

RADIOLOGIC AND ENGINEERING ASSESSMENT

FOR

DOE ID NO.: GJ-04396-RS
ADDRESS: 2654 SACOMA COURT

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 H. Tucker

M. TUCKER
DOE PROJECT ENGINEER

DATE

June 27, 1985

REA04396:REA-509

8507150437 850625
PDR WASTE PDR
WM-54

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1.0 EXECUTIVE SUMMARY

1.1 Introduction

The location, DOE ID No. GJ-04396-RS, is a single-family residence located at 2654 Sacoma Court, 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, 12 cu. yd.; interior, 0 cu. yd.

Estimated cost to perform remedial action, including dislocation when applicable, is \$1,110. Remedial action on this property will take approximately 5 days to complete.

2.0 PROPERTY DESCRIPTION

2.1 General Description

Address: 2654 Sacoma Court, Grand Junction, Colorado 81506

Zoning: Residential (R-1-B)

Lot Size: Approximately 15,714 sf (0.4 acre)

Legal Description: Lot 2, Nina Mae Subdivision, Section 35 1N 1W, County of Mesa, State of Colorado.

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

Utilities: Utility locations are shown in Appendix Figure 2.2.

Electrical:	Overhead
Gas:	Underground
Telephone:	Underground
Sewer:	Underground
Water:	Underground
Cable TV:	Overhead

Bordering Properties:

North:	Vacant land
South:	Sacoma Court
East:	Single-family residence
West:	Single-family residence

2.2 Existing Facilities and Structures

Primary Structure:

Type:	Single-story residence with attached garage
Size:	Approximately 1,838 sf
Construction Date:	1967
Construction:	Wood-frame
Foundation:	Concrete stemwall on spread footing
Footing Depth:	Approximately 18" to bottom of footing from grade
Basement:	None
Crawl Space:	None
Condition:	Good

Other Structures:

Type:	Garage
Size:	Approximately 255 sf
Construction:	Wood-frame
Foundation:	Concrete slab-on-grade
Condition:	Good

General Remarks:

The front yard is well landscaped. 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-04396-RS on May 30, 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.

The Bendix spillover inclusion data indicates contamination along the east property boundary.

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

3.2 Gamma Exposure-Rate Surveys

3.2.1 Exterior Findings

Background Readings: 14 to 16 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 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) Contamination east of the primary structure extends to a depth of 6 inches (approximately 102 sf).
- (AREA B) A contaminated deposit around an evergreen tree, southeast of the primary structure, extends to a depth of 6 inches (approximately 36 sf).
- (AREA C) Contamination near the east property boundary extends to a depth of 6 inches (approximately 198 sf).
- (AREA D) A deposit along the fence, at the east property boundary, has contamination 9 inches deep (approximately 186 sf).

4.0 RECOMMENDED REMEDIAL ACTION

4.1 Decontamination and Restoration

The recommended remedial action for this property, DOE ID No. GJ-04396-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 \$1,110.

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 Grid-Point Exposure Rates
Figure 3.2	Sample Locations
Figure 3.3	Estimated Extent of Contamination

Official Survey Report

Exterior Gamma Scan Field Map

Team Leader Notes

Deconvolution Graphs (Apparent Radium-226 Concentration)

Radium Concentrations at Exterior Locations

DOE ID #GJ-04396-RS

2654 Sacoma Court

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	159227	00	DS	1.7		*	Gas line
		03	TC	3.2		*	
		06	BH	3.6	1.3	*	DC = 0 inches
		09	TC	3.9		*	
		12	TC	4.0		*	
		15	TC	4.2		*	
		18	BH	4.1	1.1	*	
		21	TC	4.1		*	
		24	TC	4.1		*	
		27	TC	4.0		*	
		30	TC	3.9		*	
		33	TC	3.8		*	
		36	BH	3.9	1.4	*	
2	166220	00	DS	1.2		*	Water line
		03	TC	3.0		*	
		06	BH	3.3	1.4	*	DC = 0 inches
		09	TC	3.5		*	
		12	TC	3.7		*	
		15	TC	3.7		*	
		18	BH	3.6	1.6	*	
		21	TC	3.8		*	
		24	TC	3.7		*	
		27	TC	3.8		*	
		30	BH	3.6	2.3	*	
		33	TC	3.5		*	
3	185254	00	DS	1.1		*	Telephone line
		03	TC	3.0		*	North of primary structure
		06	BH	3.3	1.1	*	
		09	TC	3.6		*	
		12	TC	3.8		*	DC = 0 inches
		15	TC	3.8		*	
		18	BH	3.8	2.1	*	
		21	TC	3.8		*	
		24	TC	3.8		*	
		27	TC	3.6		*	
		30	TC	3.6		*	
		33	TC	3.5		*	
		36	BH	3.4	1.7	*	
4	199219	00	DS	1.7		*	Sewer line
		03	TC	3.5		*	
		06	TC	3.8		*	DC = 0 inches

Radium Concentrations at Exterior Locations

DOE ID #GJ-04396-RS

2654 Sacoma Court

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.		
4	199219	09	TC	4.2		*	
		12	TC	4.3		*	
		15	TC	4.3		*	
		18	TC	4.5		*	
		21	TC	4.4		*	
		24	TC	4.4		*	
		27	TC	4.2		*	
		30	TC	4.0		*	
5	205280	00	DS	<1.0		*	Background
		03	TC	2.8		*	In the area of the
		06	BH	3.3	1.5	*	septic tank
		09	TC	3.7		*	
		12	TC	4.0		*	DC = 0 inches
		15	TC	4.2		*	
		18	TC	4.3		*	
		21	TC	4.3		*	
		24	BH	4.3	1.4	*	
		27	TC	4.2		*	
		30	TC	4.2		*	
		33	TC	4.1		*	
		36	TC	4.1		*	
		39	TC	4.1		*	
		42	BH	4.1	1.2	*	
		45	TC	4.0		*	
		48	TC	4.0		*	
6	240240	00	DS	1.8		*	East foundation
		03	TC	3.0		*	
		06	BH	3.3	1.2	*	DC = 0 inches
		09	TC	3.6		*	
		12	TC	3.6		*	
		15	TC	3.8		*	
		18	BH	3.8	1.7	*	
		21	TC	3.7		*	
		24	TC	3.7		*	
		27	TC	3.5		*	
		30	BH	3.5	1.5	*	
		33	TC	3.5		*	

Radium Concentrations at Exterior Locations

DOE ID #GJ-04396-RS

2654 Sacoma Court

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.		
7	245219	00	DS	3.5		*	Southeast property
		06	DS	2.2		*	
8	251235	00	DS	4.6		*	East of primary structure
		06	DS	1.8		*	
9	262255	00	DS	2.7		*	
		06	DS	1.5		*	
10	265280	00	DS	2.4		*	East yard by fence
		06	DS	2.1		*	
11	266208	00	DS	1.3		*	
		06	DS	1.1		*	
12	266255	00	DS	6.2		*	By fence DC = 9 inches Based on the deconvolution graph
		03	TC	5.9		*	
		06	TC	5.3		*	
		09	TC	4.7		*	
		12	TC	4.2		*	
		15	TC	3.8		*	
		18	TC	3.5		*	
		21	TC	3.5		*	
		24	TC	3.5		*	
		27	TC	3.5		*	
		30	TC	3.6		*	
		33	TC	3.6		*	
		36	TC	3.6		*	

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

Notes: DC = Depth of Contamination
* = No Soil Sample Taken
[n] = Reading Taken n-Inches
Above Floor or Ground
Date of Survey = 05-30-85
Team Leader = JJ

Table 3.2

Summary of Interior Gamma Exposure Rates

DOE ID #GJ-04396-RS

2654 Sacoma Court

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)
PRIMARY STRUCTURE	*	*	*	*	13-16	*

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

Table 4.1
Area and Volume Calculations
DOE ID No. GJ-04396-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					
Contaminated Fill					
A	3 x 20	=	60		
	5 x 2	=	10		
	8 x 4	=	32		
			<u>102</u>	x 0.5 =	51
B	9 x 4	=	36	x 0.5 =	18
C	2 x 39	=	78		
	5 x 24	=	120		
			<u>198</u>	x 0.5 =	99
D	3 x 62	=	186	x 0.8 =	149
Volume of Fill				<u>317</u> =	317/27 = 12
TOTAL VOLUME - EXTERIOR					= 12

See Appendix Figure 3.3 For Areas

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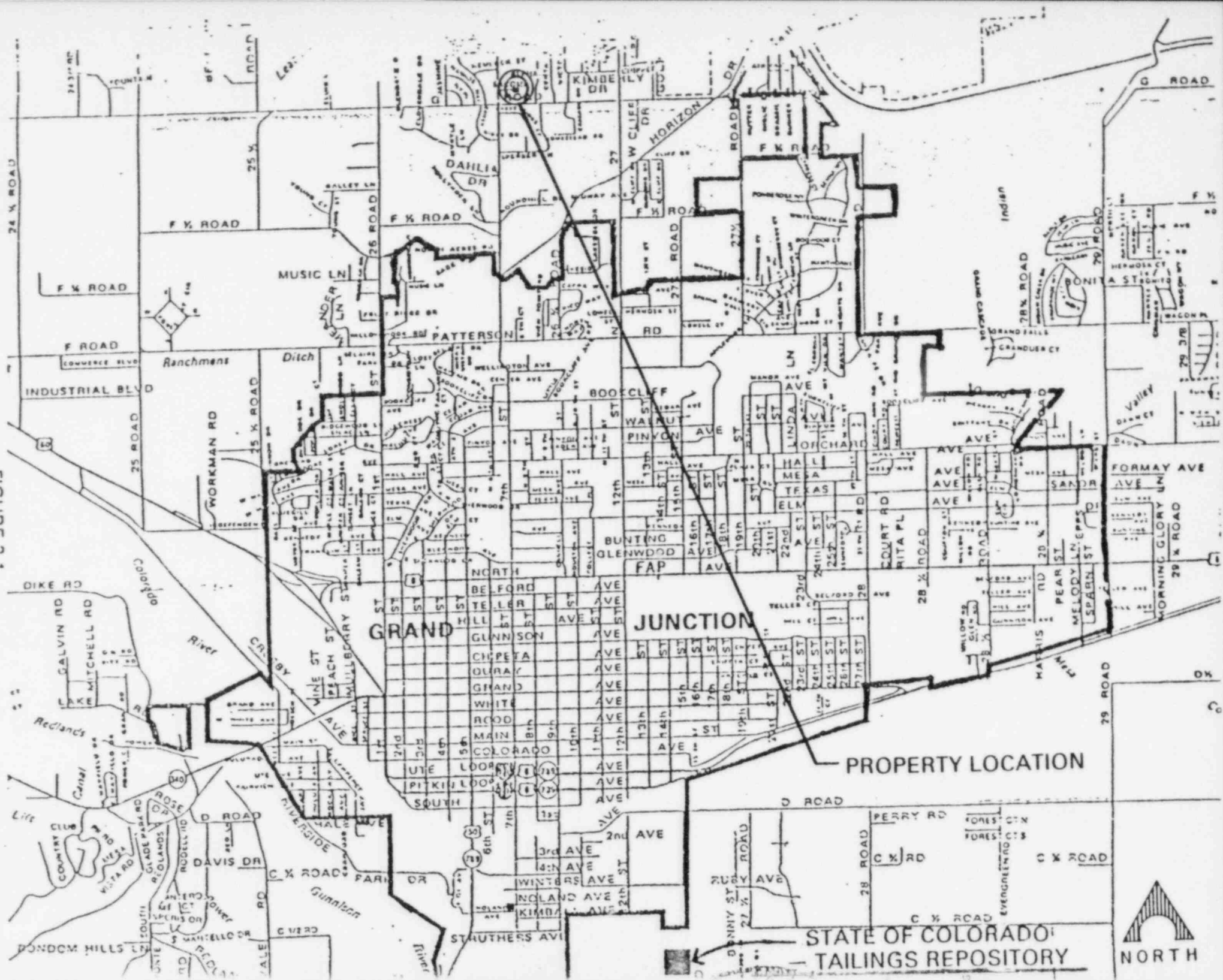
Table 4.2
Estimated Cost of Decontamination and Restoration
DOE ID No. GJ-04396-RS

Page 1 of 1

Remove identified residual radioactive material		
9 cy @ \$14.50/cy (machine-open)	\$	131
3 cy @ \$44/cy (manual-open)		132
Replace areas with topsoil		
12 cy @ \$9.50/cy		114
Replace areas with sod		
486 sf @ \$.30/sf		146
		<hr/>
TOTAL EXTERIOR	\$	523
TOTAL INTERIOR		0
ACCESS CONTROL		150
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SUBTOTAL	\$	673
CONTINGENCY @ 10%		67
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SUBTOTAL		740
CONTRACTOR OVERHEAD & PROFIT @ 50%		370
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GRAND TOTAL	\$	1,110

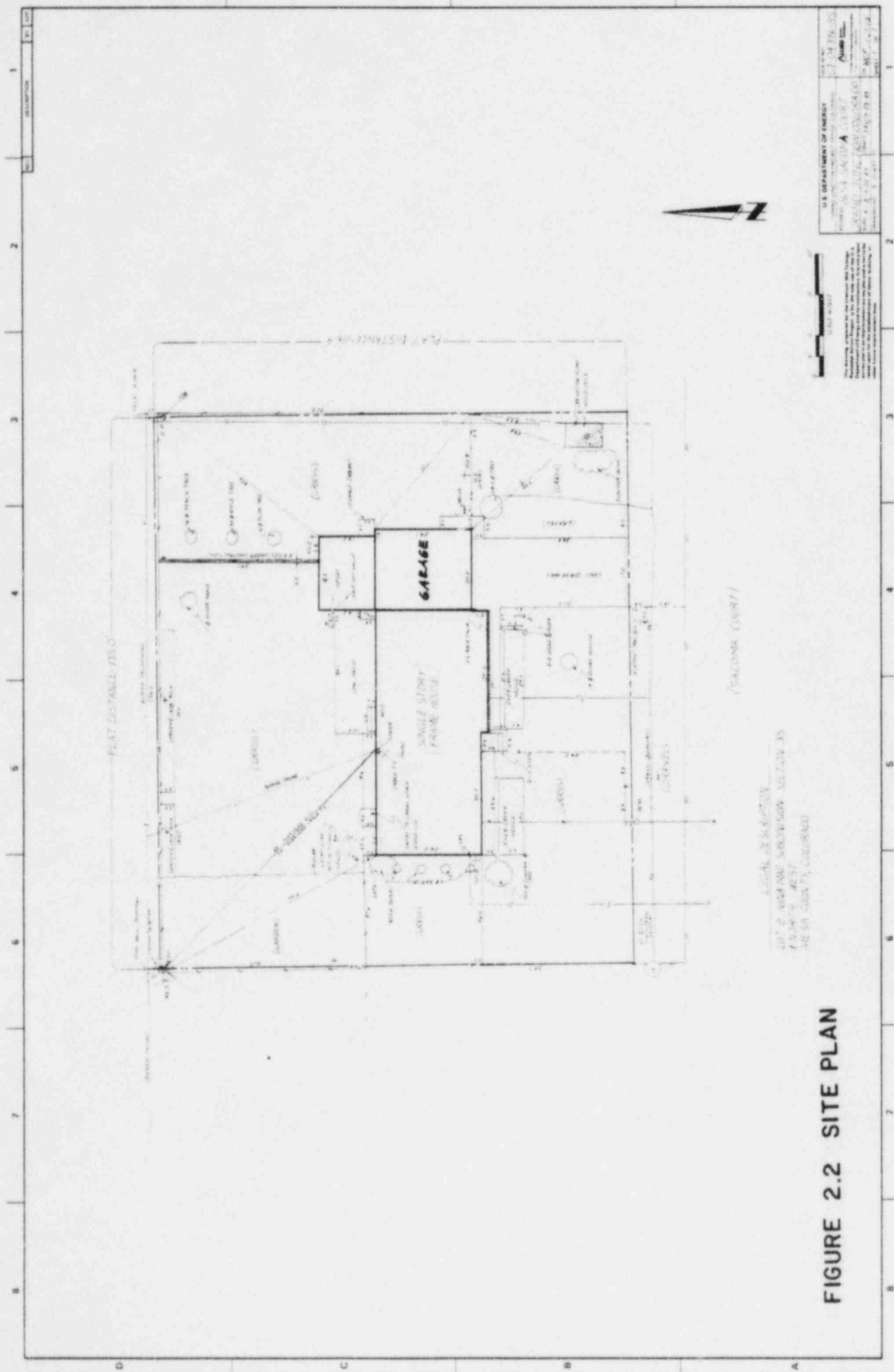
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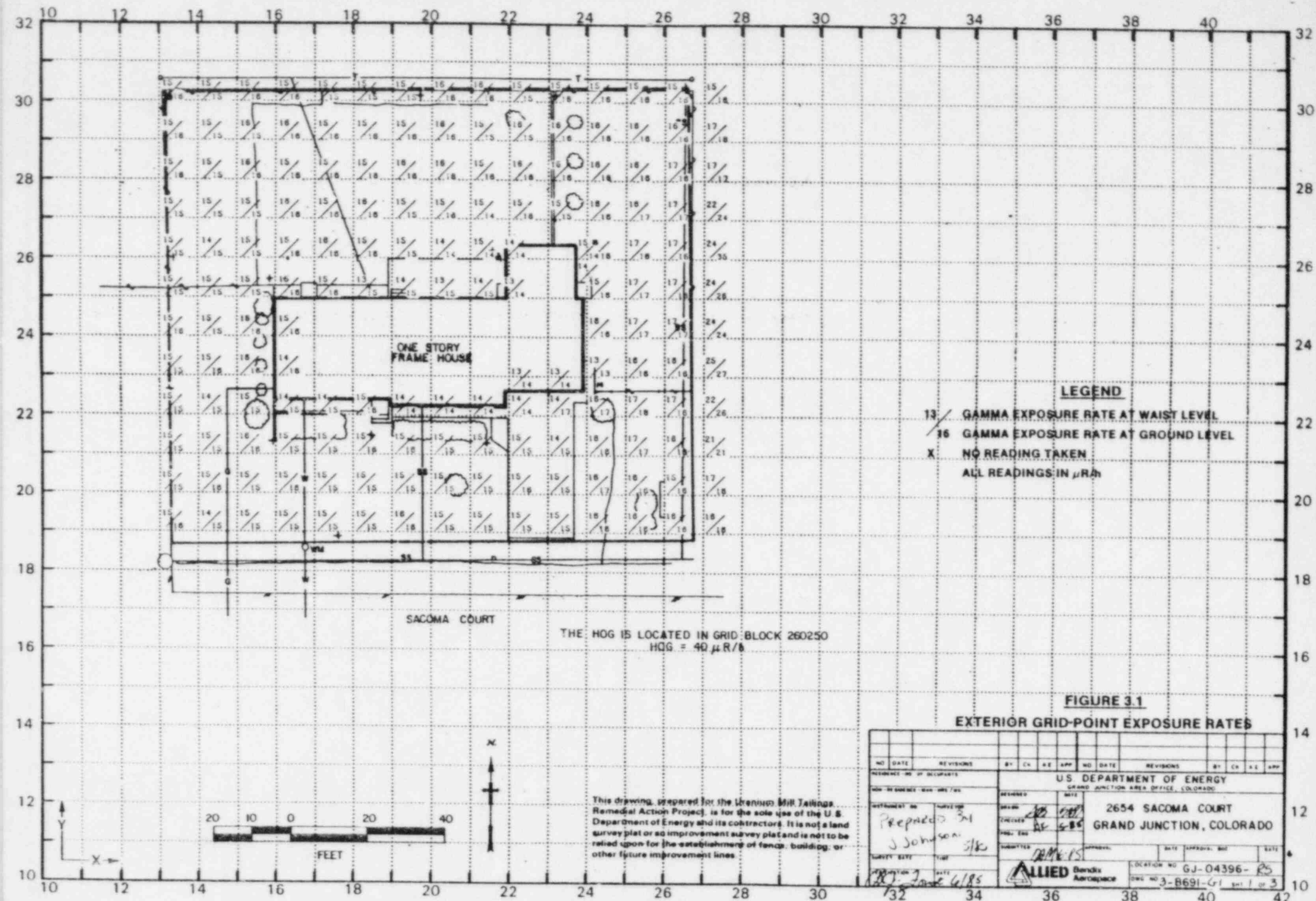
FIGURE 2.1
VICINITY MAP



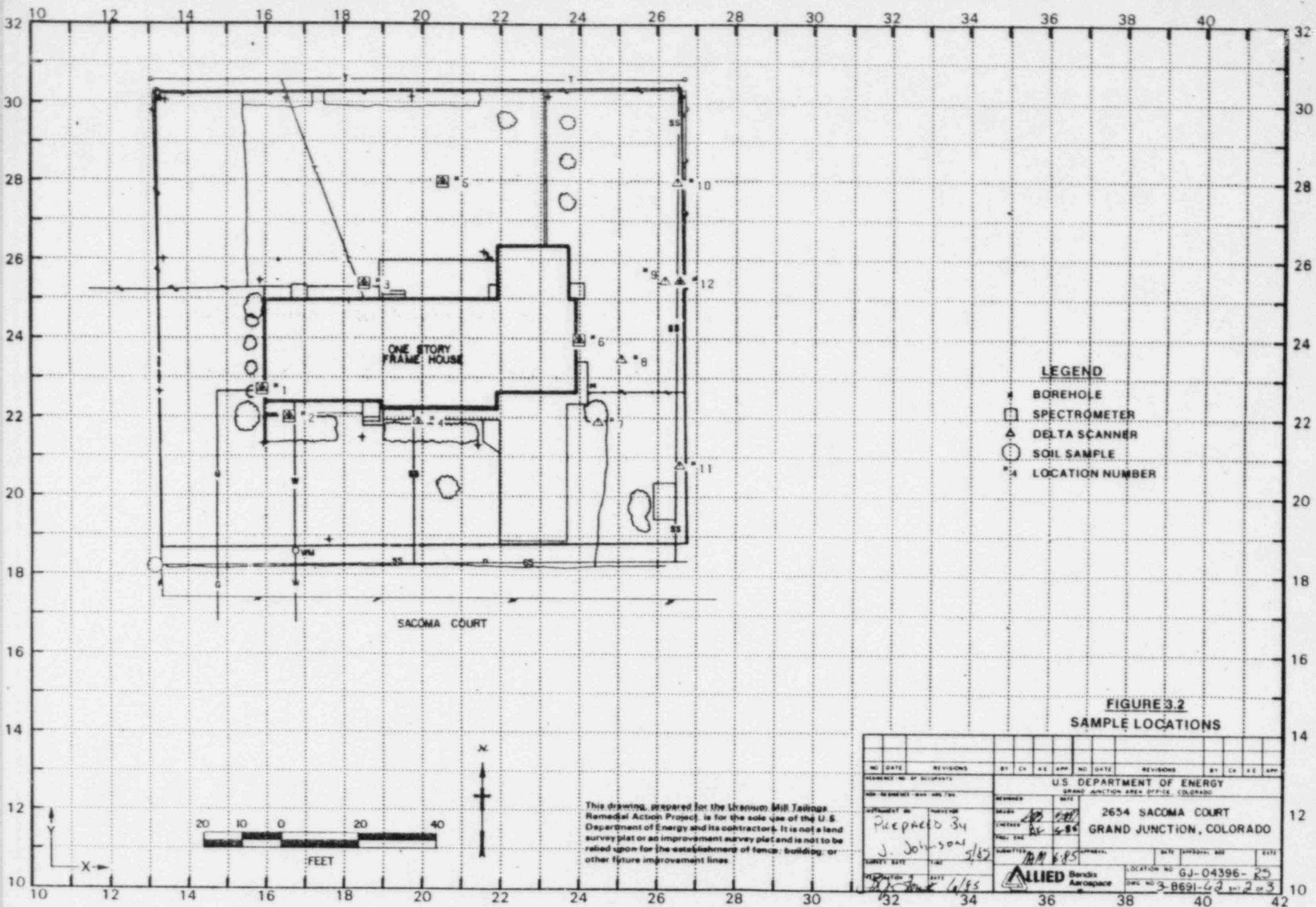
STATE OF COLORADO
— TAILINGS REPOSITORY



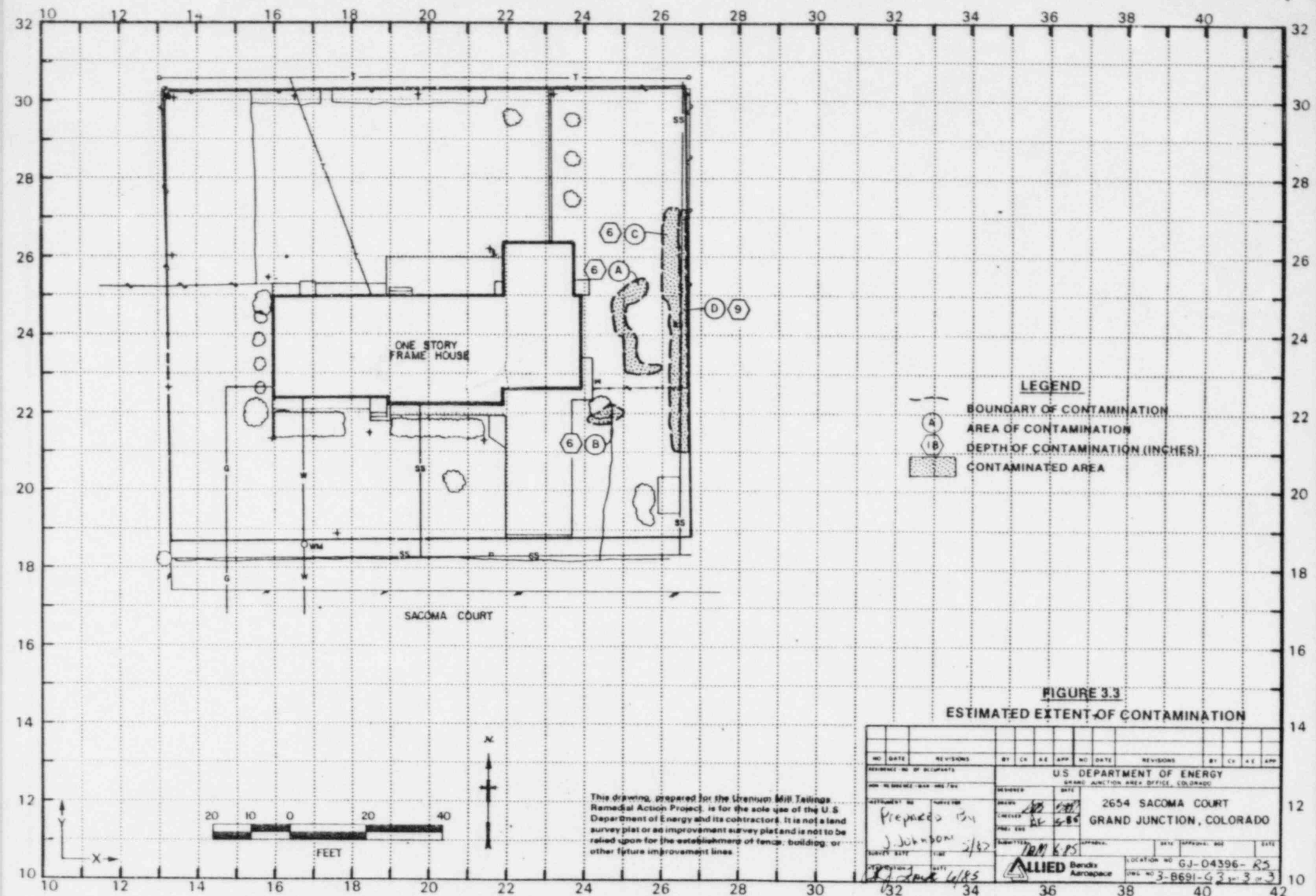




REVISIONS										REVISIONS									
NO.	DATE	BY	CHK	DATE	NO.	DATE	BY	CHK	DATE										
PREPARED BY: <i>Prepared by J. Johnson</i> CHECKED BY: <i>AK</i> DATE: <i>June 6/85</i>										U.S. DEPARTMENT OF ENERGY GRAND JUNCTION AREA OFFICE, COLORADO 2654 SACOMA COURT GRAND JUNCTION, COLORADO									
DRAWN BY: <i>AK</i> DATE: <i>June 6/85</i>										APPROVED BY: <i>AK</i> DATE: <i>June 6/85</i>									
ALLIED Bendix Aerospace										LOCATION NO: GJ-04396-RS DOW NO: 3-B691-G1									



NO. DATE REVISIONS BY CH. A.E. APP.				NO. DATE REVISIONS BY CH. A.E. APP.			
REVISION NO. OF DISCREPANCIES				U.S. DEPARTMENT OF ENERGY			
NEW REVISIONS - DAY AND TIME				GRAND JUNCTION AREA OFFICE, COLORADO			
APPROVED BY J. Johnson DATE 5/85		REVISIONS DATE 5/85		2654 SACOMA COURT GRAND JUNCTION, COLORADO		DATE APPROVAL NO.	
SURVEY SITE		TIME		QUANTITIES AM 6/85		DATE APPROVAL NO.	
PREPARED BY J. Johnson DATE 6/85		TIME		ALLIED Bands Aerospace		LOCATION NO. GJ-04396-25 DWG NO. 3-B691-42 SET 2 OF 3	



3/85

DOE ID NO. GJ-04396-RS

Date 05-30-85

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

Official Survey Report

Property Address 2654 Sacoma Court

Property Owner Roy A. Joseph

Address of Owner (if different from above) Same

Report 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.

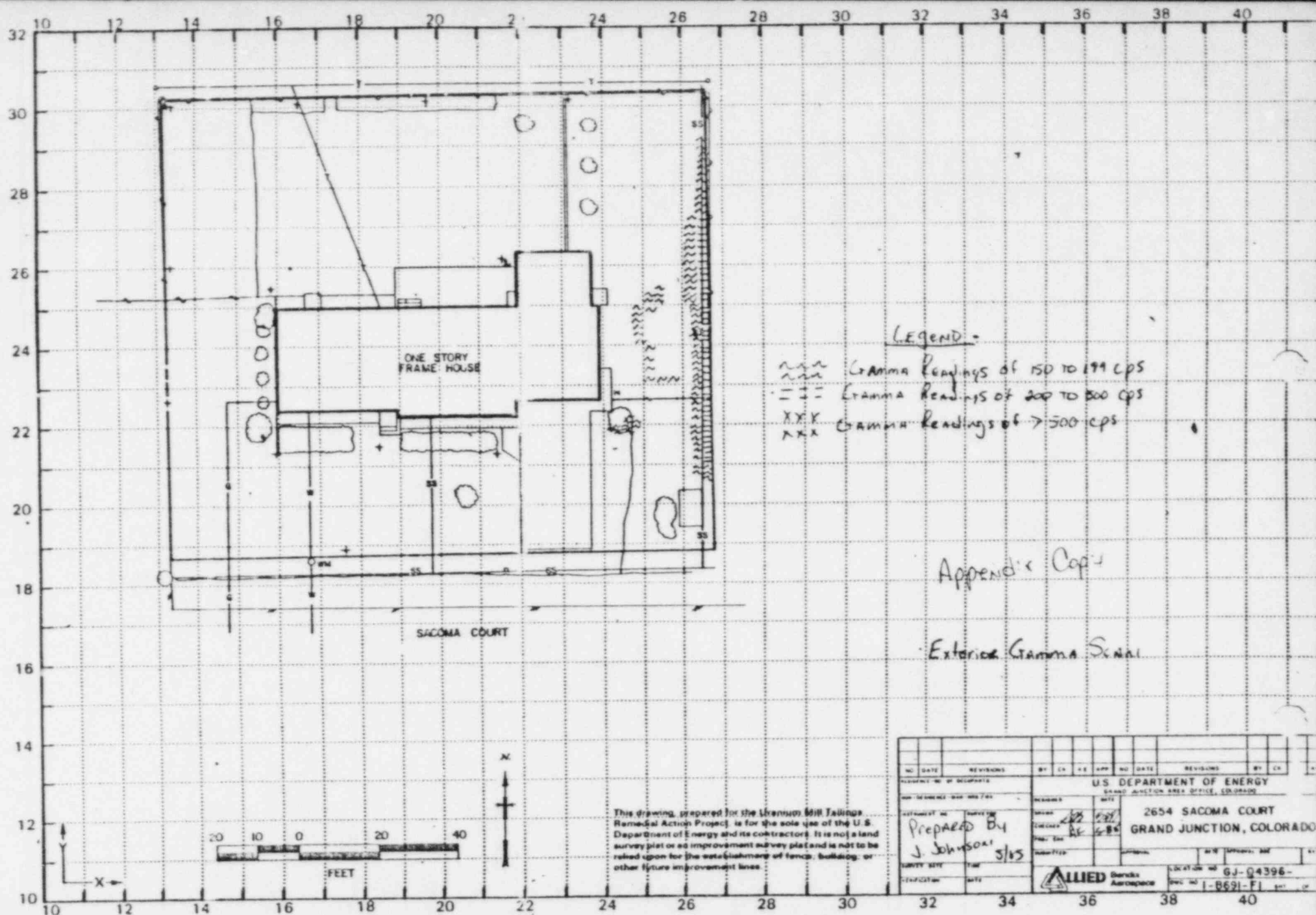
☒ Levels of radiation from residual radioactive materials exceed EPA Standards such that Remedial Action is recommended and will be accomplished, with your consent, as soon as budget and schedule permit.

cc:

G. A. Franz, III, GJ/CDH

J. Themelis, Mgr. UMTRA Proj. Off.

HIG = 16 uR/h



NO.	DATE	REVISIONS	BY	CH	RE	APP	NO.	DATE	REVISIONS	BY	CH
<p align="center">U.S. DEPARTMENT OF ENERGY GRAND JUNCTION AREA OFFICE, COLORADO</p> <p align="center">2654 SACOMA COURT GRAND JUNCTION, COLORADO</p>											
<p>PROJECT NO. 04396-1</p> <p>PREPARED BY J. Johnson 5/85</p>						<p>DATE 5/85</p> <p>TIME 4:00 PM</p> <p>BY J. Johnson</p>					
<p>LOCATION NO. GJ-04396-1</p> <p>DATE 5/85</p>						<p>TIME 4:00 PM</p> <p>BY J. Johnson</p>					
<p>ALLIED Services Aerospace</p>						<p>DATE 5/85</p> <p>BY J. Johnson</p>					

ALLIED Bendix
Aerospace

Bendix Field Engineering Corporation
Grand Junction Operations
Grand Junction, Colorado

Date: May 30, 1985

To: Files

From: Jay Johnson

Subject: Team Leader Notes - GJ-04396-RS

Address: 2654 Sacoma Court

Owner: Roy Joseph

Weather: Warm and sunny.

Team Members

J. Johnson (Team Leader)
L. Kula
D. Bell
M. Gilfillan
V. Rothman

P. Hardy
H. Mattison
M. Duran
M. Dexter

Instruments

C-1207, C-1166, C-1196, C-1128, C-1184, C-3510, C-3938, C-3942
C-4006, C-1062, C-3361

This property has a one story frame house with a crawl space.

A walking scan was performed on the ground floor with no elevated readings.

Instrument C-1128 failed to operate during the survey. All readings were rechecked with instrument C-1196.

Elevated readings were located against the east property line and is a spillover from the adjacent property.

All elevated readings were investigated.

Team Leader Notes
Jay Johnson
GJ-04396-RS
May 30, 1985
Page 2

All utility lines were located and investigated.

An old septic system was located in the north yard, Location 205280.
No contamination was found in this area.

All personnel were frisked. No problems were encountered.

APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

1

PROPERTY NUMBER: GJ-04396-RS
HOLE NUMBER: 1
LOCATION: 159227



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.2	3.2
6	3.6	3.8
9	3.9	4.3
12	4.0	3.8
15	4.2	4.7
18	4.1	3.9
21	4.1	4.1
24	4.1	4.3
27	4.0	4.0
30	3.9	3.9
33	3.8	3.4
36	3.9	3.9

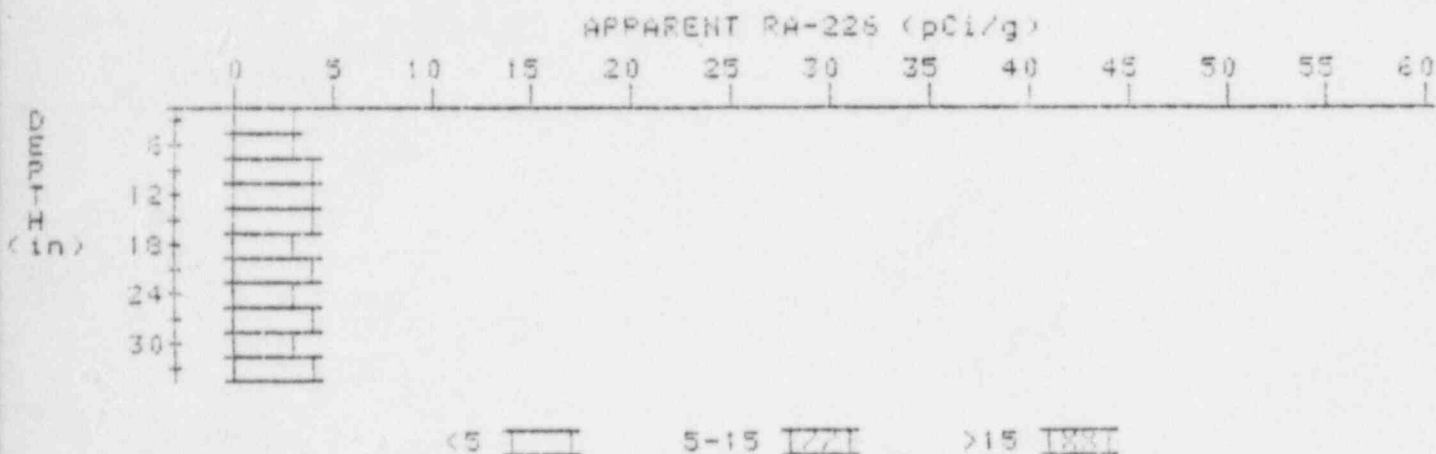
APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

2

PROPERTY NUMBER: GJ-04396-RS

HOLE NUMBER: 2

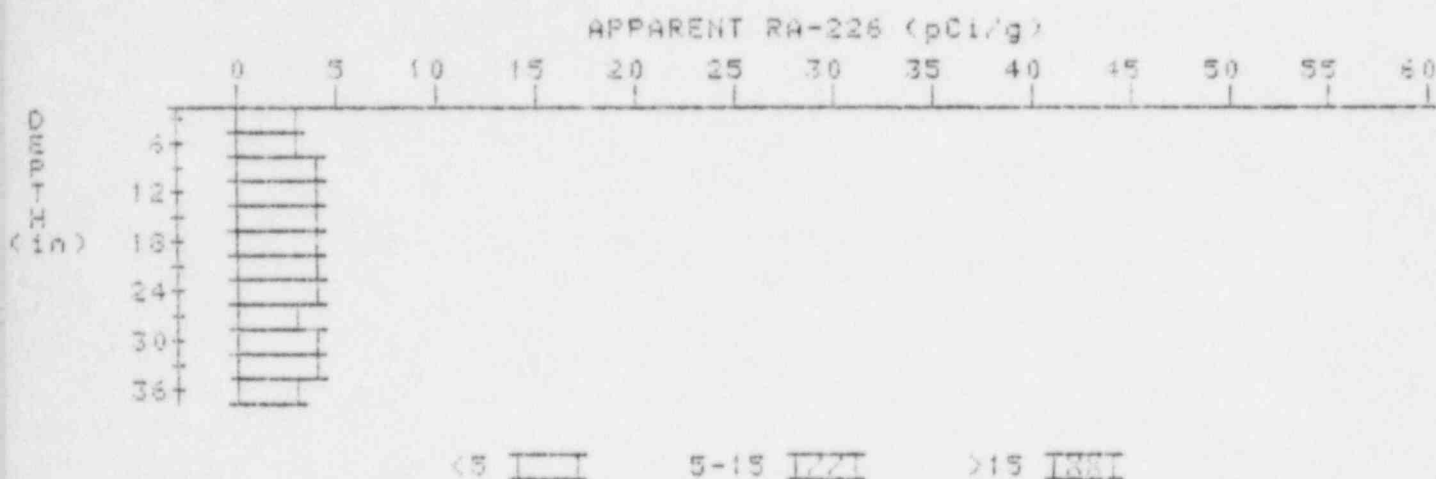
LOCATION: 166220



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.0	3.0
6	3.3	3.5
9	3.5	3.5
12	3.7	4.1
15	3.7	3.9
18	3.6	3.1
21	3.8	4.3
24	3.7	3.3
27	3.8	4.3
30	3.6	3.4
33	3.5	3.5

APPARENT RADIUM-226 CONCENTRATION 3 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-04396-RS
HOLE NUMBER: 3
LOCATION: 185254



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.0	3.0
6	3.3	3.3
9	3.6	3.3
12	3.8	4.2
15	3.8	3.8
18	3.8	3.8
21	3.8	3.8
24	3.8	4.2
27	3.6	3.8
30	3.6	3.8
33	3.5	3.8
36	3.4	3.4

APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

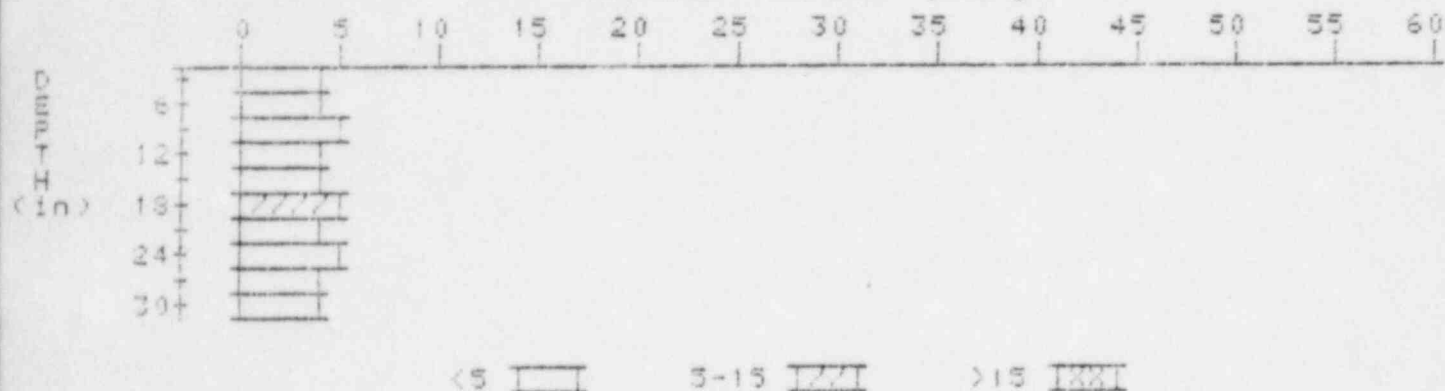
4

PROPERTY NUMBER: GJ-04396-RS

HOLE NUMBER: 4

LOCATION: 199219

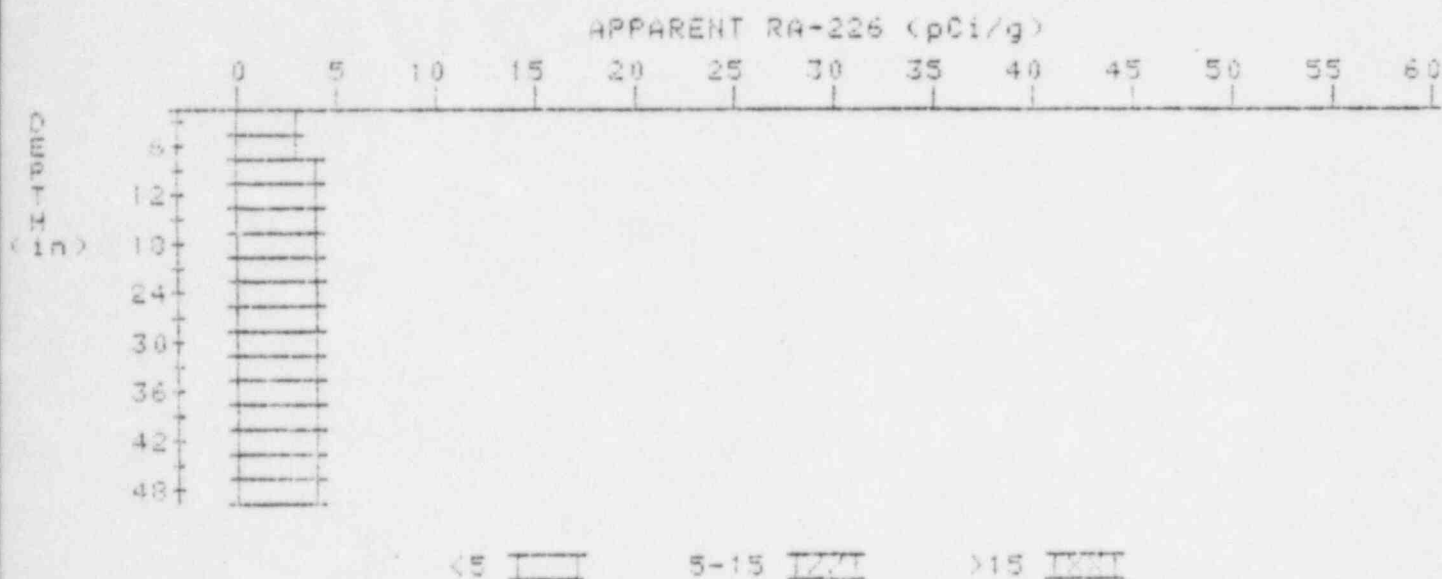
APPARENT RA-226 (pCi/g)



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.5	3.5
6	3.6	3.6
9	4.2	4.7
12	4.3	4.5
15	4.3	3.9
18	4.5	5.0
21	4.4	4.2
24	4.4	4.3
27	4.2	4.2
30	4.0	4.0

APPARENT RADIUM-226 CONCENTRATION 5 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-04396-R3
HOLE NUMBER: 5
LOCATION: 205280



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	2.8	2.8
6	3.3	3.5
9	3.7	3.9
12	4.0	4.2
15	4.2	4.4
18	4.3	4.5
21	4.3	4.3
24	4.3	4.3
27	4.2	4.0
30	4.2	4.4
33	4.1	3.9
36	4.1	4.1
39	4.1	4.1
42	4.1	4.3
45	4.0	3.8
48	4.0	4.0

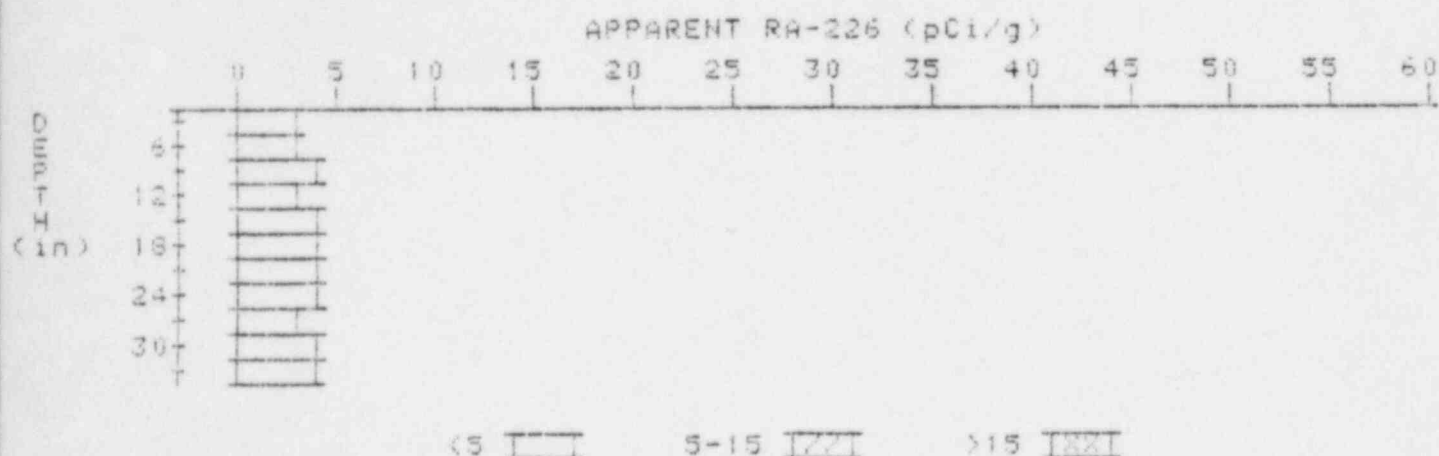
APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

6

PROPERTY NUMBER: GJ-04396-R6

HOLE NUMBER: 6

LOCATION: 240240

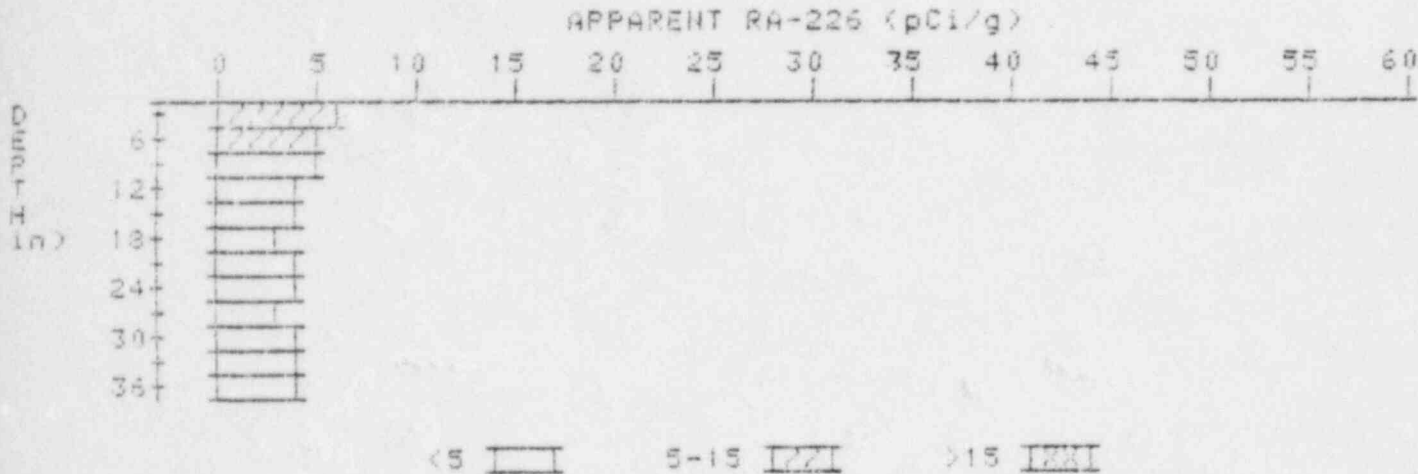


Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.0	3.0
6	3.3	3.3
9	3.6	4.1
12	3.6	3.2
15	3.8	4.2
18	3.8	4.0
21	3.7	3.5
24	3.7	4.1
27	3.5	3.1
30	3.5	3.5
33	3.5	3.5

APPARENT RADIUM-226 CONCENTRATION 12

DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-04396-RS
HOLE NUMBER: 12
LOCATION: 266255



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	5.9	5.9
6	5.3	5.3
9	4.7	4.5
12	4.2	4.0
15	3.3	3.6
18	3.5	3.0
21	3.5	3.5
24	3.3	3.5
27	3.5	3.3
30	3.6	3.0
33	3.6	3.6
36	3.6	3.6