

RADIOLOGIC AND ENGINEERING ASSESSMENT

FOR

DOE ID NO.: GJ-01007-RS
ADDRESS: 2512 TEXAS AVENUE

AUGUST 1985

FOR

URANIUM MILL TAILINGS REMEDIAL ACTION PROJECT OFFICE

ALBUQUERQUE OPERATIONS OFFICE

DEPARTMENT OF ENERGY

BY

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

APPROVED BY

Michael K. Tucker
M. TUCKER
DOE PROJECT ENGINEER

DATE

August 27, 1985

REA01007:REA-619

8509100495 850827
PDR WASTE
WM-54 PDR

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1.0 EXECUTIVE SUMMARY

1.1 Introduction

The location, DOE ID No. GJ-01007-RS, is a single-family residence located at 2512 Texas Avenue, 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, 8 cu. yd.; interior, 0 cu. yd.

Estimated cost to perform remedial action, including dislocation when applicable, is \$660. Remedial action on this property will take approximately 3 days to complete.

2.0 PROPERTY DESCRIPTION

2.1 General Description

Address: 2512 Texas Avenue, Grand Junction, Colorado

Zoning: Residential (RSF-8)

Lot Size: Approximately 8,099 sf (0.19 acres)

Legal Description: Lot 17, Block 1, East Elm Avenue Heights, Section 12, T1S R1W, Ute Meridian, City of Grand Junction, County of Mesa, State of Colorado.

Point of Reference: This property is located approximately 2 mile(s) northeast 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:	Overhead
Sewer:	Underground
Water:	Underground
Cable TV:	Overhead

Bordering Properties:

North:	Alley (gravel)
South:	Texas Avenue
East:	Single-family residence
West:	Single-family residence

2.2 Existing Facilities and Structures

Primary Structure:

Type:	Single-story residence
Size:	Approximately 2,104 sf
Construction Date:	1955
Construction:	Wood-frame
Foundation:	Concrete stemwall on spread footing
Footing Depth:	Not determined
Basement:	None
Crawl Space:	Yes - under entire living area
Condition:	Good

Other Structures:

Type:	Garage
Size:	Approximately 284 sf
Construction:	Wood-frame
Foundation:	None
Condition:	Good

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-01007-RS on July 31, 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 to determine areas of potential contamination identified during previous radiologic assessments of this property.

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, 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: 14 to 16 uR/h
Highest Outside Gamma Reading (HOG): 40 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: 16 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: Gravel and soil
Direction From Primary Structure: East
Other Directions: South of the garage
Total Depth of Contamination: 6 inches
Approximate Square Footage: 283
- (Area B) Surface Material: Gravel and soil
Direction From Primary Structure: East
Other Directions: Encircled by Area A
Total Depth of Contamination: 9 inches
Approximate Square Footage: 80
- (Area C) Surface Material: Gravel and soil
Direction From Primary Structure: East
Total Depth of Contamination: 6 inches
Approximate Square Footage: 10

(AREAS REQUIRING FURTHER INVESTIGATION DURING REMEDIAL ACTION)

An interior scan of the ground floor of the structure, near the east wall, should be performed after the removal of exterior deposits is complete.

4.0 RECOMMENDED REMEDIAL ACTION

4.1 Decontamination and Restoration

The recommended remedial action for this property, DOE ID No. GJ-01007-RS, 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 \$660.

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	Estimated Extent of Contamination

Official Survey Report

Team Leader Notes

Deconvolution Graphs (Apparent Radium-226 Concentration)

Exterior Gamma Scan Map

Radium Concentrations at Exterior Locations

DOE ID #GJ-01007-RS

2512 Texas Avenue

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Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
1	145269	00	DS	<1.0		*	Northeast yard on concrete
2	147266	00	DS	1614.7		*	Northeast yard on ore sample - Sample taken to repository
		06	DS	1.7		*	
3	147269	00	DS	<1.0		*	Northeast yard
		06	DS	1.5		*	
4	170230	00	DS	<1.0		*	North yard Background
		03	TC	3.3		*	
		06	TC	3.4		*	DC = 0 inches
		09	TC	3.6		*	
		12	TC	3.6		*	
		15	TC	3.5		*	
		18	TC	3.5		*	
		21	TC	3.5		*	
		24	TC	3.5		*	
		27	TC	3.4		*	
		30	TC	3.5		*	
		33	TC	3.6		*	
5	191220	00	DS	1.5		*	Sewer line North foundation
		03	TC	2.7		*	
		06	TC	2.9		*	DC = 0 inches
		09	TC	3.0		*	
		12	TC	3.0		*	
		15	TC	3.0		*	
		18	TC	3.0		*	
		21	TC	3.0		*	
		24	TC	3.0		*	
		27	TC	2.9		*	
		30	TC	3.0		*	
		33	TC	3.0		*	
		36	TC	2.9		*	
		39	TC	3.0		*	
		42	TC	2.9		*	
		45	TC	2.9		*	
		48	TC	3.0		*	
		51	TC	2.9		*	
		54	TC	2.8		*	
		57	TC	2.8		*	
		60	TC	2.9		*	

Radium Concentrations at Exterior Locations

DOE ID #GJ-01007-RS

2512 Texas Avenue

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Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
6	199265	00	DS	5.0		*	In driveway
		06	DS	1.8		*	East yard
7	205263	00	DS	4.8		*	North end of
		03	TC	3.9		*	driveway
		06	TC	3.8		*	
		09	TC	3.9		*	DC = 6 inches
		12	TC	4.0		*	Based on all
		15	TC	3.9		*	available data
		18	TC	3.8		*	
		21	TC	3.7		*	
		24	TC	3.7		*	
		27	TC	3.7		*	
		30	TC	3.6		*	
		33	TC	3.6		*	
		36	TC	3.6		*	
		39	TC	3.6		*	
8	206267	00	DS	6.9		*	North end of
		03	TC	5.2		*	driveway
		06	TC	4.3		*	
		09	TC	4.0		*	DC = 6 inches
		12	TC	3.8		*	Based on the
		15	TC	3.7		*	deconvolution graph
		18	TC	3.8		*	
		21	TC	3.8		*	
		24	TC	3.7		*	
		27	TC	3.8		*	
		30	TC	3.8		*	
		33	TC	3.8		*	
		36	TC	3.7		*	
		39	TC	3.7		*	
9	210270	00	DS	3.6		*	North end of
		03	TC	3.9		*	driveway
		06	TC	3.8		*	
		09	TC	3.8		*	DC = 6 inches
		12	TC	3.7		*	Based on all
		15	TC	3.7		*	available data
		18	TC	3.7		*	
		21	TC	3.7		*	
		24	TC	3.7		*	

Radium Concentrations at Exterior Locations

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Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
9	210270	27	TC	3.7		*	
		30	TC	3.7		*	
		33	TC	3.7		*	
		36	TC	3.7		*	
10	217265	00	DS	10.3		*	In driveway
		03	TC	4.7		*	East side of
		06	TC	4.5		*	primary structure
		09	TC	3.8		*	
		12	TC	3.4		*	DC = 9 inches
		15	TC	3.2		*	Based on the
		18	TC	3.1		*	deconvolution graph
		21	TC	3.0		*	
		24	TC	3.1		*	
		27	TC	3.2		*	
		30	TC	3.2		*	
		33	TC	3.2		*	
		36	TC	3.2		*	
		39	TC	3.3		*	
		42	TC	3.2		*	
11	220214	00	DS	1.1		*	
		03	TC	2.4		*	West foundation
		06	TC	2.7		*	
		09	TC	3.0		*	
		12	TC	3.1		*	
		15	TC	3.0		*	DC = 0 inches
		18	TC	3.1		*	
		21	TC	3.1		*	
		24	TC	3.1		*	
		27	TC	3.2		*	
		30	TC	3.1		*	
		33	TC	3.2		*	
		36	TC	3.2		*	
		39	TC	3.1		*	
		42	TC	3.1		*	
12	220260	00	DS	19.4		*	East side of
		03	TC	7.7		*	primary structure
		06	TC	6.2		*	
		09	TC	4.7		*	DC = 9 inches
		12	TC	4.0		*	Based on the
		15	TC	3.6		*	deconvolution graph

Radium Concentrations at Exterior Locations

DOE ID #GJ-01007-RS

2512 Texas Avenue

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Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
12	220260	18	TC	3.5		*	
		21	TC	3.5		*	
		24	TC	3.4		*	
		27	TC	3.3		*	
		30	TC	3.4		*	
		33	TC	3.4		*	
		36	TC	3.5		*	
		39	TC	3.5		*	
		42	TC	3.5		*	
13	220270	00	DS	8.2		*	In driveway
		06	DS	1.6		*	
14	227266	00	DS	4.8		*	In driveway
		06	DS	1.9		*	
15	235260	00	DS	3.8		*	East of primary structure
		06	DS	<1.0		*	
16	235265	00	DS	2.3		*	
		03	TC	2.8		*	East side of primary structure
		06	TC	2.9		*	
		09	TC	3.0		*	
		12	TC	3.1		*	DC = 0 inches
		15	TC	3.1		*	
		18	TC	3.1		*	
		21	TC	3.1		*	
		24	TC	3.1		*	
		27	TC	3.1		*	
		30	TC	3.1		*	
		33	TC	3.1		*	
17	235270	00	DS	3.8		*	East of primary structure
		06	DS	1.5		*	
18	237213	00	DS	1.5		*	Gas line
		13	DS	1.3		*	Gas line exposed

Radium Concentrations at Exterior Locations

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2512 Texas Avenue

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Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
19	242220	00	DS	1.4		*	Water line
		03	TC	3.5		*	South foundation
		06	TC	3.8		*	
		09	TC	3.9		*	DC = 0 inches
		12	TC	4.0		*	
		15	TC	3.9		*	
		18	TC	3.9		*	
		21	TC	3.9		*	
		24	TC	4.0		*	
		27	TC	3.9		*	
		30	TC	3.9		*	
		33	TC	3.8		*	
		36	TC	3.8		*	
		39	TC	3.7		*	
		42	TC	3.7		*	
		45	TC	3.9		*	
		48	TC	3.8		*	
		51	TC	3.9		*	
		54	TC	3.8		*	
		57	TC	3.9		*	
		60	TC	3.9		*	
		63	TC	4.1		*	
		66	TC	4.2		*	

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 = 07-31-85
Team Leader = JJ

Table 3.2

Summary of Interior Gamma Exposure Rates

DOE ID No. GJ-01007-RS

2512 Texas Avenue

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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)
Crawl Space	*	*	*	*	16-17	*
Ground Floor	*	*	*	*	16-17	*
Garage	*	*	*	*	16-17	*

* Gamma scans were performed to confirm the absence of interior contamination.

Table 4.1
Area and Volume Calculations
DOE ID No. GJ-01007-RS

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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>
EXTERIOR					
Contaminated Fill					
A	33 x 11	= 363			
	minus Area "B"	= (80)			
		<hr/>			
		283	x 0.5	= 142	
B	10 x 8	= 80	x 0.8	= 64	
C	5 x 2	= 10	x 0.5	= 5	
				<hr/>	
TOTAL VOLUME - EXTERIOR				= 211	= 211/27 = 8

See Appendix Figure 3.3 For Areas

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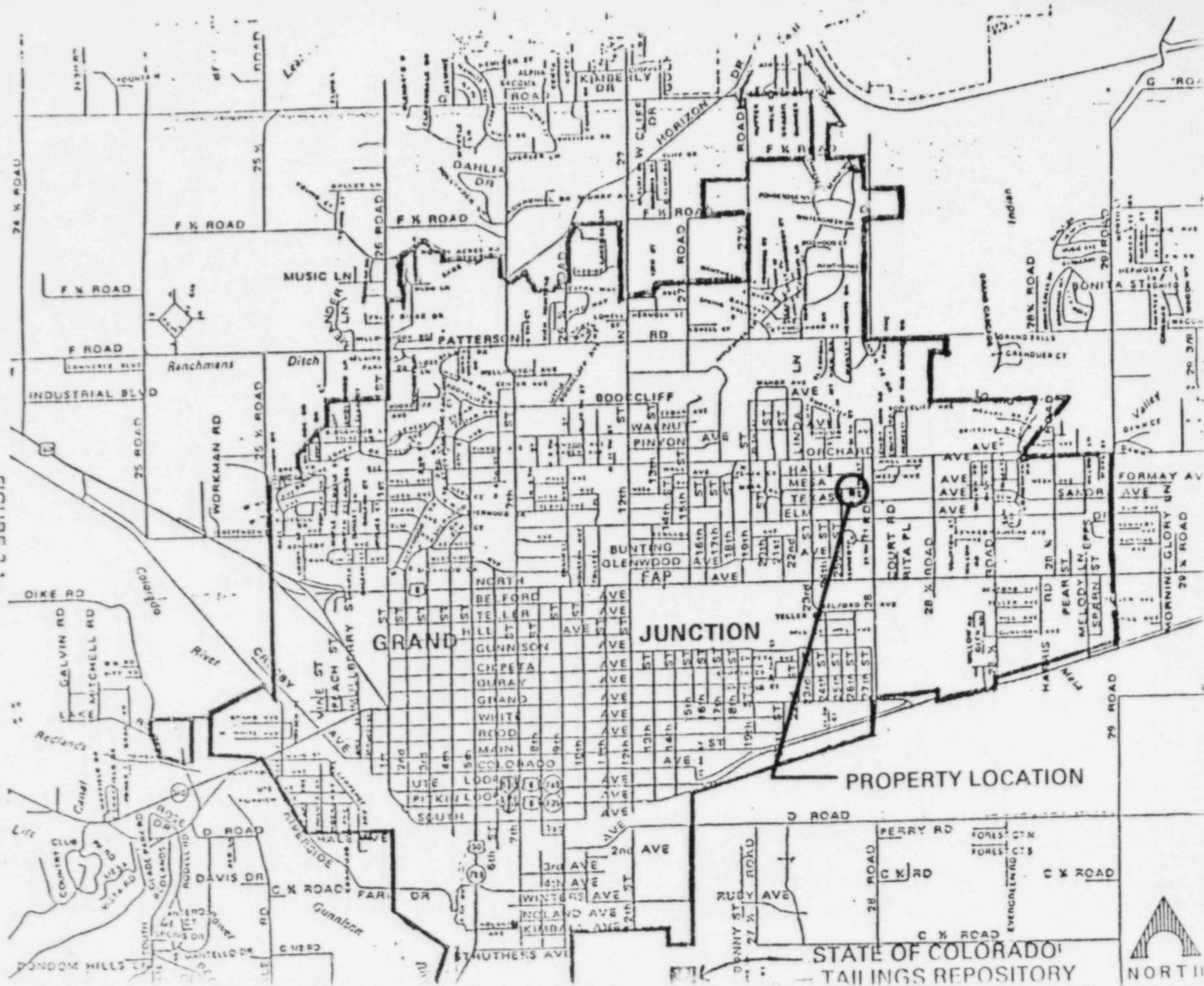
EXTERIOR

Remove identified residual radioactive material		
6 cy @ \$14.50/cy (machine-open)	\$	87
2 cy @ \$44/cy (manual-open)		88
Replace areas with compacted roadbase		
8 cy @ \$11.50/cy		92
TOTAL EXTERIOR		\$ 267
TOTAL INTERIOR		0
ACCESS CONTROL		100
SUBTOTAL		\$ 367
CONTINGENCY @ 20%		73
SUBTOTAL		\$ 440
CONTRACTOR OVERHEAD & PROFIT @ 50%		220
GRAND TOTAL		\$ 660

=====

LR081685
REA01007/REA-619/LMR

FIGURE 2.1
VICINITY MAP



Architectural site plan for a residential property. The plan shows a 'ONE STOREY FRAME HOUSE WITH CRAWL SPACE' and an attached 'GARAGE'. The house has a central chimney and is surrounded by landscaping including trees, shrubs, and a lawn. A 'GRAVEL DRIVE' runs along the left side. The plan includes various dimensions, bearings, and area calculations. Key features include: a central chimney, a gravel drive, a lawn, trees, shrubs, and a garage. Dimensions include lot width of 125.30', lot depth of 100.2', and various setbacks and building footprints. Area calculations show 'PLAT = 64.64' (GRASS) and 'PLAT = 125.30'.

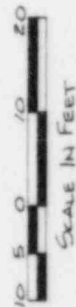
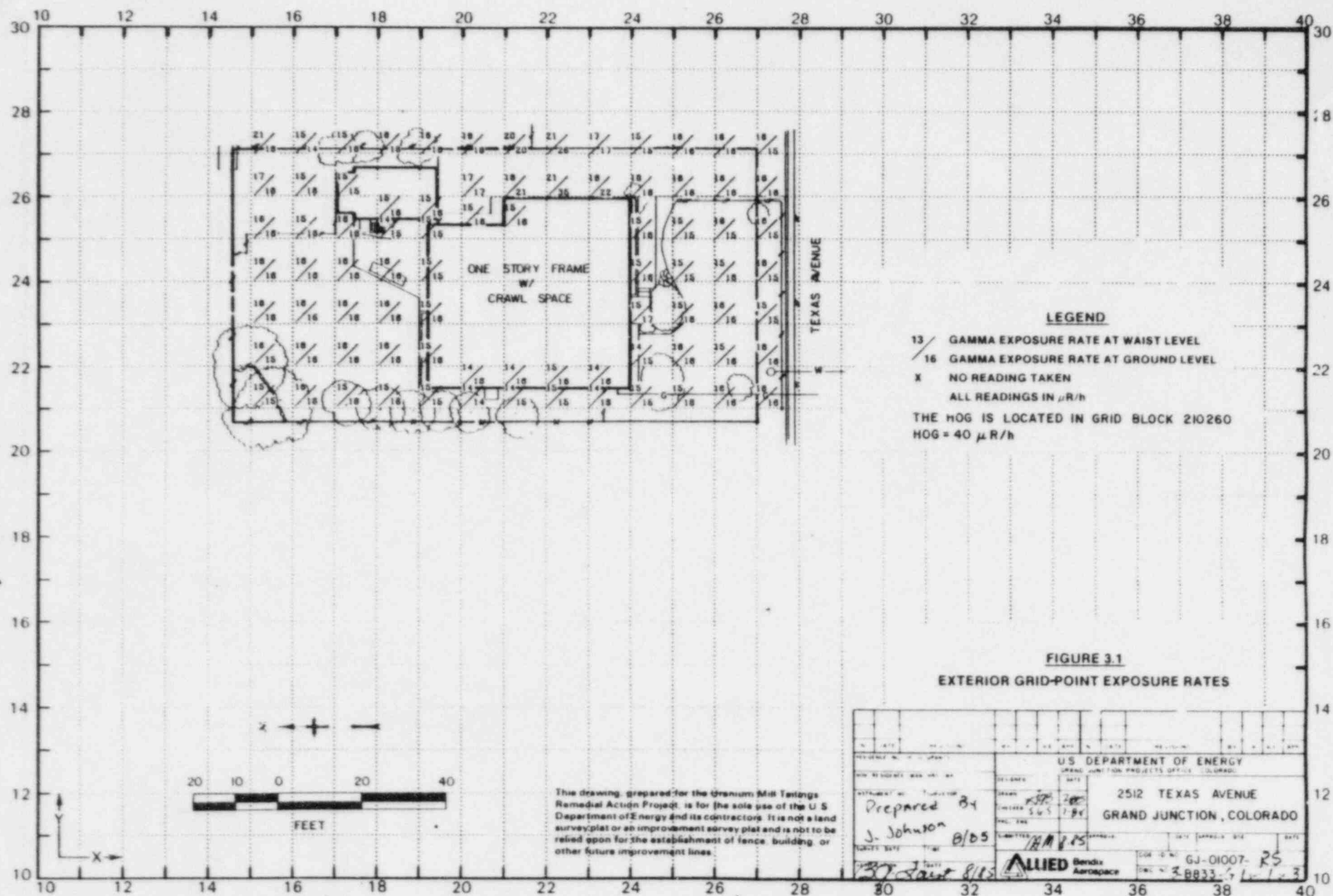


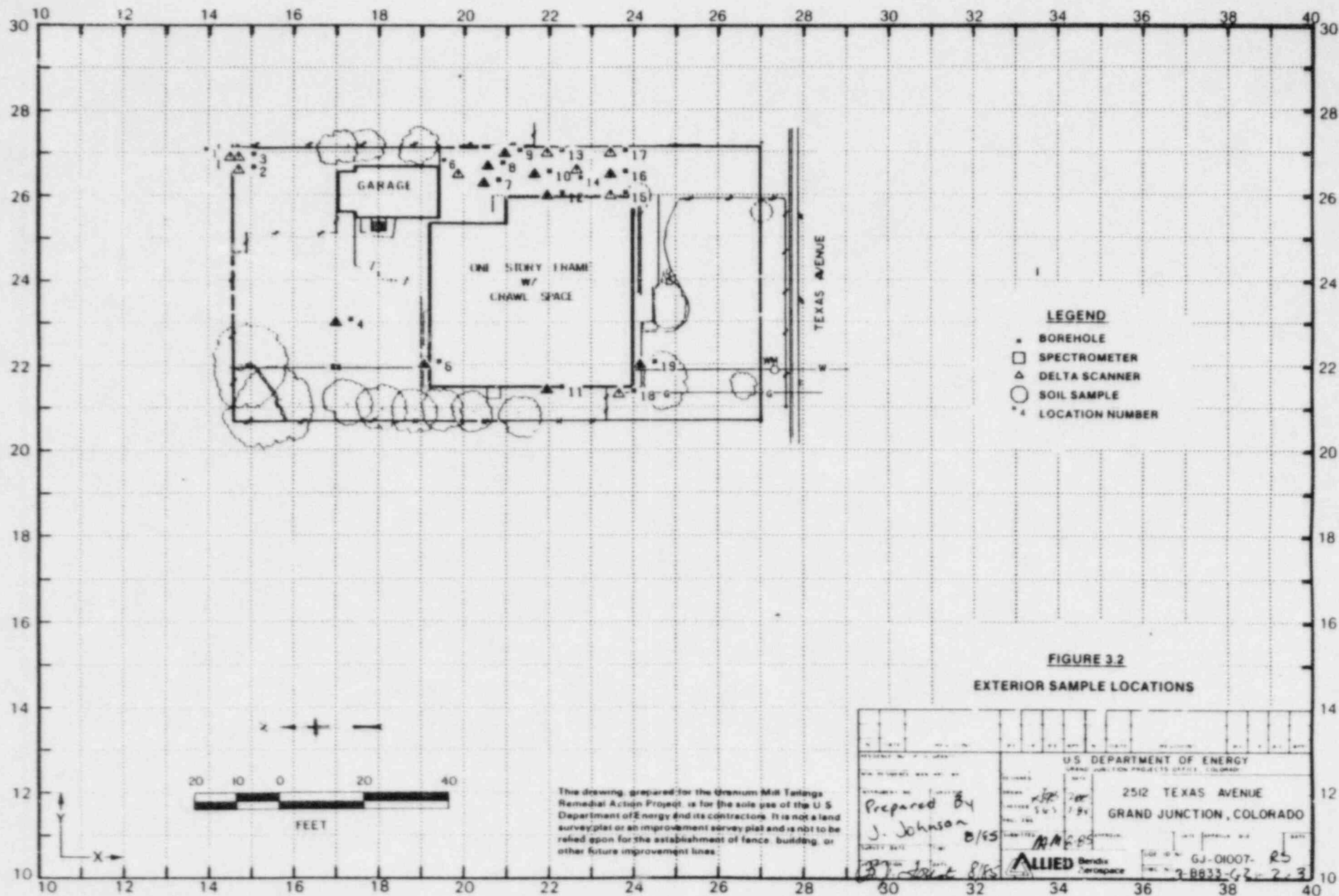
FIGURE 2.2 SITE PLAN

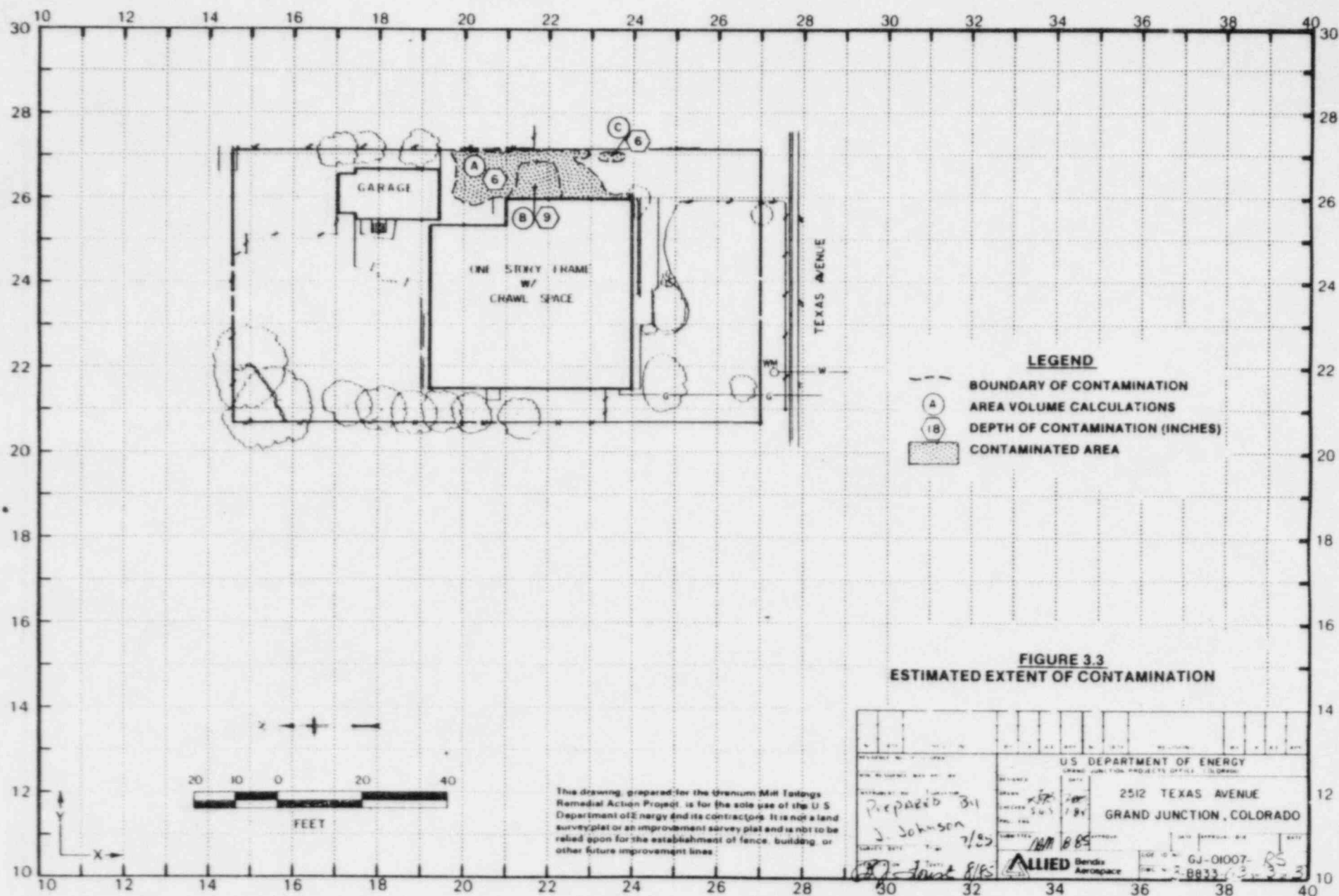
Tax SCHEDULE No 2945-124-0A-030

U.S. DEPARTMENT OF ENERGY	15-471-05	15-471-05	15-471-05
GRAND JUNCTION PROJECT OFFICE, CO. ORADO			
ADDRESS: 2512 TEXAS AVENUE			
GRAND JUNCTION, COLORADO			
CURRY 256171705 GRANT 256171805			
PERMITTING NO. 3-0833 F1			
DATE 10-1-77			
PROJECT 15-471-05			

This drawing, prepared for the Livestock Malt Feedings Research Action Project, is for the site use of the U.S. Department of Energy and its contractors. It is not a land survey plot or an improvement survey plot and is not to be relied upon for the establishment of fence, building, or other future improvement lines.







DOE ID NO. GJ-01007-RSDate 08-01-85

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

Official Survey Report

Property Address 2512 Texas AvenueProperty Owner Dennis LeeAddress of Owner (if different from above) SameReport Prepared By Jay Johnson

I. PRESENCE/ABSENCE OF RESIDUAL RADIOACTIVE MATERIALS

☐ No evidence of residual radioactive material on surveyed property.

☒ Residual radioactive materials found at the following locations:

☒ In open areas.

☐ Under or around exterior improvements.

☐ Under or around a typically nonoccupied structure.

☒ Under or around a typically occupied structure.

II. RESULTS OF RADIOLOGIC ASSESSMENT

☐ 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.

☒ 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 = 17 uR/h
HOG = 40 uR/h

ALLIED Bendix
Aerospace

Bendix Field Engineering Corporation
Grand Junction Operations
Grand Junction, Colorado

Date: July 31, 1985
To: Files
From: Jay Johnson
Subject: Team Leader Notes - GJ-01007-RS

Address: 2512 Texas Avenue

Owner: Dennis Lee

Weather: Clear and sunny

Occupancy: One

Team Members

J. Johnson (Team Leader)	S. Milton
V. Young	R. Wilkins
P. Hardy	M. Dexter

Instruments

See Equipment Operational Summary sheet

The property was scanned with elevated readings located on the east side of the primary structure and near a small slab of concrete in the northeast corner of the property. A piece of ore was found in the northeast corner of the property and was removed to the repository with the permission of the property owner. A rescan of this area proved to be clean.

There was no access to the crawl space of the original portion of the house. A scan of the ground floor showed readings of 17 uR/h near the east wall. This area of the primary structure should be monitored again after removal has taken place.

Team Leader Notes
Jay Johnson
GJ-01007-RE
July 31, 1985
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All the utilities were located by entering the crawl space (of the addition). The utilities and foundation were investigated with no indication of contamination. All areas of elevated readings were investigated.

A scan along the east property proved negative and a delta was taken with a 1.0 pCi/g result.

All team members were alpha scanned before leaving the property.

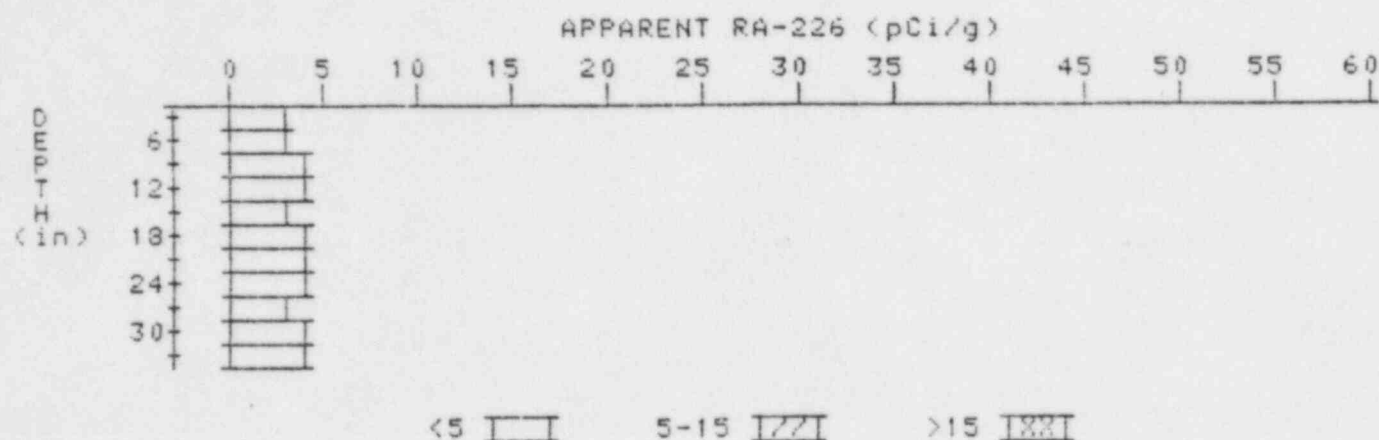
APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

4

PROPERTY NUMBER: GJ-01007-RS

HOLE NUMBER: 4

LOCATION: 170230



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.3	3.3
6	3.4	3.2
9	3.6	4.0
12	3.6	3.8
15	3.5	3.3
18	3.5	3.5
21	3.5	3.5
24	3.5	3.7
27	3.4	3.0
30	3.5	3.5
33	3.6	3.6

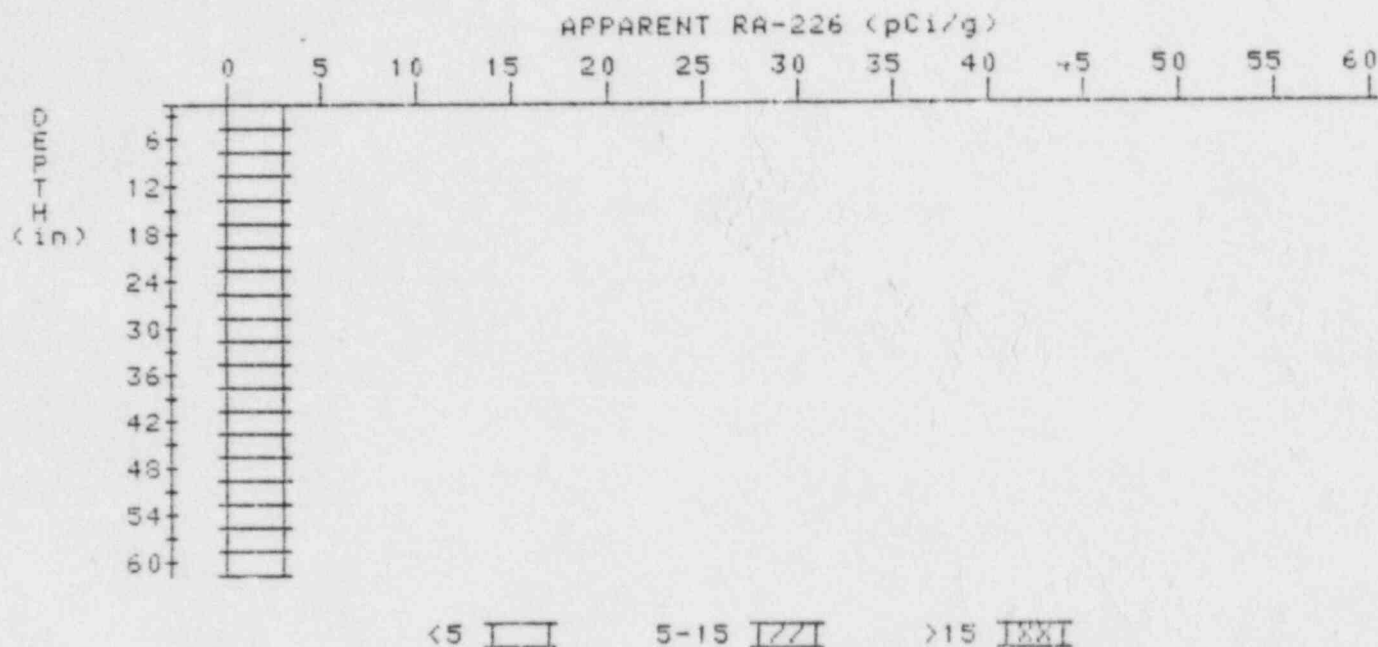
APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

5

PROPERTY NUMBER: GJ-01007-RS

HOLE NUMBER: 5

LOCATION: 191220



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	2.7	2.7
6	2.9	3.1
9	3.0	3.2
12	3.0	3.0
15	3.0	3.0
18	3.0	3.0
21	3.0	3.0
24	3.0	3.2
27	2.9	2.5
30	3.0	3.2
33	3.0	3.2
36	2.9	2.5
39	3.0	3.4
42	2.9	2.7
45	2.9	2.7
48	3.0	3.4
51	2.9	2.9
54	2.8	2.6

57
60

2.8
2.9

2.6
2.9

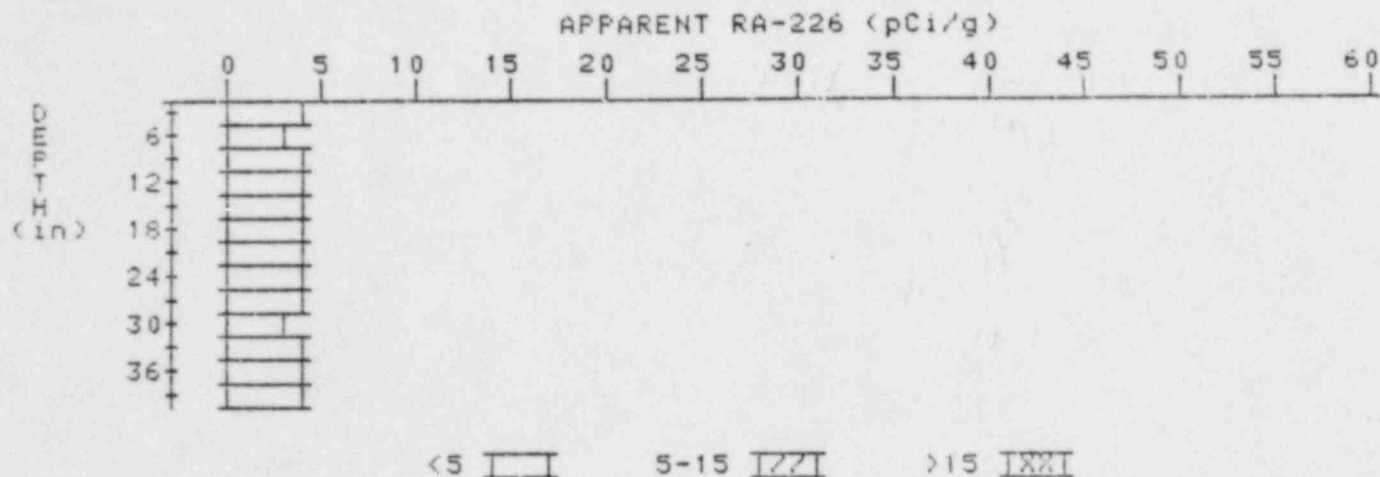
APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

7

PROPERTY NUMBER: GJ-01007-RS

HOLE NUMBER: 7

LOCATION: 205263

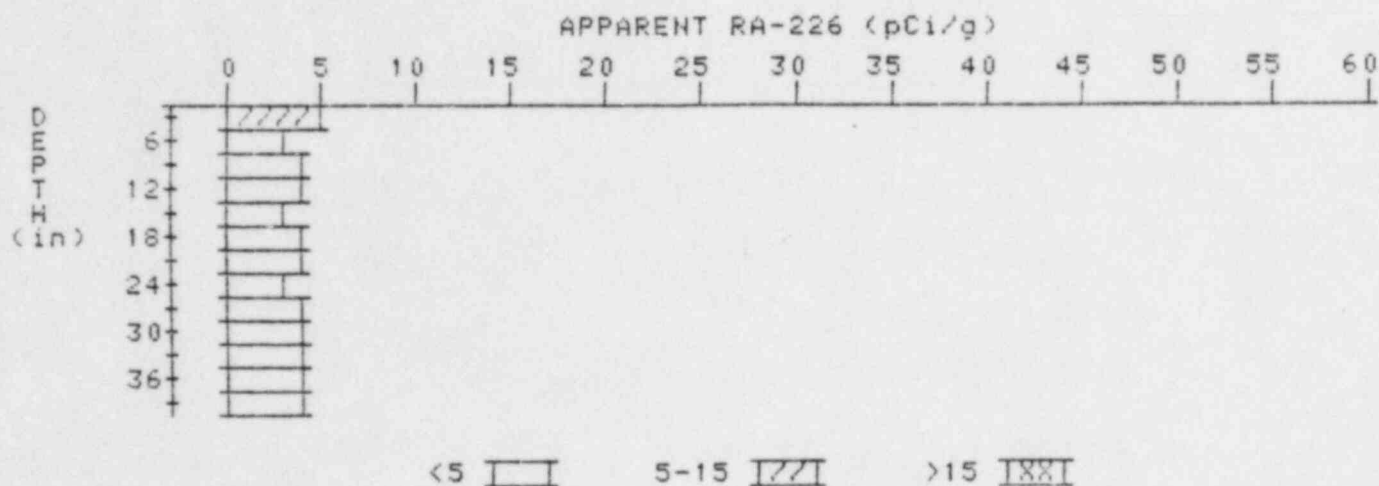


Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.9	3.9
6	3.8	3.4
9	3.9	3.9
12	4.0	4.4
15	3.9	3.9
18	3.8	3.8
21	3.7	3.5
24	3.7	3.7
27	3.7	3.9
30	3.6	3.4
33	3.6	3.6
36	3.6	3.6
39	3.6	3.6

APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

8

PROPERTY NUMBER: GJ-01007-RS
HOLE NUMBER: 8
LOCATION: 206267



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	5.2	5.2
6	4.3	3.2
9	4.0	3.8
12	3.8	3.6
15	3.7	3.3
18	3.8	4.0
21	3.8	4.0
24	3.7	3.3
27	3.8	4.0
30	3.8	3.8
33	3.8	4.0
36	3.7	3.5
39	3.7	3.7

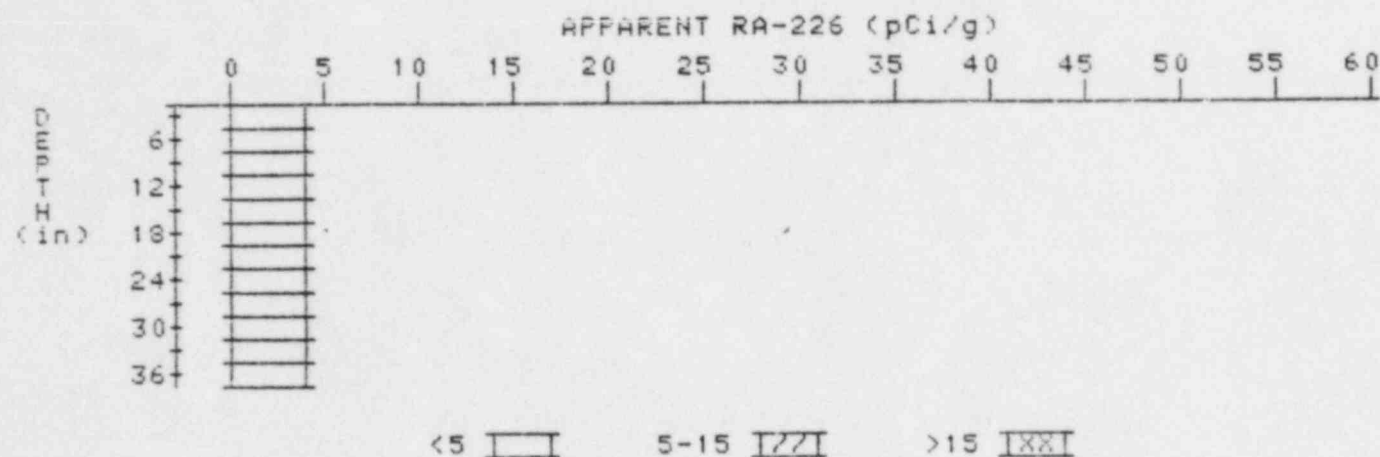
APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

9

PROPERTY NUMBER: GJ-01007-RS

HOLE NUMBER: 9

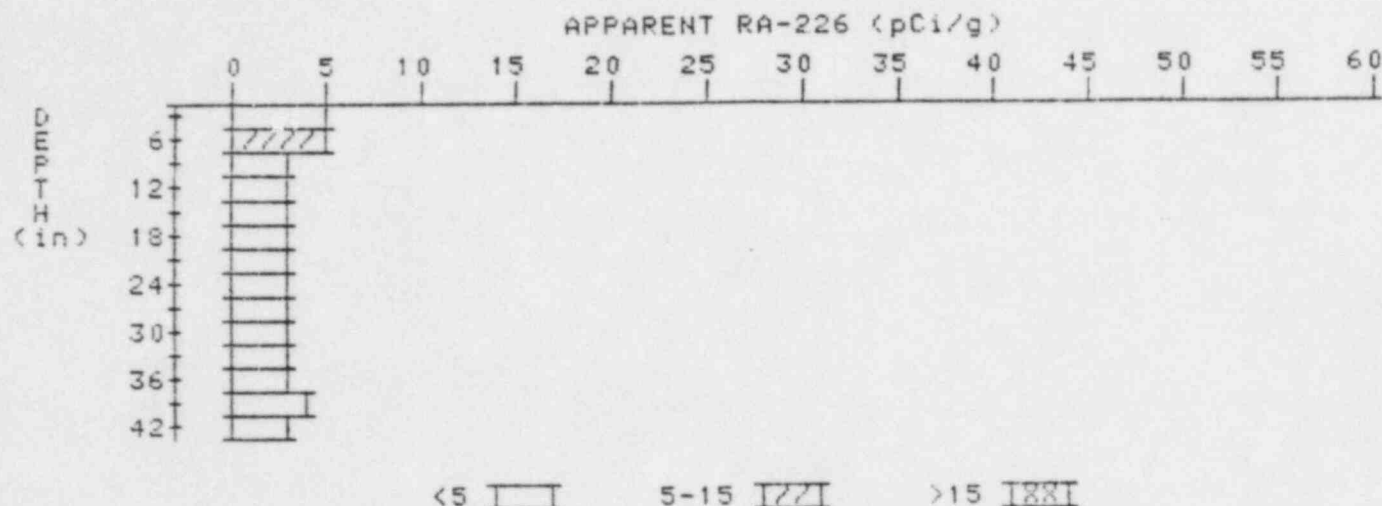
LOCATION: 210270



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

APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH 10

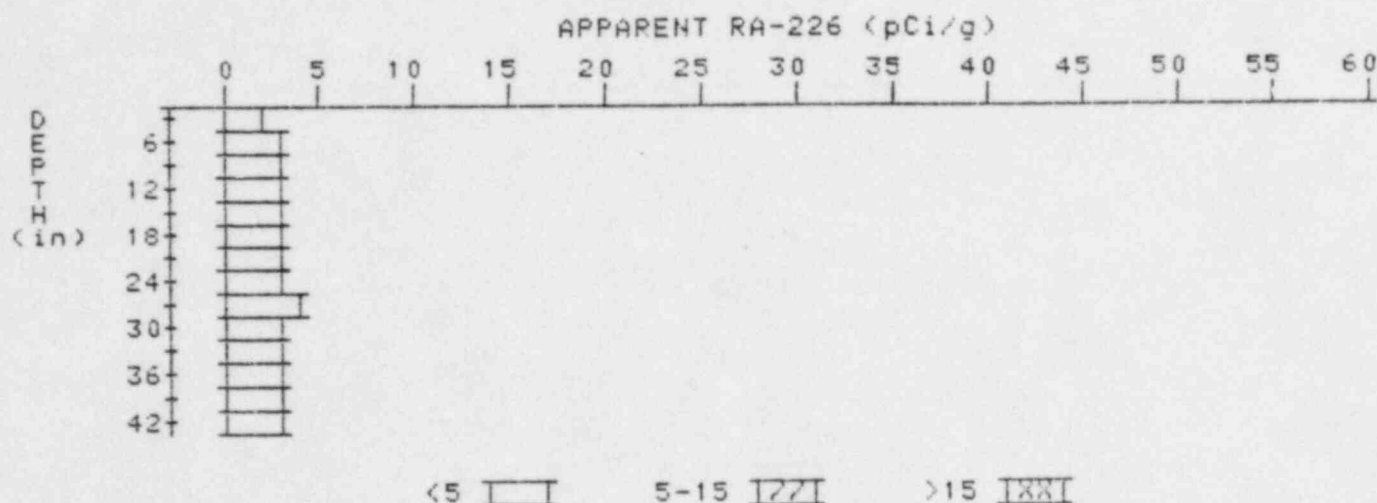
PROPERTY NUMBER: GJ-01007-RS
HOLE NUMBER: 10
LOCATION: 217265



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	4.7	4.7
6	4.5	5.4
9	3.8	3.3
12	3.4	3.0
15	3.2	3.0
18	3.1	3.1
21	3.0	2.6
24	3.1	3.1
27	3.2	3.4
30	3.2	3.2
33	3.2	3.2
36	3.2	3.0
39	3.3	3.7
42	3.2	3.2

APPARENT RADIUM-226 CONCENTRATION 11 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-01007-RS
HOLE NUMBER: 11
LOCATION: 220214

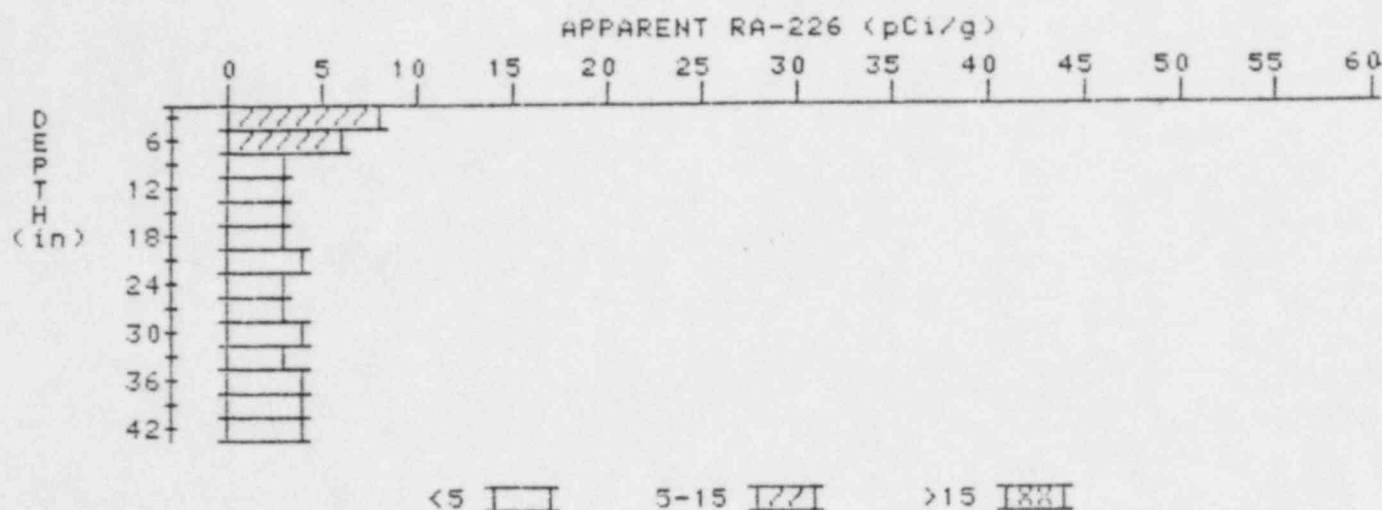


Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	2.4	2.4
6	2.7	2.7
9	3.0	3.4
12	3.1	3.5
15	3.0	2.6
18	3.1	3.3
21	3.1	3.1
24	3.1	2.9
27	3.2	3.6
30	3.1	2.7
33	3.2	3.4
36	3.2	3.4
39	3.1	2.9
42	3.1	3.1

APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

12

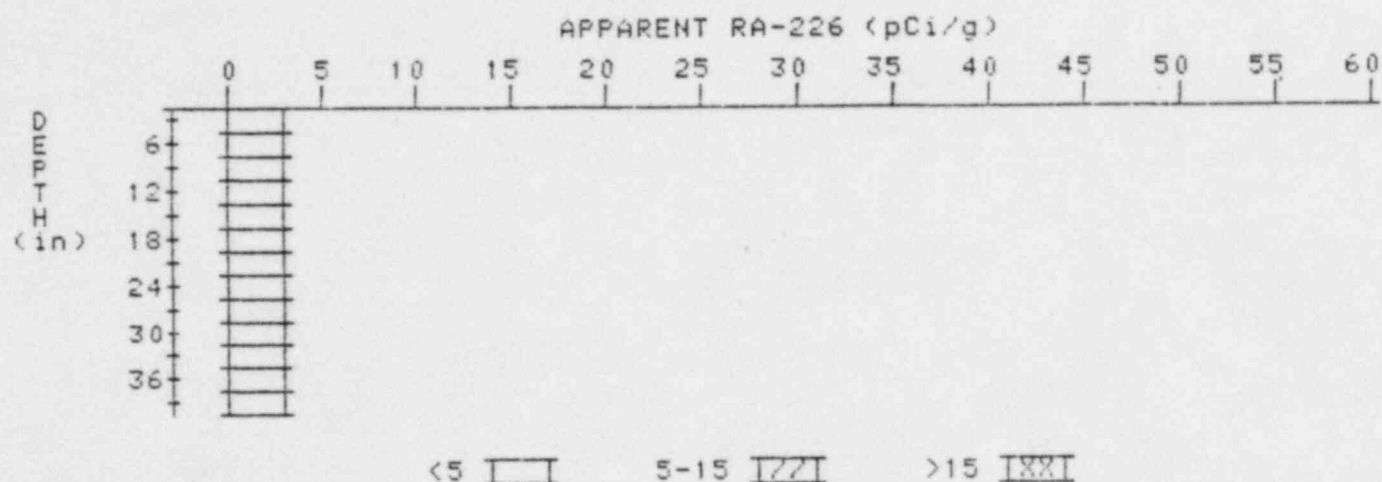
PROPERTY NUMBER: GJ-01007-RS
HOLE NUMBER: 12
LOCATION: 220260



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	7.7	7.7
6	6.2	6.2
9	4.7	3.3
12	4.0	3.5
15	3.6	3.1
18	3.5	3.3
21	3.5	3.7
24	3.4	3.4
27	3.3	2.9
30	3.4	3.6
33	3.4	3.2
36	3.5	3.7
39	3.5	3.5
42	3.5	3.5

APPARENT RADIUM-226 CONCENTRATION 16 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-01007-RS
HOLE NUMBER: 16
LOCATION: 235265



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	2.8	2.8
6	2.9	2.9
9	3.0	3.0
12	3.1	3.3
15	3.1	3.1
18	3.1	3.1
21	3.1	3.1
24	3.1	3.1
27	3.1	3.1
30	3.1	3.1
33	3.1	3.1
36	3.1	3.3
39	3.0	3.0

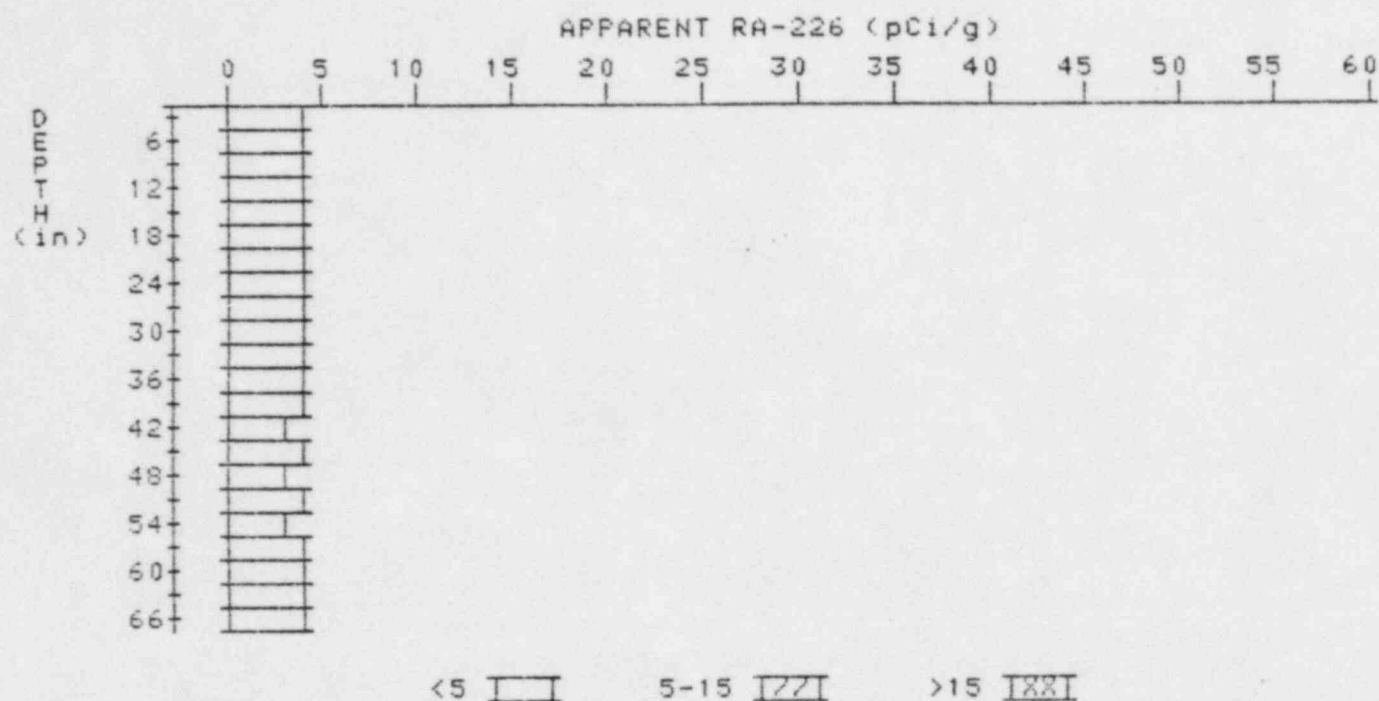
APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

19

PROPERTY NUMBER: GJ-01007-RS

HOLE NUMBER: 19

LOCATION: 242220



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.5	3.5
6	3.8	4.2
9	3.9	3.9
12	4.0	4.4
15	3.9	3.7
18	3.9	3.9
21	3.9	3.7
24	4.0	4.4
27	3.9	3.7
30	3.9	4.1
33	3.8	3.6
36	3.8	4.0
39	3.7	3.5
42	3.7	3.3
45	3.9	4.4
48	3.8	3.4

51
54
57
60
63
66

3.9
3.8
3.9
3.9
4.1
4.2

4.3
3.4
4.1
3.5
4.3
4.2

