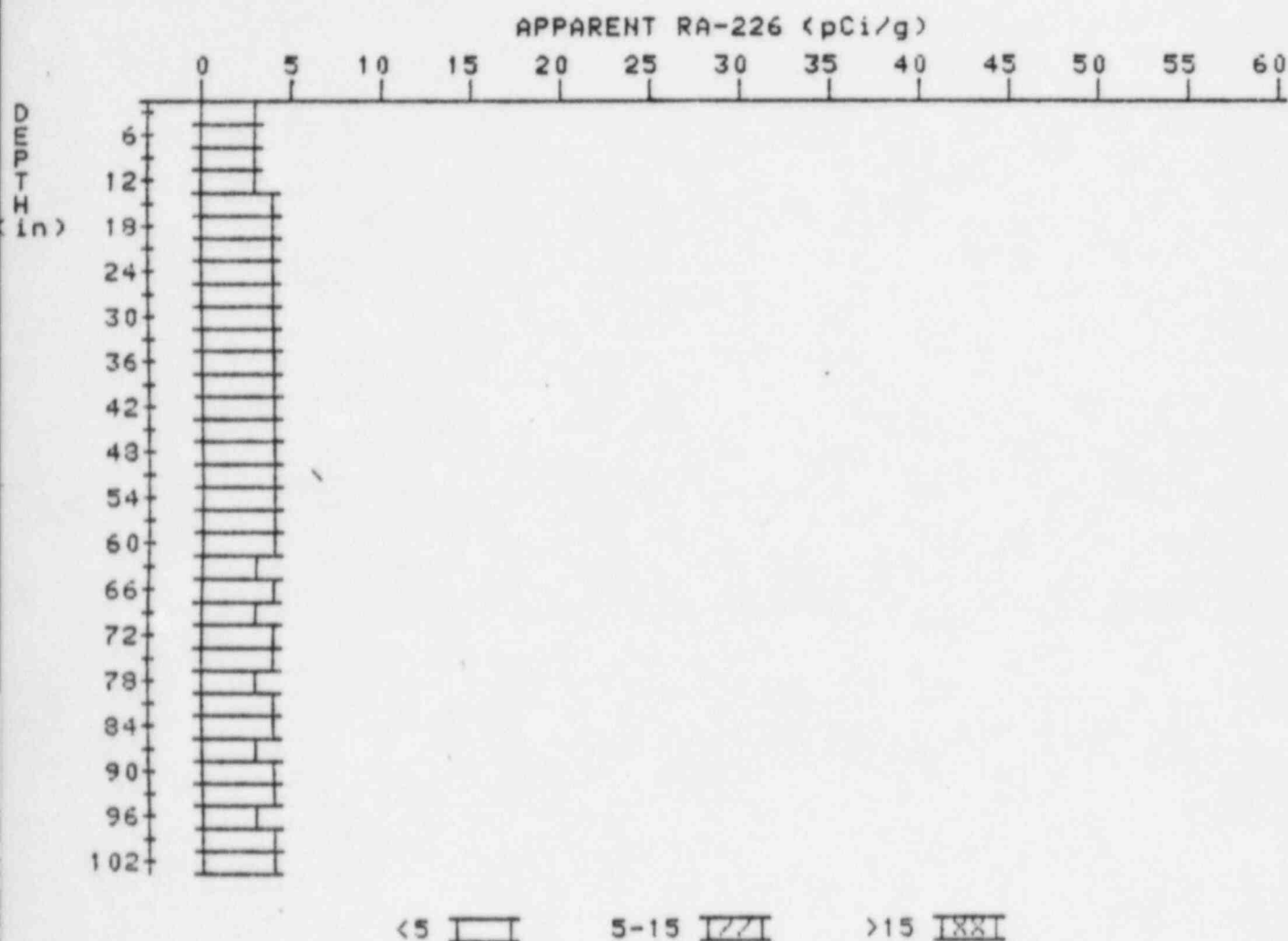
21	19.8	16.8
24	17.6	16.0
27	16.3	16.3
30	15.0	14.1
33	14.2	14.6
36	13.2	13.2
39	12.2	11.8
42	11.4	11.9
45	10.3	9.9
48	9.4	7.8
51	9.4	9.2
54	9.5	10.0
57	9.3	9.7
60	8.9	9.1
63	8.4	8.6
66	7.8	7.4
69	7.4	7.6
72	6.9	6.7
75	6.5	6.3
78	6.2	6.0
81	6.0	6.0
84	5.8	5.6
87	5.7	6.1
90	5.4	5.2
93	5.2	5.2
96	5.0	5.0
99	4.8	4.6
102	4.7	4.7
105	4.6	4.6

# APPARENT RADIUM-226 CONCENTRATION 28 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 28

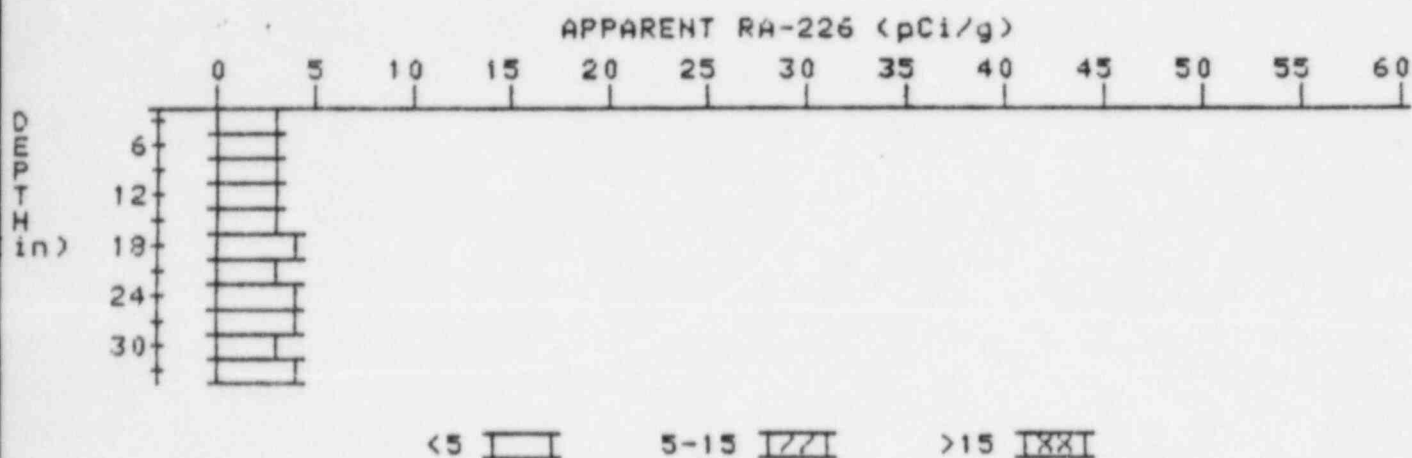
LOCATION: 258247



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	2.9	2.9
6	3.1	3.3
9	3.2	3.2
12	3.3	3.1
15	3.5	3.5
18	3.7	4.1
21	3.7	3.5

# APPARENT RADIUM-226 CONCENTRATION 30 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 30  
LOCATION: 297250



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
=====	=====	=====
3	2.9	2.9
6	3.1	3.5
9	3.1	2.7
12	3.3	3.5
15	3.4	3.4
18	3.5	3.9
21	3.4	2.9
24	3.6	4.0
27	3.6	3.6
30	3.6	3.4
33	3.7	3.7

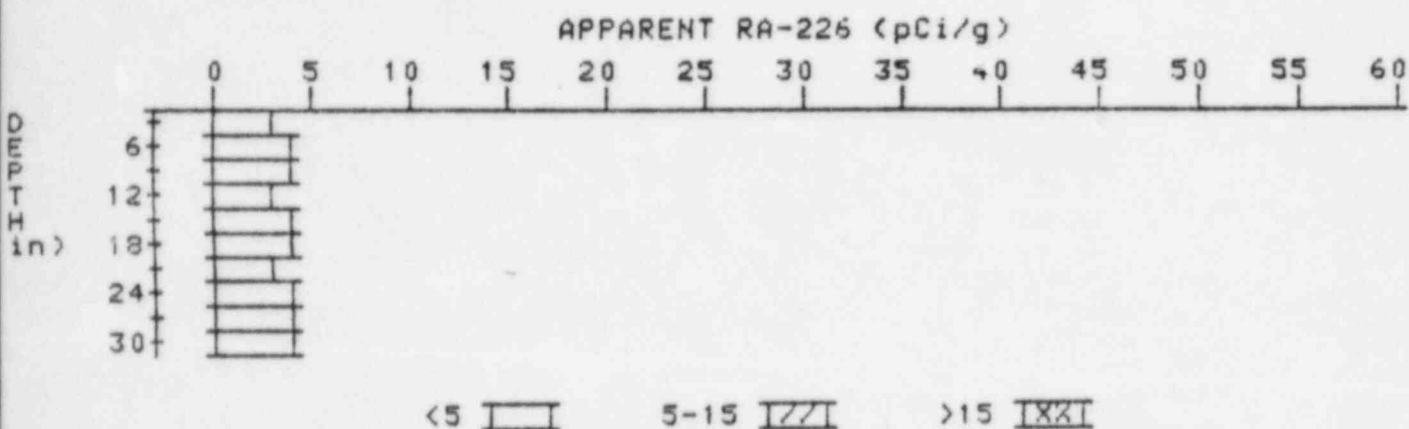
# APPARENT RADIUM-226 CONCENTRATION 31

## DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 31

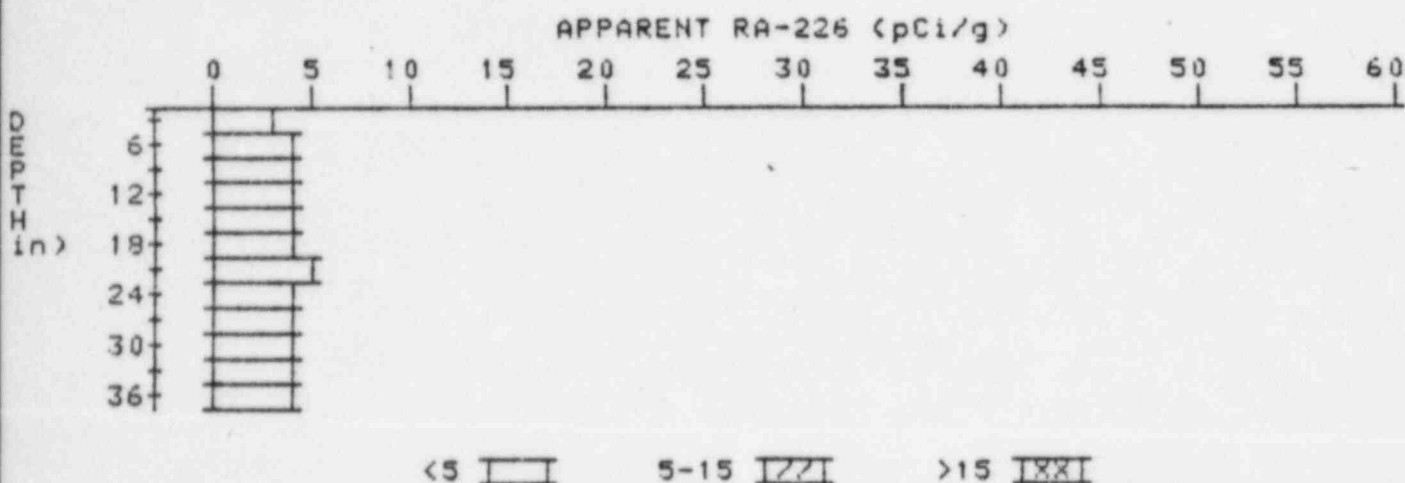
LOCATION: 320230



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
=====	=====	=====
3	3.2	3.2
6	3.4	3.6
9	3.5	3.7
12	3.5	3.3
15	3.6	3.6
18	3.7	4.1
21	3.6	3.2
24	3.7	3.9
27	3.7	3.9
30	3.6	3.6

# APPARENT RADIUM-226 CONCENTRATION 33 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 33  
LOCATION: 330400



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.2	3.2
6	3.6	4.0
9	3.8	3.8
12	4.0	4.2
15	4.1	4.3
18	4.1	3.9
21	4.2	4.6
24	4.1	4.1
27	4.0	3.8
30	4.0	4.0
33	4.0	4.2
36	3.9	3.9

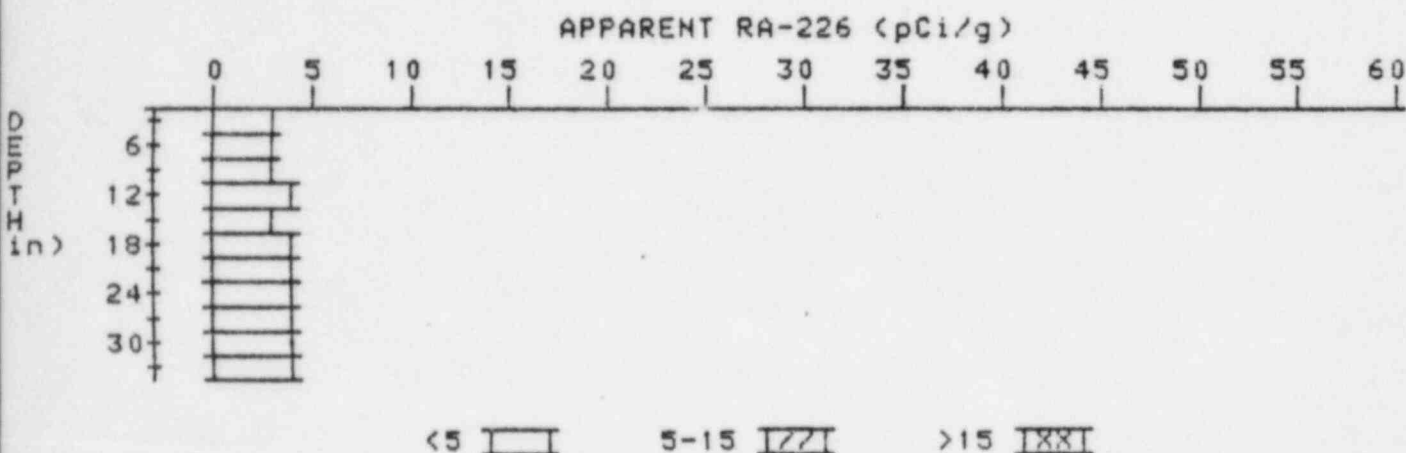
# APPARENT RADIUM-226 CONCENTRATION 34

## DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 34

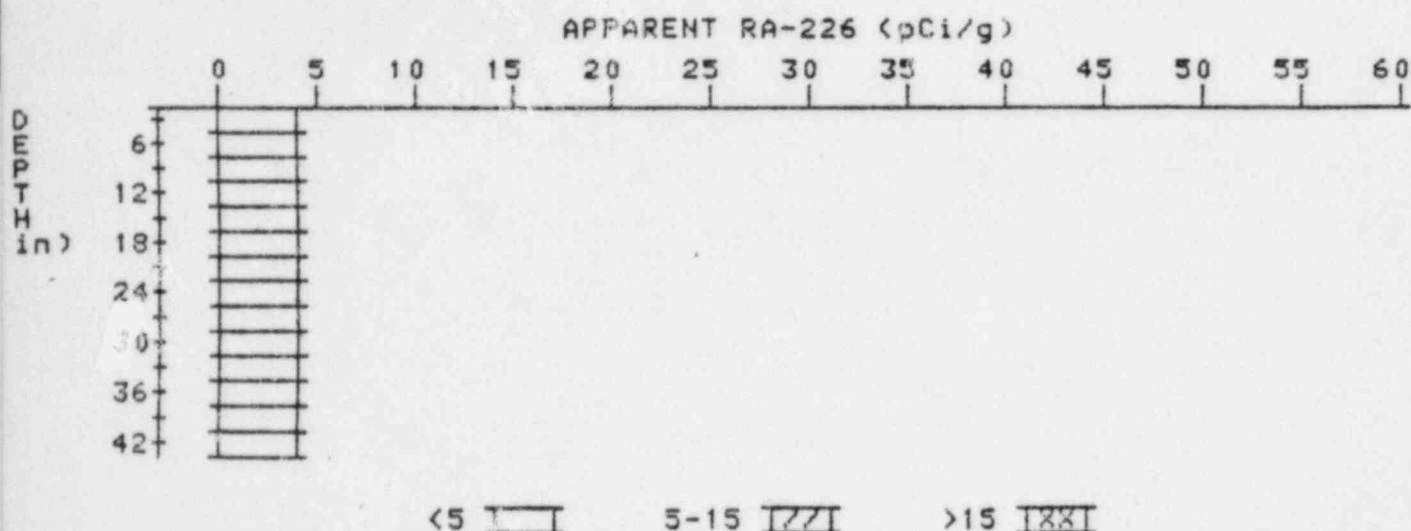
LOCATION: 330440



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	2.7	2.7
6	3.1	3.5
9	3.3	3.5
12	3.4	3.6
15	3.4	3.0
18	3.6	3.6
21	3.8	4.2
24	3.8	3.8
27	3.8	3.6
30	3.9	4.1
33	3.9	3.9

# APPARENT RADIUM-226 CONCENTRATION 36 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 36  
LOCATION: 345400

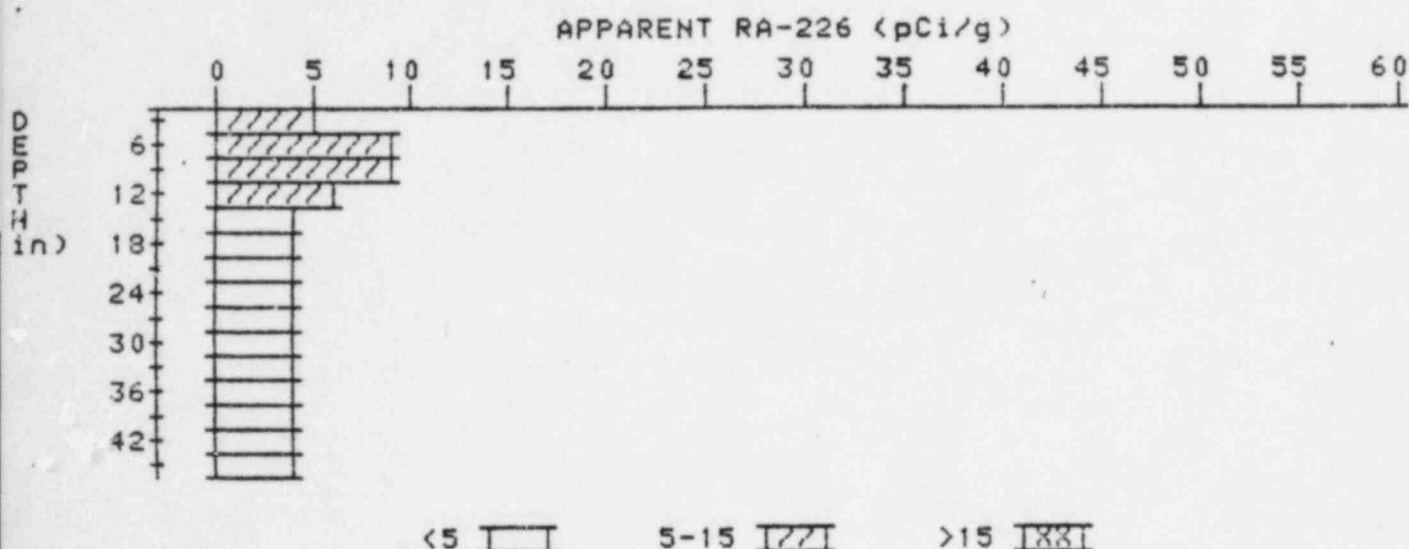


Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.6	3.6
6	3.9	4.3
9	4.0	3.8
12	4.2	4.4
15	4.3	4.5
18	4.3	4.3
21	4.3	4.5
24	4.2	4.0
27	4.2	4.4
30	4.1	3.9
33	4.1	4.3
36	4.0	4.0
39	3.9	4.1
42	3.7	3.7



# APPARENT RADIUM-226 CONCENTRATION 37 DECONVOLUTION GRAPH

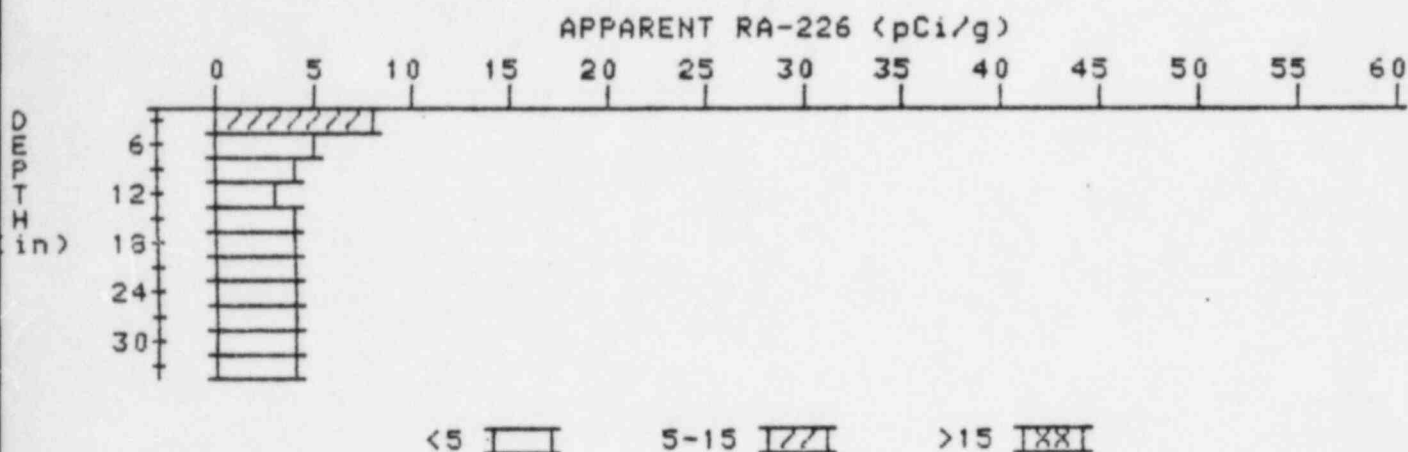
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 37  
LOCATION: 348438



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	5.4	5.4
6	6.6	8.6
9	6.7	8.7
12	5.7	5.5
15	4.8	3.9
18	4.4	4.2
21	4.1	3.7
24	4.0	4.0
27	3.9	3.7
30	3.9	4.1
33	3.8	3.6
36	3.8	3.6
39	3.9	4.3
42	3.8	3.6
45	3.8	3.8

# APPARENT RADIUM-226 CONCENTRATION 40 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 40  
LOCATION: 360400



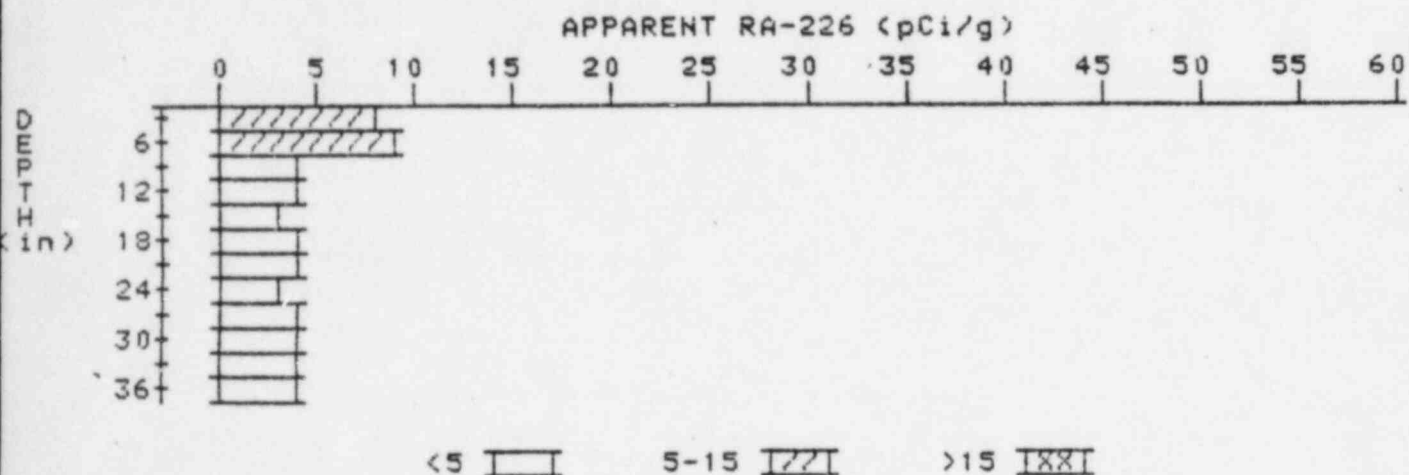
Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	7.7	7.7
6	5.9	4.8
9	4.7	3.6
12	4.1	3.4
15	3.9	3.5
18	3.9	3.9
21	3.9	3.9
24	3.9	3.9
27	3.9	3.9
30	3.9	3.9
33	3.9	3.9

# APPARENT RADIUM-226 CONCENTRATION 41 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 41

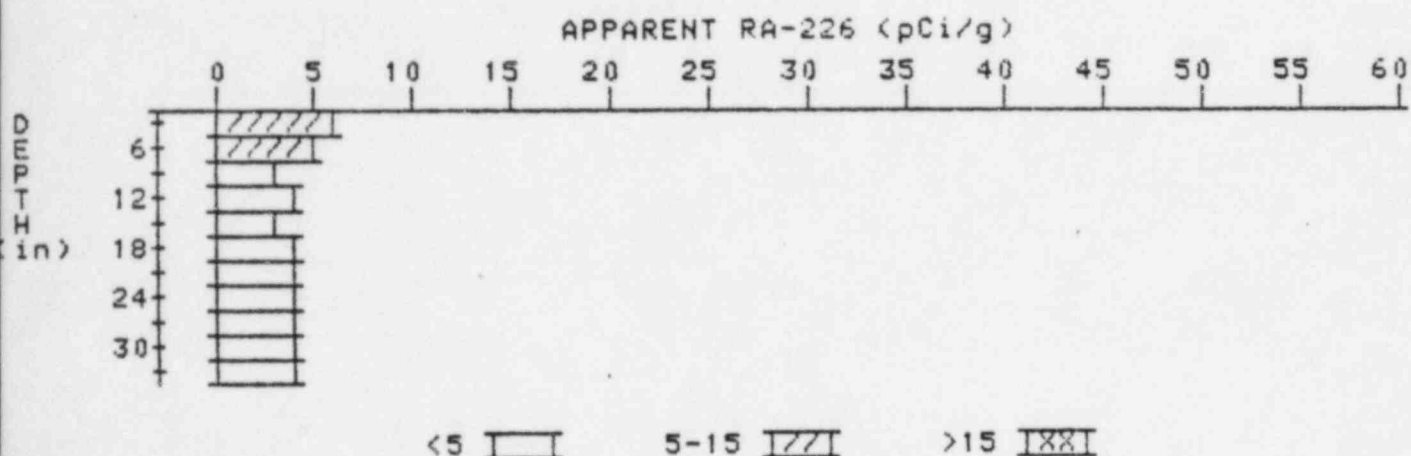
LOCATION: 365425



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	8.1	8.1
6	7.2	8.6
9	5.5	4.1
12	4.6	3.9
15	4.1	3.4
18	4.0	4.2
21	3.8	3.6
24	3.7	3.3
27	3.8	3.8
30	3.9	4.1
33	3.9	3.7
36	4.0	4.0

# APPARENT RADIUM-226 CONCENTRATION . 43 DECONVOLUTION GRAPH

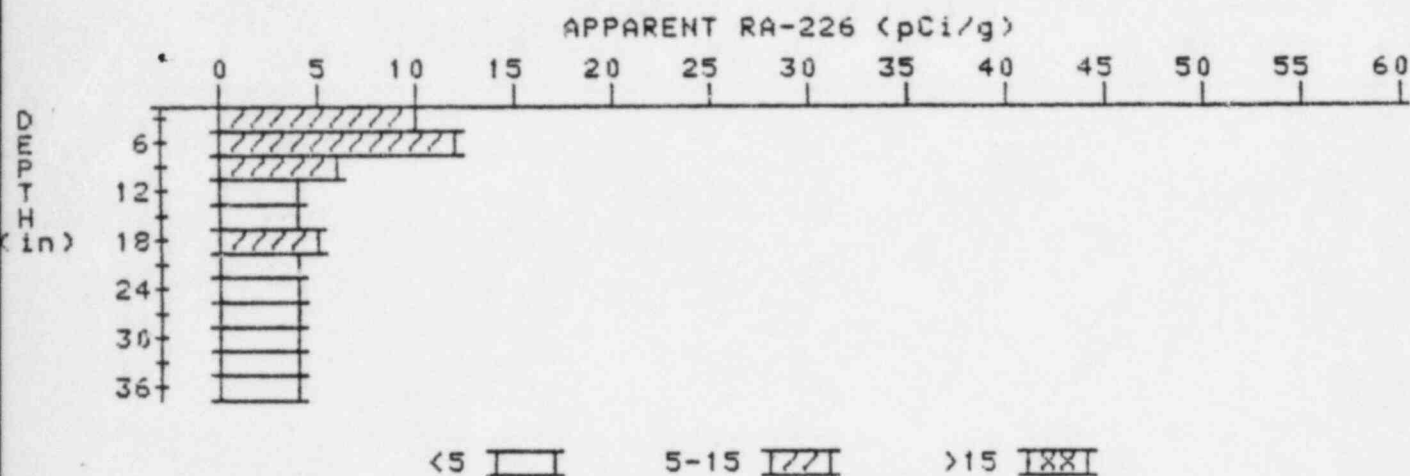
PROPERTY NUMBER: GJ-90001-OT  
HOLE NUMBER: 43  
LOCATION: 375375



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	6.1	6.1
6	5.2	5.0
9	4.4	3.3
12	4.2	4.4
15	3.9	3.4
18	3.9	3.9
21	3.9	3.9
24	3.9	3.7
27	4.0	4.4
30	3.9	3.7
33	3.9	3.9

# APPARENT RADIUM-226 CONCENTRATION 44 DECONVOLUTION GRAPH

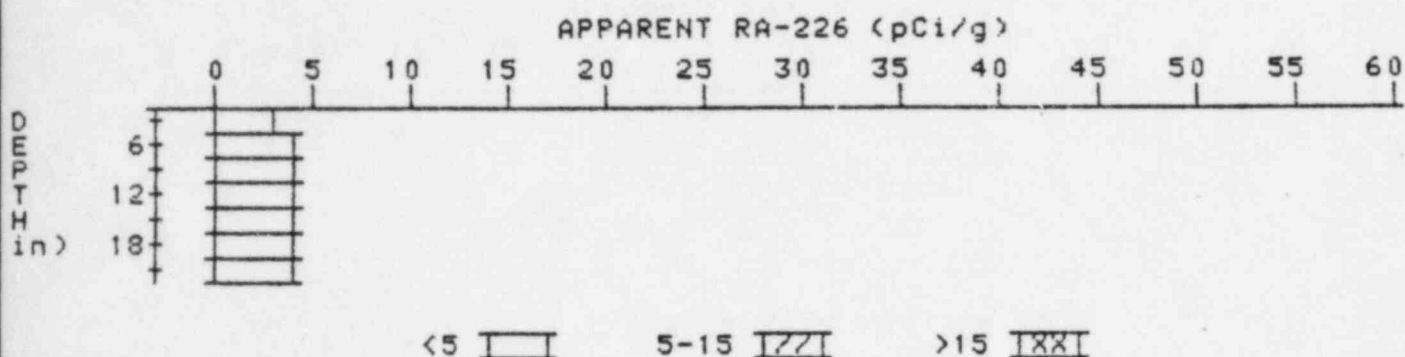
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 44  
LOCATION: 382456



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	9.8	9.8
6	9.3	12.1
9	7.2	6.1
12	5.7	4.5
15	4.9	3.8
18	4.7	5.1
21	4.3	3.6
24	4.3	4.5
27	4.2	4.0
30	4.2	4.2
33	4.2	4.2
36	4.2	4.2

# APPARENT RADIUM-226 CONCENTRATION 46 DECONVOLUTION GRAPH

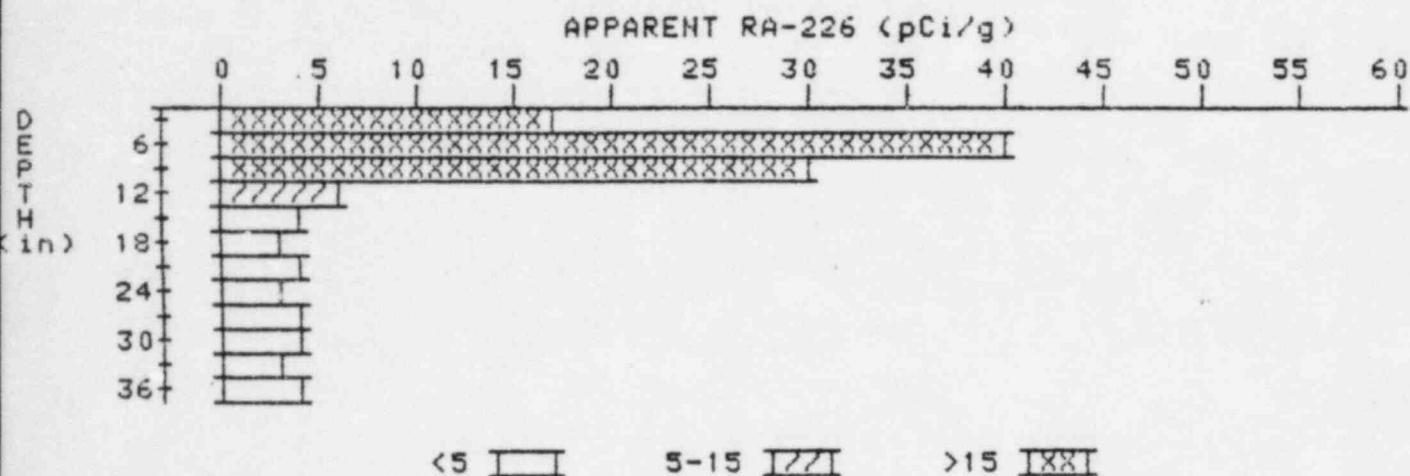
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 46  
LOCATION: 390320



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.2	3.2
6	3.6	3.8
9	3.9	4.3
12	4.0	4.4
15	3.9	3.9
18	3.8	3.8
21	3.7	3.7

# APPARENT RADIUM-226 CONCENTRATION 47 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-OT  
HOLE NUMBER: 47  
LOCATION: 390520

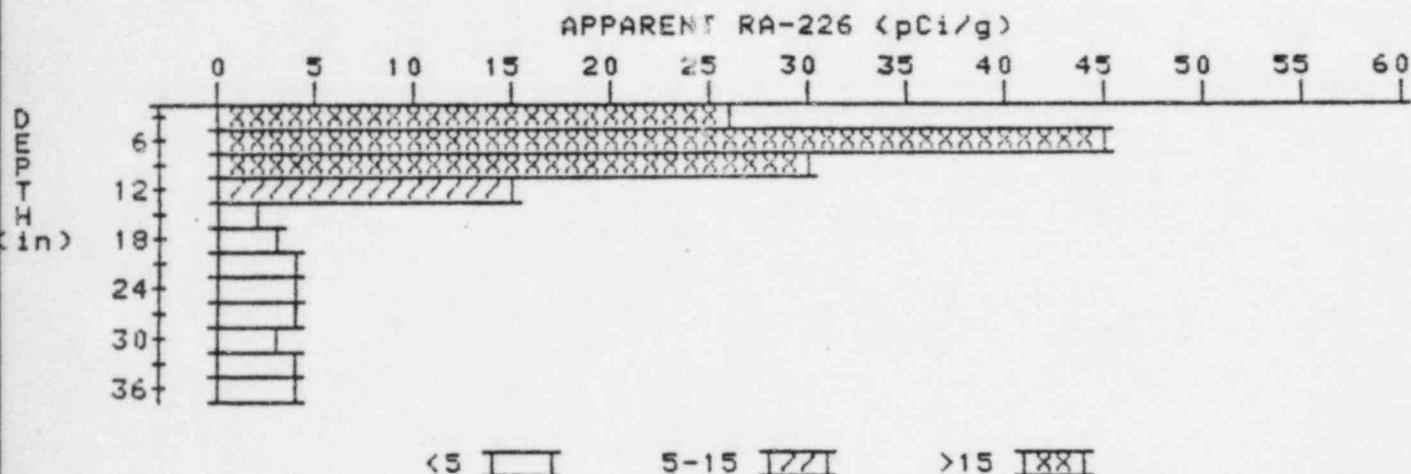


Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	16.5	16.5
6	23.1	39.8
9	20.3	29.5
12	12.3	6.1
15	7.8	3.9
18	5.5	3.0
21	4.6	4.1
24	4.0	3.3
27	3.8	3.6
30	3.7	3.7
33	3.6	3.4
36	3.6	3.6



# APPARENT RADIUM-226 CONCENTRATION 48 DECONVOLUTION GRAPH

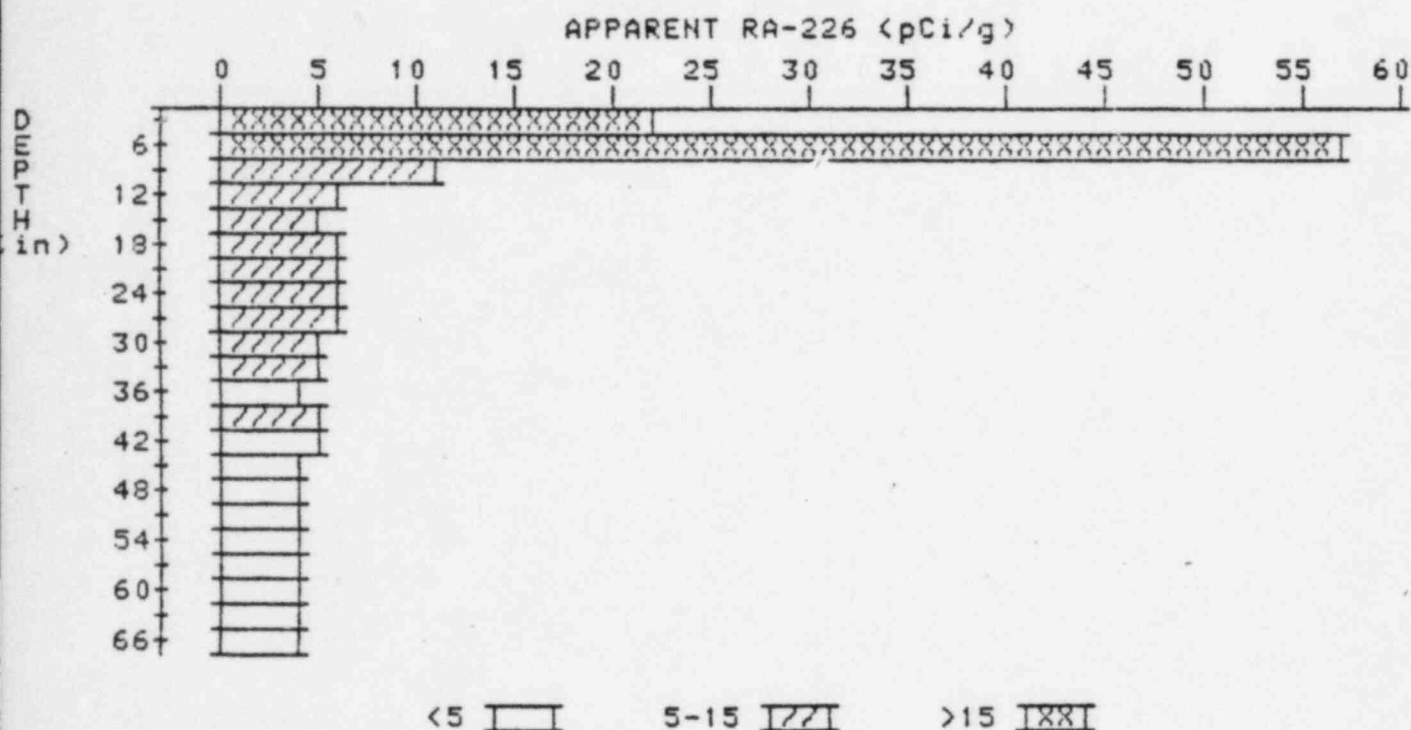
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 48  
LOCATION: 392518



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	25.7	25.7
6	29.5	45.1
9	24.5	30.0
12	16.4	14.8
15	9.2	1.7
18	6.2	3.0
21	5.0	4.1
24	4.3	3.6
27	4.0	3.8
30	3.8	3.4
33	3.8	3.6
36	3.9	3.9

# APPARENT RADIUM-226 CONCENTRATION 49 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-OT  
HOLE NUMBER: 49  
LOCATION: 395453



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	22.1	22.1
6	28.1	56.7
9	18.0	11.4
12	11.6	5.7
15	8.5	5.3
18	7.2	6.3
21	6.4	5.9
24	5.9	5.5
27	5.6	5.6
30	5.3	5.3
33	5.0	5.0
36	4.7	4.2
39	4.7	5.1
42	4.5	4.7
45	4.2	3.8
48	4.1	4.3

51  
54  
57  
60  
63  
66

3.9  
3.9  
3.8  
3.7  
3.7  
3.6

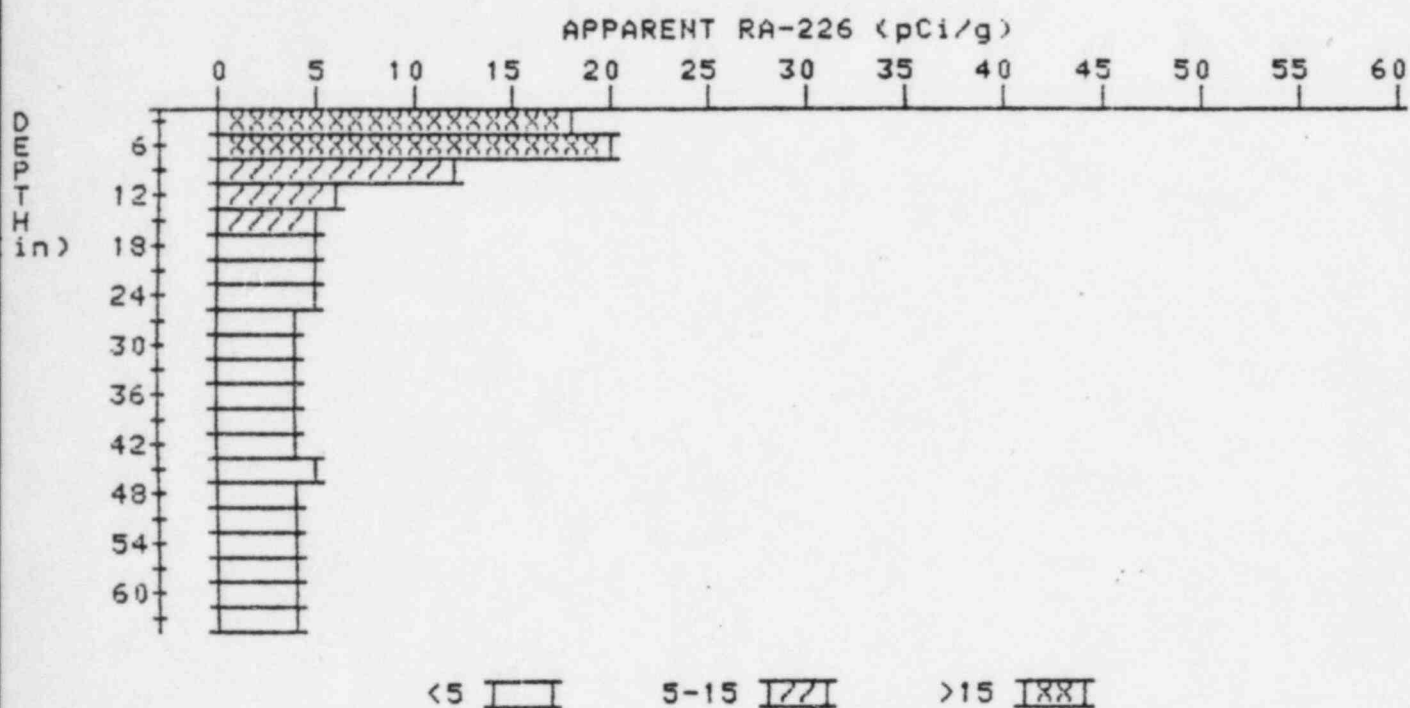
3.5  
4.1  
3.8  
3.5  
3.9  
3.6

# APPARENT RADIUM-226 CONCENTRATION 50 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 50

LOCATION: 399457

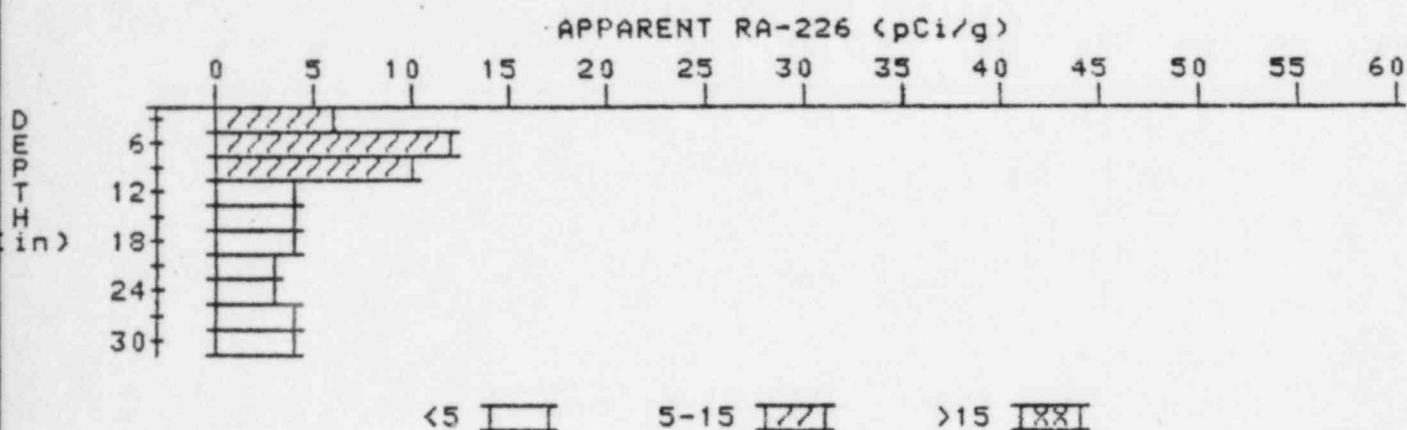


Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	18.1	18.1
6	16.4	20.5
9	12.4	11.9
12	8.7	5.7
15	6.7	5.1
18	5.6	4.5
21	5.1	4.7
24	4.8	4.8
27	4.5	4.3
30	4.3	4.1
33	4.2	4.0
36	4.2	4.2
39	4.2	4.4
42	4.1	3.7
45	4.2	4.6
48	4.1	4.1
51	4.0	4.0

54	3.9	3.5
57	4.0	4.0
60	4.1	4.5
63	4.0	4.0

# APPARENT RADIUM-226 CONCENTRATION 53 DECONVOLUTION GRAPH

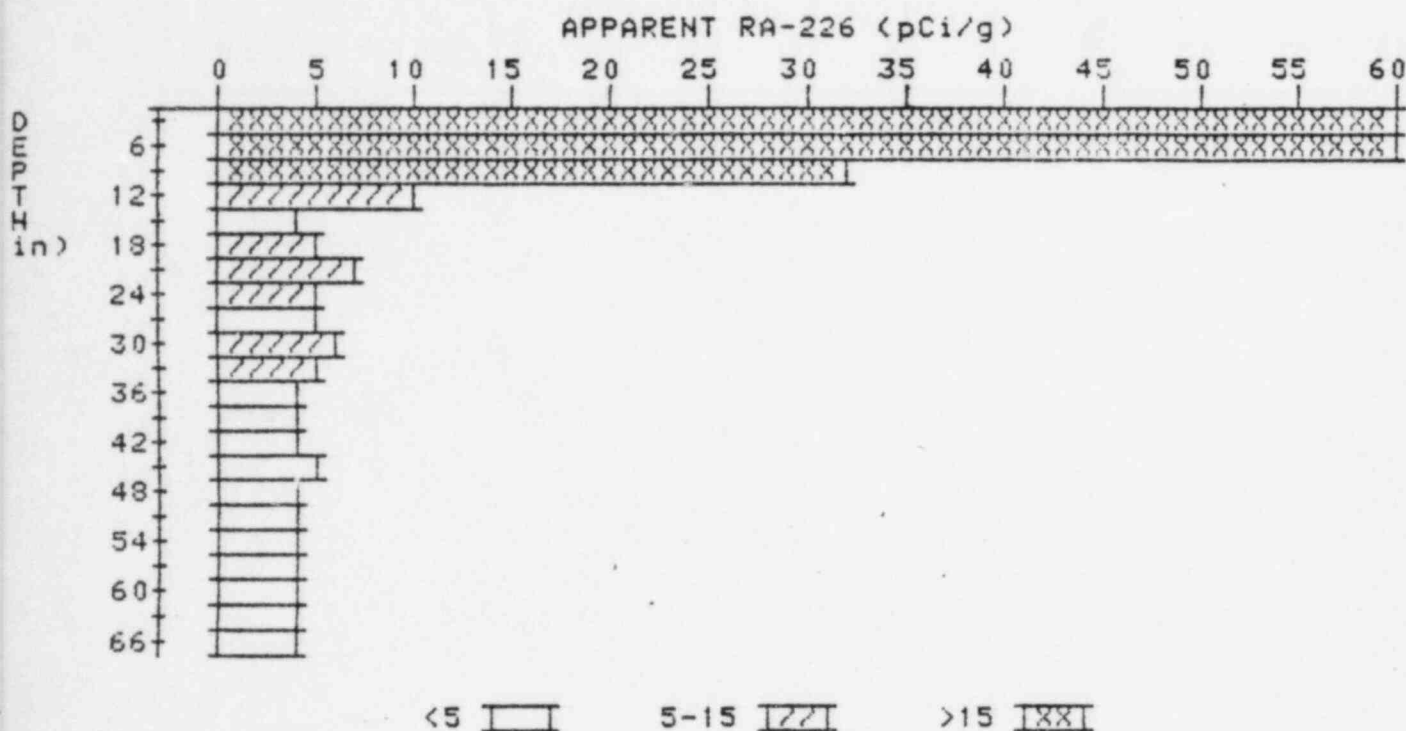
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 53  
LOCATION: 405495



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	6.2	6.2
6	8.0	12.1
9	7.5	9.8
12	5.7	4.1
15	4.8	4.4
18	4.1	3.6
21	3.7	3.2
24	3.6	3.4
27	3.6	3.6
30	3.6	3.6

# APPARENT RADIUM-226 CONCENTRATION 54 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-OT  
HOLE NUMBER: 54  
LOCATION: 409450



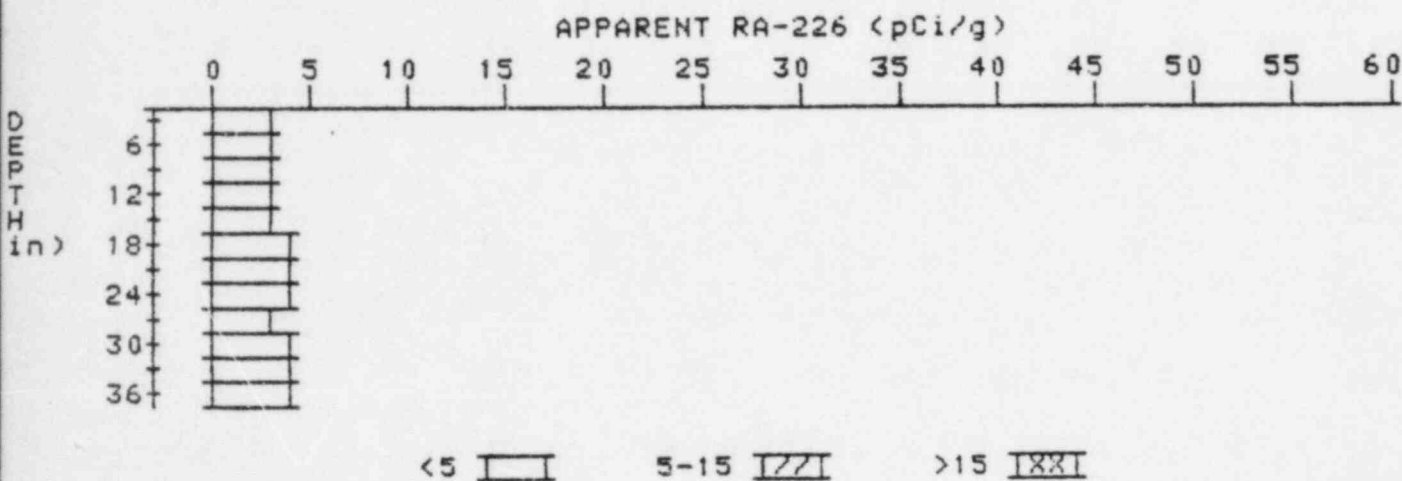
Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	63.2	63.2
6	68.1	121.1
9	43.2	32.0
12	24.6	9.7
15	14.4	4.3
18	9.9	5.3
21	8.0	7.3
24	6.5	5.3
27	5.7	4.6
30	5.5	5.9
33	5.1	5.1
36	4.7	4.3
39	4.5	4.3
42	4.4	4.4
45	4.3	4.7
48	4.0	3.6



51	3.9	3.7
54	3.9	3.9
57	3.9	3.7
60	4.0	4.4
63	3.9	3.9
66	3.8	3.8

# APPARENT RADIUM-226 CONCENTRATION 55 DECONVOLUTION GRAPH

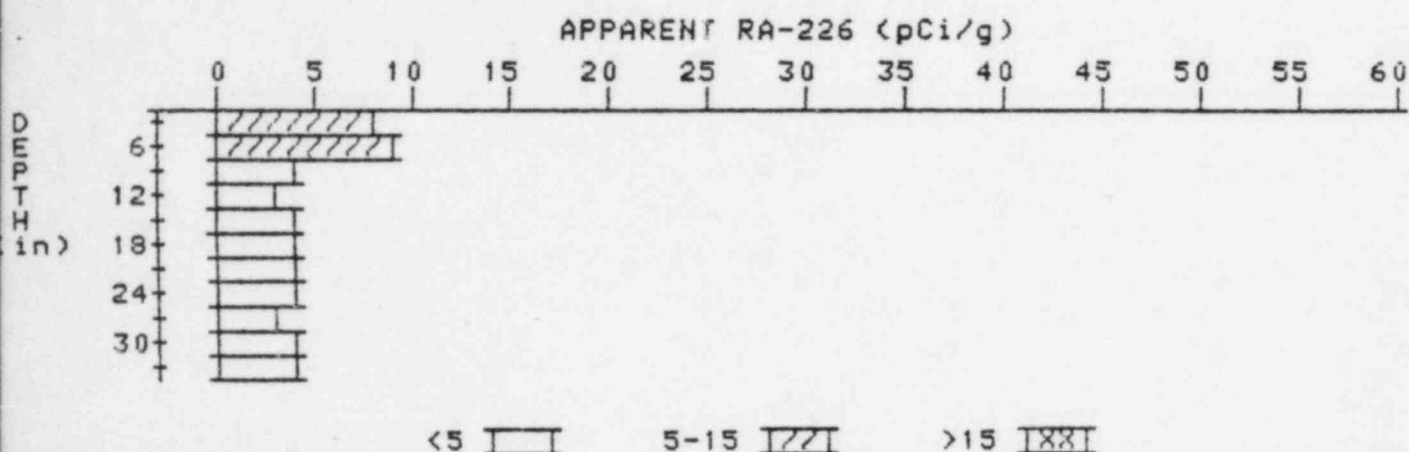
PROPERTY NUMBER: GJ-90001-OT  
HOLE NUMBER: 55  
LOCATION: 411522



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
=====	=====	=====
3	3.3	3.3
6	3.3	3.5
9	3.2	2.8
12	3.3	3.3
15	3.4	3.4
18	3.5	3.5
21	3.6	3.6
24	3.7	4.2
27	3.5	3.1
30	3.5	3.5
33	3.5	3.5
36	3.5	3.5

# APPARENT RADIUM-226 CONCENTRATION 57 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-OT  
HOLE NUMBER: 57  
LOCATION: 413217



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	7.7	7.7
6	7.1	9.2
9	5.3	3.7
12	4.4	3.3
15	4.1	3.9
18	3.9	3.7
21	3.8	3.8
24	3.7	3.7
27	3.6	3.2
30	3.7	4.2
33	3.5	3.5

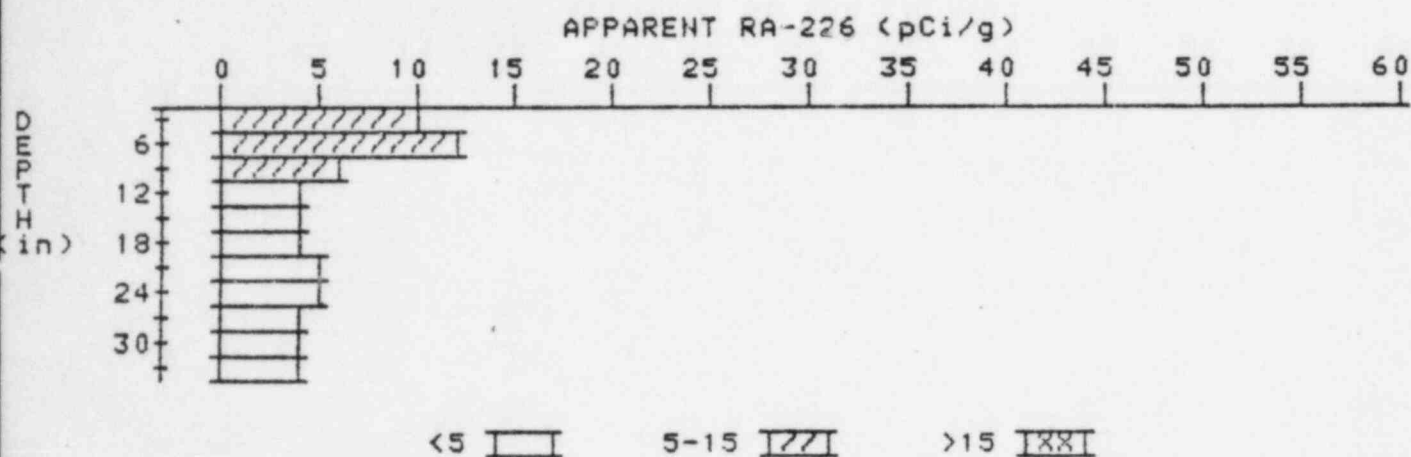
# APPARENT RADIUM-226 CONCENTRATION 58

## DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 53

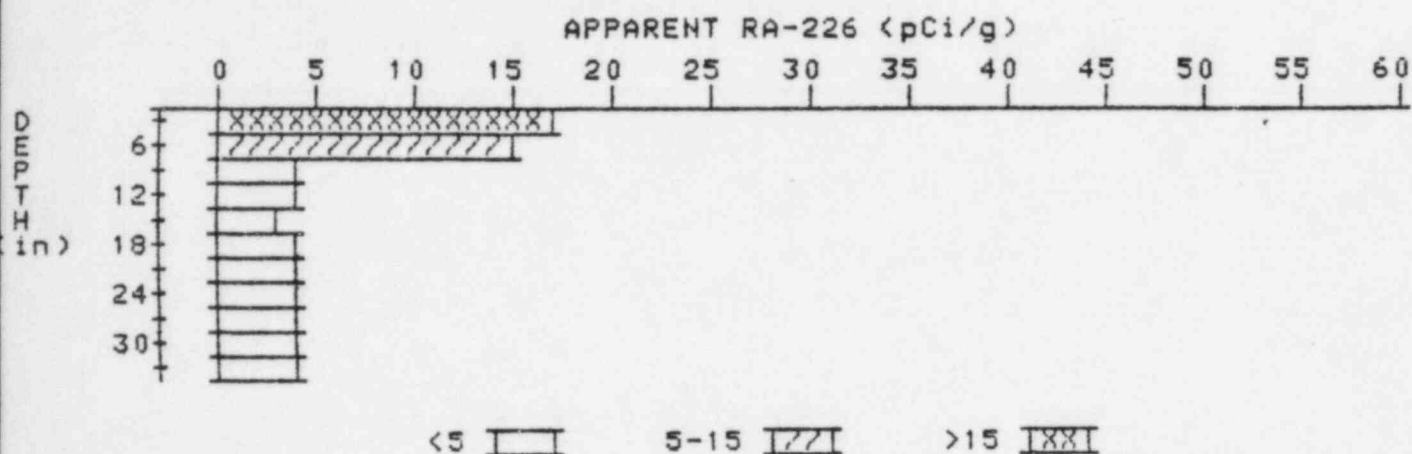
LOCATION: 415386



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	10.1	10.1
6	9.2	11.5
9	7.0	5.6
12	5.6	4.2
15	5.0	4.5
18	4.7	4.2
21	4.7	4.9
24	4.6	4.8
27	4.4	4.2
30	4.3	4.5
33	4.1	4.1

# APPARENT RADIUM-226 CONCENTRATION 59 DECONVOLUTION GRAPH

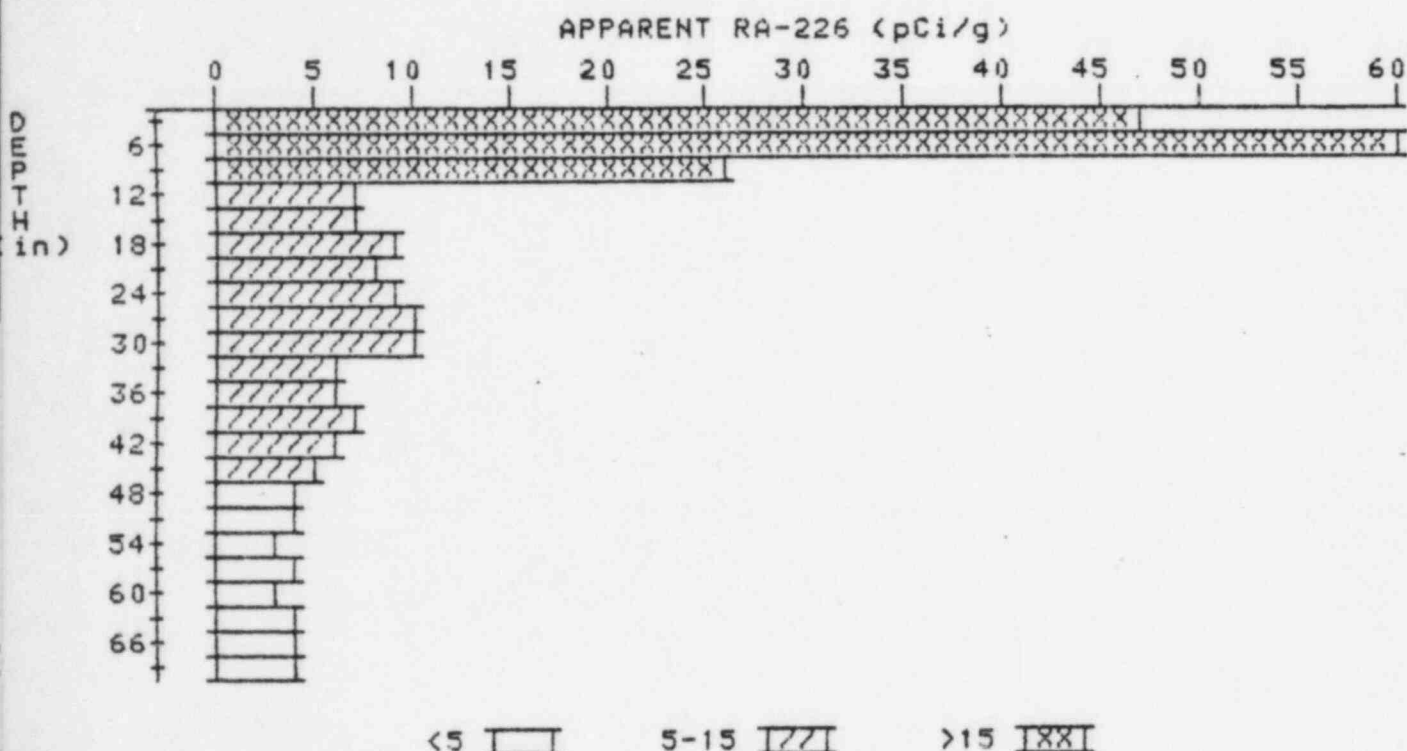
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 59  
LOCATION: 418485



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	17.0	17.0
6	13.1	14.7
9	8.3	4.0
12	5.9	3.8
15	4.7	3.3
18	4.3	4.1
21	4.0	3.8
24	3.8	3.6
27	3.7	3.5
30	3.7	3.7
33	3.7	3.7

# APPARENT RADIUM-226 CONCENTRATION 64 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 64  
LOCATION: 434420



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	46.5	46.5
6	49.2	83.9
9	32.4	25.6
12	19.4	7.0
15	13.4	7.2
18	10.9	8.6
21	9.7	8.5
24	9.2	8.7
27	9.0	9.5
30	8.5	9.7
33	7.3	6.2
36	6.7	6.0
39	6.5	7.0
42	6.0	6.4
45	5.3	5.3

48  
51  
54  
57  
60  
63  
66  
69

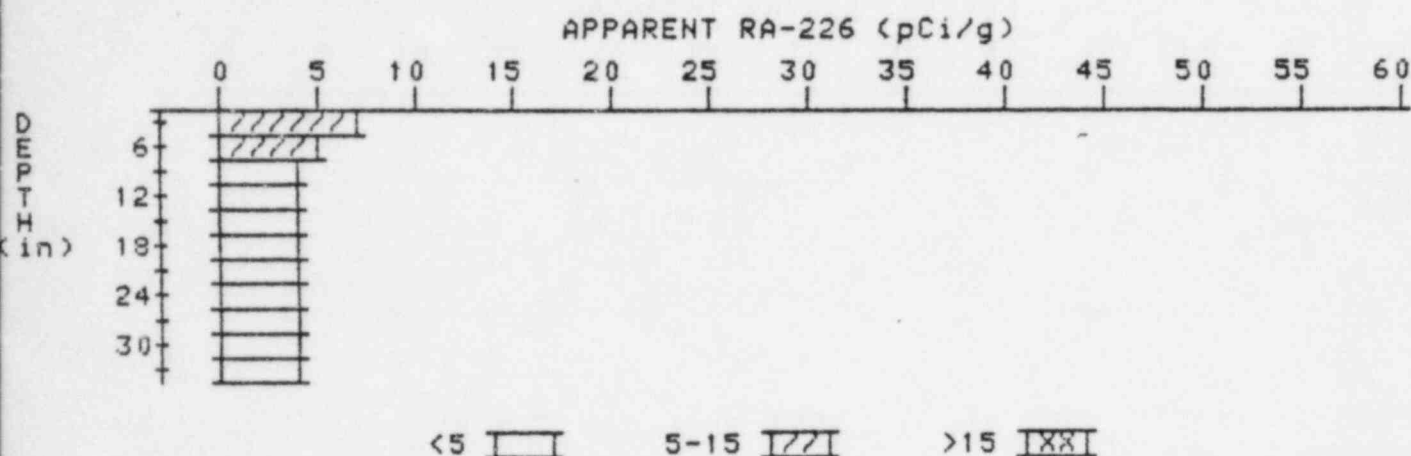
4.6  
4.1  
3.8  
3.8  
3.7  
3.8  
3.7  
3.7

4.2  
3.7  
3.3  
4.0  
3.3  
4.2  
3.5  
3.7



# APPARENT RADIUM-226 CONCENTRATION 65 DECONVOLUTION GRAPH

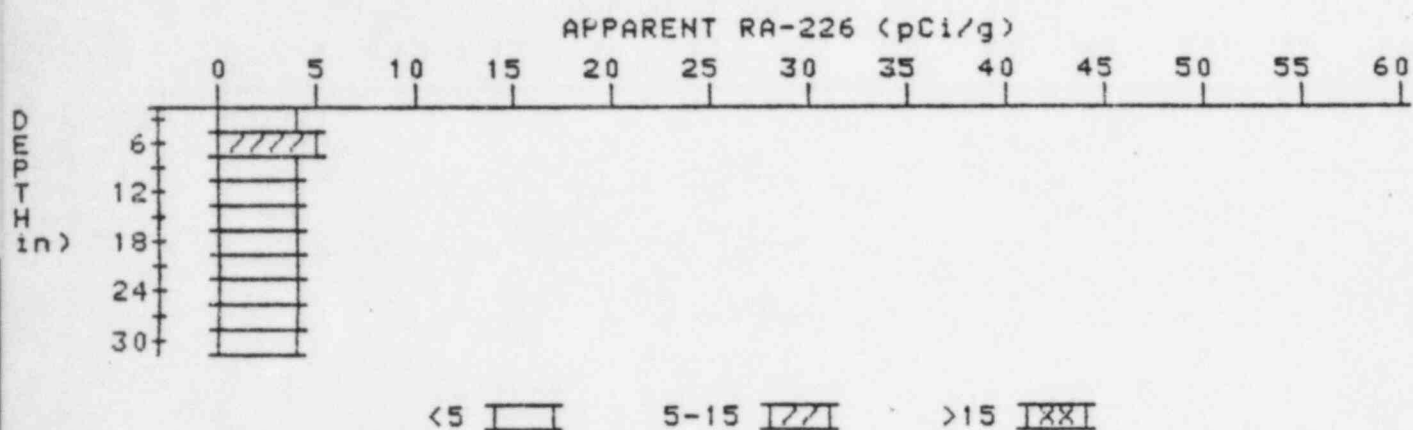
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 65  
LOCATION: 435255



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	7.0	7.0
6	5.7	5.2
9	4.7	3.6
12	4.3	4.1
15	4.0	3.6
18	3.9	3.7
21	3.9	4.1
24	3.8	3.8
27	3.7	3.5
30	3.7	3.9
33	3.6	3.6

# APPARENT RADIUM-226 CONCENTRATION 66 DECONVOLUTION GRAPH

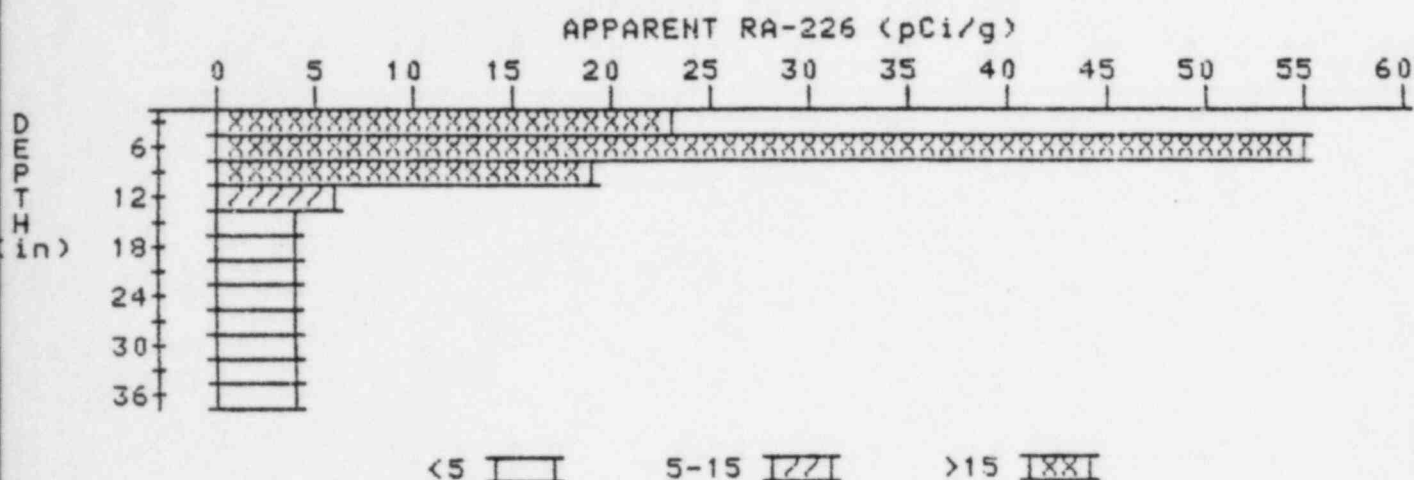
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 66  
LOCATION: 435478



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	4.2	4.2
6	4.4	5.1
9	4.2	4.0
12	4.1	4.1
15	4.0	3.8
18	4.0	4.2
21	3.9	3.7
24	3.9	3.9
27	3.9	3.9
30	3.9	3.9

# APPARENT RADIUM-226 CONCENTRATION 72 DECONVOLUTION GRAPH

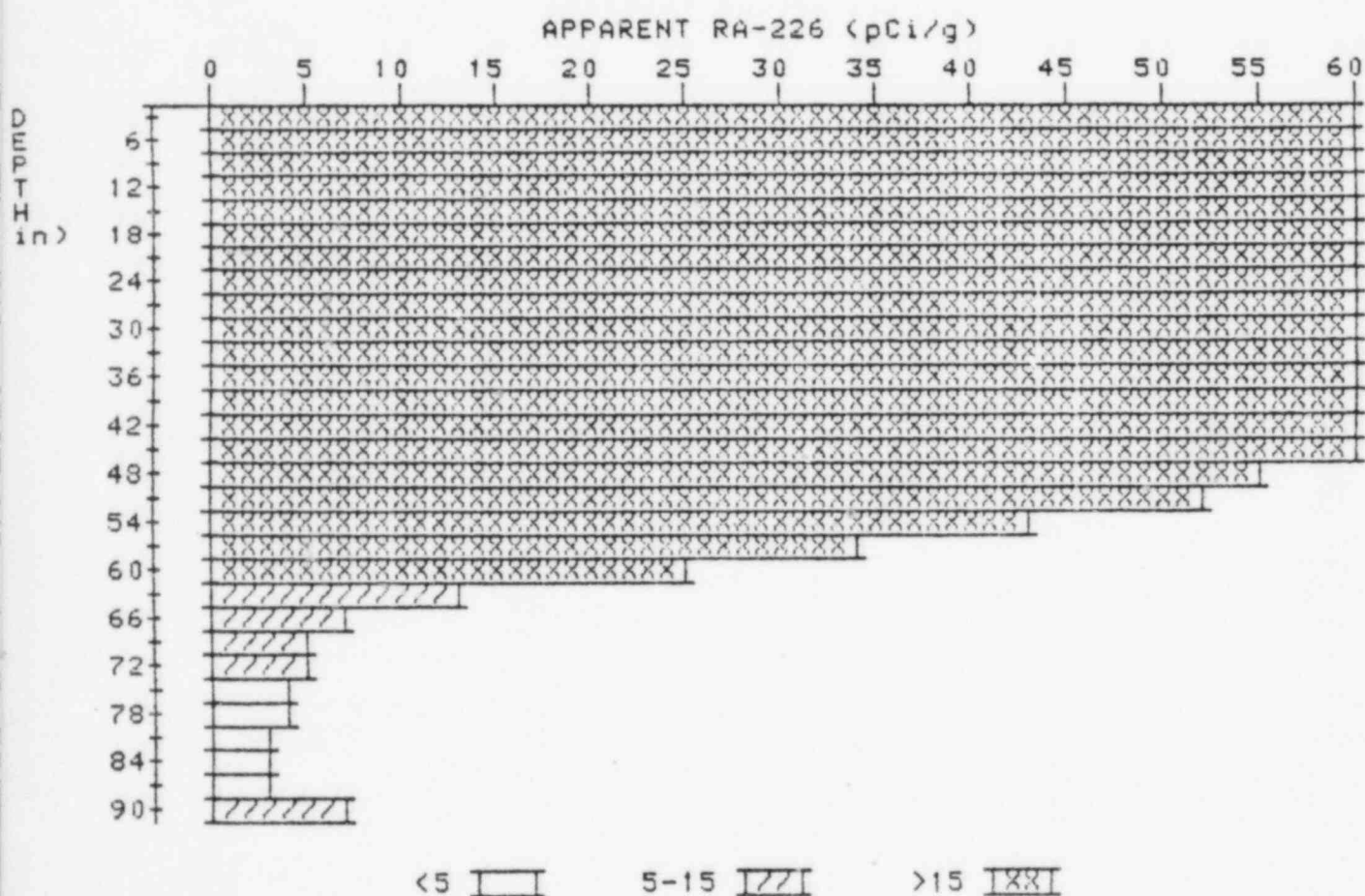
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 72  
LOCATION: 445535



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	22.5	22.5
6	28.7	55.2
9	20.0	18.6
12	12.1	5.5
15	7.9	4.3
18	5.7	3.6
21	4.7	3.8
24	4.2	3.8
27	3.9	3.5
30	3.8	3.8
33	3.7	3.7
36	3.6	3.6

# APPARENT RADIUM-226 CONCENTRATION 73 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 73  
LOCATION: 446400

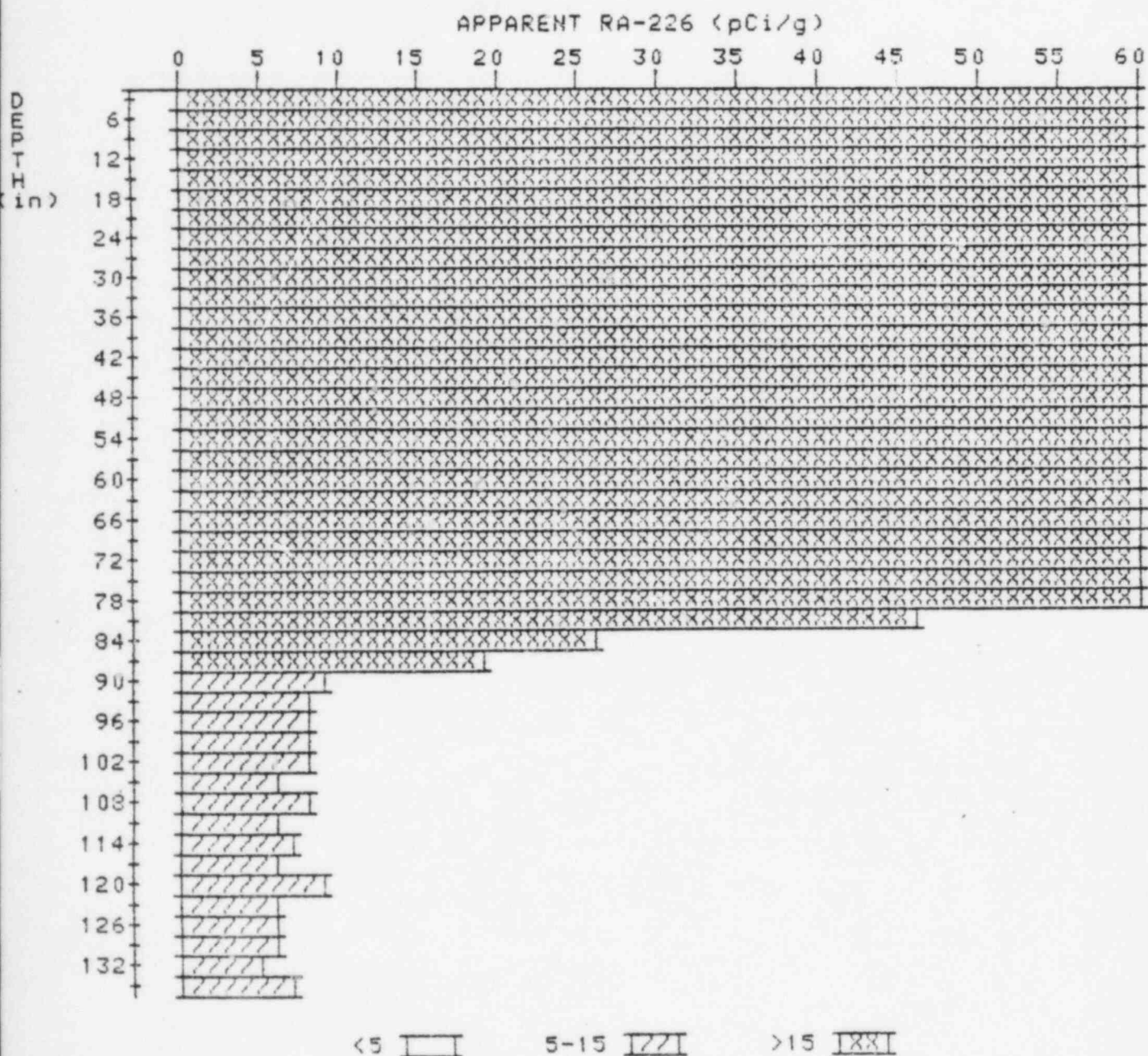


Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	73.6	73.6
6	120.5	154.5
9	143.3	173.9
12	161.7	167.7
15	171.7	176.9
18	178.8	182.4
21	183.9	188.5
24	186.4	188.4
27	187.8	195.8
30	184.7	196.3

33	175.1	198.0
36	152.6	151.0
39	131.0	138.5
42	105.2	104.1
45	80.0	63.5
48	64.1	54.7
51	53.5	51.7
54	43.9	43.2
57	34.7	34.3
60	25.7	24.6
63	17.3	12.7
66	11.5	7.2
69	8.1	5.3
72	6.3	5.1
75	5.2	4.3
78	4.6	4.2
81	4.2	3.3
84	4.3	3.1
87	5.1	3.3
90	6.9	6.9

# APPARENT RADIUM-226 CONCENTRATION 75 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-OT  
HOLE NUMBER: 75  
LOCATION: 448265



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
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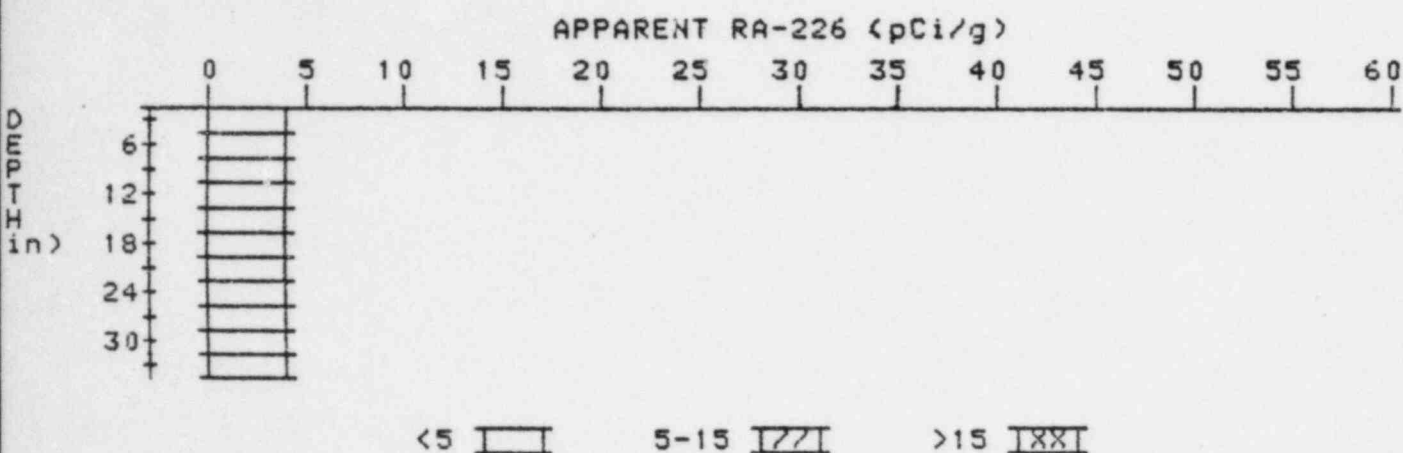
=====

3	77.2	77.2
6	120.9	156.3
9	144.7	177.8
12	149.9	174.4
15	141.3	150.2
18	127.7	123.6
21	116.4	105.2
24	111.4	103.6
27	110.8	100.5
30	116.0	105.2
33	127.3	125.7
36	139.5	143.8
39	149.3	146.6
42	160.6	164.9
45	169.5	172.9
48	176.5	180.4
51	181.3	187.5
54	182.6	183.7
57	183.3	191.7
60	179.3	183.7
63	172.8	165.3
66	170.5	168.7
69	169.2	185.7
72	158.6	179.9
75	136.0	160.5
78	99.6	95.9
81	65.3	46.1
84	41.8	25.8
87	27.3	18.9
90	17.5	8.8
93	12.6	8.2
96	10.2	8.2
99	8.9	7.8
102	8.2	8.4
105	7.4	6.2
108	7.3	7.8
111	6.9	6.2
114	6.9	6.9
117	6.9	6.4
120	7.2	9.0
123	6.5	5.6
126	6.3	5.9
129	6.3	5.9
132	6.5	5.4
135	7.3	7.3



# APPARENT RADIUM-226 CONCENTRATION 80 DECONVOLUTION GRAPH

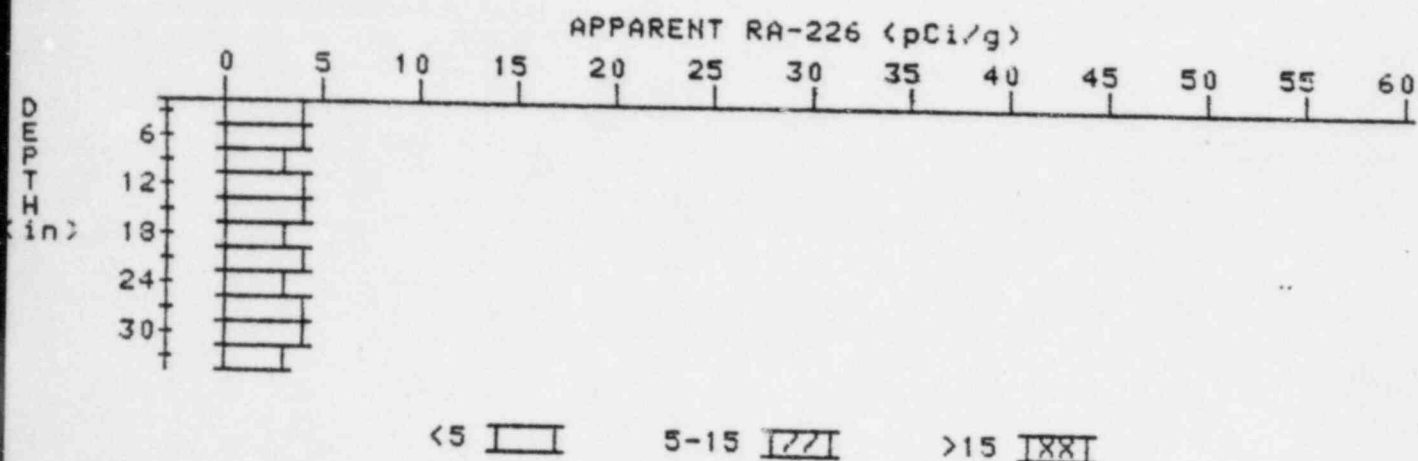
PROPERTY NUMBER: GJ-90001-OT  
HOLE NUMBER: 80  
LOCATION: 455500



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.6	3.6
6	3.7	3.7
9	3.8	3.8
12	3.9	4.1
15	3.9	3.9
18	3.9	3.7
21	4.0	4.2
24	4.0	4.2
27	3.9	3.7
30	3.9	4.1
33	3.8	3.8

# APPARENT RADIUM-226 CONCENTRATION 82 DECONVOLUTION GRAPH

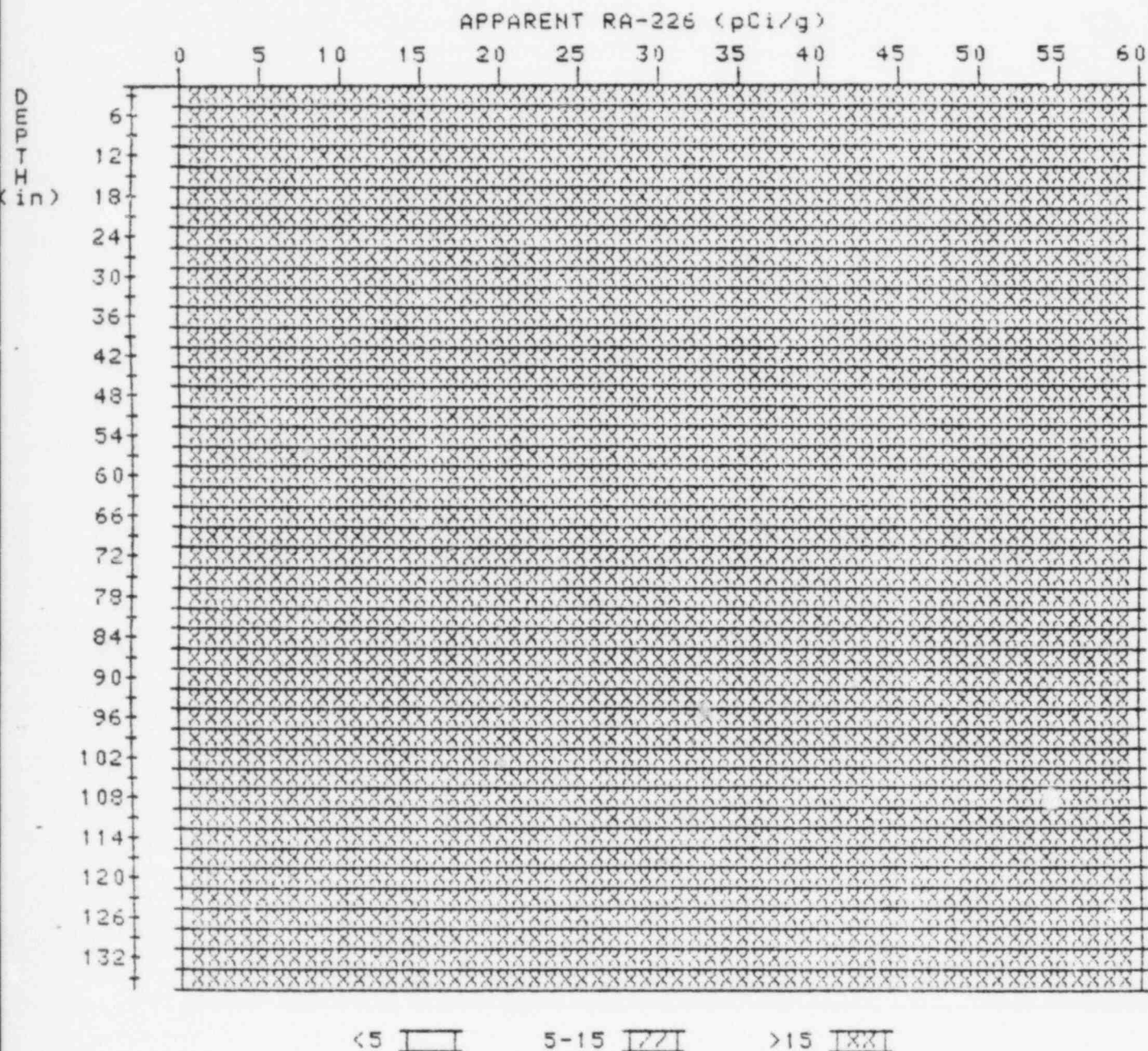
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 82  
LOCATION: 458480



Depth (in)	Apparent Radium-226 (pCi/g)	Apparent Radium-226 (pCi/g)
	Undeconvolved	Deconvolved
3	4.0	4.0
6	3.9	4.1
9	3.7	3.3
12	3.7	3.9
15	3.6	3.6
18	3.5	3.3
21	3.5	3.7
24	3.4	3.0
27	3.5	3.7
30	3.5	3.7
33	3.4	3.4

# APPARENT RADIUM-226 CONCENTRATION 84 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 84  
LOCATION: 461227

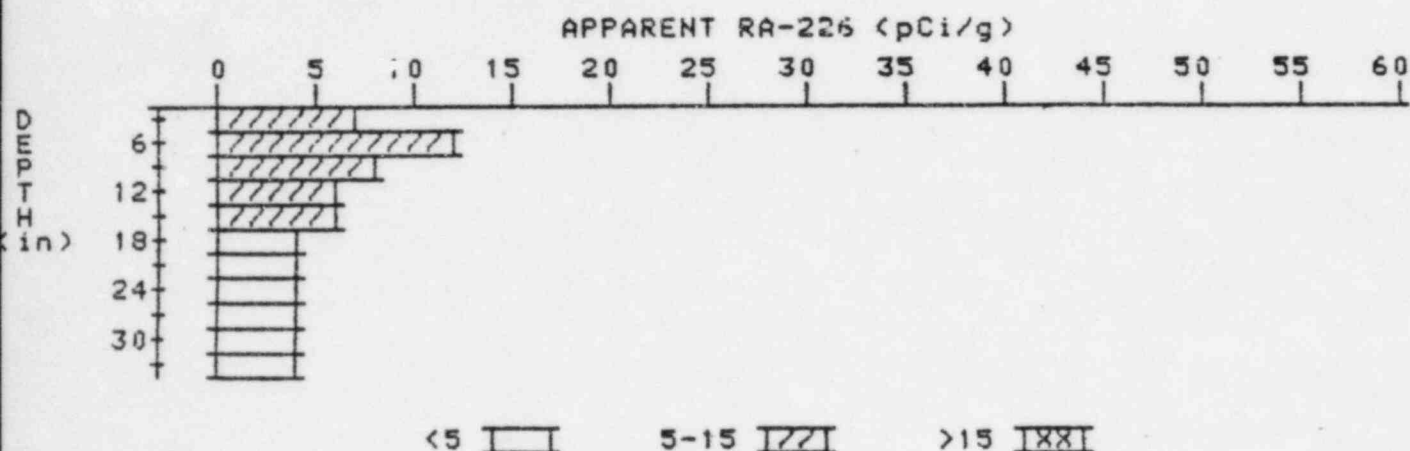


Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
---------------	--	--

3	59.9	59.9
6	89.7	77.8
9	126.2	144.2
12	152.6	179.4
15	163.9	167.1
18	173.4	176.8
21	181.0	184.6
24	186.6	188.0
27	191.4	192.1
30	195.8	199.4
33	198.2	197.0
36	201.3	204.7
39	202.5	202.3
42	203.8	203.3
45	205.4	205.8
48	206.8	206.6
51	208.3	210.6
54	208.5	208.0
57	209.0	211.3
60	208.2	207.1
63	208.0	206.9
66	208.4	207.7
69	209.2	207.1
72	211.2	213.7
75	211.8	211.4
78	212.6	213.1
81	213.1	213.5
84	213.4	212.9
87	214.0	215.1
90	214.0	212.9
93	214.6	214.1
96	215.5	218.2
99	214.9	212.9
102	215.4	214.0
105	216.7	216.9
108	217.9	218.6
111	218.7	219.1
114	219.3	219.7
117	219.7	220.6
120	219.6	220.8
123	218.8	219.5
126	217.6	219.9
129	215.1	215.8
132	212.2	214.3
135	208.1	208.1

# APPARENT RADIUM-226 CONCENTRATION 90 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 90  
LOCATION: 475495



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	6.7	6.7
6	8.3	12.4
9	7.6	8.3
12	6.5	6.0
15	5.7	5.7
18	4.9	4.0
21	4.6	4.4
24	4.4	4.4
27	4.2	4.2
30	4.0	3.8
33	3.9	3.9

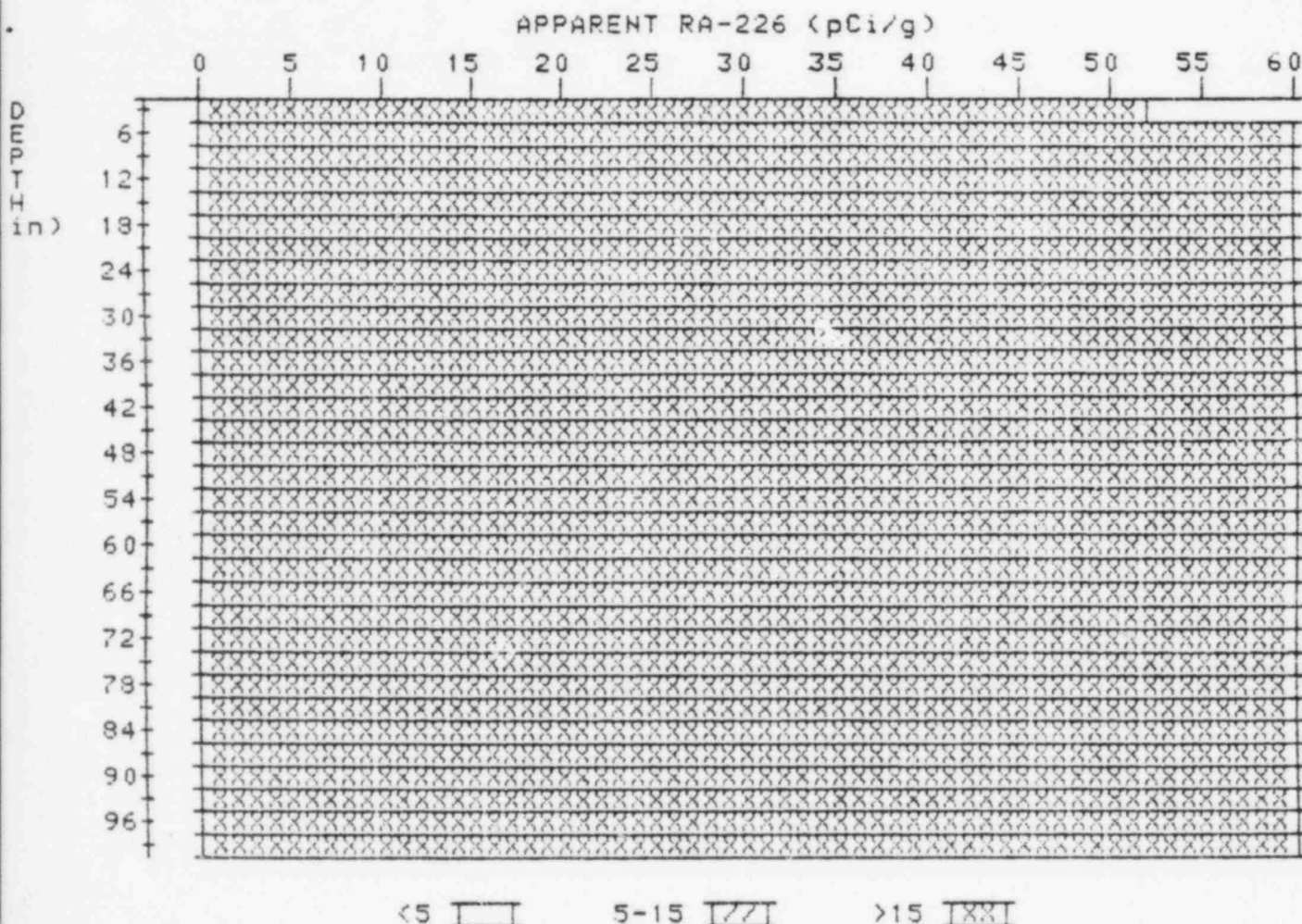
# APPARENT RADIUM-226 CONCENTRATION 91

## DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 91

LOCATION: 480226



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
=====	=====	=====
3	52.2	52.2
6	81.3	101.6
9	99.0	116.1
12	107.1	105.9
15	115.9	117.7
18	123.7	135.1
21	125.1	125.8
24	126.1	127.2

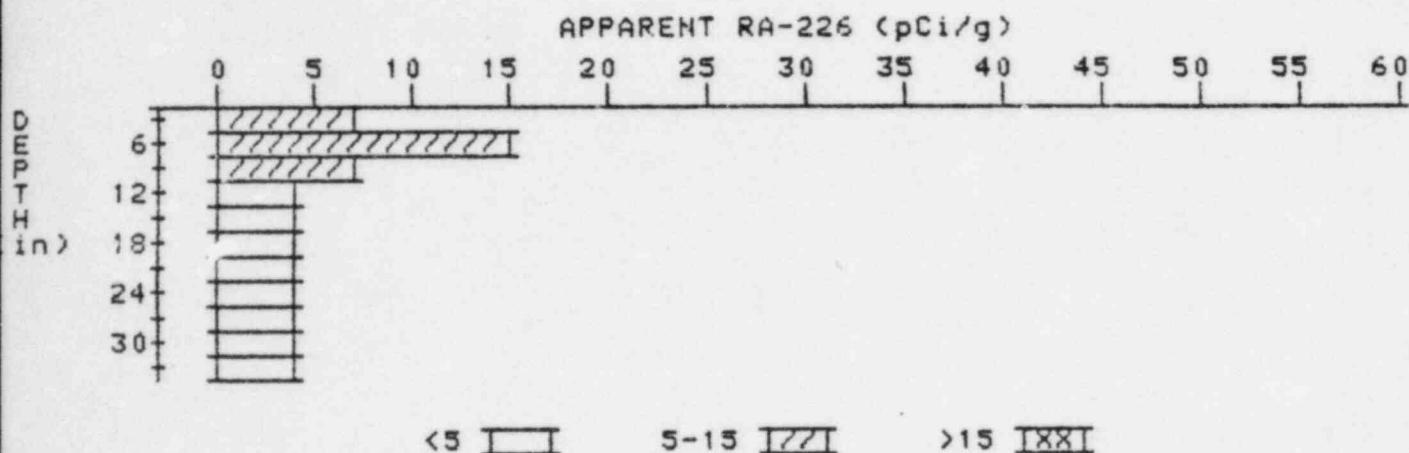


27	126.5	128.8
30	125.6	124.9
33	125.1	114.1
36	130.8	132.2
39	135.7	138.7
42	138.9	151.3
45	135.1	131.5
48	133.3	130.1
51	133.3	137.7
54	130.8	137.6
57	124.5	126.5
60	117.1	112.3
63	112.4	116.1
66	105.6	109.5
69	96.6	87.4
72	92.8	89.8
75	90.7	87.5
78	90.4	86.1
81	92.5	90.2
84	95.9	103.5
87	95.0	95.0
90	94.1	95.9
93	92.2	89.0
96	92.1	89.8
99	93.3	93.3



# APPARENT RADIUM-226 CONCENTRATION 94 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 94  
LOCATION: 485220



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	7.0	7.0
6	8.7	14.6
9	7.1	6.9
12	5.6	4.4
15	4.8	4.3
18	4.3	3.8
21	4.1	3.7
24	4.1	4.3
27	4.0	3.8
30	4.0	3.8
33	4.1	4.1

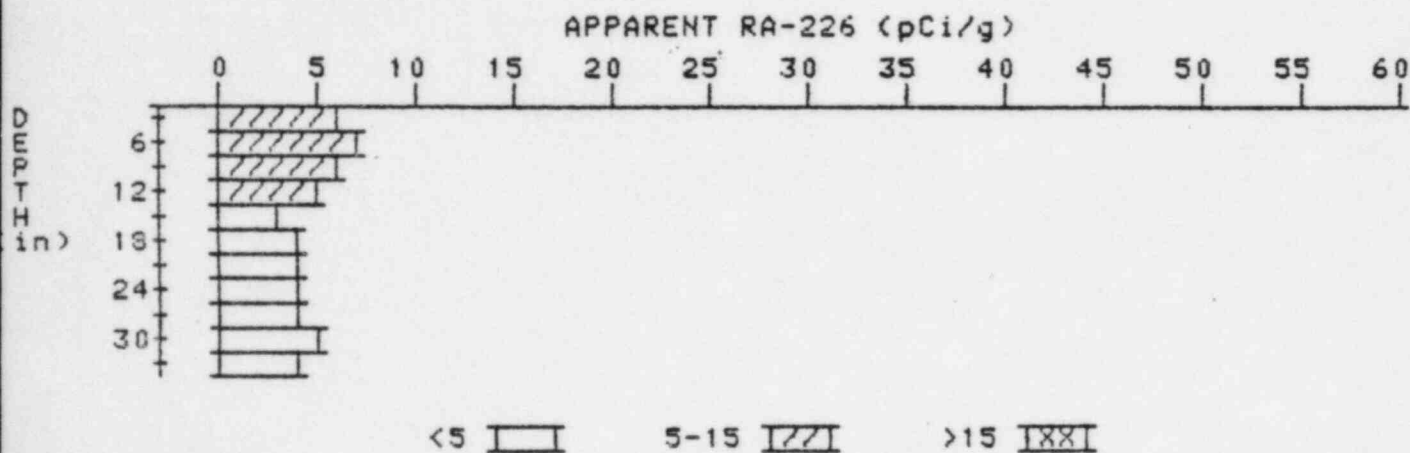
# APPARENT RADIUM-226 CONCENTRATION 96

## DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-OT

HOLE NUMBER: 96

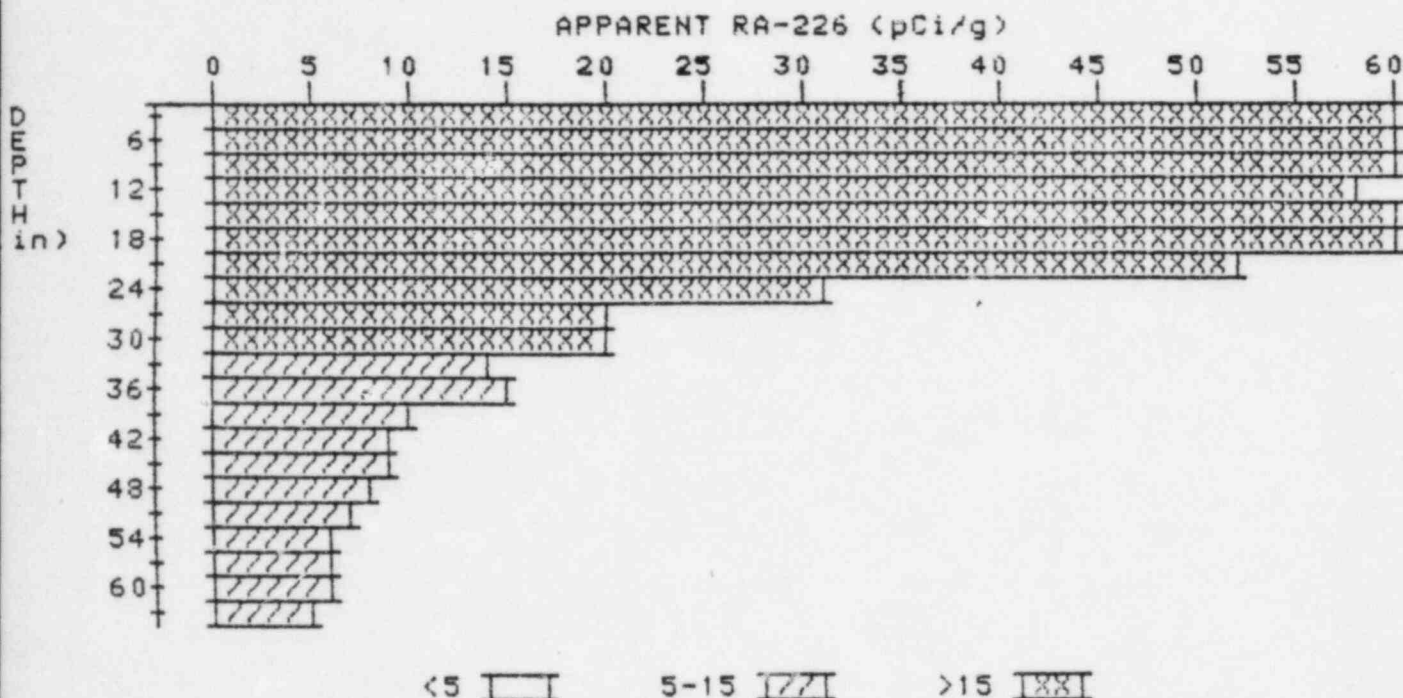
LOCATION: 488488



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	6.1	6.1
6	6.0	6.7
9	5.5	5.7
12	4.9	5.1
15	4.2	3.0
18	4.2	4.4
21	4.1	3.9
24	4.1	3.9
27	4.2	4.2
30	4.3	4.8
33	4.1	4.1

# APPARENT RADIUM-226 CONCENTRATION 97 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 97  
LOCATION: 490425



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	64.4	64.4
6	72.6	93.9
9	68.8	71.6
12	63.4	57.5
15	61.3	67.5
18	55.7	61.0
21	47.1	52.1
24	35.7	31.4
27	26.7	20.3
30	21.3	19.5
33	16.9	13.5
36	14.4	14.6
39	11.8	10.4
42	10.0	8.8
45	8.9	8.5
48	8.0	7.3
51	7.2	6.8

54  
57  
60  
63

6.6  
6.1  
5.7  
5.3

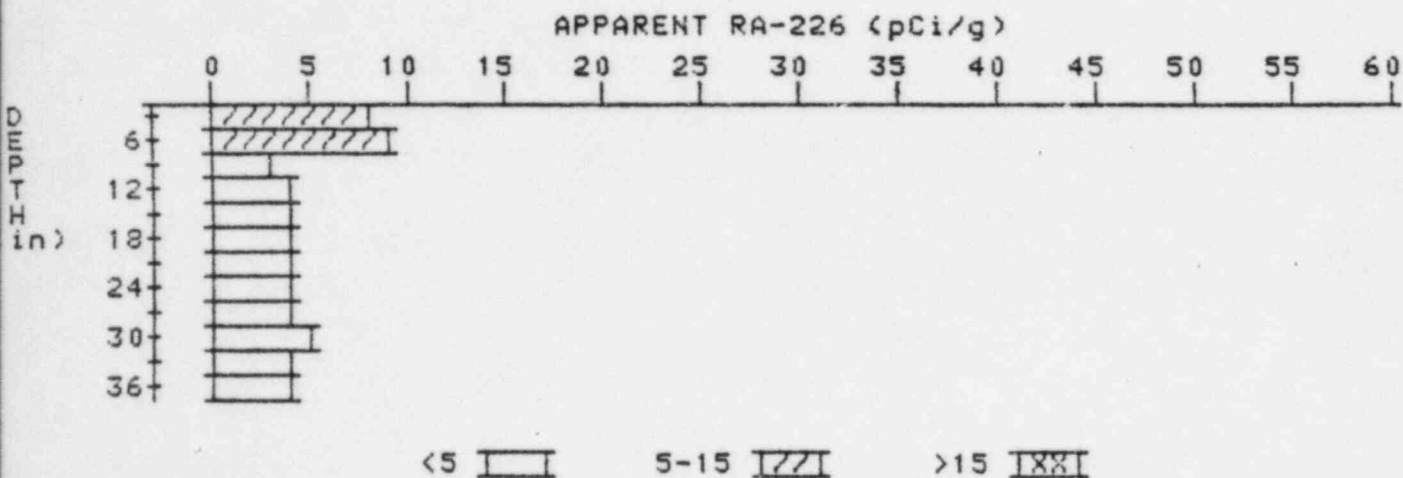
6.4  
5.9  
5.7  
5.3

# APPARENT RADIUM-226 CONCENTRATION 99 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 99

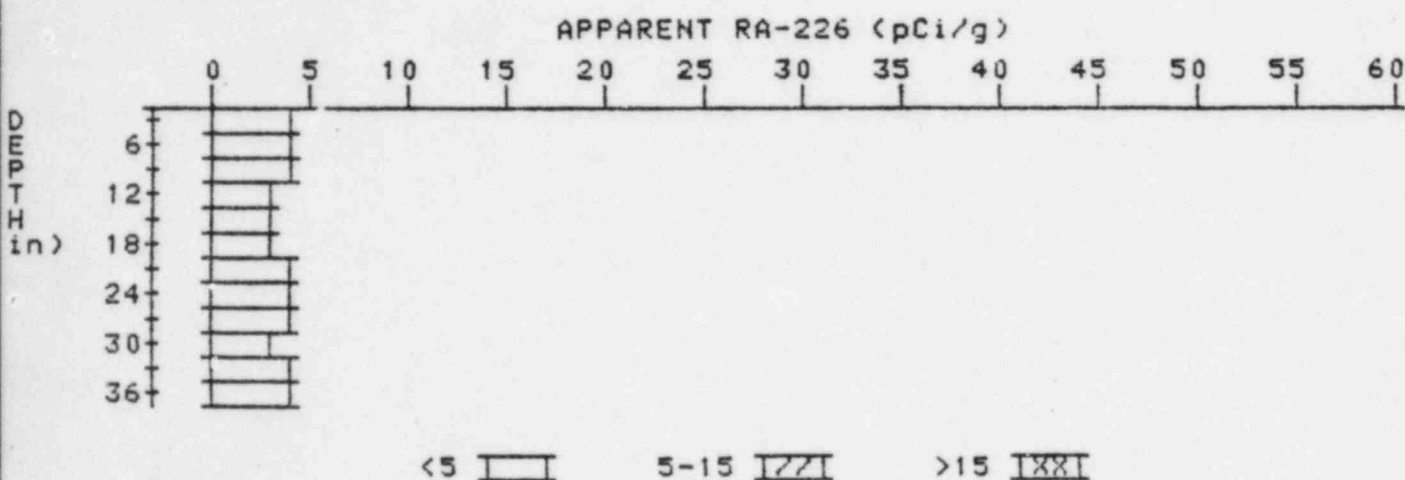
LOCATION: 495495



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	7.9	7.9
6	7.2	9.3
9	5.3	3.2
12	4.6	4.1
15	4.2	3.7
18	4.1	3.7
21	4.2	4.4
24	4.2	4.0
27	4.3	4.5
30	4.3	4.7
33	4.1	3.9
36	4.0	4.0

# APPARENT RADIUM-226 CONCENTRATION 102 DECONVOLUTION GRAPH

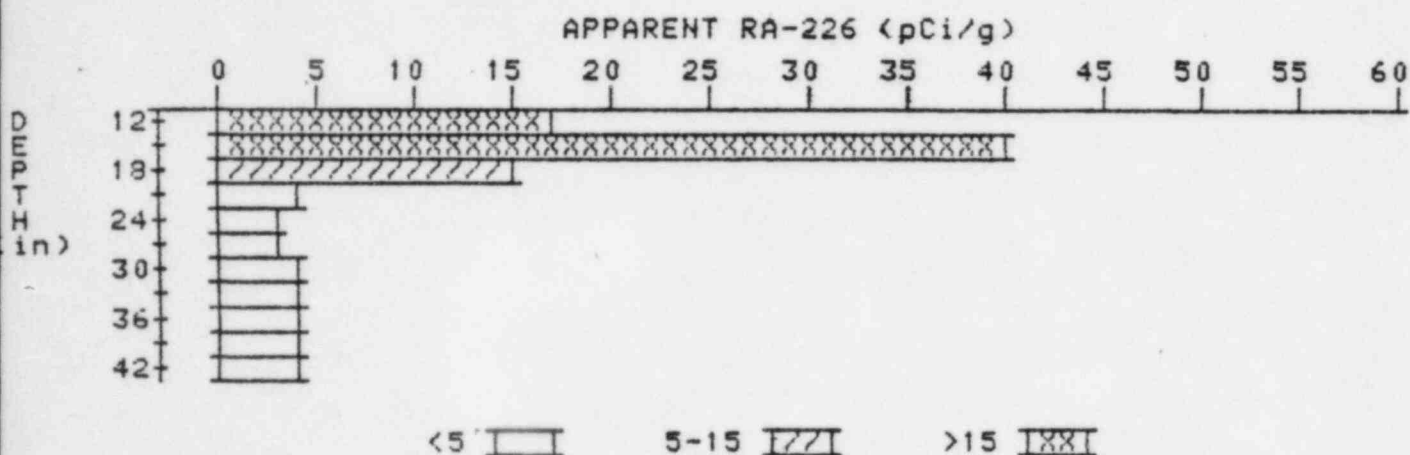
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 102  
LOCATION: 500500



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.6	3.6
6	3.7	3.9
9	3.7	4.1
12	3.5	3.1
15	3.5	3.3
18	3.6	3.4
21	3.8	4.2
24	3.8	4.0
27	3.7	3.7
30	3.6	3.2
33	3.7	4.1
36	3.6	3.6

# APPARENT RADIUM-226 CONCENTRATION 103 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 103  
LOCATION: 501300



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
12	17.4	17.4
15	21.6	40.4
18	15.2	14.7
21	9.1	3.8
24	6.0	3.2
27	4.5	2.5
30	4.1	3.7
33	3.9	3.7
36	3.8	3.8
39	3.7	3.5
42	3.7	3.7



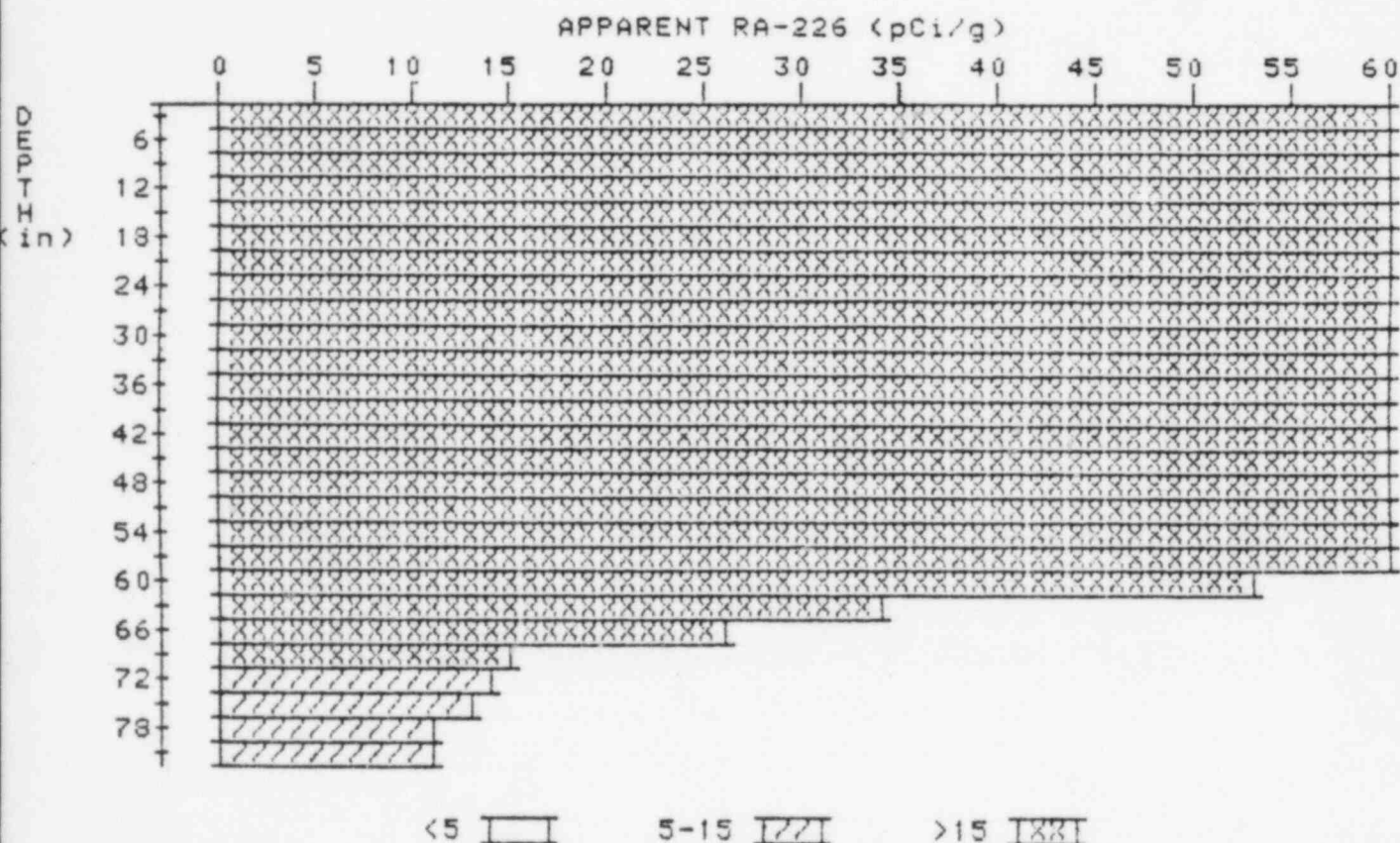
# APPARENT RADIUM-226 CONCENTRATION 106

## DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-OT

HOLE NUMBER: 106

LOCATION: 505400



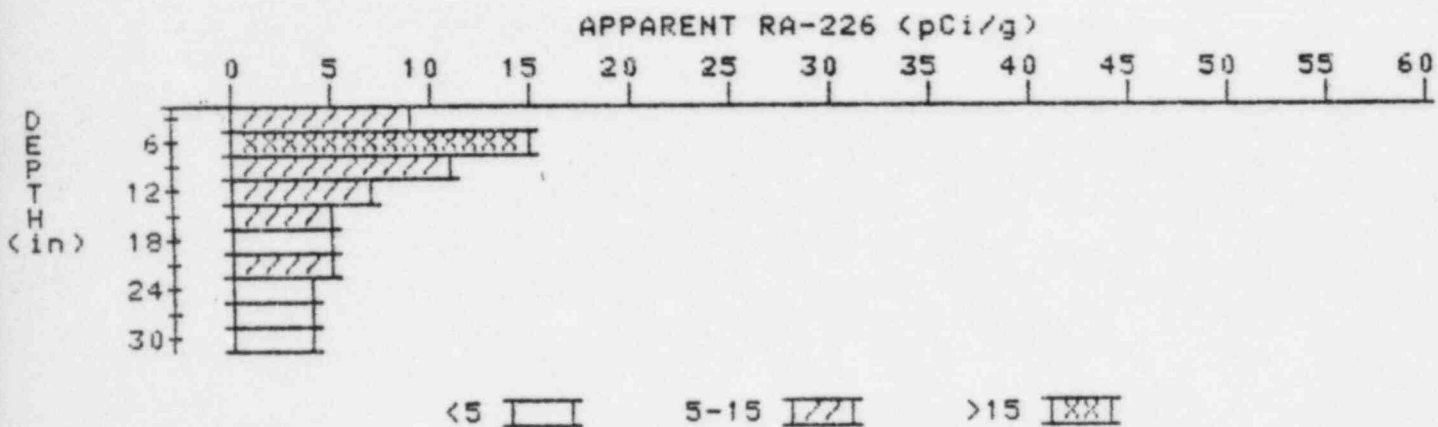
Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	98.6	98.6
6	127.2	146.8
9	144.8	160.4
12	153.6	162.7
15	157.3	160.0
18	159.5	155.9
21	163.7	163.9
24	167.8	170.3
27	170.5	168.2
30	174.5	178.8
33	176.1	187.7
36	171.2	177.1

39	163.0	173.7
42	148.8	160.0
45	128.3	126.7
48	108.7	100.7
51	93.6	86.5
54	82.5	84.3
57	70.4	76.4
60	54.9	52.8
63	40.6	33.7
66	30.2	26.5
69	21.9	15.3
72	17.3	14.3
75	14.4	13.2
78	12.2	11.0
81	10.7	10.7

# APPARENT RADIUM-226 CONCENTRATION 111

## DECONVOLUTION GRAPH

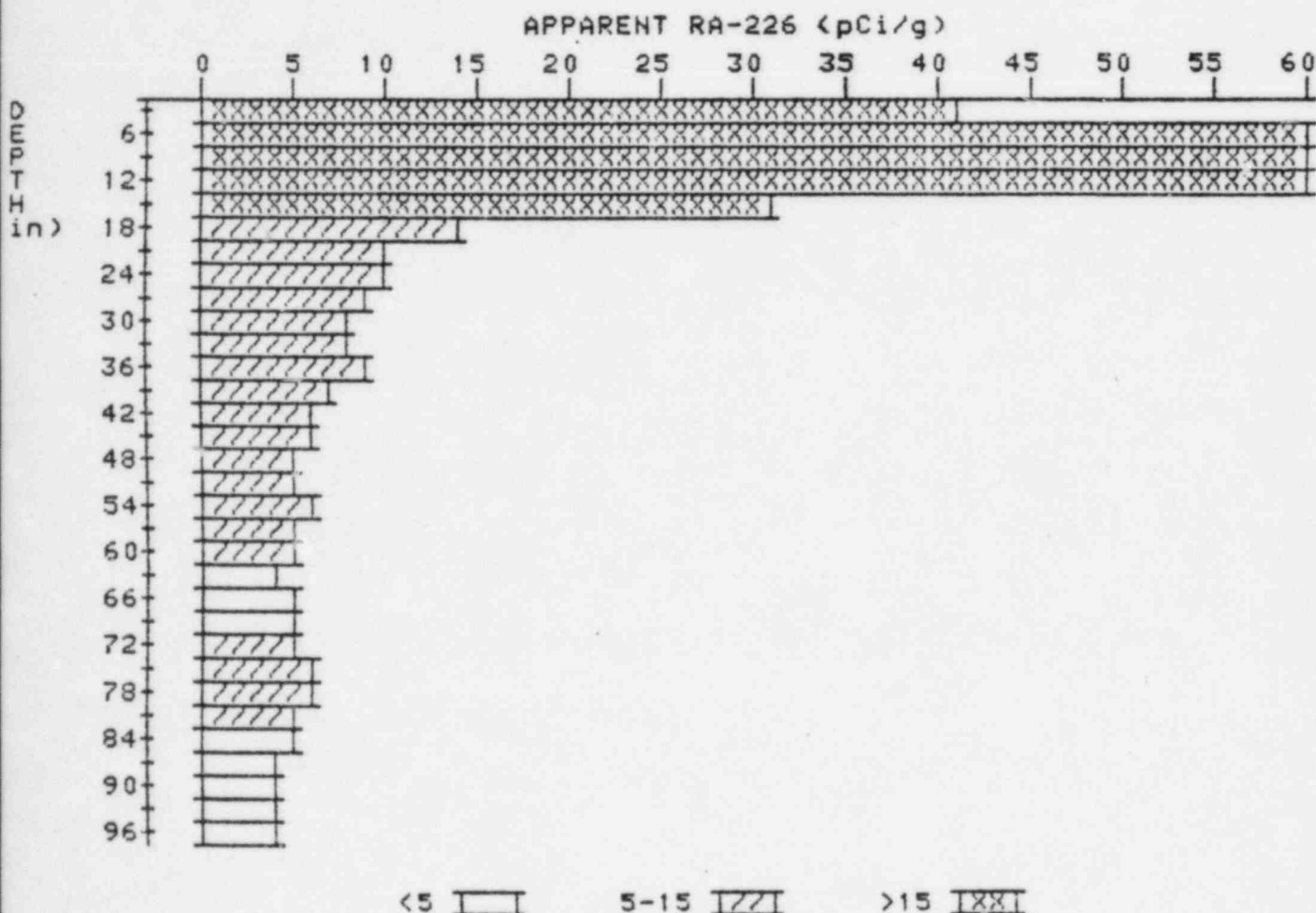
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 111  
LOCATION: 510430



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	8.9	8.9
6	10.4	15.0
9	9.3	10.5
12	7.5	6.6
15	6.2	5.3
18	5.4	4.7
21	5.0	5.0
24	4.6	4.4
27	4.3	3.9
30	4.2	4.2

# APPARENT RADIUM-226 CONCENTRATION 114 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 114  
LOCATION: 514240

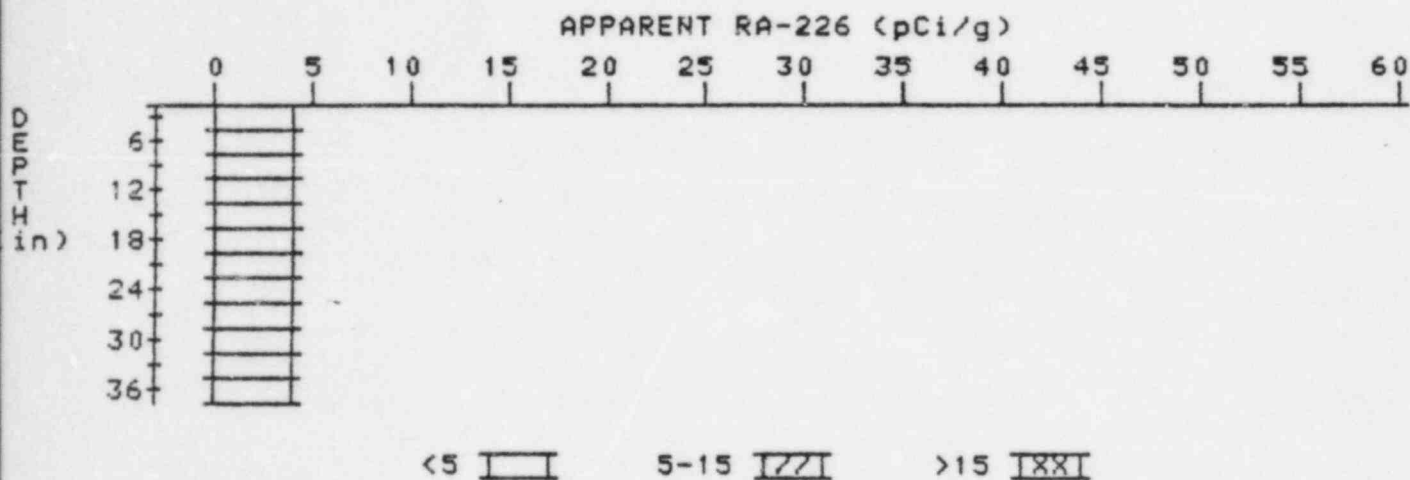


Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	40.5	40.5
6	54.2	62.2
9	63.4	83.7
12	61.2	93.9
15	40.6	30.6
18	25.6	13.9
21	17.2	9.7
24	13.0	9.6
27	10.7	8.9

30	9.4	8.3
33	8.7	8.2
36	8.3	9.4
39	7.3	6.8
42	6.6	6.2
45	6.1	5.9
48	5.7	5.3
51	5.5	5.3
54	5.4	5.6
57	5.2	5.2
60	5.0	5.0
63	4.8	4.3
66	4.9	4.9
69	5.0	4.6
72	5.3	5.3
75	5.6	6.3
78	5.5	6.0
81	5.1	5.1
84	4.7	4.7
87	4.3	3.8
90	4.2	4.4
93	4.0	3.6
96	4.0	4.0

# APPARENT RADIUM-226 CONCENTRATION 115 DECONVOLUTION GRAPH

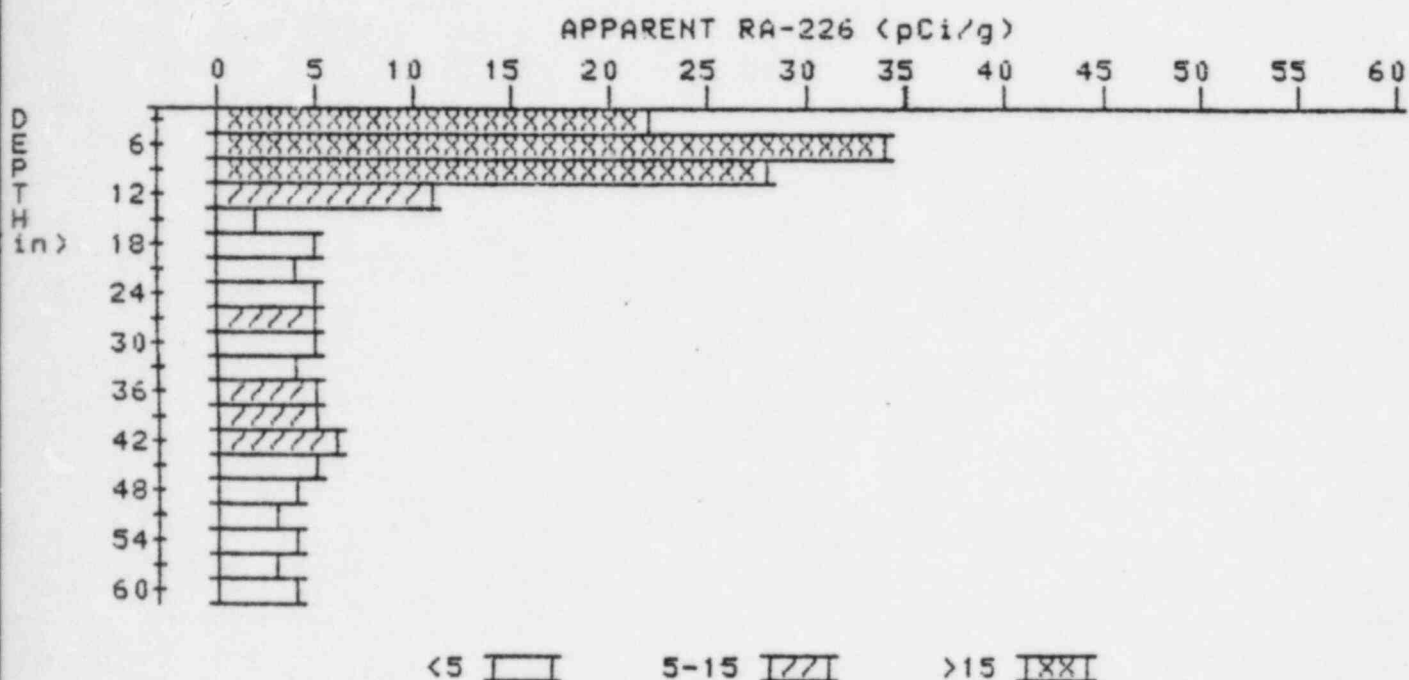
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 115  
LOCATION: 515479



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	4.3	4.3
6	4.1	3.7
9	4.1	4.3
12	4.0	3.8
15	4.0	4.0
18	4.0	4.0
21	4.0	3.8
24	4.1	4.3
27	4.1	4.1
30	4.1	4.3
33	4.0	4.0
36	3.9	3.9

# APPARENT RADIUM-226 CONCENTRATION 118 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 118  
LOCATION: 524405



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	22.4	22.4
6	24.3	33.5
9	21.0	27.8
12	13.9	11.2
15	8.3	1.7
18	6.4	4.6
21	5.5	4.4
24	5.2	4.8
27	5.1	5.3
30	4.9	4.7
33	4.8	4.1
36	5.1	5.5
39	5.2	5.4
42	5.2	5.9
45	4.8	4.8
48	4.4	4.4
51	4.0	3.5
54	3.9	3.9



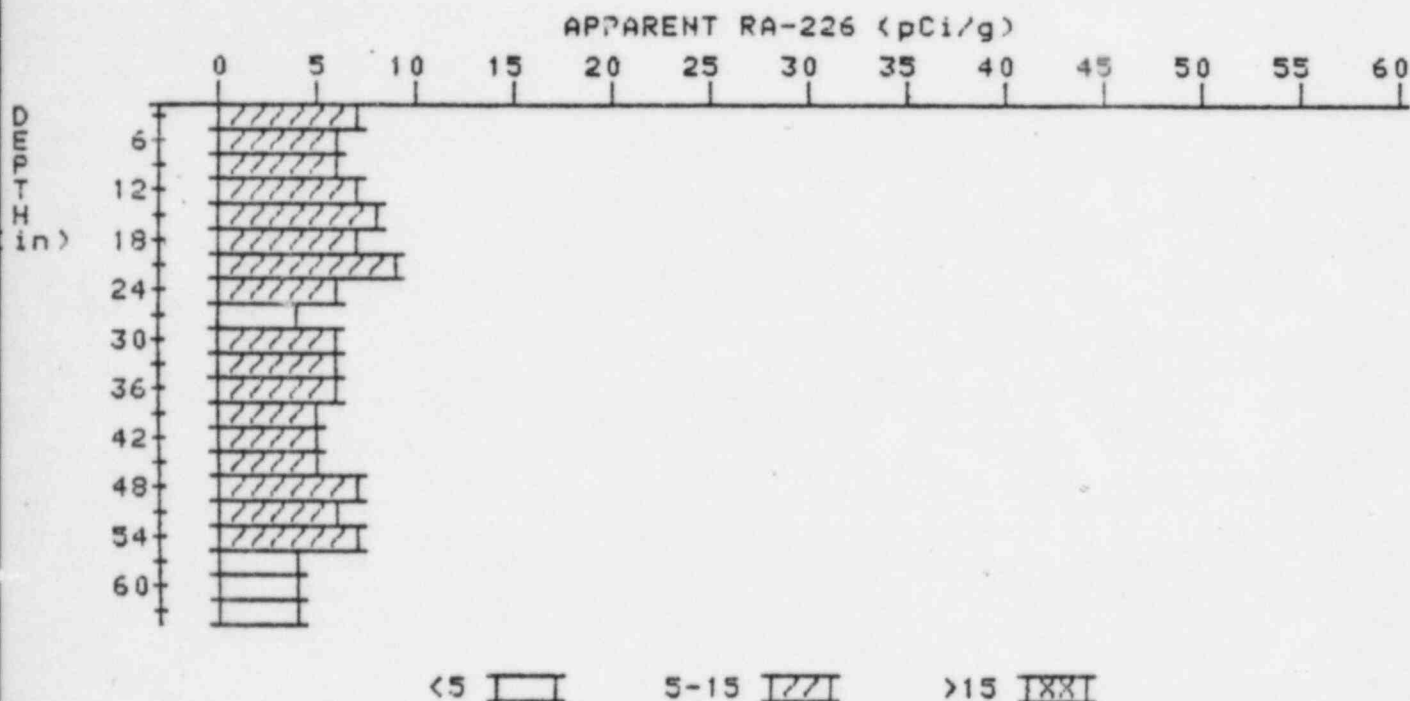
57  
60

3.8  
4.0

3.3  
4.0

# APPARENT RADIUM-226 CONCENTRATION 121 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 121  
LOCATION: 529241



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	6.5	6.5
6	6.6	6.4
9	6.8	6.4
12	7.2	7.4
15	7.5	8.2
18	7.4	7.4
21	7.3	8.7
24	6.4	6.2
27	5.6	3.8
30	5.8	6.3
33	5.7	3.5
36	5.7	5.9
39	5.6	5.4
42	5.6	5.4
45	5.7	5.3
48	6.0	6.5
51	6.0	6.4

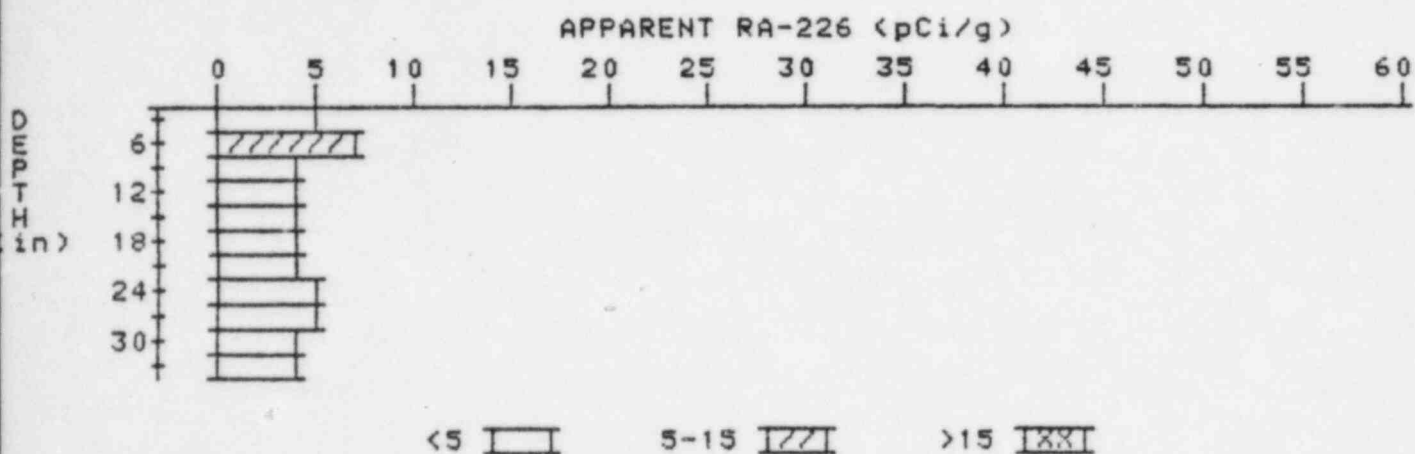
54  
57  
60  
63

5.8  
4.9  
4.4  
4.1

7.0  
4.2  
4.0  
4.1

# APPARENT RADIUM-226 CONCENTRATION 123 DECONVOLUTION GRAPH

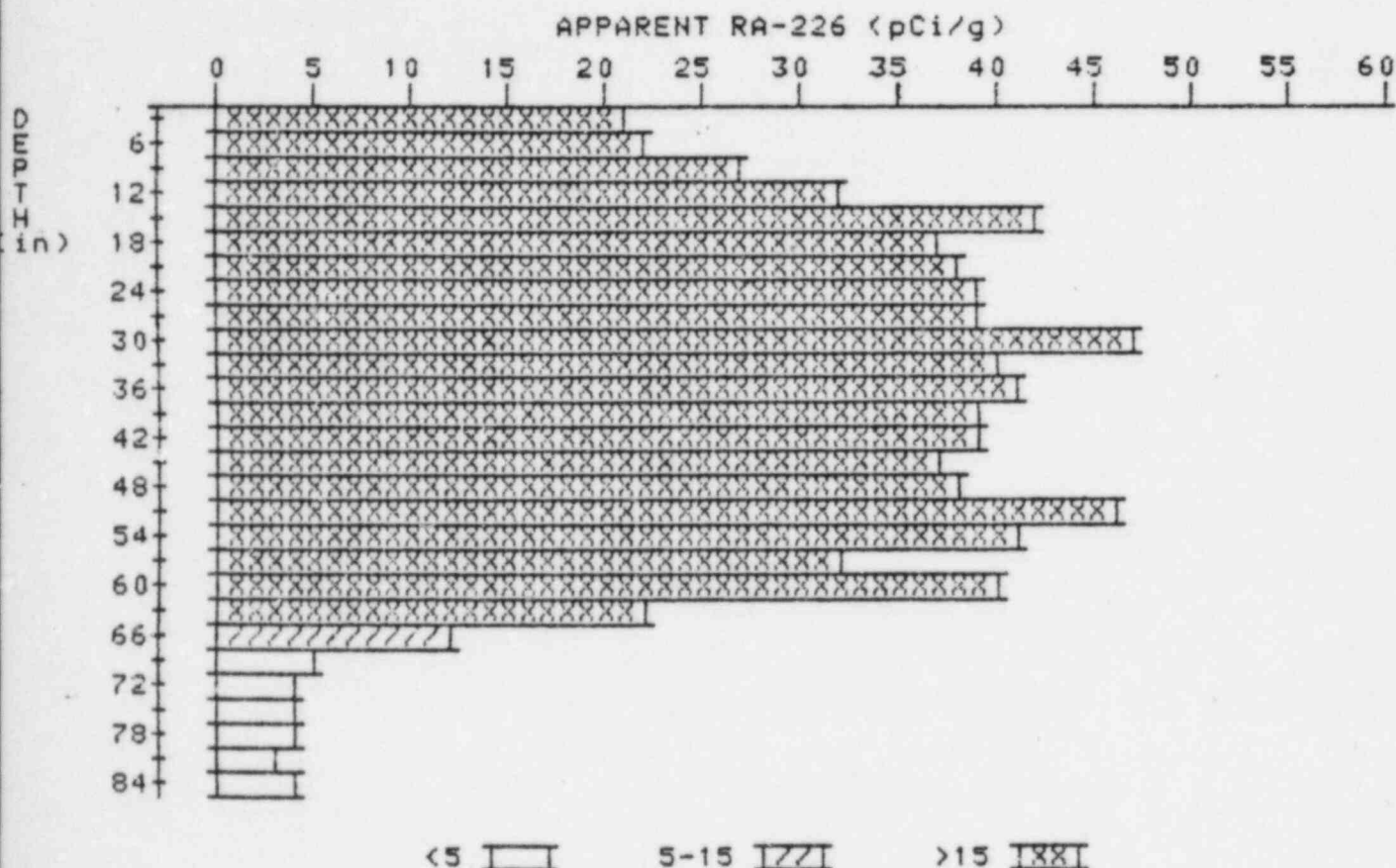
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 123  
LOCATION: 530485



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	4.5	4.5
6	4.9	6.5
9	4.4	4.0
12	4.1	3.7
15	4.0	3.8
18	4.0	3.6
21	4.2	4.2
24	4.4	4.6
27	4.5	4.9
30	4.4	4.2
33	4.4	4.4

# APPARENT RADIUM-226 CONCENTRATION 124 DECONVOLUTION GRAPH

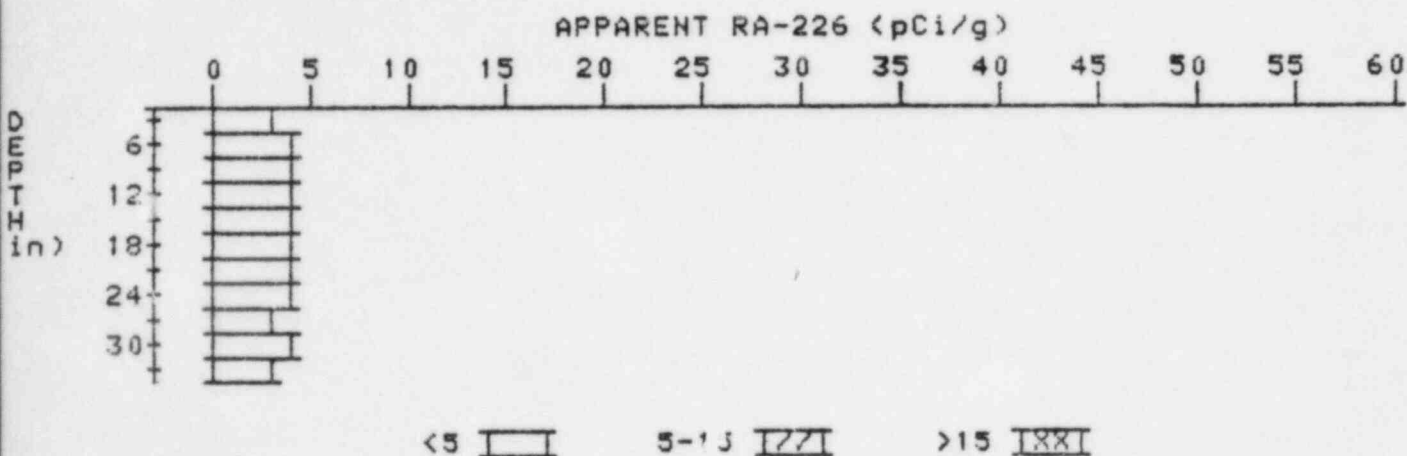
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 124  
LOCATION: 532458



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	21.4	21.4
6	24.1	22.1
9	27.9	27.2
12	32.1	32.3
15	36.2	42.1
18	37.0	36.6
21	38.0	37.8
24	39.1	39.1
27	40.2	39.1
30	41.9	46.5
33	41.0	40.5
36	40.4	40.8

# APPARENT RADIUM-226 CONCENTRATION 128 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 128  
LOCATION: 540220



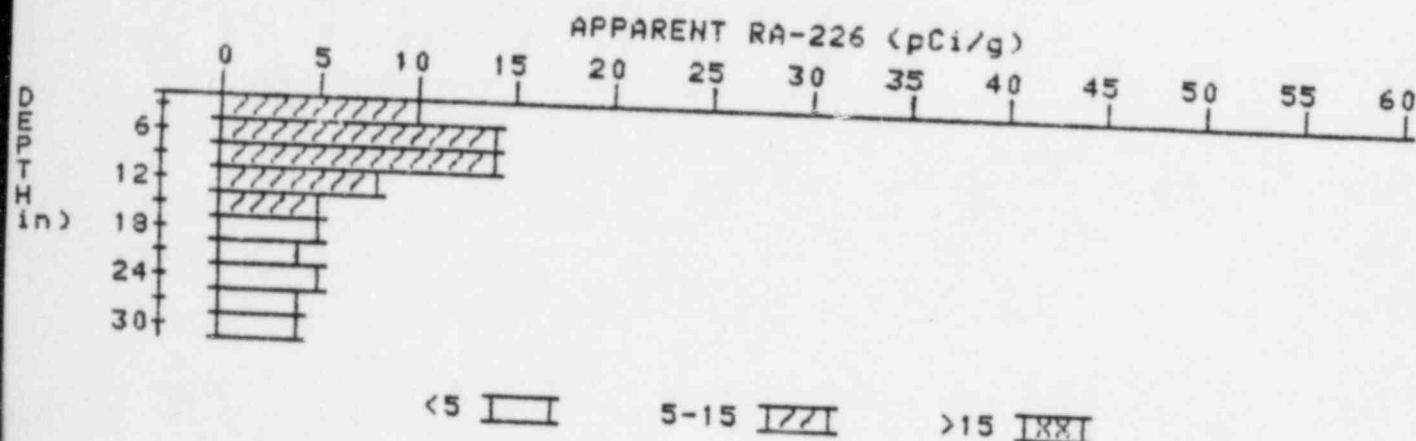
Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.2	3.2
6	3.5	3.9
9	3.6	3.8
12	3.6	3.6
15	3.6	3.6
18	3.6	3.6
21	3.6	3.8
24	3.5	3.5
27	3.4	3.2
30	3.4	3.6
33	3.3	3.3

39	39.6	39.4
42	38.9	38.5
45	38.4	36.6
48	38.9	37.8
51	40.0	46.0
54	37.7	40.7
57	33.7	31.9
60	30.7	39.6
63	22.7	22.0
66	15.1	11.5
69	9.5	4.9
72	6.5	3.7
75	5.1	4.0
78	4.3	3.6
81	3.9	3.4
84	3.8	3.8



# APPARENT RADIUM-226 CONCENTRATION 130 DECONVOLUTION GRAPH

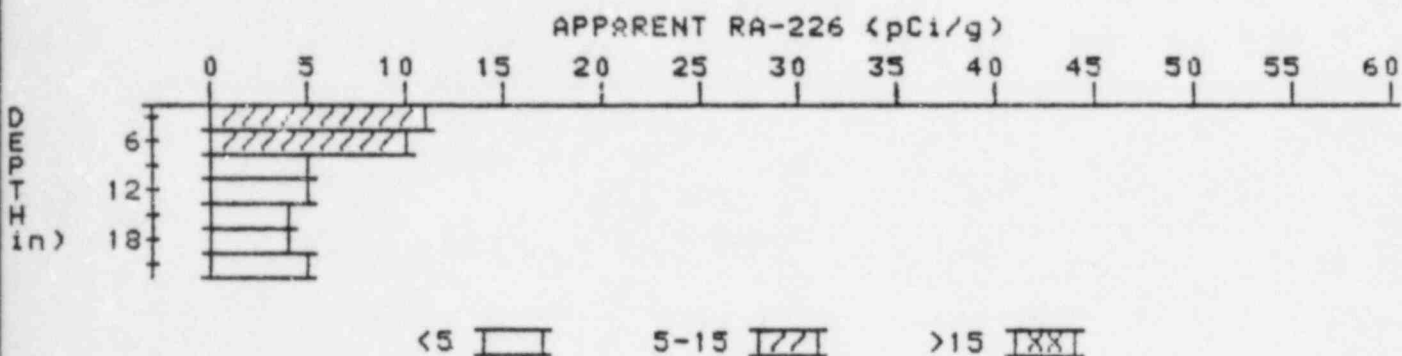
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 130  
LOCATION: 540350



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	10.2	10.2
6	11.4	14.2
9	11.0	14.2
12	8.8	8.4
15	6.8	5.2
18	5.7	5.0
21	5.0	4.1
24	4.8	5.0
27	4.5	4.1
30	4.4	4.4

# APPARENT RADIUM-226 CONCENTRATION 131 DECONVOLUTION GRAPH

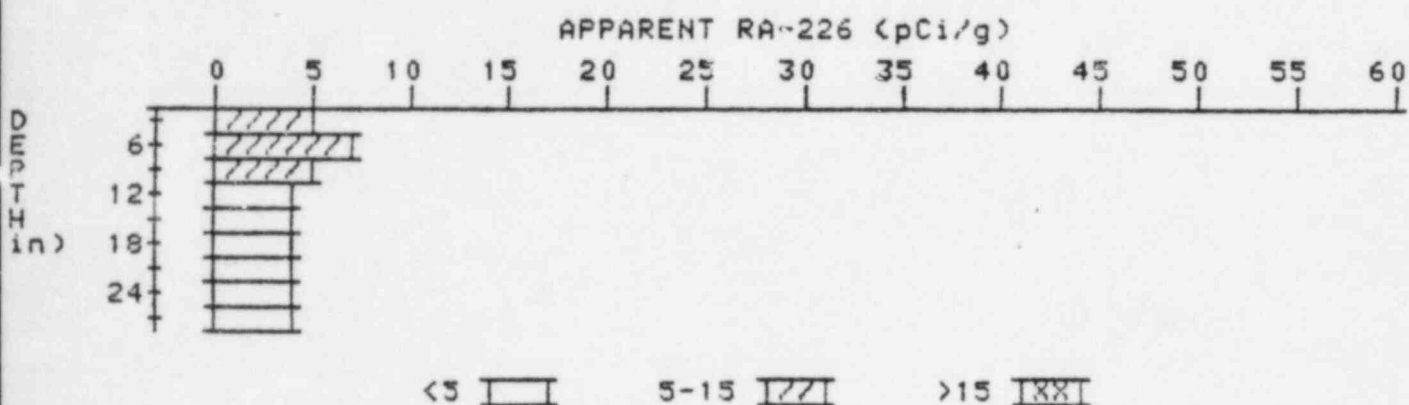
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 131  
LOCATION: 540380



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	10.9	10.9
6	9.0	9.7
9	6.7	4.7
12	5.5	4.6
15	4.8	4.1
18	4.5	4.0
21	4.5	4.5

# APPARENT RADIUM-226 CONCENTRATION 132 DECONVOLUTION GRAPH

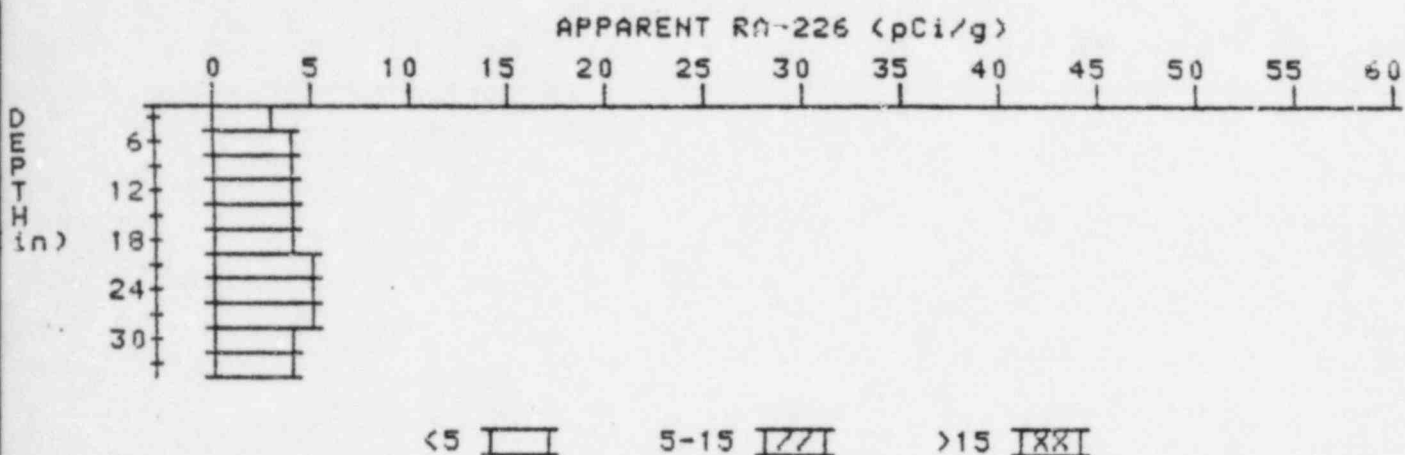
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 132  
LOCATION: 540430



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	5.0	5.0
6	5.4	7.0
9	4.9	5.1
12	4.3	3.8
15	4.0	3.6
18	3.9	3.9
21	3.8	3.8
24	3.7	3.5
27	3.7	3.7

# APPARENT RADIUM-226 CONCENTRATION 134 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 134  
LOCATION: 540490



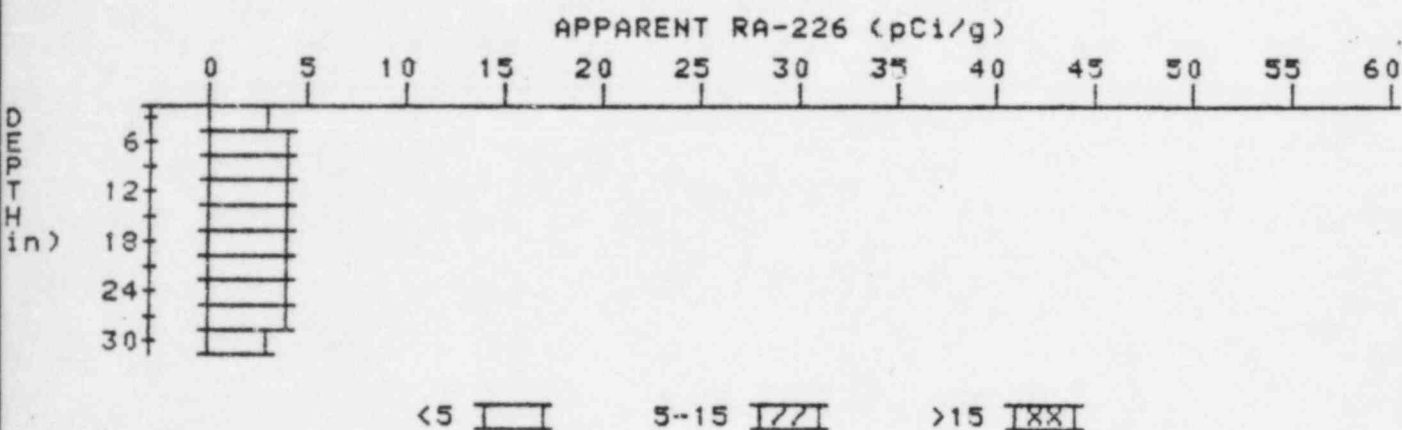
Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.4	3.4
6	3.7	4.1
9	3.8	3.8
12	3.9	3.9
15	4.0	3.8
18	4.2	4.2
21	4.4	4.8
24	4.4	4.6
27	4.3	4.7
30	4.0	3.8
33	3.8	3.8

# APPARENT RADIUM-226 CONCENTRATION 136 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 136

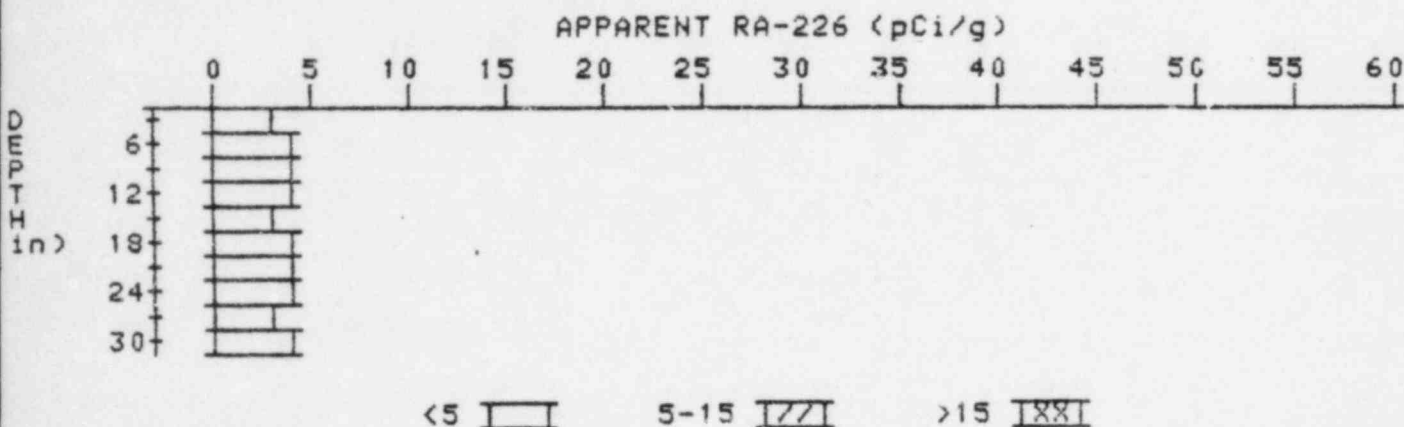
LOCATION: 560260



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.4	3.4
6	3.6	3.6
9	3.8	4.2
12	3.8	3.8
15	3.8	4.0
18	3.7	3.5
21	3.7	3.9
24	3.6	3.6
27	3.5	3.5
30	3.4	3.4

# APPARENT RADIUM-226 CONCENTRATION 137 DECONVOLUTION GRAPH

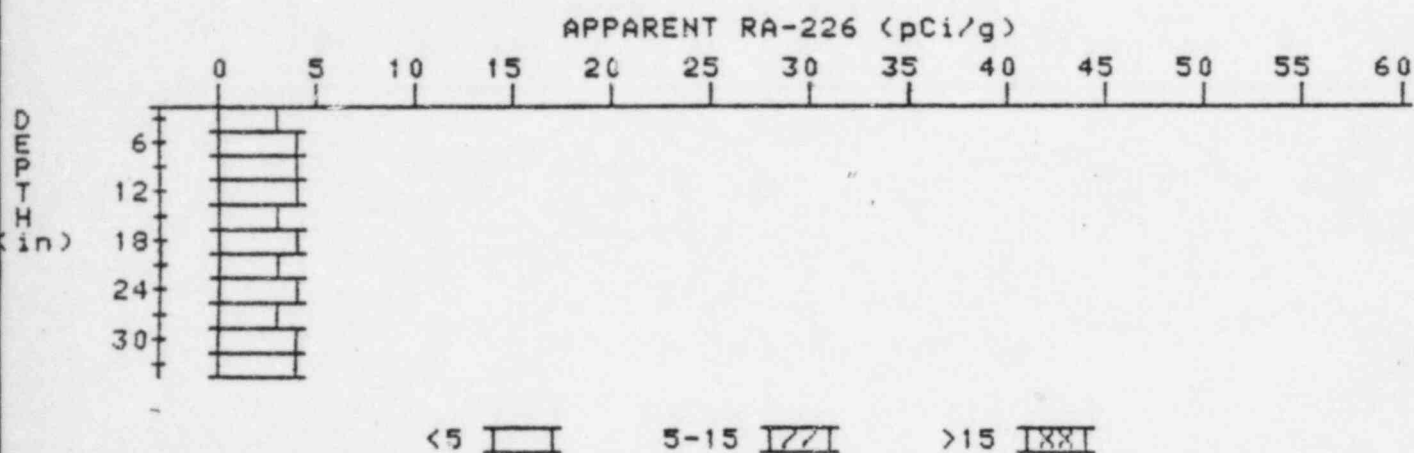
PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 137  
LOCATION: 560315



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.4	3.4
6	3.6	3.8
9	3.7	3.9
12	3.7	3.9
15	3.6	3.2
18	3.7	3.9
21	3.7	3.7
24	3.7	3.9
27	3.6	3.4
30	3.6	3.6

# APPARENT RADIUM-226 CONCENTRATION 139 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T  
HOLE NUMBER: 139  
LOCATION: 560470



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.1	3.1
6	3.4	3.6
9	3.6	4.0
12	3.6	3.6
15	3.6	3.2
18	3.8	4.3
21	3.7	3.3
24	3.8	4.3
27	3.6	3.2
30	3.6	3.8
33	3.5	3.5

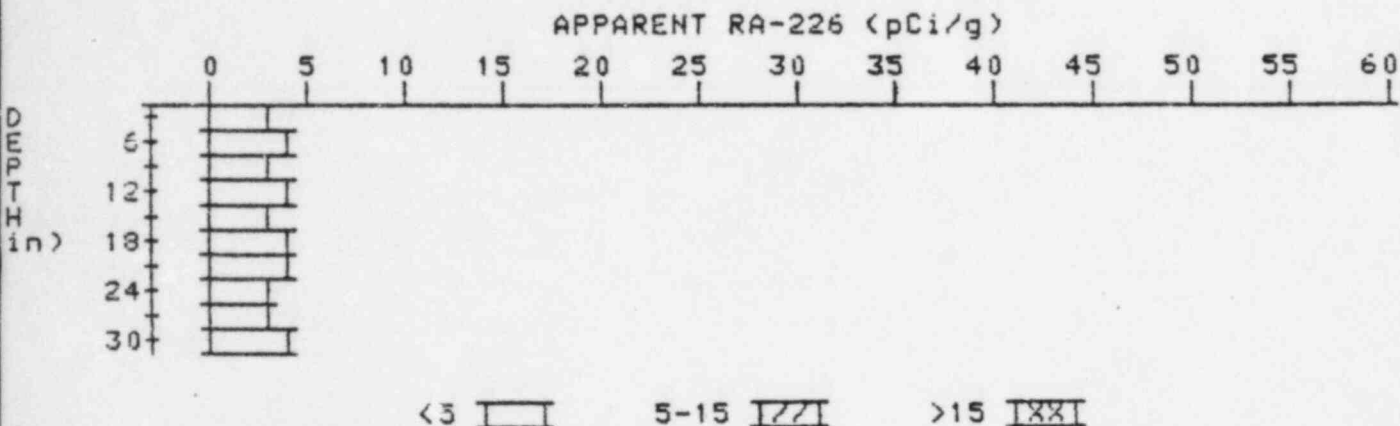


# APPARENT RADIUM-226 CONCENTRATION 141 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 141

LOCATION: 570210



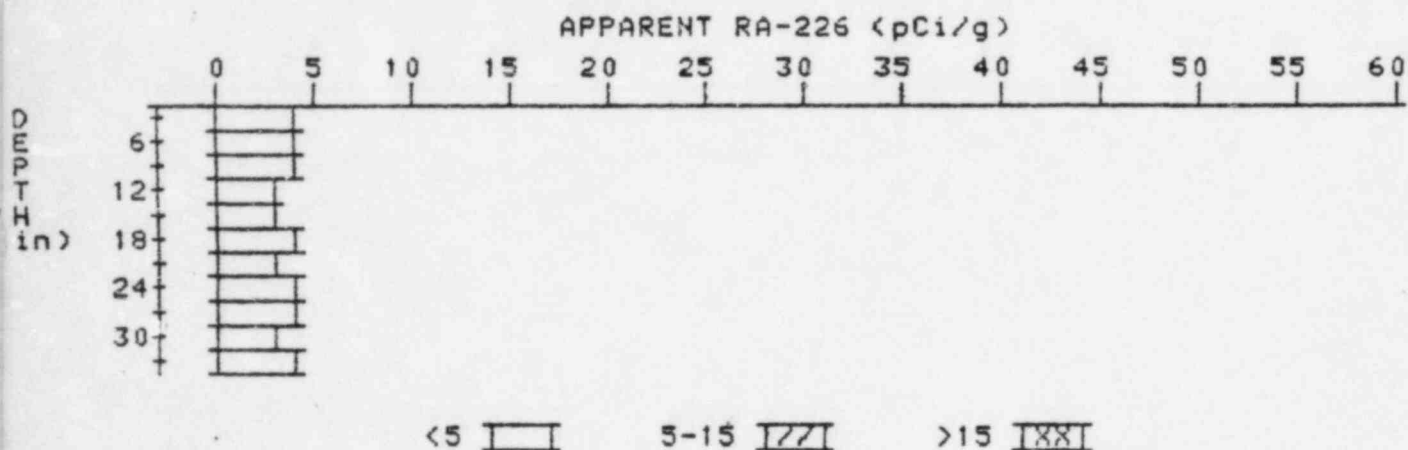
Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.2	3.2
6	3.5	4.0
9	3.5	3.3
12	3.6	4.0
15	3.5	3.3
18	3.5	3.5
21	3.5	3.7
24	3.4	3.2
27	3.4	3.2
30	3.5	3.5

# APPARENT RADIUM-226 CONCENTRATION 143 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-90001-0T

HOLE NUMBER: 143

LOCATION: 576378



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.7	3.7
6	3.8	4.2
9	3.7	3.7
12	3.6	3.4
15	3.6	3.4
18	3.7	4.1
21	3.6	3.2
24	3.7	3.9
27	3.7	3.9
30	3.6	3.4
33	3.6	3.6