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Trans. No. MK-3050-SLC-0224

Contract No. 3050

PROJECT: UMTRA
CLIENT: U.S. DEPARTMENT OF ENERGY

Date May 8, 1985

TO: U.S. Department of Energy
53[illegible] Central, NE, Suite 1700
Albuquerque, NM 87108

ATT: Mr. Mark Matthews

APPROVED FOR CONSTRUCTION/FABRICATION	A
INFORMATION ONLY	B
APPROVAL ACTION REQUESTED	C
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REMARKS The Final REA with Final Design for SL-017 is attached herewith and is distributed as noted below.

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DEPARTMENT OF ENERGY
ALBUQUERQUE OPERATIONS OFFICE
CONTRACT NO. DE-AC04-83AL18796

Radiological and Engineering Assessment

Vicinity Property No. SLC 017

Remedial Actions
Contractor
for the
Uranium Mill Tailings
Remedial Actions
Project

MORRISON KNUDSEN

Vicinity Property No. SLC 017

FINAL

THE RADIOLOGICAL AND ENGINEERING ASSESSMENT AND FINAL DESIGN FOR SALT LAKE CITY PROPERTY

SL-017

May 8, 1985

PREPARED FOR

URANIUM MILL TAILINGS REMEDIAL ACTION PROJECT OFFICE

UNITED STATES DEPARTMENT OF ENERGY

PREPARED BY

MORRISON-KNUDSEN COMPANY, INC.

TABLE OF CONTENTS

FIGURES

TABLES

APPENDIXES

1.0 Executive Summary

1.1 Introduction

Property SL-017 is a private residence located at 2980 South 2700 East, Salt Lake City, Utah.

1.2 Evaluation and Recommendation

1.2.1 Residual Radioactive Material Involvement

The area under the carport and concrete driveway is contaminated.

1.2.2 Recommended Remedial Action Option

The recommended option is to remove the contaminated material and restore the property.

1.2.3 Estimated Costs

The estimated remedial action cost is $16,400.00

1.2.4 Schedule

The estimated remedial action duration is 20 to 30 days.

2.0 ENGINEERING FIELD SURVEY

2.1 Property Description

2.1.1 Property Use and Occupancy

Property SL-017 is a private residence located at 2980 S. 2700 E. and owned by Nat M. Taggart. The map in Figure 2.1 illustrates the property's vicinity location.

2.1.2 Legal Description

The legal description as recorded with the Salt Lake County Recorder's Office in Deed Book No. 4784, Page 1244 follows:

"Lot 19 North Millcreek Heights Subdivision."

2.1.3 Bordering Properties

The lot is zoned R-1-8, single family residential zone, located less than 5 miles east of the Old Vitro mill tailings site. The property is bounded on the north by 2980 S. Street; on the east by 2700 East Street; on the south by public alleyway; and on the west by a single family residential lot.

2.2 Existing Facilities and Structures

2.2.1 Structures

There is a single family residential house with a full basement, an attached covered carport, and a small prefabricated metal shed located on the property.

The main floor of the wood framed house is at ground level. The northerly part of the house is constructed of wood siding while the southerly end of the house, which was converted from a garage, has a brick finish. The north end of the house is constructed over a full concrete basement. A family room is constructed on the connected garage slab. There is one outside concrete stair entry to the basement at the southwest corner of the house and one interior stair access at the south end of the house from the converted garage area. There is a fireplace in the south end of the basement.

The carport is a flat roof wood framed structure attached to the south end of the house over a concrete slab. The back end of the carport is a storage room with an exterior brick finish.

The yard area has a double car concrete driveway leading to the carport, sidewalk to the east entry, lawn with sprinkler system, approximately 1-1/2 dozen trees ranging from several inches to 16 inches in diameter, shrubs around the house and along the south property line, garden plot in the southwest corner of the lot, planter attached to the east side of the house, and hedge/grapes/chain link fence along the south property line.

2.2.2 Utilities

Utilities are serviced to the property as follows:

Electric power - See Site Plan Fig. 4.1.

Telephone - See Site Plan Fig. 4.1.

Water - See Site Plan Fig. 4.1.

Gas - See Site Plan Fig. 4.1.

Sewer - See Site Plan Fig. 4.1.

2.2.3 Site Plan and Survey Data

See Figure 4.1 for a site plan of the property. Property survey data and photos are presented in Table 2.1 and Figures 2.2, 2.3, and 2.4.

Table 2.1

PROPERTY SURVEY DATA

GENERAL:

Site Location: Salt Lake City, Utah

Property Address: 2980 S. 2700 E.

Owner's Name: Nat Taggart Address: Same

Lot No.: 19 Property Type: Residential

Occupancy Group: Adults: 2 Children: -0-

Survey Completed By: Russ Livengood, Jim Powers Date: 22 March 84

Property Description - Exterior:

Dwelling: Sq. Ft.:

Levels: Two - Basement and Main Floor

Construction Type: Frame with Al and Brick Veneer - Old Garage Converted to Family Room

Foundation: Half Basement - Concrete Walls

Garage: Carport with Storage Shed West End

Storage Bldg: Prefab:

Other: Green Brick Wall with Slab Floor, Wood Doors and Roof

Improvement to Dwellings: Additions: Carport Porches:

Deck: Concrete Porch (Wood)

Patio:

Other:

Driveway: Concrete: X Paved:

Gravel: Other:

Sidewalks: Concrete/Paved: Concrete - Along 2980 S. Street

Other:

Fences/Gates: Wood: Other:

Chain Link: Southwest Corner of Property; Chain Link on Concrete Block Retaining Wall

Table 2.1 (cont'd)

PROPERTY SURVEY DATA

Site Location: Salt Lake City, Utah

Property Address: 2980 S. 2700 E

Grounds:

Lawn: Lawn with Sprinkler Irrigation System

Trees: Approximately 1-1/2 Dozen Ranging from 2-16" Diameter

Shrubs: Around House and Along South Property Line

Garden: Strawberry Planter South of Carport

Grading: Relatively Flat

Other:

Soil Type:

Existing Survey Plot:

Property Description - Interior:

Room	Floor	Walls E	Walls W	Walls N	Walls S	Ceiling	Comments

Utilities:

Heating: Gas: Electric:

Hot Water: Other:

Air Cond: Gas: Heat Pump:

Table 2.1 (cont'd)

PROPERTY SURVEY DATA

Site Location: Salt Lake City, Utah

Property Address: 2980 S. 2700 E

Electric Line Location: See Site Plan Fig. 4.1

Gas Line Location: See Site Plan Fig. 4.1

Water Line Location: See Site Plan Fig. 4.1

Sewage Line Location: See Site Plan Fig. 4.1

Telephone Line Location: See Site Plan Fig. 4.1

Building Codes and Zoning:

Codes	Local	State	Federal
Building Work	U.B.C.		
Plumbing			
HVAC			
Electrical			
Other			

Zoning District: Salt Lake County

Present Dwelling Zoning: R-1-8

Setbacks: Front:

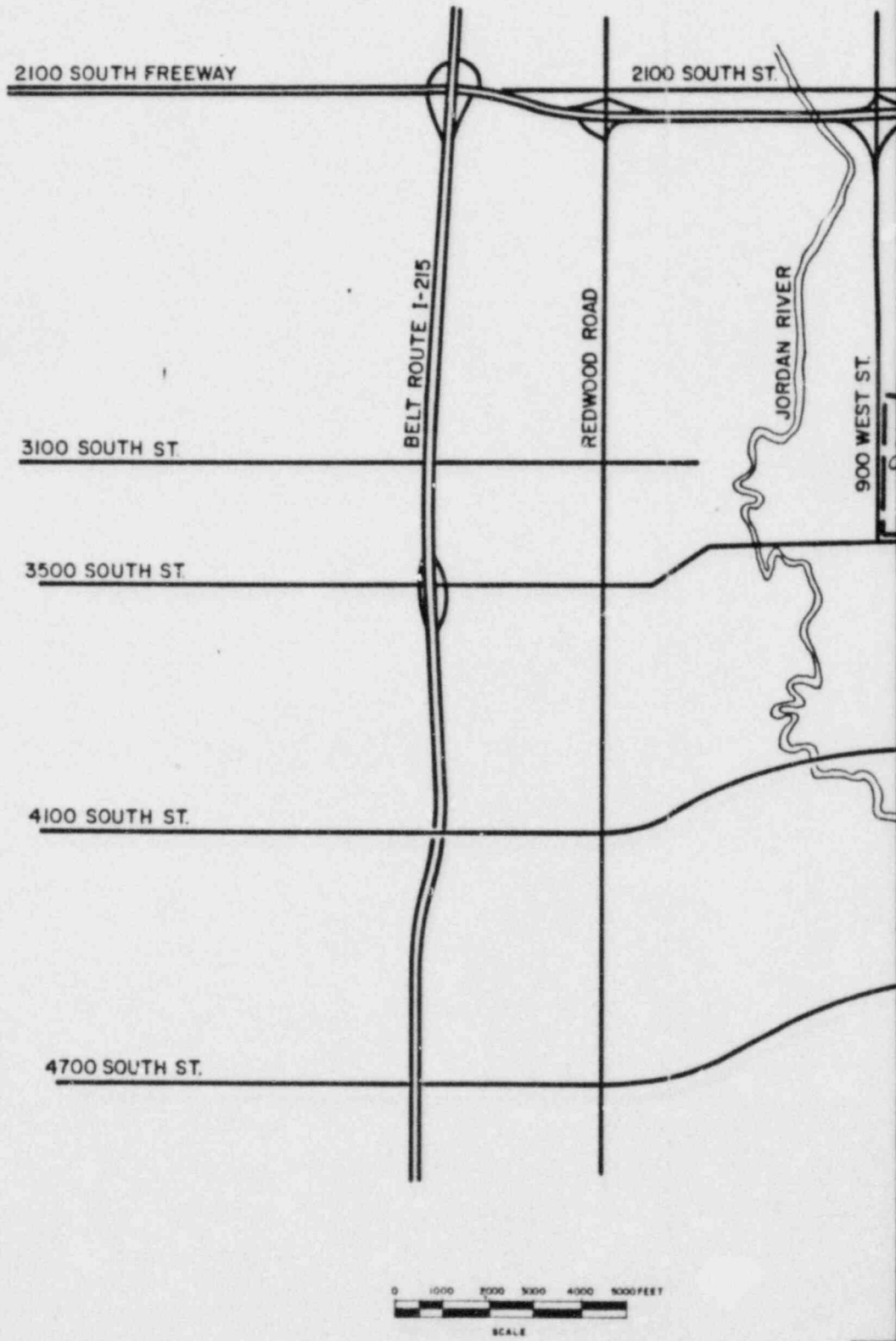
Rear:

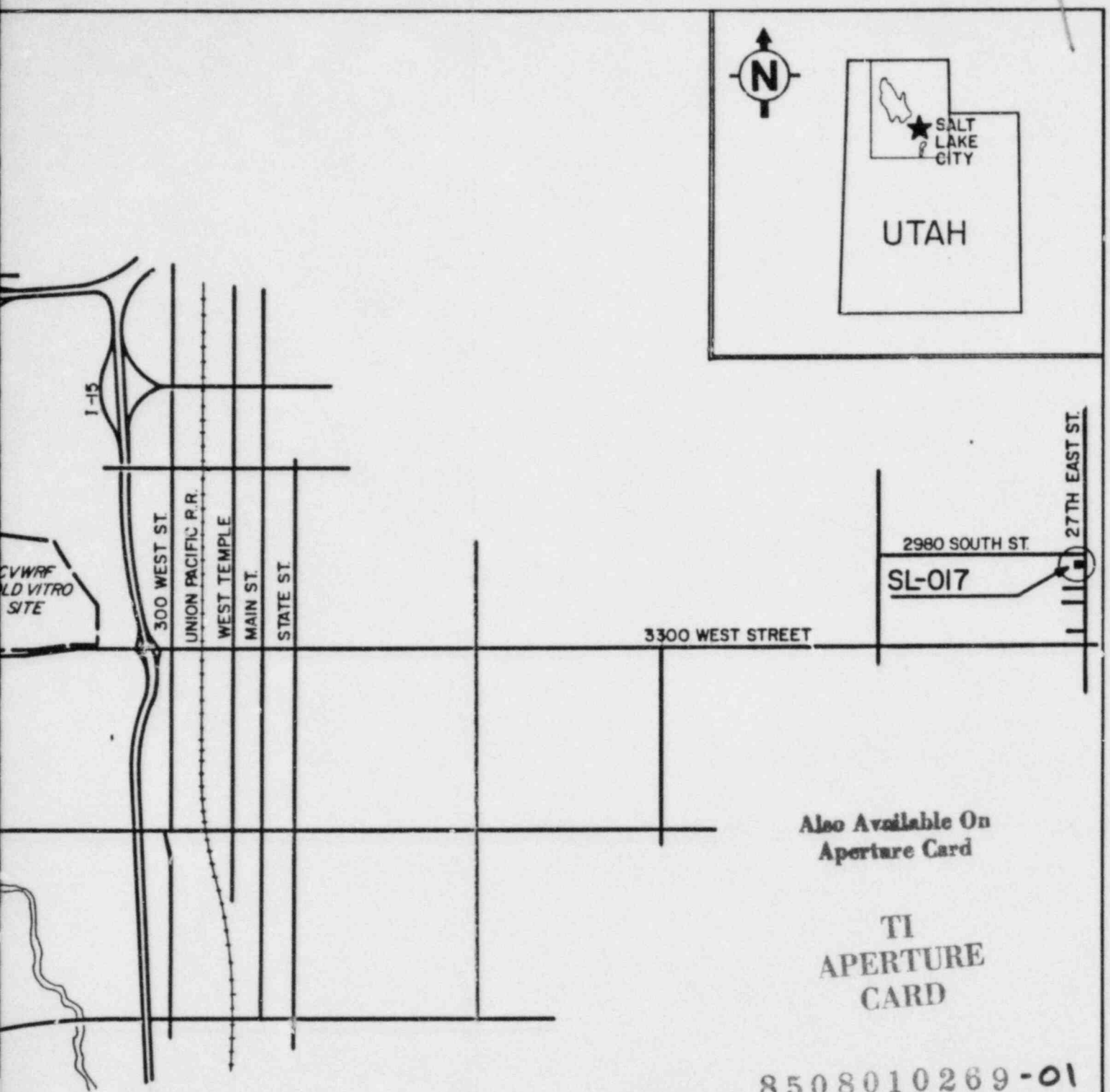
Side:

Other:

Photographs:

Roll Frame	Description	Direction
Fig. 2.2	Front of House	North
Fig. 2.2	Front of Driveway/Carport	West
Fig. 2.3	House/Carport	West
Fig. 2.3	House/Carport	North
Fig. 2.4	Side House/Carport	West
Fig. 2.4	Rear House/Carport	West


N
2100 SOUTH FREEWAY
2100 SOUTH ST.
BELT ROUTE I-215
REDWOOD ROAD
JORDAN RIVER
900 WEST ST.
3100 SOUTH ST.
3500 SOUTH ST.
4100 SOUTH ST.
4700 SOUTH ST.
0 1000 2000 3000 4000 5000 FEET
SCALE
NO.



NOTE:
PROPERTY LOCATED IN SALT LAKE COUNTY.

U. S. DEPARTMENT OF ENERGY
ALBUQUERQUE, NEW MEXICO

FIGURE 2.1
VICINITY MAP SL-017
SALT LAKE COUNTY, UTAH
URANIUM MILL TAILINGS REMEDIAL ACTION PROJECT

DRAWN	CHECKED	REVIEWED	RECOMMENDED	APPROVED	DOE PROJECT MANAGER	DOE PROJECT ENGINEER
TLE				NR	NR	NR

MORRISON KNUDSEN

PROJECT NO.
DE-AC04-83AL18796

DRAWING NO.
SL-017-005

REV
0

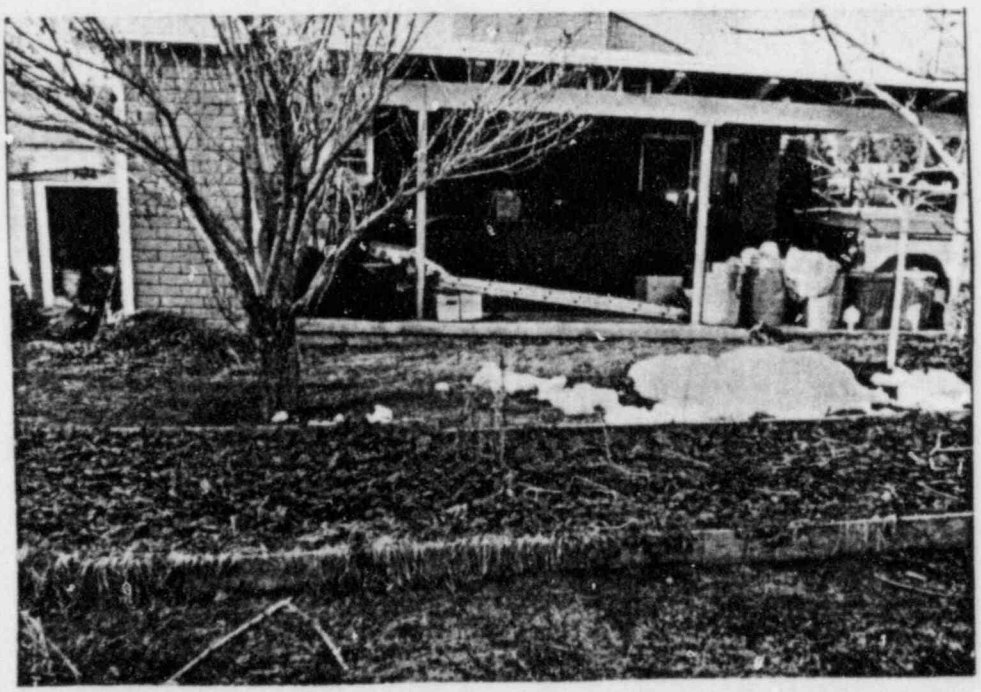
DATE	REVISIONS	DRAWN BY	CHECKED BY	APPROVAL LDE	APPROVAL DH	PROJ ENG	APPROVAL DOE
1984	ISSUE FOR CONSTRUCTION	TLE					–

Front of House Looking North

Front of House, Driveway and Carport Looking West

Figure 2.2 Property Photos

House and Carport Looking West



House and Carport Looking North

Figure 2.3 Property Photos

Side of House and Carport Looking West

Rear of House and Carport Looking West

Figure 2.4 Property Photos

3.0 RADIOLOGICAL SURVEY AND ASSESSMENT

3.1 Gamma Exposure Rate Survey

3.1.1 Survey Method

Outdoor and indoor gamma scans were conducted in accordance with RAC UMTRA Procedures 019A and 019B. The indoor survey was conducted in the room adjacent to the carport where the presence of contaminated materials was suspected (Radiological Survey at Salt Lake City Site, Vicinity Property SL-017, ORNL, March 1983).

3.1.2 Survey Results

Outdoor surface gamma readings on the property, as shown in Table 3.1 range from 10 to 58 micro R/hr. This may be compared with the background for the Salt Lake City site of 10 micro R/hr.

Indoor readings, as shown in Figure 3.1, range from 10 to 13 micro R/hr.

3.2 Borehole Survey

3.2.1 Survey Method

A borehole survey was conducted in accordance with RAC UMTRA Procedure 018.

3.2.2 Survey Results

Contamination was found in the hole drilled in the carport but not in the hole drilled in the porch. The location and depth of the contamination is described in Table 3.2 and is shown in Figure 3.1.

Borehole soil samples collected by ORNL during the inclusion survey indicated the presence of contamination in the driveway. Since these holes give a good characterization of this contamination and demonstrate the boundary around the carport, their locations are shown on Figure 3.1 of this assessment and the results are found in Table 3.2.

3.3 Radon/Radon Daughter Survey

No radon/radon daughter surveys were performed inside the house at the property during the present survey. Two radon daughter measurements were conducted by ORNL during the inclusion survey. One, in the main level, showed concentrations of 0.016 WL. The other was taken in the basement; the concentration was 0.024 WL. This is believed to be the result of the tailings found under the carport and driveway.

3.4 Estimated Extent of Contamination

One area of contamination was identified in the survey. This area consists of the covered carport, the concrete driveway, and a 3-foot wide strip immediately south of the driveway. The estimated depth of the contamination is 12 inches in the driveway and about 36 inches in the carport.

Table 3.1
OUTDOOR SURFACE GAMMA SURVEY
Property SL-017

POINT	uR/hr	POINT	uR/hr
0+00	10	A+70	13
0+10	12	A+60	12
0+20	12	A+50	12
0+30	12	A+40	12
0+40	12	A+30	11
0+50	11	A+20	11
0+60	11	A+10	11
0+70	11	A+00	11
0+80	12	B+00	11
0+90	13	B+20	12
0+100	19	B+30	11
0+110	15	B+40	12
0+120	12	B+50	13
0+130	12	B+60	13
0+140	11	B+70	13
A+140	12	B+80	13
A+130	11	B+90	13
A+120	11	B+100	21
A+110	26	B+110	27
A+100	28	B+120	13
A+90	14	B+130	11
A+80	20	B+140	13

Table 3.1 - cont'd
OUTDOOR SURFACE GAMMA SURVEY
Property SL-017

POINT	uR/hr	POINT	uR/hr
C+140	13	D+23 (Window Well)	13
C+130	11	D+93.5 (Carport)	27
C+120	13	D+100	22
C+110	14	D+110	20
C+100	16	D+120	13
C+90	23	D+130	13
C+80	14	D+140	13
C+70	13	E+140	13
C+60	12	E+130	13
C+50	13	E+120	13
Center of Porch	13	E+110	24
C+40	14	E+100	33
C+30	13	E+93.5	58
C+20	12	Side of House	13
C+10	12	E+20	12
C+00	11	E+10	11
D+00	11	F+0C	11
D+10	12	F+10	12
D+20	13	F+20	13

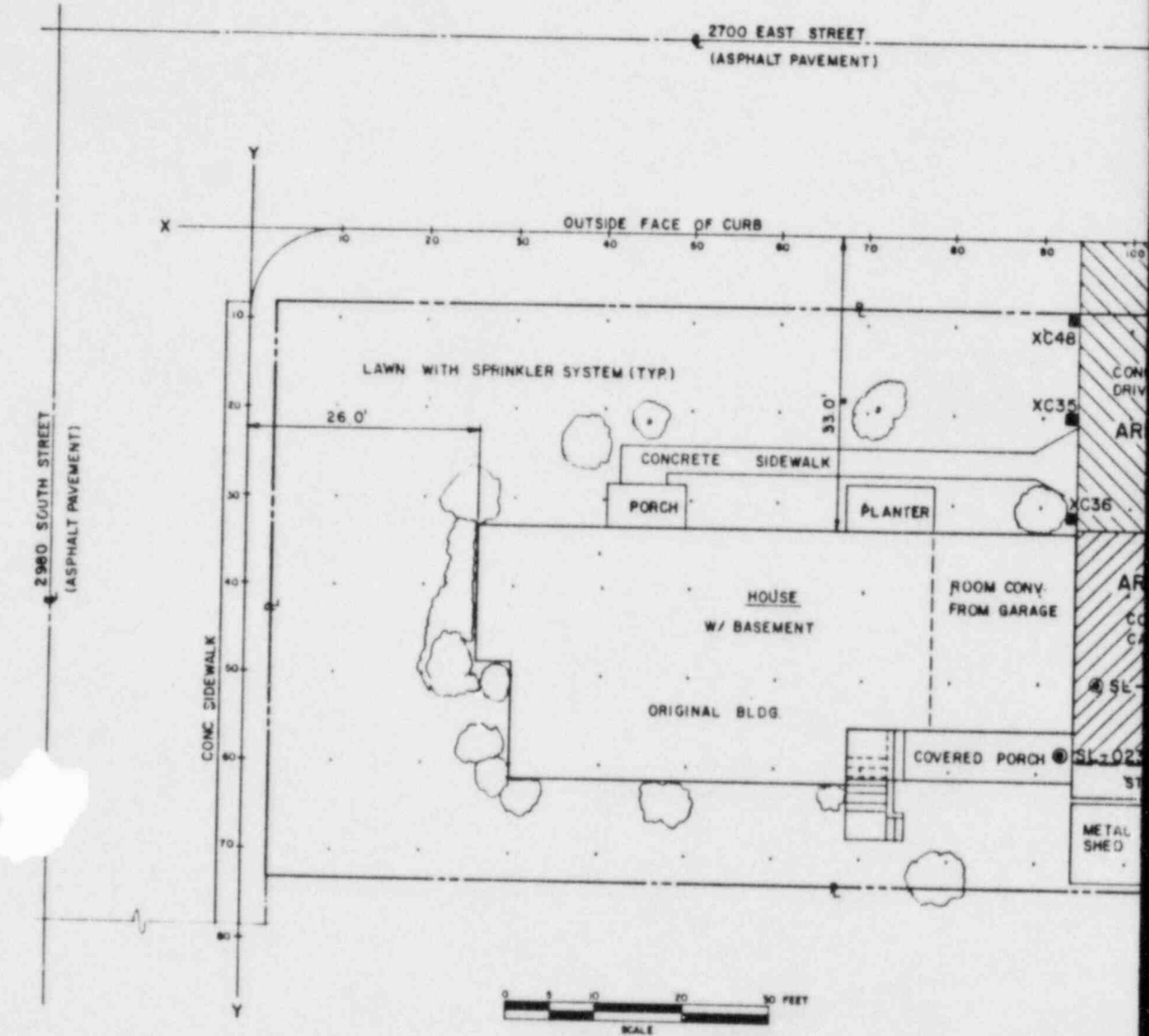
Table 3.1 - cont'd
OUTDOOR SURFACE GAMMA SURVEY
Property SL-017

POINT	uR/hr	POINT	uR/hr
F+30	13	FG+110	20
W. side of house +40	12	G+93.5	13
W. side of house +50	12	G+90	13
W. side of house +60	12	G+80	13
W. side of house +70	14	G+70	12
W. side of house +80	14	G+60	11
W. side of house +90	15	G+50	11
W. side of house +93	34	G+40	11
W. end of carport +94	34	G+30	12
W. end of carport +100	32	G+20	12
W. end of carport +110	26	G+10	12
S.W. corner of carport	31	G+00	11
F+120	15	S.W. corner of house	11
F+130	13	Porch - A	13
F+140	13	Porch - B	11
G+140	13	Porch - C	11
F+130	13	Porch - D	11
F+120	13		
G+110	13		
G+100	13		
FG+100	18		

Table 3.2
BOREHOLE SURVEY
PROPERTY SL-017

HOLE	CONTAMINATION DEPTH
A	0-36"
B	None
XC33	None
XC34	None
XC35	None
XC36	0-12"
XC37	None
XC38	None
XC39	4-20"
XC45	0-6"
XC46	0-6"
XC47	0-12"
XC48	None
XC49	0-8"

Note: All "XC" holes were augered and analyzed by ORNL during the period August 1981-March 1982 (results of the Radiological Survey at Property SL-017, ORNL, March 1983).



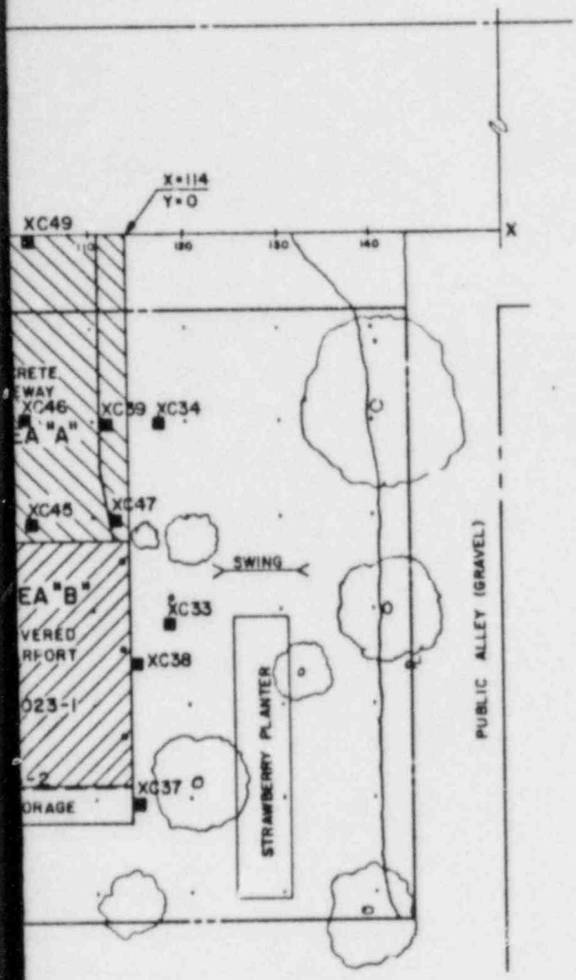
DEPTH OF ESTIMATED CONTAMINATION LEGEND

AREA "A" = 12"

AREA "B" = 36"

LEGEND

◉ SL-017-2	AUGER HOLE DESIGNATION - BY M.K. MAY 1984.
■ XC34	AUGER HOLE DESIGNATION - BY ORNL MARCH 1982.



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ALBUQUERQUE, NEW MEXICO

FIGURE 3.1
RADIOLOGICAL SURVEY DATA SL-017
SALT LAKE COUNTY, UTAH
URANIUM MILL TAILINGS REMEDIAL ACTION PROJECT

DESIGNED	CHECKED	REVIEWED	RECOMMENDED	APPROVED
				DOE PROJECT MANAGER / DOE PROJECT ENGINEER

MORRISON KNUDSEN

PROJECT NO. DE-AC04-83AL18796
DRAWING NO. SL-017-010 REV 8

DATE	REVISIONS	DRAWN BY	CHECKED BY	APPROVED LOE	APPROVED ON	PROJ ENG	APPROVED DOE
1984	ADD ORNL BOREHOLE LOCATIONS	TLE					
1984	DRAFT REA SUBMITTAL	RR					

4.0 ENGINEERING ASSESSMENT

Engineering options were formulated and evaluated based on the radiological and engineering assessment for this property. Factors forming the basis of the evaluation were: the extent and location of the contamination, construction costs, and required demolition and constructibility for the various options. Results of the evaluation are detailed below.

4.1 Evaluation of Options

4.1.1 Options

Two options were evaluated for property SL-017:

Option 1 - No action should be taken.

Option 2 - Decontamination of the property including retrieval of the contaminated material and restoration of the property.

This option involves mainly the decontamination of the areas under the carport and concrete driveway.

This will require demolishing the concrete slab in the carport area as well as the concrete driveway, excavating contaminated material, backfilling with clean backfill and constructing a new slab and driveway.

There is a small amount of lawn area around the area discussed above that requires excavation of contaminated material, backfilling with clean backfill, grading and sodding the disturbed lawn area.

4.1.2 Costs

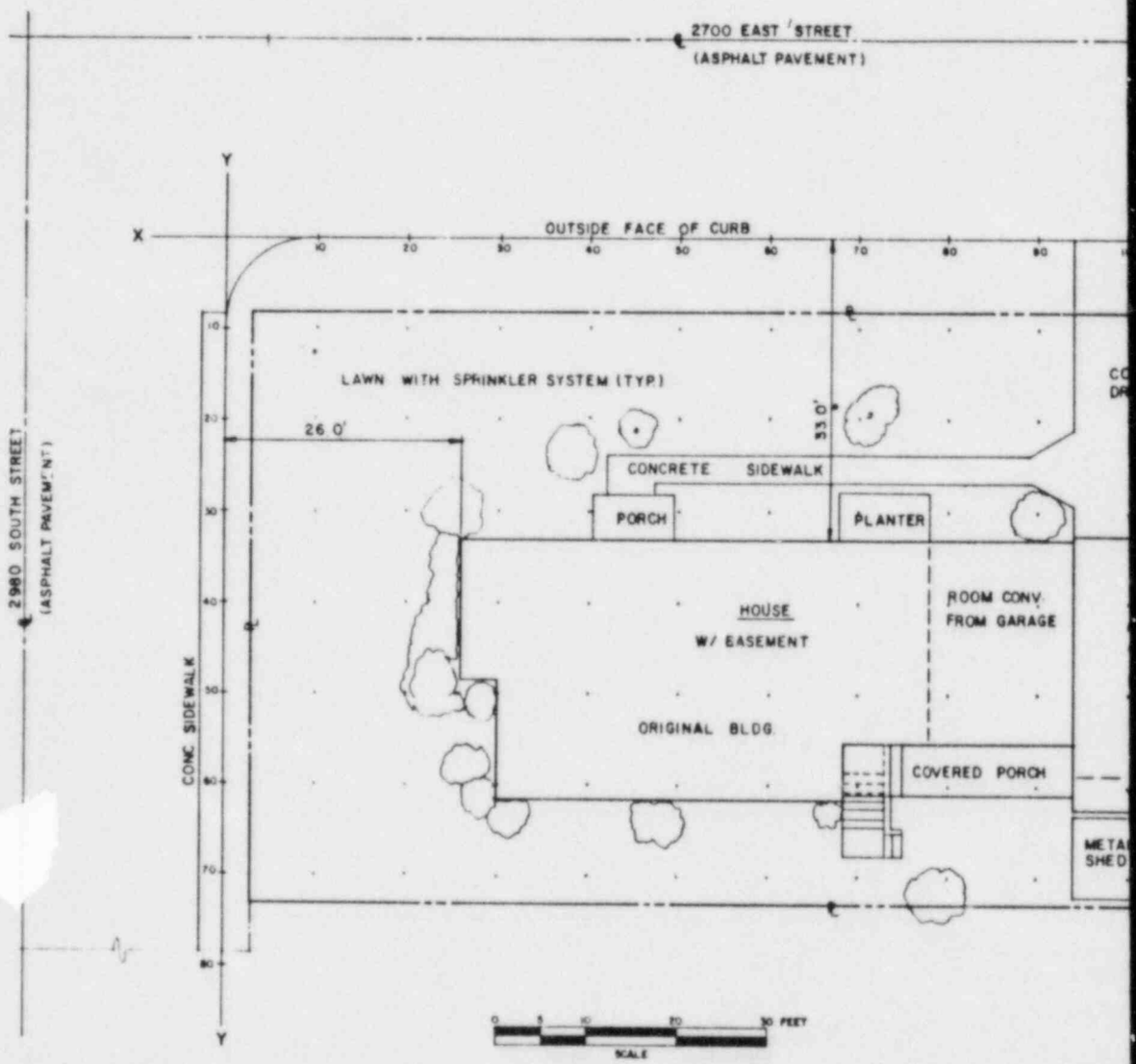
Estimated costs for the activities associated with Option 2 are detailed in Table 4.1. Costs include labor, insurance, material, equipment, supplies, overhead, profit, and contingency. All costs are escalated to 1985 dollars. It is anticipated that the time required for the subcontractor to complete the work will be 20 to 30 days.

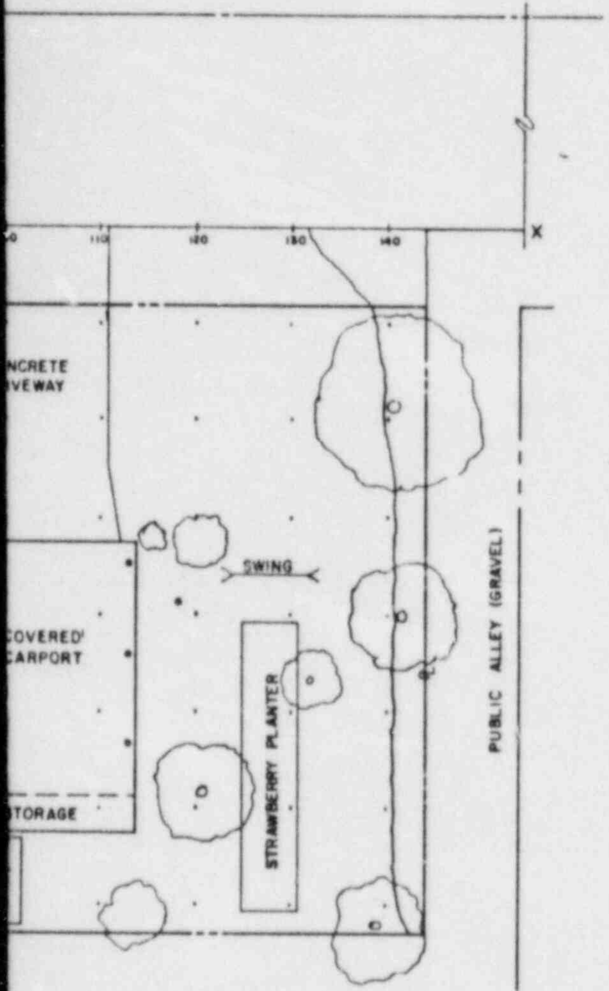
4.2 Recommendation

The limited cost and amount of remedial action work precluded evaluating any more than these two options. The results of the radiological assessment concluded that contamination levels on the property exceeded EPA guidelines. Therefore, based on these guidelines, it is recommended that Option 2, decontamination of the property, be pursued. The total estimated cost for Option 2 is $16,400.00.

Table 4.1
OPTION 2 COSTS

Activity	Unit Price	Quantity		Estimated Cost
Excavation	8.30	83	cy	689.00
Demolish Concrete	245.00	13.5	cy	3,308.00
Backfill	26.40	83	cy	2,190.00
Sod	0.20	100	sf	20.00
4" Conc. Slab	3.50	1,185	sf	4,148.00
Subtotal Direct				10,355.00
5% Contractor's Contingency				515.00
20% Overhead & Profit				2,175.00
Subtotal				13,045.00
20% Engineers Contingency				2,600.00
1985 Escalation				755.00
Total				16,400.00


2700 EAST STREET
(ASPHALT PAVEMENT)
2980 SOUTH STREET
(ASPHALT PAVEMENT)
OUTSIDE FACE OF CURB
LAWN WITH SPRINKLER SYSTEM (TYP.)
26.0'
33.0'
CONCRETE SIDEWALK
PORCH
PLANTER
HOUSE
W/ BASEMENT
ROOM CONV.
FROM GARAGE
ORIGINAL BLDG.
COVERED PORCH
CONC. SIDEWALK
SCALE



LEGEND

Symbol	Meaning
—W—	WATER LINE
—G—	GAS LINE
—GM—	GAS MAIN
—S—	SEWER LINE
—SM—	SEWER MAIN
—STM—	STORM SEWER
—E—	ELECTRICAL LINE
—T—	TELEPHONE LINE
—TV—	CABLE TV
—℄—	PROPERTY LINE
—X—X—X—	FENCE LINE
Ⓜ G,W or E	METER
⊗ G or W	VALVE
◓	PROPERTY PIN
●	POWER POLE

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U. S. DEPARTMENT OF ENERGY
ALBUQUERQUE, NEW MEXICO

FIGURE 4.1
SITE PLAN SL-017
SALT LAKE COUNTY, UTAH
URANIUM MILL TAILINGS REMEDIAL ACTION PROJECT

DESIGNED/DRAWN / CHECKED / REVIEWED / RECOMMENDED / APPROVED: NR

APPROVED	DATE	DOE PROJECT MANAGER	DATE	DOE PROJECT ENGINEER	DATE
NR		NR		NR	

MORRISON KNUDSEN

PROJECT NO. DE-AC04-83AL18796
DRAWING NO. SL-017-015 REV A

71384	DRAFT REA SUBMITTAL	R.R.					—
DATE	REVISIONS	DRAWN BY	CHECKED BY	APPROVAL LOE	APPROVAL GH	PROJ ENG	APPROVAL DOE

5.0 TECHNICAL SPECIFICATIONS

Technical specifications applicable to this property are indexed in Table 5.1 . Specifications previously approved by the Department of Energy (DOE) are noted in the table.

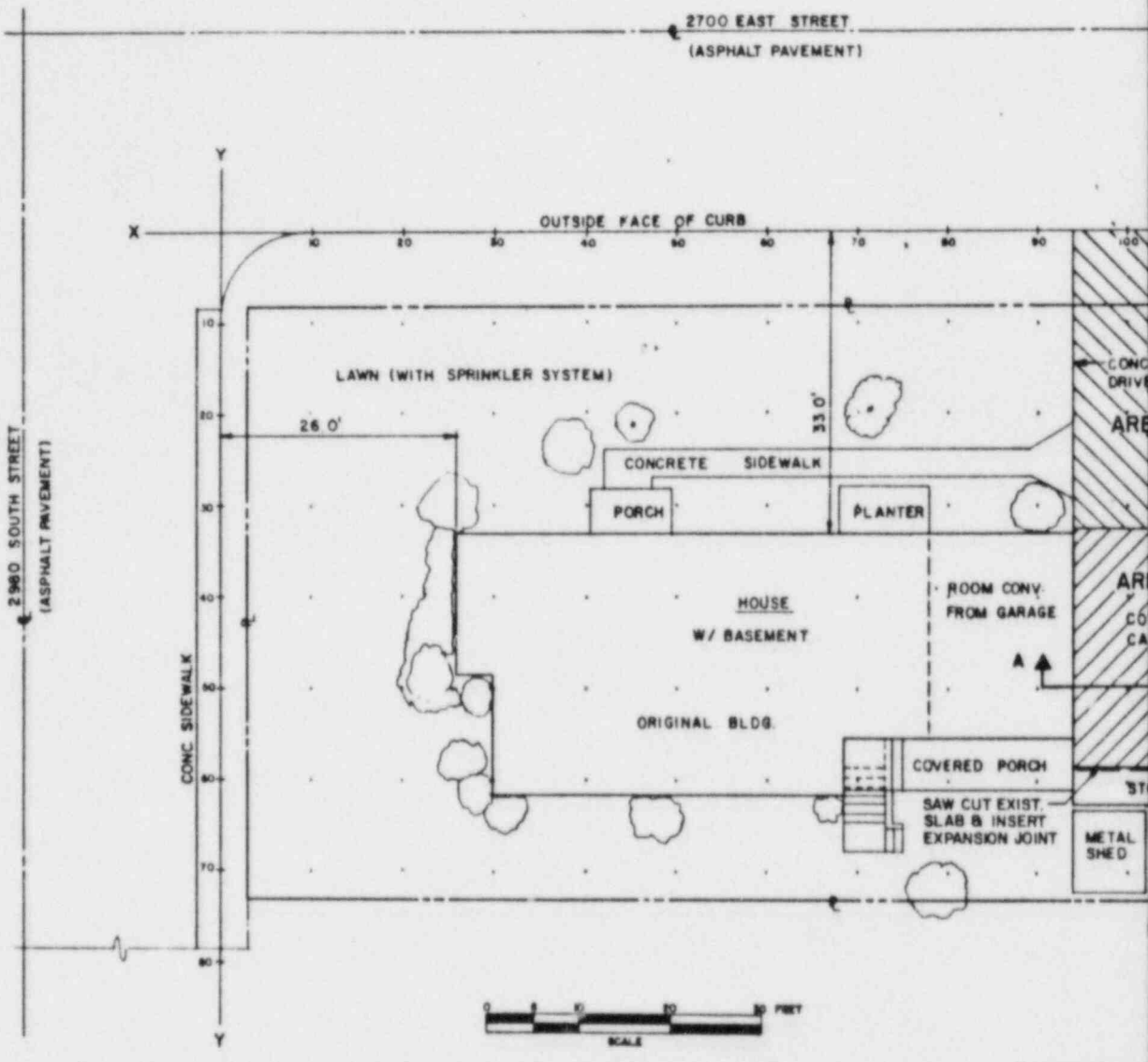
Table 5.1
INDEX OF TECHNICAL SPECIFICATIONS

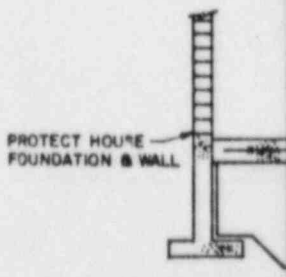
Description		Specifications Previously Approved	Specifications Requiring DOE Approval
SECTION 02050	DEMOLITION	X	
SECTION 02110	CLEARING AND GRUBBING	X	
SECTION 02130	CONTAMINATED MATERIAL REMOVAL	X	
SECTION 02150	UNDERPINNING	X	
SECTION 02200	EXCAVATION AND BACKFILL	X	
SECTION 02480	LANDSCAPING	X	
SECTION 03300	CAST-IN-PLACE CONCRETE	X	

6.0 CONSTRUCTION DRAWINGS

Listed below is an index of the construction drawings required for remedial action on this property.

Drawing Number	Drawing Title
SL-017-120	Excavation & Restoration Plan SL-017





DEPTH OF ESTIMATED CONTAMINATION LEGEND

AREA "A" = 12"

AREA "B" = 36"

NOTES:

1. THE LATEST REVISION OF THE FOLLOWING TECHNICAL SPECIFICATIONS APPLY TO THE REMEDIAL ACTION WORK REQUIRED FOR PROPERTY NO. SL-017.

   SECTION 02050
   DEMOLITION

   SECTION 02110
   CLEARING AND GRUBBING

   SECTION 02130
   CONTAMINATED MATERIAL REMOVAL

   SECTION 02150
   UNDERPINNING

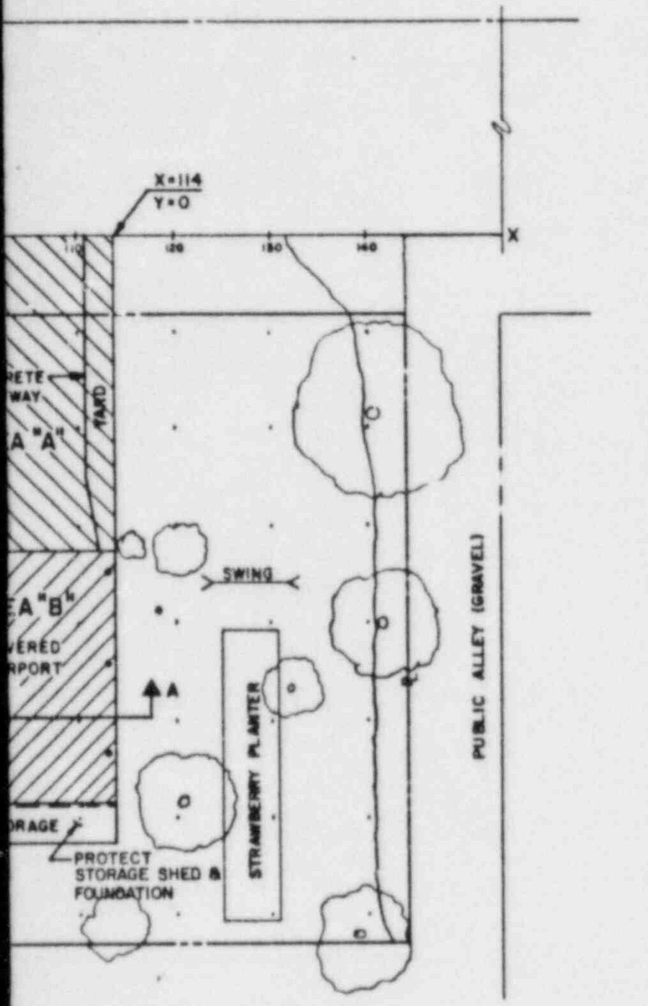
   SECTION 02200
   EXCAVATION AND BACKFILL

   SECTION 02480
   LANDSCAPING

   SECTION 03300
   CAST-IN-PLACE CONCRETE

2. UTILITY LOCATIONS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS SHALL BE DETERMINED BY THE SUBCONTRACTOR PRIOR TO START OF CONSTRUCTION.

3. THE EXCAVATION LIMITS AND DEPTHS ARE BASED ON A LIMITED NUMBER OF BORINGS TAKEN DURING THE RADIOLOGICAL SURVEYS OF THIS PROPERTY. ADDITIONAL RADIOLOGICAL SURVEYS PERFORMED DURING REMEDIAL ACTION MAY REQUIRE MORE OR LESS EXCAVATION TO BE TAKEN FROM THE DESIGNATED AREAS. ALL CHANGES TO THE LIMITS AND DEPTHS OF EXCAVATION AS SHOWN ON THE DESIGN DRAWINGS SHALL BE AS DIRECTED BY THE CONTRACTORS REPRESENTATIVE.



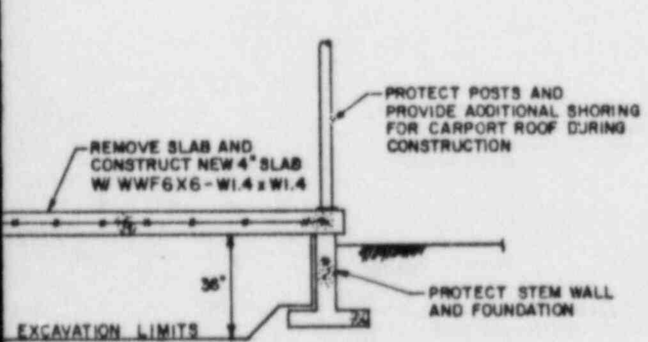
SCOPE OF WORK

AREA "A"

- DEMOLISH AND REMOVE EXISTING CONCRETE SLAB
- EXCAVATE CONTAMINATED SOIL
- PLACE AND COMPACT STRUCTURAL FILL PER SPEC.
- CONSTRUCT NEW 4 INCH THICK CONCRETE SLAB WITH 6" X 6" WWF
- BACKFILL LAWN AREA WITH COMMON FILL, TOP WITH 6 INCHES OF TOPSOIL AND SOD

AREA "B"

- DEMOLISH AND REMOVE EXISTING CONCRETE SLAB
- EXCAVATE CONTAMINATED SOIL
- PLACE AND COMPACT STRUCTURAL FILL PER SPEC.
- CONSTRUCT NEW 4 INCH THICK CONCRETE SLAB WITH 6" X 6" WWF



SECTION A-A
NTS

8508010269-04

U. S. DEPARTMENT OF ENERGY
ALBUQUERQUE, NEW MEXICO

EXCAVATION AND RESTORATION PLAN SL-017
SALT LAKE COUNTY, UTAH
URANIUM MILL TAILINGS REMEDIAL ACTION PROJECT

APPROVED	DATE	DOE PROJECT MANAGER	DATE	DOE PROJECT ENGINEER	DATE
NR		NR		NR	

MORRISON KNUDSEN

PROJECT NO. DE-AC04-83AL18796
DRAWING NO. SL-017-120 REV. 0

	1984	ISSUE FOR CONSTRUCTION	TLE		VCD			—	
	DATE	REVISIONS	DRAWN BY	CHECKED BY			PROJ ENG		

APPENDIX A

SURVEY DATA LOGS

MORRISON KNUDSEN

BOREHOLE LOG

LOGGING CREW: Turner
Nelson
Manship

INSTRUMENT ID NO. 26498 Pr # 015809

SHEET _____ OF _____ PAGE _____

DATE: _____

PROPERTY ID: SL-[redacted] 017

AREA: Taggart

NOTES: 1. ALL HOLES ARE 4"DIA. UNLESS OTHERWISE NOTED.
2. RECORD UNUSUAL CONDITIONS, SUCH AS THE PRESENCE OF WATER IN BOREHOLES AND DEPTH, CASING TYPE AND THICKNESS IF USED, CONCRETE CORES AND THICKNESS, OBSTRUCTIONS, UTILITIES, ETC., IN THE REMARKS SECTION.

017 017

HOLE ID: SL-023-1(A)		HOLE ID: SL-023-2		HOLE ID:		HOLE ID:	
TIME DRILLED:		TIME DRILLED:		TIME DRILLED:		TIME DRILLED:	
TIME LOGGED:		TIME LOGGED:		TIME LOGGED:		TIME LOGGED:	
SOIL TYPE:		SOIL TYPE:		SOIL TYPE:		SOIL TYPE:	
DEPTH	COUNTS/.1MIN	DEPTH	COUNTS/.1MIN	DEPTH	COUNTS/.1MIN	DEPTH	COUNTS/.1MIN
SURFACE	7376	SURFACE	1209	SURFACE		SURFACE	
0"		0"		0"		0"	
6"	36029	6"	1350	6"		6"	
12"	49279	12"	1448	12"		12"	
18"	38676	18"	1450	18"		18"	
24"	9069	24"		24"		24"	
30"	5620	30"		30"		30"	
36"	4158	38"		36"		36"	
42"	3543	42"		42"		42"	
48"	2962	48"		48"		48"	
54"	2794	54"		54"		54"	
60"		60"		60"		60"	
66"		66"		66"		66"	
72"		72"		72"		72"	
78"		78"		78"		78"	
84"		84"		84"		84"	
90"		90"		90"		90"	
96"		96"		96"		96"	

REMARKS: Hole # 1(A) located under carport area
Hole # 2(B) " on back porch.

VP-04B

PROPERTY SURVEY SKETCH

SLO-17 Sheet 1 of 1

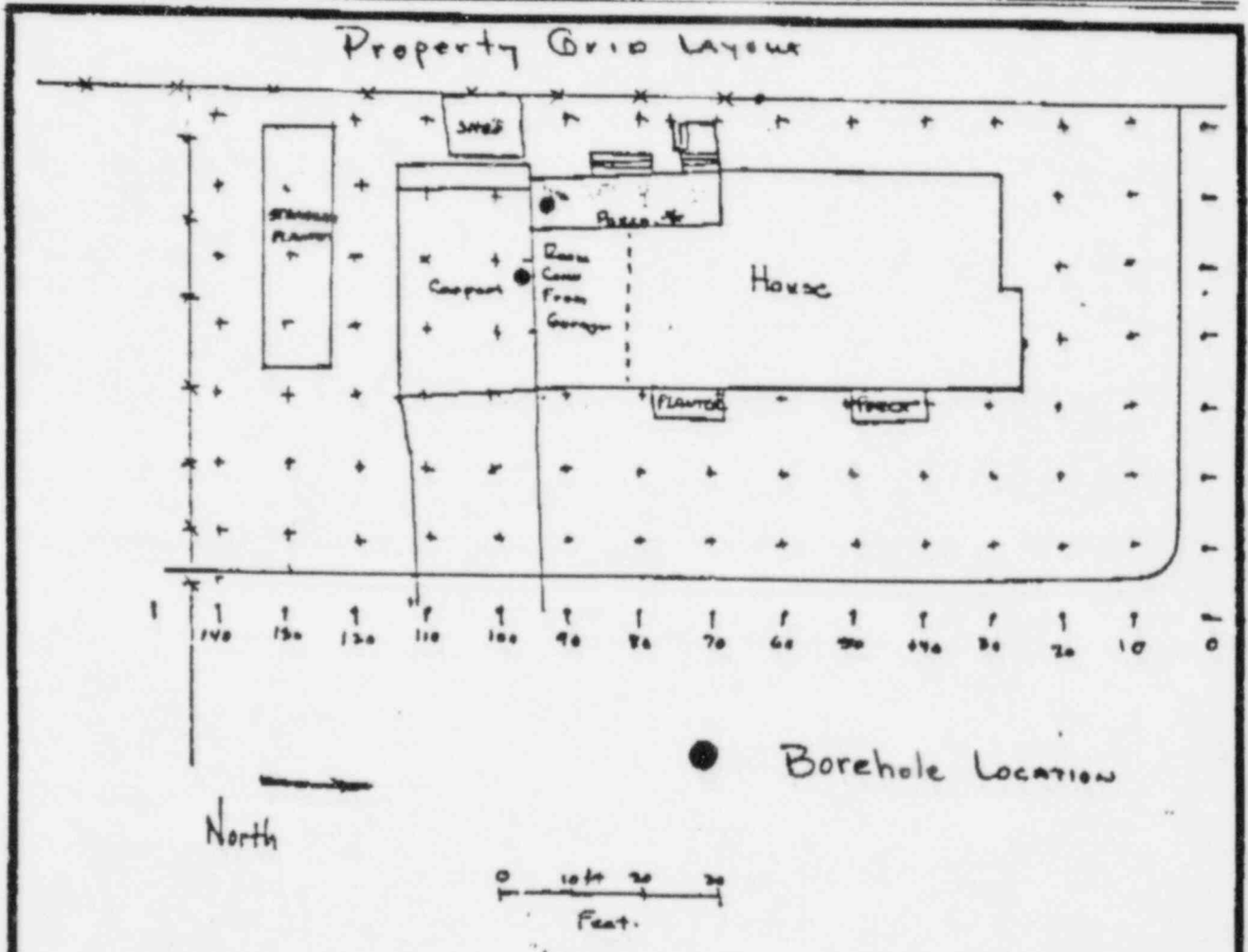
SITE LOCATION TAGGART RES. 2780 S. 27th EAST SLC.

ADDRESS

PROPERTY TYPE Home LOT NO.

OWNER

SKETCH COMPLETED BY Ray Nelson DATE 5-18-84



Borehole Location MAP.

MORRISON KNUDSEN

INTERIOR SURVEY DATA LOG/EXPOSURE

SURVEY CREW R Nelson
J. Manship

SHEET ____ OF ____ PAGE ____

DATE 5-30-84

PROPERTY ID # SL 017

PROJECT ____

EXPOSURE DATA

SURVEY METHOD: ☒ 2220 INST. ID # 26498 Pr-4 015809

** ☒ uR uR/h CONVERSION CURVE # ____ (ATTACHED)

☐ PIC INST. ID# 16081 CALIBRATION DATE 5-16-84

ROOM: Family Room 1 m. / Surface

READING LOCATION	COUNTS /0.1MIN	RATE uR/h
* 1	1430/1490	17/16
2	1602/1202	17/13
3	1009/1184	12/12
4	1184/1157	13/13
5	1122/1090	13/12
TOTALS =		
AVE. =		

ROOM: Family Room 1 m / Surface

READING LOCATION	COUNTS /0.1MIN	RATE uR/h
6	1241/941	14/10
7	903/830	10/10
8	884/922	11/11
9	976/959	12/12
10	993/1045	12/12
TOTALS =		
AVE. =		

ROOM:

READING LOCATION	COUNTS /0.1MIN	RATE uR/h
TOTALS =		
AVE. =		

ROOM:

READING LOCATION	COUNTS /0.1MIN	RATE uR/h
TOTALS =		
AVE. =		

ROOM:

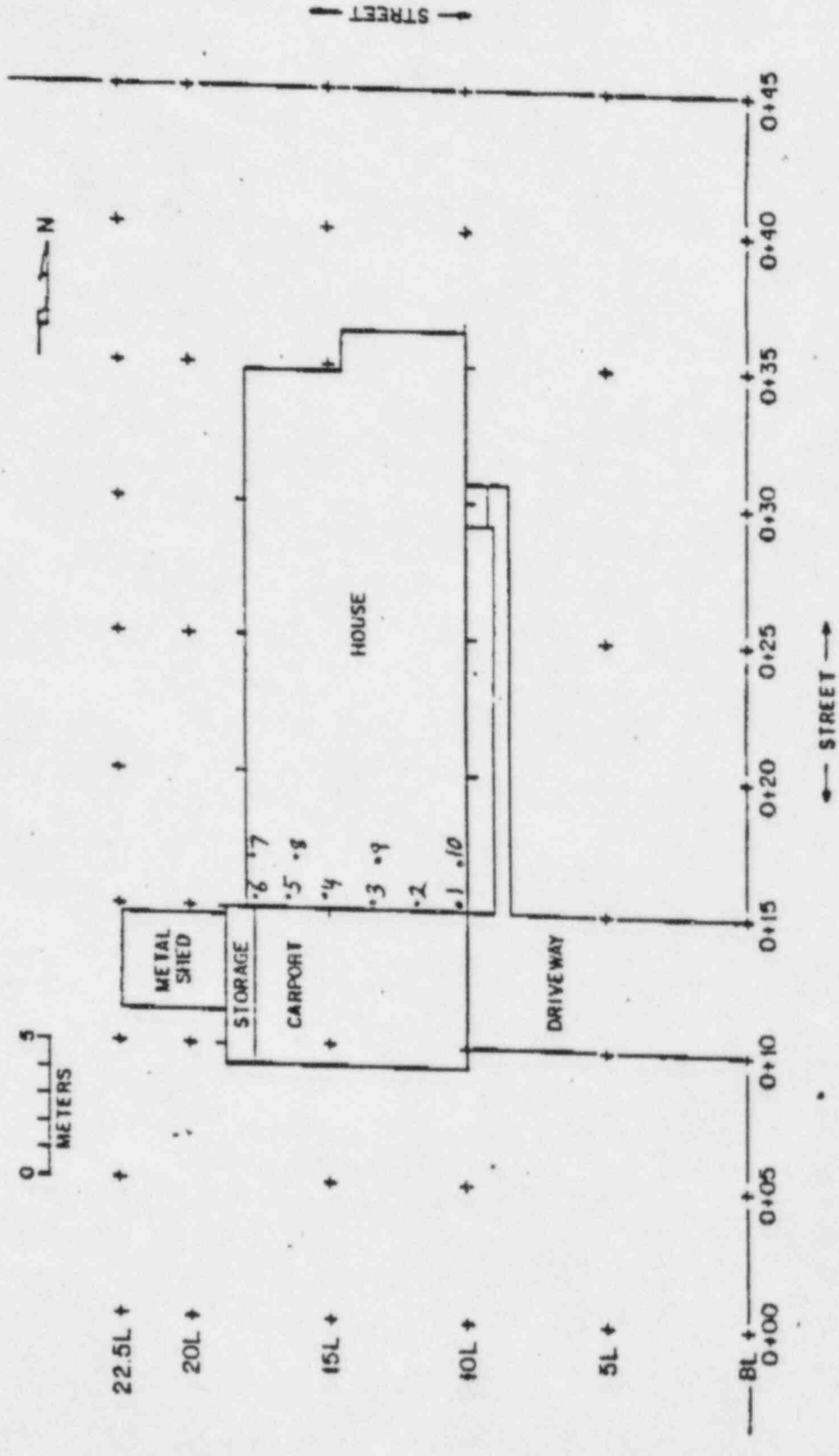
READING LOCATION	COUNTS /0.1MIN	RATE uR/h
TOTALS =		
AVE. =		

ROOM:

READING LOCATION	COUNTS /0.1MIN	RATE uR/h
TOTALS =		
AVE. =		

COMMENTS: * See attached diagram for point locations.
** uR readings taken with a Ludlum Model 12S

VP-02A


STREET
N
0
5
METERS
METAL SHED
STORAGE
CARPORT
HOUSE
DRIVEWAY
STREET
22.5L
20L
15L
10L
5L
BL
0+00
0+05
0+10
0+15
0+20
0+25
0+30
0+35
0+40
0+45
.6
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.10

MORRISON-KNUDSEN COMPANY, INC.

UMTRA PROJECT OFFICE
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