East Bay Expansion Remediation Report

Prepared for:

KUHLMAN ELECTRIC

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1.0 EXECUTIVE SUMMARY

The information contained herein describes the remedial activities performed for Kuhlman Electric Corporation (KEC) by Environmental Management Services, Inc. (EMS) at the KEC electrical transformer manufacturing facility at Crystal Springs, MS, in preparation for a building expansion at this facility.

The work was performed in general accordance with a work plan previously required and approved by the Mississippi Department of Environmental Quality (MDEQ), East Bay Expansion Work Plan, May 27, 2005.

The primary work included: the removal and disposal of existing concrete slabs and underlying soil to an approximate four foot depth from existing surfaces within approximately one half the expansion area; and the removal of asphalt and clean fill soil to an approximate depth of two feet from existing surfaces; and the removal and disposal of the remaining approximately two feet of soil beneath the asphalt covered area. The targeted final depth was 461 feet relative to the National Geodetic Vertical Datum (NGVD).

The objectives of the work performed were to provide engineering controls to eliminate the potential exposure pathways for construction workers during the grading and foundation construction activities necessary for the new building in a manner protective of health and the environment. Previous investigation and remediation measures indicated the potential presence of PCB's within the planned expansion area.

KEC contracted with EMS to develop the required workplan and perform the required remedial measures.

In summary, the following lists the primary activities performed in accomplishing the desired objectives:

- Established survey control commensurate with existing established coordinates;
- Performed pre-characterization confirmation sampling of concrete and soil and subsurface soil characterization for waste profiling and localized definition;
- Coordinated with waste disposal facility, BFI, for waste profiling of the materials for disposal;
- Performed survey and investigation of utilities and other potential subsurface hazards within the area to be excavated;
- Installation of security measures including isolation fencing, gate locks, door barriers, and temporary traffic control measures. Coordination with KEC was performed regarding access and control restrictions to be communicated to on site personnel;
- Installation of stormwater control measures including runoff barriers, the installation of a removable synthetic cover for prevention of rainfall intrusion, and

identification of and coordination with KEC and their contractors for the installation of building runoff control facilities;

- Installation of personnel and equipment decontamination facilities for use during the sampling and remedial activities;
- Establishment, operation, and maintenance of air monitoring and sampling facilities within the restricted zone;
- Conducted job specific Health & Safety training and orientation for all EMS employees involved in the remedial activities and maintained H&S compliance monitoring throughout the duration of the activities;
- Coordinated with KEC and Copeland & Johns General Contractors, the building contractor, for the identification and marking of the limits of the intended removal activities;
- Performed sawing, where necessary, of the concrete slab at the boundaries of the planned excavation;
- Mobilized heavy equipment, one temporary water storage tank, and a roll off container to the job site;
- Performed concrete demolition and subsequent loading for haul and disposal;
- Performed soil excavation and loading for haul and disposal;
- Performed removal and loading of asphalt for hauling;
- Performed excavation and loading for relocation on site of the clean fill soil beneath the asphalt;
- Performed excavation and loading for haul and disposal of the soil beneath the clean fill material;
- Surveyed bottom of hole of excavated areas for confirmation of the desired excavated depths;
- Sampled proposed backfill material for PCB analysis;
- Installed geotextile cloth material over all exposed excavation walls and anchored to excavation bottom;
- Backfilled and compacted approximately 12" of clean fill brought from off site pit over the entire area excavated;
- Performed compaction testing of backfilled area and coordinated with geotechnical representatives of the General Contractor for their confirmation testing;
- In conjunction with KEC and the General Contractor, inspected the final excavated and partially backfilled area for final acceptance;
- Performed decontamination of equipment used in the removal and handling of suspect materials then demobilized the equipment;
- Performed decontamination of the personnel decontamination facilities including containerization of all wastes generated;
- Performed sampling for analysis of the equipment decontamination liners and subsequently loaded for haul and disposal; and
- Demobilized from the site.

reasons after consultation with KEC and the General Contractor. There was concern by the architect that water could pool above the geotextile. Because the elevation of the foundation excavation is known, it was judged to be redundant to have the geotextile fabric in place as well.

Notable findings during the sampling and remedial activities included finding three soil sample locations containing low concentrations of PCB's, and one small liquid seep was noted coming from beneath the adjoining containment area slab. None of the soil or seep sample analytical results were above allowable disposal concentration levels and the contained seep stopped after a few hours. Seepage did not reoccur during our work presence.

The work was accomplished with minimal rainfall and thus runoff did not occur during the period of work.

Neither the contingency roll off container nor the water storage tank was used.

2.0 DETAIL DISCUSSION OF PRIMARY ACTIVITIES

The following discussion is a summary of the activities performed by Environmental Management Services, Inc. (EMS) personnel with respect to the East Bay Expansion Work Plan prepared by EMS on May 27, 2005. The preliminary activities began on approximately May 31, 2005 with field activities ceasing on June 30, 2005. Copeland and Johns, Inc. (C&J), the General Contractor, officially assumed responsibility for the work area and completion of the building expansion work at this time. A list of tasks performed by EMS personnel under the scope of this project, along with a brief description of the work and the date which the activity commenced follows:

- A Health and Safety Plan was developed specifically for the Kuhlman site and activities to be performed in conjunction with this project. This plan was developed as an Appendix to the East Bay Expansion Work Plan which was submitted to both Kuhlman and Mississippi Department of Environmental Quality (MDEQ) on May 27, 2005.

- Field activities began on May 31, 2005. An initial survey of the site to provide information for area and volume calculations, as well as marking sample locations was performed at this time. Sampling of the concrete in the southern area of the excavation, which was not previously remediated, was performed to determine the presence and/or quantity of contamination by polychlorinated biphenyls (PCBs) from previous activities occurring on-site. Upon completion of concrete sampling, all holes were backfilled with grout. Laboratory analysis of the concrete collected indicated all samples were less than the laboratory detection level of 2 mg/kg. Complete analytical reports from this analysis are provided in Appendix A.

- Installation of temporary fencing and other means of forming an exclusion zone around the work area were installed during the mobilization of equipment to the work area. After the exclusion zone was established, soil sampling on a ten (10) foot grid pattern was performed beginning on June 2, 2005. This sampling event spanned a two (2) day period in which 94 samples were collected and analyzed for PCB for waste characterization purposes. The sample locations can be seen on Figure 3 in Appendix B. All samples were collected with the use of a Geoprobe® from the region of most likely contamination determined by visual means and with the use of a flame ionization detector (FID) for vapor screening. Soil borings were logged and classified per USCS standards with the location of subsurface materials such as geotextile liner noted. These soil boring logs can be found in Appendix C. Of these 94 samples, only 3 were found to contain concentrations of PCB in excess of the laboratory minimum detection level of 1 mg/kg. These sample locations and concentrations were sample numbers 21, 108, and 114 with concentrations of 2.19, 26.8, and 2.53 mg/kg, respectively. These three locations are identified on Figure 3 in Appendix B. Complete analytical reports from the sampling are presented in Appendix A.

- Air samples were collected each day in which concrete or soil was disturbed by EMS activities throughout the duration of the project. These sample locations were along the northern, eastern, and southern boundary of the exclusion zone. The western boundary of the exclusion zone was the pre-existing Kuhlman building wall and did not require air monitoring as no airborne particles could escape the exclusion zone in this direction. Of the thirty (30) air samples collected throughout the duration of field activities, all were found to contain less than one (1) µg/kg (parts per billion) PCB, which is the laboratory minimum detection level.

- The cutting of concrete delineating the southernmost edge of the excavation was performed on June 9, 2005. The line along which EMS personnel cut the concrete was marked by C&J and approved by KEC prior to cutting.

- Mobilization of construction equipment, a roll-off box and a fractionation tank to the work area were performed in conjunction with preparation efforts prior to beginning the excavation. These preparation activities included installing stormwater controls and reinforcing the barriers forming the exclusion area to prevent unauthorized personnel from entering as well as the installation of a silt fence along the northeast corner of the exclusion zone where the previously remediated soils were to be stockpiled.

- The excavation activities began on June 16, 2005 with the breaking of concrete for removal. A concrete breaker was used to perforate a line approximately 18 inches from the edge of the secondary containment wall to prevent compromising the integrity of the containment wall. A water mist was used to control potential dust created during the concrete handling activities.

- Upon completion of concrete breaking activities, a track hoe was used to peel the layer of concrete from the top of the soil within the excavation area. This concrete was then loaded onto trucks and hauled to the Little Dixie Landfill in Ridgeland, Mississippi. The trucks were loaded atop a 60 mil thick high density polyethylene (HDPE) liner, brushed off, and inspected before leaving the site to prevent potential offsite releases. Subsequent to removal of the concrete, the soil below the concrete was excavated to a final elevation of 461 feet relative to the National Geodetic Vertical Datum (NGVD). This soil was also delivered to Little Dixie Landfill for disposal.

- During the excavation of soil under the concrete area, a small amount of liquid was noted seeping to the east from beneath the existing building's concrete slab. The liquid was traced back to the corner formed by the building and the secondary containment wall. This small amount of liquid appeared to have petroleum sheen. A small earthen berm, lined with oil absorbent pads, was constructed to prevent the possible migration into the excavation area. This soil was sampled (sample ID "seep1") and collected in a drum once the leaching appeared to cease. The oil

absorbent pad collected only a very small amount of the liquid, indicating that it consisted mainly of water which was absorbed separately. Laboratory analysis of soil saturated with the liquid indicated a concentration of 5.64 mg/kg PCB, well below the 50 mg/kg concentration required to be considered hazardous waste. Further analysis proved the absence of any hydrocarbon material in the liquid that seeped from beneath the building.

- After the removal of soil from the concrete covered area, the asphalt and underlying soil was then removed down to slightly above the geotextile, signifying the depth of former remedial activities. The liner material was found at varying elevations and a conservative amount of clean fill was left to compensate for uncertainty. The asphalt was hauled off-site while the previously imported fill soil was piled in the northeastern corner of the exclusion zone in the area where the silt fence was constructed.

- The soil below the geotextile, as well as the concrete ramp and underlying soil, was excavated to a similar elevation of 461 feet NGVD and hauled to the Little Dixie Landfill. Copies of all waste manifests for materials hauled to the Little Dixie Landfill can be found in Appendix D.

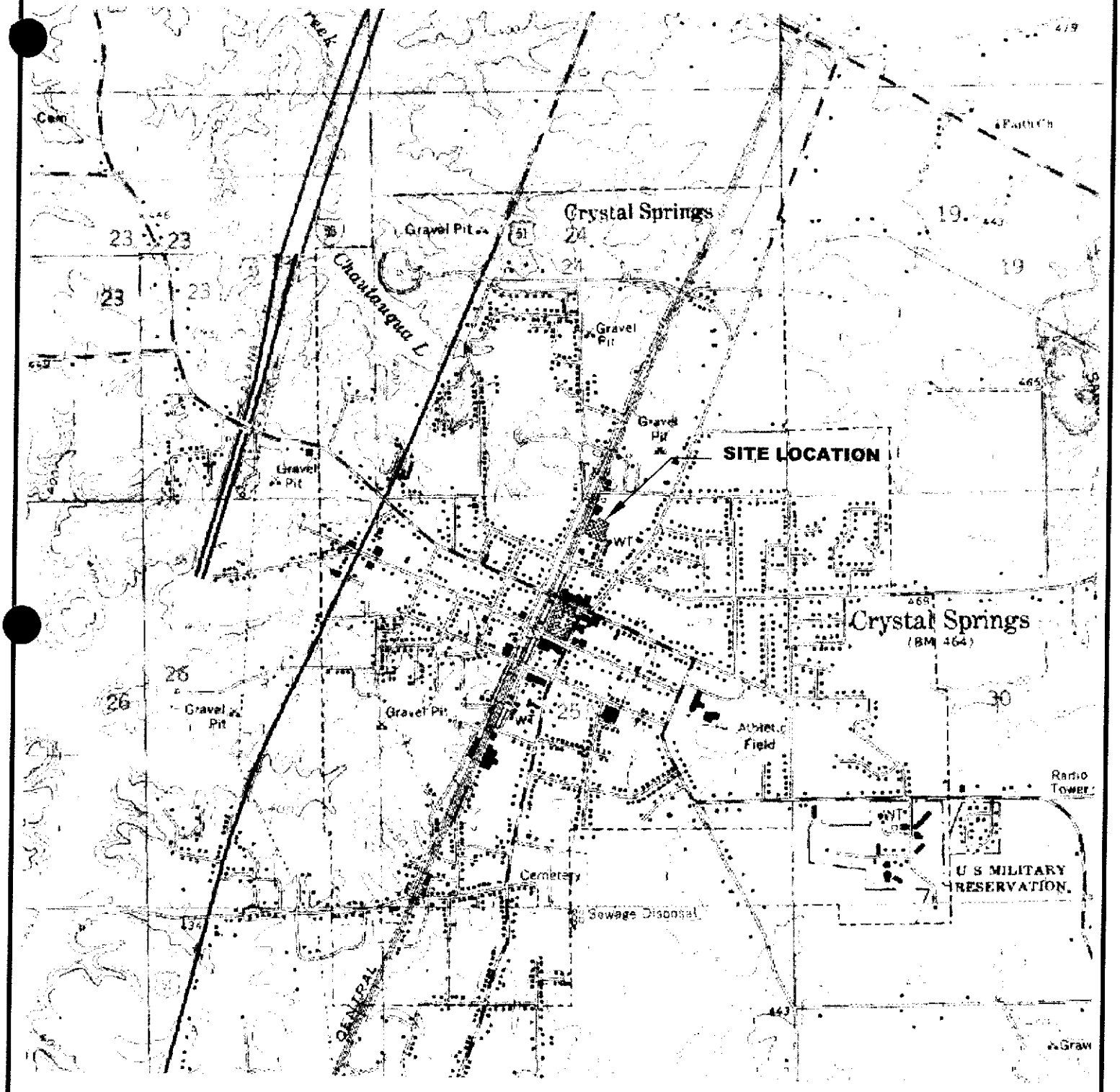
- After all soils were removed to an elevation of 461 feet NGVD, a survey of the excavation floor was performed.

- A red, sandy soil, chosen and provided by C&J, was used to begin backfilling the excavation area. A geotextile liner was placed around the excavation side walls to ensure possibly contaminated soils did not fall back into the excavation area where uncontaminated soils were being placed. EMS placed approximately ten to twelve inches of loose fill material into the excavation area and compacted it to the specifications provided by C&J. Standard proctor curves were provided for the fill material by C&J. A Troxler nuclear density gauge was used to ensure the desired compaction of 95% Standard proctor was achieved prior to turning the excavation area over to C&J for their testing and acceptance.

Photographs of the aforementioned activities can be seen in Appendix E with the Daily Field Activity Logs located in Appendix F. Appendix G contains the Daily Tailgate Safety Meeting forms. Geotechnical reports, including soil boring logs, compaction test results, and standard proctor (ASTM 0 698) soil density test results are included in Appendix C.

Appendix A
Analytical Reports

Appendix B
Figures



SCALE 1 INCH = 1800 FEET

450 900 1800

0 450 900 1800 3600

N

NOTE: PROPERTY BOUNDARIES AND SCALE ARE APPROXIMATE.

REFERENCE: U.S.G.S. TOPOGRAPHIC MAP
1963 – CRYSTAL SPRINGS
7.5 MINUTE SERIES
LINCOLN COUNTY, MS

SITE LOCATION MAP

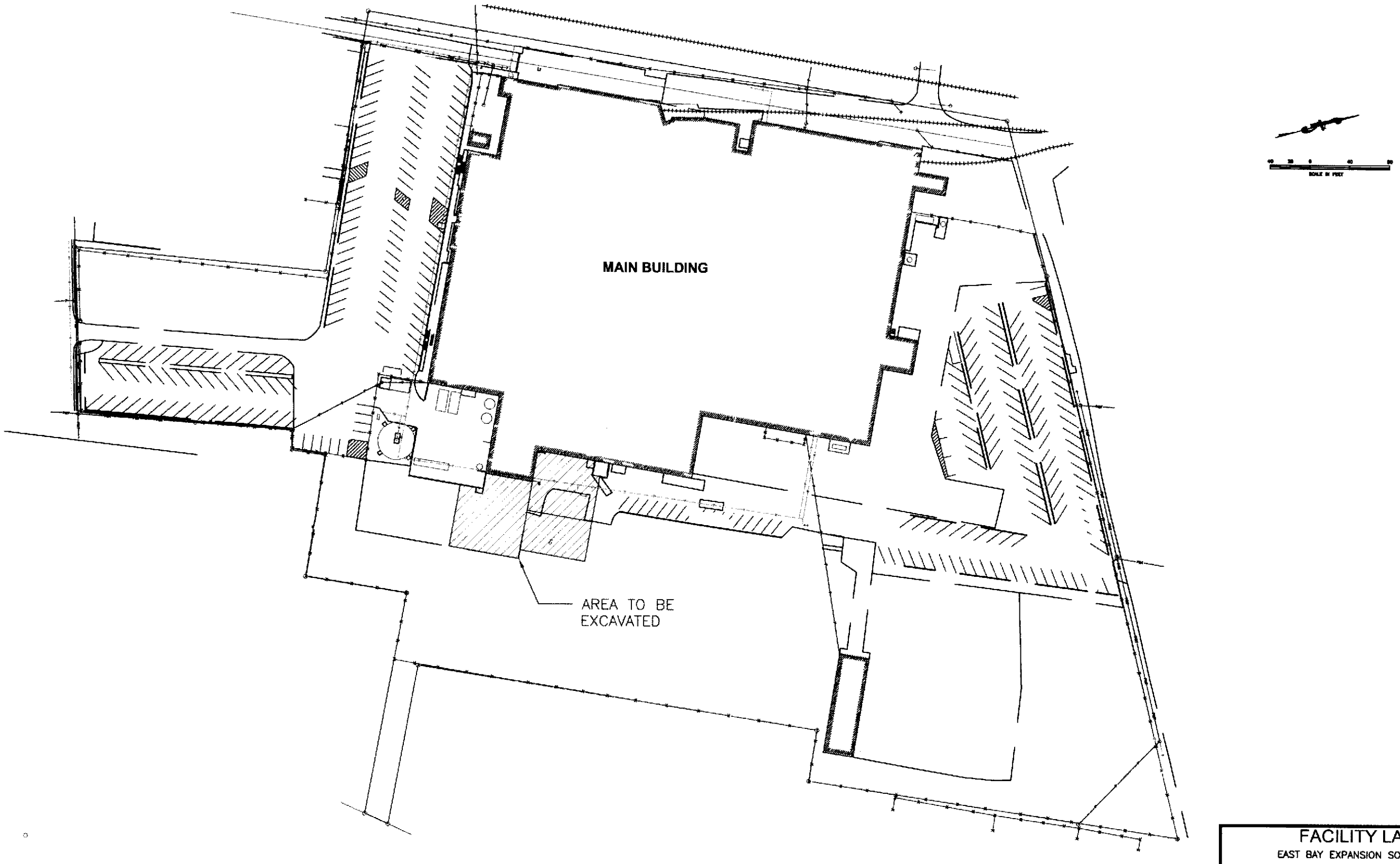
EAST BAY EXPANSION SOIL REMEDIATION

KUHLMAN ELECTRIC CORPORATION
CRYSTAL SPRINGS, MS

DATE: 5/25/05	APPROVED: BY: DATE:	DRAWN BY: KRK
SCALE: 1" = 1800'		CAD NO. SITE LOCATION

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIGURE 1



REFERENCE: GEOENVIRONMENTAL ASSOC. LLC
MARTIN & SLAGLE
BLACK MOUNTAIN, NC

FACILITY LAYOUT

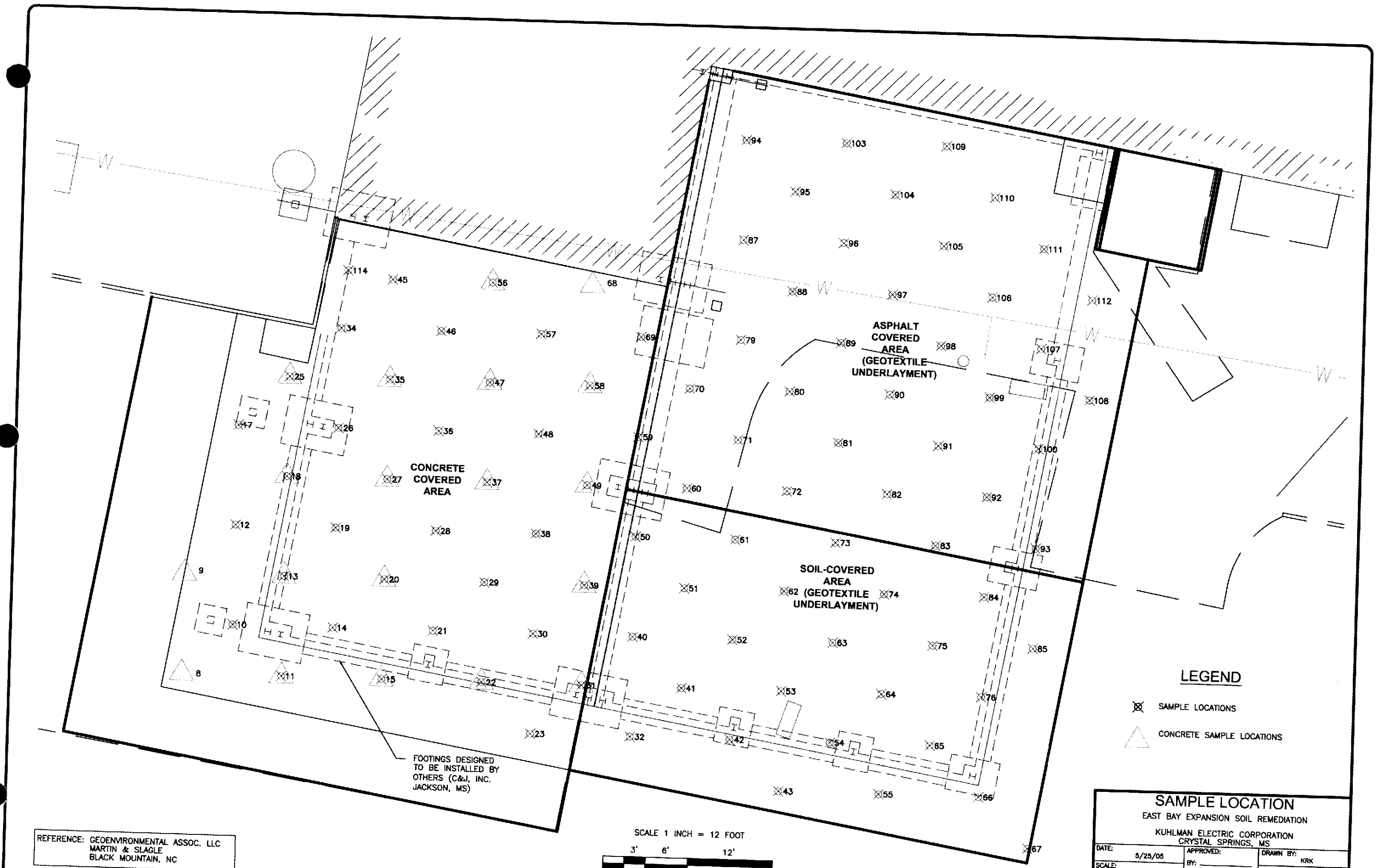
EAST BAY EXPANSION SOIL REMEDIATION

KUHLMAN ELECTRIC CORPORATION
CRYSTAL SPRINGS, MS

DATE: 5/25/05	APPROVED: BY: DATE:	DRAWN BY: KRK
SCALE: AS SHOWN		CAD NO. FACILITY LAYOUT

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIGURE 2



REFERENCE: GEOENVIRONMENTAL ASSOC. LLC
MARTIN & SLAGLE
BLACK MOUNTAIN, NC

SAMPLE LOCATION

EAST BAY EXPANSION SOIL REMEDIATION

KUHLMAN ELECTRIC CORPORATION
CRYSTAL SPRINGS, MS

DATE: 5/25/06	APPROVED: BY: DATE:	DRAWN BY: KRK
SCALE: 1" = 12'		CAD NO. SAMPLE LOCATIONS

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FIGURE 3