

RADIOLOGIC AND ENGINEERING ASSESSMENT

FOR

DOE ID NO.: GJ-00599-RS
ADDRESS: 1944 NORTH 22ND STREET

AUGUST 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

M. K. Tucker
M. TUCKER

DOE PROJECT ENGINEER

DATE

August 1, 1985

REA00599:REA-704

8508150144 850802
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	5
3.5 Extent of Contamination	5
4.0 RECOMMENDED REMEDIAL ACTION	7
4.1 Decontamination and Restoration	7
4.2 Evaluation of Recommended Remedial Action	7
5.0 REFERENCES	8
6.0 APPENDIX	9

1.0 EXECUTIVE SUMMARY

1.1 Introduction

The location, DOE ID No. GJ-00599-RS, is a single-family residence located at 1944 North 22nd 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, 28 cu. yd.; interior, 0 cu. yd.

Estimated cost to perform remedial action, including dislocation when applicable, is \$1,716. Remedial action on this property will take approximately 5 days to complete.

2.0 PROPERTY DESCRIPTION

2.1 General Description

Address: 1944 North 22nd Street, Grand Junction, Colorado

Zoning: Residential (RSF-8)

Lot Size: Approximately 7,800 sf (0.18 acres)

Legal Description: Lot 6, Block 3, Subdivision Del Rey Replat, Section 12, T1S, R1W, U.M., 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:	Overhead
Sewer:	Underground
Water:	Underground
Cable TV:	Overhead

Bordering Properties:

North:	Single-family residence
South:	Single-family residence
East:	Alley
West:	North 22nd Street

2.2 Existing Facilities and Structures

Primary Structure:

Type:	Single-story residence
Size:	Approximately 1,194 sf
Construction Date:	1955
Construction:	Wood-frame
Foundation:	Concrete wall on spread footing
Footing Depth:	Approximately 24" to bottom of footing from grade
Basement:	None
Crawl Space:	Yes
Condition:	Good

Other Structures:

Type:	Utility shed
Size:	Approximately 28 sf
Construction:	Wood-frame
Foundation:	Monolithic concrete slab-on-grade
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-00599-RS on June 28, 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 in the yard south, east, and west of the primary structure, and along the east side 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: 14 to 17 uR/h
Highest Outside Gamma Reading (HOG): 69 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: 15 to 16 uR/h
Highest Inside Gamma Reading (HIG): 16 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) Surface Material: Lawn
 Direction From Primary Structure: Northwest
 Other Directions: Northwest corner of property
 Total Depth of Contamination: 12 inches
 Approximate Square Footage: 72
- (Area B) Surface Material: Lawn
 Direction From Primary Structure: West
 Total Depth of Contamination: 6 inches
 Approximate Square Footage: 20
- (Area C) Surface Material: Lawn
 Direction From Primary Structure: West
 Total Depth of Contamination: 9 inches
 Approximate Square Footage: 147
- (Area D) Surface Material: Lawn
 Direction From Primary Structure: East
 Other Directions: Along east side of primary structure
 Total Depth of Contamination: 15 inches
 Approximate Square Footage: 40
- (Area E) Surface Material: Lawn
 Direction From Primary Structure: East
 Other Directions: South of Area D
 Total Depth of Contamination: 9 inches
 Approximate Square Footage: 33
- (Area F) Surface Material: Lawn
 Direction From Primary Structure: Northeast
 Other Directions: Along north property line
 Total Depth of Contamination: 12 inches
 Approximate Square Footage: 56
- (Area G) Surface Material: Lawn
 Direction From Primary Structure: Southeast
 Total Depth of Contamination: 6 inches
 Approximate Square Footage: 40

- (Area H) Surface Material: Lawn
Direction From Primary Structure: East
Other Directions: Northeast corner of property
Total Depth of Contamination: 9 inches
Approximate Square Footage: 380
- (Area I) Surface Material: Soil
Direction From Primary Structure: East
Other Directions: In alley
Total Depth of Contamination: 9 inches
Comments: The depth of contamination is based on
information gathered in Area H.
Approximate Square Footage: 136

4.0 RECOMMENDED REMEDIAL ACTION

4.1 Decontamination and Restoration

The recommended remedial action for this property, DOE ID No. GJ-00599-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 \$1,716.

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 Office, 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 Exposure Rates
Figure 3.2	Exterior Sample Locations
Figure 3.3	Exterior Estimated Extent of Contamination

Official Survey Report

Memo of Understanding

Team Leader Notes

Deconvolution Graphs (Apparent Radium-226 Concentration)

Exterior Gamma Scan Map

Radium Concentrations at Exterior Locations

DOE ID #GJ-00599-RS

1944 North 22nd Street

Page 1 of 3

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
1	157293	00	DS	1.8		*	On sidewalk
2	165269	00	DS	2.7		*	
3	165272	00	DS	12.4		*	
		06	DS	7.1		*	
		09	DS	2.6		*	
		12	DS	1.5		*	
4	165283	00	DS	4.0		*	
		06	DS	1.7		*	
5	165293	00	DS	14.9		*	
		06	DS	3.3		*	
		12	DS	2.1		*	
6	184272	00	DS	1.8		*	
		06	DS	1.2		*	
7	199292	00	DS	<1.0		*	Gas line
		09	DS	1.1		*	On gas line
8	210271	00	DS	2.8		*	DC = 9 inches
		03	TC	5.3		*	Based on the
		06	TC	5.0		*	deconvolution graph
		09	TC	4.4		*	
		12	TC	4.0		*	
		15	TC	3.9		*	
		18	TC	3.9		*	
		21	TC	3.8		*	
		24	TC	3.7		*	
		27	TC	3.6		*	
		30	TC	3.6		*	
9	210282	00	DS	18.3		*	DC = 15 inches
		03	TC	9.1		*	Based on the
		06	TC	8.3		*	deconvolution graph
		09	TC	7.0		*	
		12	TC	6.1		*	
		15	TC	5.4		*	
		18	TC	5.0		*	
		21	TC	4.4		*	

Radium Concentrations at Exterior Locations

DOE ID #GJ-00599-RS

1944 North 22nd Street

Page 2 of 3

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
9	210282	24	TC	4.2		*	
		27	TC	4.0		*	
		30	TC	3.9		*	
		33	TC	3.8		*	
10	216236	00	DS	7.4		*	
		03	DS	3.2		*	
		06	DS	2.1		*	
11	225236	00	DS	1.3		*	
		06	DS	1.9		*	
12	230295	00	DS	7.2		*	Along north fence
		03	TC	10.1		*	DC = 12 inches
		06	TC	11.4		*	Based on the
		09	TC	9.2		*	deconvolution graph
		12	TC	6.5		*	
		15	TC	5.0		*	
		18	TC	4.3		*	
		21	TC	4.0		*	
		24	TC	3.7		*	
		27	TC	3.7		*	
		30	TC	3.7		*	
13	240260	00	DS	<1.0		*	Background
		03	TC	2.7		*	DC = 0 inches
		06	TC	3.2		*	
		09	TC	3.3		*	
		12	TC	3.4		*	
		15	TC	3.4		*	
		18	TC	3.5		*	
		21	TC	3.5		*	
		24	TC	3.4		*	
		27	TC	3.4		*	
		30	TC	3.3		*	
14	270293	00	DS	1.0		*	Along north fence
		03	TC	2.9		*	DC = 0 inches
		06	TC	3.2		*	
		09	TC	3.3		*	
		12	TC	3.5		*	

Radium Concentrations at Exterior Locations

DOE ID #GJ-00599-RS

1944 North 22nd Street

Page 3 of 3

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
14	270293	15	TC	3.5		*	
		18	TC	3.6		*	
		21	TC	3.6		*	
		24	TC	3.6		*	
		27	TC	3.6		*	
		30	TC	3.6		*	
		33	TC	3.7		*	
		36	TC	3.6		*	
15	280270	00	DS	1.1		*	
		06	DS	1.1		*	
16	286294	00	DS	24.8		*	
		06	DS	3.3		*	
		09	DS	1.8		*	
17	299293	00	DS	1.2		*	Along alley DC = 0 inches
		03	TC	3.2		*	
		06	TC	3.6		*	
		09	TC	3.9		*	
		12	TC	4.1		*	
		15	TC	3.9		*	
		18	TC	3.9		*	
		21	TC	3.8		*	
		24	TC	3.6		*	
		27	TC	3.7		*	
		30	TC	3.6		*	
		33	TC	3.6		*	

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 = 06-28-85
 Team Leader = JDG

Table 3.2

Summary of Interior Gamma Exposure Rates

DOE ID No. GJ-00599-RS 1944 North 22nd 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	*	*	*	*	15-17	*
Enclosed patio	*	*	*	*	15-16	*
Shed	*	*	*	*	15-15	*

* A walking gamma scan was performed to confirm the absence of interior contamination at this location.

Table 4.1
Area and Volume Calculations
DOE ID No. GJ-00599-RS

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									
A	12 x 6	=	72	x	1.0	x	72		
B	5 x 4	=	20	x	0.5	=	10		
C	21 x 7	=	147	x	0.8	=	118		
D	4 x 10	=	40	x	1.3	=	52		
E	3 x 11	=	33	x	0.8	=	26		
F	14 x 4	=	56	x	1.0	=	56		
G	10 x 4	=	40	x	0.5	=	20		
H	19 x 20	=	380	x	0.8	=	304		
I	8 x 17	=	136	x	0.8	=	109		
TOTAL VOLUME - EXTERIOR							=	767	= 767/27 = 28

See Appendix Figure 3.3 For Areas

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Table 4.2
Estimated Cost of Decontamination and Restoration
DOE ID No. GJ-00599-RS

Page 1 of 1

EXTERIOR

Remove identified residual radioactive material	
22 cy @ \$14.50/cy (machine-open)	\$ 319
6 cy @ \$44/cy (manual-open)	264

Replace areas with topsoil	
23 cy @ \$9.50/cy	219

Replace areas with compacted roadbase	
5 cy @ \$11.50/cy	58

Replace areas with sod	
788 sf @ \$.20/sf	158

TOTAL EXTERIOR	\$ 1,018
----------------	----------

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

ACCESS CONTROL	150
----------------	-----

SUBTOTAL	\$ 1,168
----------	----------

CONTINGENCY @ 5%	58
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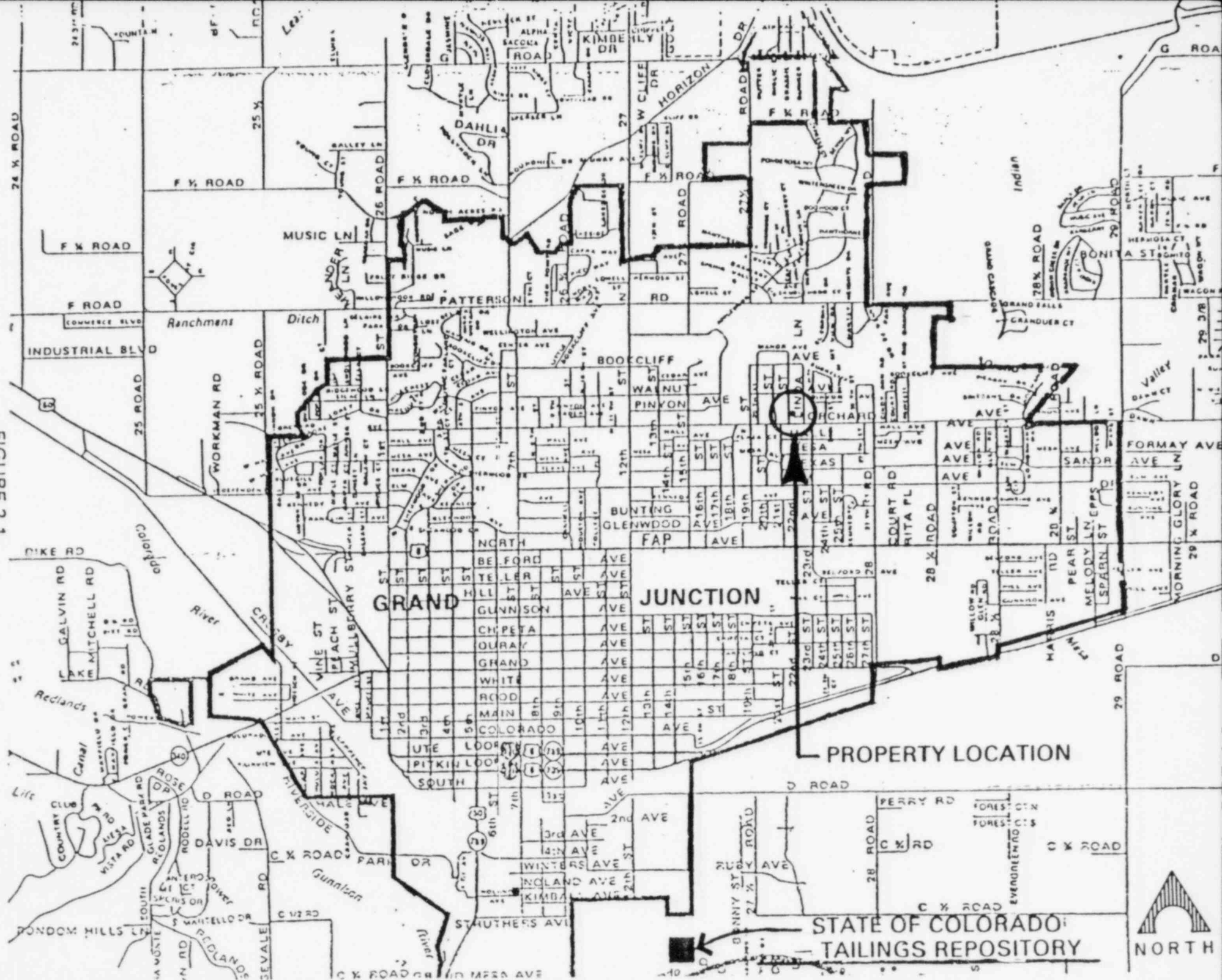
SUBTOTAL	\$ 1,226
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CONTRACTOR OVERHEAD & PROFIT @ 40%	490
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GRAND TOTAL	\$ 1,716
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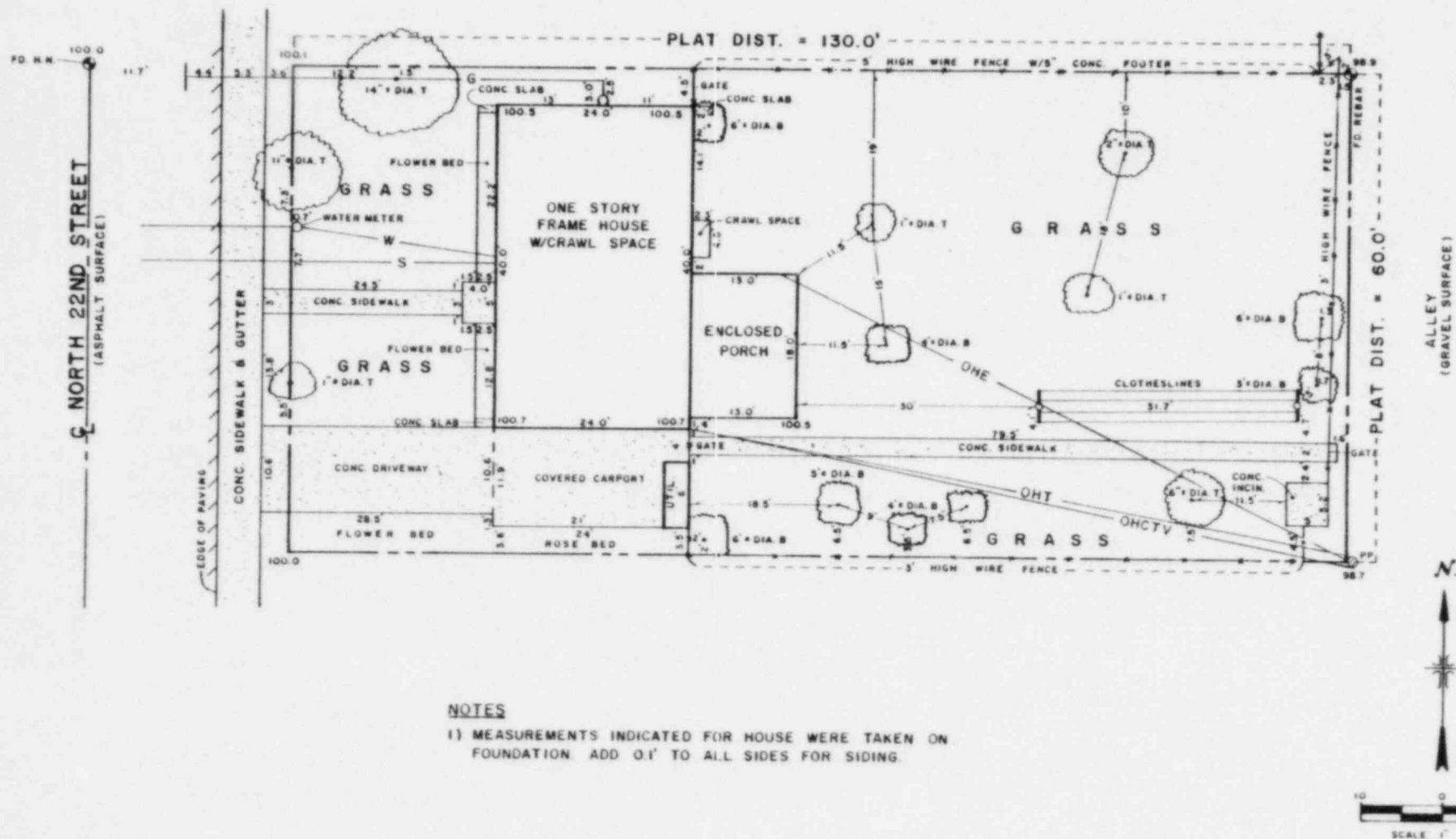
FAV072685
REA00599/REA-704/AP

FIGURE 2.1
VICINITY MAP



LOT 6, BLOCK 3, SUBDIVISION DEL REY REPLAT

SEC 12, T1S, R1W, U.M.




NOTES

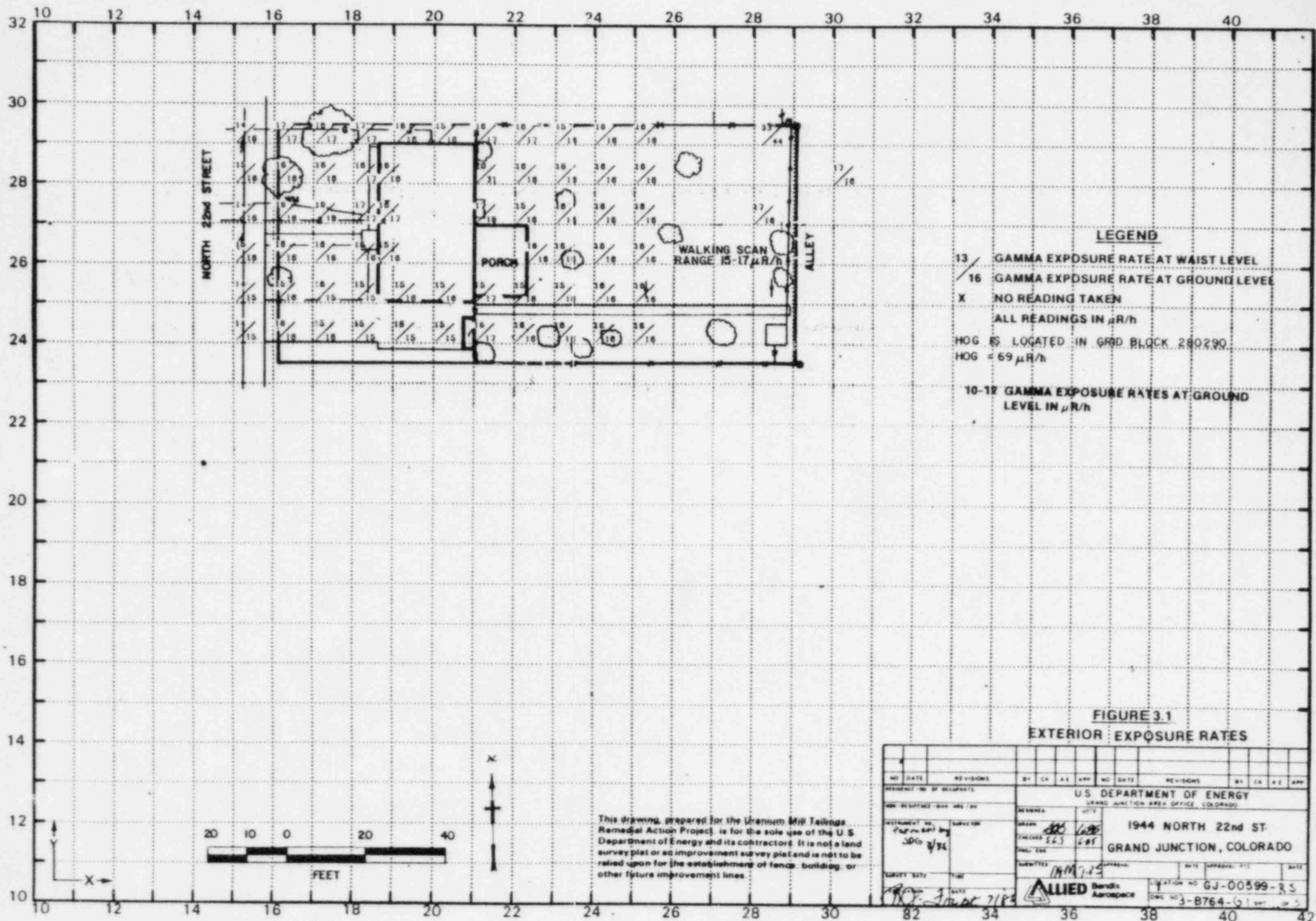
- 1) MEASUREMENTS INDICATED FOR HOUSE WERE TAKEN ON FOUNDATION. ADD 0.1' TO ALL SIDES FOR SIDING.

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		GJ-00599-75
ADDRESS 1944 NORTH 22ND ST. GRAND JUNCTION, CO 81501		 UDELL S. WILLIAMS 100 Block, Houston 10000 North 22nd, Houston, Texas
SURV USW/6-4-85	DRAFT USW/6-5-85	
DRAWING NO.		SHEET 1 OF 1

TAX SCHEDULE NO. 2945-121-21-011



NO. DATE		REVISIONS		BY	CH	A.E.	APP.	NO.	DATE	REVISIONS		BY	CH	A.E.	APP.
RESIDENT NO. OF OCCUPANTS															
OWN. RESIDENCE (YES OR NO)															
INSTRUMENT NO.		SURVEYOR		DESIGNED		CHECKED		DATE		U.S. DEPARTMENT OF ENERGY GRAND JUNCTION AREA OFFICE, COLORADO 1944 NORTH 22nd ST. GRAND JUNCTION, COLORADO					
SURVEY DATE		TIME		QUANTITIES		APPROVED		DATE		LOCATION NO. GJ-00599-RS DOW. NO. 3-B764-51 EXT. 100					
82		34		36		38		40		42					

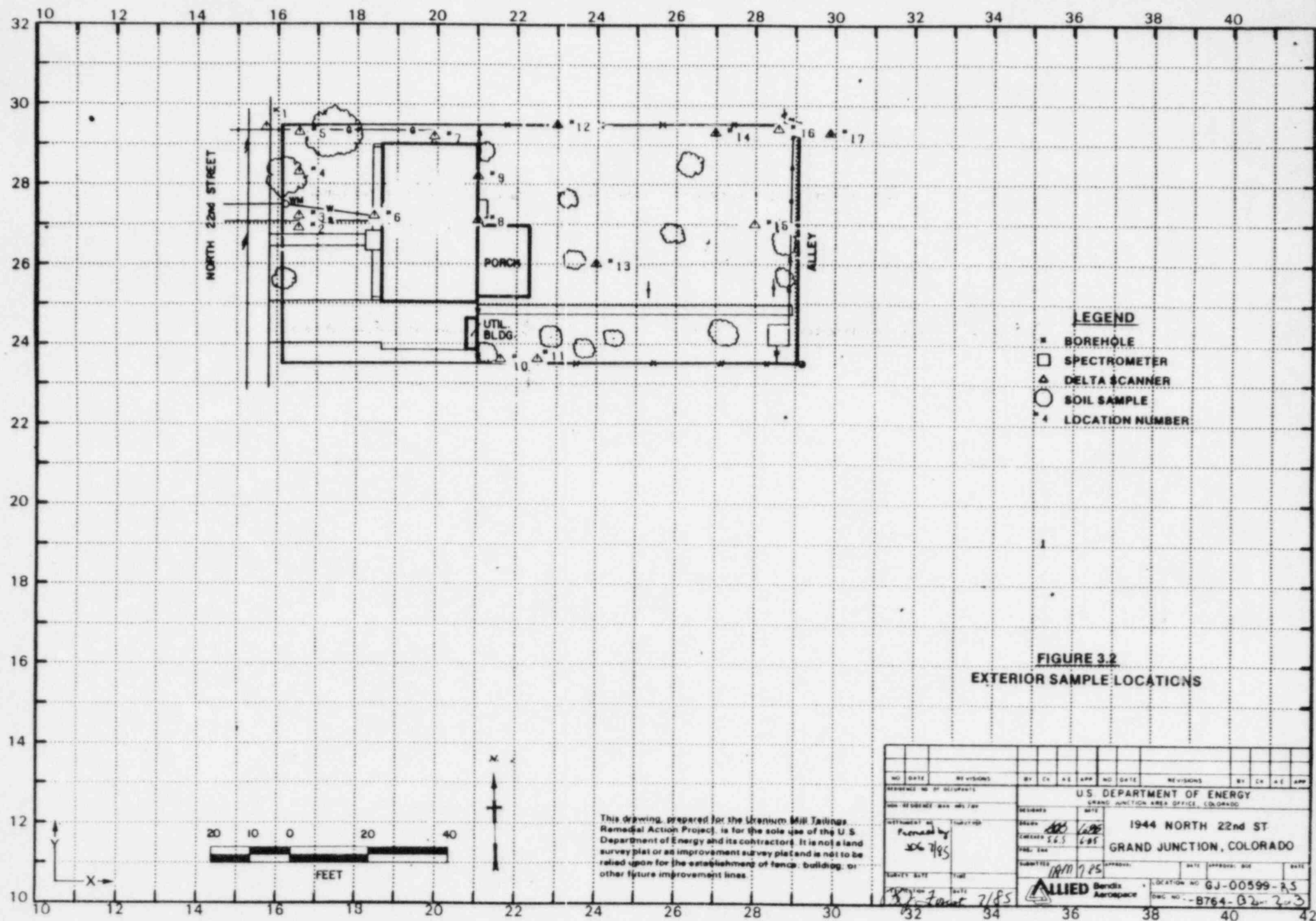
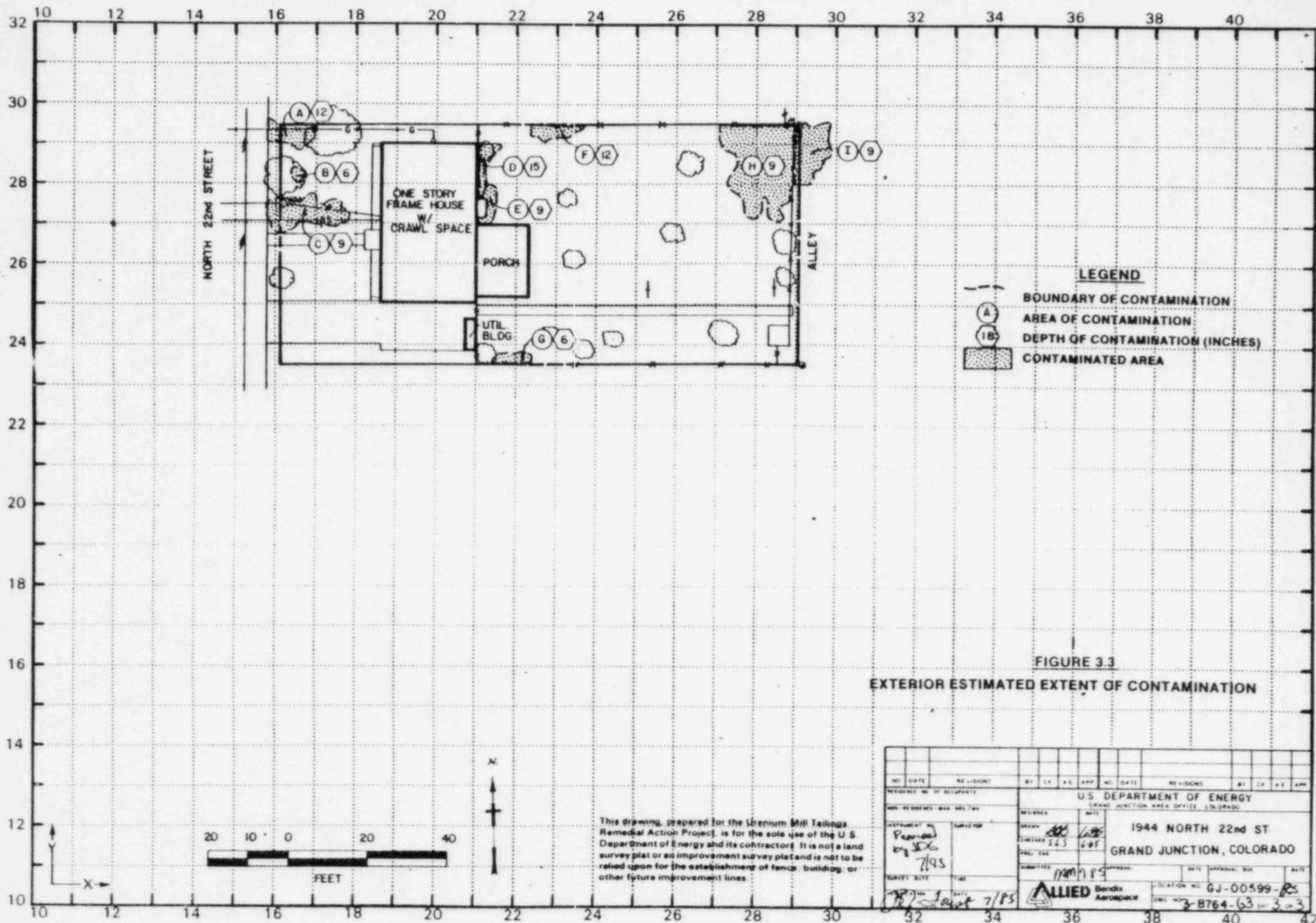


FIGURE 3.2
EXTERIOR SAMPLE LOCATIONS

[illegible]



NO. DATE		REVISION		BY	CHK	DATE	APP	NO. DATE	REVISION		BY	CHK	DATE	APP
RESIDENCE NO. OF OCCUPANTS														
MAX. RESIDENCE MAX. NO. / YR.														
INSTRUMENT NO.		SURVEYOR		DESIGNED		DATE		U.S. DEPARTMENT OF ENERGY						
Checked by <i>SK</i>		7/93		CHECKED		163 6/95		GRAND JUNCTION AREA OFFICE, COLORADO						
SURVEY DATE		TIME		SUBMITTER		APPROVAL		1944 NORTH 22nd ST						
7/93		7/93		ALLIED		Bordis Aerospace		GRAND JUNCTION, COLORADO						
LOCATION NO.		GJ-00599-RS		DATE		APPROVAL		DATE						
3-8764-63		3-3												

3/85

DOE ID NO. GJ-00599-RS

Date 7-8-85

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

Official Survey Report

Property Address 1944 North 22nd Street
Property Owner Lawrence and Irene Williams
Address of Owner (if different from above) same
Report Prepared By James D. Garcia

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 XXX 1 In open areas.

1 XXX 1 Under or around exterior improvements.

1 1 Under or around a typically nonoccupied structure.

1 XXX 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 = 16 uR/h
HOG = 69 uR/h

July 17, 1985

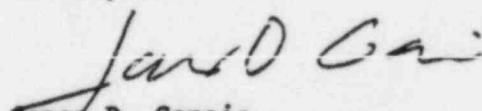
Colorado Department of Health
222 South 6th Street
Grand Junction, Colorado 81501

ATTN: Chuck Thornberg

Dear Chuck:

"No Comments" concerning Department of Energy (DOE) Identification number
GJ-00599-RS (1944 22nd Street) has been noted.

Thank you.



James D. Garcia
RSD Survey Team Leader

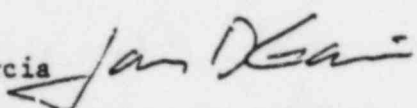
JDG:pr

ALLIED Bendix
Aerospace

Bendix Field Engineering Corporation
Grand Junction Operations
Grand Junction, Colorado

Date: June 28, 1985

To: Files

From: James Garcia 

Subject: Team Leader Notes - GJ-00599-RS

Address: 1944 North 22nd Street

Owner: Lawrence and Irene Wallace

Telephone: 245-1559

Team Members

J. Garcia (Team Leader)
H. Lucero
G. Larsen

V. Young
D. Krabacher
S. Southern

Instruments

See Operational Summary sheet

We arrived on the property and proceeded to grid, scan, and collect data from the property.

Bendix team crew located spillover contamination spilling onto the adjacent property to the north (1944 North 22nd Street). The home owner informed me that she had already signed a consent form; in fact, a crew from ORNL arrived on her property at approximately 11:00 AM to do an inclusion survey.

Team members discovered contamination along the south property line; however, it did not spillover onto the adjacent property. The homeowner informed me that his property had been certified clean by the Colorado Department of Health (CDH)

Team Leader Notes
James Garcia
GJ-00599-RS
June 28, 1985
Page 2

All team members were frisked (alpha scanned) and proceeded to Cathy Kelleher's property on Hall Avenue.

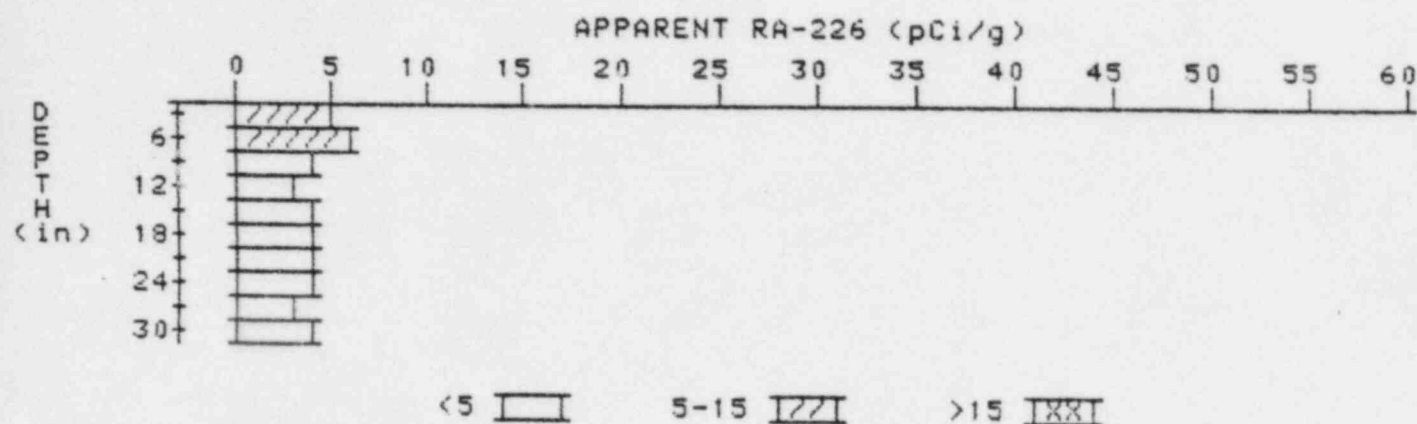
APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

8

PROPERTY NUMBER: GJ-00599-RS

HOLE NUMBER: 8

LOCATION: 210271



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	5.3	5.3
6	5.0	5.5
9	4.4	4.0
12	4.0	3.5
15	3.9	3.7
18	3.9	4.1
21	3.8	3.8
24	3.7	3.7
27	3.6	3.4
30	3.6	3.6

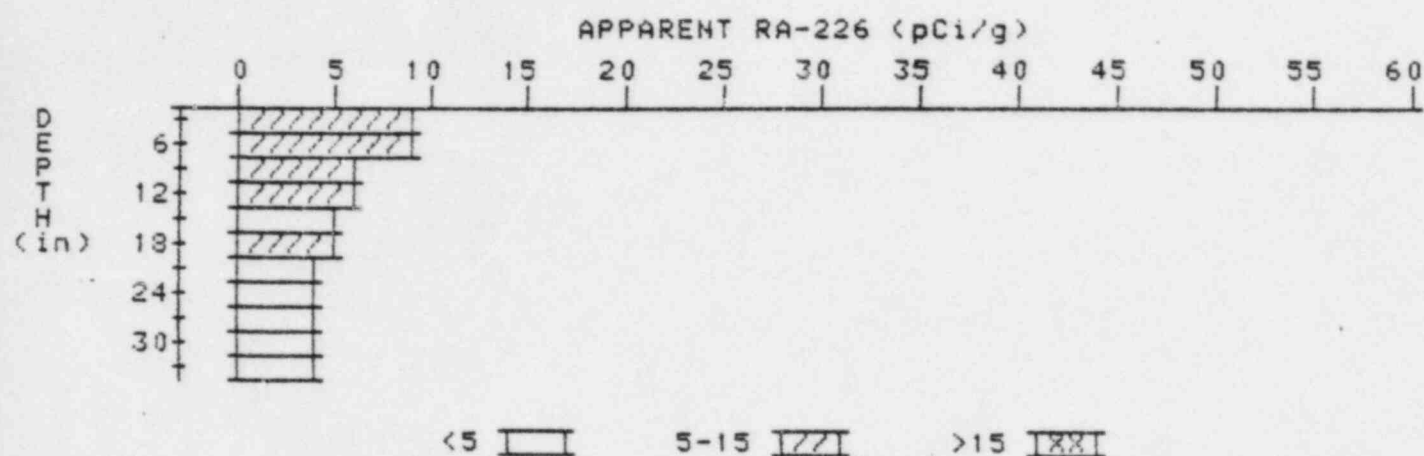
APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

9

PROPERTY NUMBER: GJ-00599-RS

HOLE NUMBER: 9

LOCATION: 210282



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	9.1	9.1
6	8.3	9.2
9	7.0	6.3
12	6.1	5.7
15	5.4	4.9
18	5.0	5.4
21	4.4	3.7
24	4.2	4.2
27	4.0	3.8
30	3.9	3.9
33	3.8	3.8

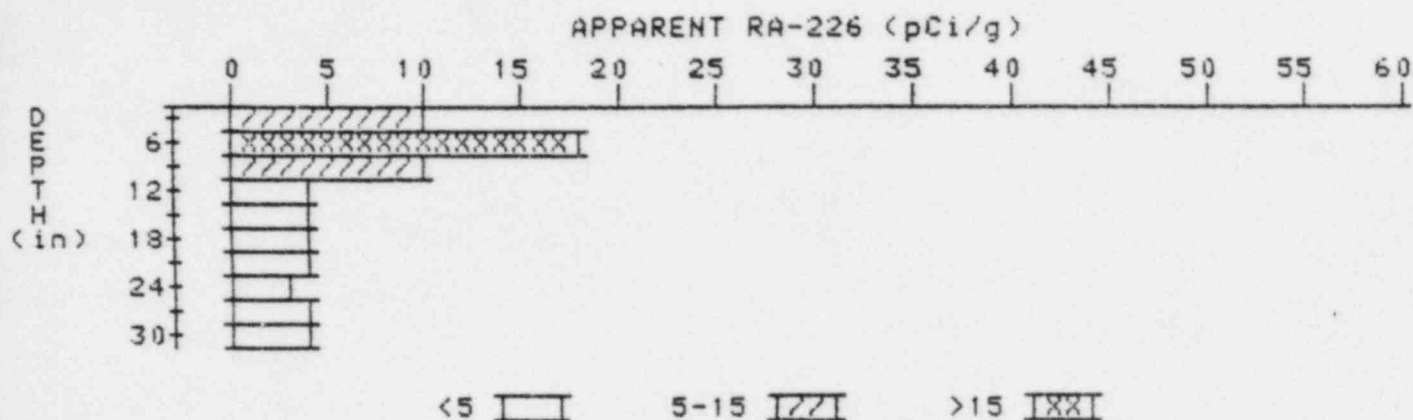
APPARENT RADIUM-226 CONCENTRATION 12

DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-00599-RS

HOLE NUMBER: 12

LOCATION: 230295



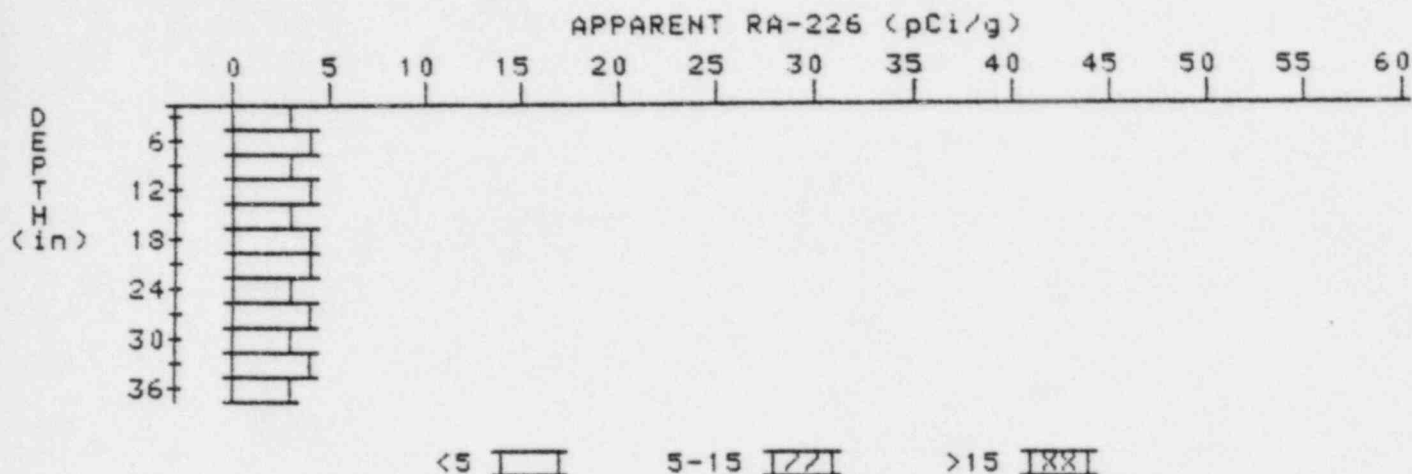
Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	10.1	10.1
6	11.4	17.6
9	9.2	10.1
12	6.5	4.4
15	5.0	3.6
18	4.3	3.6
21	4.0	4.0
24	3.7	3.2
27	3.7	3.7
30	3.7	3.7

APPARENT RADIUM-226 CONCENTRATION 13 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-00599-RS

HOLE NUMBER: 13

LOCATION: 240260



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	2.7	2.7
6	3.2	3.9
9	3.3	3.3
12	3.4	3.6
15	3.4	3.2
18	3.5	3.7
21	3.5	3.7
24	3.4	3.2
27	3.4	3.6
30	3.3	2.9
33	3.4	3.8
36	3.3	3.3

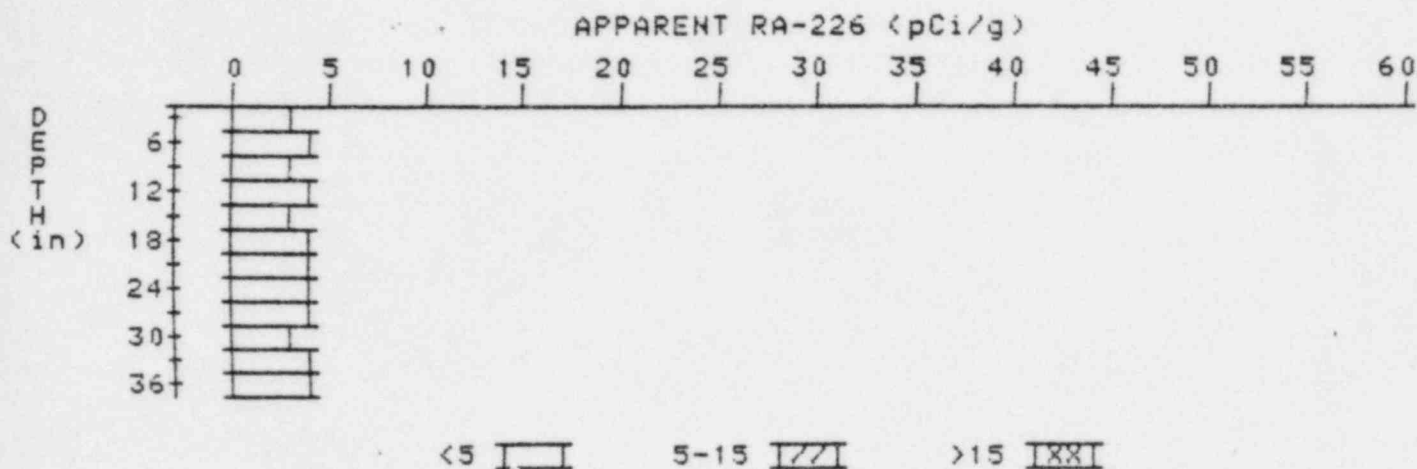
APPARENT RADIUM-226 CONCENTRATION 14

DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-00599-RS

HOLE NUMBER: 14

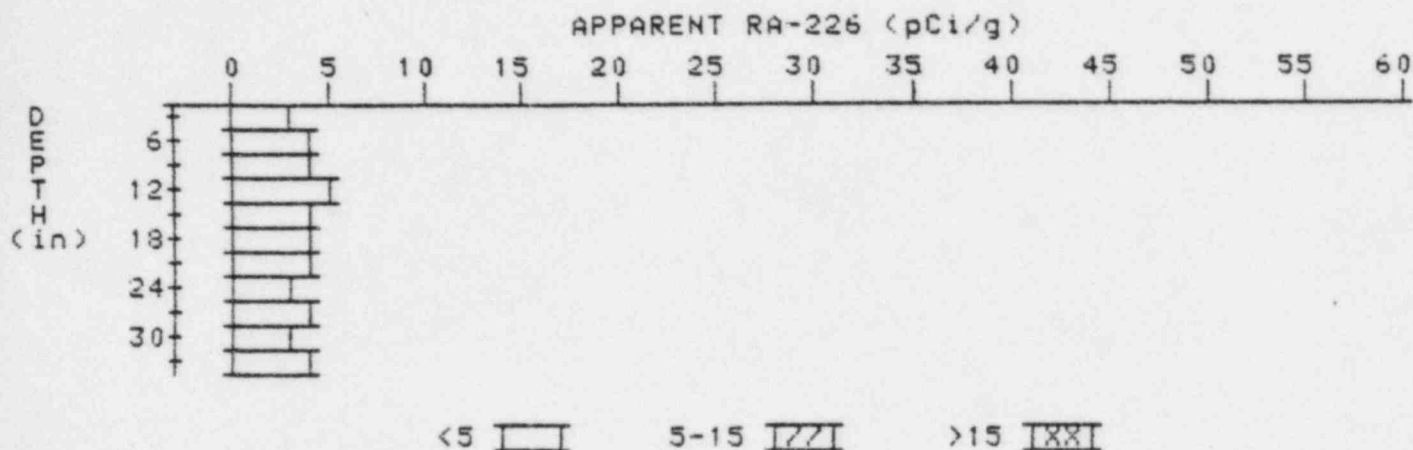
LOCATION: 270293



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	2.9	2.9
6	3.2	3.6
9	3.3	3.1
12	3.5	3.9
15	3.5	3.3
18	3.6	3.8
21	3.6	3.6
24	3.6	3.6
27	3.6	3.6
30	3.6	3.4
33	3.7	4.1
36	3.6	3.6

APPARENT RADIUM-226 CONCENTRATION 17 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-00599-RS
HOLE NUMBER: 17
LOCATION: 299293



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	4.1
12	4.1	4.8
15	3.9	3.5
18	3.9	4.1
21	3.8	4.0
24	3.6	3.1
27	3.7	4.1
30	3.6	3.4
33	3.6	3.6

