

RADIOLOGIC AND ENGINEERING ASSESSMENT

FOR

DOE ID NO.: GJ-01354-CS
ADDRESS: 1710 NORTH 12TH STREET

SEPTEMBER 1985

FOR

URANIUM MILL TAILINGS REMEDIAL ACTION PROJECT OFFICE

ALBUQUERQUE OPERATIONS OFFICE

DEPARTMENT OF ENERGY

BY

BENDIX FIELD ENGINEERING CORPORATION
P.O. Box 1569
Grand Junction, Colorado 81502

APPROVED BY Michael K. Tucker
M. TUCKER
DOE PROJECT ENGINEER

DATE September 11, 1985

REA01354:REA-622

8509270165 850912
PDR WASTE
WM-54 PDR

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	4
3.1 Introduction	4
3.2 Gamma Exposure-Rate Surveys	4
3.2.1 Exterior Findings	4
3.2.2 Interior Findings	4
3.3 Boreholes, Soil Samples, and Other Measurements	4
3.4 Radon/Radon Daughter Concentration	4
3.5 Extent of Contamination	5
4.0 RECOMMENDED REMEDIAL ACTION	6
4.1 Decontamination and Restoration	6
4.2 Evaluation of Recommended Remedial Action	6
5.0 REFERENCES	7
6.0 APPENDIX	8

1.0 EXECUTIVE SUMMARY

1.1 Introduction

The location, DOE ID No. GJ-01354-CS, is a commercial structure located at 1710 North 12th Street, Grand Junction, Colorado.

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 restoration of the property to its original condition. The identified residual radioactive material found on this property is tailings; the estimated volume is: exterior, 51 cu. yd.; interior, 0 cu. yd.

Estimated cost to perform remedial action is \$4,291. Remedial action on this property will take approximately 7 days to complete.

2.0 PROPERTY DESCRIPTION

2.1 General Description

Address: 1710 North 12th Street, Grand Junction, Colorado

Zoning: Business (B-3)

Lot Size: Approximately 9,900 sf (0.23 acres)

Legal Description: Beginning 427.66' south of northwest corner, Block 2, Overhill Annex Subdivision, north 89° 57' east 110.0 feet, south 90 feet, south 89° 57' west 110.0 feet, north 90.0 feet to beginning, City of Grand Junction, County of Mesa, State of Colorado.

Point of Reference: This property is located approximately 2 mile(s) 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
Gas:	Underground
Telephone:	Underground
Sewer:	Underground
Water:	Underground
Cable TV:	None

Bordering Properties:

North:	Shopping center
South:	Single-family residence
East:	Shopping center
West:	North 12th Street

2.2 Existing Facilities and Structures

Primary Structure:

Type:	Single-story commercial structure
Size:	Approximately 1,650 sf
Construction Date:	1963
Construction:	Pre-engineered steel frame with brick veneer
Foundation:	Monolithic concrete slab-on-grade
Footing Depth:	Approximately 12" to bottom of footing from grade
Basement:	None
Crawl Space:	None
Condition:	Good

Other Structures: None

General Remarks:

Structures, utilities, landscaping, and other special features of this property are included in Appendix Figure 2.2.

Historical Data:

This structure is not over 50 years old. Therefore, it does 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-01354-CS on August 5, 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 the historical information available for this property was conducted to determine the areas of potential contamination identified during previous radiologic assessments.

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 team leader notes, deconvolution graphs, and Exterior Gamma Scan map are included in the Appendix (Section 6.0).

3.2 Gamma Exposure-Rate Surveys

3.2.1 Exterior Findings

Background Readings: 15 to 16 uR/h
Highest Outside Gamma Reading (HOG): 76 uR/h

Exterior radium-concentration measurements are presented in Appendix Table 3.1. Exterior exposure-rate survey results are shown in Appendix Figure 3.1.

3.2.2 Interior Findings

Background Readings: 14 to 17 uR/h
Highest Inside Gamma Reading (HIG): 17 uR/h

Interior gamma exposure-rate measurements are summarized in Appendix Table 3.2.

3.3 Boreholes, Soil Samples, and Other Measurements

Areas which displayed elevated gamma levels were further investigated; the locations and types of these investigations are shown in Appendix Figure 3.2. Data from these investigations are included in Appendix Table 3.1.

3.4 Radon/Radon Daughter Concentration (RDC)

The working level was not assessed by CDH. No RDC measurements were taken by Bendix.

3.5 Extent of Contamination

Appendix Figure 3.3 shows identified areas and estimated depths of contamination on this property, based on assessments of all measurements taken. As noted in this figure, areas recommended for remedial action that contain identified residual radioactive materials are:

- (Area A) Surface Material: Asphalt
 Direction From Primary Structure: South
 Other Directions: South parking area
 Total Depth of Contamination: 36 inches
 Other (height or thickness): 3-inch-thick asphalt
 Comments: Area contains large pit run and the
 contamination could extend deeper than indicated.
 Approximate Square Footage: 239
- (Area B) Surface Material: Asphalt
 Direction From Primary Structure: Southwest
 Other Directions: Adjacent to the west property line
 Total Depth of Contamination: 27 inches
 Other (height or thickness): 3-inch-thick asphalt
 Comments: Area contains large pit run.
 Approximate Square Footage: 120
- (Area C) Surface Material: Asphalt
 Direction From Primary Structure: West
 Total Depth of Contamination: 15 inches
 Other (height or thickness): 3-inch-thick asphalt
 Approximate Square Footage: 60
- (Area D) Surface Material: Decorative rock
 Direction From Primary Structure: West
 Other Directions: Adjacent to the west property line
 Total Depth of Contamination: 15 inches
 Comments: Depth of contamination is based on all
 available data.
 Approximate Square Footage: 84
- (Area E) Surface Material: Decorative rock
 Direction From Primary Structure: West
 Other Directions: Adjacent to the west property line
 Total Depth of Contamination: 9 inches
 Comments: Depth of contamination is based on all
 available data.
 Approximate Square Footage: 165

4.0 RECOMMENDED REMEDIAL ACTION

4.1 Decontamination and Restoration

The recommended remedial action for this property, DOE ID No. GJ-01354-CS, includes removal of all areas identified as containing radioactive material (as discussed in Section 3.5 and shown in Appendix Figure 3.3) and transport of removed material to the disposal site.

After remedial action is completed, the areas involved will be restored to original condition in accordance with the Bendix drawings, Vicinity Properties General Construction Specification (Bendix Field Engineering Corporation, 1984), and Statement of Work for Construction Subcontractor.

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 \$4,291.

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

There is no owner preference with respect to remedial action 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	Summary of Interior Gamma Exposure Rates
Table 4.1	Area and Volume Calculations
Table 4.2	Estimated Cost of Decontamination and Restoration

Appendix Figures:

Figure 2.1	Vicinity Map
Figure 2.2	Site Plan
Figure 3.1	Exterior Grid-Point Exposure Rates
Figure 3.2	Exterior Sample Locations
Figure 3.3	Exterior Estimated Extent of Contamination

Team Leader Notes

Deconvolution Graphs (Apparent Radium-226 Concentration)

Exterior Gamma Scan Map

Radium Concentrations at Exterior Locations

DOE ID #GJ-01354-CS

1710 North 12th Street

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	128200	00	DS	<1.0		*	Southwest sidewalk
2	128227	00	DS	1.1		*	Sidewalk
3	128240	00	DS	<1.0		*	Sidewalk
4	131243	00	DS	6.4		*	
		06	DS	2.1		*	
5	132214	00	DS	1.2		*	
6	132226	00	DS	4.5		*	West yard
		03	TC	9.7		*	
		06	TC	13.1		*	
		09	TC	13.1		*	
		12	TC	10.0		*	
		15	TC	7.4		*	DC = 15 inches
		18	TC	5.9		*	Based on the
		21	TC	5.0		*	deconvolution graph
		24	TC	4.5		*	
		27	TC	4.2		*	
		30	TC	4.0		*	
7	134190	00	DS	<1.0		*	Southwest of the primary structure
8	134194	00	DS	3.0		*	
9	134200	00	DS	6.3		*	Southwest of the primary structure
		03	TC	9.4		*	
		06	TC	11.6		*	
		09	TC	11.2		*	Auger refusal at
		12	TC	10.7		*	36 inches
		15	TC	10.3		*	
		18	TC	10.3		*	
		21	TC	9.9		*	
		24	TC	9.3		*	
		27	TC	7.8		*	DC = 27 inches
		30	TC	7.0		*	Based on the
		33	TC	5.7		*	deconvolution graph
		36	TC	5.1		*	
10	135230	00	DS	<1.0		*	

Radium Concentrations at Exterior Locations

DOE ID #GJ-01354-CS

1710 North 12th Street

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.		
11	135240	00	DS	72.3		*	
		03	TC	42.4		*	West yard
		06	TC	29.5		*	
		09	TC	18.6		*	DC = 9 inches Based on the deconvolution graph
		12	TC	11.6		*	
		15	TC	8.0		*	
		18	TC	6.2		*	
		21	TC	5.1		*	
		24	TC	4.7		*	
		27	TC	4.3		*	
		30	TC	4.1		*	
		33	TC	4.2		*	
		36	TC	4.2		*	
		39	TC	4.0		*	
		42	TC	3.8		*	
		45	TC	3.6		*	
12	137247	00	DS	1.1		*	
		06	DS	1.4		*	
13	138222	00	DS	6.1		*	
		03	TC	11.5		*	West asphalt
		06	TC	19.4		*	
		09	TC	28.3		*	
		12	TC	27.4		*	
		15	TC	16.7		*	DC = 15 inches Based on the deconvolution graph
		18	TC	10.5		*	
		21	TC	7.0		*	
		24	TC	5.3		*	
		27	TC	4.6		*	
		30	TC	4.2		*	
14	138226	33	TC	3.9		*	
		36	TC	4.0		*	
		00	DS	2.4		*	
		06	DS	6.6		*	
		03	TC	6.9		*	Southwest yard
		06	TC	7.1		*	
		09	TC	6.1		*	
		12	TC	5.1		*	
		15	TC	4.6		*	DC = 12 inches Based on the deconvolution graph
		18	TC	4.2		*	
		21	TC	4.1		*	
		24	TC	3.9		*	

Radium Concentrations at Exterior Locations

DOE ID #GJ-01354-CS

1710 North 12th Street

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.		
14	138226	27	TC	4.0		*	
		30	TC	4.0		*	
		33	TC	3.9		*	
		36	TC	3.8		*	
		39	TC	3.9		*	
15	138230	00	DS	<1.0		*	
		06	DS	1.5		*	
16	140200	00	DS	6.1		*	
17	143199	00	DS	1.1		*	
18	149225	00	DS	<1.0		*	Water and foundation
19	149247	00	DS	1.1		*	Sewer line
20	150200	00	DS	1.6		*	
21	160223	00	DS	1.2		*	
22	168196	00	DS	1.4		*	
23	170200	00	DS	1.8		*	
24	171226	00	DS	<1.0		*	
25	176202	00	DS	1.2		*	
26	177194	00	DS	<1.0		*	
27	177199	00	DS	2.1		*	
28	178210	00	DS	<1.0		*	
29	178215	00	DS	<1.0		*	
30	179261	00	DS	1.0		*	Gas line
		27	DS	1.4		*	
31	180195	00	DS	1.2		*	
32	180199	00	DS	2.8		*	South of the primary structure
		03	TC	6.5		*	

Radium Concentrations at Exterior Locations

DOE ID #GJ-01354-CS

1710 North 12th Street

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.		
32	180199	06	TC	9.0		*	
		09	TC	10.1		*	Auger refusal at 36 inches
		12	TC	10.6		*	
		15	TC	10.5		*	
		18	TC	10.1		*	
		21	TC	10.0		*	
		24	TC	10.1		*	
		27	TC	10.0		*	
		30	TC	9.7		*	DC = 36 inches
		33	TC	9.2		*	Based on the
		36	TC	8.2		*	deconvolution graph
33	180229	00	DS	<1.0		*	
34	180230	00	DS	2.3		*	On bricks
35	182207	00	DS	3.0		*	
36	182215	00	DS	2.2		*	
37	182220	00	DS	<1.0		*	
38	185200	00	DS	2.5		*	
39	188205	00	DS	1.3		*	
40	188215	00	DS	1.3		*	
41	189194	00	DS	<1.0		*	
42	190200	00	DS	2.0		*	
43	195200	00	DS	1.1		*	
44	202230	00	DS	1.8		*	Foundation

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 = 08-05-85
 Team Leader = MJH

Table 3.2

Summary of Interior Gamma Exposure Rates

DOE ID #GJ-01354-CS

1710 North 12th Street

Page 1 of 1

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)
Ground Floor	*	*	*	*	14-17	*

* A gamma scan was performed to confirm the absence of interior contamination.

Table 4.1
Area and Volume Calculations
DOE ID No. GJ-01354-CS

Page 1 of 1

<u>AREA</u>	<u>CALCULATIONS(ft)</u>	<u>SF</u>	<u>DEPTH(ft)</u>	<u>CF</u>	<u>CUBIC YARDS</u>
EXTERIOR					
	Asphalt				
A	10 x 18 =	180			
	8 x 25 =	200			
		<hr/>			
		380	x 0.3 =	114	
B	17 x 12 =	204	x 0.3 =	61	
C	7 x 12 =	84	x 0.3 =	25	
				<hr/>	
	Volume of Asphalt			= 200 =	200/27 = 7
	Contaminated Fill				
A	7 x 17 =	119			
	5 x 24 =	120			
		<hr/>			
		239	x 2.7 =	645	
B	8 x 15 =	120	x 2.0 =	240	
C	6 x 10 =	60	x 1.0 =	60	
D	6 x 14 =	84	x 1.3 =	109	
E	15 x 11 =	165	x 0.8 =	132	
				<hr/>	
	Volume of Fill			= 1,186 =	1,186/27 = 44
	TOTAL VOLUME - EXTERIOR				
					<hr/> = 51

See Appendix Figure 3.3 For Areas

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Table 4.2
Estimated Cost of Decontamination and Restoration
DOE ID No. GJ-01354-CS

Page 1 of 1

EXTERIOR

Remove/replace asphalt paving 668 sf @ \$2.60/sf	\$ 1,737
Remove identified residual radioactive material 44 cy @ \$14.50/cy (machine-open)	638
Replace areas with roadbase 44 cy @ \$11.50/cy	506
Replace decorative rock 250 sf @ \$.25/sf	63

TOTAL EXTERIOR	\$ 2,944
----------------	----------

TOTAL INTERIOR	0
----------------	---

ACCESS CONTROL	200
----------------	-----

SUBTOTAL	\$ 3,144
----------	----------

CONTINGENCY @ 5%	157
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SUBTOTAL	\$ 3,301
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CONTRACTOR OVERHEAD & PROFIT @ 30%	990
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GRAND TOTAL	\$ 4,291
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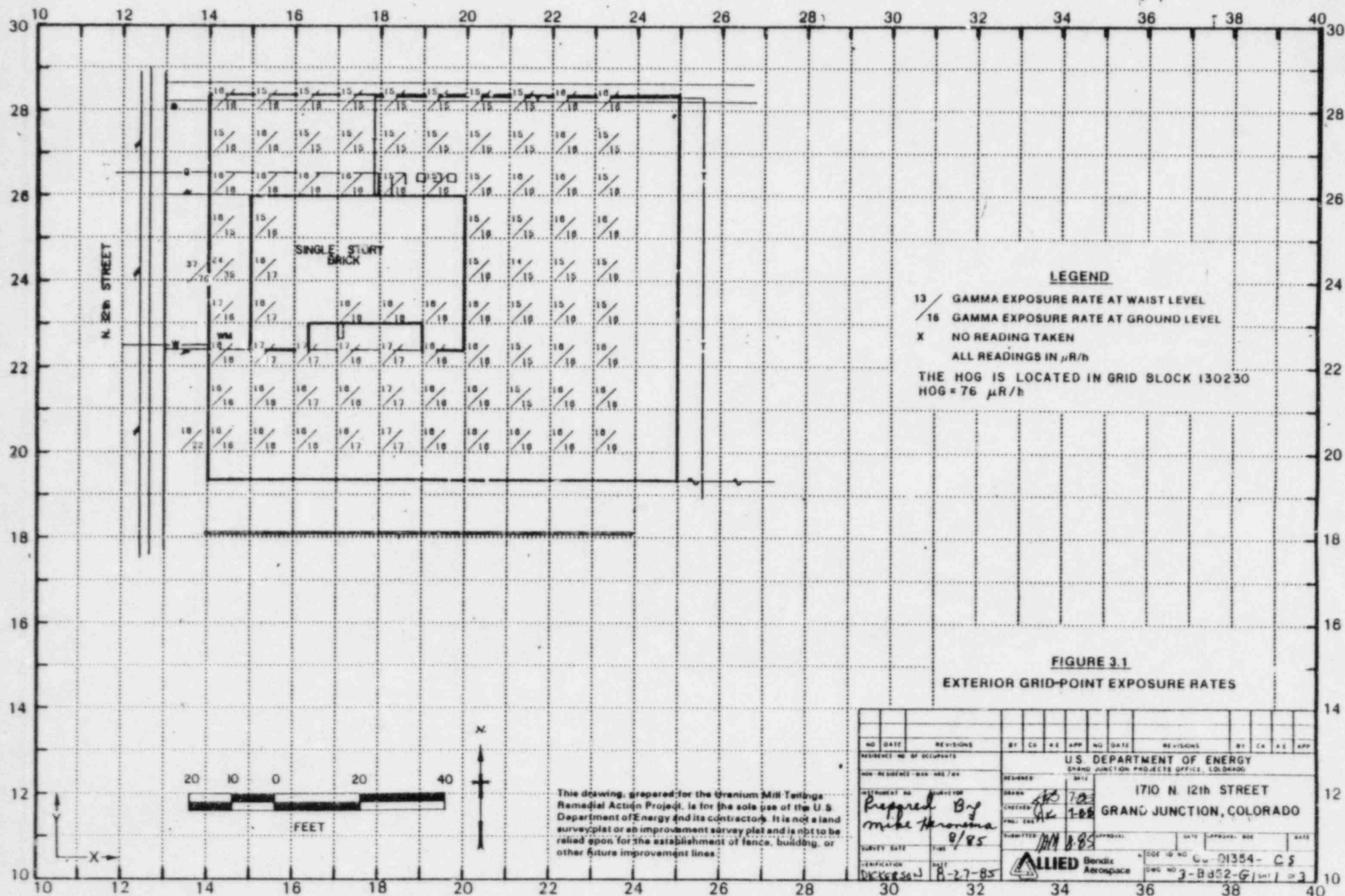
RR090485

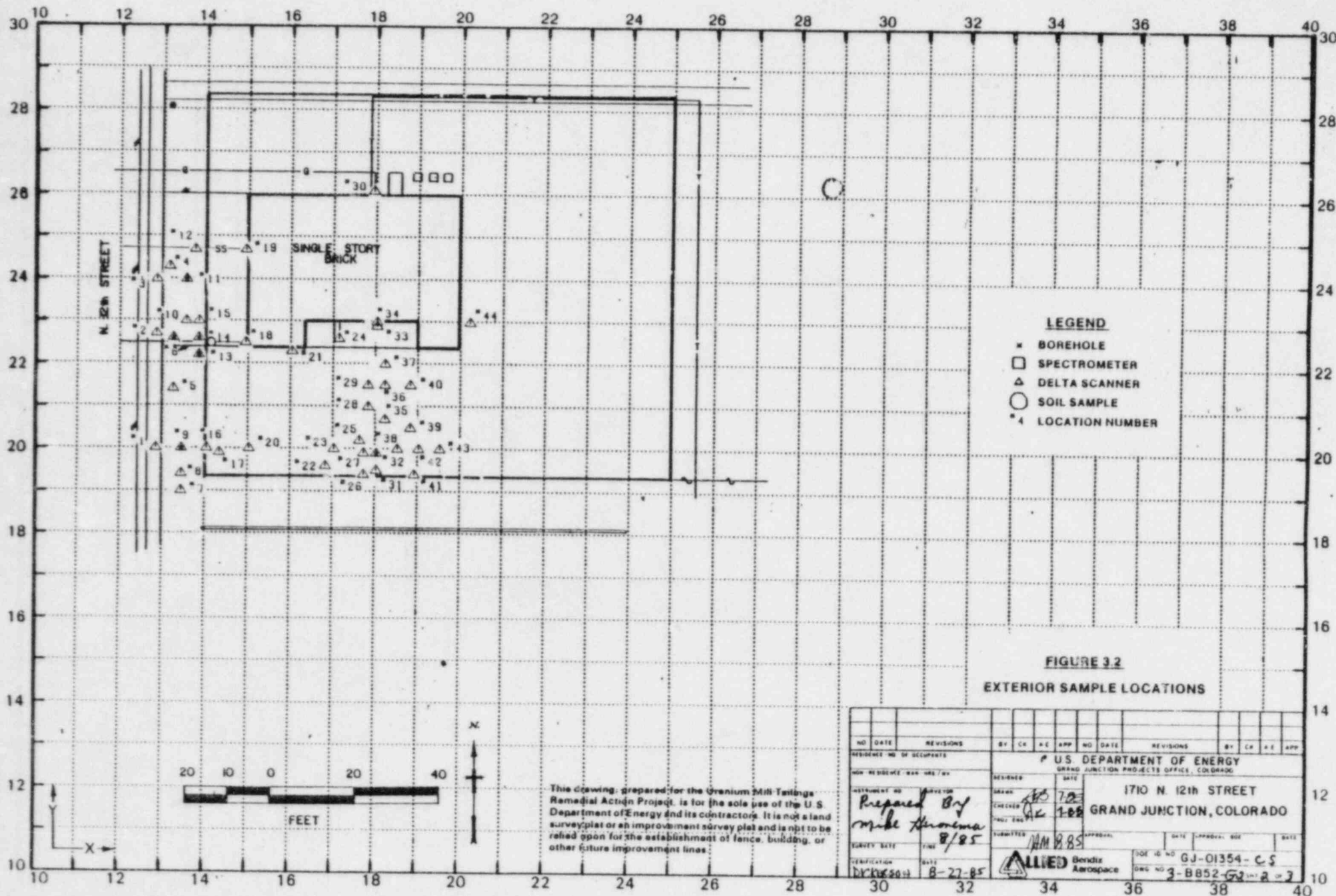
REA01354/REA-622/LMR



FIGURE 2.1
VICINITY MAP







NO DATE		REVISIONS		BY	CR	DATE	NO DATE		REVISIONS		BY	CR	DATE
RESIDENCE NO. OF OCCUPANTS													
U.S. DEPARTMENT OF ENERGY GRAND JUNCTION PROJECTS OFFICE, COLORADO													
1710 N. 12TH STREET GRAND JUNCTION, COLORADO													
INSTRUMENT NO.		DATE		DRAWN		DATE		CHECKED		DATE		DATE	
Prepared By		8/85		JES		7/85		JES		7/85		7/85	
Mike Hironaka		8/85		JES		7/85		JES		7/85		7/85	
SURVEY DATE		TIME		SUBMITTED		DATE		APPROVAL		DATE		DATE	
8-27-85				AM 8/85				DATE		DATE		DATE	
CERTIFICATION		DATE		ALLIED		Bendix Aerospace		JOB NO.		GJ-01354-C5		DATE	
DRW 204		8-27-85		ALLIED		Bendix Aerospace		DWG NO.		3-B852-52		2 of 2	

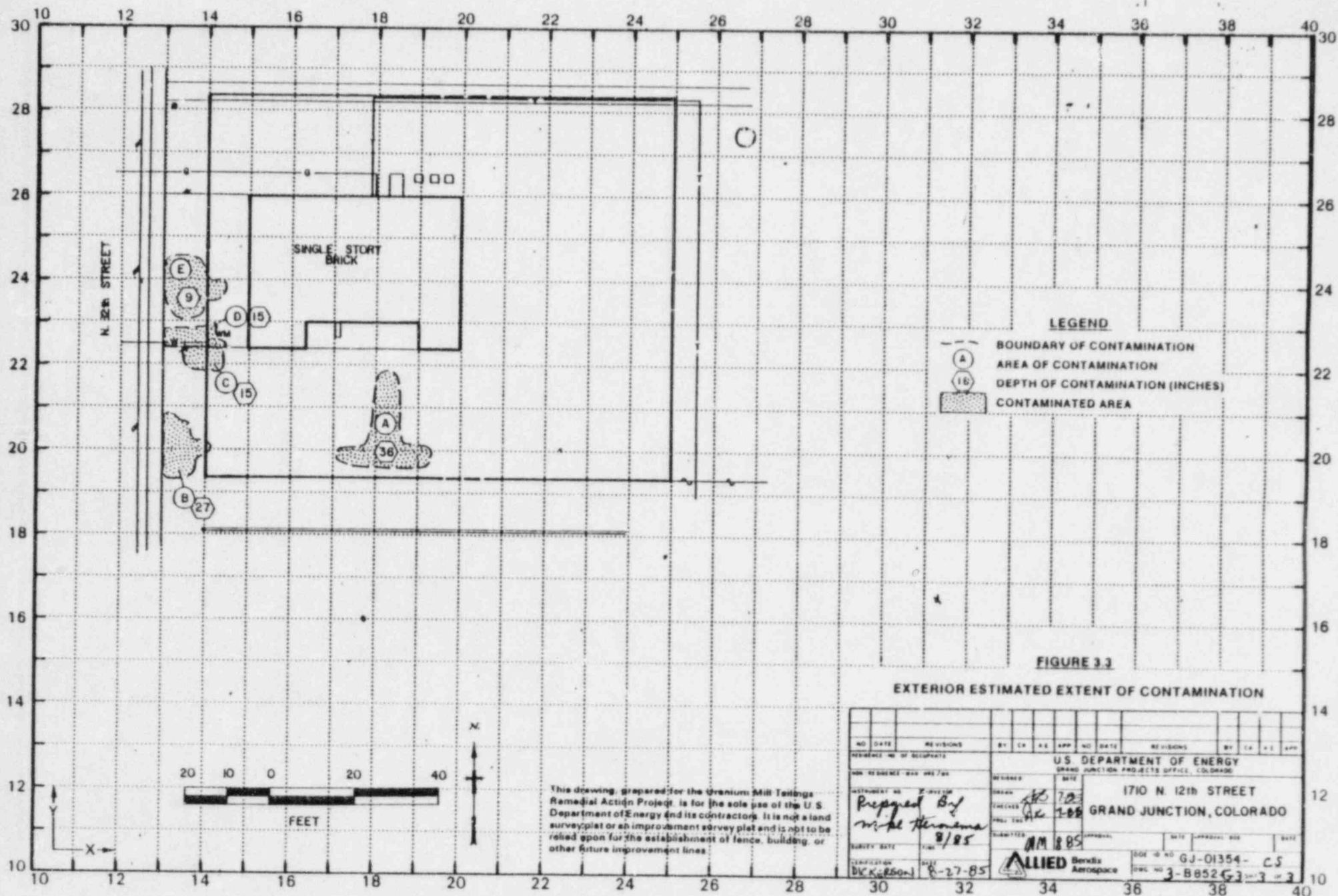


FIGURE 3.3

EXTERIOR ESTIMATED EXTENT OF CONTAMINATION

[illegible]

MEMORANDUM

ALLIED Bendix
Aerospace

Bendix Field Engineering Corporation
Grand Junction Operations
Grand Junction, Colorado

Date: August 5, 1985

To: Files

From: Mike Heronema *MSH by YLB*

Subject: Team Leader Notes - GJ-01354-CS

Address: 1710 North 12th Street

Owner: Orchard Group, LTD.
J.R. Livingston, Managing Partner

Occupancy/Tenant: Unknown, Commercial Office

Team Members

M. Heronema (Team Leader)
D. Bell
D. Dow

M. Gilfillan
L. Kula

Instruments

See Equipment Summary sheet

All utilities were investigated with no apparent contamination. Boreholes for the water, sewer, and east foundation were investigated with the downhole scintillometer. Contamination was found around the water meter pit.

Elevated readings adjacent to the south side of the primary structure were investigated with no apparent contamination found, natural radiation in the brick is the suspected cause.

Scintillometer readings of 140 counts per second (cps) in the south parking area were investigated and found to be contaminated.

Team Leader Notes
Mike Heronema
GJ-01354-CS
August 5, 1985
Page 2

The foundation for the primary structure is a concrete slab-on-grade. There is no basement or crawl space.

An investigation for spillover onto the adjacent properties was conducted, no spillover was noted.

The areas of contamination found during the survey exceeds the Colorado Department of Health (CDH) and Oak Ridge National Laboratory (ORNL) inclusion data.

All team members were alpha scanned before eating, drinking, and smoking in a clean designated area, and prior to leaving the property.

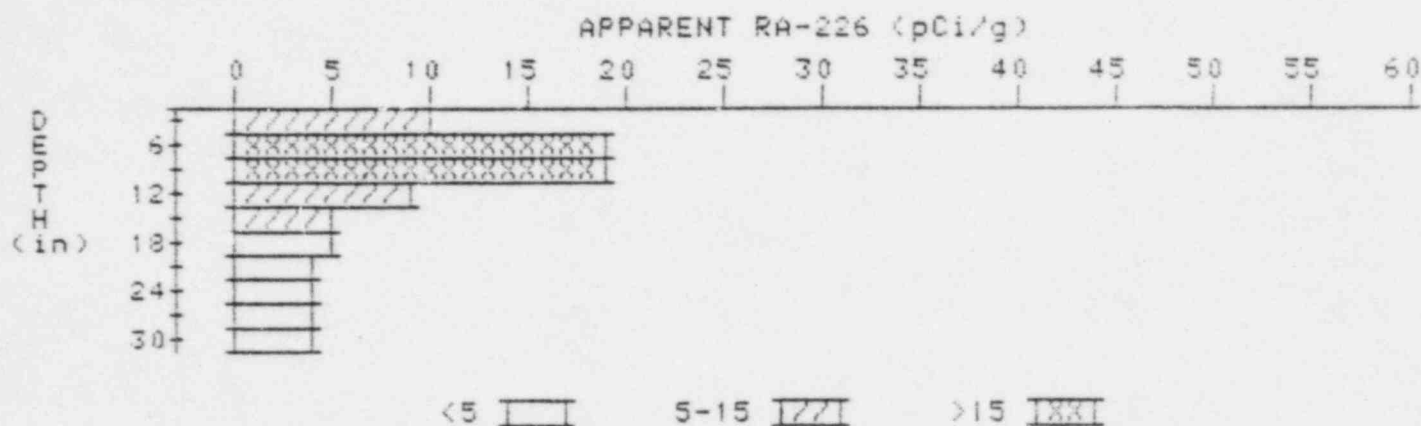
APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

6

PROPERTY NUMBER: GJ-01354-CS

HOLE NUMBER: 6

LOCATION: 132226



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	9.7	9.7
6	13.1	19.1
9	13.1	18.6
12	10.0	9.1
15	7.4	5.4
18	5.9	4.8
21	5.0	4.3
24	4.5	4.1
27	4.2	4.0
30	4.0	4.0

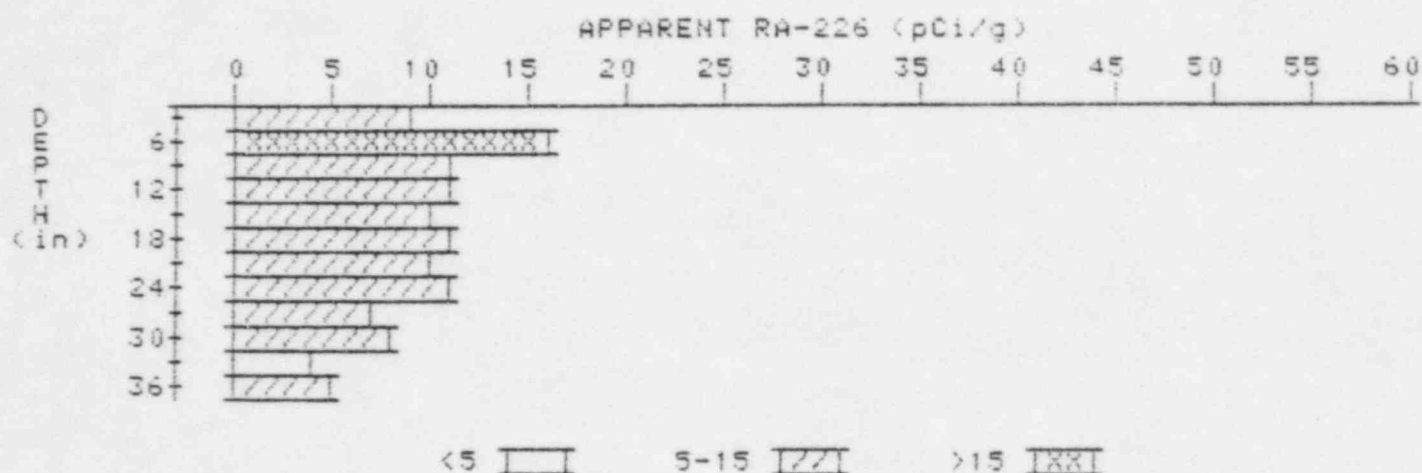
APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

9

PROPERTY NUMBER: GJ-01354-CS

HOLE NUMBER: 9

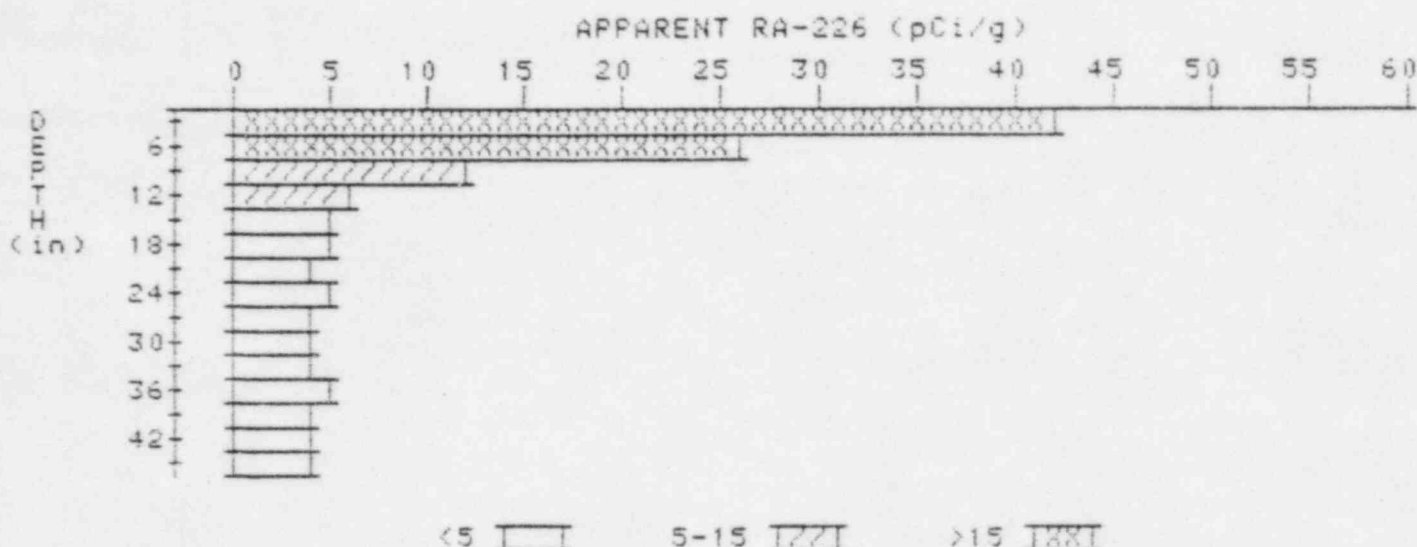
LOCATION: 134200



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	9.4	9.4
6	11.6	16.2
9	11.2	11.4
12	10.7	10.5
15	10.3	9.6
18	10.3	11.0
21	9.9	10.3
24	9.3	10.9
27	7.8	6.6
30	7.0	7.9
33	5.7	4.5
36	5.1	5.1

APPARENT RADIUM-226 CONCENTRATION 11 DECONVOLUTION GRAPH

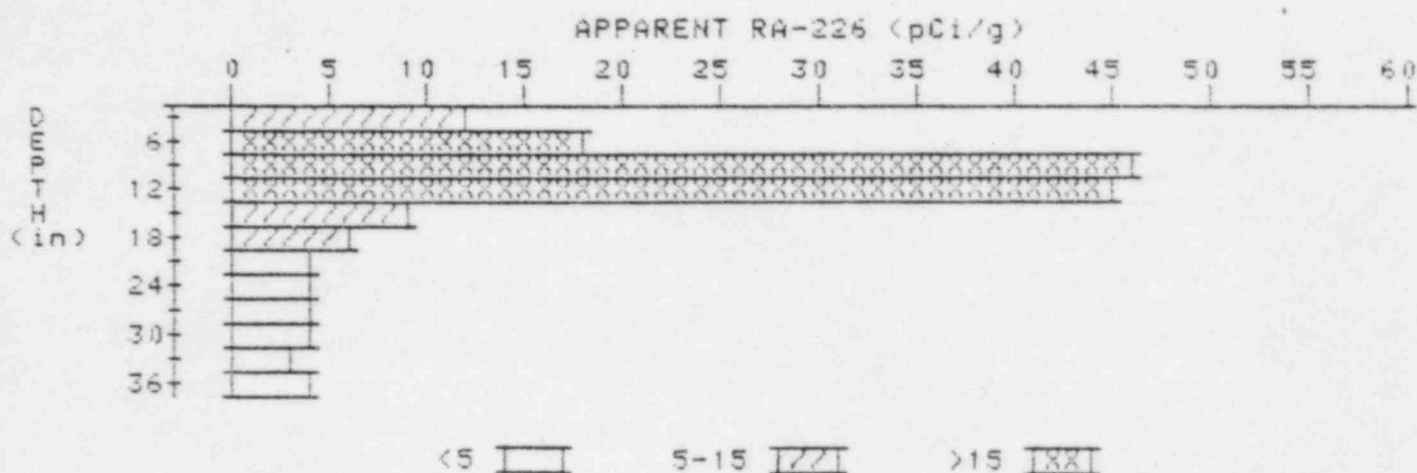
PROPERTY NUMBER: GJ-01354-CS
HOLE NUMBER: 11
LOCATION: 135240



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	42.4	42.4
6	29.5	25.9
9	18.6	11.7
12	11.6	5.6
15	8.0	4.8
18	6.2	5.0
21	5.1	3.9
24	4.7	4.7
27	4.3	3.9
30	4.1	3.6
33	4.2	4.4
36	4.2	4.6
39	4.0	4.0
42	3.8	3.8
45	3.6	3.6

APPARENT RADIUM-226 CONCENTRATION 13 DECONVOLUTION GRAPH

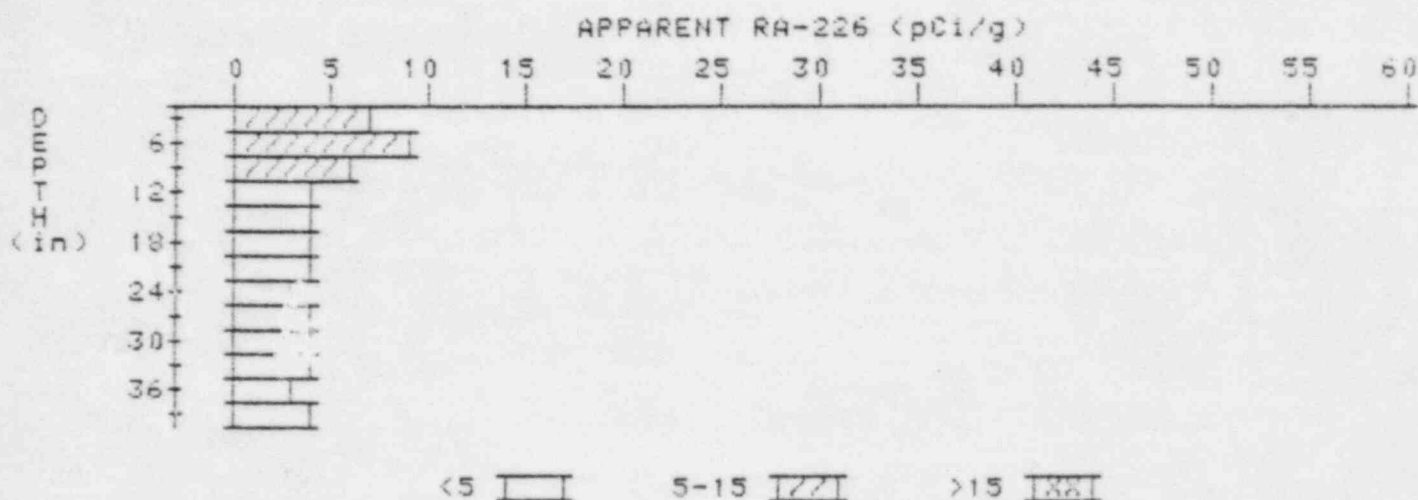
PROPERTY NUMBER: GJ-01354-CS
HOLE NUMBER: 13
LOCATION: 138222



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	11.5	11.5
6	19.4	17.6
9	28.3	45.7
12	27.4	44.8
15	16.7	8.7
18	10.5	5.7
21	7.0	3.8
24	5.3	3.5
27	4.6	4.1
30	4.2	4.0
33	3.9	3.2
36	4.0	4.0

APPARENT RADIUM-226 CONCENTRATION 14 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-01354-CS
HOLE NUMBER: 14
LOCATION: 138226



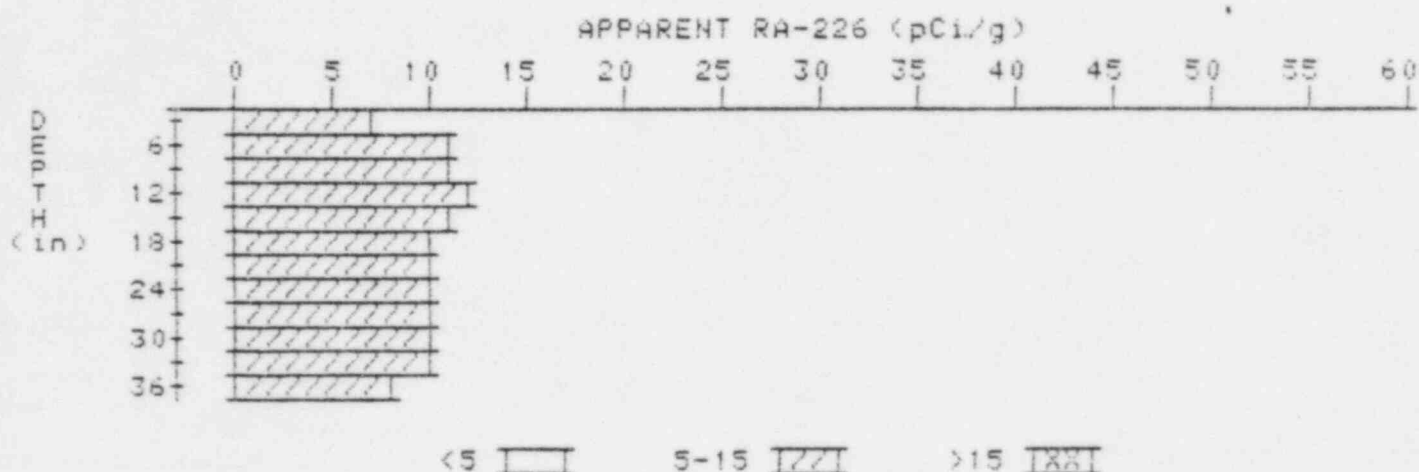
Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	6.9	6.9
6	7.1	9.2
9	6.1	6.1
12	5.1	4.2
15	4.6	4.4
18	4.2	3.7
21	4.1	4.3
24	3.9	3.4
27	4.0	4.2
30	4.0	4.2
33	3.9	3.9
36	3.8	3.4
39	3.9	3.9

APPARENT RADIUM-226 CONCENTRATION 32 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-01354-CS

HOLE NUMBER: 32

LOCATION: 180199



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	6.5	6.5
6	9.0	11.5
9	10.1	11.2
12	10.6	11.7
15	10.5	11.0
18	10.1	9.6
21	10.0	9.6
24	10.1	10.5
27	10.0	10.4
30	9.7	10.1
33	9.2	10.1
36	8.2	8.2

