

RECORD OF TECHNICAL CHANGE

Technical Change No.: CAP-1

Page: 1 of 3

Project/Job No. Corrective Action Unit 168

Date: August 25, 2005

Project/Job Name: Corrective Action Plan for Corrective Action Unit 168: Area 25 and 26 Contaminated Materials and Waste Dumps

The following technical changes (including justification) are requested by:

Alissa Silvas

(Name)

Bechtel Nevada Technical Lead

(Title)

Description of Changes:

1. Page xi, Bullet 6 (CAS 25-23-18). Replace Sentence 2 with the following:

A total impacted soil volume of approximately 4.6 m³ (8 yd³) will be excavated and disposed.

2. Page xii, Bullet 5 (CAS 25-16-03). Replace Sentences 4 and 5 with the following:

An engineered soil cover will be installed with a minimum thickness of 0.6 meters (2 feet) and a cover surface slope of 2-4 percent. Surface runoff controls will be put in place. A three-strand wire fence will be installed, and use restriction signs will be posted.

3. Page 10, Figure 9. Replace Page 10 (Figure 9) with the attached figure.

4. Page 17, Table 1. Add the following bullet to the cell in Row 2, Column 5 (CAS 25-16-03):

- Install an engineered soil cover

5. Page 22, Table 2. Replace Table 2 with the following:

Contaminant of Concern	Cleanup Action Level	Reference
TPH	100 mg/kg	NAC, 2002
PCBs	0.7 mg/kg	EPA, 2003
Cs-137	12.2 pCi/g	NDEP, 2004
U-234	143 pCi/g	NDEP, 2004
U-235	17.6 pCi/g	NDEP, 2004
Sr-90	838 pCi/g	NDEP, 2004

6. Page 23, Section 2.1.2.3, Paragraph 4. Replace Paragraph 4 with the following:

Radiologically impacted soil areas were discovered in three locations. The total volume of radiologically impacted soil is approximately 2.3 m³ (3 yd³). Radiological contamination was primarily confined to a few scattered hotspot locations on the ground surface near various railroad spurs and abandoned equipment areas. U-234, U-235, and Cs-137 were discovered at one surface location outside of the chainlink fence on the east side of the site. Sr-90 and Cs-137 were found at the end of railroad spur "O." Cs-137 was found at the end of railroad spur "S."

7. Page 25, Section 2.1.3.1. Remove Sentence 2.

8. Page 26, Paragraph 2. Replace Paragraph 2 with the following:

The site will be closed in place, and a use restriction will be implemented to prohibit any unauthorized intrusive activity. An engineered soil cover will be installed with a minimum thickness of 0.6 m (2 ft) and a cover surface slope of 2-4 percent. Surface runoff controls (i.e., rip rap) will be put in place. A three-strand wire fence will be installed, and use restriction signs will be posted. The corrective actions will be confirmed by visual inspection and photographic documentation of the final site conditions, and the cover will be as-built surveyed. Annual site inspections will be required to ensure that the signs are intact and legible and that the use restriction is maintained (Section 4.0).

9. Page 26, Section 2.2. Replace Paragraph 1 with the following:

Construction activities are limited to excavation and backfilling, debris removal, site posting, and the installation of a native soil cover over the existing footprint of the construction landfill at CAS 25-16-03, MX Construction Landfill. Engineering drawings for the landfill cover at CAS 25-16-03 are provided in Appendix A.

10. Page 26, Section 2.2.1. Add the following paragraph to Section 2.2.1:

At CAS 25-16-03, MX Construction Landfill, field density tests will be performed in three randomly selected locations per acre to verify that the fill is compacted to a minimum of 85 percent of maximum density.

11. Page 30, Section 2.4.2.3, Paragraph 3. Replace Sentences 1 through 3 with the following:

Radiologically impacted soil will be removed from three locations, and LLW will be dispositioned for proper disposal. The size and extent of the excavations will be determined by use of handheld radiological field screening instruments, ISOCS, or equivalent for radionuclides. For excavations up to six inches in depth, a minimum of two verification samples will be collected from randomly selected locations. If the excavation exceeds six inches in depth, a minimum of five verification samples, one from each sidewall and one from the floor, will be collected.

12. Page 34, Section 2.4.3.1. Replace Sentence 1 with the following:

For CAS 25-16-03, corrective actions will include removal of metal surface debris, installation of an engineered cover and surface runoff controls, and installation of a fence and proper signage.

13. Page 37, Section 3.0. Replace Sentences 1 through 3 with the following:

Preparation activities will occur during August 2005, and field work is planned to start in Fiscal Year 2005. The FFACO deadline for the CR is August 31, 2006.

14. Page 39, Section 4.1. Replace Sentences 4 through 6 with the following:

The results of post-closure inspections will be incorporated into the combined NTS post-closure annual letter report and submitted to the NDEP. The letter report will include a discussion of observations and provide a record of any repair or maintenance activities.

15. Appendix A.1. Include the attached engineering drawings for CAS 25-16-03.

Justification:

Changes associated with CAS 25-16-03, MX Construction Landfill (Changes 2, 4, 7-10, 12, and 15): An engineered soil cover will be built instead of placing additional soil over the existing landfill. The design parameters are specified in the attached engineering drawings. The cover design is based on the following guidelines:

- 1) 1989 Nevada Administrative Code (NAC) 444.688 for Class I Sanitary Landfills. The applicable 1989 NAC was used based on Environmental Restoration provided documentation which states that since the landfill was active prior to 1991, the landfill must be closed under 1989 solid waste regulations.
- 2) Design and Construction of Covers for Solid Waste Landfills, EPA report no. EPA-600/2-79-165, dated August 1979. This is a standard practice guideline for the design and construction of covers for solid waste landfills.

Changes associated with CAS 25-23-18, Radioactive Material Storage (Changes 1, 3, 5, 6, and 11): The Nevada Department of Environmental Protection (NDEP) and the U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office have agreed to use the radiological preliminary action levels (PALs) based on a 25 mrem/yr dose rate for radioisotopes instead of a 15 mrem/yr dose rate (NDEP, 2004). Therefore, several of the impacted soil locations no longer exceed the current radiological PALs, and less soil will be removed. In particular, one Cs-137 hotspot at the end of railroad spur M that was estimated to be 2 yd³ and one U-234 hotspot at the steel casks footprint that was estimated to be 1 yd³ no longer exceed the current radiological PALs. Therefore, only 3 yd³ of radiologically impacted soil will be removed instead of the originally estimated 6 yd³.

The project time will be increased by approximately 40 days.

Applicable Project-Specific Document(s): ***Corrective Action Plan for Corrective Action Unit 168: Area 25 and 26 Contaminated Materials and Waste Dumps, Nevada Test Site, Nevada, Revision 0, April 2004, DOE/NV-971.***

Approved By:

Sabine Curtis

Date

8/25/05

NNSA/NSO Project Manager

Paul Peggel

Date

8/25/05

NNSA/NSO Environmental Restoration Division Director

NDEP

Date

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Approved By:

Sabine Curtis
NNSA/NSO Project Manager

Date

8/25/05

Paul J. Pappalardo
NNSA/NSO Environmental Restoration Division Director

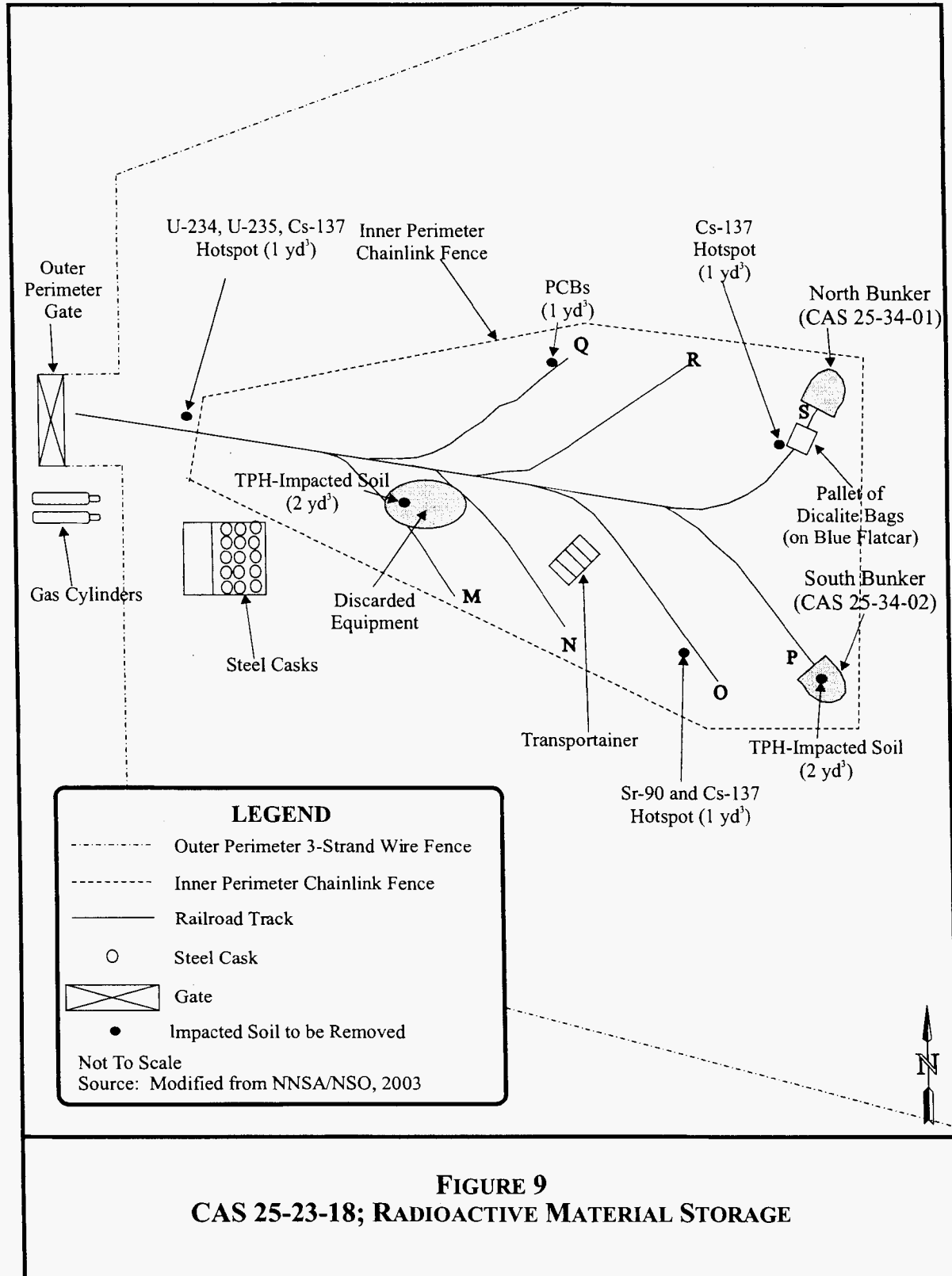
Date

8/25/05

Don E. O'Leary
NDEP

Date

8/26/05



NEVADA SITE OFFICE
LAS VEGAS, NEVADA

CAU 168, CAS 25-16-03
MX LANDFILL SOIL COVER

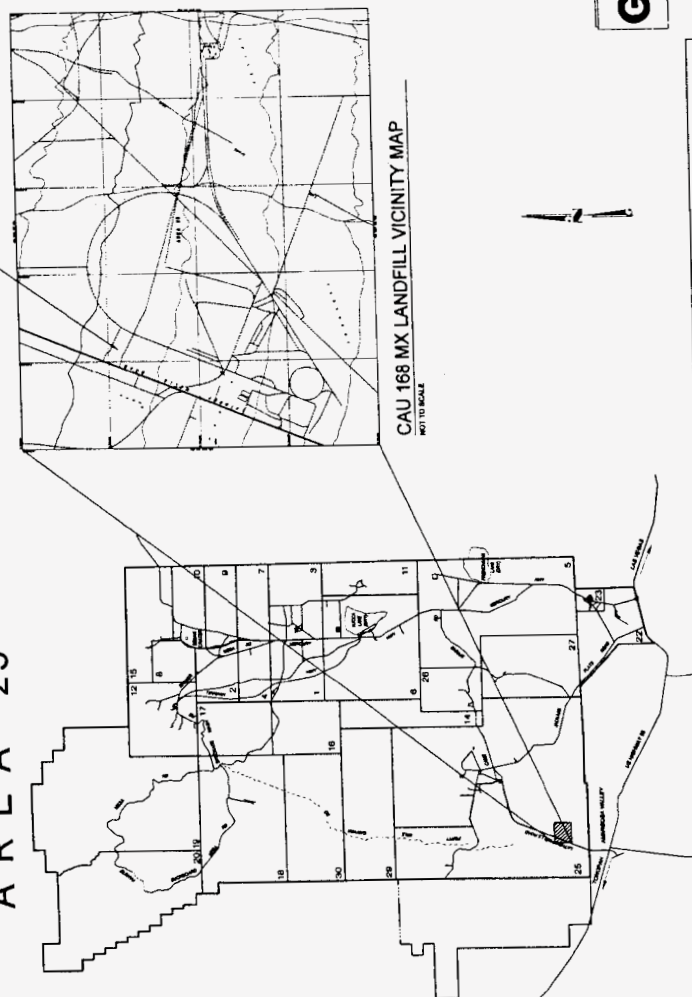
AREA 25

DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
00000-000-CALWING-01	TITLE SHEET
00000-000-CALWING-02	NOTES, LEGEND & SYMBOLS
00000-000-CALWING-03	STANDARD ABREVIATIONS
00000-000-CALWING-04	VICTORY MAP
00000-000-CALWING-05	SITE & GRADING PLAN
00000-000-CALWING-06	GRADING SECTIONS & DETAILS
00000-000-CALWING-07	FENCE DETAILS
00000-000-CALWING-08	MATERIAL REQUIREMENT SCHEDULE

SCOPE OF WORK
REMOVE EXISTING AREA FENCING. CONSTRUCT ENGINEERED SOIL COVER TO A MINIMUM OF 10 FEET ABOVE HIGHEST ELEVATION AND 3-4% SLOPE.

PROJECT NOTES
ALL CONSTRUCTION FEATURES, MATERIALS, TESTS AND DETAILS SHALL CONFORM TO
"USDOCKING STANDARD SPECIFICATIONS, DATED DECEMBER 1987" AND THE APPROVED
"USACE DOK PLAN (CAP)".



NEVADA TEST SITE

NOT TO SCALE

CAUTION NOTE:

INFORMATION SHOWN ON THESE DRAWINGS MIGHT NOT REFLECT CURRENT CONDITIONS OF FACILITY OR STRUCTURE. PERSONNEL SHALL USE CAUTION WHEN PERFORMING WORK BASED ON THE EXISTING INFORMATION SHOWN ON THE DRAWINGS.

CAU 168, CAS 25-16-03
MX LANDFILL SOIL COVER
TITLE SHEET

NEVADA TEST SITE

GS



NMS
NATIONAL MARKET SURVEYING ASSOCIATION
10000 W. 10th Avenue, Suite 100, Denver, CO 80202
303.755.6600

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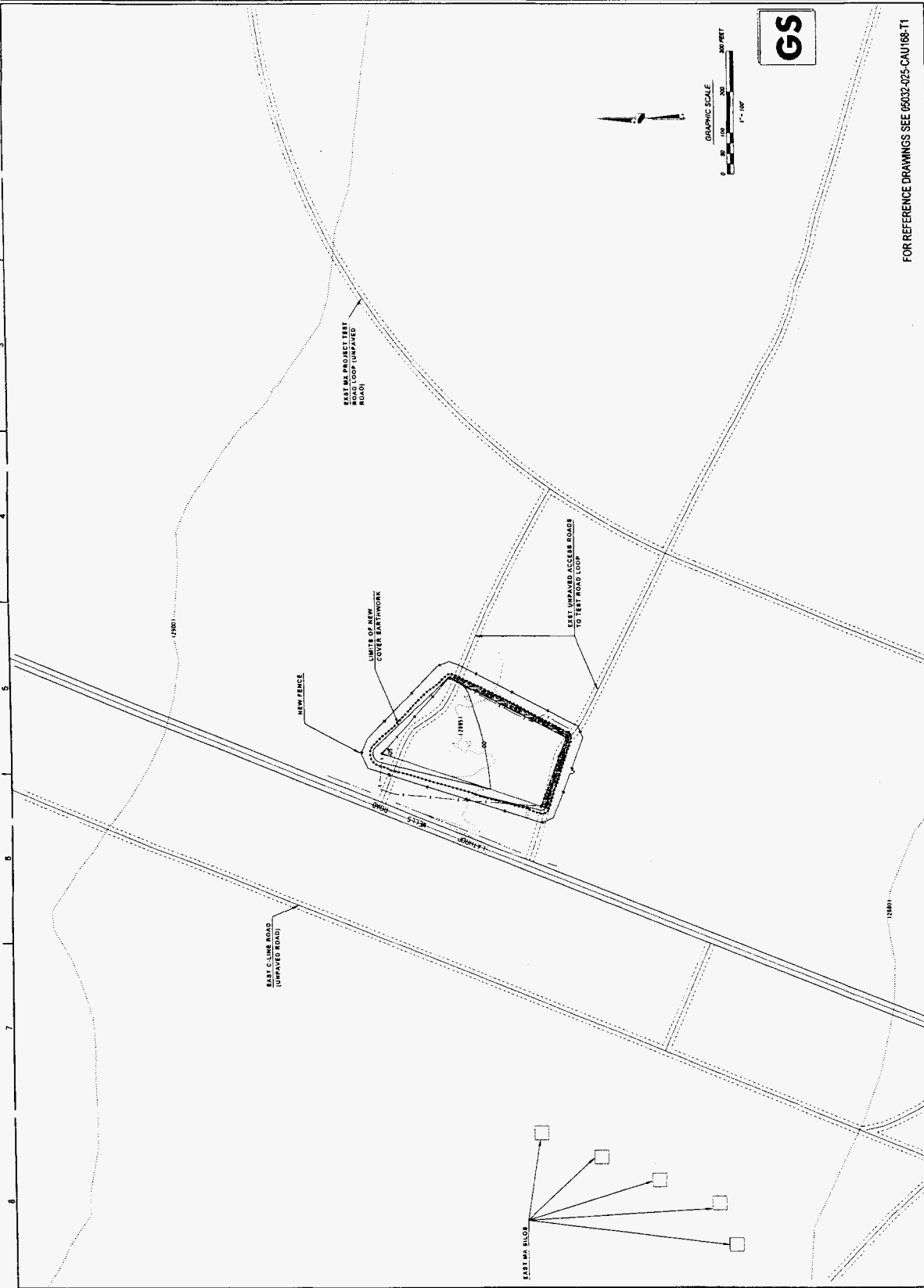
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FOR REFERENCE DRAWINGS SEE 06032-025-CAU168-T1

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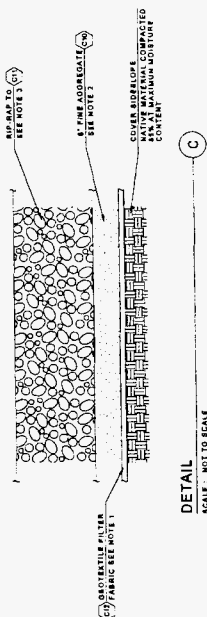


GRADING SECTIONS & DETAILS

MAX LANDFILL SOIL COVER

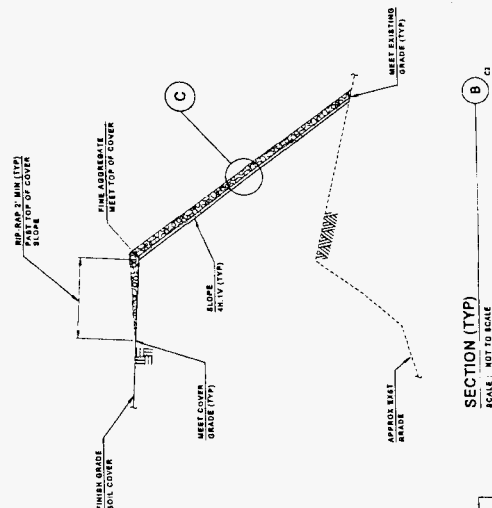
CAU 168, CAS 25-16-03

AREA 25



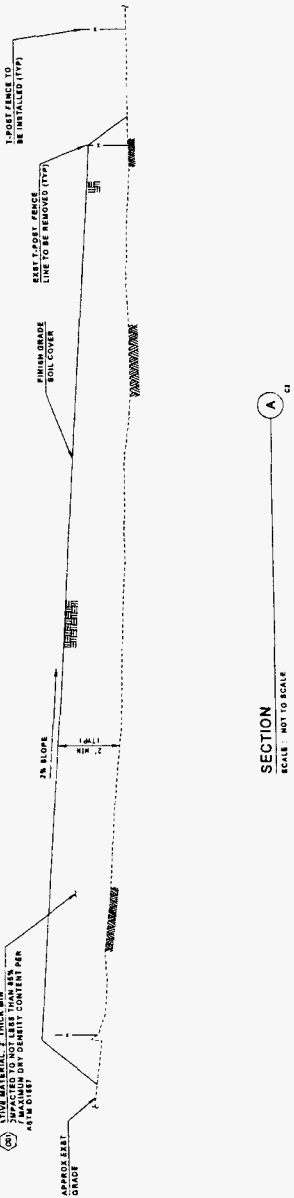
DETAIL

SCALE : NOT TO SCALE



SECTION (TYP)

SCALE: NOT TO SCALE



SECTION

SCALE : NOT TO SCALE

	% PLASMA PI-HCQPT	160 PP-AP	300 PP-AP
	90	825 (M)	SIZE (M)
	35-60	8	12
	6-14	7	6

NOTES

- [illegible]

ESTIMATED QUANTITIES			
DESCRIPTION	QTY	UNIT	
EARTHWORK VOLUME	17,150	CY	
FENCE (LENGTH)	1,100	LF	
FINE AGGREGATE (6" THICK)	175	CY	
BID RAP (CLASS 150, 1" THICK)	325 (APPROX)	CY	
RAP RAP (CLASS 300, 2" THICK)	850 (APPROX)	CY	
GEOTEXTILE FABRIC	3500	SQ FT	

NOTES

1. COMPACTION AND EXPANSION FACTORS HAVE NOT BEEN APPLIED TO PROPOSED EARTHWORK QUANTITIES
2. QUANTITIES PROVIDED ARE FOR BECTEL NEVADA ESTIMATING PURPOSES ONLY. ITEMS LISTED ARE NOT ALL INCLUSIVE

NOTES

1. DRAWING SHALL MEET THE REQUIREMENTS OF THIS DRAWING.
2. ALL FENCING COMPONENTS SHOWN ARE MINIMUM.
3. 1-POST SPACING TO BE NO LESS THAN 8' BUT NO MORE THAN 12'.
4. SECURE WIRE TO LINE POSTS AND PULL AROUND CORNER POST WITH EASEL-FASTEN TO ADJUT SADDLING.
5. SECURE STAP TO WIRE WITH #9 WIRE.

KEY NOTES

① MINIMUM SIZE OF CORNER PIN: 3" x 1" HEMMED CORN.
1/2" DIA. HOLE IN EACH, WITH GALVANIZED STEEL WIRE ROPE WITH A MINIMUM OF 100 LBS BREAKING STRENGTH.

② USE RESTRICTION SIGN (LETTERING TO BE OBTAINED BY PER.)

TOP BOTTOM WIRE

2

3

GS

FOR REFERENCE DRAWINGS SEE 05032-025 CAU 08-71

- ✓ FENCING SHALL MEET THE REQUIREMENTS OF THIS DRAWING
- ✓ ALL FENCING COMPONENTS SHOWN ARE NORMAL.
- ✓ T-POSTS SPACING TO BE NO LESS THAN 12' BUT NO MORE THAN 12'.
- ✓ SECURE WIRE TO LINE POSTS AND PULL AROUND CORNER POSTS WITH ENOUGH TENSION TO AVOID SAGGING.
- ✓ SECURE STOW TO WIRE WITH #9 WIRE.

○ FENCING WIRE SHALL BE COMMERCIAL GRADE, 7 X 7 STRAND CORE, 3/32 INCH GAGE, 1/16 GALVANIZED STEEL WIRE ROPE WITH A MINIMUM OF 500 LBS BREAKING STRENGTH.

○ USC RESTRICTION SIGN LETTERING TO BE OBTAINED BY ER.



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1. E = ENGINEERING
C = CONSTRUCTION
V = VERIZON
S = SUBCONTRACTOR
2. FOR DEFINITIONS SEE DP-2110-309 "FIELD STORAGE AND HANDLING REQUIREMENTS FOR MINAMI PLANT EQUIPMENT", LATEST EDITION.

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