

REVIEW OF EXISTING CONDITIONS AT THE WAYSIDE AREA

NAVAL WEAPONS STATION EARLE Colts Neck, New Jersey



**Prepared by
Northern Division
Naval Facilities Engineering Command**

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1.0 SITE OVERVIEW

1.1 GENERAL FACILITY DESCRIPTION

The Wayside Area of Naval Weapons Station (NWS) Earle is an area of approximately 440 acres in the northeast corner of the station. It was obtained during establishment of the Naval Ammunition Depot (now NWS Earle) around 1940. At that time, 10 houses were located on the site and a sand and gravel pit was located in the center of the site. A large section of the area was cleared during construction of the adjacent In-Transit Barricade Area in the 1940's. Sand and gravel from the Wayside Area was probably used for construction of the barricades. The cleared areas have been revegetated to a limited extent, but poor soil conditions have limited growth. A network of dirt roads crosses the site.

NWS Earle signed an agreement with the Army in 1947, which permitted the Army to use some of this area. The Army continued to use various parts of the site until June 1991. The site was evaluated at that time for construction of family housing and two school buildings, but the proposed project was never completed.

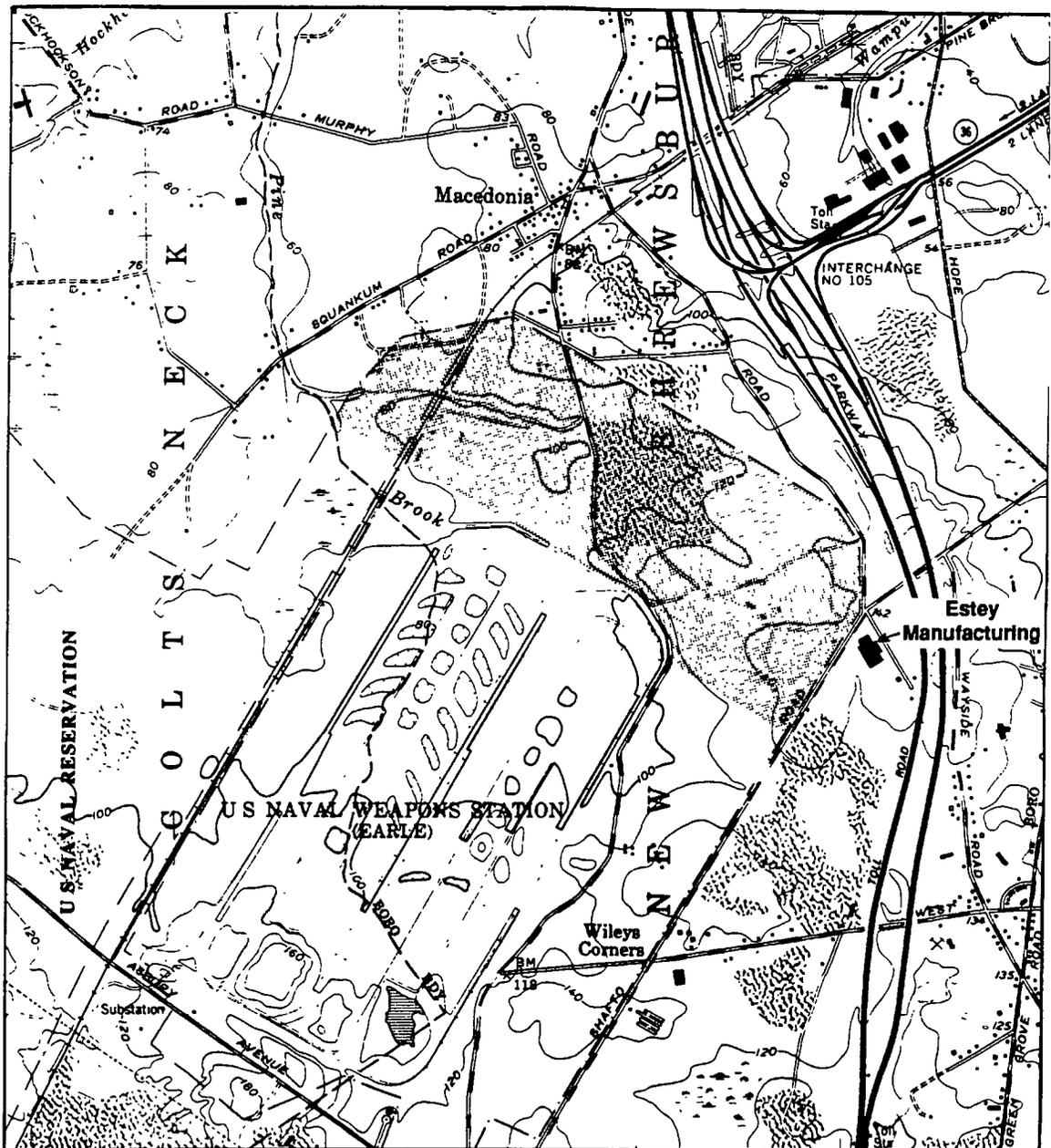
Figure 1-1 shows the location of the Wayside Area and Figure 1-2 is a general site map which delineates the locations of major structures.

1.2 HISTORICAL USES

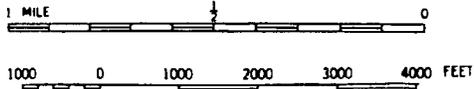
Various Army uses of the site included military training, testing of electronic and communications equipment, laser testing, and firearms target practice at a pistol range which was constructed on the site.

Other uses of the site have included an in-situ soil washing test conducted by the U.S. Environmental Protection Agency in 1985 and an insecticide study conducted by the New Jersey State Department of Health in 1986. The latter study was initiated in response to an outbreak of Lyme disease in an Army Reserve unit using the area. It examined the tick population of the site and evaluated the effectiveness of two pesticides (carbaryl and diazinon) in controlling this population.

Deer hunting has periodically been allowed in the area.



SCALE 1:24000



CONTOUR INTERVAL 20 FEET

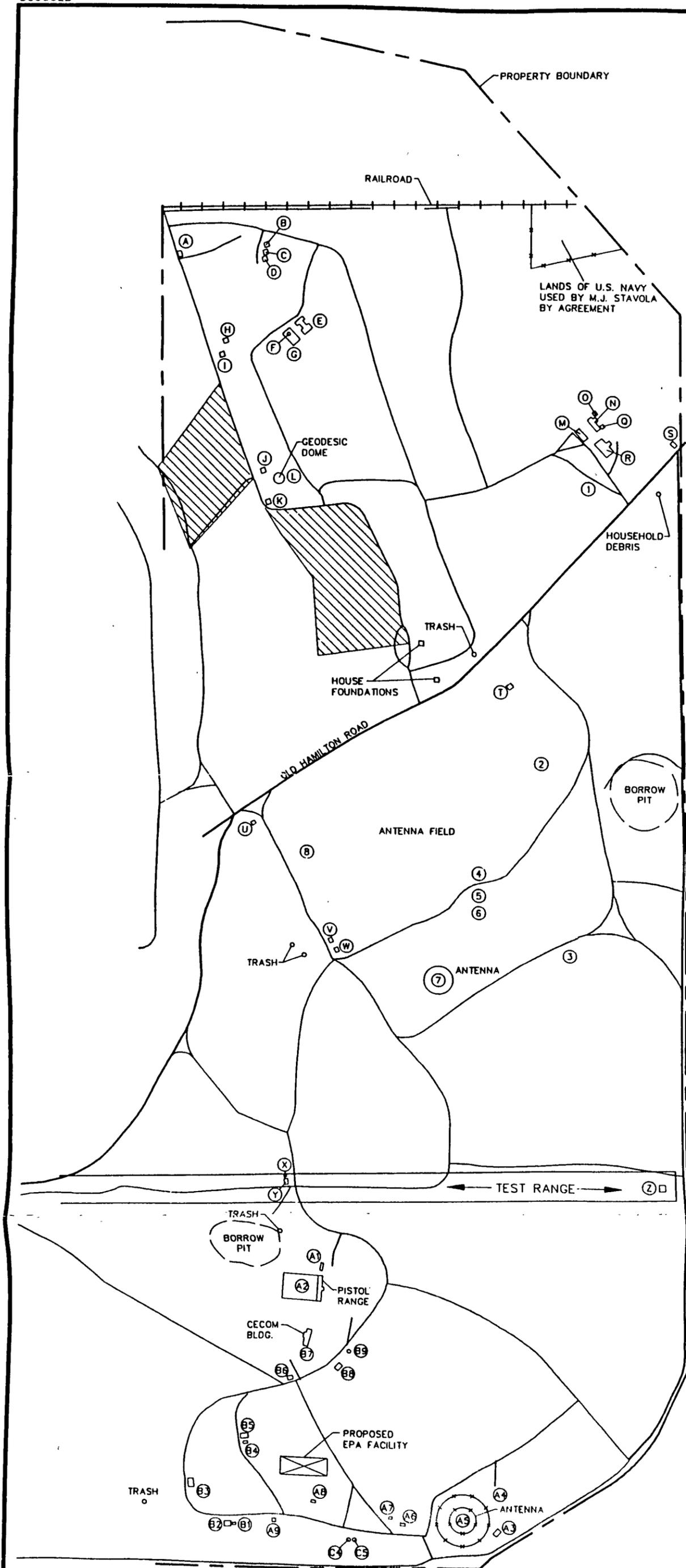
 Area of Investigation

ENSR

ENSR Consulting and Engineering

FIGURE 1-1
WAYSIDE AREA, NWS EARLE
MONMOUTH, NJ

DRAWN: SOR	DATE: August 22, 1991	PROJECT NO.:	REV.
FILE NO.:	CHECKED:		



KEY TO STRUCTURES

- A METAL BLDG.
 - B METAL SHED
 - C WOOD SHED W/OBSERVATION DECK ROOF & SMALL SHED IN BACK
 - D SMALL ROUND METAL BLDG.
 - E LARGE WOOD ROOF HELICOPTER HANGER
 - F SMALL ROUND METAL BLDG.
 - G WOOD BLDG. W/ATTACHED STAIRWAY & OBSV. DECK
 - H SMALL WOOD BLDG. W/OBSV. DECK ROOF
 - I WOOD TOWER
 - J SMALL WOOD BLDG. W/OBSV. DECK ROOF
 - K SMALL WOOD BLDG. W/OBSV. DECK ROOF
 - L LARGE SPHERE FIBERGLASS BLDG.
 - M METAL BLDG.
 - N METAL BLDG.
 - O WOOD SHED
 - P HOUSE TRAILER
 - Q WOOD SHED
 - R CONCRETE FOUNDATION OF BLDG. DESTROYED BY FIRE
 - S WOOD GUARD HOUSE
 - T WOOD OBSERVATION PLATFORM APPROX. 25' HIGH
 - U SMALL WOOD STORAGE SHED
 - V METAL TRAILER BOX (ELECTRICAL)
 - W SMALL WOOD SHED
 - X HOUSE TRAILER
 - Y WOOD BLDG.
 - Z HOUSE TRAILER W/WOOD PORCH AND OVERHEAD WOOD OBSERVATION BLDG.
-
- A1 WOOD SHED
 - A2 PISTOL RANGE SHELTER & PISTOL RANGE
 - A3 BLDG. FOUNDATION
 - A4 CAMP SITE W/5 PORTA-JOHNS
 - A5 ABANDONED ANTENNA
 - A6 SMALL WOOD SHED
 - A7 METAL TOWER
 - A8 METAL TOWER W/METAL TRUCK BOX
 - A9 METAL BOX SHED
 - B1 SMALL WOOD BLDG. W/OBSV. ROOF
 - B2 LARGE WOOD PLATFORM
 - B3 LARGE WOOD PLATFORM
 - B4 SMALL WOOD SHED
 - B5 WOOD BLDG.
 - B6 WOOD SHED
 - B7 METAL BLDG. W/OBSV. DECK ON ROOF
 - B8 PAD OR OLD BLDG. FOUNDATION
 - B9 SMALL ROUND BLDG.
 - C4 SMALL ROUND BLDG.
 - C5 SMALL ROUND BLDG.

KEY TO ANTENNAS IN ARMY AREA

- 1 IONOSPHERIC SOUNDER
- 2 HORIZONTAL DIPOLE
- 3 LIGHT TRACKER BEACON
- 4 LOG PERIODIC
- 5 WHIP
- 6 BLADE
- 7 MONOCONE ANTENNA
- 8 SSL

MAP IS COMPILED FROM AERIAL PHOTOGRAPHS AND SITE MAPS PROVIDED BY THE NAVY AND ARMY, AND MAY NOT REPRESENT FEATURES EXACTLY.

EXPLANATION

TICK STUDY AREAS

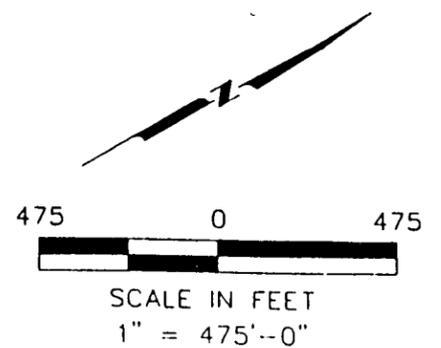


FIGURE 1-2
GENERAL SITE MAP
WAYSIDE AREA, NWS EARLE

1.3 PREVIOUS INVESTIGATIONS

1.3.1 Environmental Evaluation – November 1991

This study was conducted by a Navy contractor (ENSR Consulting and Engineering) to identify areas of known or potential contamination that might render portions of the site unsuitable for housing units or a school. It consisted of site reconnaissance and a review of available historical data. No unsuitable areas were identified, but analytical testing of several areas was recommended.

1.3.2 Site Investigation Report – July 1992

A field investigation was conducted by ENSR in April 1992 to evaluate the areas identified in the November 1991 evaluation. Soil samples were obtained near septic tanks, transformer pads, storage tanks and the pistol range. Water and sludge samples were obtained from one septic tank. Several buildings were tested for lead paint and asbestos installation. Geophysical investigations were conducted at two suspected disposal areas.

As anticipated, elevated levels of lead and copper were found in surface soil on the embankment of the pistol range. The presence of lead paint on the building exteriors was also confirmed. Elevated levels of hydrocarbons were found in soils near one above ground storage tank, but concentrations were below New Jersey cleanup standards.

There was no evidence that hazardous compounds had been discharged through the septic systems. No asbestos was found in the insulation evaluated. No PCBs were found in the surface soils adjacent to pads that once held PCB transformers. The geophysical surveys did not reveal any buried objects in the suspected disposal areas.

1.3.3 Design Analysis – Vacate the Wayside Area at NWS Earle – July 1992

This analysis was performed by Henkels & McCoy, Inc. for the Army. It identified the following items requiring removal or closure. Findings were based on existing drawings and a site survey:

• Buildings and Structures	50
• Abandoned Foundation Walls and Concrete Slabs	26
• Transformer Pads	15
• Transformers	25
• Antennas	6
• In-Ground Poles (not including poles supporting structures)	171
• Poles Laying on Ground	46
• Railroad Ties Laying on Ground	21
• Underground fuel oil tanks	3
• Septic Tanks	2
• Wells	2

The Design Analysis proposed removal procedures for each type of structure. It also proposed removal of all electrical distribution boxes and any above grade electrical conduit.

1.3.4 Remedial Investigation Report for Naval Weapons Station Earle – July 1996

This report focused on 27 sites throughout NWS Earle where waste handling activities had occurred. Because of its remote location and limited use, two sites within the Wayside Area were selected for background sampling locations. Surface water, sediment, groundwater and subsurface soil samples were obtained. No significant contamination was detected in any of these samples.

1.4 COMPLETED ACTIONS

All PCB transformers which had been present on the site had been removed prior to November 1991. The Army contracted for removal of three underground storage tanks in 1992. A few small structures and a limited amount of debris were apparently also removed some time prior to July 1992. The pistol range was slightly re-designed and re-opened for Navy use in 1993.

2.0 CURRENT CONDITIONS

2.1 PREVIOUSLY IDENTIFIED STRUCTURES

No maintenance has been performed on the structures in this area since the Army ceased operations in 1991. As stated in the 1992 Design Analysis, the buildings and structures were in a deteriorating condition at that time. Conditions have only gotten progressively worse. Peeling paint is evident throughout the site and the geodesic dome structure has collapsed completely. Other structures appear to be unstable. The abandoned septic systems and wells have still not been closed in accordance with state regulations.

2.2 ADDITIONAL CONCERNS

Recent analyses of three types of electrical cable found in the Wayside Area revealed the presence of elevated levels of lead and cadmium. All underground cable is apparently in conduit, but removal of this cable would eliminate the possibility of any environmental exposure to these compounds in the future. Additionally, the presence of this cable could be a hazard during any future construction on the site. The cable is already exposed above grade in several locations.

While all PCB transformers have been removed from the site, 25 other transformers are still in place and assorted other electrical equipment also remains. Without proper

maintenance, a spill from an oil-filled transformer is a distinct possibility. The possibility also exists that some of the remaining equipment could contain PCBs in components such as capacitors or switches.

One section of the Wayside Area was used as a laser testing range. If any of this testing was of a destructive nature, the target area should be investigated to determine if there is any residual contamination.

Structure description 8L in the Project Notes from the Design Analysis Report identifies a below grade water tank. If any possibility exists that this tank held any substance other than water, subsurface soil sampling would be appropriate upon excavation. If these samples indicate any leakage from the tank, a groundwater investigation would be warranted.

The Navy would be interested in any available records which the Army might have regarding any chemicals used in the Wayside Area and how they were disposed.

3.0 CONCLUSIONS & RECOMMENDATIONS

The Design Analysis performed by Henkels & McCoy, Inc. for the Army in 1992 is an excellent representation of the actions needed to restore the Wayside Area. The only change is that additional deterioration of the structures has occurred since no maintenance has been performed since 1991. This project should be implemented as soon as possible.

All underground cable should be removed wherever feasible. Since all structures will be removed, the cable is in conduit, and soil conditions are quite sandy, a complete removal should be possible.

Electrical equipment should be inspected during removal for leakage and/or the presence of any PCB-containing components. Appropriate cleanup or disposal could then be performed.

The use of the below-grade tank in structure description 8L for water storage should be confirmed or soil sampling should be conducted upon excavation.

Any other general debris on the site should be removed.

Navy Monitoring Well MW-BG-01, a U.S. Geological Service Observation Well, and the pistol range should not be disturbed during any restoration activities.

APPENDIX

SITE PICTURES
February 1999



Gate House – Peeling lead paint and suspected asbestos floor tiles



Deteriorating building with peeling paint



Collapsed Geodesic Dome



Deteriorating structures



Shed at Area 8L of Design Analysis Report



Below grade tank at 8L (reportedly held water)



Cable above ground surface which had elevated cadmium levels



U.S. Geological Service observation well