

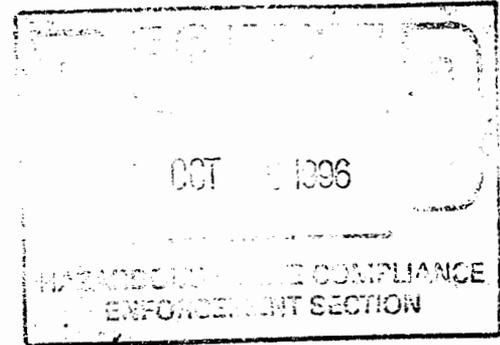


GE Apparatus Service

General Electric Company
One River Road, Bldg. 2 Room B-33
Schenectady, NY 12345
(518) 385-9931 fax: (518) 385-8714

October 29, 1996

Mr. Gary Miller
Project Coordinator
Technical Section (6EN-HX)
Hazardous Waste Enforcement Branch
United States EPA
1445 Ross Avenue
Dallas, Texas 75202-2733



Sent Via Fax: (214) 665-7446

Re: Former GE Apparatus Service Center
4420 McLeod Road NE
Albuquerque, New Mexico
Civil Action No. 87-1073-jb

Dear Mr. Miller:

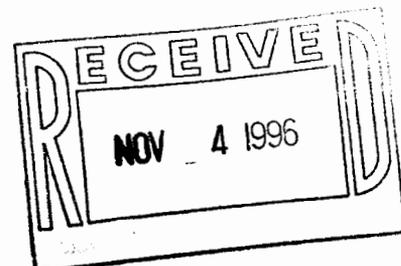
Enclosed is the Work Plan for Closure of Two Drywells at the former General Electric Company Apparatus Service Center in Albuquerque, New Mexico. The plan describes the work scope and procedures that will be incorporated into construction documents for contractor bidding. GE intends to select a contractor by November 11. Your concurrence on this plan is requested before this date.

If you have any questions, please contact me at (518) 385-9931.

Very truly yours,


Michael K. O'Donnell

cc: Section Chief, Technical Section (6EN-HX), USEPA (without enclosure)
Ms. Nelly Rocha, Legal Branch (6EN-L), USEPA (without enclosure)





LAW

ENGINEERING AND ENVIRONMENTAL SERVICES, INC

28 October 1996

Mr. Michael K. O'Donnell
General Electric Company
One River Road
Building 2, Room B35
Schenectady, New York 12345

Subject: **Submittal of Work Plan for Closure of Two Drywells
GE Apparatus Service Shop
Albuquerque, New Mexico
EPA ID NMD047140256
LAW Project No. 11001-6-0214**

Dear Mr. O'Donnell:

Enclosed is the Work Plan for Closure of Two Drywells at the General Electric Company Apparatus Service Shop Site in Albuquerque, New Mexico. The plan describes the work scope and procedures that will be incorporated into construction documents for contractor bidding and selection and work execution.

We appreciate the opportunity of preparing this plan for you.

Sincerely,

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

Michael A. Plants
Staff Chemical Engineer

L. David Wheelless, P.E. (GA,FL)
Principal Engineer

MAP/LDW:sg

Enclosures

g:\wheeless\albuqrqe\wkp\intrn.doc



LAW

ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

WORK PLAN FOR CLOSURE OF TWO DRY WELLS

GENERAL ELECTRIC COMPANY
FORMER ELECTRICAL APPARATUS SERVICE CENTER
Albuquerque, New Mexico

Prepared for:

GENERAL ELECTRIC COMPANY
Schenectady, New York

October 28, 1996

WORK PLAN FOR CLOSURE OF TWO DRY WELLS
GENERAL ELECTRIC COMPANY
FORMER ELECTRICAL APPARATUS SERVICE CENTER
Albuquerque, New Mexico

Prepared for:

GENERAL ELECTRIC COMPANY
Schenectady, New York

Prepared by:

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
Kennesaw, Georgia

Law Engineering and Environmental Services, Inc. Project 11001-6- 0214

October 28, 1996

TABLE OF CONTENTS

	<u>Page</u>
LIST OF FIGURES.....	iii
1.0 BACKGROUND.....	1-1
1.1 GE FACILITY HISTORY AND SETTING.....	1-1
1.2 SITE CHARACTERIZATION.....	1-1
2.0 OBJECTIVES OF CLOSURE OF TWO DRY WELLS	2-1
3.0 REMEDIATION LEVEL	3-1
4.0 DRYWELL CLOSURE ACTION	4-1
4.1 SITE PREPARATION.....	4-1
4.1.1 Site Security.....	4-1
4.1.2 Utility Clearances.....	4-1
4.1.3 Survey and Layout of Excavation Areas	4-1
4.2 EXCAVATION.....	4-2
4.3 VERIFICATION SAMPLING AND ANALYSES.....	4-3
4.4 CHARACTERIZATION FOR TREATMENT/DISPOSAL	4-4
4.5 WASTE TRANSPORT AND TREATMENT/DISPOSAL.....	4-4
4.6 EQUIPMENT DECONTAMINATION	4-5
4.7 BACKFILLING, GRADING AND EROSION PROTECTION	4-5
5.0 HEALTH AND SAFETY	5-1
6.0 COMPLETION REPORT.....	6-1
7.0 SCHEDULE.....	7-1

FIGURES

LIST OF FIGURES

Figure

- | | |
|---|--|
| 1 | Site Location Map |
| 2 | Site Plan and Excavation Location Plan |

1.0 BACKGROUND

The letter dated 13 August 1996 from US EPA Region 6 to General Electric Company (GE) listed six actions required at the former GE Electrical Apparatus Service Shop site in Albuquerque, New Mexico. One of the actions is closure of two drywells. GE retained Law Engineering and Environmental Services, Inc. to prepare this Work Plan for Closure of the Two Drywells in preparation for closure of the two dry wells. Polychlorinated biphenyls (PCBs) and volatile organic compounds (VOCs) have been detected in the drywell contents and adjacent soils.

This Work Plan includes site background information; objectives of closure of the two drywells; a statement of cleanup levels; a description of the planned drywell closure operations, including health and safety, verification sampling and analyses.

1.1 GE FACILITY HISTORY AND SETTING

General Electric's Apparatus Service Shop is located at 4420 McLeod Road, NE, in Albuquerque, New Mexico, on a 2-acre site in a light industrial park. The facility is approximately 4 miles northeast of downtown Albuquerque and approximately 4.5 miles east of the Rio Grande (Figure 1).

1.2 SITE CHARACTERIZATION

The GE Apparatus Service Shop was constructed in 1969 for the repair of industrial equipment, primarily electrical motors. Transformers filled with askarels and insulating oils containing PCBs were also repaired at the shop. Until 1983, waste water from steam cleaning operations was disposed of in two on-site drywells, west of the service shop (Figure 2).

Drywell No. 1 was examined in 1986. The drywell was found to be about 12 feet deep, with an inner diameter of about 2.5 feet at the top, widening slightly with depth. The wall of the drywell was constructed of staggered masonry block with the cavities laying horizontal. A concrete lid, about one foot below ground level, spanned across the masonry block walls.

Drywell No. 2 was found in 1990 by a boring being made as part of site assessment activities. The boring data suggest the drywell is approximately three to five feet in diameter and 15 feet deep. The boring at the drywell encountered soil from the surface to the seven foot depth and cobbles between depths of seven and 15 feet. The lateral extent of the cobbles is assumed to coincide with the lateral extent of Drywell No. 2, since the cobbles could have been used to form the drywell when it was constructed or the cobbles could have been placed in the drywell when it was abandoned.

2.0 OBJECTIVES OF CLOSURE OF TWO DRY WELLS

The primary goal for closure of two drywells is to protect human health and the environment. Drywell closure objectives are specific goals developed to achieve this protection.

The primary objectives for the closure of two drywells at the GE site are the following:

- Prevent human exposure through ingestion of, direct contact with, and inhalation of contaminated soils or dust from contaminated soils.
- Prevent potential contaminant migration to the ground-water by removing the primary source materials.
- Prevent contaminant migration through surface water and sediment transport.

3.0 REMEDIATION LEVEL

The excavation made at each drywell will extend to a maximum depth of 15 feet and laterally until verification sidewall samples that are taken and analyzed for PCBs have PCB concentrations less than 10 ppm, as required by the EPA letter of 13 August 1996.

4.0 DRYWELL CLOSURE ACTION

4.1 SITE PREPARATION

4.1.1 Site Security

Prior to the start of dry well closure, site security and control measures will be implemented to protect the public and on-site persons. Such measures include designation and marking of the "hot zones" where soil handling operations will be conducted. The "hot zones" will be marked with signs and barriers to preclude entry of all persons except those properly involved in the work. Equipment and vehicle maneuvering areas will be marked and supervised to avoid conflicts between drywell closure activities and the public.

Security measures, consisting of a combination of signs and barriers, will be placed around the excavations. The existing fence will be used to prevent accidental entry of the public into the work area.

4.1.2 Utility Clearances

Prior to the start of excavation work, contracts will be made with all utility companies having services at the site (telephone, power, gas and sewer) and proper clearances will be obtained. The presence and location of overhead utilities will be determined. If temporary relocation or inactivation of the overhead utilities are required for safety or for protection of the utilities, these modifications will be made.

4.1.3 Survey and Layout of Excavation Areas

The boundaries of the initial excavations will be surveyed and marked at the site. Locations of the drywells and the optional area of excavation shown on Figure 2 have been taken from Figure 3 of the Corrective Measures Study Report dated April 1992.

The excavation boundaries shown in this plan for Drywell No. 1 will be marked on the ground by locating the center of Drywell No. 1, then laying out the boundaries of the Drywell No. 1 excavation from the drywell center. The location of the optional area of excavation (if the excavation is made) and the location of assessment boring B-7, which encountered Drywell No. 2, will be reestablished by scaling distances on Figure 2, then laying out the scaled distances at the site by measuring from the building perimeter. The boundaries of the excavation for Drywell No. 2 will be marked at the site to center on boring B-7, with plans for the excavation location to be readjusted when the cobbles are encountered, to coincide with the lateral extent of the cobbles that are expected to be found at the seven foot depth.

Erosion protection will be established at the site in accordance with local requirements so as to prevent erosion and sediment transport from disturbed areas and stockpiles.

4.2 EXCAVATION

The configurations of the planned initial excavations of the contents, structures and connected drain lines of the two drywell locations are shown on Figure 2. Removal of the concrete sump, which is located at the south end of the shop building, will involve closure of portions of the surrounding concrete slab as necessary to remove the sump and any connected drain lines.

The excavations will be performed by equipment such as a backhoe or trackhoe. Excavated material will be either loaded directly into roll-off boxes or placed in temporary stockpiles for subsequent loading into roll-off boxes. Segregation and size reduction of large boulders or concrete debris will be performed as necessary to meet the size criteria of the receiving facilities. GE may elect to place materials excavated from within the drywells into roll-off boxes separate from those boxes into which soils from around the drywells are placed.

As necessary, dust will be controlled by water spray during soil excavation and loading operations. Any stockpiles that are left in place during non-working hours will be covered with plastic sheeting to prevent erosion by rainfall or wind. Any waste transport vehicles that contain waste and are parked on site during non-working hours will be closed or covered.

Excavation will be planned and specified without precautionary measures to protect foundation stability of the adjacent service shop building. If foundation stability problems are encountered during the drywell closure, the work will be temporarily interrupted until the building problem is evaluated and corrected, which may involve demolition of a portion of the building.

4.3 VERIFICATION SAMPLING AND ANALYSES

After the excavation at each of the two dry wells reaches a depth of 15 feet and the lateral limits shown on Figure 2, verification samples will be taken from the excavation sidewalls. After the optional area of excavation (if this excavation is made) reaches the lateral and vertical limits shown on Figure 2, verification samples will be taken from the excavation bottom and sidewalls. The samples will be analyzed in a laboratory for PCBs by EPA SW-846 Method 8080. Samples will be shipped to the laboratory under Chain-of-Custody protocols.

After the excavations reach the limits shown on Figure 2 and prior to taking the verification samples for laboratory PCB analyses, GE may elect to perform field immunoassay screening for PCBs on samples from the excavation sidewalls. As necessitated by the results of the field screening or verification sampling and analyses, the drywell excavations will be expanded laterally until analyses of verification samples demonstrate that the remediation level of 10 ppm for PCBs has been achieved. As necessitated by the results of the field screening or verification sampling and analyses, the optional area of excavation will be expanded vertically, with a maximum depth of 15 feet, and laterally until analyses of verification samples demonstrate that the remediation level of 10 ppm has been achieved. In locations where an excavation is extended as a result of screening or analyses of verification samples, the verification sampling will be repeated on the new excavation surface.

Locations of verification samples on the excavation boundaries will be determined using the hexagonal grid pattern described in "Verification of PCB Spill Cleanup by Sampling and Analysis", TSCA EPA-560/5-85-026. In general, verification samples will be taken on the final excavation boundaries at a frequency of approximately one sample per 15 square feet of boundary surface. Samples will be composited and results evaluated as described in the above-referenced document.

Verification samples will be taken using new or properly decontaminated hand tools such as spoons, trowels or scoops. Where sampling in excavations deeper than four feet is required, samples will be obtained by excavating a trackhoe bucket of soil from the sampling point, bringing the bucket to the surface in the bucket, then using the hand tools to take the sample from the soil that has not been in contact with the trackhoe bucket.

4.4 CHARACTERIZATION FOR TREATMENT/DISPOSAL

After the excavations are complete, five individual samples will be taken from each roll-off box to make up a composite soil sample to represent the material in the roll-off box. The individual samples will be shipped to the laboratory in their individual sample jars and compositing will be performed in the laboratory. The chemical analyses planned for the composite samples are TCLP analyses for volatiles (Method 8240), semi-volatiles (Method 8270), metals (Method 6010), Mercury (Method 7471), total analysis for volatiles (Method 8240) and PCBs (Method 8080). From the characterization data, GE will determine appropriate EPA Hazardous Waste Numbers and select a proper disposition for the material in each roll-off box, considering Land Disposal Restrictions. GE will then select and contract with a permitted treatment/disposal facility for acceptance of the wastes. During all or part of the waste characterization and facility selection process, the remediation contractor will be demobilized and the roll-off boxes containing the excavated materials will be staged on site. Prior to the wastes being characterized by data, PCB labels will be placed on the roll-off boxes.

4.5 WASTE TRANSPORT AND TREATMENT/DISPOSAL

All transport of excavated materials will be done by a licensed hazardous waste transporter approved by GE. A manifest will be prepared and will accompany each load removed from the site. Prior to departure from the site, the exterior surfaces and tires of each transport vehicle will be cleaned of all accumulations of soil.

The excavated material will be transported for treatment/disposal at a permitted facility approved by GE. If no RCRA hazardous waste is indicated by the characterization analyses, the excavated

material will be disposed in a TSCA approved landfill. If RCRA hazardous waste is indicated and land disposal restrictions are exceeded, the soil having such constituents will be transported to an incinerator facility permitted to treat PCBs and hazardous wastes. If hazardous waste is indicated and land disposal restrictions are not exceeded, the excavated material will be disposed in a landfill permitted for PCBs and RCRA hazardous waste.

4.6 EQUIPMENT DECONTAMINATION

All equipment that was in contact with the excavated materials will be decontaminated by pressure washing prior to being removed from the site. The pressure washing will be performed to remove all visible accumulations of soil and site materials from the equipment surfaces. Items which cannot be decontaminated or are disposable will be transported with the excavated materials. Water generated by decontamination will be captured and used for dust control on the loads of excavated material. Decontamination water that is in excess of the amount used for dust control will be filtered, containerized, characterized, and transported to a proper treatment facility.

4.7 BACKFILLING, GRADING AND EROSION PROTECTION

After verification analyses confirm that the remediation level has been achieved, excavations will be backfilled. Backfill will be clean soil or gravel obtained from an off-site, commercial borrow source. Prior to bringing backfill soil on site, a sample will be obtained from the proposed source and analyzed in a laboratory for PCBs, volatiles, semi-volatiles and pesticides.

The backfill will be placed in lifts and given a nominal tamping with the trackhoe bucket. The final surface of the backfill will be trafficked with two to three coverages of the earth moving equipment. Specific compaction criteria, in terms of backfill density, will not be specified. The backfill surface will be graded to match surface elevations that existed prior to the excavation work. The graded surface will be covered with gravel to provide erosion protection.

5.0 HEALTH AND SAFETY

The dry well closure work, as well as all field sampling and PCB screening, will be performed under a written Health and Safety Plan (HASP). The HASP will be prepared by the closure contractor and reviewed by GE. The contractor will be required by project specifications to designate a Site Safety Officer to see that work is performed according to the HASP.

The HASP will provide for designating exclusion “hot” zones, contamination reduction zones, and support “clean” zones. Personnel and equipment will be decontaminated before leaving the site. The HASP will describe procedures for decontamination and for managing residues generated by decontamination. Wash water from decontamination will be used for dust control. Decontamination water in excess of the amount that can be used for dust control will be filtered, containerized, and characterized for treatment/disposal. Solids from the filtering, along with spent supplies (tyveks, gloves, tape, paper towels, etc.) will be transported with the excavated materials for treatment/disposal.

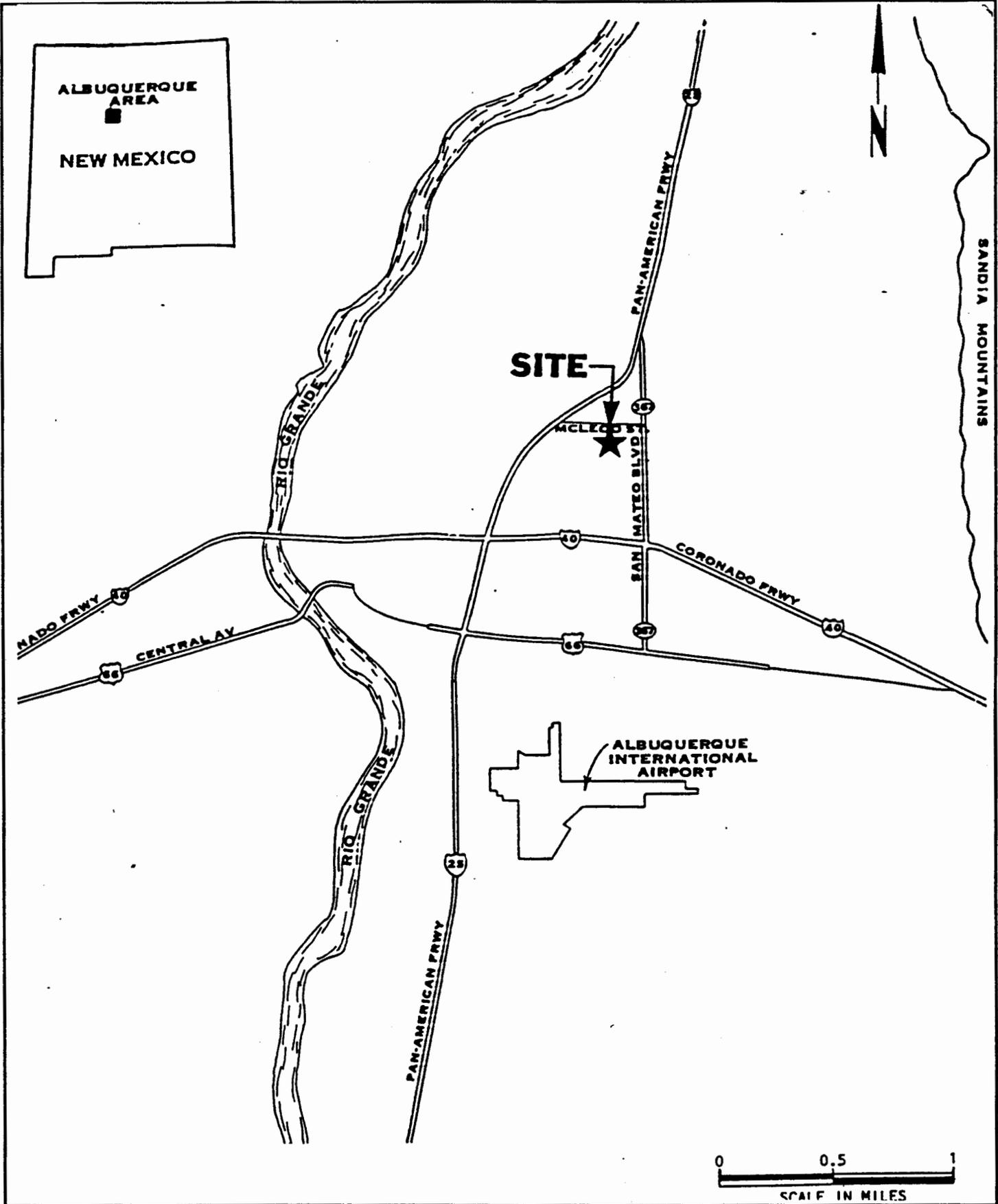
6.0 COMPLETION REPORT

Documentation of the drywell closure work will be included in the Final Investigations and Closure Actions Report.

7.0 SCHEDULE

The following general sequence and duration of activities are estimated for the planned drywell closure work:

<u>Activity</u>	<u>Estimated Completion</u>
EPA approval of Work Plan	31 October 1996
Preconstruction meeting with contractor	14 November 1996
Excavation and backfilling	22 November 1996
Transport of excavated material to TSD facility	6 December 1996
Submittal of report	18 December 1996



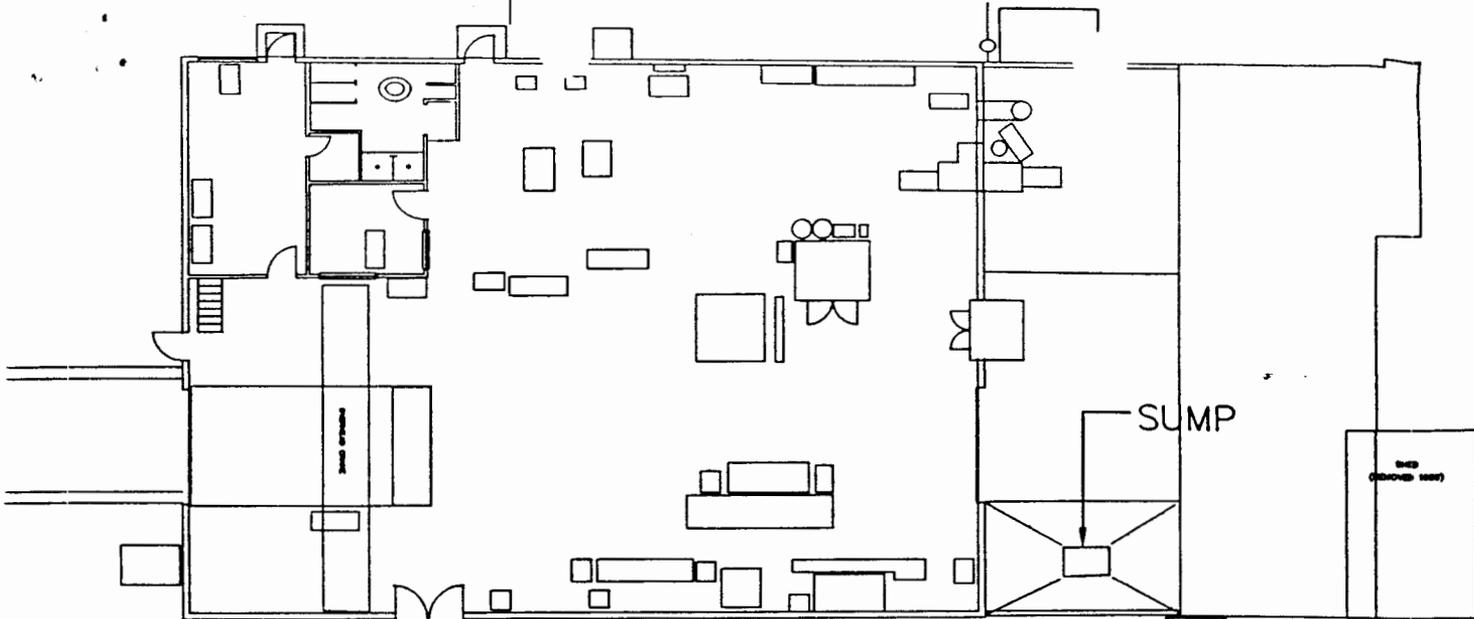
LAYER/LEVEL

GENERAL ELECTRIC
SERVICE SHOP
ALBUQUERQUE,
NEW MEXICO



LAW
ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

SITE LOCATION MAP



24' GATE

DRYWELL #1
EXCAVATION,
7'x7'x15' DEPTH

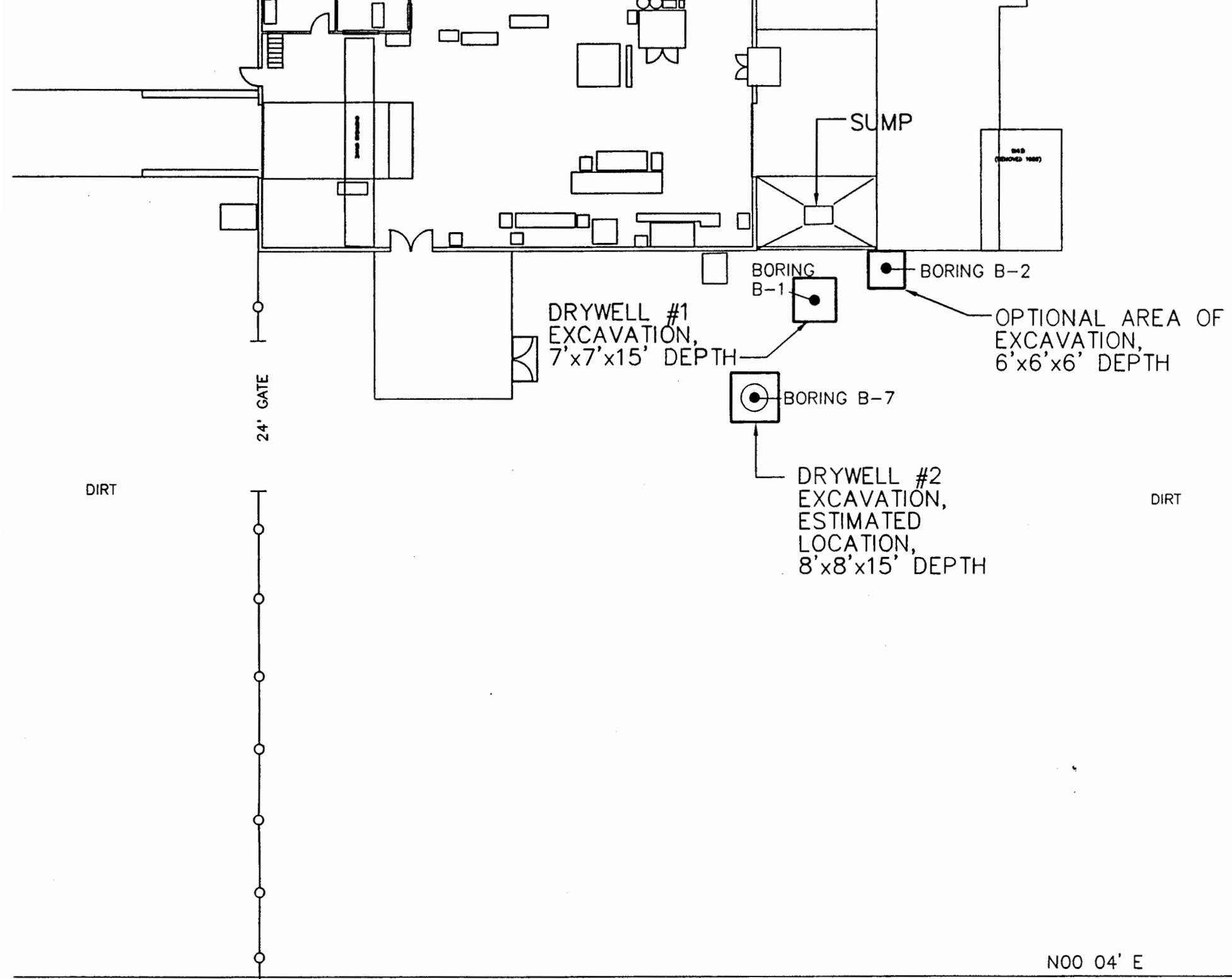
BORING
B-1

BORING B-2

OPTIONAL
EXCAVATION
6'x6'x6' D

BORING B-7

DRYWELL #2
EXCAVATION,
ESTIMATED
LOCATION,
8'x8'x15' DEPTH



SUMP

SAS
(REMOVED 1987)

BORING
B-1

BORING B-2

DRYWELL #1
EXCAVATION,
7'x7'x15' DEPTH

OPTIONAL AREA OF
EXCAVATION,
6'x6'x6' DEPTH

BORING B-7

DRYWELL #2
EXCAVATION,
ESTIMATED
LOCATION,
8'x8'x15' DEPTH

24' GATE

DIRT

DIRT

NOO 04' E