

RADIOLOGIC AND ENGINEERING ASSESSMENT

FOR

DOE ID NO.: GJ-03979-RM  
ADDRESS: 703/705 NORTH 3RD STREET

JUNE 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

*June 14, 1985*

REA03979:REA-606

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PDR WASTE PDR  
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## 1.0 EXECUTIVE SUMMARY

### 1.1 Introduction

The location, DOE ID No. GJ-03979-RM, is a multi-family residence located at 703/705 North 3rd 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, 7 cu. yd.; interior, 0 cu. yd.

Estimated cost to perform remedial action, including dislocation when applicable, is \$845. Remedial action on this property will take approximately 3 days to complete.

## 2.0 PROPERTY DESCRIPTION

### 2.1 General Description

Address: 703/705 North 3rd Street, Grand Junction, Colorado

Zoning: Residential (RMF-64)

Lot Size: Approximately 3,620 sf (0.1 acre)

Legal Description: South 72.4 Feet of Lots 17 and 18, Block 35, City of Grand Junction, County of Mesa, State of Colorado.

Point of Reference: This property is located approximately 2 miles northwest 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:	Single-family residence
South:	Gunnison Avenue
East:	North 3rd Street
West:	Single-family residence

### 2.2 Existing Facilities and Structures

Primary Structure:

Type:	Single-story multi-family residence
Size:	Approximately 2,282 sf
Construction Date:	1939
Construction:	Wood-frame with stucco siding
Foundation:	Concrete stemwall on spread footing
Footing Depth:	Approximately 60" to bottom of footing from grade
Basement:	Yes (full)
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-03979-RM on May 13, 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. These records indicate contamination located under the city sidewalk southeast of the primary structure.

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, 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: 12 to 15 uR/h  
Highest Outside Gamma Reading (HOG): 40 uR/h

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

##### **3.2.2 Interior Findings**

Background Readings: 13 to 15 uR/h  
Highest Inside Gamma Reading (HIG): 15 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; these areas 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) The city sidewalk at the southeast corner of the property has contaminated soil below the 4-inch-thick uncontaminated concrete slab. The total depth of contamination is 12 inches (approximately 95 sf).
- (AREA B) Along the east side of the sidewalk, the depth of contamination is 12 inches (approximately 38 sf).
- (AREA C) The depth of contamination along the west side of the sidewalk is 6 inches (approximately 95 sf).

#### 4.0 RECOMMENDED REMEDIAL ACTION

##### 4.1 Decontamination and Restoration

The recommended remedial action for this property, DOE ID No. GJ-03979-RM, 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 \$845.

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

Official Survey Report

Exterior Gamma Scan Field Map

Memo of Understanding

Team Leader Notes

Deconvolution Graphs (Apparent Radium-226 Concentration)



## Radium Concentrations at Exterior Locations

DOE ID #GJ-03979-RM

703/705 North 3rd Street

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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	152187	03	TC	3.2		*	West of two water meters
		06	TC	3.5		*	
		09	TC	3.5		*	DC = 0 inches
		12	TC	3.6		*	
		15	TC	3.5		*	
		18	TC	3.6		*	
		21	TC	3.5		*	
		24	TC	3.5		*	
		27	TC	3.4		*	
		30	TC	3.5		*	
		33	TC	3.5		*	
		36	TC	3.6		*	
		39	TC	3.6		*	
		42	TC	3.6		*	
		45	TC	3.6		*	
		48	TC	3.6		*	
		51	TC	3.5		*	
		54	TC	3.5		*	
		57	TC	3.6		*	
		60	TC	3.6		*	
		63	TC	3.6		*	
2	152208	00	DS	<1.0		*	Background
		00	GS		<1.0	*	
		00-06	SS			2.0	Moist DC = 0 inches
		03	TC	3.2		*	
		06	TC	3.6		*	
		09	TC	3.8		*	
		12	TC	4.0		*	
		15	TC	4.0		*	
		18	TC	4.0		*	
		21	TC	4.1		*	
		24	TC	4.2		*	
		27	TC	4.1		*	
		30	TC	4.2		*	
3	156188	03	TC	3.3		*	East side of two water meters
		06	TC	3.6		*	
		09	TC	3.8		*	DC = 0 inches
		12	TC	3.8		*	
		15	TC	3.9		*	

## Radium Concentrations at Exterior Locations

DOE ID #GJ-03979-RM

703/705 North 3rd Street

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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.		
3	156188	18	TC	3.9		*	
		21	TC	3.9		*	
		24	TC	3.9		*	
		27	TC	3.8		*	
		30	TC	3.7		*	
		33	TC	3.6		*	
		36	TC	3.7		*	
		39	TC	3.6		*	
		42	TC	3.5		*	
		45	TC	3.5		*	
		48	TC	3.5		*	
		51	TC	3.4		*	
		54	TC	3.5		*	
		57	TC	3.5		*	
		60	TC	3.6		*	
		63	TC	3.6		*	
		66	TC	3.6		*	
4	159241	00	DS	<1.0		*	Back steps
5	161229	03	TC	3.4		*	DC = 0 inches
		06	TC	3.6		*	
		09	TC	3.8		*	
		12	TC	3.9		*	
		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		*	
		36	TC	3.9		*	
		39	TC	3.9		*	
		42	TC	3.8		*	
		45	TC	3.9		*	
		48	TC	3.8		*	
		51	TC	3.7		*	
		54	TC	3.8		*	
		57	TC	3.8		*	
		60	TC	3.8		*	
		63	TC	3.8		*	
		66	TC	3.7		*	
		69	TC	3.7		*	
		72	TC	3.6		*	

## 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.		
5	161229	75	TC	3.6		*	
		78	TC	3.7		*	
		81	TC	3.6		*	
		84	TC	3.7		*	
		87	TC	3.7		*	
		90	TC	3.8		*	
		93	TC	3.9		*	
		96	TC	3.9		*	
6	173184	03	TC	3.3		*	Water meter
		06	TC	3.7		*	
		09	TC	4.0		*	DC = 0 inches
		12	TC	3.9		*	
		15	TC	4.0		*	
		18	TC	4.0		*	
		21	TC	4.0		*	
		24	TC	4.0		*	
		27	TC	4.0		*	
		30	TC	4.0		*	
		33	TC	4.0		*	
		36	TC	3.9		*	
		39	TC	3.9		*	
		42	TC	3.9		*	
		45	TC	3.9		*	
		48	TC	3.8		*	
7	187229	03	TC	3.6		*	DC = 0 inches
		06	TC	3.9		*	
		09	TC	3.9		*	
		12	TC	4.1		*	
		15	TC	4.2		*	
		18	TC	4.1		*	
		21	TC	4.1		*	
		24	TC	4.1		*	
		27	TC	4.1		*	
		30	TC	4.1		*	
8	187274	00	DS	1.0		*	Gas line
		06	DS	1.1		*	
		18	DS	<1.0		*	
9	189266	03	TC	3.3		*	Sewer line
		06	TC	3.6		*	
		09	TC	3.8		*	DC = 0 inches

## Radium Concentrations at Exterior Locations

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703/705 North 3rd Street

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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	189266	12	TC	3.9		*	
		15	TC	4.0		*	
		18	TC	3.9		*	
		21	TC	3.9		*	
		24	TC	3.8		*	
		27	TC	3.8		*	
		30	TC	3.9		*	
10	192242	03	TC	3.1		*	Sewer line
		06	TC	3.4		*	
		09	TC	3.6		*	DC = 0 inches
		12	TC	3.6		*	
		15	TC	3.8		*	
		18	TC	3.7		*	
		21	TC	3.6		*	
		24	TC	3.7		*	
		27	TC	3.8		*	
		30	TC	3.8		*	
		33	TC	3.9		*	
		36	TC	3.8		*	
		39	TC	3.8		*	
		42	TC	3.8		*	
		45	TC	3.8		*	
		48	TC	3.9		*	
		51	TC	3.9		*	
		54	TC	3.8		*	
		57	TC	3.9		*	
		60	TC	3.9		*	
		63	TC	3.9		*	
		66	TC	3.8		*	
		69	TC	3.9		*	
11	196181	00	DS	1.4		*	
		06	DS	1.2		*	
12	198198	00	DS	3.1		*	
		06	DS	1.9		*	
13	204183	04-10	SS			112.2	Under core, moist
		03	TC	39.5		*	Sidewalk
		06	TC	50.9		*	
		09	TC	32.9		*	DC = 12 inches
		12	TC	18.6		*	Based on the
		15	TC	11.2		*	deconvolution graph

## Radium Concentrations at Exterior Locations

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703/705 North 3rd Street

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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.		
13	204183	18	TC	8.1		*	
		21	TC	6.5		*	
		24	TC	5.5		*	
		27	TC	4.8		*	
		30	TC	4.5		*	
		33	TC	4.3		*	
		36	TC	4.2		*	
14	205190	00	DS	4.7		*	Southeast corner of property
		06	DS	2.4		*	
		10	DS	2.6		*	
		12	DS	1.2		*	
15	205194	03	TC	7.0		*	East of sidewalk
		06	TC	7.1		*	
		09	TC	6.5		*	DC = 12 inches Based on the deconvolution graph
		12	TC	5.7		*	
		15	TC	5.3		*	
		18	TC	4.8		*	
		21	TC	4.5		*	
		24	TC	4.4		*	
		27	TC	4.2		*	
		30	TC	4.1		*	
		33	TC	4.0		*	
		36	TC	3.9		*	
16	205198	00	DS	7.8		*	Horizontally
		06	DS	19.2		*	
		10	DS	21.1		*	
		16	DS	6.3		*	
		06	GS		12.4	*	Horizontally
		06	GS		11.8	*	

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 = 05-13-85  
 Team Leader = BMM

Table 3.2

## Summary of Interior Gamma Exposure Rates

DOE ID #GJ-03979-RM 703/705 North 3rd 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)
CRAWL SPACE	00	-	-	06	13-15	15
BASEMENT	*	*	*	*	13-15	*

\*The CDH and ORNL data indicates the absence of interior contamination at this property. This information was investigated by performing a walking gamma scan of the basement.



Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-03979-RM

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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					
	Concrete				
A	5 x 19 =	95	x 0.3 =	29	
	Volume of Concrete			29	= 29/27 = 1
	Contaminated Fill				
A	5 x 19 =	95	x 0.7 =	67	
B	2 x 19 =	38	x 1.0 =	38	
C	5 x 19 =	95	x 0.5 =	48	
	Volume of Fill			153	= 153/27 = 6
	TOTAL VOLUME - EXTERIOR				= 7

See Appendix Figure 3.3 For Areas

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EXTERIOR

Remove/replace concrete sidewalk 95 sf @ \$3/sf	\$	285
Remove identified residual radioactive material 6 cy @ \$14.50/cy (machine-open)		87
Replace area with compacted roadbase 3 cy @ \$11.50/cy		35
Replace areas with topsoil 3 cy @ \$9.50/cy		29
		<hr/>
TOTAL EXTERIOR	\$	436
TOTAL INTERIOR		0
ACCESS CONTROL		100
		<hr/>
SUBTOTAL	\$	536
CONTINGENCY @ 5%		27
		<hr/>
SUBTOTAL	\$	563
CONTRACTOR OVERHEAD & PROFIT @ 50%		282
		<hr/>
GRAND TOTAL	\$	845

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FAV061285  
REA03979/REA-606/LMR

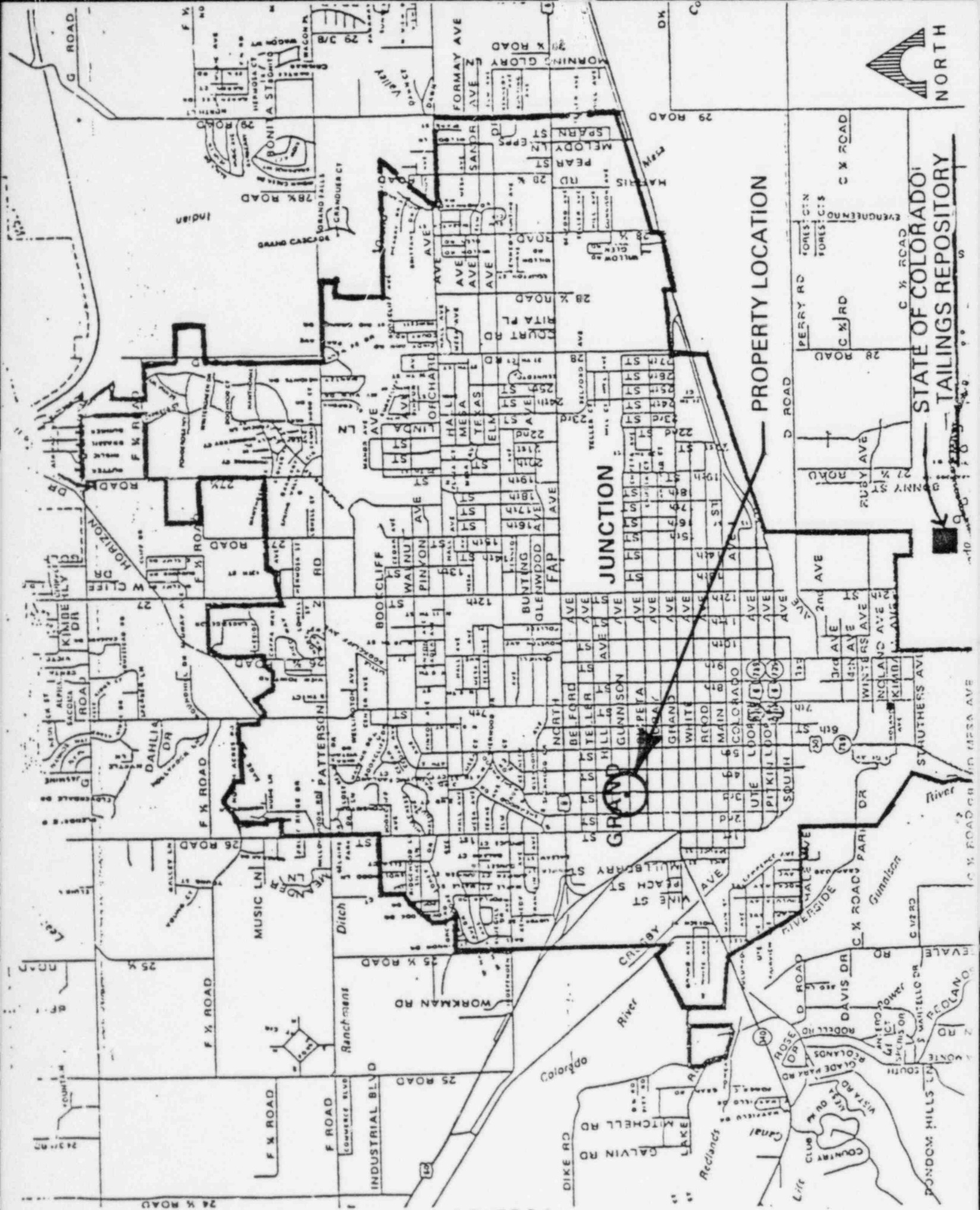



FIGURE 2.1  
VICINITY MAP

10 5 0 10 20  
SCALE IN FEET

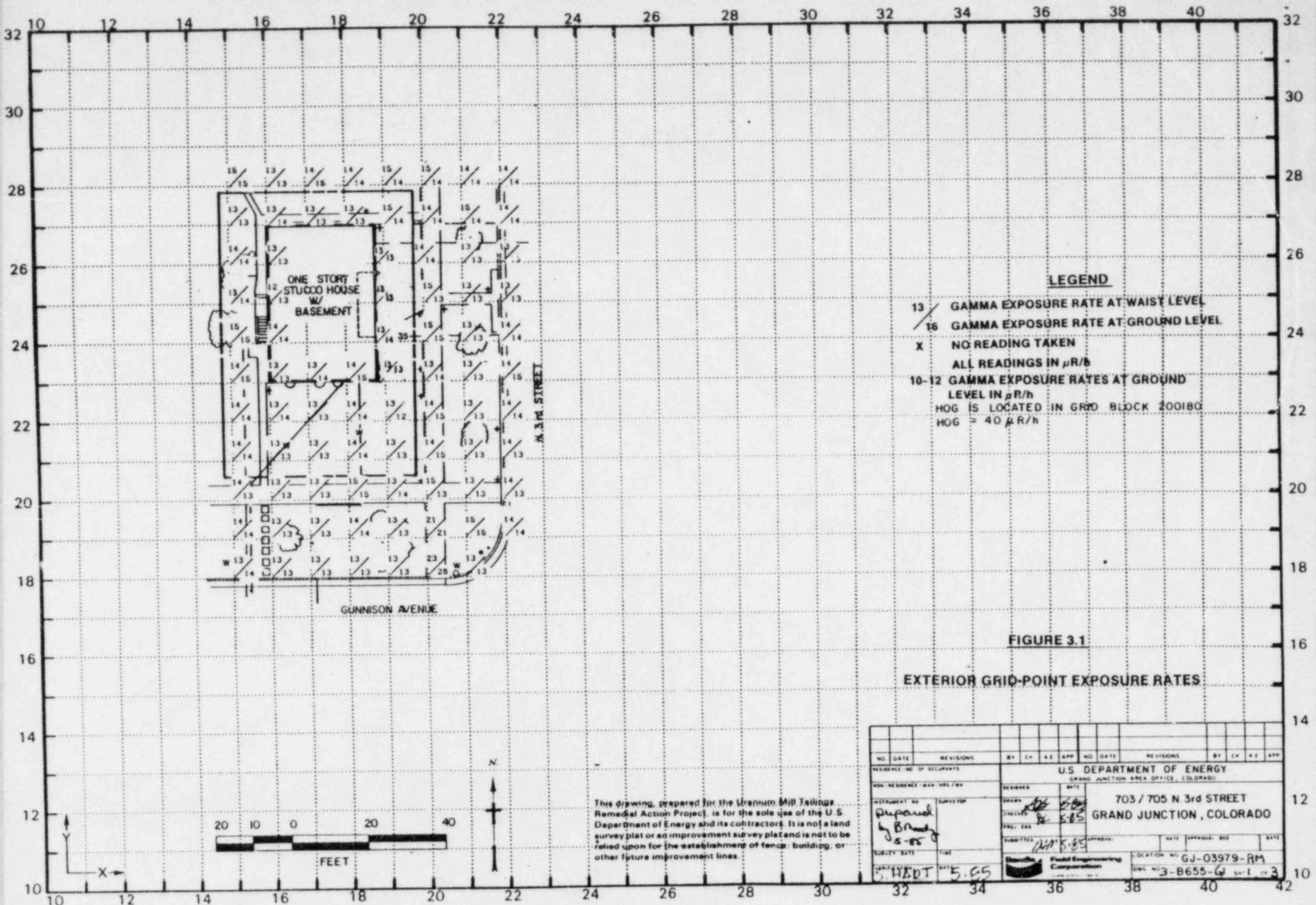


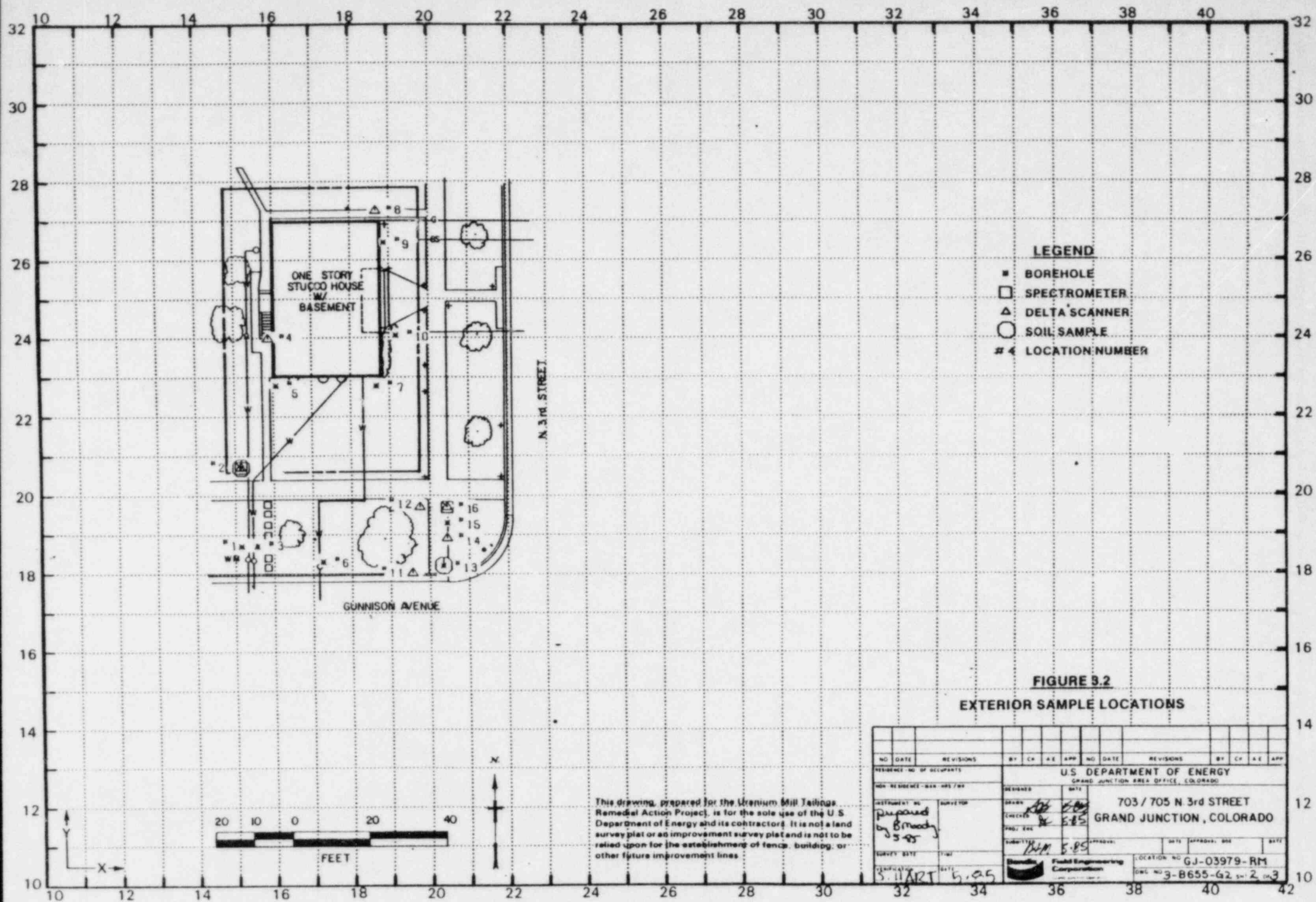
FIGURE 2.2 SITE PLAN

This drawing, prepared for the Uranium Mill Tailings Remedial Action Project, is for the sole use of the U.S. Department of Energy and its contractors. It is not a land survey plat or an improvement survey plat and is not to be relied upon for the establishment of fence, building, or other future improvement lines.

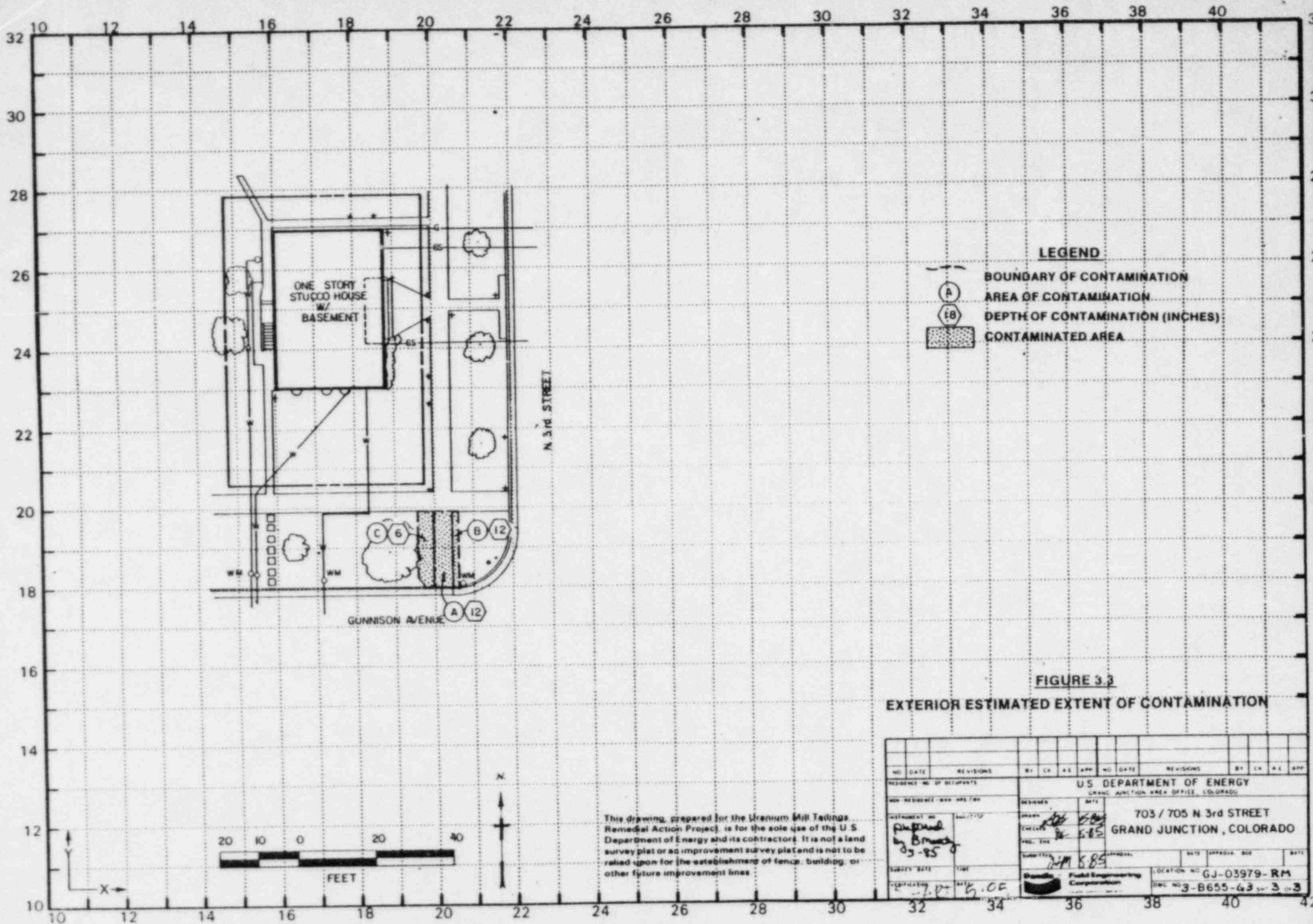
U.S. DEPARTMENT OF ENERGY	DOE ID NO
GRAND JUNCTION PROJECT OFFICE COLORADO	GJ03979RM
ADDRESS 103/105 NORTH 3RD STREET	 Allied Business Real Estate & Surveying Corporation Grand Junction, Colorado
GRAND JUNCTION, COLORADO	
SURV RLB 5-6-85 DRAFT RSK 5-8-85	
DRAWING NO 3-665-F1	ON NCF 5-8-85
	SHEET 1 OF 1











**FIGURE 3.3**  
**EXTERIOR ESTIMATED EXTENT OF CONTAMINATION**

NO. DATE		REVISIONS		BY	CHK	APP	NO. DATE	REVISIONS		BY	CHK	APP
<p align="center"><b>U.S. DEPARTMENT OF ENERGY</b> GRAND JUNCTION AREA OFFICE, COLORADO</p> <p align="center"><b>703 / 705 N 3rd STREET</b> <b>GRAND JUNCTION, COLORADO</b></p>												
RESIDENCE NO. OF OCCUPANTS				<p>DESIGNED: <i>[Signature]</i> DATE: <i>5-85</i></p> <p>CHECKED: <i>[Signature]</i> DATE: <i>5-85</i></p> <p>NO. RESIDENCE: <i>W-101</i></p>								
INSTRUMENT NO.				<p>DATE: <i>5-85</i></p> <p>TIME: <i>5:05</i></p> <p>LOCATION NO: <i>GJ-03979-RM</i></p>								
CERTIFICATION				<p>DATE: <i>5-85</i></p> <p>TIME: <i>5:05</i></p> <p>LOCATION NO: <i>GJ-03979-RM</i></p>								

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

Official Survey Report

Property Address 703 and 705 North 3rd Street

Property Owner Bob Faich

Address of Owner (if different from above) 623 Hill

Report Prepared By Brenda Moody

I. PRESENCE/ABSENCE OF RESIDUAL RADIOACTIVE MATERIALS

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

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

1 1 In open areas.

1 XXXX 1 Under or around exterior improvements.

1 1 Under or around a typically nonoccupied structure.

1 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.

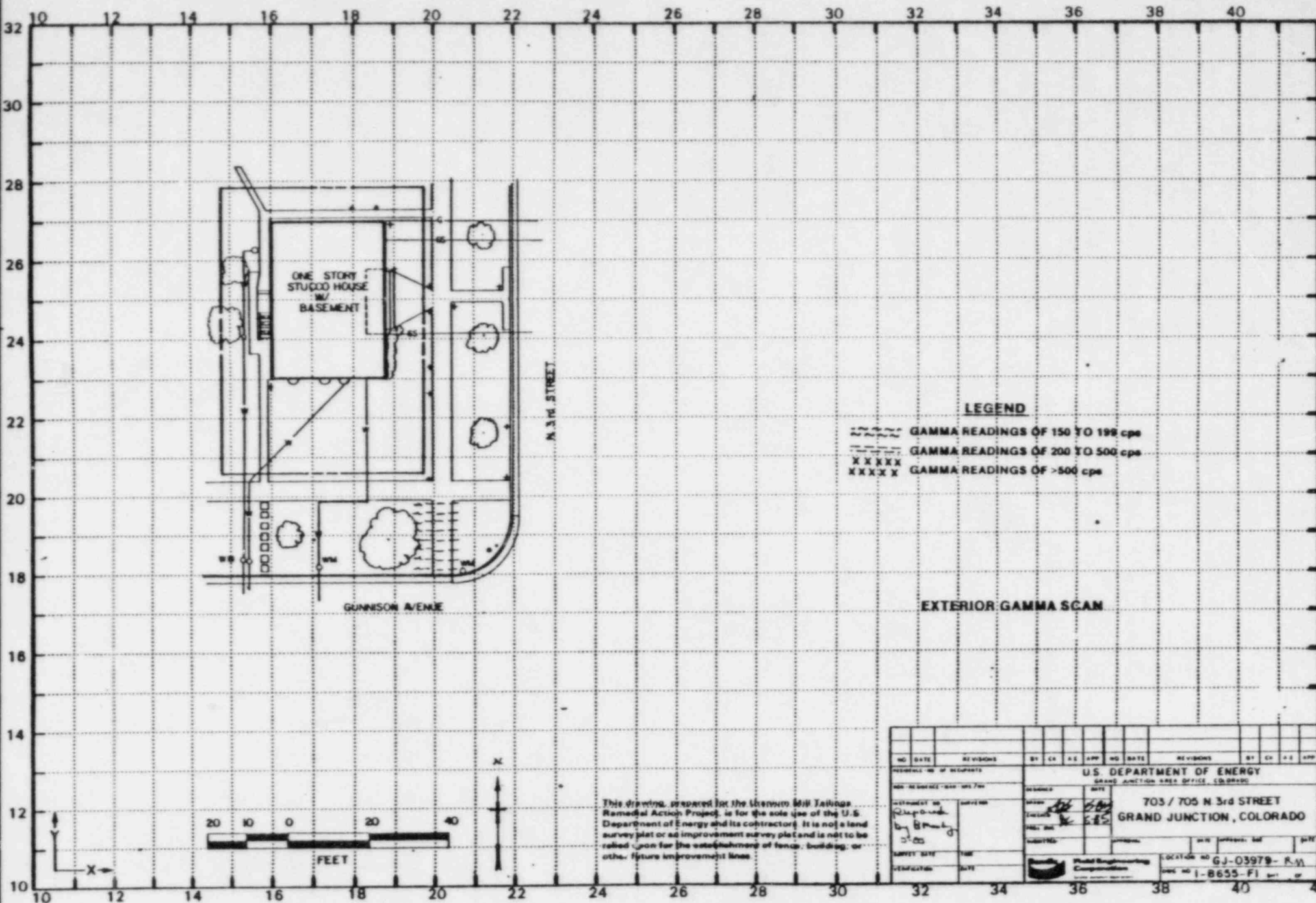
1 XXXX 1 Levels of radiation from residual radioactive materials exceed EPA Standards such that Remedial Action is recommended and will be accomplished, with your consent, as soon as budget and schedule permit.

cc:

G. A. Franz, III, GJ/CDH

J. Themelis, Mgr. UMTRA Proj. Off.

HIG = 15 uR/h  
HOG = 40 uR/h



NO.		DATE		REVISIONS		BY		CA		APP		NO.		DATE		REVISIONS		BY		CA		APP	
<p align="center"><b>U.S. DEPARTMENT OF ENERGY</b></p> <p align="center">GRAND JUNCTION AREA OFFICE, COLORADO</p> <p align="center"><b>703 / 705 N 3rd STREET</b></p> <p align="center"><b>GRAND JUNCTION, COLORADO</b></p>																							
<p>PROJECT NO. <b>703</b></p> <p>CONTRACT NO. <b>705</b></p> <p>DATE <b>10/1/79</b></p> <p>BY <b>W. J. [Signature]</b></p> <p>CA <b>[Signature]</b></p> <p>APP <b>[Signature]</b></p>												<p>PROJECT NO. <b>GJ-03979-R-1</b></p> <p>CONTRACT NO. <b>1-8655-F1</b></p> <p>DATE <b>10/1/79</b></p> <p>BY <b>[Signature]</b></p> <p>CA <b>[Signature]</b></p> <p>APP <b>[Signature]</b></p>											

May 30, 1985

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

ATTN: Jon Luellen

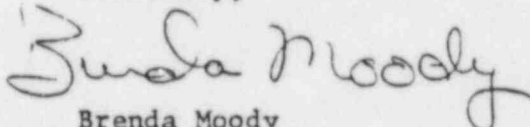
Dear Jon:

In response to the Technical Review of DOE ID No. GJ-03979-RM  
(703/705 North 3rd Street) dated May 28, 1985, the comment is as  
follows:

1. The range of gamma readings recorded in the basement stairwell  
was 12 - 17 uR/h, due to the geometry of the concrete walls  
and steps.

Thank you for your time and comments. If you have any further  
questions or comments, please contact me at 242-8621, extension  
475.

Sincerely,



Brenda Moody  
Assistant, Field Technician II

ALLIED Bendix  
Aerospace

Bendix Field Engineering Corporation  
Grand Junction Operations  
Grand Junction, Colorado

Date: May 15, 1985

To: Files

From: Brenda Moody

Subject: Team Leader Notes - GJ-03979-RS

RM 78 6/11/85

Address: 703/705 North 3rd Street

Owner: Bob Faith

#### Team Member

B. Moody (Team Leader)	D. Martz
J. Hebel	S. Larsen
P. Hardy	M. Duran
V. Rothman	M. Gilfillan

#### Instrument

Crutch Scintillometer - C-1185, C-3510, C-1206  
Delta Scintillometer - C-3940, C-3943, C-3942  
Total Count - C-3573, C-4006  
Downhole Spectrometer - C-1372

Date: May 13, 1985

Contamination was located under the city sidewalk southeast of the property, (four newer looking slabs of concrete only). A core was drilled and deltas were taken around the sidewalk. Bricks were found under the first slab where horizontal deltas were performed.

1	1	1	1	1
1 4	1 3	1 2	1 1	1
1	1	1	1	1

N ---->

Team Leader Notes  
Brenda Moody  
GJ-03979-RS  
May 15, 1985  
Page 2

All utility lines were investigated; three water lines, one gas line, and two sewer lines. No contamination was found.

Bob Faith, owner, arrived at 11:00 A.M. His tenant let us in the basement apartment and crawl space. The crawl space was determined as not being accessible by Health and Safety. Some readings were taken where possible. No contamination was found in the crawl space or basement.

The tenant had a small piece of ore which we removed from the apartment to the repository.

No injuries occurred.

All team members were alpha scanned.

Date: May 15, 1985

Elevated readings were found in the stairwell. A delta was done and showed no contamination.



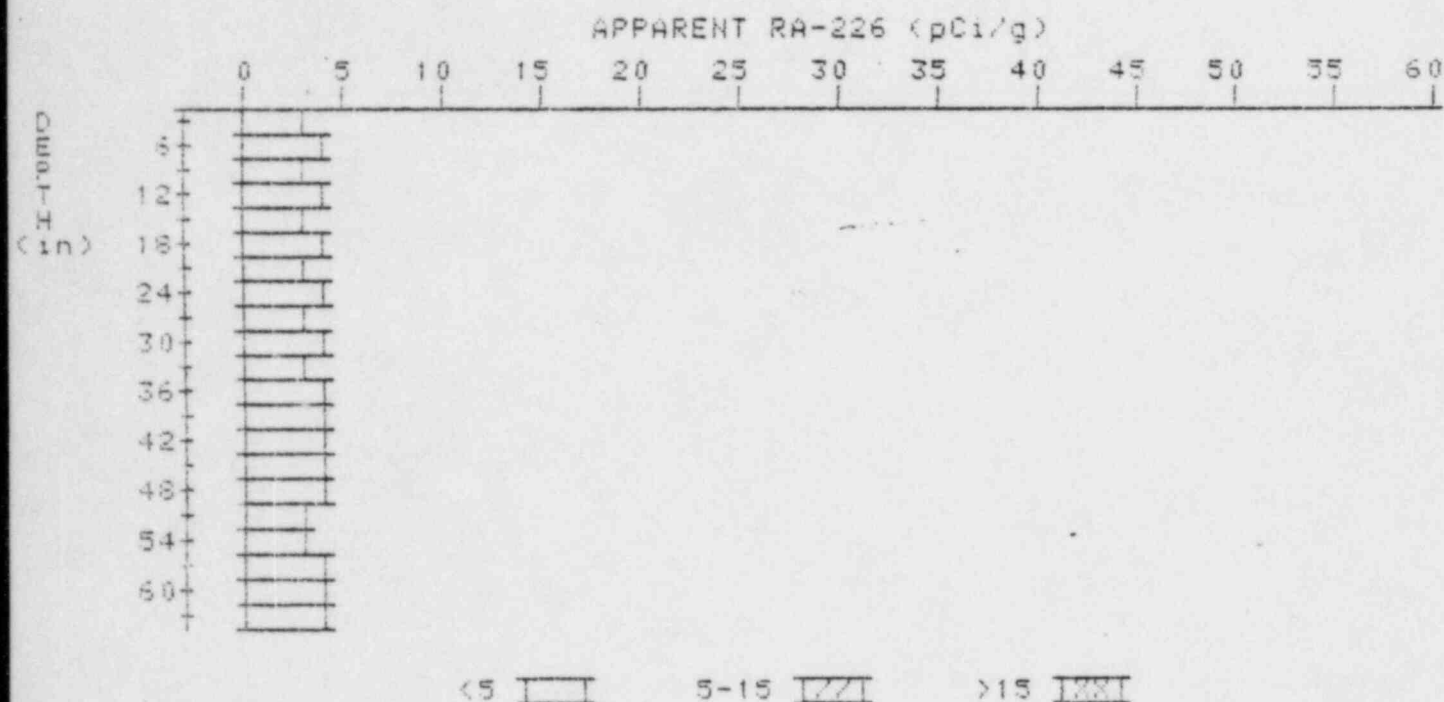
# APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

1

PROPERTY NUMBER: GJ-03979-RM

HOLE NUMBER: 1

LOCATION: 152188



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	3.1
18	3.6	4.0
21	3.5	3.3
24	3.5	3.7
27	3.4	3.0
30	3.5	3.7
33	3.5	3.3
36	3.6	3.6
39	3.6	3.6
42	3.6	3.6
45	3.6	3.6
48	3.6	3.3
51	3.5	3.3

54  
57  
60  
63

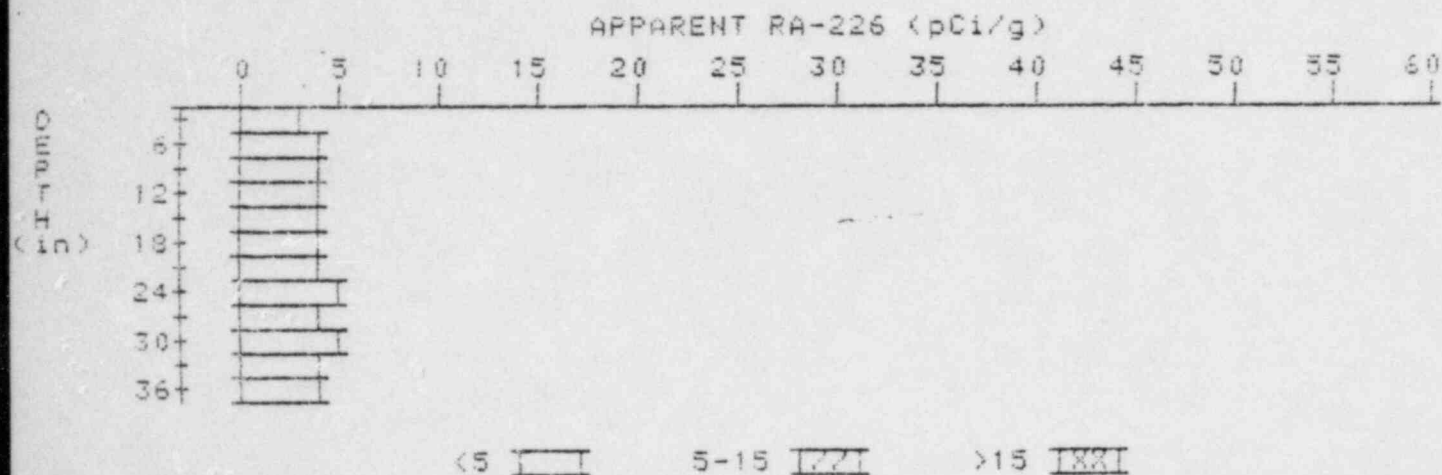
3.5  
3.6  
3.6  
3.6

3.3  
3.8  
3.6  
3.6

# APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

2

PROPERTY NUMBER: GJ-03979-RM  
HOLE NUMBER: 2  
LOCATION: 152208



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	4.4
15	4.0	4.0
18	4.0	3.8
21	4.1	4.1
24	4.2	4.6
27	4.1	3.7
30	4.1	4.6
33	4.1	4.1
36	4.0	4.0

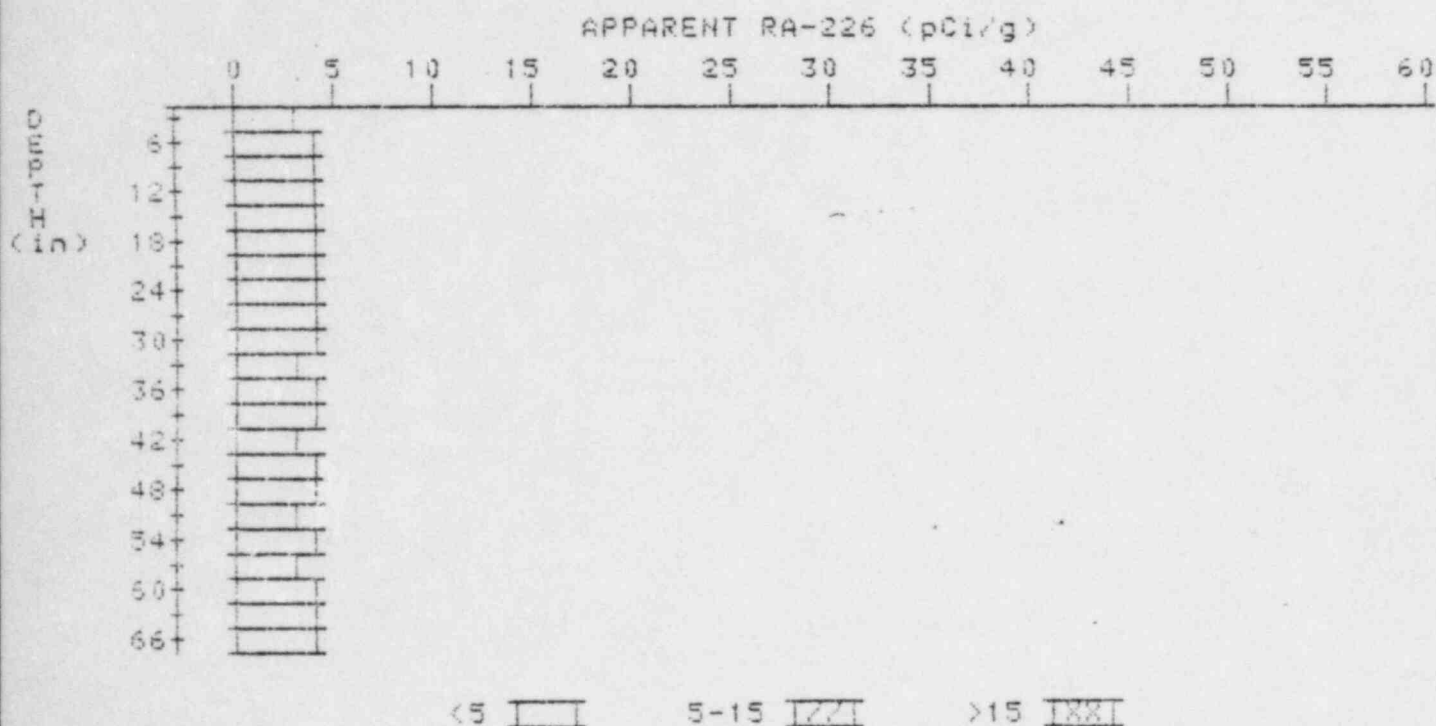
# APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

3

PROPERTY NUMBER: GJ-03979-RM

HOLE NUMBER: 3

LOCATION: 156188



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.3	3.3
6	3.6	3.8
9	3.8	4.2
12	3.8	3.6
15	3.9	4.1
18	3.9	3.9
21	3.9	3.9
24	3.9	4.1
27	3.8	3.8
30	3.7	3.7
33	3.6	3.2
36	3.7	4.1
39	3.6	3.6
42	3.5	3.3
45	3.5	3.5
48	3.5	3.7

51  
54  
57  
60  
63  
66

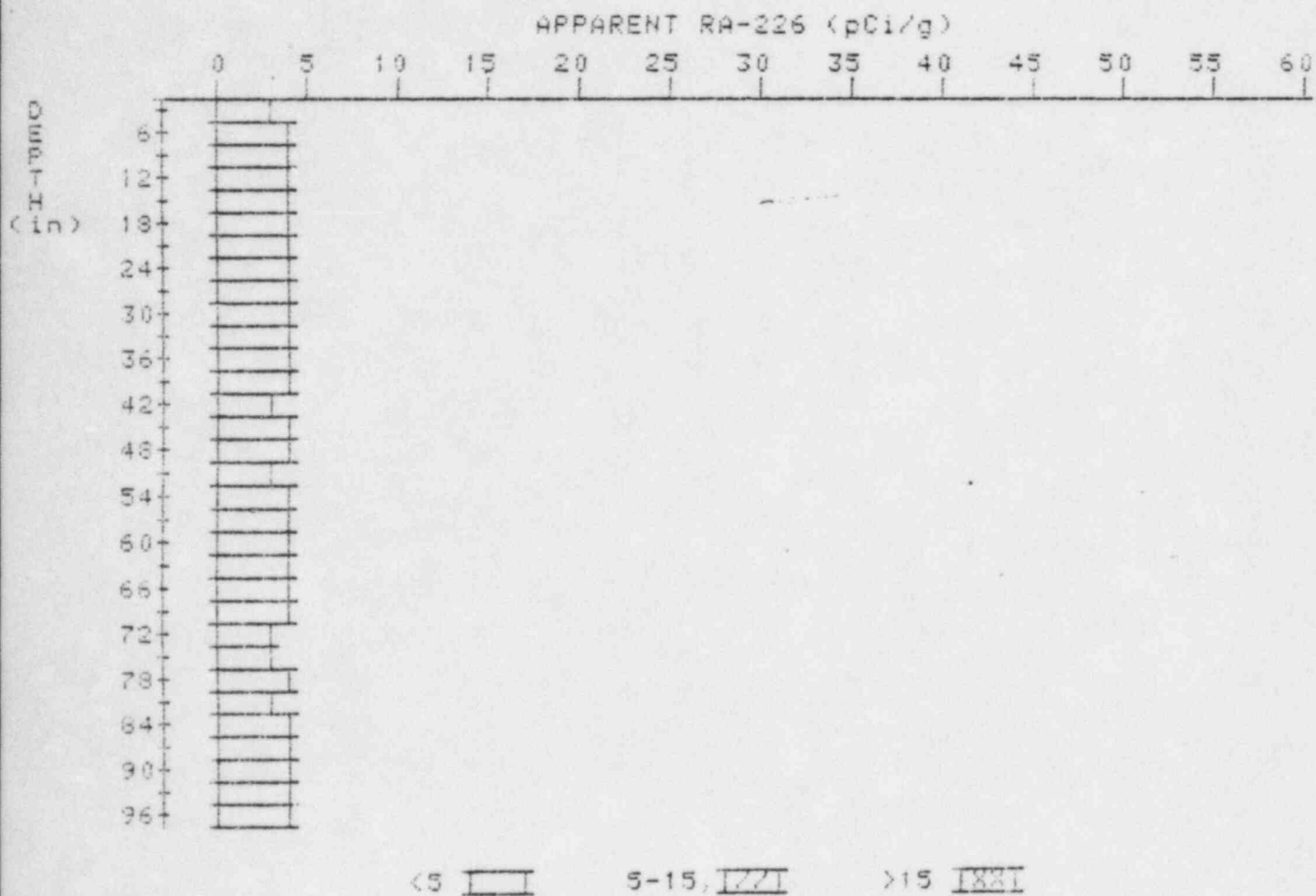
3.4  
3.5  
3.5  
3.6  
3.6  
3.6

3.0  
3.7  
3.3  
3.3  
3.6  
3.6



# APPARENT RADIUM-226 CONCENTRATION 5 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-03979-RM  
HOLE NUMBER: 5  
LOCATION: 161229



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	4.0
12	3.9	4.1
15	3.9	3.9
18	3.9	3.9
21	3.9	3.9
24	3.9	3.9
27	3.9	3.9

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33  
36  
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42  
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3.8  
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3.8  
4.0  
3.5  
3.9  
3.4  
3.4  
4.1  
3.2  
3.9  
3.5  
3.8  
4.1  
3.9

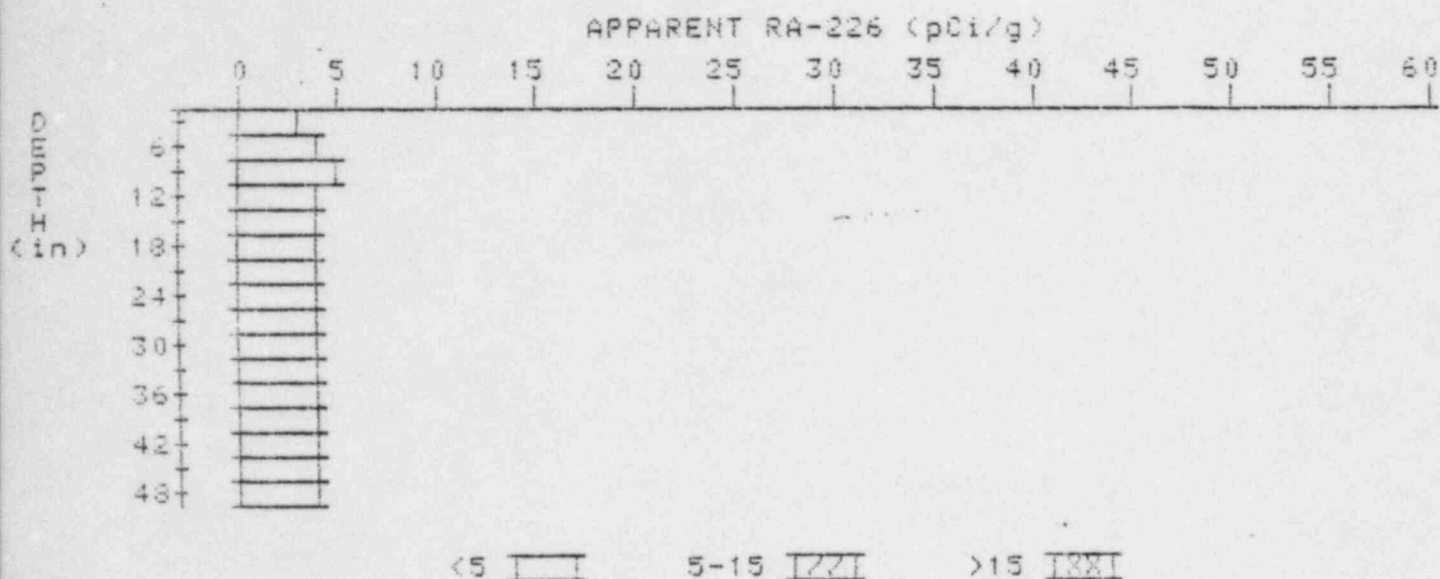
# APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

6

PROPERTY NUMBER: GJ-03979-RM

HOLE NUMBER: 6

LOCATION: 173184



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.3	3.3
6	3.7	3.9
9	4.0	4.7
12	3.9	3.5
15	4.0	4.2
18	4.0	4.0
21	4.0	4.0
24	4.0	4.0
27	4.0	4.0
30	4.0	4.0
33	4.0	4.2
36	3.9	3.7
39	3.9	3.9
42	3.9	3.9
45	3.9	4.1
48	3.8	3.8

# APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

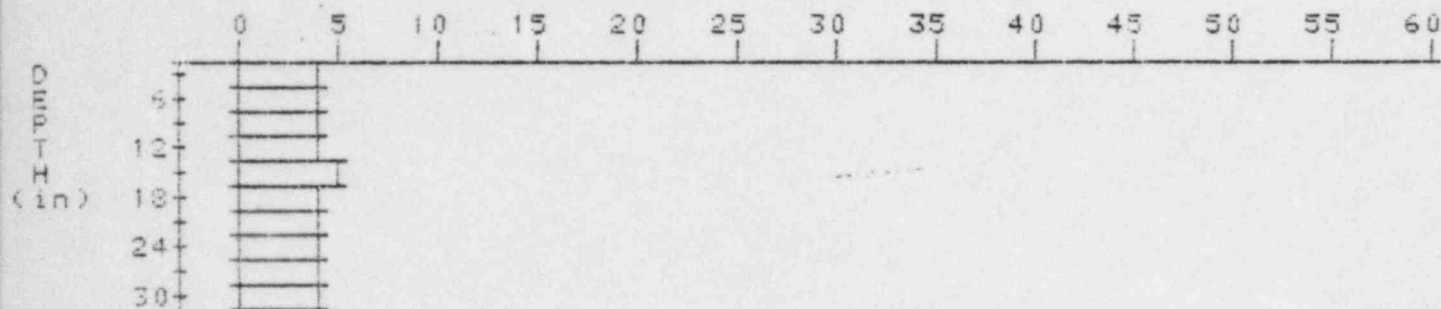
7

PROPERTY NUMBER: GJ-03979-RM

HOLE NUMBER: 7

LOCATION: 187229

APPARENT RA-226 (pCi/g)



<5

5-15

>15

Depth (in)	Apparent Radium-226 (pCi/g)	Apparent Radium-226 (pCi/g)
	Undeconvolved	Deconvolved
3	3.6	3.6
6	3.9	4.4
9	3.9	3.5
12	4.1	4.3
15	4.2	4.6
18	4.1	3.9
21	4.1	4.1
24	4.1	4.1
27	4.1	4.1
30	4.1	4.1

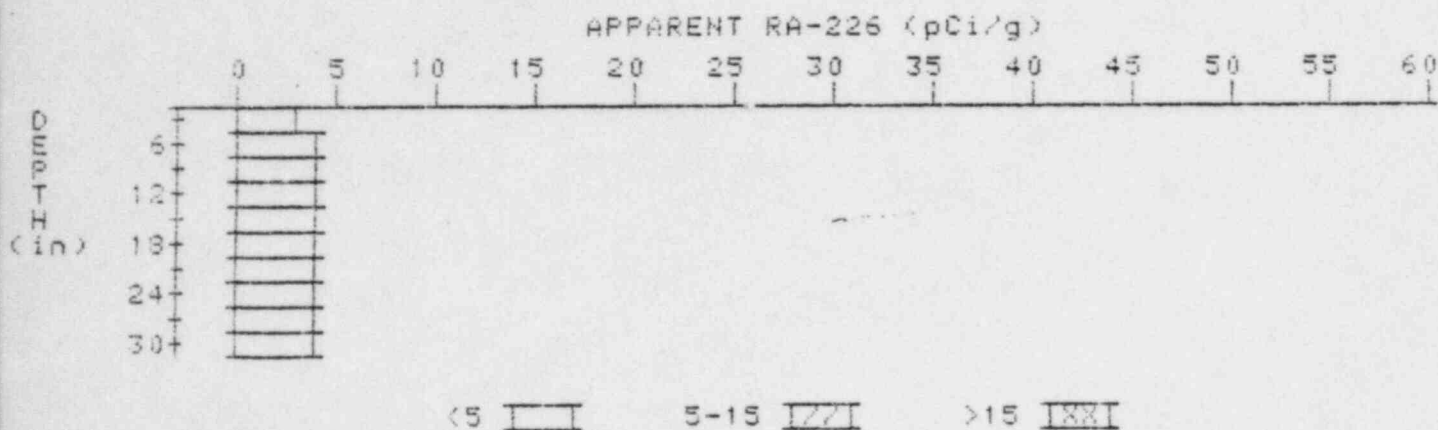
# APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

9

PROPERTY NUMBER: GJ-03979-RM

HOLE NUMBER: 9

LOCATION: 189266



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.3	3.3
6	3.6	3.8
9	3.8	4.0
12	3.9	3.9
15	4.0	4.4
18	3.9	3.7
21	3.9	4.1
24	3.8	3.6
27	3.8	3.6
30	3.9	3.9

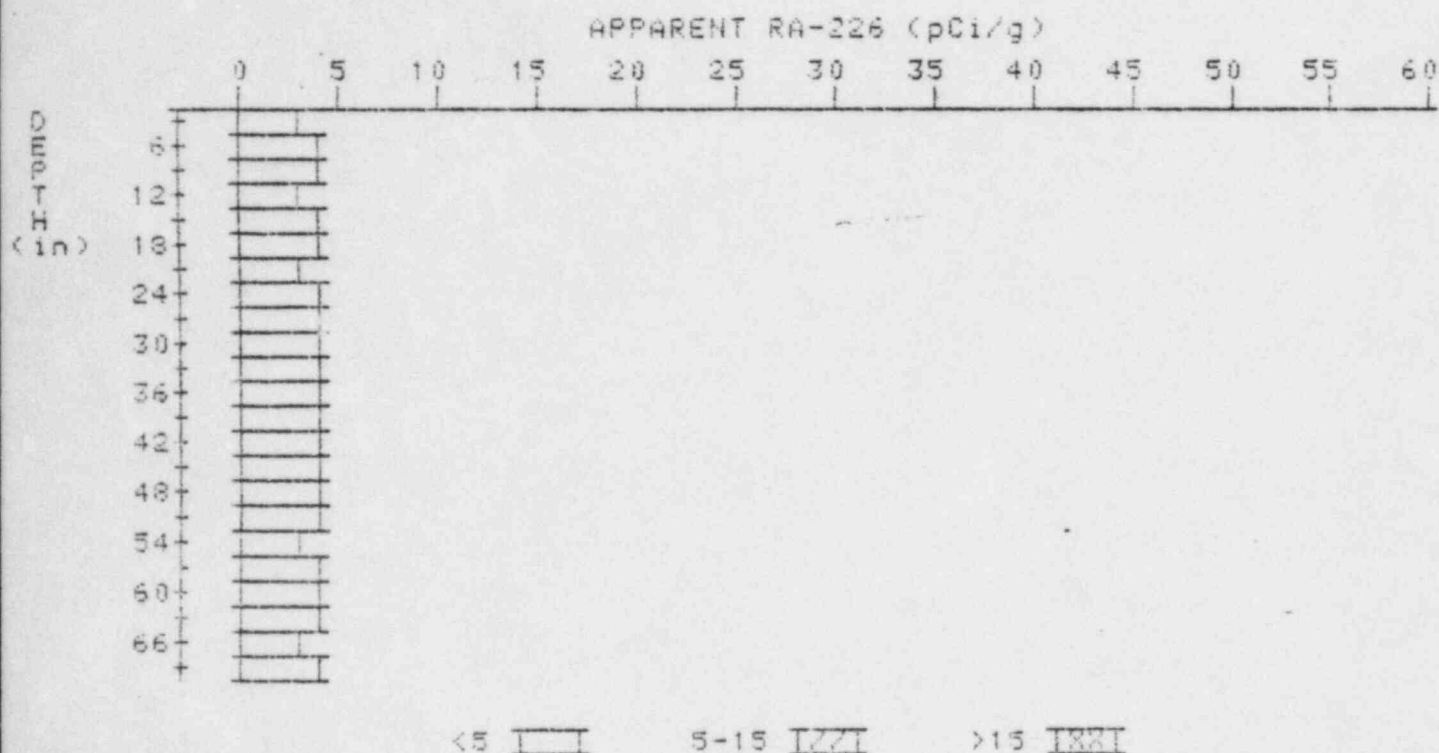


# APPARENT RADIUM-226 CONCENTRATION 10 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-03979-RM

HOLE NUMBER: 10

LOCATION: 192242



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	3.2
15	3.8	4.3
18	3.7	3.7
21	3.6	3.2
24	3.7	3.7
27	3.8	4.0
30	3.8	3.6
33	3.9	4.3
36	3.8	3.6
39	3.8	3.6
42	3.8	3.6
45	3.8	3.6

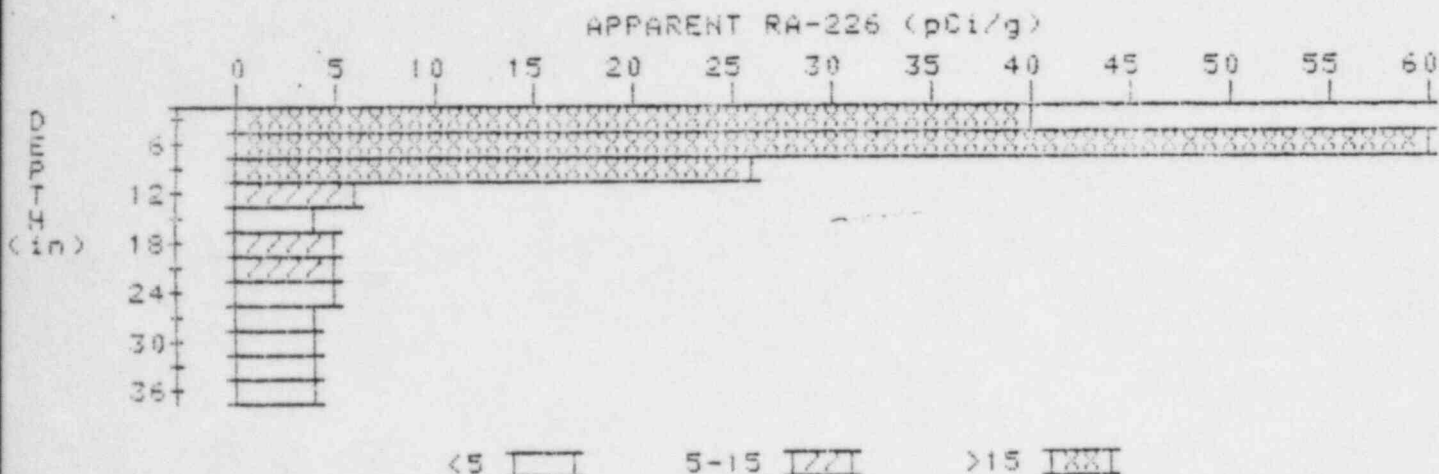
48  
51  
54  
57  
60  
63  
66  
69

3.9  
3.9  
3.8  
3.9  
3.9  
3.9  
3.8  
3.9

4.1  
4.1  
3.4  
4.1  
3.9  
4.1  
3.4  
3.9

# APPARENT RADIUM-226 CONCENTRATION 13 DECONVOLUTION GRAPH

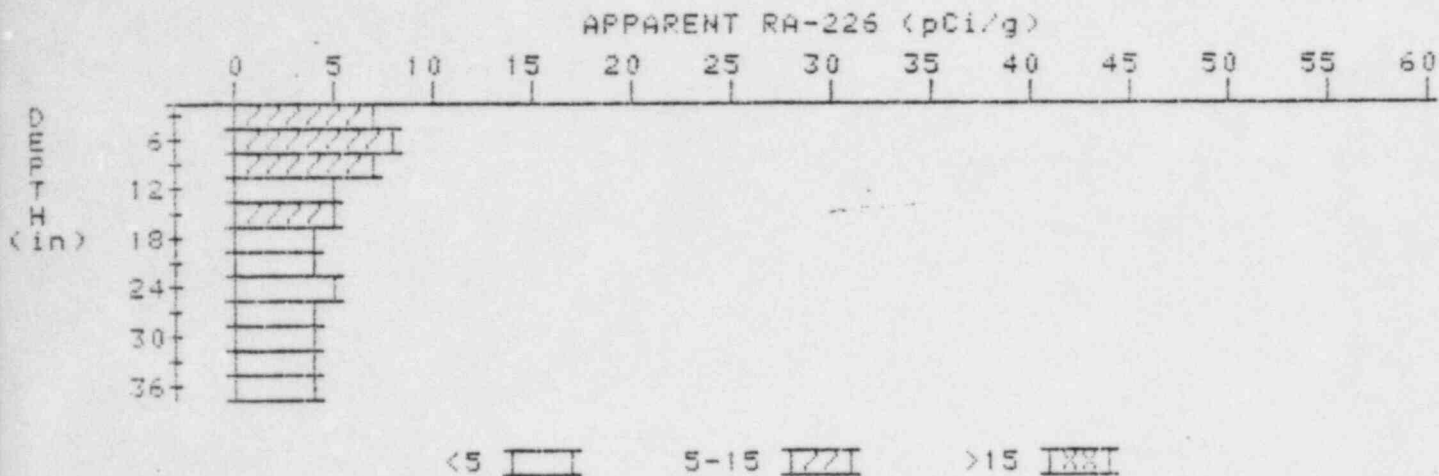
PROPERTY NUMBER: GJ-03979-RM  
HOLE NUMBER: 13  
LOCATION: 204183



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	39.5	39.5
6	50.9	103.2
9	32.9	26.3
12	18.6	6.3
15	11.2	3.6
18	8.1	5.4
21	6.5	5.4
24	5.5	5.0
27	4.8	4.1
30	4.5	4.3
33	4.3	4.1
36	4.2	4.2

# APPARENT RADIUM-226 CONCENTRATION 15 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-03979-RM  
HOLE NUMBER: 15  
LOCATION: 205194



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	7.0	7.0
6	7.1	8.3
9	6.5	6.9
12	5.7	5.0
15	5.3	5.3
18	4.8	4.4
21	4.5	4.1
24	4.4	4.6
27	4.2	4.0
30	4.1	4.1
33	4.0	4.0
36	3.9	3.9