

RADIOLOGIC AND ENGINEERING ASSESSMENT

FOR

DOE ID NO.: GJ-08847-MR  
ADDRESS: 2529 SOUTH BROADWAY

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

*Michael K. Tucker*  
M. TUCKER  
DOE PROJECT ENGINEER

DATE

*September 3, 1985*

REA08847:REA-712

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PDR WASTE PDR  
WM-54

## 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 . . . . .	6
4.1 Decontamination and Restoration . . . . .	6
4.2 Evaluation of Recommended Remedial Action . . . . .	6
5.0 REFERENCES . . . . .	7
6.0 APPENDIX . . . . .	8

## 1.0 EXECUTIVE SUMMARY

### 1.1 Introduction

The location, DOE ID No. GJ-08847-MR, is two single-family residences located at 2529 South Broadway, Grand Junction, Colorado.

The purpose of this assessment is to evaluate the extent of uranium millsite contamination at this property and present a recommendation based on this assessment.

### 1.2 Evaluation and Recommendation

It is recommended that no remedial action be performed on this property (as discussed in Section 4.0) and that a Property Completion Report be prepared for use in the DOE certification process. The identified residual radioactive material found on this property is tailings; the estimated volume is: exterior, 2 cu. yd.; interior, 0.3 cu. yd.

## 2.0 PROPERTY DESCRIPTION

### 2.1 General Description

Address: 2529 South Broadway, Grand Junction, Colorado

Zoning: Residential (R-2)

Lot Size: Approximately 12,655 sf (0.29 acres)

Legal Description: Beginning at a point N. 55°44'W, 1441.3' from the south 1/4 cor. of Section 15, T.1S., R.1W., Ute Meridian; thence S. 41°03'W., 148.62'; thence S. 83°12'W., 23.63'; thence N. 02°56'W., 135.24'; thence N. 35°42'E., 100.9'; thence S. 34°06'E., 123.25', to the point of beginning, except: beginning at a point N. 55°44'W., 1441.3' from the south 1/4 cor. of said Section 15; thence N. 34°06' W., 123.25'; thence S. 35°32'W., 70.0'; thence S. 34°06'E. to a point of intersection on a line which bears S. 41°03'W. from the point of beginning; thence N. 41°03'E. to the point of beginning, County of Mesa, State of Colorado.

Point of Reference: This property is located approximately 2.5 mile(s) west 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:	South Broadway (gravel)
South:	Single-family residence
East:	Single-family residence
West:	Single-family residence

### 2.2 Existing Facilities and Structures

Primary Structure: (House 1)

Type:	Single-family residence
Size:	Approximately 720 sf
Construction Date:	1963
Construction:	Wood-frame

Foundation:	Concrete block on spread footing
Footing Depth:	Not determined
Basement:	None
Crawl Space:	Yes - full
Condition:	Fair

Secondary Structure: (House 2)

Type:	Single-family residence
Size:	Approximately 1,600 sf
Construction Date:	1960's
Construction:	Wood-frame
Foundation:	Concrete block on spread footing
Footing Depth:	Not determined
Basement:	None
Crawl Space:	Yes - full
Condition:	Fair

Other Structures:

Type:	Chicken coop and shed
Size:	Approximately 40 and 80 sf respectively
Construction:	Wood-frame
Foundation:	None
Condition:	Fair to good

General Remarks:

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

Historical Data:

These structures are not over 50 years old. Therefore, they do 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-08847-MR on July 11, 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 under and around House 1 and in the driveway.

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 17 uR/h  
Highest Outside Gamma Reading (HOG): 38 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: 12 to 17 uR/h  
Highest Inside Gamma Reading (HIG): 33 uR/h (House 1)

Interior radium-concentration measurements are presented in Appendix Table 3.2. Interior gamma exposure-rate measurements are summarized in Appendix Table 3.3. Appendix Figure 3.2 shows interior exposure rates and locations of these measurements.

#### 3.3 Boreholes, Soil Samples, and Other Measurements

Areas which displayed elevated gamma levels were further investigated; these areas are shown in Appendix Figures 3.2 and 3.3. Data from these investigations are included in Appendix Tables 3.1 and 3.2.

### 3.4 Radon/Radon Daughter Concentration (RDC)

Determined by CDH: 0.014 gross working level (WL). No additional RDC measurements were taken by Bendix.

### 3.5 Extent of Contamination

Appendix Figures 3.4a and 3.4b show identified areas and estimated depths of contamination on this property, based on assessments of all measurements taken. As noted in these figures, areas recommended for remedial action that contain identified residual radioactive materials are:

- (Area A) Surface Material: Wood floor  
Direction From Primary Structure: Interior  
Other Directions: Underneath House 1  
Other (height or thickness): 12-inch x 6-inch concrete beam  
Comments: The beam extends the full width of House 1.  
Approximate Square Footage: 36
- (Area B) Surface Material: Soil  
Direction From Primary Structure: North  
Other Directions: Southeast of South Broadway  
Total Depth of Contamination: 6 inches  
Approximate Square Footage: 30
- (Area C) Surface Material: Soil  
Direction From Primary Structure: Northeast  
Other Directions: Northwest of House 2  
Total Depth of Contamination: 6 inches  
Approximate Square Footage: 25
- (Area D) Surface Material: Soil  
Direction From Primary Structure: West  
Total Depth of Contamination: 6 inches  
Approximate Square Footage: 33

#### 4.0 RECOMMENDED REMEDIAL ACTION

##### 4.1 Decontamination and Restoration

It is recommended that no remedial action be performed and that an indoor RDC measurement be completed on this property. If the RDC measurement exceeds EPA Standards, then the REA will be revised and remedial action accomplished in accordance with the Vicinity Property Management and Implementation Manual. If EPA Standards are not exceeded, then the no-action recommendation will be considered valid, and a Property Completion Report will be prepared for DOE certification.

##### 4.2 Evaluation of Recommended Remedial Action

The recommendation that no remedial action be performed on this property is made because the levels of radioactivity on this property fall below the EPA Standards (40 CFR 192).

The EPA Standards are:

- (1) 5 pCi/g above background when averaged over 100 m<sup>2</sup>., averaged over the first 15 cm of soil below the surface; and
- (2) 15 pCi/g above background when averaged over 100 m<sup>2</sup>., averaged over 15-cm-thick layers of soil more than 15 cm below the surface.
- (3) Indoor radon-decay products shall not exceed a working level of 0.03, nor, to the extent possible, a working level of 0.02. (At this property the gross working level, as determined by CDH, is 0.014.)
- (4) Indoor gamma radiation shall not exceed 20 microroentgens per hour (uR/h) above background levels. (At this location the interior background readings were found to be between 12 and 17 uR/h, with the highest mean surface gamma reading at 27 uR/h.)

Appendix Table 4.1 presents the area and volume calculations of contamination present on the property. The average radium concentration for this property is 2.02 pCi/g, which falls below the allowable EPA Standard, including background, of 7 pCi/g for this area. Appendix Table 4.2 presents the calculations for concentrations of Radium-226 in soil for this location.



## 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	Radium Concentrations at Interior Locations
Table 3.3	Summary of Interior Gamma Exposure Rates
Table 4.1	Area and Volume Calculations
Table 4.2	Calculations for Concentration of Radium-226 in Soil

Appendix Figures:

Figure 2.1	Vicinity Map
Figure 2.2	Site Plan
Figure 3.1	Exterior Grid-Point Exposure Rates
Figure 3.2	Interior Gamma Exposure Rates and Sample Locations
Figure 3.3	Exterior Sample Locations
Figure 3.4a	Interior Estimated Extent of Contamination
Figure 3.4b	Exterior 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-08847-MR

2529 South Broadway

Page 1 of 2

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
7	161239	00	DS	4.6		*	
		06	DS	<1.0		*	
8	200260	00	DS	<1.0		*	Background
		00	GS		1.3	*	
		03	TC	2.6		*	
		06	TC	2.9		*	DC = 0 inches
		09	TC	3.0		*	
		12	TC	3.0		*	
		15	TC	2.9		*	
		18	TC	2.8		*	
		21	TC	2.7		*	
		24	TC	2.5		*	
		27	TC	2.4		*	
9	210230	00	DS	1.2		*	
		06	DS	2.9		*	
		12	DS	3.1		*	
		18	DS	2.5		*	
10	221239	03	TC	6.8		*	Front gravel drive
		06	TC	5.3		*	
		09	TC	4.2		*	DC = 6 inches
		12	TC	3.4		*	Based on the
		15	TC	3.1		*	deconvolution graph
		18	TC	2.9		*	
		21	TC	2.7		*	
		24	TC	2.8		*	
11	226255	00	DS	<1.0		*	Gas line
		18	DS	<1.0		*	House 2
12	233231	00	DS	<1.0		*	Gas line
		10	DS	<1.0		*	House 1
13	238255	00	DS	<1.0		*	East of House 1
14	246231	00	DS	<1.0		*	
		06	DS	<1.0		*	
15	247211	00	GS		8.6	*	West foundation of House 1

## Radium Concentrations at Exterior Locations

DOE ID #GJ-08847-MR

2529 South Broadway

Page 2 of 2

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
16	249211	00	DS	3.9		*	West of House 1
		00	DS	22.3		*	Horizontal on beam
		06	DS	2.2		*	
		06	DS	21.6		*	Horizontal
		12	DS	<1.0		*	
		03	TC	3.5		*	
		06	TC	3.7		*	DC = 6 inches
		09	TC	3.5		*	Based on all
		12	TC	3.3		*	available data
		15	TC	3.2		*	
		18	TC	3.1		*	
		21	TC	3.0		*	
		24	TC	2.9		*	
		27	TC	2.9		*	
		30	TC	2.8		*	
17	261231	03	TC	2.0		*	Between houses
		06	TC	2.2		*	DC = 0 inches
		09	TC	2.2		*	
		12	TC	2.1		*	
		15	TC	2.1		*	
		18	TC	2.4		*	
		21	TC	2.6		*	
		24	TC	3.0		*	
		27	TC	3.8		*	
		30	TC	3.1		*	

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 = 07-11-85  
Team Leader = DGD

## Radium Concentrations at Interior Locations

DOE ID #GJ-08847-MR

2529 South Broadway

Page 1 of 1

Loc #	Grid Location	Depth (in.)	Meas. Type	In Situ Ra-226 (pCi/g)		Chem Ra-226 (pCi/g)	Comments
				Tot. Ct	Spectr.		
1		00	DS	3.7		*	Hallway
2		00	DS	5.8		*	Hallway
3		00	DS	<1.0		*	Hallway
4		00	DS	14.1		*	Bedroom
		00	GS		<1.0	*	
5		00	DS	7.3		*	Bedroom
6		00	DS	2.5		*	Bedroom

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 = 07-11-85  
 Team Leader = DGD

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)
Room A	05	14-15	14	05	14-16	15
Room B	05	15-20	18	05	13-29	21
Room C	05	18-21	20	04	19-33	27
Room D	14	14-22	18	14	14-29	21
Room E	08	14-22	17	09	15-33	19
Room F	02	14-14	14	02	14-14	14
House 2	*	*	*	*	12-15	*
Wood shed	*	*	*	*	13-15	*
Chicken coop	*	*	*	*	13-14	*

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\* Walking gamma scans were performed to confirm the absence of interior contamination in House 2 and the outbuildings. Exposure rates and room locations are shown in Appendix Figure 3.2.

Table 4.1  
Area and Volume Calculations  
DOE ID No. GJ-08847-MR

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>
INTERIOR					
	Concrete				
A	18 x 0.5 =	9	x 1.0 =	9	
				<hr/>	
	TOTAL VOLUME - INTERIOR				= 9 = 9/27 = 0.3
EXTERIOR					
	Contaminated Fill				
B	6 x 5 =	30	x 0.5 =	15	
C	5 x 5 =	25	x 0.5 =	13	
D	3 x 11 =	33	x 0.5 =	17	
				<hr/>	
	TOTAL VOLUME - EXTERIOR				= 45 = 45/27 = 2.0

NOTE: Total square feet of Areas B, C, and D = 88 square feet  
88 square feet = 8.08 square meters

See Appendix Figures 3.4a and 3.4b For Areas

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Table 4.2  
Calculations for Concentration of Radium-226 in Soil  
DOE ID No. GJ-08847-MR

Page 1 of 1

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$$C_{avg} = \frac{C_c \times A_c + C_b (100m^2 - A_c)}{100m^2}$$

Where

$C_{avg}$  = Concentration average (pCi/g)

$C_c$  = Concentration of contamination (pCi/g)

$A_c$  = Area of concentration (m<sup>2</sup>)

$C_b$  = Background concentration (pCi/g)

$$C_{avg} = \frac{2.23 \times 8.08 + 2 (100 - 8.08)}{100}$$

$$C_{avg} = 2.02 < 7$$

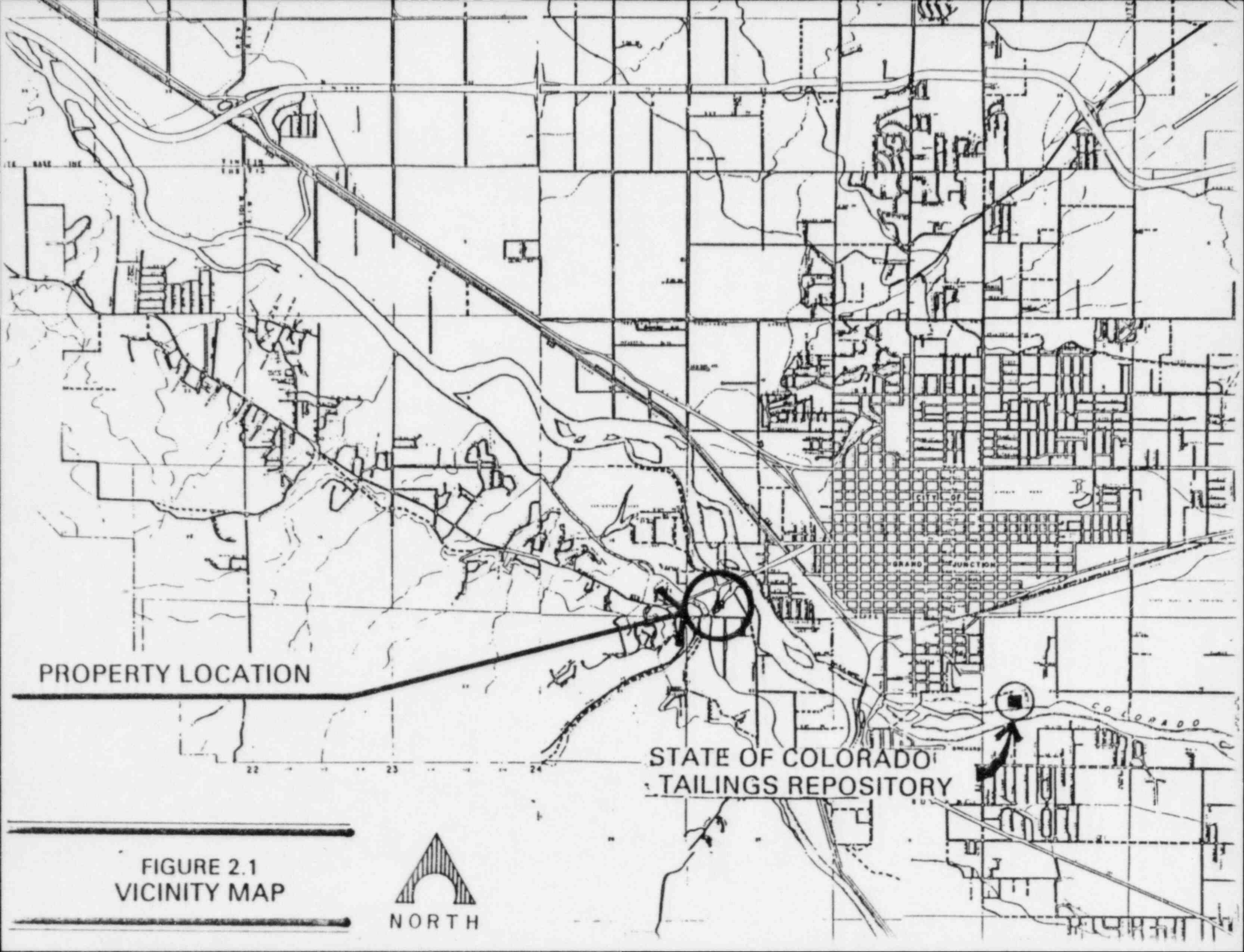
Therefore, concentration does not exceed EPA Standards of 7 pCi/g

NOTE: Background radium concentration for this area is 2 pCi/g

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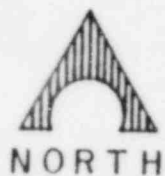




PROPERTY LOCATION

STATE OF COLORADO  
TAILINGS REPOSITORY

FIGURE 2.1  
VICINITY MAP



\* BURIED GAS LINE FROM GAS METERS TO WESTERLY HOUSE WAS NOT LOCATED BY P.S.Co., Cold.

- 1 GAS LINE RISER. \*
- 2 3" DIA SEWER VENT.
- 3 1 1/2" DIA. EXPOSED DRAIN IN
- 4 ELECTRICAL METER.
- 5 1.5' x 4.0' WOOD RABBIT HUT
- 6 WOOD CHICKEN COOR
- 7 WOOD STEPS 200.8' TREAD.
- 8 WOOD PALLET.
- 9 LOOSE STONE BORDER.
- 10 RAILROAD TIE BORDER.
- 11 3" DIA PIPE FOR CLOTHES LINE.



BEGINNING AT A POINT N. 55° 44' W., 1441.3' FROM THE SOUTH 1/4 COR. OF SECTION 15, T. 1 S., R. 1 W., UTE MERIDIAN; THENCE S. 41° 03' W., 148.62'; THENCE S. 83° 12' W., 223.63'; THENCE N. 02° 56' W., 135.24'; THENCE N. 35° 42' E., 100.9'; THENCE S. 34° 06' E., 123.25', TO THE POINT OF BEGINNING, EXCEPT: BEGINNING AT A POINT N. 55° 44' W., 1441.3' FROM THE SOUTH 1/4 COR. OF SAID SECTION 15; THENCE N. 34° 06' W., 123.25'; THENCE S. 35° 32' W., 70.0'; THENCE S. 34° 06' E. TO A POINT OF INTERSECTION ON A LINE WHICH BEARS S. 41° 03' W. FROM THE POINT OF BEGINNING; THENCE N. 41° 03' E. TO THE POINT OF BEGINNING, ALL WITHIN MESA COUNTY COLORADO.

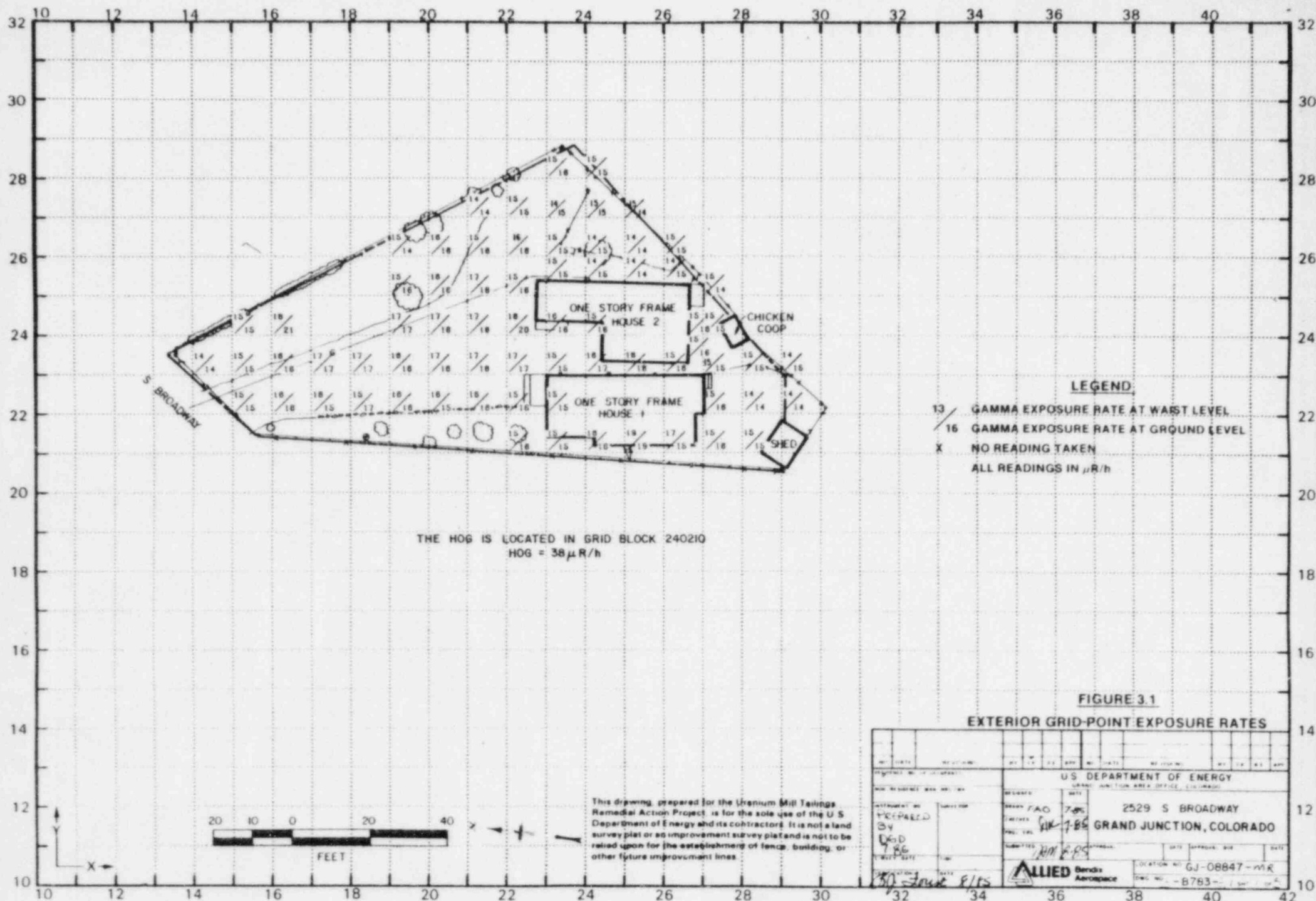
FIGURE 2.2 SITE PLAN

U.S. DEPARTMENT OF ENERGY GRAND JUNCTION PROJECT OFFICE, COLORADO	DATE AND NO. JUL 08 47 MR
ADDRESS 2529 SOUTH BROADWAY GRAND JUNCTION, COLORADO	SCALE AS SHOWN
SURV. JLG / 6-28-85 (GRANT JLG / 7-1-85)	North Point Engineering Corporation 1000 North Point Building Grand Junction, CO 81505
DRAWING NO. 3-C783-F1	CN
	SHEET 1 OF 1

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 plot or an engineering survey plot and is not to be relied upon for the establishment of fence, building, or other future improvements.

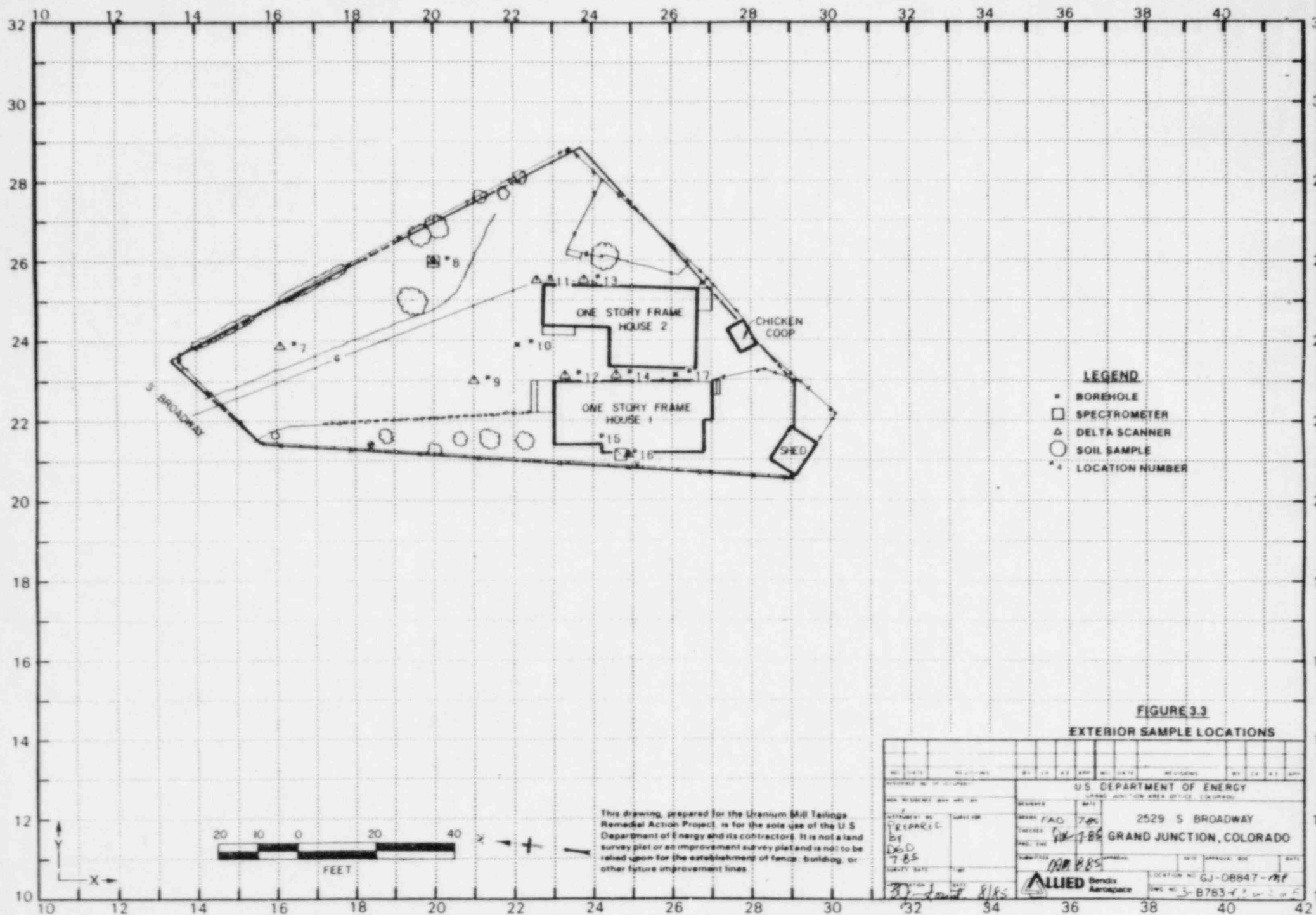
(MESA CO. TAX SCHED. NO. 2945-153-00-042)

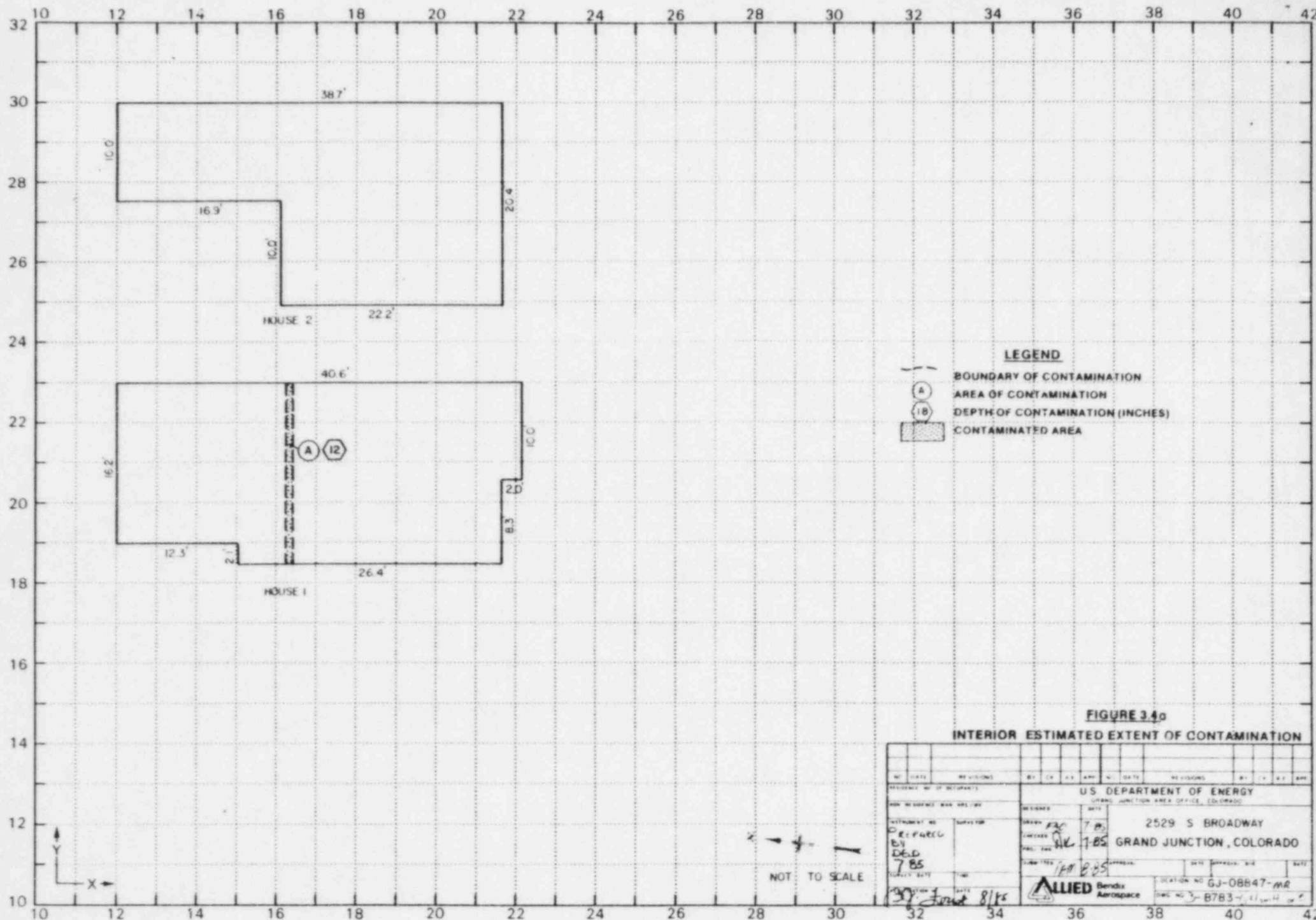
SCALE IN FEET

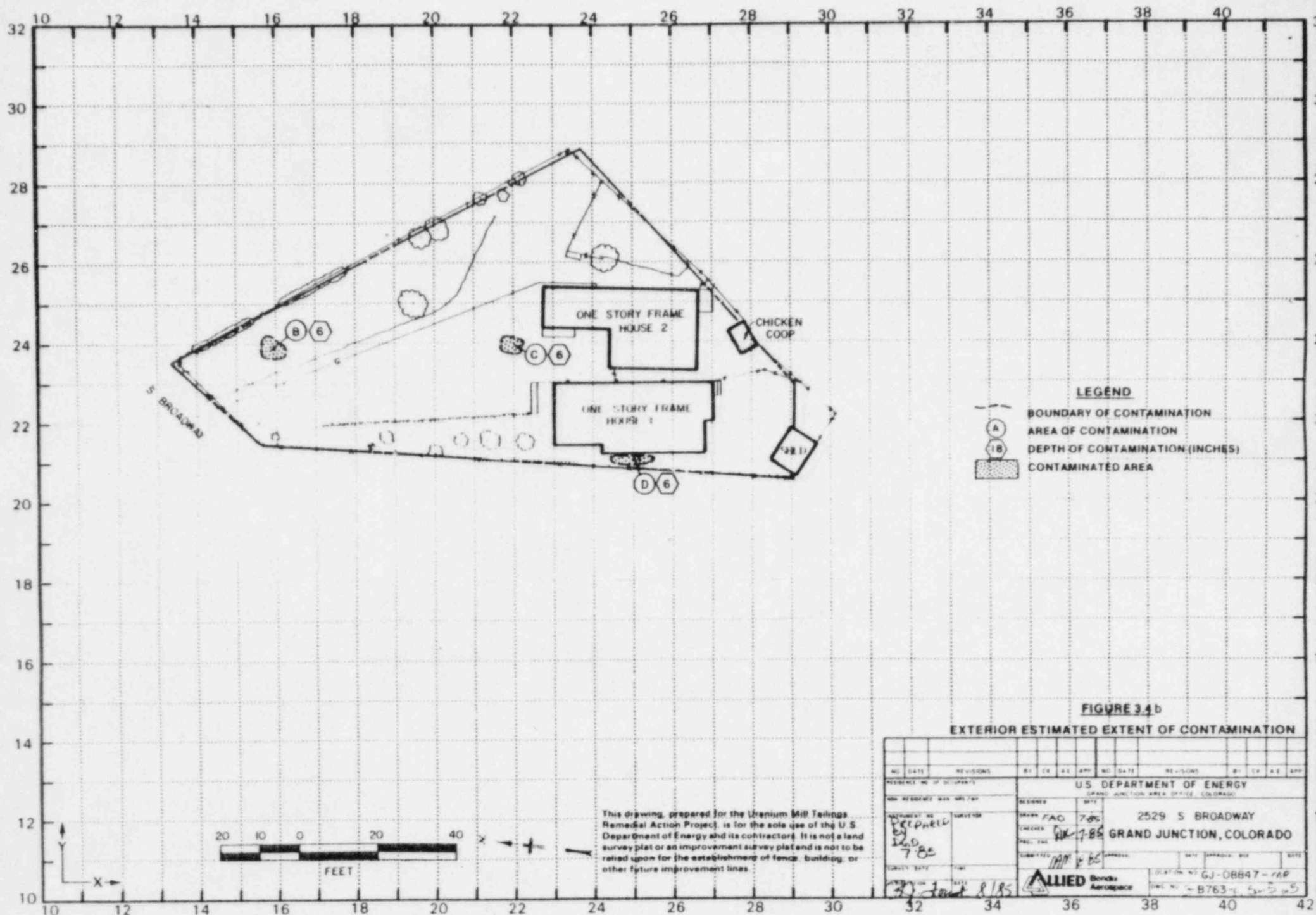












3/85

DOE ID NO. GJ-08847-MR

Date July 16, 1985

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

Official Survey Report

Property Address 2529 South Broadway

Property Owner Jacquelyn A. Moran

Address of Owner (if different from above) 623 26 Road Grand Jct. 81501

Report Prepared By David Dille

I. PRESENCE/ABSENCE OF RESIDUAL RADIOACTIVE MATERIALS

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

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

1 XX 1 In open areas.

1 1 Under or around exterior improvements.

1 1 Under or around a typically nonoccupied structure.

1 XX 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 XX 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 = 33 uR/h  
HOG = 38 uR/h



ALLIED Bendix  
Aerospace

Bendix Field Engineering Corporation  
Grand Junction Operations  
Grand Junction, Colorado

Date: July 11, 1985

To: Files

From: David G. Dille

DGD

Subject: Team Leader Notes - GJ-08847-MR

Address:

Owner: J. Moran

Occupancy: Five (Two in House 1, Three in House 2)

Weather: Warm, Clear

Tenant: House 1; Dave Duncan  
House 2; Dale Torrance

Colorado Department of Health (CDH) and Oak Ridge National Laboratory (ORNL) data indicates contamination in the west house, Building 1, and north of both houses in the driveway.

Team Members

D. Dille (Team Leader)  
S. Larsen  
M. Duran  
V. Rothman  
A. Raabe

S. Southern  
L. Kula  
H. Mattison  
V. Young

Team members conducted a gamma scan of the entire property, including the out buildings and a portion of South Broadway.

Team Leader Notes  
David G. Dille  
GJ-08847-MR  
July 11, 1985  
Page 2

The wood shed was scanned with instrument C-1024, readings ranging from 80 to 100 counts per second (cps) were noted. The chicken coop was scanned with the same instrument (C-1024), readings ranging from 80 to 90 cps. Gamma readings in the water meter pit ranged from 75 to 120 cps.

The elevated gamma readings in House 1 appeared to be associated with a concrete beam, which supports the house.

Delta readings were taken on the gas line into House 2 and from House 2 into House 1 (Locations 226255 and 233231). The sewer line exiting House 2 was investigated by a borehole and a downhole scintillometer at Location 266234. The location of the sewer line from House 1 was not determined and neither of the tenants or the owner of the property had knowledge of its whereabouts.

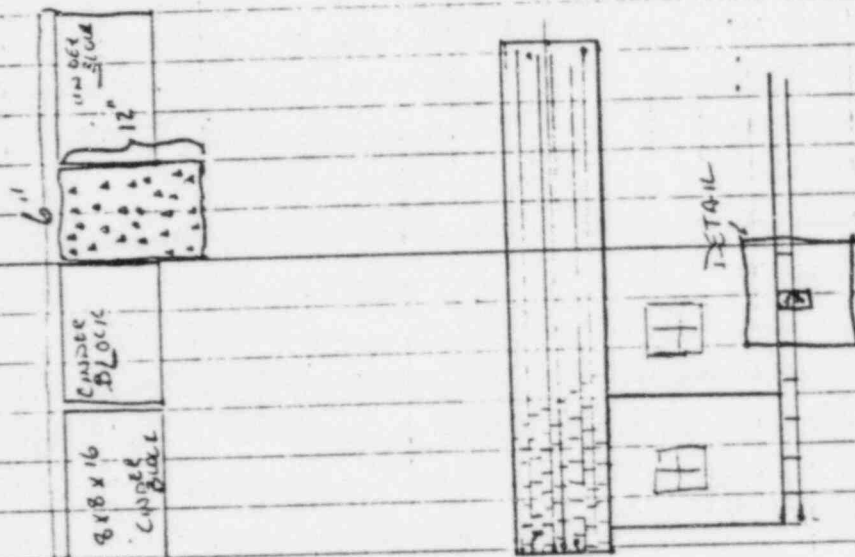
Since House 1 has a very narrow crawl space, we were unable to determine if there was more than one beam used to support the house.

All team members were frisked before leaving the property.

OF ITS WHEREABOUTS.  
 SINCE THE HOUSE HAS A VERY  
 NARROW CRAWL SPACE ~~IT~~ WAS  
 UNABLE TO DETERMINE IF THERE  
 WERE MORE THAN ONE BEAM  
 USED TO SUPPORT THE HOUSE.

ALL FRISKED  
 David Dille

SUPPLEMENT TO THE  
 TEAM LEADER NOTES



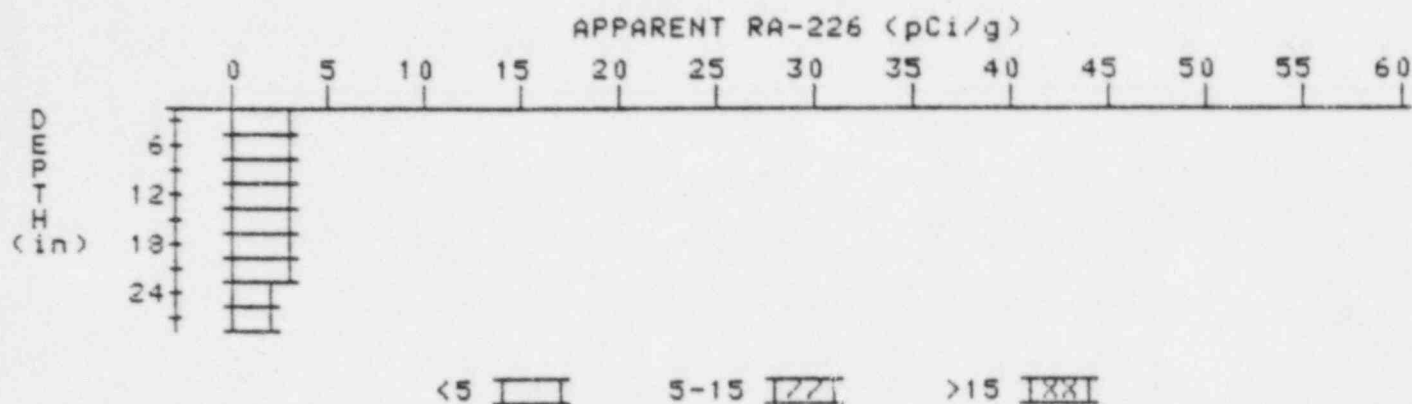
# APPARENT RADIUM-226 CONCENTRATION DECONVOLUTION GRAPH

8

PROPERTY NUMBER: GJ-08847-MR

HOLE NUMBER: 8

LOCATION: 200260



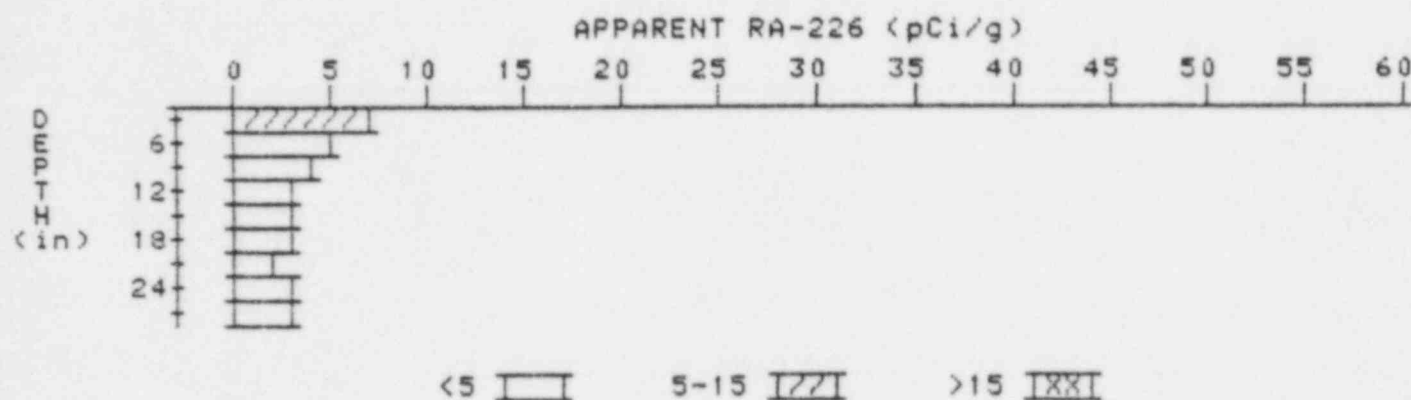
Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	2.6	2.6
6	2.9	3.3
9	3.0	3.2
12	3.0	3.2
15	2.9	2.9
18	2.8	2.8
21	2.7	2.9
24	2.5	2.3
27	2.4	2.4

# APPARENT RADIUM-226 CONCENTRATION 10 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-08847-MR

HOLE NUMBER: 10

LOCATION: 221239



Depth (in)	Apparent Radium-226 (pCi/g)	Apparent Radium-226 (pCi/g)
	Undeconvolved	Deconvolved
3	6.8	6.8
6	5.3	4.6
9	4.2	3.7
12	3.4	2.5
15	3.1	2.9
18	2.9	2.9
21	2.7	2.2
24	2.8	3.0
27	2.8	2.8

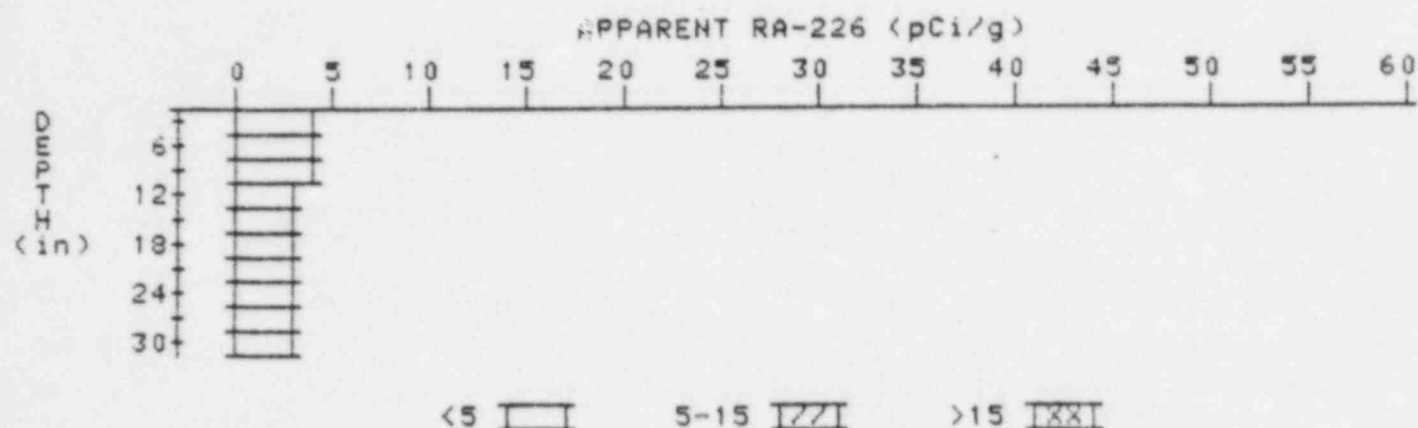
# APPARENT RADIUM-226 CONCENTRATION 16

## DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-08847-MR

HOLE NUMBER: 16

LOCATION: 249211



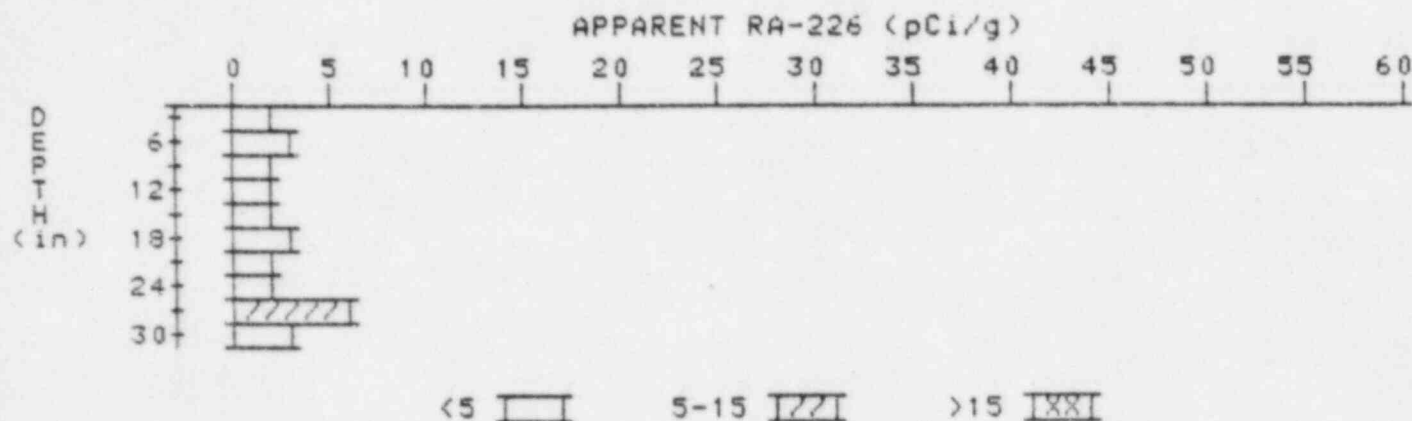
Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	3.5	3.5
6	3.7	4.4
9	3.5	3.5
12	3.3	3.1
15	3.2	3.2
18	3.1	3.1
21	3.0	3.0
24	2.9	2.7
27	2.9	3.1
30	2.8	2.8

# APPARENT RADIUM-226 CONCENTRATION 17 DECONVOLUTION GRAPH

PROPERTY NUMBER: GJ-08847-MR

HOLE NUMBER: 17

LOCATION: 261231



Depth (in)	Apparent Radium-226 (pCi/g) Undeconvolved	Apparent Radium-226 (pCi/g) Deconvolved
3	2.0	2.0
6	2.2	2.6
9	2.2	2.4
12	2.1	1.9
15	2.1	1.6
18	2.4	2.6
21	2.6	2.2
24	3.0	2.3
27	3.8	6.5
30	3.1	3.1



